Chapter 4: Proposed Development

INTRODUCTION

4.1 This ES chapter presents a description of the Proposed Development that the Outline Planning Permission (OPP) is being sought for. It provides comprehensive information on the Proposed Development to inform the identification and assessment of potential environmental impacts and likely significant environmental effects across the technical topic areas addressed by the EIA as presented in **ES Volume 1, Chapters 6 – 13,** and **ES Volume 2, Townscape, Visual Impact and Heritage Assessment.**

4.2 Further details on the Proposed Development can be found within the Design & Access Statement (DAS) that has been submitted in support of the Outline Planning Application ('OPA') and Listed Building Consent ('LBC'), however the information presented within this ES chapter is sufficient to understand the Proposed Development sought for approval, and the basis of the EIA.

The Planning Applications

4.3 As described in **ES Volume 1, Chapter 1: Introduction**, this application is an OPA (all matters reserved) for the comprehensive mixed-use redevelopment of the Site (approximately 3.28 hectares (ha) in size), comprising:

- Demolition of existing buildings and structures;
- Erection of buildings and construction of basements;
- The following uses:
  - Business floorspace (B1)
  - Hotel/Serviced Apartments (C1)
  - Residential (C3)
  - Co-Living (C4/Sui Generis)
  - Student Housing (Sui Generis)
  - Retail (A1-A5)
  - Community and Leisure (D1 and D2)
  - Other Sui Generis Uses
- Associated infrastructure, including a new deck over part of the existing dock;
- Creation of streets, open spaces, hard and soft landscaping and public realm;
- Creation of new vehicular accesses and associated works to Aspen Way, Upper Bank Street, Hertsmere Road and underneath Delta Junction;
- Connections to Aspen Way Footbridge and Crossrail Place (Canary Wharf Crossrail Station);
- Car, motorcycle, bicycle parking spaces, servicing;
- Utilities including energy centres and electricity substation(s); and
- Other minor works incidental to the Proposed Development.

4.4 In addition, an application for LBC to stabilise the listed quay wall within the Site boundary and any associated/necessary remedial works, as well as demolition/removal of the false quay in connection with the OPA, is being submitted.

4.5 At the time of making the OPA, the Applicant is unable to determine exactly how much of the Proposed Development is likely to come forward in which land use. The OPA reserves all matters for later approval by the LBTH through the submission of RMAs; the following matters are reserved for later approval: Layout; Access; Scale; Appearance; and Landscaping. In addition, flexibility is being sought by the Applicant within the OPA, to enable the Proposed Development to react to future market changes, particularly in regard to the scale and layout of the Proposed Development and the amount of floor area that could come forward for each land use class. For this reason, the description of development provides the Applicant with flexibility as to the uses that could be undertaken on the Site.

4.6 However, in order to ensure that the level of flexibility is appropriately controlled in the context of policies and EIA, the OPA also seeks approval for three Control Documents which define the Specified Parameters for the Proposed Development and will control how the Proposed Development will come forward in future RMAs. All RMA's would need to comply with theses Control Documents and the Parameters they set, as they set a framework within which future development would need to come forward. These Control Documents comprise: (1) the Development Specification; (2) the Parameter Plans; and (3) the Design Guidelines.

4.7 As discussed in **ES Volume 1, Chapter 1: Introduction,** and **ES Volume 1, Chapter 2: EIA Methodology** the Control Documents are documents and plans which describe the principal components of the Proposed Development, provide parameters that guide future RMAs, and act as controls to limit development within the parameters set. These documents create a framework which sets out the information required to allow the impacts of the Proposed Development to be identified with sufficient certainty.

4.8 The Control Documents provide a number of development controls, including the maximum building and land use floorspace limits, and a 3-dimensional (3D) building envelope within which the detailed design of buildings can come forward through the submission of RMAs. The range of land use classes which could be bought forward in each Development Zone has also been specified.

4.9 The Control Documents that comprise the OPA and for which OPP is sought are described in **ES Volume 1, Chapter 2: EIA Methodology** and comprise:

- **Development Specificatio**n – a document which defines and describes the principal components of the Proposed Development, including the form and content of the OPA as well as the parameters for future RMA's. The Development Specification and outlines the maximum amount of development that could come forward across the Site. The Development Specification provides land use class floorspace ranges for each of the use classes which are being sought for approval and could be brought forward across the Site and sets a specific minimum floor area for the commercial (B1) and retail (A1-A5) offering. These areas are set within an overall Site wide total floorspace;
- **Parameter Plans** – these present outline parameters associated with the scale, layout, access and circulation and distribution of Development Plots and use classes for the Proposed Development; and
- **Design Guidelines** – a document which provides a set of rules and codes which establish the design principles and sets out the way in which the RMAs can be brought forward. The Design Guidelines restrict the Proposed Development from being built out to the maximum parameters (i.e. maximum layout and scale) across all Development Zones, and are in place to ensure that there is variation in height between the buildings being brought forward.

4.10 The controls in the Parameter Plans primarily deal with 'Access', 'Layout', 'Scale' and 'Use', where the Development Specification relates to 'Amount', and the Design Guidelines relates to all aspects of design, including 'Scale' and 'Appearance'. It is through these Parameter Plans that the street layout, public spaces and Development Zone locations are laid out and controlled.

4.11 The Parameter Plans, Design Specification and Design Guidelines submitted as part of the OPA set out the information required to allow the environmental and socio-economic impacts and effects of the Proposed Development to be identified with sufficient certainty at the OPA stage. The assessments contained within **ES Volume 1, Chapters: 6 to 13** and in **ES Volume 2, Townscape, Visual Impact and Heritage Assessment** are based on the Proposed Development, as defined and described by the Control Documents.

4.12 An Indicative Scheme representing one possible way the principles as defined in the above listed Control Documents could be interpreted/achieved and developed into a design, is also described in the DAS and set out within this ES chapter.

DESCRIPTION OF THE PROPOSED DEVELOPMENT

Amount of Development

Maximum Amount of Development

4.13 In terms of the land uses proposed and the amount or 'quantum' of development, the OPA via the Development Specification, specifies the 'maximum' amount of development for each land use class proposed, as well as a total maximum amount of development across the entire Site. This builds in a degree of flexibility for the future detailed design of the outline components within a site wide maximum quantum.

4.14 The site-wide total floorspace for the Proposed Development as set out within the Development Specification is 355,000m^2 Gross Internal Area (GIA).

Floor Areas

4.15 The maximum and minimum amount of area for each land use proposed as set out in the OPA's Development Specification is shown in Table 4.1.

Table 4.1 Proposed Land Uses and Amount of Development

Land Use (Use Class)	Minimum Above Ground Floorspace GIA (m^2)		Maximum Above Ground Floorspace GIA (m^2)	Minimum Below Ground Floorspace GIA (m^2)	Maximum Below Ground Floorspace GIA (m^2)
Retail (A1-A5)	Total 10,000	A1 – A5 5,000	20,000	0	5,000
Community (D1)			20,000	0	5,000
Leisure (D2)			20,000	0	10,000
Business (B1)	150,000		240,000	0	20,000
Hotel/Serviced Apartments (C1)	0		150,000	-	-
Residential (C3)	0		150,000	-	-
Co-Living (C4)	0		150,000	-	-
Student Housing (Sui Generis)	0		150,000	-	-
Other Permitted (Sui Generis)[1]	0		25,000	-	-
Ancillary[2]	0		No Maximum	0	0

4.16 The proposed flexible proportions of office, residential live/stay uses (comprising Residential, Hotel/Serviced Apartments, Co-Living and Student Housing) retail and leisure across the Site described in the Development Specification aims to bridge the gap between the mainly office-based accommodation provided in Canary Wharf to the south, and the mainly residential area of South Poplar to the north.

4.17 The spectrum of uses applied for in the OPA, represent a range of future activity in an area which can respond effectively to inevitable changes in future demand.

4.18 The Proposed Development and Control Documents are structured to provide flexibility in the way uses are distributed across the Site. However, this flexibility is limited through the Parameter Plans, Design Guidelines and Development Specification (the Control Documents) which will ultimately control how the Proposed Development comes forward.

Tenure Mix, Residential Unit Numbers, and Affordable Housing

4.19 The Proposed Development will provide up to a maximum residential (C3) floorspace of 150,000m^2 GIA (as set out in the Development Specification Document) across a range of tenure types and unit sizes. The outline dwelling mix for the Proposed Development as presented in the Development Specification is shown in Table 4.2.

[1] *Conference Centres, Casinos, Private Members Clubs, Nightclubs, Theatres, Launderettes (unless otherwise agreed with the Local Planning Authority)*

[2] *Ancillary floorspace comprising Business, Back of House, Enclosed Plant, Storage, Servicing, Car and Cycle Parking Areas, Energy Centres, Electricity Sub Stations etc.*

Table 4.2 Dwelling Mix

Tenure	Type	% by Unit
Open Market	Studio	5 – 25%
	1 bed	20 – 50%
	2 bed	20 – 50%
	3+ bed	5 – 25%
Intermediate	1 bed	15 – 50%
	2 bed	35 – 45 %
	3+ bed	5 – 45%
Affordable/Social Rented	1 bed	25%
	2 bed	30%
	3+bed	30%
	4+ bed	15%

4.20 A number of different unit mix scenarios have been considered to establish the maximum number of residential units that could potentially be accommodated on the Site, having regard to the Control Documents. Table 4.3 presents a housing mix scenario based on a policy target housing mix as determined by the LBTH's Local Plan Policy DH.2 'Affordable housing and housing mix'. For the purposes of assessing a worst case socio-economic scenario 35% of the total habitable rooms are assumed to be in affordable tenures, split 70:30 between affordable/social rented and intermediate tenures. On this basis the 150,000 m^2 GIA of residential floorspace could deliver 1,152 units.

Table 4.3 Policy Target Housing Mix (Maximum Residential Floorspace) Based on 35% Affordable Housing Provision

Tenure	Studio	1 Bed	2 Bed	3 Bed	4 Bed	Total
Open Market	49 (6%)	189 (23%)	410 (50%)	131 (16%)	41 (5%)	820 (100%)
Intermediate	-	15 (15%)	40 (40%)	30 (30%)	15 (15%)	100 (100%)
Affordable/ Social Rented	-	58 (25%)	70 (30%)	70 (30%)	34 (15%)	232 (100%)
Total	49	262	520	231	90	1,152

4.21 An alternative market housing unit mix could be delivered in line with the ranges set out in the Development Specification. In addition, the affordable housing proposed for the OPA is 20% affordable housing (by habitable room). Applying the alternative market housing unit mix, with 20% affordable housing would enable the delivery of more units (1,264 units) within the maximum permissible 150,000 m^2 GIA of residential floorspace. The unit mix for this scenario (including the details of the alternative market housing unit mix) is set out in Table 4.4 below.

Table 4.4 Alternative Mix and 20% Affordable Housing (Maximum Residential Floorspace)

Tenure	Studio	1 Bed	2 Bed	3 Bed	4 Bed	Total
Open Market	**240 (22%)**	**530 (48%)**	**282 (25%)**	**60 (5%)**	**-**	**1,112 (100%)**
Intermediate	**-**	**7 (15%)**	**18 (40%)**	**14 (30%)**	**7 (15%)**	**46 (100%)**
Affordable/ Social Rented	**-**	**26 (25%)**	**32 (30%)**	**32 (30%)**	**16 (15%)**	**106 (100%)**
Total	**240**	**563**	**332**	**106**	**23**	**1,264**

Minimum Development Quantum

4.22 There is no requirement under the EIA Regulations to assess minimum development extents or quantum as part of the EIA process associated with a planning application. However, a number of assumptions on the minimum amounts of development are assumed in order to provide a reasonable worst case for the socio-economic assessment for the outline components of the Proposed Development as shown in Table 4.1 and discussed and agreed with the LBTH. The Proposed Development would have a minimum of 5,000m^2 of Retail A1-A5; and a minimum of 150,000m^2 Business (B1), with a minimum of 0m^2 for all other uses.

Layout of Development

Development Zones / Layout

4.23 The layout of the Proposed Development is split into eight Development Zones (Figure 4.1) in which the use classes that could come forward are then defined, which is set out in the Parameter Plans:

- NQ.A – Building Development Zone located to the west of the Site;
- NQ.B – Building Development Zone located to the north-west of the Site;
- NQ.C – Public Realm Zone located in the north of the Site;
- NQ.D – Building Development Zone located in the east of the Site;
- NQ.E – Public Realm Zone located in the center and south of the Site;
- NQ.F – Public Realm Zone located along the southern boundary of the Site;
- NQ.G – Public Realm Zone along the western and north-western boundary of the Site; and
- NQ.H – Zone covers Upper Bank Street along the eastern and north eastern boundary of the Site.

4.24 Each Development Zone is then split further into Development Plot shown in Figure 4.2, with maximum width, length and height controls included and controls where public realm, access and circulation routes will be located within the Site (Figure 4.9 and 4.12).

Figure 4.1 QMP-PP-004 Development Zones

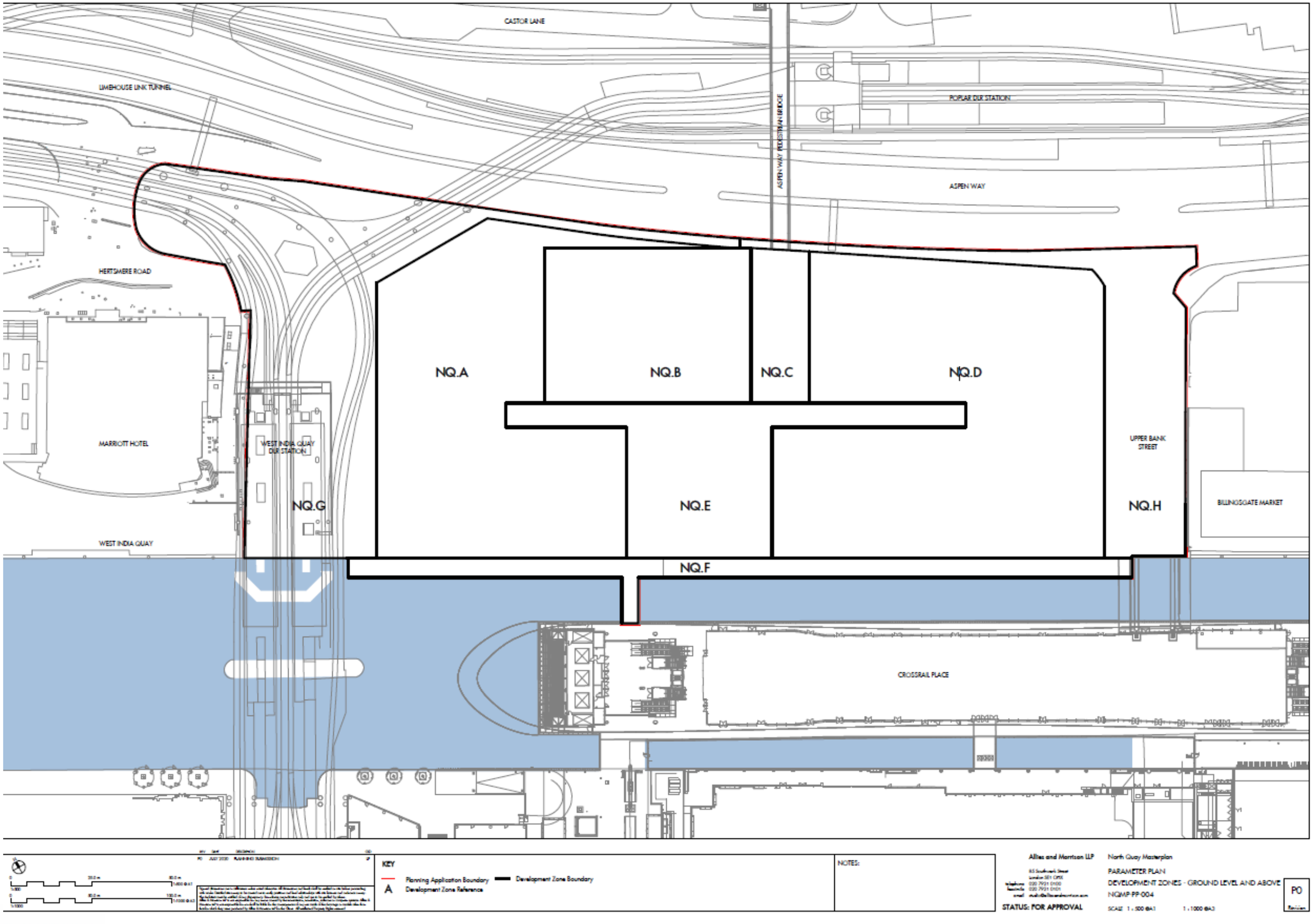
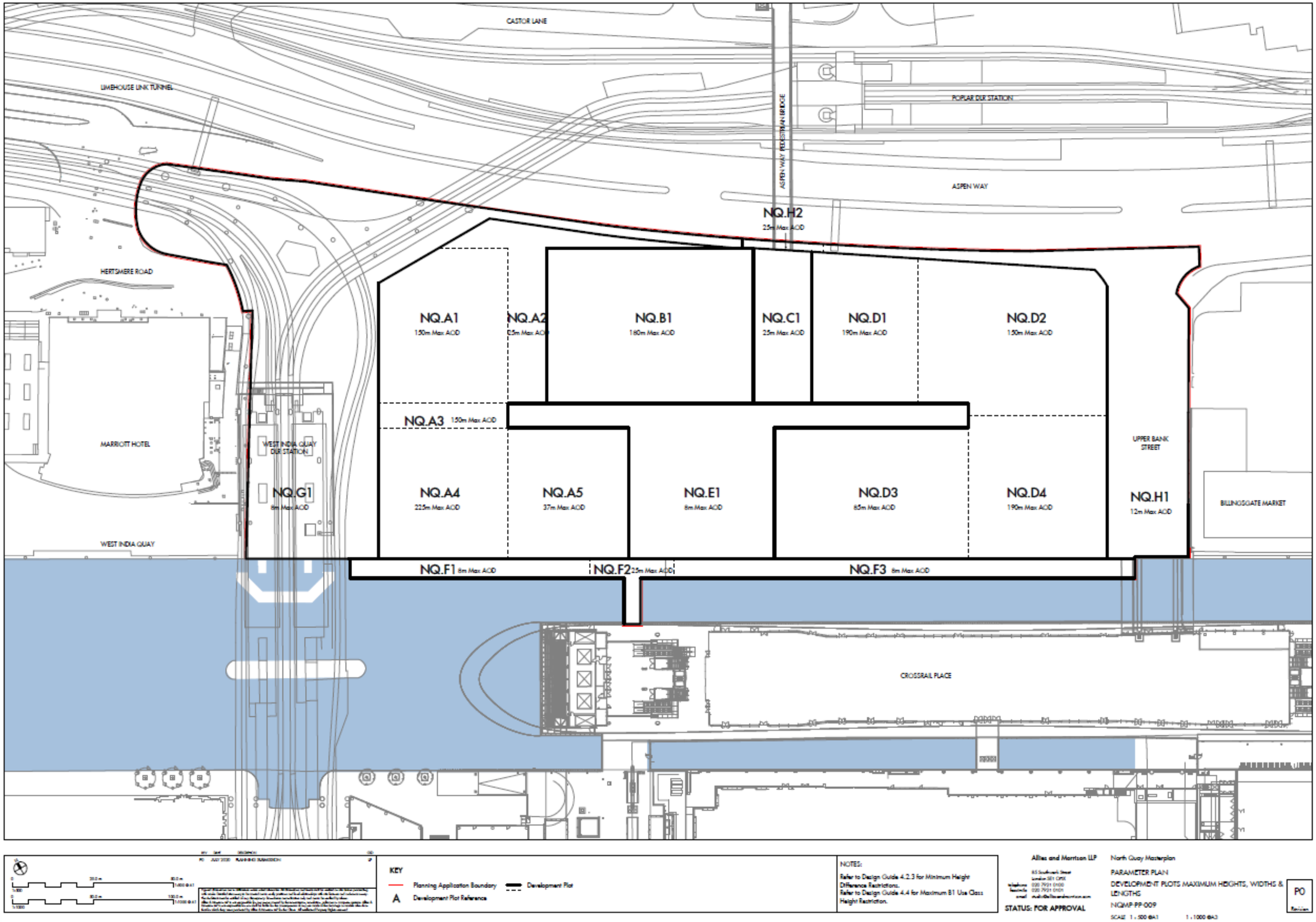


Figure 4.2 NQMP-PP-009 Development Plot Maximum Heights



4.25 Development Zone NQ.A is split into five Development Plots, NQ.A1 through to NQ.A5. These plots are located on the west of the Site, adjacent to West India Quay DLR station and The Delta Junction. The central route proposed through the centre of the site known as North Quay Way (which is oriented west – east – the blue route in Figure 4.9 below) runs through NQ.A3, which may be built over by a building structure. NQ.A4 and NQ.A5 provide important frontage on to the North Dock.

4.26 Development Zone NQ.B has a single Development Plot NQ.B1 which could come forward as one or more buildings. This provides a key stretch of frontage on to North Quay Way and forms much of the north side of the main open space of NQ.E1. It has a further long frontage on to Aspen Way.

4.27 Development Zone NQ.C has a single Development Plot NQ.C1. This is to provide a podium (raised platform area above ground level), open space, lifts and stairs leading off of Aspen Way Footbridge into the Site (Poplar Plaza) and the upper level connection of Aspen Way Footbridge to the Proposed Development.

4.28 Development Zone NQ.D is split into four Development Plot NQ.D1 through to NQ.D4 which are located on the east side of the Site. The central route of North Quay Way runs through NQ.D4, which may be built over by a building structure. NQ.D3 and NQ.D4 provide important frontage on to the North Dock and Quayside.

4.29 Development Zones NQ.E, NQ.F, NQ.G and NQ.H are zones in which no buildings are intended to come forward (shown in Figure 4.11 below). These Development Zones are proposed for public realm and accessibility uses; a maximum height has been allocated to Zones NQ.E, NQ.F, NQ.G and NQ.H although it is accepted that landscape features such as trees, arbours and planting, street furniture, lighting, bus shelters, signage, CCTV etc. may protrude beyond the maximum heights stipulated on Parameter Plan NQMP-PP-009 Development Plot and Maximum Heights' and shown in Table 4.3.

4.30 Development Zone NQ.E comprises the main public square proposed and central street – North Quay Way running through the centre of the Site from east to west.

4.31 Development Zone NQ.F comprises the new public dock edge know as Quayside providing open public space adjacent to the North Dock.

4.32 Development Zone NQ.G comprises an area of public realm underneath the DLR rail lines (no works are specifically proposed to the DLR station or tracks).

4.33 Development Zone NQ.H comprising works to Upper Bank Street for improved vehicle and pedestrian movement.

Scale and Massing of Development

4.34 The maximum footprints and the maximum heights of buildings have been defined for the Proposed Development in the Parameter Plans (shown in Figure 4.2, Figure 4.3 and Figure 4.4), however, there are no minimum heights. By defining the location and maximum extents of each Development Zone footprint, the overall urban composition and massing is defined. The minimum extent of open space is also defined within the Design Guidelines as a requirement which guarantees space between buildings which is described in further detail in this ES chapter and are set out in the Design Guidelines. This process of setting maximum development zones fixes the location of the larger open spaces of the public realm.

4.35 Maximum heights, lengths and widths of the Development Plot are provided in Table 4.3.

Table 4.5 Maximum Heights of Development Plots

Development Zone	Development Plot	Maximum Height (m) AOD	Maximum Length (m)	Maximum Width (m)
NQ.A	NQ.A1	150.00	48.00	40.00
	NQ.A2	25.00	84.00	56.50
	NQ.A3	150.00	40.00	7.50
	NQ.A4	225.00	40.50	40.00
	NQ.A5	37.00	40.50	37.50
NQ.B	NQ.B1	180.00	64.00	48.00
NQ.C	NQ.C1	25.00	48.00	18.00
NQ.D	NQ.D1	190.00	46.90	33.00
	NQ.D2	150.00	58.50	48.60
	NQ.D3	85.00	60.00	40.50
	NQ.D4	190.00	44.25	43.00
NQ.E	NQ.E1	8.00	142.50	48.00
NQ.F	NQ.F1	8.00	74.20	6.00
	NQ.F2	25.00	26.10	21.00
	NQ.F3	8.00	143.00	6.00
NQ.G	NQ.G1	8.00	185.00	117.00
NQ.H	NQ.H1	12.00	116.50	96.00
	NQ.H2	25.00	25.00	3.00

Maximum Development Parameters Scale and Massing - Jelly Mould

4.36 The maximum parameters for the Proposed Development establish a three-dimensional (3D) building envelope within which the detailed design of buildings will be developed. The 'jelly mould' is a term used to describe the shape that would emerge from a mould made to the outer most, maximum dimensions for every Development Zone on the Site, as shown in Figure 4.3. The Maximum Development Parameters or 'jelly mould' represents a developable envelope that could never be built out to its full volume due to various controls set out in the Control Documents including the maximum site-wide total floorspace for the Proposed Development of 355,000m^2 GIA.

Figure 4.3 Maximum Parameters Model (the 'Jelly Mould') View from the South

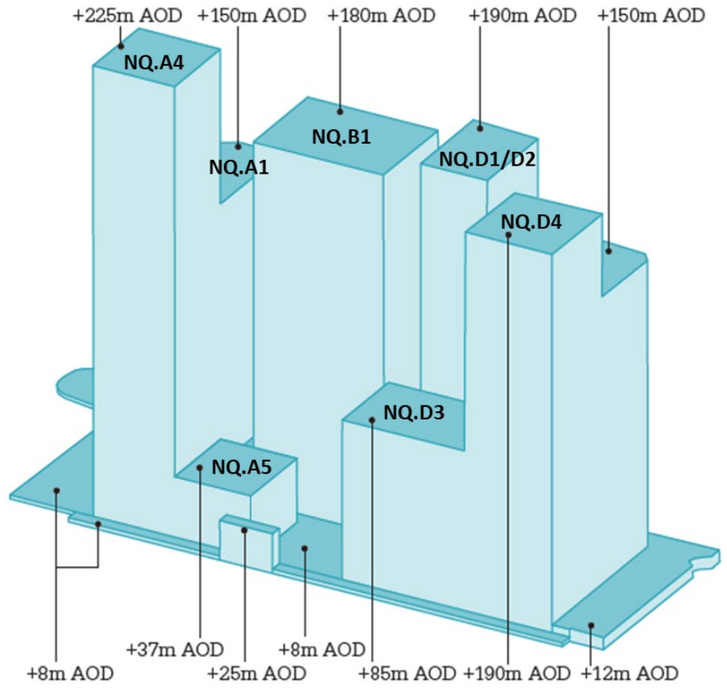
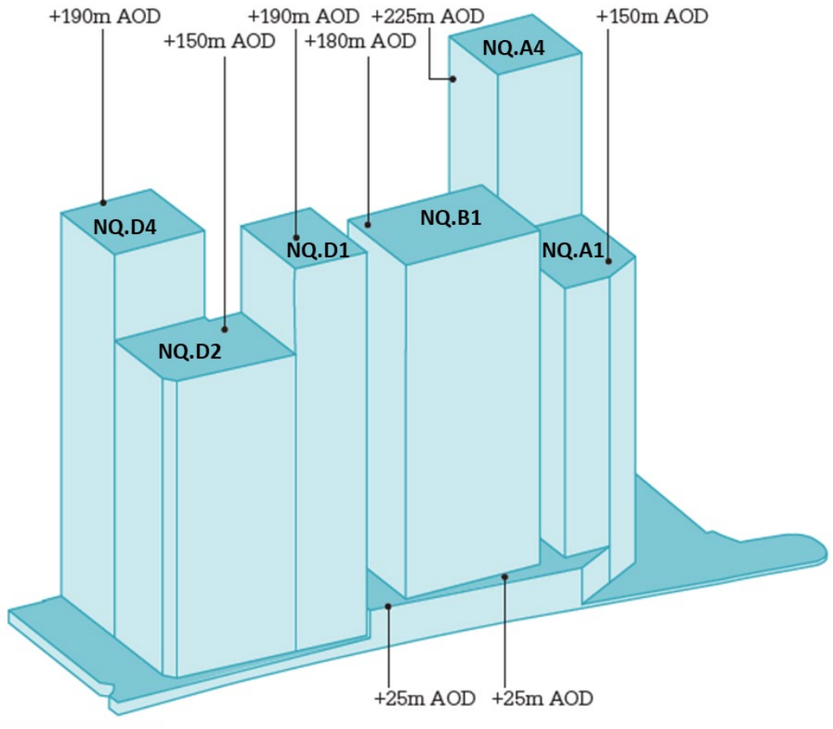


Figure 4.4 Maximum Parameters Model (the 'Jelly Mould') View from the North



Massing Design Guidelines

4.37 To optimize the potential of the Site, tall buildings are the predominant urban form in the Proposed Development. Massing restrictions, as well as variation and detail of buildings, have been set out within the Design Guidelines documents, which are shown in Figure 4.5 and outlined below. The massing proposed reflects current planning policy and the Site's current designation as a Central Activity Zone, Tall Building Zone, Opportunity Area and emerging Metropolitan Centre.

4.38 The Design Guidelines states that if NQ.A1 and NQ.A4 both come forward as live/stay buildings (i.e. all residential based uses comprising residential, student accommodation, hotel/serviced apartments and co-living uses), there is the requirement to have a defined minimum height difference of 60m between them (Figure 4.5 – A and B). If NQ.A1 and NQ.A4 come forward with other uses (e.g. office) the height difference is then reduced to 20m. This is such that one of these Development Plots is seen to be taller and the other subservient, but it does not determine which is the taller or the two buildings, therefore preserving flexibility.

4.39 In all other Development Zones across the Site, there will be a minimum height difference of 20m between adjacent Development Zones. This is to create a varied and informal skyline (examples are shown in in Figure 4.5 – B, C and D).

4.40 This flexibility across 'tall' building zones NQ.A4, NQ.D1 and NQ.D4 has intentionally been built into the Proposed Development to allow for a degree of controlled future design set out in the Parameter Plans and supported by detail in the Design Guidelines.

4.41 The maximum permissible floor plate for any of the live/stay buildings is 1,000m^2 Gross External Area (GEA). This design code (as set out within the Design Guidelines) ensures the relative slenderness of the buildings to achieve views out of the Proposed Development and let light into the Proposed Development.

4.42 The minimum horizontal separation of residential buildings will be 18m (shown in Figure 4.5 – F), excluding any projecting balconies. Overlooking of habitable rooms in neighbouring buildings will be kept to a minimum and the privacy for the individual unit maintained. This also aids provision of panoramic views from the residential units and long-range views between buildings from the public realm. This requirement is outlined as a design code within the Design Guidelines.

4.43 The massing of NQ.A5 (the smaller building) would be designed to relate to human scale and contrast to the larger buildings in adjacent Development Zones. The design, detailing and massing should distinguish the smaller building as a more distinct 'pavilion' object within the larger context and scale of the Proposed Development.

Limits of Deviation

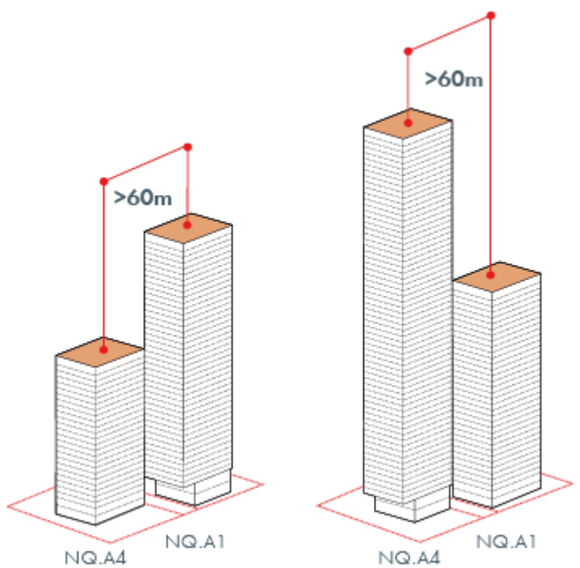
4.44 There is flexibility within the layout, in that routes, spaces and building boundaries are not completely fixed but are subject to limits of deviation.

4.45 Each Development Zone boundary is marked on the Parameter Plan entitled 'NQMP-PP-004 Development Zones' as shown on Figure 4.1 and the Development Plots within these Zones marked on Parameter Plan 'NQMP-PP-009 Development Plot Maximum Heights' as shown in Figure 4.2. These Parameter Plans show the maximum extents where building development can be located across the Site in each Zone and Plot.

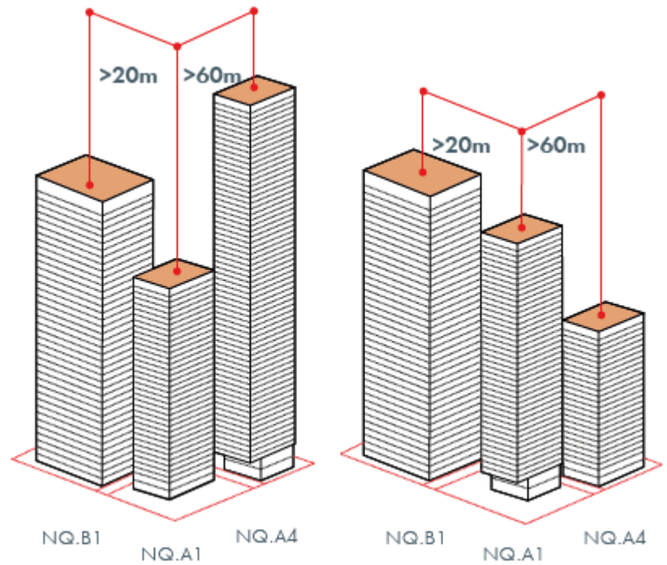
4.46 These Parameter Plans establishes the maximum developable envelope for the Proposed Development. As noted above however, this envelope could never be built out to its full volume due to various controls set out in the Control Documents including the maximum site-wide total floorspace for the Proposed Development of 355,000m2 GIA. The limits of deviation between buildings within Zones and Plots are further controlled by the Design Guidelines, which set rules and codes on the minimum horizontal separation between buildings, location of open spaces and public realm etc. which provide limits of deviation within the Development Zones.

4.47 Parameter Plan 'NQMP-PP-006 Access and Circulation routes', as shown in Figure 4.9, establishes the positioning of routes between building structures and relevant limits of deviation shown in grey within the Figure 4.9

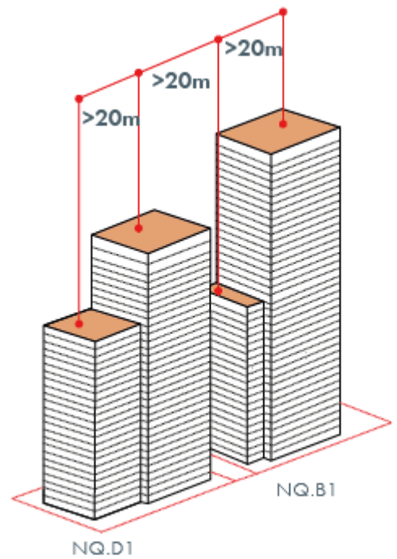
Figure 4.5 Massing Design Guidelines



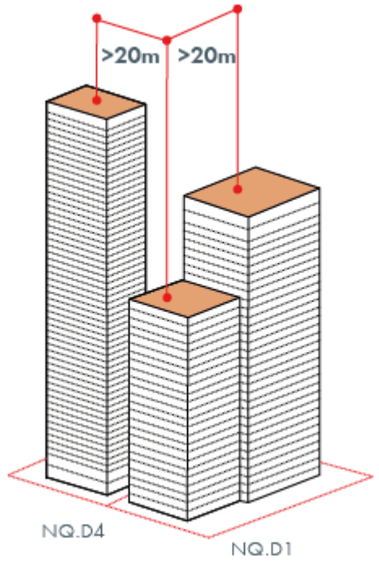
A) Height Difference in Development Zone NQ.A1 and NQ.A4 if Live/Stay Buildings



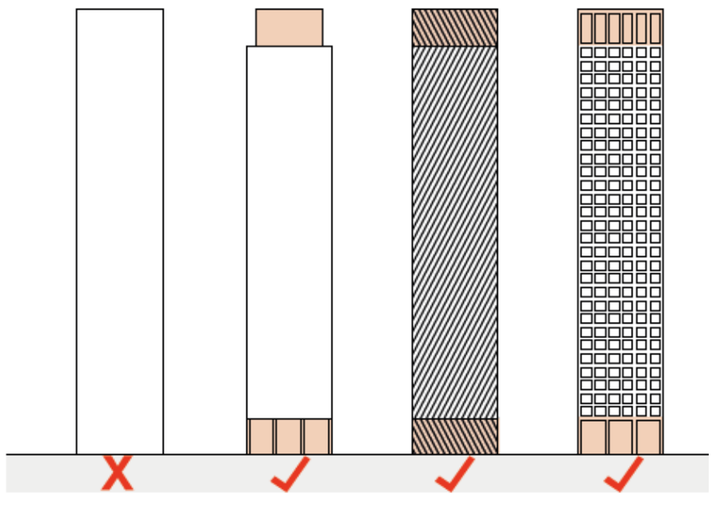
B) Height Difference in Development Zone NQ.A1 and NQ.B1



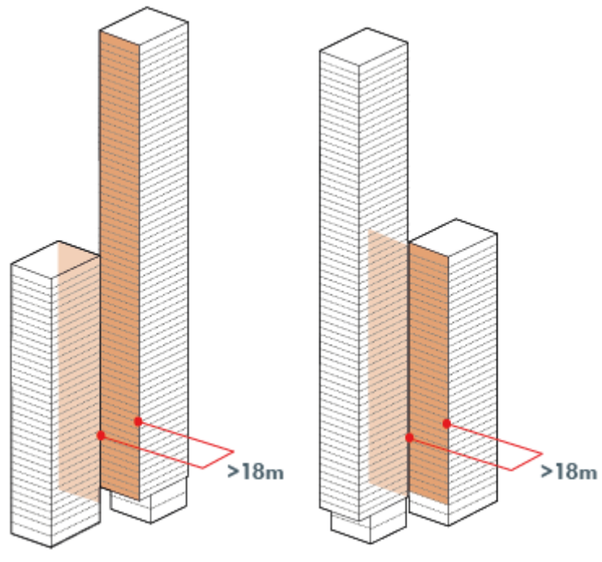
C) Height Difference in Development Zone NQ.B1 and NQ.D1



D) Height Difference between buildings in NQ.D



E) Variation and Detail at the Building Top and Ground



F) Minimum Horizontal Separation For Residential Buildings

Development Zone Land Use Classes

4.48 The type of land use classes proposed for the Proposed Development respond to the Site's strategic location in an Opportunity Area. Adjacent to the financial centre of Canary Wharf, with excellent transport links to the rest of London, and to the growing demand to make this part of the Isle of Dogs a fully-functioning, 'liveable' part of London, flexibility is sought to ensure that the Proposed Development can meet the future market demand. It also looks to reflect the fact that the Site is seen as integral to the Central Activity Zone.

4.49 The Proposed Development has a number of restrictions with regards to which use classes can come forward in each Development Zone. This is shown in the Parameter Plans NQMP-PP-007 Proposed Land Uses at Ground Floor, Mezzanine and First Floor Level (Figure 4.6) and NQMP-PP-008 Land Uses – Upper levels (Above First Floor), Figure 4.7, and Table 4.4. Some Development Zones are given a predominant use class (which are defined as a proportion of area greater than 51% and therefore represents the land use classes that are most likely to come forward in each specific zone) or can come forward with "Any Permitted Use Class" as defined.

4.50 Development Zones and Development Plots NQ.A and NQ.D1 and NQ.D4 have the flexibility of Any Permitted Use classes' being applied for (as set out in Table 4.1) being brought forward. In the other Development Zones which have set 'Predominant Use Classes', at least 51% of the floorspace created within the Zone must be given over to the predominant use (or uses) as shown in Figure 4.6 and Figure 4.7. The other 49% of the floorspace can be assigned to Any Permitted Use Class.

4.51 The uses that could come forward within each Development Zone have been split into potential ground, mezzanine and first floor level use, and proposed upper levels (above first floor) use. This is to ensure that buildings brought forward under the Proposed Development would have active frontages as shown in Parameter Plan NQMP-PP-010 – Figure 4.8.

4.52 The uses applied for in the OPA as presented above in Table 4.1, include office, residential, student housing, hotel rooms, serviced apartments, shops, restaurants, cafes and community spaces represent a variety of future activity and use in an area which can respond effectively to inevitable changes in future demand.

Table 4.6 Land Uses by Development Zone

Development Zone	Ground, Mezzanine and First Floor Land Use Class	Upper Levels Land Use Class
NQ.A	• Any Permitted Use Class (NQA1, NQ.A2 and NQ.A3) • Predominantly Use Classes A1-A5, D1, D2 or Sui Generis (NQ.A4 and NQ.A5)	• Any Permitted Use Class (NQ.A1, NQ.A2, NQ.A3 and NQ.A4) • Predominantly Use Classes A1-A5, D1, D2 or Sui Generis (NQ.A5)
NQ.B	• Any Permitted Use Class	• Use Class B1
NQ.C	• Any Permitted Use Class	• No Development
NQ.D	• Any Permitted Use Class (NQ.D1) • Predominantly Use Classes A1-A5, D1, D2 or Sui Generis (NQ.D2, NQ.D4 and NQ.D3)	• Any Permitted Use (NQ.D1 and NQ.D4) • Predominantly Use Class B1 (NQ.D3) and • Use Class B1 (NQ.D2).
NQ.E	N/A	N/A
NQ.F	N/A	N/A
NQ.G	N/A	N/A
NQ.H	N/A	N/A

- *Any permitted uses relates to any uses being sought for approval as part of the OPA.*

Figure 4.6 NQMP-PP-007 Proposed Land Uses at Ground Floor, Mezzanine and First Floor Level

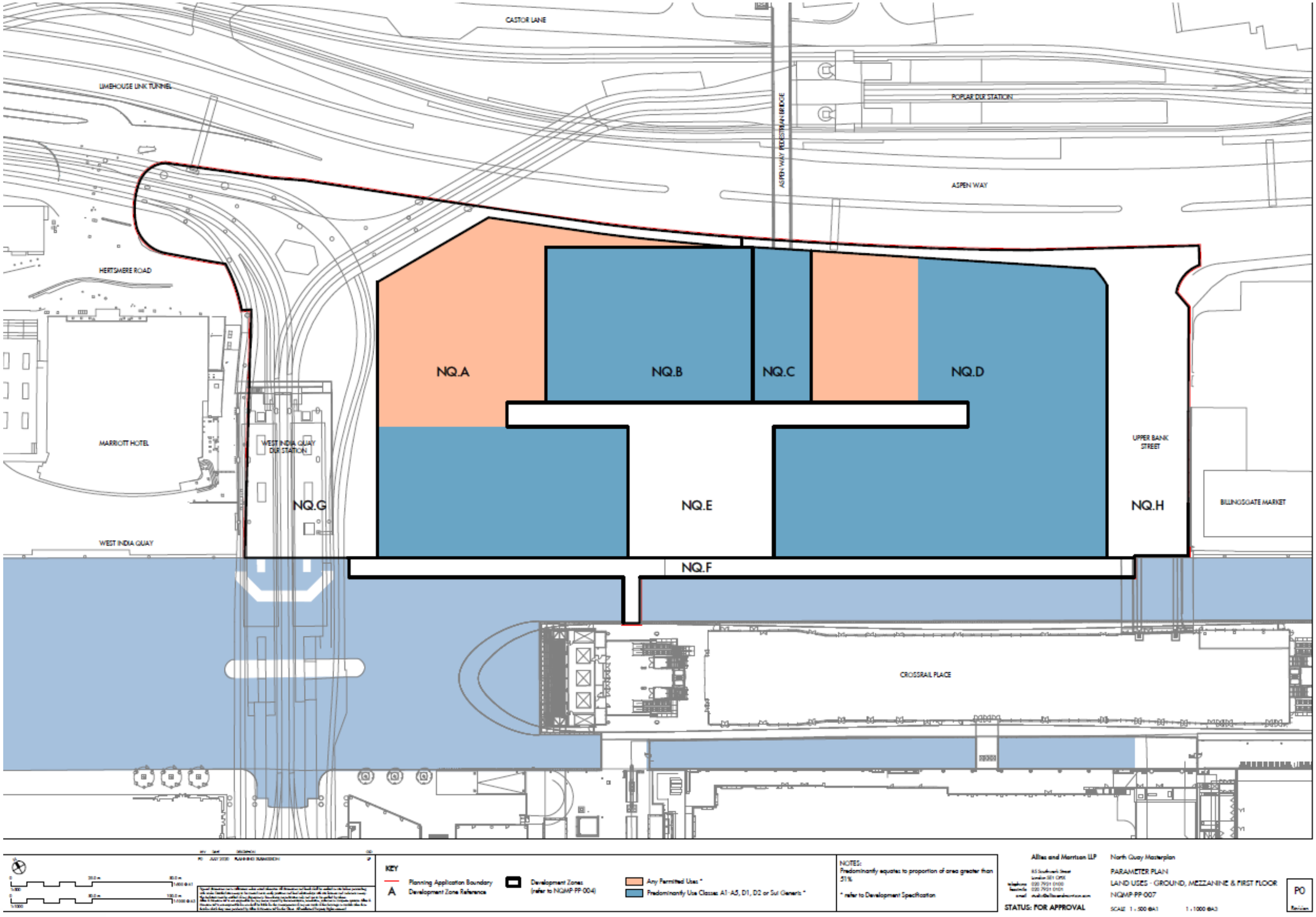


Figure 4.7 NQMP-PP-008 Use Classes Above First Floor Level

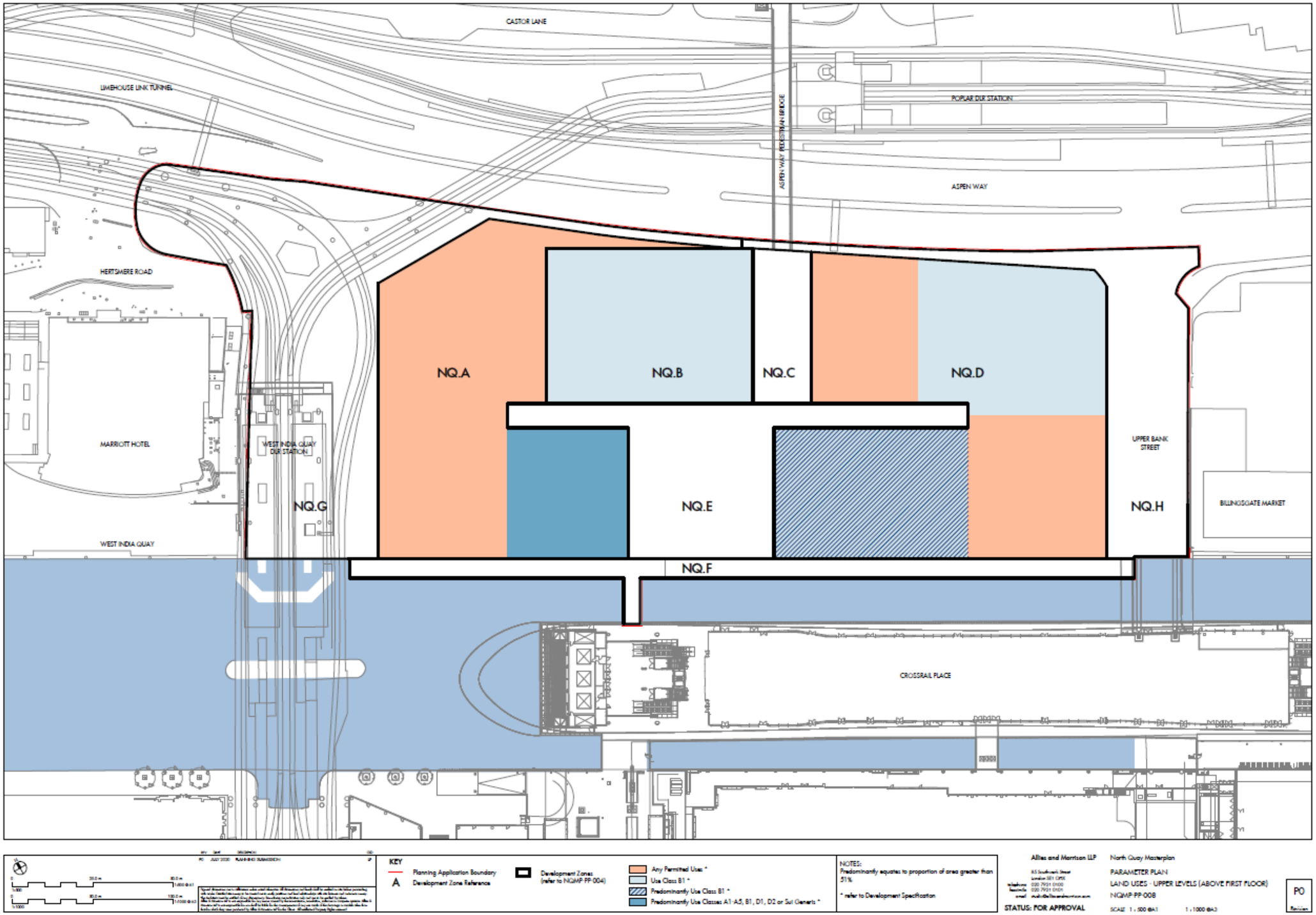
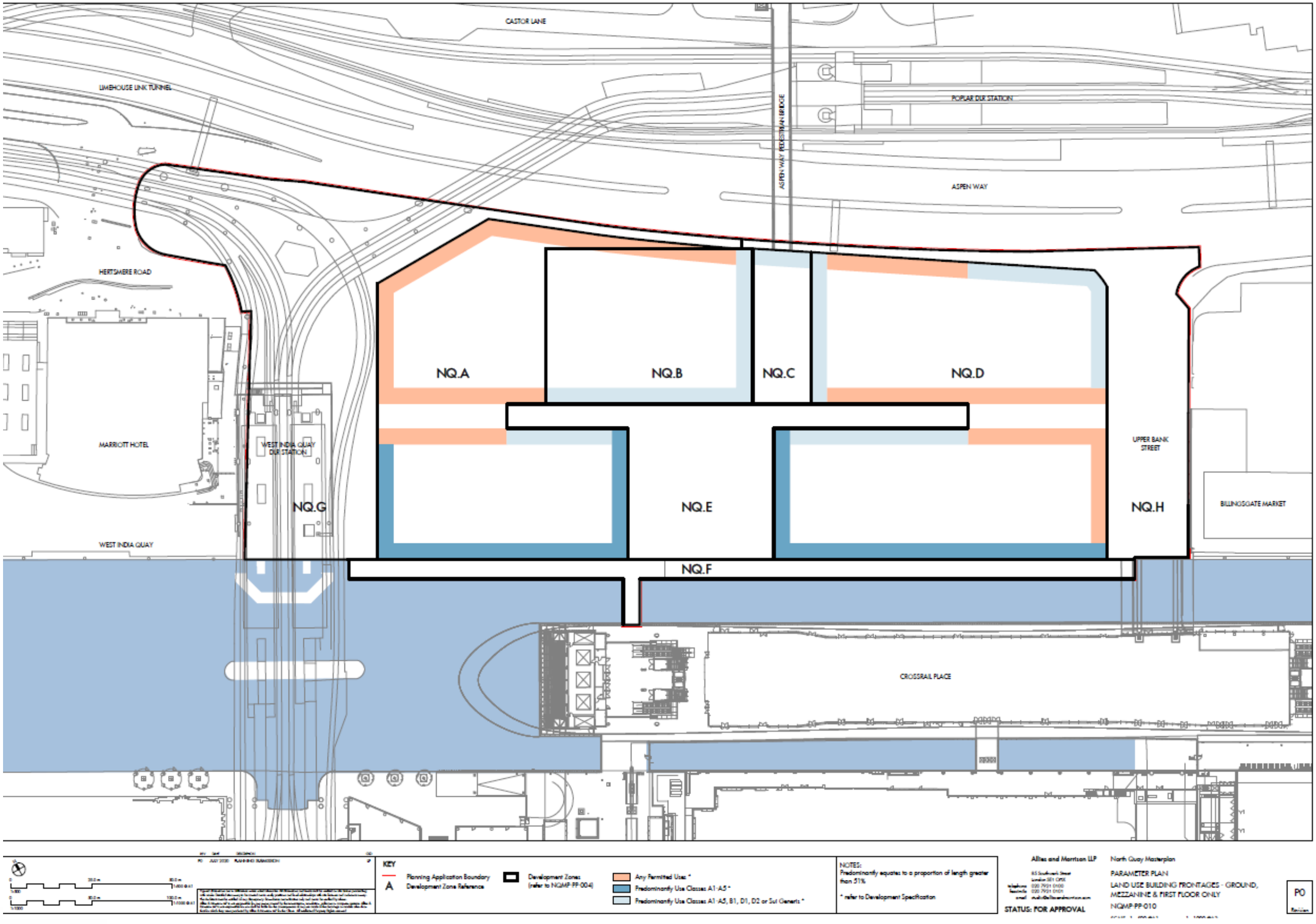


Figure 4.8 NQMP-PP-010 – Land Use Building Frontages – Ground, Mezzanine and First Floor



Appearance

4.53 Given the outline nature of the OPA, the scale and layout parameters of the Proposed Development have been defined, but the architecture and design of the buildings has not. The Proposed Development has been conceived as a group of buildings that may be designed by different architects to bring diversity and variety across the scheme. The architecture will use high quality materials and will respect their particular context and the Design Guidelines present specific rules, codes and guidance on the future appearance of buildings. In particular the Design Guidelines state that '*All buildings should be designed utilising high quality and appropriate external cladding materials…*'.

4.54 The Design Guidelines Document does set a restriction on the appearance of the taller buildings. The Design Guidelines state that live/stay buildings should be detailed with a differentiated top and ground by employing one or more of the following strategies: setbacks, different cladding material, different facade system, different window proportion or increased percentage of glazing, etc. The built mass of live/stay buildings is thus broken down so that they have a positive impact on the public realm. Examples of this rule are shown in Figure 4.5 - E.

4.55 The Design Guidelines provides further guidance on the appearance of buildings including: any single building that occupies the full elevation to Development Plots NQ.D2 and NQ.D4 along Upper Bank Street should be detailed in such a way as to articulate and break down the scale of the elevation in to a number of parts; all buildings should be designed utilising high quality and appropriate external cladding materials and weathering detailing; the quality of the architecture should be commensurate with that evident in the existing Canary Wharf Estate. Retail units and residential and office entries should have visually transparent facades which maximises glazed ground floor façade; and office buildings should be detailed with a differentiated top and ground by employing one or more of the following strategies: setbacks, different cladding material, different facade system, different window proportion, increased percentage of glazing.

4.56 These rules and codes along with the rest of the Design Guidelines presents a framework for the appearance of the Proposed Development during the detailed design at RMA stage.

Means of Access

4.57 The Parameter Plan entitled 'NQMP-PP-006 Access and Circulation Routes', as shown in Figure 4.9 formalises the general arrangement of the route network between, around the edges, and in some cases through, Development Zones.

4.58 A new street ('North Quay Way') through the centre of the Site will provide access for servicing and drop off, and connect to the existing road network. These road connections are made at Upper Bank Street to the east and Hertsmere Road to the west.

4.59 The existing east-west footpath along Aspen Way will be strengthened with a new cycle route.

4.60 The proposed route layout (Shown in Figure 4.9) is intentionally orthogonal, allowing for a series of 'regular' Development Zones and public spaces to emerge in between Aspen Way and the Quayside. North Quay Way is located such that there are suitable sized areas for Development Zones both to the north, lining Aspen Way, and to the south lining the Quayside, either side of the street.

Basements

4.61 The maximum extent of the basement is -18m AOD and is shown in Figure 4.10 NQMP-PP-003 Land Uses – Below Ground. To provide the maximum amount of basement, a shared basement approach would need to be adopted for the Proposed Development, this would be accessed via a shared ramp from under the Delta Junction near Hertsmere Road to the west of the Site. However, separate individual basements for each building could be brought forward as part of the OPA, this would need to be within the Basement Extent as set out in Figure 4.10; 'Parameter Plan NQMP-PP-03'.

4.62 The basement perimeter is defined by a continuous piled wall which is required to limit the ingress of ground water into the Site both during and after construction. A portion of the basement wall will be constructed behind the Grade I listed dock wall (Banana Wall). No modifications are proposed to the Banana Wall although some remedial/stabilisation works may be required..

4.63 The following functions are supported by the shared basement:

- Large deliveries and collection;
- Cycle storage;
- Car parking;
- Waste storage and removal;
- Building and infrastructure plant;
- Estate management and storage facilities; and
- Retail storage/accommodation.

4.64 The Proposed Development proposes to be a car-free development, therefore no maximum number of car parking has been set. Limited accessible parking for 'Blue Badge Holders' which will be provided in accordance with the Draft London Plan standards, including electric vehicle charging provision.

False Quay and Marine Deck

4.65 The existing false quay will be demolished to allow a new false quay to be erected, and a newly proposed marine deck built to the southern edge. The marine deck would be built over part of the existing dock water, consistent with the existing promenade adjacent to the west, whilst maintaining the required navigable channel for water vehicles. The false quay would be provided over the Banana Wall, which will be left in situ.

Figure 4.9 NQMP-PP-006 Access and Circulation Parameter Plan

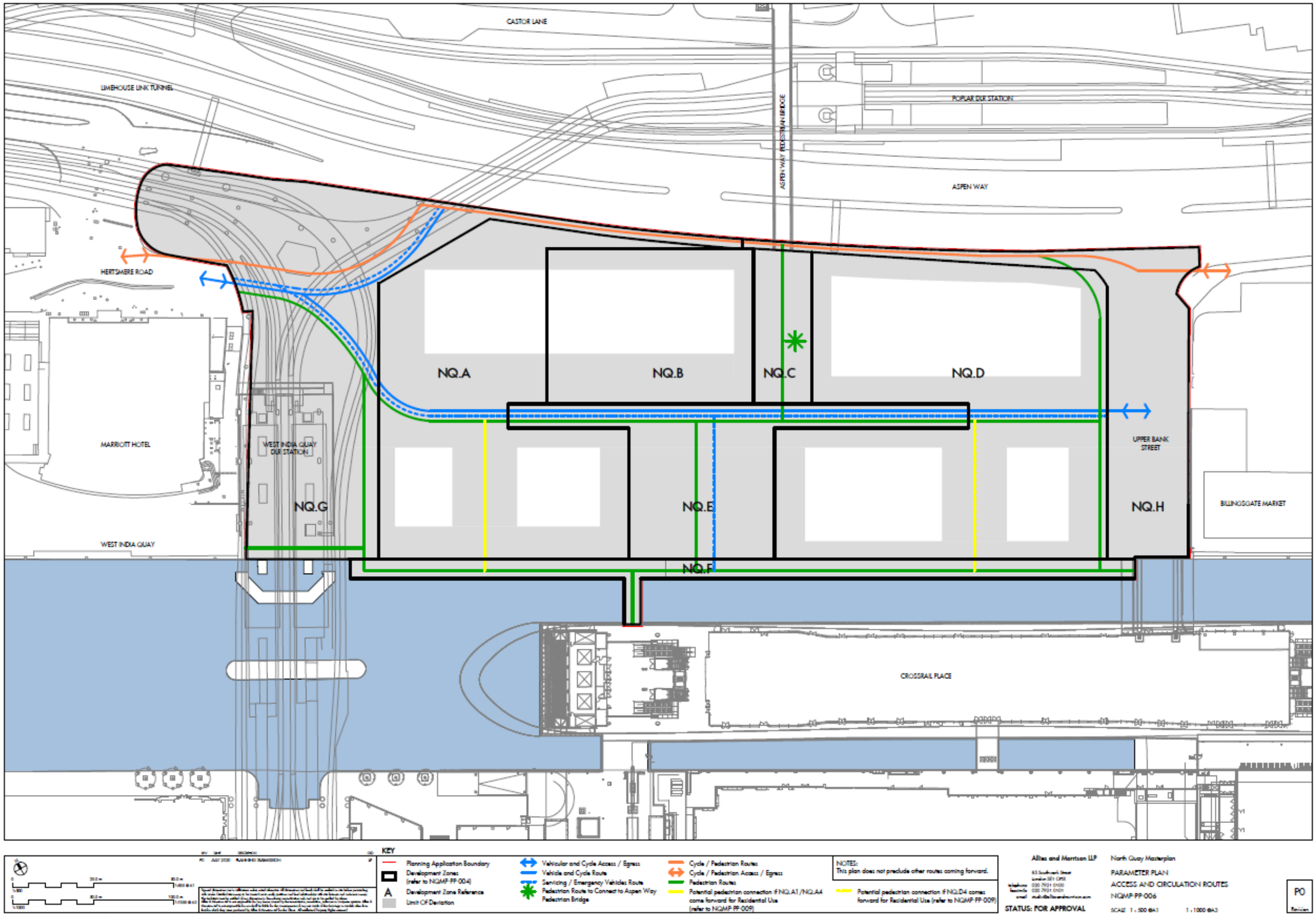
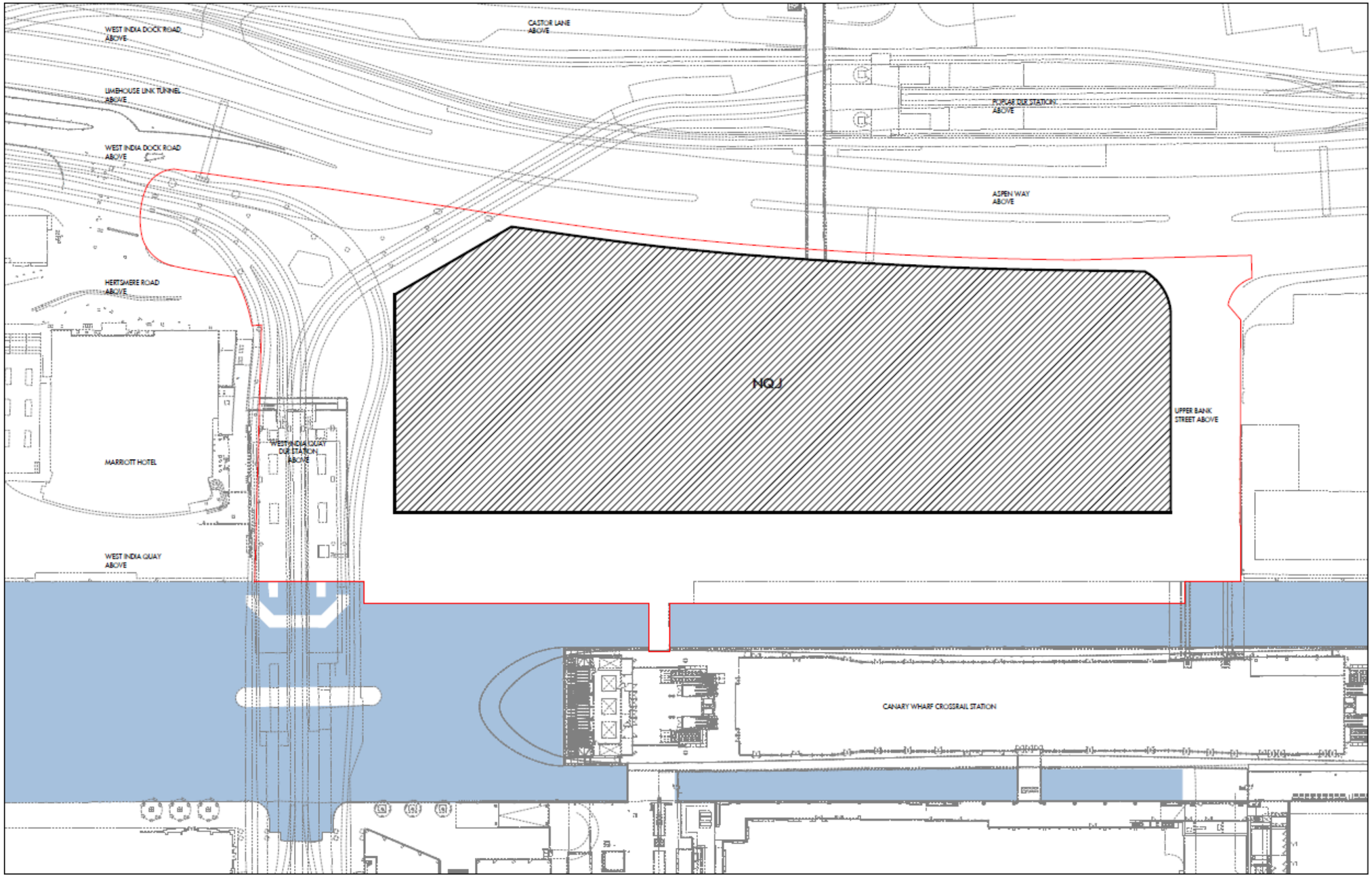


Figure 4.10 NQMP-PP-003 Basement Parameter Plan – Maximum Extent



PUBLIC REALM AND LANDSCAPING

Principles

4.66 Given the outline nature of the OPA the landscaping proposals for the Proposed Development have not been designed in detail. However, within the Control Documents a minimum amount of public open space of 0.4ha has been set for the Proposed Development. Parameter Plan NQMP-PP-005 Public Realm (Figure 4.12) also defines the areas and Development Zones specifically designated for public realm. The principles of the landscaping are defined and set out with the Design Guidelines, further detail on an indicative landscaping strategy based on the Indicative Scheme has also been developed (Figure 4.11).

4.67 Public spaces have been developed with the history of the Site and its surroundings in mind. The primary aim is to reflect the working nature of the Dock and the Quay. The horticulture of the landscaping has also been carefully considered with landscaped squares throughout the Site in all directions, east, west and Poplar Plaza. These areas of dense horticulture reflect the stacking of materials and goods brought from around the world during the operation of the Quay and as such the detailed planting will reflect the varied nature of plants from around the world all brought to the Site.

4.68 Landscaping is to be designed to allow access for emergency and servicing vehicles where necessary. These routes would be fully integrated with the landscape design and be allowed for by the careful placement of trees and street furniture.

4.69 The Design Guidelines present a framework for the landscaping proposals to be developed at RMA's with a focus on the design of the landscape enhancing the experience of moving through one continuous space. There should also be some level of differentiation between the footpath and the carriageway for those with visual impairments and the design of pedestrian and cycle route(s) should be integrated with the detailed landscape design.

4.70 All areas of the public and private landscape would be designed to maximise access through to all parts of the Proposed Development, its facilities and services for people who are residents, visitors and/or members of staff regardless of disability.

4.71 The indicative landscape has been designed to use a wide range of plants and tree species, encouraging biodiversity and using local and indigenous tree species where possible.

Public Spaces

4.72 The Site is surrounded by a series of very different edge conditions. These include a busy road to the north (Aspen Way), a dock to the south (North Dock), an elevated railway to the west (DLR) and a key access road to Canary Wharf Estate to the east (Upper Bank Street).

4.73 Beyond these are the areas of West India Quay, Canary Wharf and South Poplar. These areas already exist but interconnection between them is currently limited and incongruous.

4.74 The Proposed Development proposes a street (North Quay Way) which runs through the centre of the Site from east to west and seven new public spaces within the Site; these are Quay Square, Quayside, Dock Gardens, Garden Square, Poplar Plaza, The Delta and Aspen Gardens shown in Figure 4.11 and set out within the Design Guidelines Document of this OPA.

Areas of Landscaping

4.75 There are several specific public spaces within the Proposed Development, however, the landscape and public realm are designed to have a cohesive and unified appearance when experienced on the ground by the community and wider public. The key areas of landscaping as set out in the Design Guidelines are described below and shown in Figure 4.11:

- **Quay Square** is the main public space with active ground floor frontages overlooking the dock. The space provides an important connection between the quayside and Poplar Plaza, which creates a strong sequence of open spaces;
- **The Quayside** provides south facing water-side amenity that maximises exposure to the sun all year round. The space is located along the south of the Site, adjacent to Canary Wharf Station / Crossrail Place.
- **Dock Gardens and Garden Square** are two public areas connecting the Quayside to the north of the Site and east/west to North Quay Way, with Dock Gardens to the west of Quay Square and Garden Square to the east of Quay Square (If Zones NQ.A4 and NQ.A5 or NQ.D3 and NQ.D4 combine as a single building plot during detail design and during RMA stage, the Garden Square and/or Garden Dock respectively would not be provided);
- **The Delta** is a public realm area located within the north-west corner of the Site, the Delta is an area of open space located under the existing elevated DLR tracks at the western end of the Site. It provides connectivity between the edge of Aspen Way and Hertsmere Road and will form part of a key east-west cycle and pedestrian route;
- **Poplar Plaza** is a public space that is located in the centre of the Site connecting Canary Wharf with Poplar via the Aspen Way Footbridge and Quay Square; and
- **Aspen Way Gardens** are pockets of public realm located along the northern edge of the Site.

Figure 4.11 Public Spaces

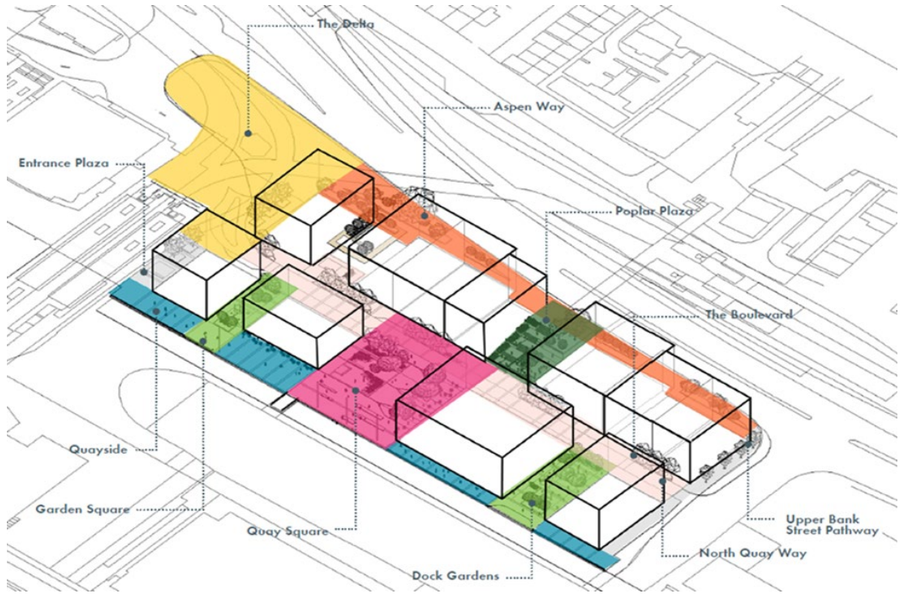
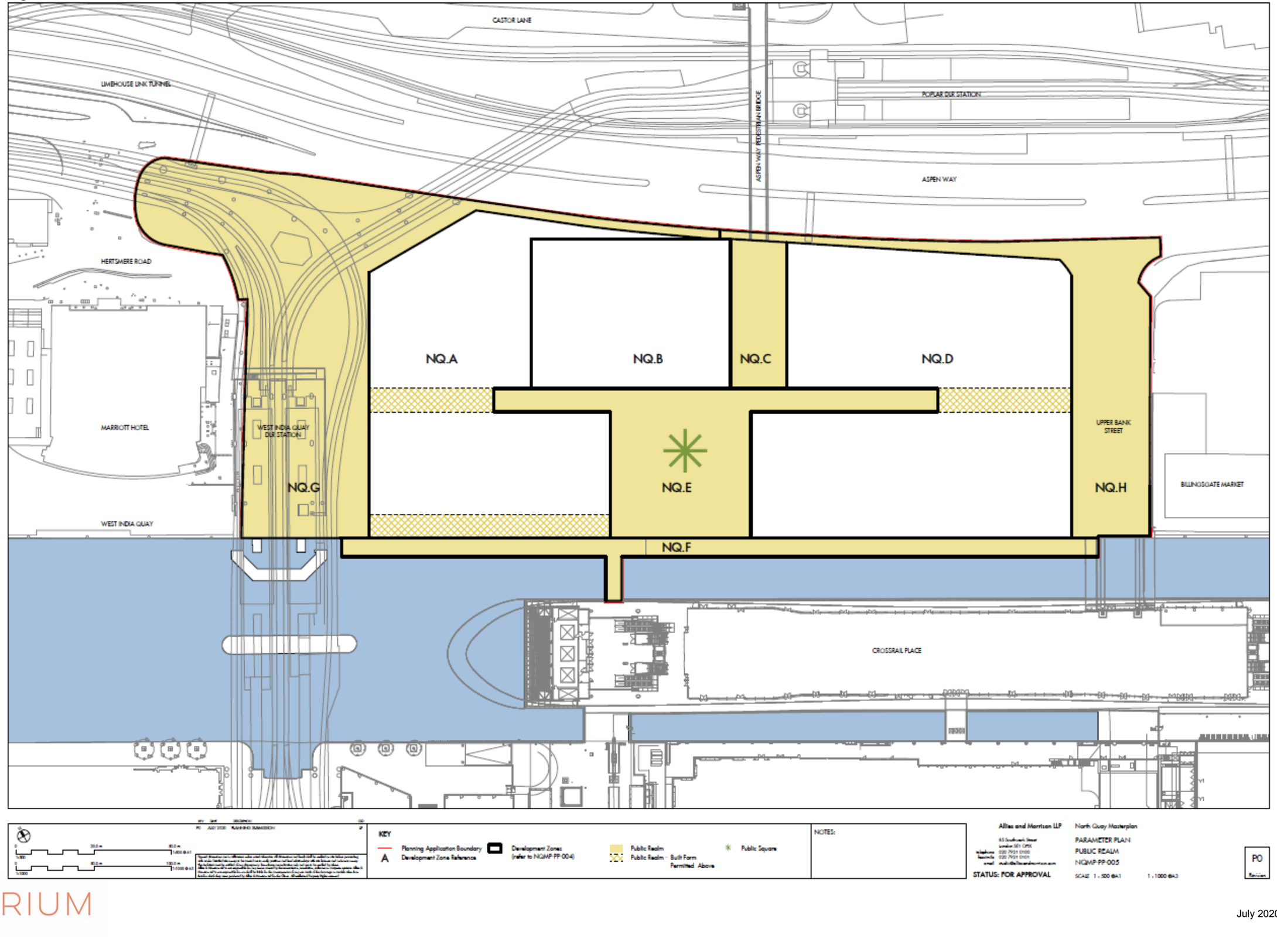


Figure 4.12 NQMP-PP-005 - Public Realm



INDICATIVE SCHEME

4.76 The Indicative Scheme is not a design template or submitted for approval; it represents one possible way the principles as defined in the above listed Control Documents could be interpreted/achieved and developed into a design, is shown in Figure 4.13 and Figure 4.14.

Figure 4.13 Indicative Scheme View from the North

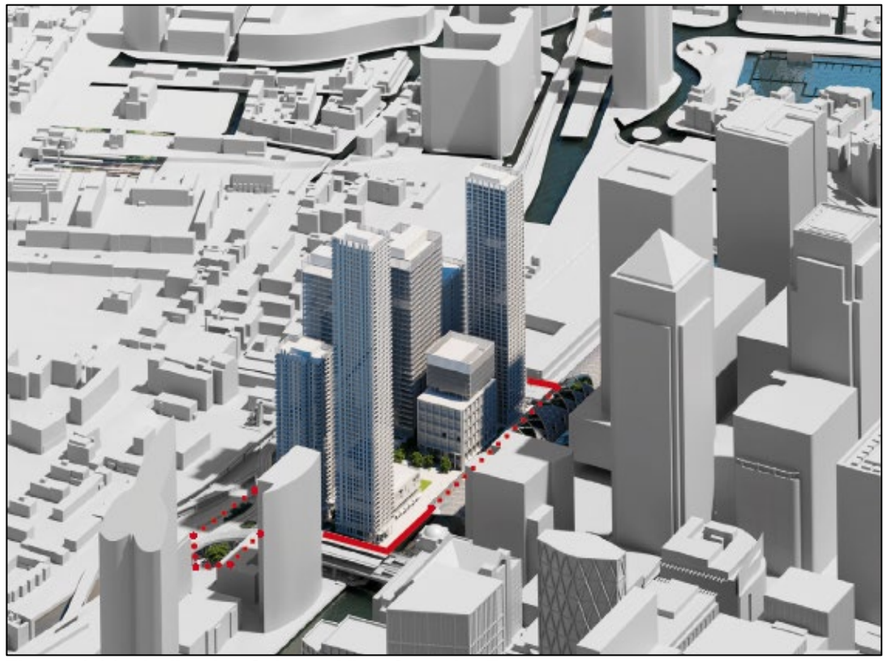
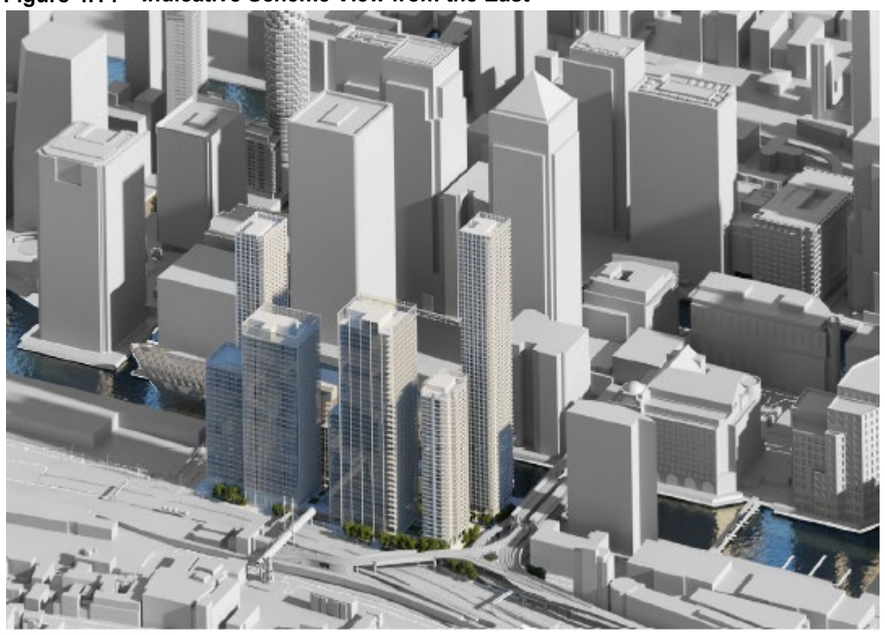


Figure 4.14 Indicative Scheme View from the East



Indicative Scheme - Amount of Development

4.77 The Indicative Scheme comprises of 7 mixed use buildings which includes Residential (C3), Retail (A1-A5), Business (B1), Hotel/Serviced Apartments (C1) and ancillary uses. The buildings would range between 6 and 65 storeys in height.

4.78 The amount of development per use class for the Indicative Scheme is provided within Table 4.5.

Table 4.7 Indicative Scheme Amount of Development

Land Use (Use Class)	Indicative Above Ground Floorspace GIA (m^2)	Indicative Below Ground Floorspace GIA (m^2)
Retail (A1-A5)	13,681	0
Community (D1)	0	0
Leisure (D2)	0	0
Residential (C3)	84,736	0
Co-Living (C4)	0	0
Business (B1)	174,653	0
Hotel/Serviced Apartments (C1)	44,081	0
Student Housing (Sui Generis)	0	0
Other Permitted (Sui Generis)	0	0
Ancillary	9,730	28,047
Total Available Floorspace (m^2)	**354,928**	

Tenure Mix, Residential Unit Numbers and Affordable Housing

4.79 The Indicative Scheme comprises 84,736 m^2 of residential floorspace and 702 residential units. Table 4.8 presents the Indicative Scheme unit mix. The Indicative Scheme unit mix follows the target unit mix set out in policy DH.2 – 'Affordable housing and housing mix' of the Local Plan. It also includes 35% of the habitable rooms in the affordable tenures, split 70:30 between Affordable/Social Rented and Intermediate.

Table 4.8 Indicative Scheme Unit Mix

Tenure	Studio	1 Bed	2 Bed	3 Bed	4 Bed	Total
Open Market	**30 (6%)**	**114 (23%)**	**248 (50%)**	**79 (16%)**	**25 (5%)**	**496 (100%)**
Intermediate	**-**	**9 (15%)**	**25 (40%)**	**19 (30%)**	**9 (15%)**	**62 (100%)**
Affordable/ Social Rented	**-**	**36 (25%)**	**43 (30%)**	**43 (30%)**	**22 (15%)**	**144 (100%)**
Total	**30**	**159**	**316**	**141**	**56**	**702**

As the affordable housing offer within the OPA is for 20% affordable housing (by habitable room), Table 4.9 presents a unit mix with the same overall number of units (702), but with a lower affordable housing provision. The affordable tenures remain split 70:30 between Affordable/Social Rented and Intermediate.

Table 4.9 Indicative Scheme 20% Affordable Housing Unit Mix

Tenure	Studio	1 Bed	2 Bed	3 Bed	4 Bed	Total
Open Market	35 (6%)	136 (23%)	295 (50%)	94 (16%)	30 (5%)	590 (100%)
Intermediate	-	5 (15%)	14 (40%)	10 (30%)	5 (15)%	34 (100%)
Affordable/ Social Rented	-	20 (25%)	23 (30%)	23 (30%)	12 (15%)	78 (100%)
Total	35	161	332	127	47	702

Indicative Scheme - Site Layout

4.80 The 7 buildings constitute NQ.A1, NQ.A4, NQ.A5, NQ.B1, NQ.D1, NQ.D3 and NQ.D4. The layout of the Indicative Scheme is shown in Figure 4.15, with the heights and massing shown in Figure 4.16 and Table 4.6.

Figure 4.15 Indicative Scheme Ground Floor Layout

Figure 4.16 Indicative Scheme Scale and Massing

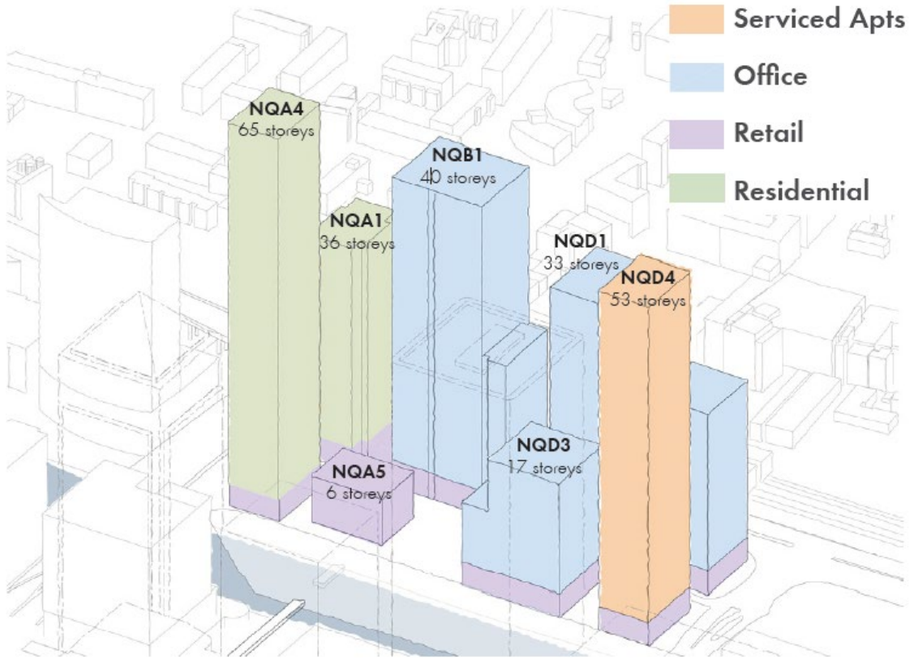


Table 4.10 Indicative Scheme Building Heights

Building	Indicative Building Height (m)	Indicative Building Storeys
NQ.A1	124.60	35
NQ.A4	220.60	65
NQ.A5	35.20	6
NQ.B1	168.25/89.15*	21/40*
NQ.D1/D2	140.60/104.95*	33/24*
NQ.D3	49.65/77.40*	11/17*
NQ.D4	182.20	53

**Two heights provided due to stepped architecture of the buildings.*

Indicative Scheme - Scale and Massing, Land Use Classes

4.81 The Indicative Scheme shows a balance of uses and floor areas that have been deemed commercially viable in the context of present day when the OPA is submitted.

Flexible Live / Stay Buildings

4.82 NQ.A1, NQ.A4 and NQ.D4 are the three flexible live/stay buildings on-site (Use Class C3/C1), two of these buildings being residential (NQ.A1 and NQ.A4) and one of these buildings being serviced apartments (NQ.D4), which will range from 35 to 65 storeys. There is a design code in place to ensure that there will be a minimum height of 60m difference between NQ.A1 and NQ.A4 if they are brought forward as live stay

buildings, as the buildings are directly adjacent to each other. The height adjacent to different use buildings (e.g. office) and all other Development Zones, will have a minimum height difference of 20m.

4.83 The maximum permissible floor plate of any live/stay building is 1,000m^2 GEA.

4.84 The minimum horizontal separation of residential buildings would be 18 m, excluding any projecting balconies.

Office Buildings

4.85 NQ.B1, NQ.D1 and NQ.D3 are the three office buildings of the Indicative Scheme and will range from 17 to 40 storeys. They will offer flexible floor plates to larger tenants or subdivided into areas for smaller tenants.

4.86 The height difference between adjacent buildings for any commercial building, including offices, will have a minimum height difference of 20m.

4.87 There are likely to be retail units at ground and mezzanine levels, with office activities located on floors above.

Small Building

4.88 Development Plot NQ.A5 is a small building for which will provide floor space for food, beverage and dining.

4.89 The massing and scale of the Small Building would be designed to relate to human scale and contrast to the larger buildings in the adjacent Development Zones, as set out within the Design Guidelines.

4.90 The design, detailing and massing will distinguish the Small Building as a more distinct 'pavilion' building within the larger context and scale of the Proposed Development.

Indicative Scheme – Appearance and Materiality

4.91 To integrate with the surrounding urban context, the Design Guidelines propose that future buildings draw upon the local character and history of the area to suggest a range of materials appropriate to the Proposed Development. As demonstrated in Figure 4.17, the Proposed Development will follow historic and proposed schemes with the use of high-quality materials to match the surrounding areas. The Design Guidelines proposes a continuation of this theme, using high quality materials within this range of colours to contribute to the sense of coherence, both within the Proposed Development and the wider area.

4.92 Buildings need to respect their particular context and setting with materials and detailing carefully considered to ensure an appropriate response. For example, if the adjacent public realm would benefit from reflected sunlight then this could be factored into the light reflectance values of façade materials – thereby providing an enhancement to the local environment. At the same time the potential for problematic glare to the space or a facing building would need to be taken into account during detailed design.

4.93 The Design Guidelines set the minimum percentage of active frontage at lower levels, reducing the amount of service entrances on certain frontages where an active, busy street is the goal.

4.94 The material treatment of buildings across the Site would correspond to the hierarchy of proposed streets, spaces and character areas. Therefore, facades along key public routes will be treated in a different manner, scale and detail to frontages to more intimate garden squares. The architectural proposals would be contemporary in character, using high quality materials and be clear in their resolution of base, middle and top sections.

Figure 4.17 Indicative Scheme Appearance and Materiality

Indicative Scheme – Basement

4.95 The Indicative Scheme proposes a shared basement across the Site.

4.96 The Indicative Scheme basement is typically 9m deep and is divided into 2 primary levels with some additional mezzanine space for cycle storage. In some areas, the second level is double height to accommodate the space required for refuse vehicles to lift/operate compactors.

4.97 The basement perimeter is defined by a continuous piled wall which is required to limit the ingress of ground water into the Site both during and after construction. A portion of the basement wall will be constructed behind the Grade I listed dock wall (Banana Wall). No modifications are proposed on the banana wall. Further details on the construction of the proposed basement is provided in **ES Volume 1, Chapter 5: Enabling and Construction Works.**

4.98 The following functions are supported by the shared basement:

- Large deliveries and collection;
- Secure cycle storage;
- Car parking;
- Waste storage and removal;
- Building and infrastructure plant;

- Estate management and storage facilities; and
- Retail storage/accommodation.

Indicative Scheme Landscaping

4.99 The details of the Indicative Scheme landscaping proposals are based on the key elements and design guidelines for the Proposed Development's landscaping and are set out below (shown in Figure 4.18).

North Quay Way

4.100 North Quay Way is a street which passes through the centre of the Site in an east-west orientation, providing vehicular and pedestrian access and connectivity. The street connects all of the Development Zones and the key open spaces together from the centre of the Site.

4.101 North Quay Way connects all of the buildings together as well as the key open spaces. It is animated by a variety of ground and upper ground floor uses; including bars, restaurants, retail, office reception lobbies and could include residential entry lobbies and communal spaces.

4.102 North Quay Way will have wide footpaths with tree planting and rain gardens located along the newly proposed street that will be utilised as sustainable urban drainage system (SUDs).

Aspen Way Gardens

4.103 Aspen Way is an existing multi-lane busy primary road forming the northern edge of the Site. Aspen Way Gardens runs along side the northern boundary of the Site that includes a pedestrian and cycle route in the north of the Site connecting Aspen Way to Hertsmere Road and Upper Bank Street.

Quay Square

4.104 Quay Square is the main formal open space and sits centrally in the Site between NQ.A4 and NQ.D3. The square will be surrounded by active ground floor frontages and associated spill out into the public realm. The proposals for Quay Square include:

- A flexible plaza for community gatherings, outdoor cinema, arts and crafts stalls, performances and weekend markets;
- Flexible open lawn spaces for children to play; and
- High quality hard landscape materials should reinforce the importance of this space.

4.105 Open lawns would provide green space for relaxation, picnics, informal gathering as well as community events and celebrations. Planting within Quay Square would provide year-round interest with a mix of evergreen species, emerging bulbs, shrubs and perennial planting.

4.106 The trees proposed within Quay Square should have a high canopy and clear stem to allow views to the water, as well as maintaining the visual connection between Poplar Plaza and Crossrail Place.

4.107 The Design Guidelines will ensure that the square will not be any narrower than 45m from the east building to the west building face.

4.108 The building lines across the east and west edges of Quay Square will be parallel to each other. This will define the area as a formal rectangular space. It will also help unite Quay Square and The Quayside as an L-shaped public space used for large scale events.

4.109 A single unified area of no less than 0.4 ha of open public space would be provided across Quay Square and The Quayside.

The Quayside

4.110 The Quayside is located along the southern edge of the Site, located adjacent to the water's edge and across from the existing Crossrail Place building.

4.111 The Quayside is built over part of the existing dock water using a marine deck with the water underneath, consistent with the existing areas adjacent, whilst maintaining the required navigable channel for water vehicles.

4.112 The northern edge of The Quayside is formed by a series of buildings in the southern part of the Proposed Development. Through the control of the Parameter Plans the space will have a varied width. The southern edge of The Quayside as an urban space is not just defined by the edge of the water but also by the built form of Crossrail Place and the Canary Wharf buildings to the south.

4.113 The Design Guidelines will ensure that the Quayside will have a minimum width of 9m from building face to water edge. This may include external seating areas and street furniture.

Dock Gardens

4.114 Dock gardens will be a garden space located in the south-east of the Site, between zones NQ.D3 and NQ.D4 and adjacent to The Quayside.

4.115 The scale of the buildings in Development Zone NQ.D that frame the east and west sides of Dock Square would vary but would form a consistent enclosure to the space. Building lines across the eastern and western edges would be parallel, defining Dock Square as a formal rectangular space.

4.116 Dock Gardens will include an evergreen planting strategy so as to soften the space throughout the year and provide a structure for the various activities taking place in these spaces. These elements could include outdoor workstations, table tennis, formal and informal children's play elements seating areas and outdoor gym equipment.

4.117 Tree planting should provide seasonal interest, have a light canopy to allow daylight into the spaces below and smaller multi- stem trees to provide an intimate human scale to the space.

4.118 The Design Guidelines state that Dock Square should not be any narrower than 20m from east building face to west building face.

Garden Square

4.119 Garden Square is a small garden space located in the south-west of the Site, between Development Zones NQ.A4 and NQ.A5 and adjacent to The Quayside.

4.120 This area would be an urban linear square with very different scales of buildings framing its long sides.

4.121 Landscaping for Garden Square mirrors the landscaping for Dock Gardens and would include an evergreen planting strategy so as to soften the space throughout the year and provide a structure for the various activities taking place in these spaces. These elements could include, outdoor workstations, table tennis, formal and informal children's play elements seating areas and outdoor gym equipment.

4.122 Tree planting should provide seasonal interest, have a light canopy to allow daylight into the spaces below and smaller multi- stem trees to provide an intimate human scale to the space.

4.123 The scale of the buildings in Development Zone NQ.A that frame the east and west sides would vary significantly but would form a consistent enclosure to the space.

4.124 The Design Guidelines ensure that Garden Square would be a minimum of 12m wide.

Poplar Plaza

4.125 Poplar Plaza occupies Development Plot NQ.C1 and is a formal open space linking the Site with Aspen Way Footbridge, Poplar DLR station and the Poplar residential community beyond. The Plaza is edged by Development Zones NQ.B and NQ.D and integrates with North Quay Way along its south edge and meets Aspen Way and Aspen Way Footbridge to the north.

4.126 The landscaping for Poplar Plaza will include attractive planting that provides seasonal interests.

4.127 Poplar Plaza would be an open space framed with large buildings. The Design Guidelines have set out that Poplar Plaza would not be any narrower than 20m from east building face to west building face.

4.128 The scale of the buildings in Development Zone NQ.B and NQ.D that frame the east and west sides of Poplar Plaza would vary but would form a consistent enclosure to the space.

The Delta

4.129 The Delta is an area of open space located under the existing elevated DLR tracks at the north western end of the Site. The Delta is located to the south of the West India Dock Road/Limehouse Link tunnel approach and to the north of the proposed connection to North Quay Way. It provides connectivity between the edge of Aspen Way and Hertsmere Road and would form part of a key east-west cycle and pedestrian route.

4.130 It would be developed as a collection of spaces that enable the east-west cycle route, pedestrian connectivity. An informal space for youth interaction has been allocated within the Delta. This space will include skate and urban games elements.

4.131 The Delta will include a planted wall along the Aspen Way (as described in the Design Guidelines) to encourage biodiversity as well as reducing noise pollution and which may also help to improve air quality. The landscaping would include shade tolerant, robust and low maintenance planting that functions well in removing pollutants and include creative lighting to improve surveillance.

Entrance Plaza

4.132 The Entrance Plaza is an extension to the Delta located to the west of NQ.A4. This space would be used by pedestrians entering the Site from West India Quay. Future proposals for this space should provide informal children's play elements and seating areas; strong evergreen planting to soften the space throughout the year; tree planting would provide seasonal interest, have a light canopy to allow daylight into the spaces below; open lawn spaces for people to linger; and spill out areas for retail and commercial units on NQ.A4.

Communal Amenity Space

4.133 The Indicative Scheme proposes 702 residential units and therefore the minimum provision of communal residential amenity space required is 742m^2. The Indicative Scheme provides 838m^2 of communal residential amenity space which is located within NQ.A1 and is split between Level 01 and Level 02 to provide both internal and external space (Figure 4.19):

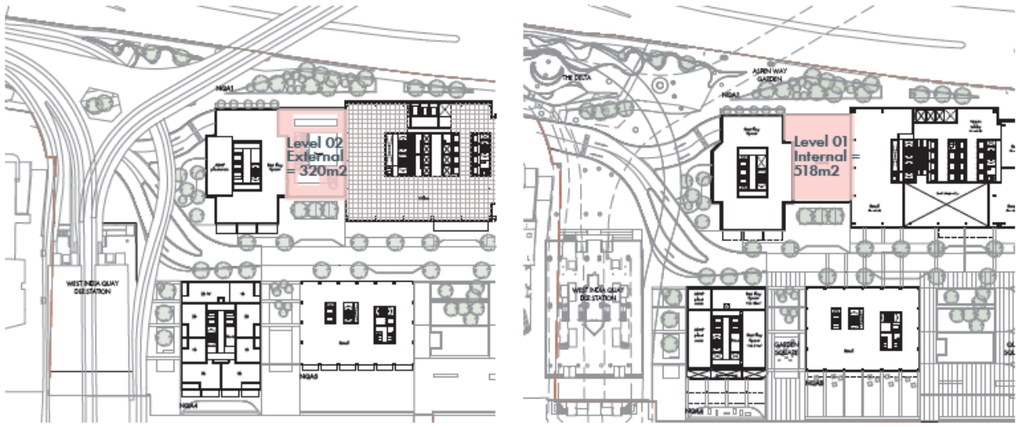
- NQ.A1 Level 1 – 518 m^2 of internal communal amenity space; and
- NQ.A1 Level 2 – 320 m^2 of external semi-private courtyard space for future residents.

Upper Bank Street

4.134 Upper Bank Street is located in the eastern proportion of the Site. The eastern edge at NQ.D4 will be enhanced with proposals for green walls, artwork and a play wall.

Figure 4.18 Indicative Scheme Landscaping Plan

Figure 4.19 Communal Amenity Space



Children's Playspace

4.135 The calculations for child playspace for the residential elements within the Indicative Scheme are based on the LBTH's policy requirements for 10m^2 play space per child. The play requirements for the Indicative Scheme is outlined below.

4.136 Figure 4.20 and Table 4.7 below illustrates how on-site play provision is achieved within the Indicative Scheme and can be categories as follows:

- Under 5 comprises of external play areas and internal play areas totaling 1,479m^2;
- 5-11 comprises of external and internal play areas at NQ.A1 and NQ.A4 totaling 1,224m^2 and
- 12-18 comprises of external play within the Delta and internal play at NQ.A1 totaling 1,162m^2.

4.137 Within the Indicative Scheme, Building NQ.A1 is designed to accommodate internal play spaces at Level 1 for 5-11 year olds and 12-18 year olds. The play spaces include quiet areas such as a library and reading stage with other more active areas including a trampoline, sand pit, balls pit and slide, table tennis and climbing wall. Adjacent to the playspace are a series of internal communal amenity areas for the residents which include a residents' lounge, a multi-purpose room which could be used for exercise classes, a community meeting/events space and furniture storage areas.

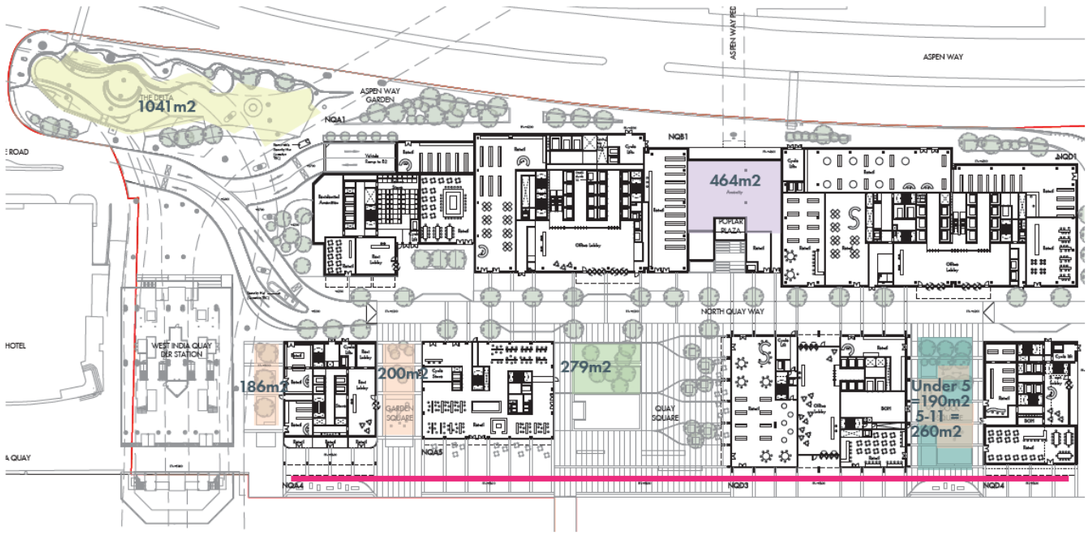
4.138 Within the Indicative Scheme at Level 2, Building NQ.A1 accommodates internal play spaces for under 5 children. Areas include workshop, arts and crafts room and soft play. Its connectivity to the large external garden/terrace creates a opportunity for full interaction between indoor and outdoor play activities.

4.139 Within the Indicative Scheme, Building NQ.A4 provides a range of internal play space activities for residents at Level 1 including a library, arts and crafts room and soft play areas. The amenity/ playspaces overlook Garden Square which provides visual amenity and connection with the North Dock.

Table 4.11 Play Provision

Age Profile	Indicative Scheme Requirement (m2)	Indicative Scheme Proposed Provision	Typology
Under 5s	1,470	1,479	Doorstep Playable Space
5-11 Years	1,200	1,224	Local Playable Space
12-18 Years	1,160	1,162	Neighbourhood Playable Space
All Ages		590	Playable landscape
Total	**3,830**	**4,455**	

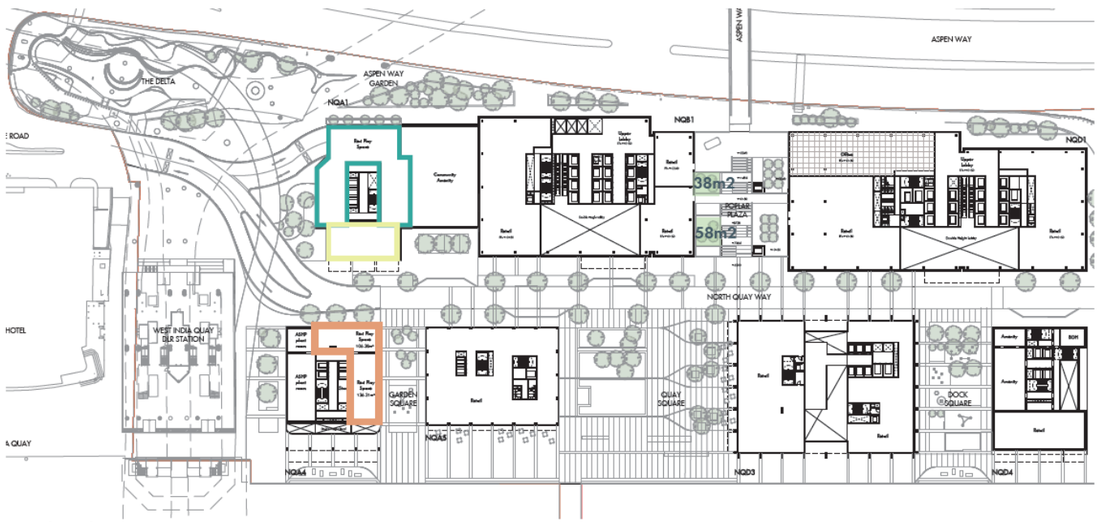
Figure 4.20 Location of Child Playspace and Amenity Space



Ground Floor Play Diagram

GROUND FLOOR PLAY PROVISION

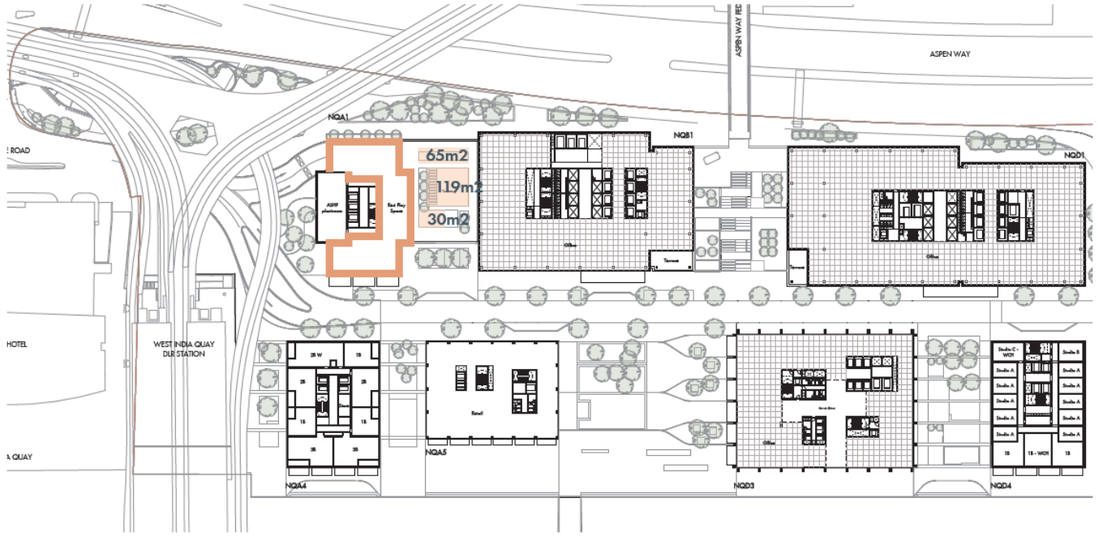
ID	Category	Scheme Provision m2
	Under 5 Yrs (External)	576
	5 - 11 Yrs (External)	260
	5- 11 Yrs (Internal MUGA)	464
	12+ Delta Skate (External)	1,041
	Quayside Play (All Ages external)	215
	All Ages (All Ages external)	279
	TOTAL	2,835



Level 01 Play Diagram

LEVEL 01 PLAY PROVISION

ID	Category	Scheme Provision m2
	Under 5 Yrs (Internal)	242
	5 - 11 Yrs (Internal)	500
	12+ Yrs (Internal)	121
	All Ages (external)	96
	TOTAL	1,303



Level 02 Play Diagram

LEVEL 2 PLAY PROVISION

ID	Category	Scheme Provision m2
	Under 5 Yrs (External)	214
	Under 5 Yrs (Internal)	447
	TOTAL	661

Indicative Scheme Access, Parking and Servicing

Access

4.140 Access to all buildings in the Indicative Scheme is off a street or well-defined pedestrian route. The Design Guidelines make suggestions for the locations of major entrances for the Proposed Development. The Indicative Scheme aims to keep main entrances lining main roads for ease of drop off, rather than pedestrianised spaces. Points of access also encourage people movement through different times of the day and night. By locating them with this in mind the aim is to create a safe and animated public realm.

4.141 The key access provisions for the Indicative Scheme include:

- Drop off/pick up points for taxis;
- Accessible on-street visitor car-parking spaces (Blue Badge) in close proximity to building entrances;
- Logical and compact layout of facilities would facilitate wayfinding for people who are blind or partially sighted;
- Safe and inclusive pedestrian routes;
- Routes will be step-free, level or gently sloping;
- Accessible cycle parking provided on plot and street;
- Clearly distinguishable entrances to facilitate orientation and wayfinding; and will have automatic or easily openable doorways; and
- A fire-fighting lift would be provided in each core which will assist in the evacuation of disabled people who cannot use stairs.

Car Parking

4.142 The Proposed Development will be a car free development with the exception of a limited number of car drop off spaces will be provided at street level across the Site and accessible parking spaces will be provided within the shared basement at lower basement level.

4.143 Accessible car parking will be provided for 3% of residential dwellings at basement level and some nominal blue badge spaces will be provided at ground level for the commercial and retail land uses.

4.144 The shared vehicular ramp to the basement provides access from The Delta near Hertsmere Road.

Cycle Hire, Cycle Parking and Storage Facilities

4.145 Provision is made within the proposed basement for secure cycle storage facilities.

4.146 Storage facilities for commercial and residential buildings would be within their demise (or directly adjacent) with access and layouts determined at detailed design stage.

4.147 For retail staff, storage has been identified in common basement areas as these facilities are shared between buildings. Cycle storage is would be provided through a combination of single and double storey stacking systems.

4.148 Access from street level is anticipated to be via secure ramped access routes, cycle lifts or stairs with gutter rails located within adjacent buildings.

4.149 The Proposed Development would provide a minimum of 340 short stay cycle parking spaces throughout the Site and 3,800 long stay cycle parking, in accordance with the Draft London Plan Standards.

4.150 Shower and locker facilities for residents, employees and visitors will be provided, and as such, around 14% of trips are forecast to be made to the site by cycle or on foot.

4.151 The Indicative Scheme will provide cycle hire stations which will be located within the Delta.

Deliveries and Servicing

4.152 The Proposed Development will have two main services infrastructure routes crossing the Site from west to east to allow for phasing and resilience of utilities and site services installations.

4.153 Route 1: At the north of Site allows connection to the main utility services in Aspen Way (water, drainage, telecoms etc). The services would be buried below ground under the soft and hard landscape including the combined cycle ways and pedestrian foot paths.

4.154 Route 2: Running through the centre of the Site to pick up all the southern buildings adjacent to the dock front. This would be in the form of a road box above the basement.

4.155 The central road route will be the designated route for any future heat network installation. Space will be allowed for the future installation of this heat network. At the end of the final phase of the development, the Site infrastructure network will form a loop around the Proposed Development.

4.156 Delivery and servicing access will be provided within the basement however, movements would be limited to a specific loading and goods handling area.

4.157 The loading area enables functions such as waste collection, plant replacement and large deliveries to be managed discreetly below ground thus maximising open space and amenity at street level as well as reducing visual clutter.

4.158 The loading bay would be supervised and deliveries managed to avoid congestion.

Indicative Scheme Wind Mitigation

4.159 Mitigation measures have been recommended for the Indicative Scheme to improve the wind microclimate within and surrounding the Site and are presented in **ES Volume 1, Chapter 12 Wind Microclimate**. The following measures have been tested and recommended for the Indicative Scheme:

- Indicative landscaping at certain terrace locations;
- 1.5m high solid balustrade at certain balcony locations;
- Some entrances recessed by 1.5m within the façade;
- Potential mitigation measures have been included at certain off-site entrances on Crossrail Place in the form of 50% porous screens 1.5m wide and 2m high on either side of the entrances;
- Inclusion of a porous sculpture 4m high with a 2m high 50% porous screens (leaving 2m clearance from ground level) at the south-east of the Site along the Quayside;
- 1.5m high solid balustrade included at certain terrace locations;
- The solid canopies at the south-east of the Site have been extended along the western, southern and eastern façade and made 3m wide, at 3m from the ground;

- One additional 8m high deciduous tree;
- Three 3-4m high deciduous trees in 0.5m high cubical planters have been included to the west of the south west corner of NQ.D4;
- Two 4m wide and 2m high 30% porous screens included at the south-east of the Site at 3m from the façades; and
- Eight 8m high proposed trees at the west of the Site have been replaced with 12m high evergreen trees.

OTHER ENVIRONMENTAL CONSIDERATIONS

4.160 The following section presented further environmental considerations of the Proposed Development, and where relevant linked to the Indicative Scheme as presented above.

Flood Risk and Drainage

4.161 The Site is partially located within both Flood Zone 2 (medium risk) and Flood Zone 3 (high risk), defined as having a low risk of flooding from rivers and the sea. The principal flood risk to the Site is therefore from surface water flooding that will be mitigated through the implementation of the proposed surface water drainage strategy as described below with further details provided in the Flood Risk Assessment (FRA) which is a stand-alone document submitted as part of the OPA. In addition, the proposed promenade levels along the south of the Site are such that the Proposed Development is adequately protected from fluvial/tidal flood risk. On the north side of the Proposed Development, the proposed building edge and landscaping would be raised to provide adequate protection in the event of a breach in the Thames Tidal Defenses.

4.162 The Proposed Development will convey surface and foul water away from the Site in an appropriate manner. The majority of the surface water would be discharged to the docks. This is the most sustainable solution for the Site and is generally preferred by the EA and the Canal & River Trust (CRT). It would be necessary to provide attenuation for limited areas which cannot be discharged to the docks because of either hydraulic or water quality constraints. This runoff would discharge to the public sewer in Aspen Way at a limited rate agreed with Thames Water Utilities Limited (TWUL) during detailed design stage.

4.163 The remainder of the surface water drainage for buildings and hard landscaping to the north of the Site would outfall via gravity to a single connection to the combined 1500mm North Quay Sewer in Aspen Way. It is proposed that the connection to the combined sewer in Aspen Way is a single connection for both the surface water and foul water discharge from the Site.

4.164 The surface water system will be designed in order to not affect the water quality of the receiving watercourse or sewers. Catch-pit manholes will be installed upstream and downstream of the attenuation tanks providing additional treatment for the surface water drained from the impermeable areas. The surface water drainage systems will be gravity systems apart from the basement loading bay which will be pumped.

4.165 Foul water drainage connections will be provided to each building and will all fall via gravity to the site-wide drainage network which would connect via a terminating outlet into the combined Thames Water combined trunk sewer in Aspen Way. The foul water drainage system would be a gravity system apart from the basement which will be pumped.

Waste

4.166 An Site Waste Management Plan has been developed for the Proposed Development to ensure that all waste produced across the Site is managed in an efficient and sustainable manner. The facilities provided would be in accordance with Policy D.MW3 of the LBTH's Local Plan, focusing on waste management in accordance with the established waste hierarchy. A detailed SWMP would be developed for each building or development zone at the RMA stage.

4.167 All residential waste on the Site would be collected by the LBTH waste collection operatives and as such the Proposed Development has been designed to allow for the LBTH storage solution and collection vehicles to be used for all waste and recycling. This includes the use of "Bulk storage" such as portable skip compactors to minimise the space taken by waste and maximise the efficiency of collection operations. The volume of waste storage provided would be in accordance with the guidelines given in Appendix 4 of the LBTH's Local Plan.

4.168 Commercial waste (which includes that generated by serviced apartments) would be managing by the Site owner. The Applicant has a long and well established reputation for employing sustainable waste management practices and these principles will be critical to the success of the Proposed Development.

4.169 There would be several different commercial land uses across the Site generating different quantities of different waste streams and therefore the waste strategy established at the outline stage must retain a suitable level of flexibility whilst demonstrating that appropriate storage and collection facilities have been secured.

4.170 Commercial waste storage volume requirements have been estimated using "British Standard BS5906 – Waste Management in Buildings – Code of Practice". The focus of the commercial waste strategy is to maximise opportunities for re-use and recycling of all waste products. The exact percentages of different waste types would vary dependent on the eventual tenants but the principles of segregation and treatment of different recyclables is presented below.

4.171 The strategy allows for the separated management and recycling of:

- Dry mixed recyclables;
- Cardboard;
- Organic Food Waste;
- Glass; and
- Food oil.

4.172 The strategy is flexible and the waste management spaces are designed to allow the Applicant to separate and recycle other different materials and to integrate new waste management technologies if these provide a more sustainable outcome.

Energy and CO2

4.173 The Proposed Development responds to the Mayor's Energy Strategy as stated in The London Plan. The design team has approached the design of the Indicative Scheme in order to reduce the energy demands in the following way:

- A high-performance building fabric (Be Lean):

  - Excellent U-Values and low g-values;
  - Low air-permeability;
  - Low thermal bridging;
  - Façade performance criteria which maximises daylight whilst limiting solar gains in summer;
  - Optimised ratio of solid to glass on facades appropriate for each building type;
  - Appropriate external shading to suit each building type.
- Energy efficient services such as (Be Lean):
  - Heat recovery and demand driven ventilation on fresh air supplies;
  - Night cooling from fresh air supplies in commercial building;
  - Energy efficient lighting with intelligent controls;
  - Mixed mode ventilation where appropriate and feasible;
  - Energy saving controls.
- Energy efficient sources (Be Clean):
  - There are no existing heat networks in the immediate vicinity that could be viably connected to the Site;
  - A distributed heat pump energy centre approach rather than a single energy centre is proposed, as the Indicative Scheme will have 4 phases and will consists of predominately commercial buildings;
  - Commercial building cooling heat rejection will be used as a secondary heat source for the residential buildings in conjunction with local ambient-loop heat pumps;
  - Thermal storage will be included in each heat network for optimising system performance and balancing surplus heating and cooling energy production;
  - The heat networks will be designed with provision for future connections to a suitable low carbon heat network, if one becomes available in the local vicinity of the site.
- Renewable energy technologies being considered including (Be Green):
  - Ambient loop heat pump systems for residential building heating, hot water, and cooling;
  - 4-pipe multifunction ground and air source heat pumps for retail and commercial building simultaneous heating, cooling, and hot water preheat;
  - Water cooled high temperature heat pumps and CO_2 air source heat pumps for commercial hot water generation;
  - Photovoltaic panels above suitable roof areas that are not intended for occupant access or heat rejection plant;
  - Heat recovery from building foul waste;
  - Monitoring and reporting on Energy Performance; and
  - Extensive metering and energy monitoring will be included within each building network and site wide secondary heat connections to enable system performance optimisation and accurate billing.

4.174 Feasible options for reducing further the energy demands of the Proposed Development through other renewable energy solutions and innovative technologies have been explored, and the results of this analysis is presented within the Energy Statement report which forms a stand-alone document submitted with the OPA.

4.175 The Proposed Development would include life-safety emergency generators, which would operate only under emergency situations and for routine testing. The technical details of the generators, including their locations, will be submitted to the LBTH as part of any RMA for the Proposed Development.

4.176 Emerging new technologies will be investigated during each RMA as relevant for each phase as they are submitted to take account of technology development at the time of each submission.

Potable Water

4.177 A potable water network will be installed across the Site connecting to the exiting water mains in Aspen Way. The network will be phased with two distribution routes running east to west at the north and centre of the Site. Potable water demand of the Proposed Development when complete and operational is expected to be 25.75 l/s based on the Indicative Scheme.

4.178 Discussions will be undertaken with TWUL regarding the requirements for the Site with reference to the TWUL mains water capacity study undertaken in 2019 for the wider Isle of Dogs area.

4.179 Rainwater collection and potentially condensate water recovery will be considered in each Reserved Matters Application for the office buildings with large roof areas and cooling loads. For the Indicative Scheme space has been allowed within the basement plantrooms for required storage tanks.

4.180 The potable water networks will include connections to each of the buildings within each phase. Where fire supplies are required to the buildings, these will be provided from the TWUL main.

Foul Water Drainage

4.181 Foul water drainage connections will be provided to each building that comes forward and will all fall via gravity to a site-wide drainage network which will connect via a terminating outlet into the combined Thames Water combined trunk sewer in Aspen way.

4.182 The connections will be phased up to 2029 and the first phase will be at the west of the Site. The connecting manhole in Aspen Way will be located to the west side of the Proposed Development. The foul water drainage system will be a gravity system apart from the basement which will be pumped via sumps.

4.183 The estimated peak foul discharges from the Proposed Development based on the Indicative Scheme is 64.32 l/s which will be discharged into the Aspen Way Truck Sewer.

Ecological Enhancements

4.184 Across the Site, a number of proposed measures and described in the Design Guidelines, DAS and Indicative Landscaping proposals, would be implemented to increase ecological value and comprise:

- Pollinating plant species;
- Street trees to improve air quality and resilience to climate change;
- Biodiverse roofs;
- Biodiverse lawns with species rich native herbs;
- Rain gardens/suds;

- Green walls/trellises with climbers and known pollinator species;
- Intensive podium planting with pollinator species and colourful/scented plants/used for culinary purposes;
- Swift, house sparrow, black redstart, peregrin and generalist bird boxes across the Site;
- Bat boxes;
- Fish terraces;
- New bird nesting platforms on the water;
- Loggeries for stag beetles;
- Insect hotels; and
- Sandy piles for nesting species such as solitary bees.

4.185 The Indicative landscape proposals significantly increase the green spaces across the Site compared with the existing site condition, providing increased opportunities for urban wildlife to flourish. There are a variety of habitats proposed on-site including semi-natural vegetation, flower rich perennial planting, intensive and extensive green roofs, rain gardens, lawns and a number of tree species as shown in the Indicative Scheme landscaping proposals (Figures 4.21 – 4.23).

4.186 The urban green factor, target score in the Draft New London Plan for the Site is 0.3, calculated using the urban green factor table and method below (Figure 4.18). Urban green factor: (Factor A x Area) + (Factor B x Area) + (Factor C x Area) etc. Divided by Total Site Area. The design team has designed an Indicative Scheme which enhances and increases green spaces where possible along with providing a range of ecological enhancement measures. The urban greening factor achieved by the Indicative Scheme is 0.22.

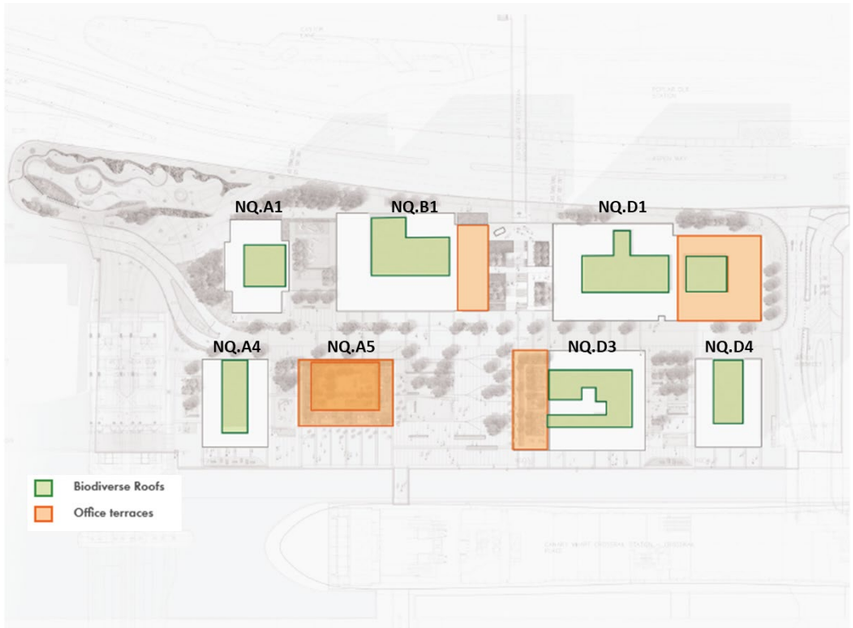
4.187 The Indicative Scheme also has a series of non-accessible biodiverse roofs at NQ.B1, NQ.D1, NQ.A5 and NQ.D3 providing valuable habitat for insects and wildlife, further improving the ecological value of the Proposed Development (Figure 4.22).

4.188 As part of the Indicative Scheme office building roof terraces are proposed at NQ.D3 and NQ.D1, providing amenity space for commercial users and office workers. The roof on NQ.A5, the retail pavilion would be a publicly accessible space.

4.189 The varied habitats within the Proposed Development would enhance biodiversity, encourage pollinators and native birds and wildlife to thrive on-site, as well as contributing to the character of the different spaces. Final planting selection would be part of the detailed design process through RMAs. The detailed planting design would not only focus on creating an attractive composition throughout each season but also enhance biodiversity. Maintainability and resilient to climate change would also be an important consideration in plant species selection and ecological considerations at detailed design and RMA stages.

Figure 4.21 Urban Greening Factor Indicative Scheme

Figure 4.22 Biodiverse Roof Strategy



Climate Change, Resilience and Greenhouse Gas Emissions

4.190 Key guidance and principles on climate change mitigation and EIA identify climate change as one of the defining environmental policy drivers of the future, and that action to address greenhouse gas (GHG) emissions is essential.

4.191 The principles are based on the following considerations:

- All projects create greenhouse gas emissions that contribute to climate change;
- Climate change has the potential to lead to significant environmental effects; and
- There is a carbon budget that defines a level of dangerous climate changes whereby any greenhouse gas emissions within that budget can be considered as significant.

4.192 As a result, the Institute of Environmental Management and Assessment recommend that all greenhouse gas emissions, including any residual emissions following adoption of any mitigation measures, are to be determined as significant.

4.193 A GHG Assessment was therefore carried out (**ES Volume 1, Chapter 10: Greenhouse Gas Emissions**), the purpose of which was to quantify the anticipated GHG emissions and contextualise the Proposed Development's contribution to an existing carbon budget. Based on the reasonable worst assessment undertaken (outlined within **ES Volume 1, Chapter 10: Greenhouse Gas Emissions**), the contribution of emissions in the context of the budget are deemed to be a small component (0.096% of emissions from within the GLA/London) of the regional GHG emissions. With the adoption of mitigation measures, as well as continuing decarbonisation of the energy network, it is anticipated that emissions will be reduced over time.

4.194 The total estimate of greenhouse gas emissions for the Proposed Development is 24,201 tonnes of carbon dioxide equivalent annually. To reduce these emissions, over the course of the ongoing detailed design, the following principles will be considered:

- Reducing GHG emissions during the construction phase would include consideration of minimising the use of materials as well as the procurement of sustainable materials, with consideration of the embedded carbon footprint of the material from the extraction of the raw materials, the production of the final construction products and the transport of products between the factory and Proposed Development;
- The Applicant would develop and implement a Construction Environmental Management Plan (CEMP) through which mitigation and compliance with the GLAs 'Sustainable Design and Construction Supplementary Planning Guidance (SPG)[3]' will be managed. The CEMP will detail control measures and activities to be undertaken to minimise environmental effects, including matters regarding waste management, and energy and water usage;
- A Travel Plan will be developed for the Proposed Development, in order to minimise car use and facilitate the sustainable movement of residents, staff, visitors and goods to and from the Proposed Development;
- There will be pedestrian and cycle access to the Proposed Development, including cycle parking; and
- Measures would be adopted to reduce energy consumption and are set out within the Energy Strategy submitted as part of the OPA and summarized in the section 'Energy and CO_2' below.

4.195 In addition to all of these measures the resilience of the Proposed Development to climate change has been considered throughout other aspects of the Proposed Development as well. Maintainability and resilience to climate change would be an important consideration in plant species selection and ecological considerations at detailed design and has been taken into account in the indicative landscaping proposals. Flood risk and drainage measures such as the proposed promenade levels along the south of the Site and the proposed surface water drainage strategy have taken into account climate change modelling and potential increases in rainfall and storm events etc. thereby inherently factoring in climate change resilience.

[3] *Greater London Authority. 2014. Sustainable Design and Construction Supplementary Planning Guidance. GLA.*

Figure 4.23 Ecological Enhancements

Diagram showing ecology strategy for the Indicative Scheme

- Biodiverse lawns with species rich native herbs, tall fringes
- Rain gardens/suds, species to be agreed with ecologist
- Green walls/ trellises with climbers & pollinator species
- Intensive podium planting - 10 pollinator sp. Colourful/scented
- Swift boxes on east facing elevations to ecologists advice
- House sparrow boxes provided as terraces to ecologists advice
- Shrub and herbaceous beds containing at min 10 pollinator species
- Street trees - to improve air quality and resilient to climate change
- Multi- stem trees - refer to tree typologies for species list
- Black redstart boxes provided to ecologists advice
- Generalist bird boxes provided to ecologists advice
- Peregrin boxes provided on buildings to ecologists advice
- Bat Boxes to ecologists advice.
- Loggeries for stag beetles
- Insect hotels
- Sandy piles for ground nesting species such as solitary bees
- Biodiverse roofs (area and detail to be agreed with ecologist). Locations TBC with architects and engineers
- Fish terraces overhanging habitats, details to be agreed with ecologist