

9

CONCLUSION



When Allies and Morrison began work on a new masterplan for North Quay in 2019, they found a number of earlier ideas from the previous 2007 and 2017 detailed planning applications with which they could sympathise and various moments of coincidence with their own response to the existing context and the constraints and opportunities that the Site provides.

It was clear from the beginning that a flexible urban framework, prescribed through an OPA and LBC would offer the best way forward for the Site. The Masterplan that has been described in this document is not revolutionary as such, but has rather evolved from consideration of the best of what has gone before, combined with their own informed masterplan delivery experience and the wider consultant team response to the exciting challenges of this well-placed, historic and currently underused piece of docklands.

This document has described the Masterplan and explained the mechanisms which it puts in place to both control and encourage development within the OPA area. First and foremost, we have seen that the Masterplan is not intended to determine the exact future for the Site but instead, it has been designed to ensure that as the various elements of the developing built environment are brought forward, certain fundamental aspects are safeguarded and promoted. It is therefore deliberately restrictive in some ways while remaining malleable in others, with inherent robustness derived from appropriate flexibility

and comprehensive thinking, intensively tested and explored.

As masterplanners, Allies and Morrison understand that the space between buildings; the public realm, is a critical attribute to a city living and working environment. When properly connected with the surrounding communities, it is the glue that holds everything together.

Having a Masterplan in place for North Quay that is written around the urban responsibilities that the development plays in defining these important connections and creating spaces will prevent the missing of opportunities and unfortunate mediocrity which can sometimes be experienced in areas of incremental growth.

A clear network of routes and integrated infrastructure, with appropriately scaled buildings carefully positioned around high quality open spaces, can provide a stable platform suitable for many different user groups. It is with these strategic aspects that the Masterplan is concerned and it is with such an ingrained longevity that the ensuing choices of following architects and designers can be appropriately managed and incorporated, ensuring that a positive, durable future will be sustained.

The Masterplan is less concerned with matters of appearance or stylistic intentions at this stage. Indeed, it promotes freedom of creativity, envisioning that North Quay, as with the wider Canary Wharf estate over the past 30 years, is the work of many hands, where varying scales and inventive design responses from individual

teams will help to produce an engaging built environment.

Similarly, it encourages a flexible mix of uses, the balance of which can adapt over time to meet changing needs. North Quay will become a place where people can work, live, stay, play and learn - a truly mixed used development which will be flexible to changing forces, whatever they may be.

With a much improved north-south connection from South Poplar through to Canary Wharf and a newly accessible and lively waterfront connecting the historic frontage of West India Quay along to the opportunity of a redeveloped Billingsgate, set directly adjacent to the new Elizabeth Line station and Crossrail Place, North Quay becomes an important node and essential repair in the city fabric.

North Quay will become a distinctive and connected place within Tower Hamlets which has a fundamental part to play in the next stage of Canary Wharf and the wider London docklands history.



APPENDIX 1: TECHNICAL CONSTRAINTS

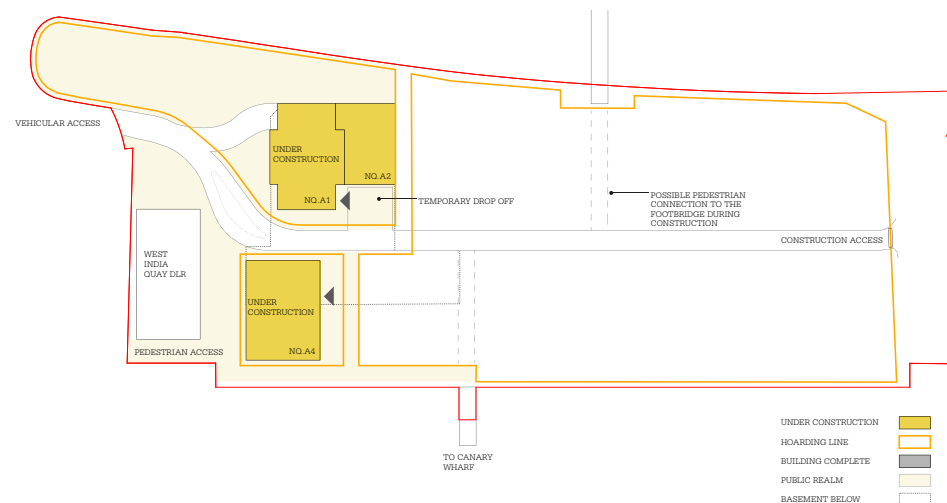
1.1 PHASING AND DELIVERY

Indicative development phasing

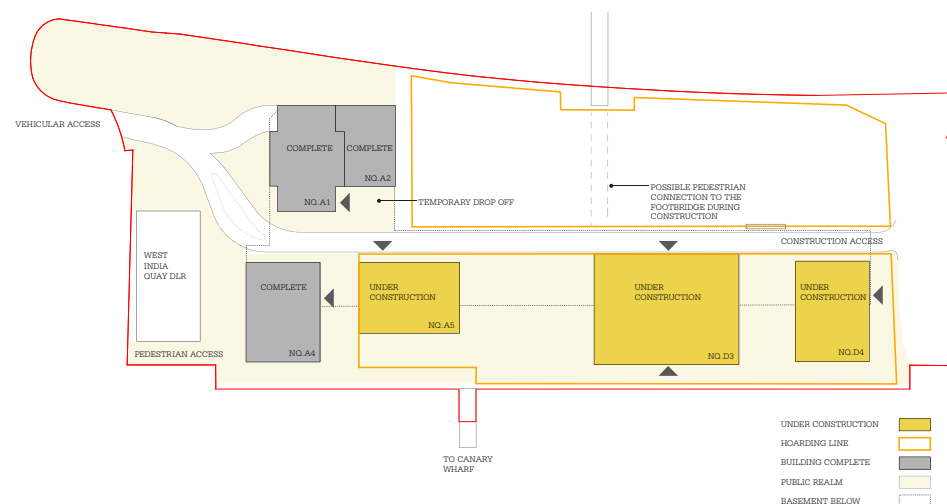
Work is expected to commence on site in 2021 (pending planning approval). It is expected that the scheme will be built out up to 2029 in a number of phases. The current intention is that the buildings at the westernmost part of the Masterplan make up the first Reserved Matters Application and would include any associated basements, access road at grade and ramp to basement. Any accessible spaces will be temporarily located at grade and a temporary servicing/drop off will be setup to ensure this part of the Masterplan is able to operate as a self contained entity.

The buildings that sit on the Quayside are likely to make up the second Reserved Matters Application and help to define the southern boundary of the Site and create and frame a new urban square at the heart of the Masterplan. A route in between the hoarding for later plots will allow pedestrians to move to and from the Aspen Way Footbridge and reinforce this important north-south connection from Canary Wharf to Poplar. The Central Street will be formed which will allow construction access from both Upper Bank Street on the east side of the side, and Hertsmere Road on the western side under the DLR.

The associated portions of basement with each building will also be formed, and it is likely that the entire perimeter of the singular basement is completed at this stage to then allow future Development Plot cores and basements to plug into this basement footprint.



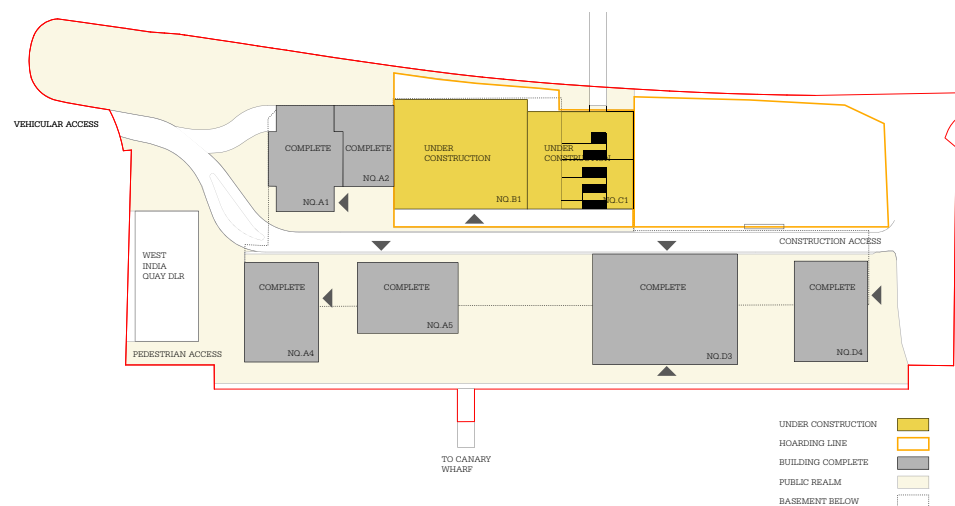
Phase 1



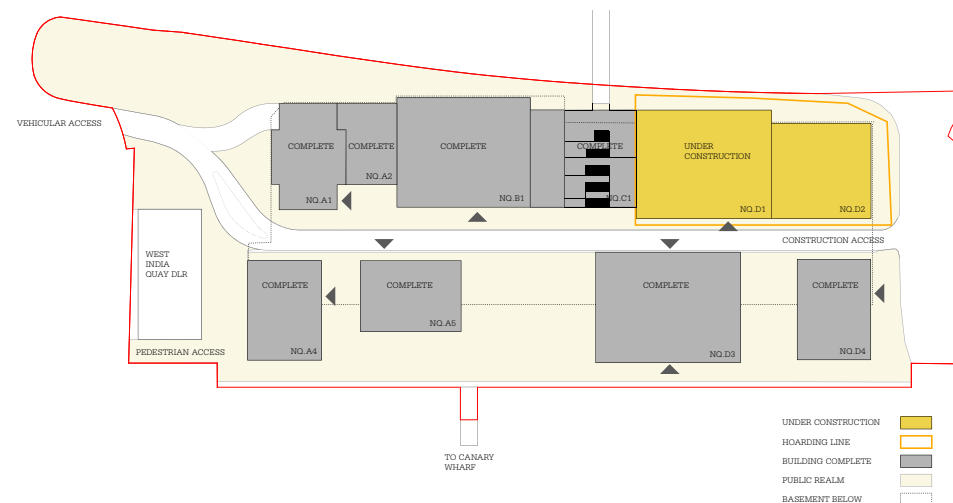
Phase 2

All diagrams are based on the Indicative Scheme and are for illustrative purposes only

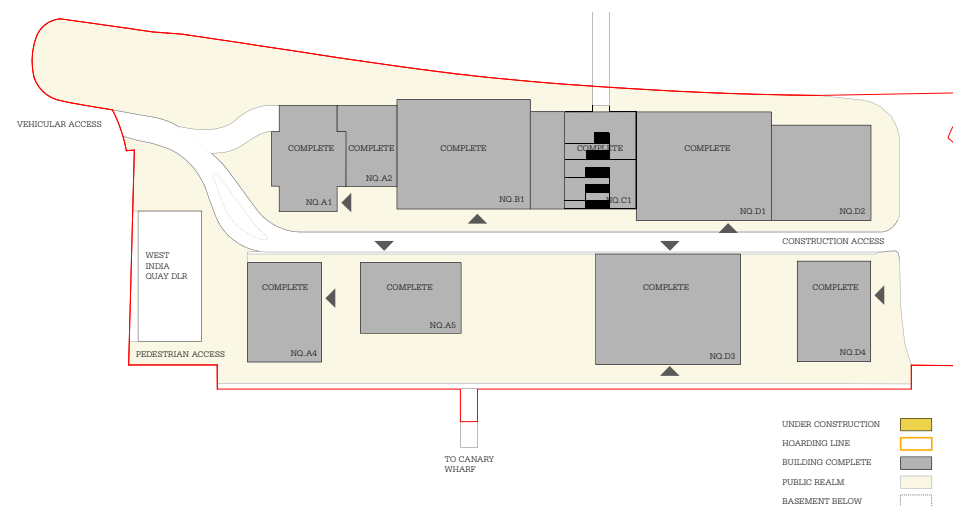
The buildings in the early phases establish the initial momentum of the Masterplan and provide a benchmark for future Development Zones as they come forward. They serve to anchor the new development to the existing Canary Wharf estate, while instigating new typologies and a redefined urban character, to be carried forward as the Masterplan is built out. The latter phases of the Masterplan are currently thought to be the two larger commercial plots to the north of the Site which frame Poplar Plaza. The structure and flexibility of the Masterplan allows of number of phasing iterations which can confidently respond to changing market conditions and requirements from potential tenants to North Quay.



Phase 3



Phase 4



Phase 5

1.2 SECURED BY DESIGN

The Masterplan has been developed whilst being mindful of key principles in the London Plan, Secured by Design (ACPO) and By Design: Better Places to Live (ODPM).

The design team have consulted with the local Metropolitan Police Crime Prevention Officers and Counter Terrorism Security Advisors (CTSA), and also with the experienced security team at Canary Wharf.

Designing for community safety has been an integral aspect of the Masterplan development with specific concerns for the safety and security of visitors, workers, inhabitants and neighbours of North Quay.

These issues include:

- Create safe, secure and appropriate accessible environments where crime and disorder, including terrorism, and fear of crime do not undermine the quality of life or community cohesion.
- Potential physical risks, including those arising as a result of fire and related hazards.
- Minimise potential crime itself through good design.
- Natural surveillance and overlooked routes.
- Effective security surveillance in combination with physical presence.

- Creation of active neighbourhoods, streets and places (Eyes on the Street).
- Appropriate mix of development.
- Clear distinction between secure private spaces and the accessible public realm.
- Creation of connected movement networks.
- Avoidance of unseen and under used areas within developments.
- Secure and observed basement parking for any potential disabled residents.
- Good lighting of public and private areas with robust non vulnerable street furniture.
- Open public space and landscape design supporting natural surveillance and safety.
- Quality of environment, good management and maintenance.
- Fostering a sense of ownership.
- Eliminate illicit access opportunities from street level.

The above issues have guided and influenced the design.

Managed security presence

The Applicant has agreed that the Site will adopt a managed estate security policy. It is proposed that the established estate security approach policy at Canary Wharf will be adopted for the new North Quay Masterplan, with substantial physical presence of security officers supported by full CCTV and other advanced technology security backup, controlled from a dedicated security centre.

The main movement networks within the development have been designed as linear routes with clear visibility and good sight lines. The Masterplan responds to the substantial public movement through all key public spaces, where “Eyes on the Street” form an additional security and safety measure. As is already the case at Canary Wharf, many office employees will work over extended hours - as a result, the Site will be active all day and well into the evening and night hours.

Consequently, in addition to formal security measures being in place, the security of the Site will benefit from continuous public presence in well lit, monitored, non-threatening spaces. The security policy will be supported by the provision of a high quality, well maintained environment which people respect and in which people behave appropriately.

Access and vehicle security

Vehicles approaching North Quay from Aspen Way will pass through a security checkpoint, move southwards along Upper Bank Street into the main estate before returning northwards on Upper Bank Street. Vehicles are not permitted to turn right into the development off Upper Bank Street, Aspen Way junction.

Vehicles approaching from Hertsmere Road onto North Quay Way will need to pass through a security barrier and check point past the underside of the DLR station. Checks will be carried out on vehicles entering North Quay Way and the basement to validate permission to access the development.

Service vehicles will need to be preregistered to make deliveries or collections and cars will need to display permits. Black cabs will be permitted.

1.3 SUSTAINABILITY

The Applicant set an ambitious sustainability brief in line with their corporate policies that includes Zero Carbon as defined by the Draft London Plan, Policy SI2 - 'Minimising greenhouse gas emissions' requirements, addressing the circular economy (Draft London Plan, Policy SI7 - 'Reducing Waste and Supporting the Circular Economy') and health and wellbeing. This section summarises the project team's response to the key requirements of the GLA and LBTH. Full details are provided within the Sustainability Statement (NQ.PA.16)

The key policy responses are:

Climate Change Adaptation (Draft London Plan, Policy G1 - 'Green Infrastructure', Policy G5 - 'Urban Greening', Policy SI2 - 'Minimising greenhouse gas emissions', Policy SI3 - 'Energy infrastructure', Policy SI4 - 'Managing heat risk', Policy SI5 - 'Water Infrastructure', Policy SI12 - 'Flood Risk Management', Policy SI13 - 'Sustainable Drainage')- The risk assessment identified that key hazards for the Site are rise in temperature, more extreme weather conditions, and increase in water-levels.

Risk of overheating will be addressed on building and public realm level through high performing facades, self shading components and urban greening. Extreme weather conditions and rise in temperature will also affect natural habitats and biodiversity,

therefore the Applicant has set up a Biodiversity Action plan 2018 - 2028 which will be implemented on the Site. A climate change adaptation risk workshop was held and a complete list of risk and mitigation strategies is included within the NQ.PA.16 Sustainability Statement.

Water and surface run-off (Draft London Plan - Policy SI5 "Water Infrastructure", Policy SI13 - 'Sustainable Drainage') - The two main strategies in water management are at a site-wide level- SuDS, landscaping and flood mitigation and at a building level - Water efficiency/Leakage detection. Drainage strategies include, positive drainage to slot and channel drains, blue roof attenuation and surfaces draining to rain gardens, and reducing surface runoff into the dock. The use of a 'blue roofs' strategy is proposed to slow the egress of water across the Site. Where feasible, rainwater collection will be considered to reduce unregulated demands such as irrigation for planting. Full mitigative measures for surface water run-off are described in the Flood Risk Assessment Appendix in the Sustainability Statement (NQ.PA.16). Residential developments are to achieve an internal mains water consumption of no more than 105 litres per person per day. A 25% reduction in water-use through low-flow fittings will be implemented in the nonresidential buildings in line with BREEAM requirements.

Health and well-being - The Applicant has created a bespoke Wellbeing Framework, which is based on various specifications, including WELL Building Standard, Fitwel standard, BREEAM, LEED and British Council for Offices. The key priorities include air quality, water quality, waste, comfort, materials, welfare and tenant fit-out guide. The process of implementation is described in the Applicant's Wellbeing Framework 2019.

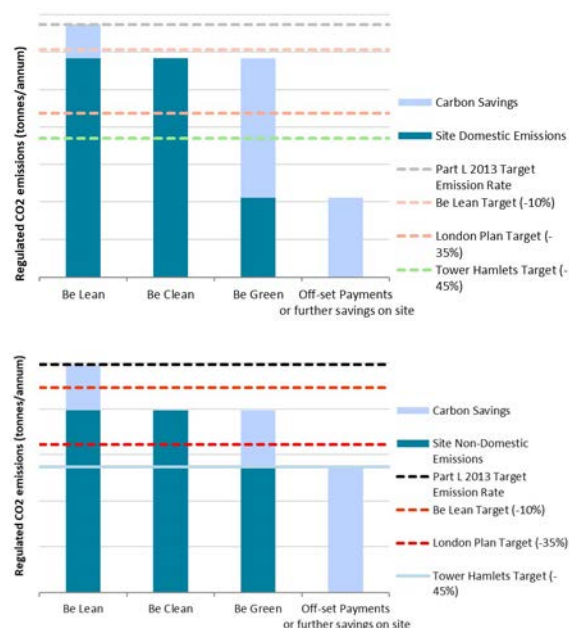
The overarching sustainability strategy for the Proposed Development is designed to facilitate the implementation of the framework. Some of these measures include material VOC levels (as per the Sustainable and Healthy Materials Brief), minimising water pollution and managing waste as per BREEAM requirements.

Materials and sustainable procurement plan - responsible sourcing is one of the priorities for the scheme. The Applicant has integrated sustainability within their procurement policy, and North Quay is to follow the established plan. The Applicant has also developed a robust monitoring and performance evaluation process to ensure target achievement. The procedures in practice are described further within the Applicant's Sustainable Procurement Plan. This plan also serves as the backbone for the MAT 03 Sustainable procurement plan in line with BREEAM Certification.

The Proposed Development will reduce its environmental impact by rigorously implementing, and going beyond whenever possible, the minimum standards for reuse of materials, material recovery and recycled content. The Applicant has adopted these requirements within their Sustainable and Healthy Materials Plan.

Whole Life Carbon - Embodied Carbon and BRE Ecopoint Life Cycle Assessments have been carried out showing that a typical building for the development scores high under the MAT 01 BREEAM 2018 NC methodology. The draft London Plan requires that proposals report on whole lifecycle carbon emissions through a nationally recognised Whole Life-Cycle Carbon Assessment (the RICS methodology) and demonstrate actions taken to reduce life-cycle carbon emissions. Carrying out a Whole Life Cycle Carbon Assessment requires detailed design information. We envisage that this exercise is carried out for each individual building. Our initial, higher-level, assessment based on approximations of materials required for buildings of this type proposed show that reductions in whole life carbon, in comparison to industry benchmarks are feasible.

Energy (Draft London Plan - Policy SI2 Minimising Greenhouse Gas Emissions) - The Applicant has signed up to the Better Building Performance Partnership Climate change commitment to be net zero carbon. To this end the Proposed Development will focus on delivering realistic operational energy including following the principles of Design for Performance including implementing Post Occupancy Evaluation on all new buildings. Further detailed information can be found under Chapter 1.4 Energy.



Circular Economy and Waste - (This section is a response to Draft London Plan - Policy SI7 - 'Reducing Waste and upporting the Circular Economy') - An initial workshop with the design team set the key steps in creating circularity within different stages of the Masterplan. The initial approach is to re-use the building materials on the Site (sourcing from the logistics yard for the Canary Wharf Crossrail Station). Further initial strategies include - re-use of existing structures as temporary site offices, community engagement in sourcing or donating materials, and design for disassembly. This will be measured and implemented through BREEAM credit Was 06. The Applicant's aspirations for flexible space use means design is adaptable and enables future refurbishment considerations. As per BREEAM requirements, further reduction in waste and recycled content benchmarks have also been set - refer to Sustainability Statement (NQ.PA.16) for credit details.

Sustainable transportation (This section is a response to the Draft London Plan - Policy T2 - 'Healthy Streets' / Policy T5 "Cycling")

- The site layout provides a high quality environment, designed to encourage people to walk, cycle and use public transport.

An ecologist has reviewed the Site and engaged with the design. A key driver of the development is to provide enhanced pedestrian routes from Poplar, Canary Wharf existing public transport links, and the new Elizabeth Line. The scheme will have excellent public transport links and is promoting the use of low carbon transport through the integration of extensive cycle friendly measures into the design of the masterplan.

It is proposed that the section of footway to the south of Aspen Way should be dedicated as a shared footway allowing cyclists a segregated route east - west along this busy road.

Street-level cycle parking is provided for use by visitors. Balancing provision against the desire to create a walkable and low clutter street scape has been a prime consideration for the design team. The space allowed for cycle storage is based on the maximum residential scheme to ensure that the masterplan can provide cycle provision in all scenarios. The supporting cycle facilities required for long stay commercial use have been sized to allow the secure segregated parking that is likely to be requested by future tenants. This goes

beyond the requirements of the BREEAM NC 2018 and the GLA and LBTH requirements.

It is worth noting that providing space for cycle storage has an environmental cost in terms of embodied carbon resulting from construction. Ensuring efficient utilisation of the spaces provided will maximise the sustainable transportation benefits while minimising the embodied carbon cost. To achieve this, high density cycle storage solutions using that two or three tier parking may be explored in detailed design.

Biodiversity (This section is a response to LBTH - Policy D.OWS3 Open space and green rid networks) - Landscaping design has been developed to balance the need for urban realm, children's play, servicing and improvement in biodiversity. The development is using a variety of habitats, and the indicative Scheme is achieving an urban green factor of 0.208. An ecologist has reviewed the Site and engaged with the design. The design team has set up a mitigative strategy to prevent any biodiversity loss due to changing climate, and pest infestation. Site specific ecological enhancement will be provided on a later stage of the landscape design, however Land Use and Ecology credits are targeted as per the BREEAM pre-assessment. For specific improvements in biodiversity refer to NW.PA.28 Ecological Impact Assessment for further information.

BREEAM (LBTH - Policy D.ES7: A zero carbon borough)- the development will be assessed under the BREEAM 2018 New Construction scheme targeting 'Excellent' score as a minimum. BREEAM assessment for individual buildings will be developed during detailed design.

BREEAM Communities - BREEAM Communities. The whole site will also be pursuing BREEAM Communities certification. Residential buildings will be assessed under Home Quality Mark (HQM) methodology targeting an equivalent to Code for Sustainable Homes Level 4

1.4 ENERGY

The Energy Statement NQ.PA.17 has been prepared to support the OPA for the Proposed Development at North Quay in the London Borough of Tower Hamlets (LBTH). The development is a flexible, commercially led mixed-use scheme on a brown field Site within the Canary Wharf Estate.

The primary purpose of the Energy Statement is to describe the approach and measures adopted within the design of the Indicative Scheme, in order to show how the Proposed Development could comply with Building Regulations as well as London Plan and LBTH Local Plan energy requirements. The same approach and measures are applicable to any scheme that may come forward under RMAs.

The energy assessment follows the GLA Energy Assessment Guidance (October 2018). It aims to:

- Demonstrate approach to compliance with Building Regulations Part L, primarily that the building emission rate (BER) is less than the target emission rate (TER);
- Demonstrate how the development could comply with the Draft London Plan Energy Hierarchy 'Be lean, Be clean, Be green, and Be seen';

- Demonstrate how the development could comply with the London Borough of Tower Hamlets (LBTH) new Local Plan Energy requirements;
- Show the measures adopted in the Indicative Scheme to reduce the cooling demand, by following the Cooling Hierarchy, whilst also ensuring the risk from overheating is reduced.

The project team has engaged with the GLA and LBTH Energy teams to discuss the energy hierarchy proposals. The feedback has been considered and incorporated into the Energy Statement.

The project team have considered the impact of the draft 2020 updated version of the GLA Energy Assessment Guidance in the preparation of the OPA.

The proposed energy strategy aligns with the wider Science Based Target and Net Zero Carbon pathway for Canary Wharf which aims to reduce natural gas usage and switch to electric solutions.

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 - use less energy):

- 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 (Be Lean- use less energy and manage demand during operation):

- 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 - exploit local energy resources, such as secondary heat, and supply energy efficiently and cleanly):

- There are no existing heat networks in the immediate vicinity that could be viably connected to the Site;
- Commercial building cooling heat rejection will be used as a secondary heat source connected to a site wide heat network for residential and serviced apartment buildings in conjunction with local heat pumps;
- Thermal storage will be included in each heat network for optimising system performance and balancing surplus heating and cooling energy production;
- The site wide heat network will be designed with provision for a future single point connection to a suitable low carbon third party heat network, if one becomes available in the local vicinity of the Site;
- No fossil fuel energy strategy.

Renewable energy technologies (Be Green - maximise opportunities for renewable energy by producing, storing and using renewable energy on-site):

- Ambient loop heat pump systems for residential building heating, hot water, and cooling;
- 4-pipe multifunction ground and air source

heat pumps for retail, commercial, and serviced apartment buildings, providing simultaneous heating, cooling, and hot water preheat;

- Water cooled high temperature heat pumps and CO2 air source heat pumps for commercial, student residential, and serviced apartment building hot water generation;
- Photovoltaic panels above suitable roof areas that are not intended for occupant access or heat rejection plant;
- Energy Storage;

Monitoring and reporting on Energy Performance (Be Seen - monitor, verify and report on energy performance):

- Extensive metering and energy monitoring will be included within each building network and the site wide secondary heat connections to enable system performance optimisation and accurate billing.

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 this Energy.

Emerging new technologies will be investigated during each RMA stage to take account of technology development at the time of submission.

Masterplan Massing

The North Quay Masterplan layout and building orientations have been carefully considered within the constraints of the Site. The external fabric and the windows will be particularly important elements for each façade orientation of the various buildings on the development.

The balance between daylight and solar gains for each building design will be optimised during each RMA. This will result in minimising the need for artificial lighting whilst also minimising overheating risk and cooling requirements.

The amount of exposed external area relative to the interior volume has a significant influence on the overall building heating demand. The Indicative Scheme has optimised this A/V ratio by proposing regular floor plates and tall buildings.

The large commercial buildings have been laid out along an East-West orientation which allows solar gain and daylight to be managed on the south facades with measures such as external Brise Soleil type shading with the advantage of allowing passive solar heating in winter.

Building Fabric Measures

The Draft London Plan (policy S I2) and LBTH Local Plan require domestic developments and non-domestic developments to achieve at least a 10% and 15% improvement respectively on the Building Regulations from energy efficiency measures alone, represented by the “Be Lean” stage.

This leads to the need for considerable improvements in fabric performance and system efficiencies compared to the Building Regulations Part L notional building baseline parameters.

The thermal performance of the fabric for each building type in the Indicative scheme has been set out to optimise the balance between energy savings and other considerations such as cost, wall thicknesses, and the diminishing returns available from further increasing the thermal performance of a building envelope.

The amount of glazing, its orientation and specification will be carefully considered in each RMA to ensure a balance between heat loss, heat gain, daylighting, and ventilation is maintained.

The benefits of improved insulation levels and more energy efficient heating systems can be lost if warm air is able to leak out of a building and cold air able to leak in.

Consequently, achieving a reasonable level of air tightness is important for a building's energy efficiency and the comfort of its occupants. A minimum standard of 3m³/m²/hr is specified for the Indicative Scheme.

Thermal bridges will be an area of focus in the detailed design within each RMA. Energy lost at thermal junctions shall be minimised using robust details wherever possible and appropriate.

Connection to Existing and Planned District Heating Networks

There are no existing or planned district heat networks in the immediate vicinity that could be viably connected to the Proposed Development at this time. Therefore, connection to a third-party area wide heat network has been discounted.

All Electric Energy Strategy

The electrical grid in the UK has been decarbonising and is projected to continue doing so. This means using grid electricity becomes a lower carbon source of energy than gas. This favours electrically powered heat pumps for heating and means that CHP is no longer beneficial in carbon terms.

For the North Quay Masterplan all heating and cooling generation will be by electrically powered heat pumps with thermal storage. There will be no additional local emissions to account for.

This aligns with the Net Zero Carbon pathway for Canary Wharf.

Distributed Energy Centres

The Masterplan will be developed in 4 phases up to 2029 and so a strategy of distributed energy centres is proposed, rather than a single central energy centre.

This strategy ensures that the development can optimise decarbonisation as it is built out over time and respond to changes in policy and regulation as each phase is implemented. This is a better outcome for achieving the energy policy objectives.

As most of the buildings proposed for the Proposed Development are commercial with low heating and hot water requirements compared to their cooling energy needs, a strategy of very-low temperature Building-Level heat networks incorporating multifunction 4-pipe heat pumps capable of simultaneous heating, cooling and hot water production is proposed.

Also, based on the size of each building within each phase, there is already sufficient economies of scale in terms of plant and network system size within each building-level energy centre.

It is proposed to use surplus heat rejection from office and retail buildings as a “secondary heat source” to provide heat recovery energy to any residential and serviced apartment heat networks. Thermal storage will be used to balance the production of this surplus heat with the demand for heat from the residential buildings.

All the buildings will be connected through the secondary heat site wide network.

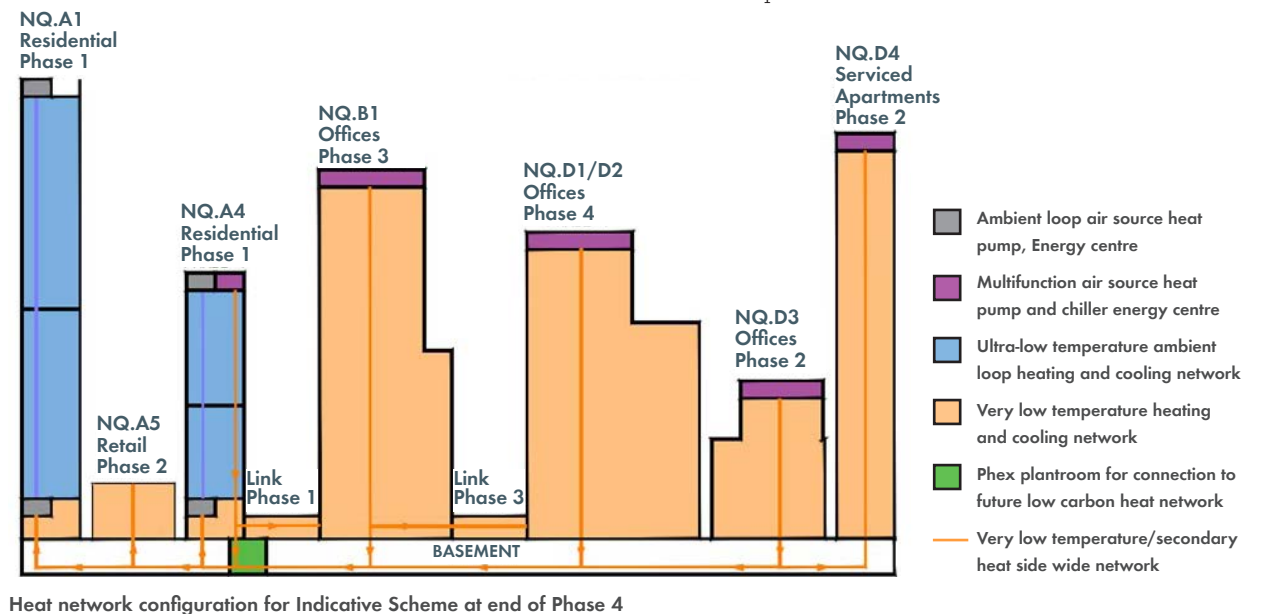
The proposed very-low temperature and ambient loop heat networks minimise distribution losses and together with the secondary heat source connections will deliver the lowest carbon emissions for the Site and energy costs to the occupants.

Future connection to low carbon district heating network

The Proposed Development will be future proofed to allow a single point of connection to a wider low carbon low temperature DHN if one becomes available in the vicinity of the North Quay development in the future and it is feasible to do so. The secondary heat network connecting the buildings across the Site would become the heat distribution network for such a future DHN connection

Low to Zero Carbon Technologies

A renewable energy assessment has been conducted to confirm which renewable energy technologies are considered both practical and viable to serve the Proposed Development. The assessment identified ground and air source heat pumps, photovoltaic panels (PV), and heat from waste as the most appropriate LTZC solutions for this development. The Indicative Scheme incorporates the maximum quantity of PV panels that can feasibly be installed on suitable roof areas across the Proposed Development.



Heat network configuration for Indicative Scheme at end of Phase 4

Cooling Hierarchy

In line with Policy SI 4 of the Draft London Plan the cooling hierarchy has to be applied and the following measures are proposed to reduce the demand for cooling across The Masterplan:

- 1** Reducing the amount of heat entering the building in summer

The Indicative Scheme considers external shading on all buildings on critical facades. High performance solar control glazing will be selected as appropriate for each building type, balancing solar gain with daylighting.
- 2** Minimising internal heat gains through efficient design

Ultra-low temperature ambient loop networks for residential buildings and very low temperature distribution networks for commercial buildings will reduce heating system heat gains.
- 3** Manage the heat within the building

Consideration of exposed thermal mass and night-time purge ventilation on appropriate buildings will be considered in each Reserved Matters Application.
- 4** Passive ventilation

Noise levels across the Site means that mechanical ventilation and active cooling will be required on all buildings to control

overheating. Residential building will have opening windows to allow mixed mode ventilation and for future proofing for potential reductions in noise levels across the Site.

There may be the possibility to consider mixed mode strategies on some of the commercial buildings on facades facing south and these will be considered within the Reserved Matters Applications for each building and phase.

5 Mechanical ventilation

All apartments in the residential buildings will be mechanically ventilated via Mechanical Ventilation with Heat Recovery within each dwelling.

All commercial buildings will consider the latest high efficiency heat, coolth and latent recovery Air Handling Units as part of the “Be Lean” energy strategy.

6 Provide active cooling systems

The use of the ambient loop heat pump solutions for heating and hot water production for the residential buildings allows active cooling to apartments from the same distribution network, thus providing heat recovery opportunities for hot water production.

4-pipe multifunction heat pumps for retail and commercial buildings allow for simultaneous heating, cooling, and hot water preheat, and for secondary heat export to residential buildings

1.5 TRANSPORT

Transport Assessment

A Healthy Streets Transport Assessment (TA) has been undertaken in support of this OPA which considers all aspects of movement by employees, visitors and residents. It also reviews servicing and delivery requirements and waste collection after opening as well as movement associated with the demolition and construction phases. Travel Plans accompany the TA to promote sustainable travel for all residents, employees and visitors to the Site, whilst a Delivery and Servicing Plan (DSP) promotes the sustainable movement of goods and servicing activity.

The TA considers the trips associated with both the indicative scheme and a scheme from the Development Specification that would produce the highest number of trips to provide a worst-case assessment. Overall, the indicative scheme would generate around 57,000 daily two-way trips, whilst a 'worst-case' scheme would generate around 70,000 daily two-way trips. The TA assesses the impact of these trips in the morning and evening peak commuting hours, when around 14% and 11% of the daily trips are forecast to be made respectively.

Proposed vehicle access to the Site will be via Hertsmere Road to the west and Upper Bank Street to the east. Owing to the existing Canary Wharf Estate security check point, the access at Upper Bank Street will permit left-in / left-out manoeuvres only. 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. The majority of servicing will take place via a loading bay at basement level, accessed via ramp from Hertsmere Road, although some servicing activity can take place at ground level via designated loading bays on North Quay Way. Overall, around 4% of trips associated with North Quay are to be made by vehicle (including servicing and delivery trips).

The Site is very well connected by public transport achieving a PTAL level of 6a to the east adjacent to Upper Bank Street and 5 across the rest of the Site. The opening of the Elizabeth Line will increase the PTAL of the entire site to 6a. West India Quays and Poplar DLR stations, Canary Wharf Jubilee Line station, the future Elizabeth Line station and eight bus services are all within walking distance. The majority of trips associated with the Proposed Development will be by public transport (84%).

In the indicative scheme cycle facilities including a 32-point docking station, over 3,800 long-stay cycle parking spaces and a minimum of 340 short-stay spaces (170 Sheffield stands) in the public realm, along with shower and locker facilities for residents, employees and visitors would be provided, and as such, around 14% of trips are forecast to be made to the site by cycle or on foot.

The TA establishes a baseline condition for traffic, public transport service provision and patronage levels, and the travel patterns of employees, residents and visitors in Canary Wharf. Data from TfL's London Highway Assignment Model (LoHAM) and Railplan model have been used to derive the future baseline traffic and public transport scenarios, including cumulative developments. In particular, the trips associated with the 2007 implemented North Quay scheme have been deducted from the models in agreement with TfL to derive the 2031 baseline scenarios.

A number of measures will be implemented as part of the North Quay proposals to mitigate the proposed impact identified in the TA and encourage use of sustainable modes. These include:

- A Framework Travel Plan and Residential Travel Plan including initiatives to further reduce car use;
- A Delivery and Servicing Plan to better manage all types of freight movement;
- A Construction Logistics Plan to manage construction travel activity; and
- A Car Parking Management Plan to ensure parking is appropriately allocated across the proposed development and to address how parking would be controlled, managed and enforced.

1.6 WASTE

The Operational Waste Strategy for the Site has been developed to ensure that all waste produced across the site is managed in an efficient and sustainable manner. The facilities provided will be in accordance with Policy D.MW3 “Waste collection facilities in new development” of the Local Plan, focusing on waste management in accordance with the waste hierarchy established in the Local Plan as shown below.

Residential Waste

All residential waste on the Site will be collected by LBTH waste collection operatives and as such the scheme has been designed to allow for 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 will be in accordance with the guidelines given in Appendix 4 of the Local Plan.

Commercial Waste

Commercial waste (which includes that generated by serviced apartments) will be managed 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 North Quay development.

There will 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.

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 will vary dependent on the eventual tenants but the principles of segregation and treatment of different recyclates is presented in this application.

The strategy allows for the separated management and recycling of;

- Dry mixed recyclables
- Cardboard
- Organic food waste
- Glass
- Food oil

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



Waste Hierarchy

1.7 UTILITIES

The Utilities Statement submitted in support of this OPA covers surface and foul water drainage, potable water, electrical and telecommunications supplies.

There are no gas utility supplies proposed for the North Quay Masterplan as all heating, cooling, hot water and cooking energy within the development will be by electric means. This forms part of the wider Science Based Target and Net Zero Carbon pathway for Canary Wharf which aims to reduce natural gas usage and switch to electric solutions to reduce carbon emissions over the life of the Proposed Development as the UK electrical grid decarbonises.

Site survey information and existing utility apparatus searches have been used to set out the Masterplan to avoid the need for any major utility diversions.

It is proposed to 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.

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 footpaths.

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.

There will be two HV networks both coming from the West side of the Site.

The central road box 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 Masterplan the Site infrastructure network will form a loop around the development.

Surface Water Drainage

The design intent is that where possible surface water runoff should be discharged into the North Dock.

Soakaways in the form of open or sealed water features are being investigated across the Site as part of the indicative landscaping scheme.

The remainder of the surface water drainage for buildings and hard landscaping to the north of the Site will outfall via gravity to a single connection to the combined 1500mm North Quay Sewer in Aspen Way. The surface water outfall flow rate will be restricted as per

Appendix B of the Thames Water Utilities Ltd (TWUL) H139 Canary Wharf, Isle of Dogs Development Impact Study 2017. 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.

To achieve the restricted outfall flow rate attenuation will be included across the Site using a combination of “Blue Roofs” on each building and buried cellular attenuation tanks with Hydrobrake flow control prior to discharging under gravity connection into the TWUL combined sewer in Aspen Way.

The surface water drainage for the buildings and the hard landscaping to the south of the Site will outfall by gravity directly to the dock. Areas of green roof that cannot be discharged to the dock for reasons relating to water quality will be discharged to the Aspen Way sewer.

The surface water systems will be designed in order to not affect the water quality of the receiving watercourse or sewers.

The surface water drainage systems will be gravity systems apart from runoff from the access road, which ramps down into the basement. This runoff will be stored in a storm pumping station before it is pumped to the high-level attenuation and then discharged to the Aspen Way sewer.

Foul Water Drainage

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

The connections will be phased up to 2029 and the first phase will be at the west of the Site, so the connecting manhole in Aspen Way will be located to the west side of the North Quay Proposed Development.

The foul water drainage system will be a gravity system apart from the basement which will be pumped via sumps.

Potable Water

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.

Discussions are taking place with TWUL regarding the requirements for the masterplan with reference to the TWUL mains water capacity study undertaken in 2017 for the wider Isle of Dogs area.

Rainwater collection and potentially condensate water recovery will be considered in each Reserved Matter 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.

The potable water networks will include connections to each of the buildings within each phase. Where dual supplies to a building are required, these will be provided either side of a valve, allowing any section of pipe to be shut. Where fire supplies are required to the buildings, these will be provided from the TWUL main.

Telecommunications

A number of separate telecoms duct networks will be provided running east-west at the north and through the centre of the Proposed Development and connecting to the existing networks in Aspen Way. Each of the North Quay networks will comprise below ground cable duct banks with access chambers at regular intervals. Some duct banks will carry Openreach telecoms cables, and others will be shared by Canary Wharf (North Quay) Ltd communications cables and those of other third party utility telecoms providers.

The networks will serve the telecoms rooms of each building in the Proposed Development, to provide sufficient incoming connections for the voice and data services required for building operations, and infrastructure capacity to facilitate the fit-out of fibre or copper telecoms connections as required by residential and commercial tenants.

The networks will be owned and maintained by the estate management who will allow access to the networks by telecom providers. The networks will allow diverse connections to buildings either by using separate networks or by routing cables from opposite directions.

Mains Grid Electrical Supplies

New electrical connections and alterations are required across the whole of the Proposed Development. Through previous discussions with UKPN, Canary Wharf (North Quay) Ltd have determined that a total capacity of 22MVA is available from two local UKPN HV networks (West Ferry Primary Substation and Simpsons Road Primary Substation) without incurring any requirement for major network reinforcement or new 132kV substation.

Each building will be provided with medium voltage (MV) supplies originating from both UKPN HV networks. For domestic residential buildings, sufficient utility LV substations will be provided at low level to serve the building loads, and for commercial buildings metered MV supplies will be provided to a network of private LV substations distributed through the building.

The normal power loads of the two large commercial buildings NQ.B1 and NQ.D1/2 will be shared between the two utility MV supplies, with essential life safety and firefighting systems having resilient power supplies from both MV networks. All other building types will primarily be served by a single utility MV intake, with the other utility intake used to serve secondary supplies for life safety and firefighting services.

A number of power supplies will be required to serve Site infrastructure services and the public realm. These will be derived from the landlords supplies in the surrounding buildings.

1.8 ECOLOGY

A Ecological Impact Assessment and Aquatic Ecological Scoping Assessment were undertaken at the Site. These surveys identified the primary constraints and opportunities relating to protected and notable ecological receptors for the Proposed Development.

Terrestrial ecological value was extremely limited, with no evidence of protected and or notable species or habitats within the Proposed Development footprint, other than low value for common nesting birds amongst some vegetation and structures.

The North Dock was however identified as a Site of Importance for Nature Conservation, with value for some aquatic invertebrate, fish and bird species present.

Proposed works within the docks are limited, however measures to address construction impacts upon key aquatic receptors are to be addressed through a Construction Environmental Management Plan. Furthermore, minor operational impacts associated with overshadowing are to be addressed through the provision of aquatic habitat features targeting fish and invertebrates.

Terrestrial enhancements include the provision of integrated nesting and roosting space for birds and bats, biodiverse living roofs with invertebrate habitat structure, vertical greening and wildlife friendly landscaping. Overall, assuming these enhancements which are further described within the Ecological Impact Assessment report and landscaping plans, are predicted to result in biodiversity net gains at the Site as a consequence of the Proposed Development.



existing site ecological value

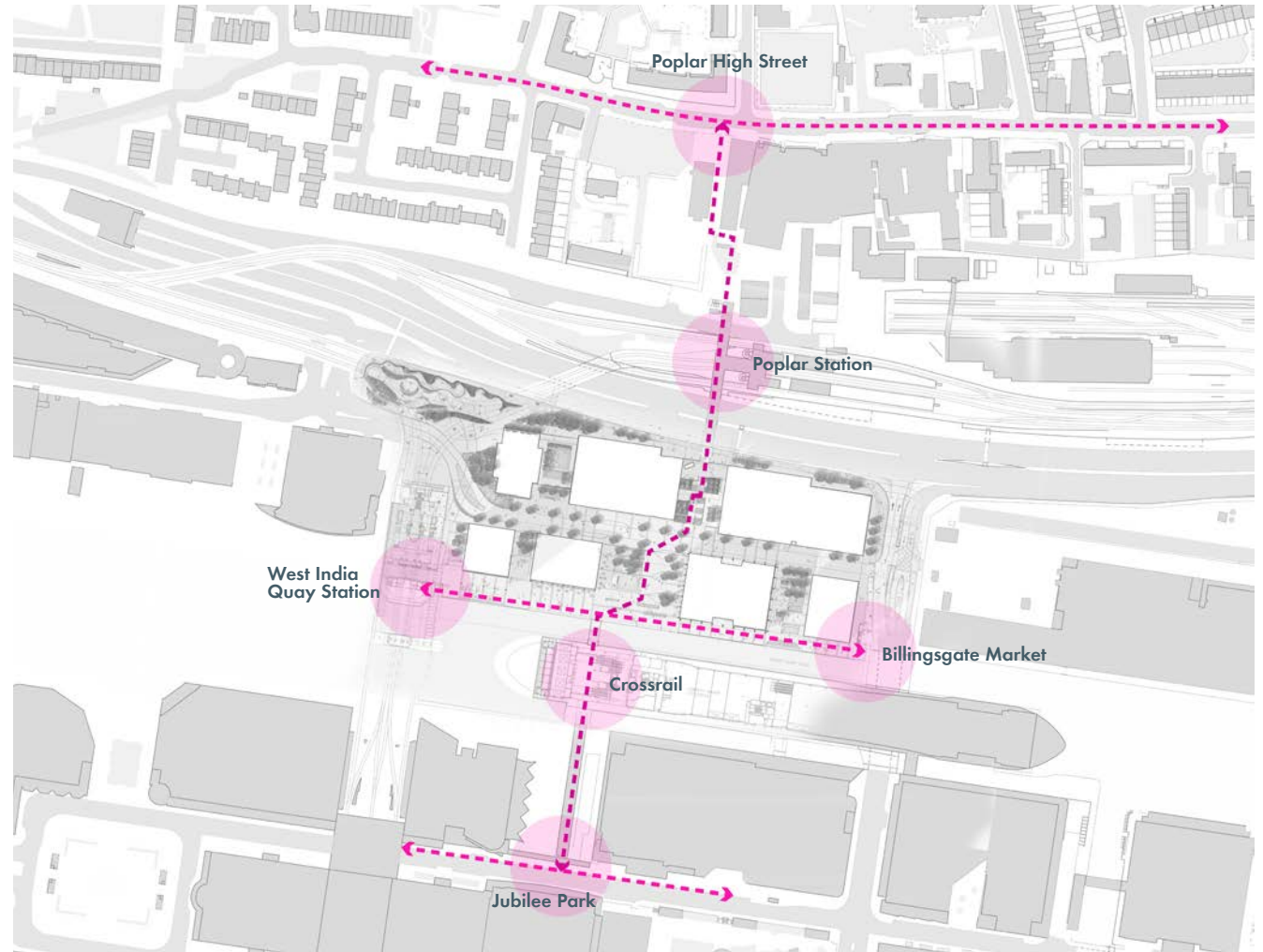


potential aquatic mitigation options.

1.9 LANDSCAPE

Wider Connections

The diagram opposite illustrates the wider connecting routes to the surroundings including Poplar High Street to the north, Crossrail and Jubilee Park to the south, West India Quay to the west and Billingsgate to the east.



Wider Pedestrian Connections

Short stay Cycle parking - The London Plan

Cycle parking for all land uses (except for retail short-stay cycle parking) will be provided in accordance with Draft London Plan standards. Retail short-stay cycle parking will be provided in accordance with the Adopted London Plan standards initially as agreed with TfL during pre- application discussions, however usage will be monitored and provision increased if needed. In accordance with the provision required for the Indicative Scheme, The diagram opposite shows the proposed location of 344 short-stay cycle parking spaces (172 Sheffield stands) within the public realm.

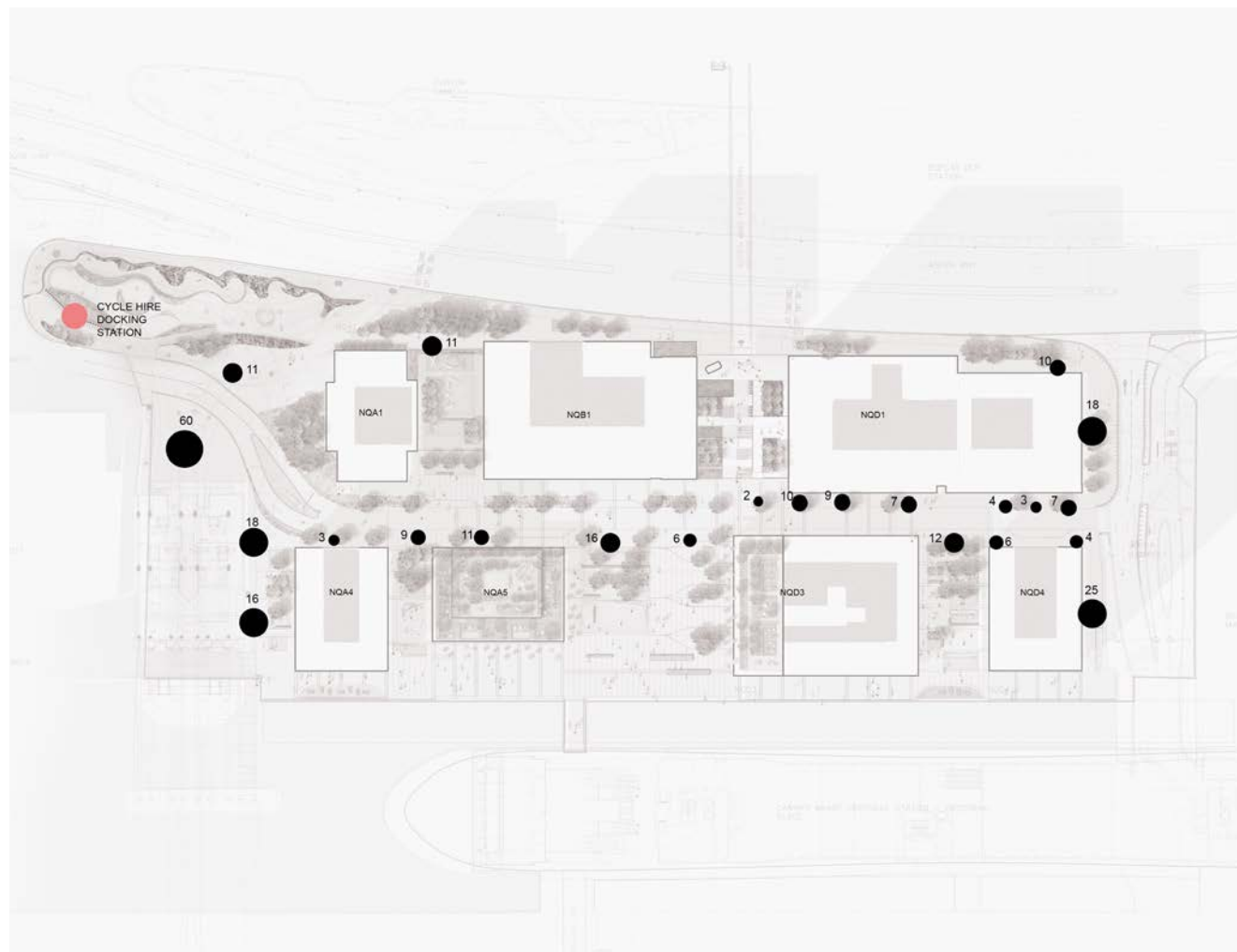
The diagram on the facing page shows the additional 264 short-stay retail cycle parking space which could subsequently be provided within the public realm should the demand arise. This short stay cycle provision is in accordance with The London Plan standards.



- Cycle Stand Locations (172 stands providing 344 spaces)

Short stay Cycle parking - Draft London Plan

The diagram opposite illustrates the short stay cycle parking provision required within the Indicative Scheme in accordance with the Draft London Plan standards. This indicates a requirement of 304 no. cycles stands to be provided throughout the Site, which equates to 608 cycle parking spaces.



- **Cycle Stand Locations (304 stands providing 608 spaces)**

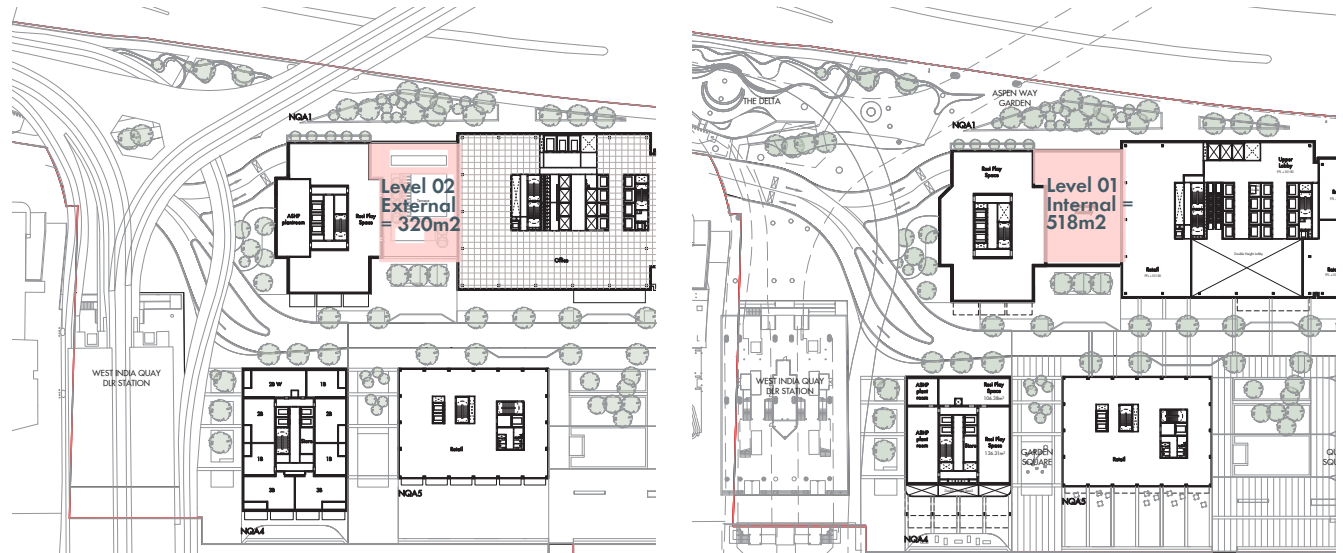
Communal Amenity Space

Communal Amenity Space provision consist of a mix of internal communal residential lounge and external semi-private shared podium space.

The Indicative Scheme illustrates how this strategy could be applied to deliver the requirements for 702 units. Further details of communal amenity space for different residential scenarios can be found in the socio-economics chapter within the Environmental Statement accompany this Outline Planning Application.

LBTH Local Plan 2020 Policy D.H3 part 5 states that for development with 10 or more residential units, the minimum communal amenity spaces should be 50sqm for the first 10 units plus a further 1sqm for every additional unit thereafter. The Proposed Development will accommodate 702 units in the Indicative Scheme and therefore a minimum provision of 742sqm of communal amenity space is required.

The diagrams opposite illustrates a total of 838sqm of communal amenity space is being provided. This includes 518m2 of internal communal amenity space at Level 01 of NQA1 and 320m2 of semi-private courtyard at Level 02 of NQA1 to meet the needs of future residents.



Diagrams showing Internal and External Communal Amenity provision for the Indicative Scheme

Local and neighbourhood play context

The play provision in the wider context is illustrated here, which has been informed by the London Plan SPG 'Shaping neighbourhoods: play and informal recreation'. Poplar Recreation Ground is within 400m of the development and Jubilee Park and Rose Field Gardens are located just outside the 400m radius, making them all easily accessible on foot. The nearby play spaces are of good quality, contributing as additional play spaces for children of the Proposed Development within suitable walking distance for ages 5-11yrs and over 12s.

- Site Boundary
- Under 5yrs: 'Doorstep' Informal play opportunities, maximum 100m walking distance
- 5-11 yrs: Informal/formal play provision, maximum 400m walking distance
- 11 yrs +: Adventure playground, sports and fitness trails, maximum 800m walking distance
- Public park/open space location



1. Jubilee Park a roof garden built above Canary Wharf underground railway station with raised serpentine water channel
2. Ropemakers Field park between Limehouse and Canary Wharf, includes play area for under 5 yrs and +5yrs.
3. Rosefield Gardens is an open space area with play opportunities for all ages.

4. Poplar Recreation Ground is a large open space area with play opportunities for all ages.
5. Langdon Park with a large open space provides play opportunities for all ages.

1.10 BUILDING OVER THE LISTED BANANA WALL

Proposed Structural Sequence to build over the Banana wall

The banana wall was constructed as part of the original dock construction between 1800 and 1802. This is a concave brick structure forming the dock walls and is Grade 1 listed.

In 1912 to 1915 the False Quay was built as an extension to the dock and bridges over the Banana Wall. The structure is formed of reinforced concrete beams and slabs supported on piles; it is understood the structure was strengthened in 1953.

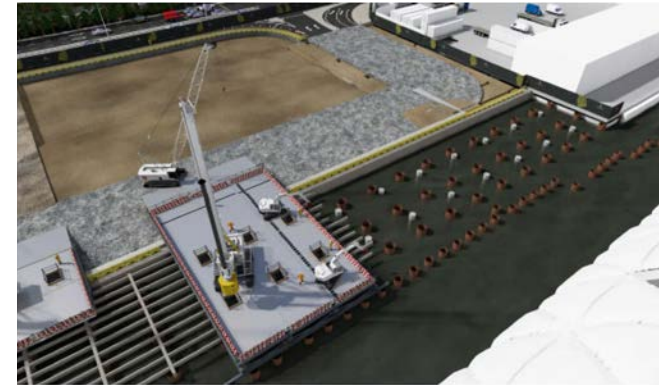
A detailed survey will be carried out prior to works proceeding and any repairs identified to the brick banana wall completed prior to works proceeding above it.

It is proposed to install a secant wall to the rear of the banana wall (North) which will relieve the wall of surcharge pressures and ensure its stability during the new development.

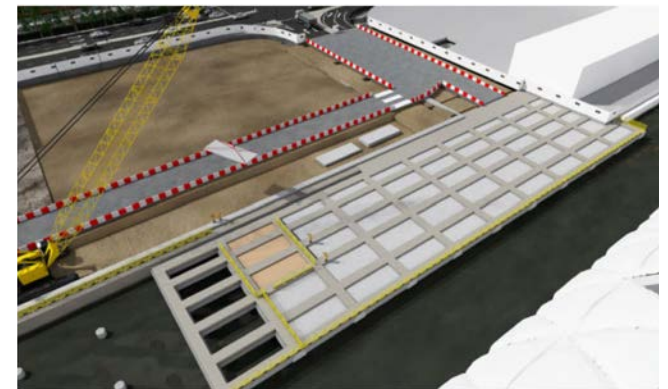
The existing false quay slab will then be demolished to allow a temporary deck to be erected on to the beams and piles of the Quay Structure to then allow installation of the new marine piles from the deck.

Once the piles are in place precast shells (Shutters) will be erected over the piles for the new Ground beams which will need to be sealed where these are within the dock water. Precast slabs will then be supported from the shells to form the slabs. Once complete the new Quay deck will be cast using insitu concrete.

The area of slab over the Banana Wall will then be completed with Precast floor planks spanning from the new beams south of the Banana Wall to the capping beam on the secant wall to the north, then providing a complete deck over the wall.



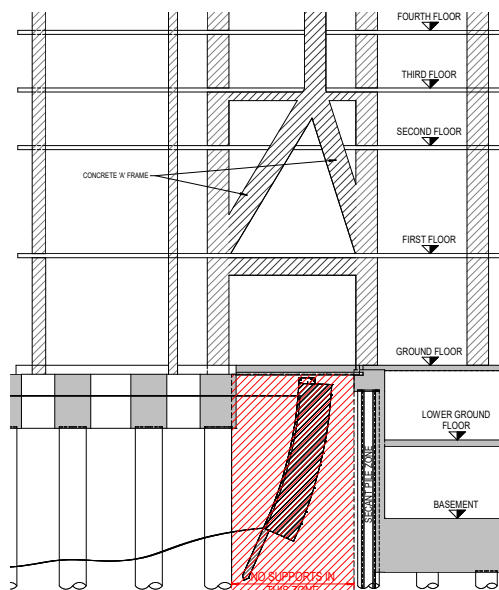
Installation of marine piles using temporary deck with pre-engineered openings for new piles followed by demolition of existing quay beams



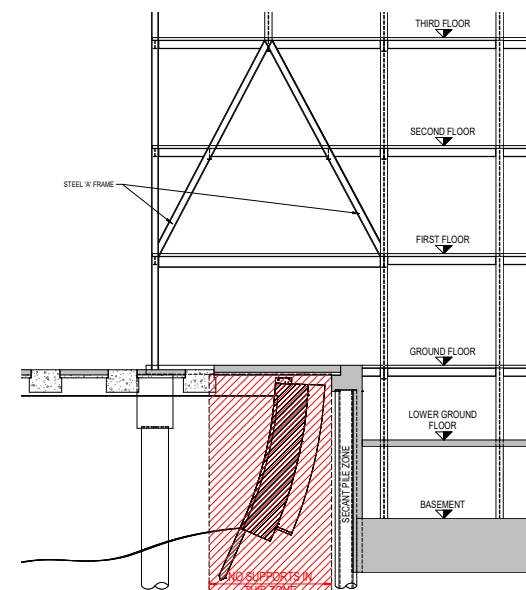
Erection of New Deck Beams using landside crane.

The buildings above will transfer over the banana wall using either concrete walls, "A" frame structures in either steel or concrete or where loads permit traditional beams. These will be designed using precast or temporary steelwork beams to support the wet weight of any insitu concrete structures to avoid any loads being transferred to the Banana Wall.

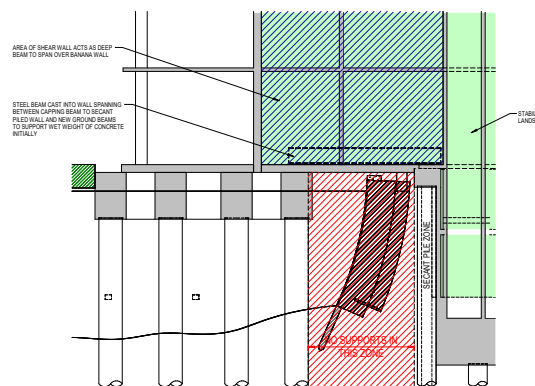
During the works monitoring of the banana wall and any surrounding structure will be carried out to detect if any movements occur and allow remedial action to be taken.



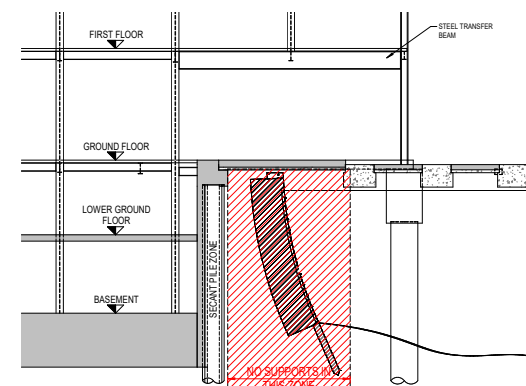
Concrete A Frame spanning over Banana Wall exclusion zone



Steel A Frame spanning over Banana Wall exclusion zone



Concrete Shear Wall spanning over Banana Wall exclusion zone



Steel transfer Beam spanning over Banana Wall exclusion zone

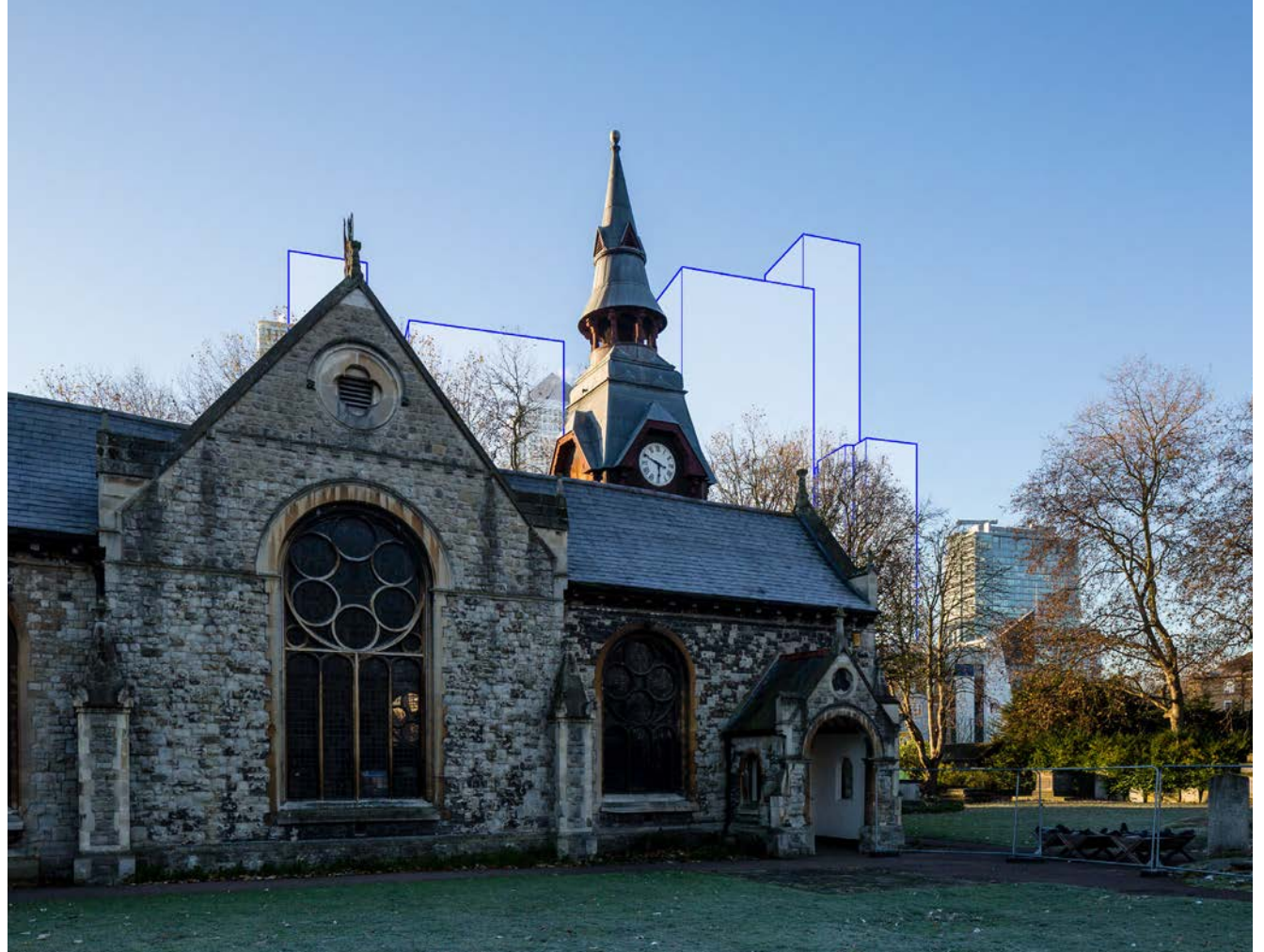
1.11 TOWNSCAPE OPPORTUNITY



Trinity Gardens view



All Saints Churchyard view



Church of St. Matthias view

The Townscape, Heritage and Visual Impact Assessment (TVIA) (NQ.PP.15) forms a chapter of the Environmental Statement. It has been produced by Peter Stewart Consultancy and includes accurate visual representations of both maximum parameter envelope and the Indicative Scheme prepared by Cityscape.

The TVIA assesses the potential visual impacts of the proposed development on the character of the local and wider townscape, protected views and the setting of heritage assets. The assessment is made in accordance with local, regional and national policy and guidance and is based on an appraisal of the existing character of the Site, surrounding townscape character areas and the significance of relevant designated heritage assets and views. It includes an assessment of cumulative impacts which would arise from relevant schemes consented for sites in the surrounding area.

The Site is not located within a conservation area. There are no listed buildings or locally listed buildings above ground on Site (the listed dock wall (banana wall) runs below ground through the Site).

There are a number of listed buildings, conservation areas and locally listed buildings in the within the study area around the Site. Those close to the Site are located to the west within the West India Conservation Area, and

north within St Matthias Conservation Area. There are also many other heritage assets in the wider area around the Site. In the TVIA, these are assessed in detail within 1km of the Site. Heritage assets beyond the 1km study area include the Maritime Greenwich World Heritage Site some 2.6km to the south.

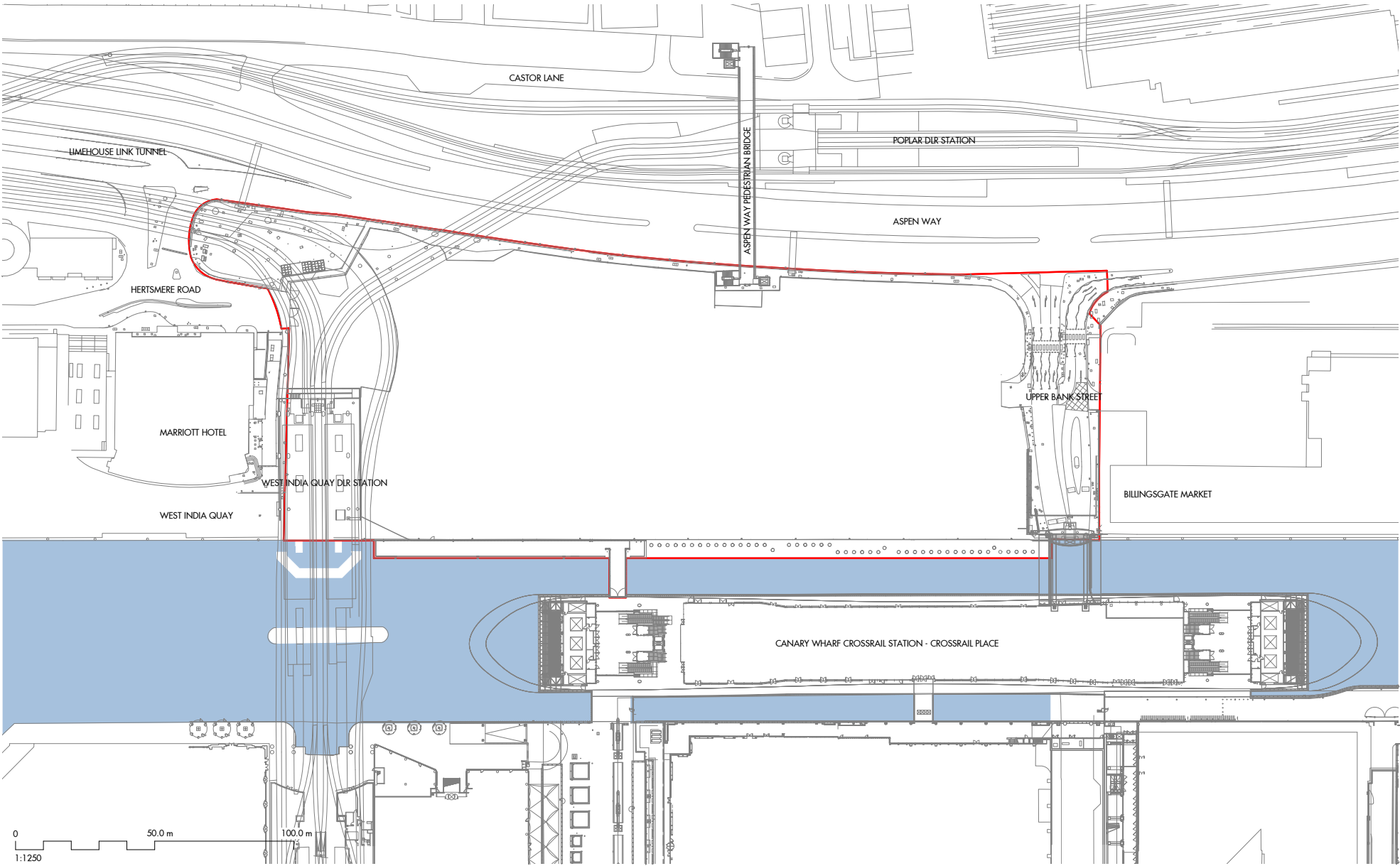
The local (and wider) context within which the identified heritage assets are experienced is densely developed and urban in character. The setting of listed buildings and locally listed buildings is limited in extent. The area around the Site in general has been subject to significant change since these buildings were built, and it includes post-war, modern and large-scale development, most notably in the form of the tall buildings of Canary Wharf. Similarly, in respect of the conservation areas considered, these are located within a varied urban context that includes substantial post-war and modern development, and the settings of these conservation areas do not contribute to their heritage significance.

The Site, in its existing vacant state, does not contribute to the heritage significance of the identified heritage assets, and detracts from the local context in which those heritage assets closest to the Site are experienced.



APPENDIX 2: ACCESS

2.1 INTRODUCTION



Site boundary plan

2.1.1 INTRODUCTION

The North Quay Masterplan project forms part of the northernmost edge of the Canary Wharf development. As such it follows many of the design principles set out in previous sites and has its own North Quay Design Guide drafted by the Canary Wharf (North Quay) Ltd.

The Outline application (all matters reserved) is for a comprehensive mixed-use redevelopment of North Quay comprising:

- Demolition of existing buildings and structures;
- The erection of buildings, including tall buildings, and basements comprising:
 - 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)
 - Sui Generis Uses;
- Associated infrastructure, including an new marine deck over North Dock;
- Streets, open spaces, landscaping and public realm;

- Creation of new vehicular accesses and works to Aspen Way, Upper Bank Street, Hertsmere Road and underneath Delta Junction;
- Connections to Aspen Way Footbridge and Canary Wharf Crossrail Station;
- Car, motorcycle, bicycle parking spaces, servicing;
- Utilities including energy centres and electricity substation(s); and
- Other works incidental to the proposed development.

2.1.2 PURPOSE OF THE REPORT

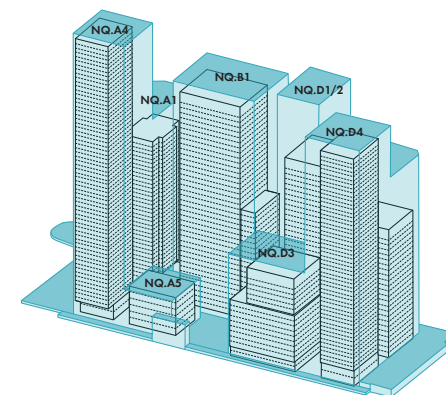
David Bonnett Associates (DBA) was appointed by the Applicant as Access Consultant to the project in 2019.

This Access Statement has been prepared to support the North Quay Masterplan project at Stage 2 and is based on a review of the proposals by Allies and Morrison. This statement forms part of a design framework for future detailed schemes and sets out design and access parameters for future plot design.

2.1.3 METHODOLOGY

The Access Statement describes the access provisions using a journey around the proposed Masterplan as follows:

- Arrival at and circulation through the Masterplan;
- Public realm and approaches to the buildings;
- Overview of entrances;
- Overview of horizontal and vertical circulation in plots;
- Overview of access to facilities , e.g. WCs; and
- The emergency evacuation strategy.



Jelly mould with indicative massing - view from the south

The Access Statement describes how the scheme has been progressed with consideration of the principles of inclusive design including visitors, staff and the wider community.

The report considers the requirements of all users, including:

- People with mobility impairments;
- People with visual impairments;
- People with cognitive impairments;
- Deaf people;
- Older people; and
- Small children.

The meaning of 'disabled' in this Access Statement is as defined in the Equality Act 2010. Refer to Section 5.4 for more details.

Note:

DBA provides guidance and advice as access consultants. The consultancy does not officially approve designs, nor does it provide confirmation that a design complies with statutory standards. This remains the responsibility of the designers and the approvals authority.

2.1.4 STANDARDS AND POLICIES RELEVANT TO ACCESS

The access provisions are reviewed against the access regulations and standards that apply, which are identified below.

National Regulations

The Building Regulations 2010, Approved Document M (Access to and use of buildings) Volume 1: Dwellings, HM Government, 2015 edition.

The Building Regulations 2010, Approved Document M (Access to and use of buildings) Volume 2: Building other than dwellings, HM Government, 2015 edition.

The Building Regulations 2010, Approved Document K (Protection from falling, collision and impact), HM Government, 2013 edition.

Approved Document B (Fire safety) – Volume 1: Dwellings (2019 edition)

Approved Document B (Fire safety) – Volume 2: Buildings other than dwellings (2019 edition).

Best Practice

British Standard 8300:2018 Design of Buildings of an Accessible and Inclusive Built Environment
BS8300-1 - External Environment Code of Practice
BS8300-2 : Building Code of Practice

British Standard 9999:2017 Code of Practice for Fire Safety in the Design, Management and use of Buildings, British Standards Institution, 2017.

National Planning Policy

National Planning Policy Framework (NPPF), Ministry of Housing, Communities and Local Government, 2019.

London Planning Policy and Guidance

The London Plan, The Spatial Development Strategy for London - Consolidated with Alterations since 2011, Mayor of London, March 2016.

The Draft London Plan – Intend to Publish version (December 2019)

Town Centres, SPG, July 2014 (London Plan 2011)

Housing Supplementary Planning Guidance, London Plan 2016 Implementation Framework, Mayor of London March 2016.

LB TOWER HAMLETS PLANNING POLICY AND GUIDANCE

London Borough of Tower Hamlets Local Plan 2031: Managing growth and sharing the benefits (Adopted January 2020)

Other guidance

North Quay Design Guidelines, Canary Wharf Group, 2020

A full list of references and a description of relevant legislation, regulations, standards and guidance are detailed in Appendix 1 :References for inclusive design.

Shared Living Planning Policy

The London Housing SPG (March 2016) does not apply to specialist forms of housing which are not in the C3 use class.

One of the plots (HQ08?) may be classed as Sui Generis use development.

Policy H18 of the draft New London Plan sets out the basis for the design of large-scale purpose-built shared living: “The private units should be appropriately sized to be comfortable and functional for a tenant’s needs and may include facilities such as en-suite bathrooms and kitchenettes. There are currently no minimum space standards for these units. Given the generally small size of the private space in these developments, the communal amenity spaces are important elements in ensuring the quality of the overall residential amenity is acceptable. If deemed necessary, the Mayor will produce planning guidance, including space standards, for this form of accommodation.”

2.1.5 INTERPRETATION OF THE STANDARDS

Approved Documents M, K and BS 8300:2018 provide general access advice, but refer to other standards and regulations about specific aspects of buildings and their immediate surroundings. Therefore, several separately authored documents are referred to, including good practice guidance books written by specialists. Refer to Appendix 1 for more details.

There are no nationally agreed access standards or regulatory controls governing extended external spaces and landscaping. For primary routes and approaches to buildings Approved Documents M are taken as a benchmark for determining accessibility. With regards to streetscape and pavement design, guidance is provided by the Department for Transport’s Inclusive Mobility Guide and Transport Notes and BS8300:2018.

Access standards are in a continuing state of development because of changing needs, expectations and legislation. The nature of these changing needs and standards can result in anomalies and contradictions. Therefore it is important that access and inclusivity are considered and refined throughout the design process. The design of the scheme should seek to interpret these standards to provide

the best possible level of inclusive design and this Access Statement describes situations and solutions where interpretation may be necessary.

2.1.6 BUILDING REGULATIONS AND LISTED BUILDING CONSENT

The scope for making alterations to improve access in historic or listed buildings is limited by the need to protect and conserve the architectural features of the existing fabric. A guiding principle for alterations to historic buildings is that the alterations should be reversible wherever possible, enabling the building to be restored to its original condition if required some time in the future.

As a result, it may be possible that Listed Building Consent can override some of the guidance of Approved Document M, Volume 2 and K, particularly for the existing building improvements. The Proposed Development will comply with building regulations as far as possible.

The Equality Act cannot override any other piece of legislation. Where alteration is not possible, service providers and employers still need to meet their duties under the Equality Act. In such cases a managed approach or alternative provision may be adopted and will be set out in this statement and the building's post-completion Access Management Plan.

The only listed element is the wharf wall underneath the development, which has no impact on enabling the provision of accessible scheme.

2.1.7 PROJECT CONSTRAINTS

The Site is bounded by a body of water to the south, the DLR railway lines and station to the west and north as well as main roads north, east and west. The retained 'banana' wall of the original docks to the south of the Site is listed, as it is part of the original wharf, and sits below the Site. As a result this limits the extent of the basement area and subsequent parking capacities.

There is an existing pedestrian footbridge over the road and railway linking to Poplar DLR. The existing site slopes by 1 to 2m south to north.

2.1.8 THE EQUALITY ACT

Statutory consents

When considering a reasonable adjustment to a physical feature, the Equality Act does not override the need to obtain consents such as planning permission, building regulations approval, listed building consent, scheduled

monument consent and fire regulations. If the consent is not given, there is still a duty to consider a reasonable means of avoiding the feature.

Refer to Appendix 1 for further information.

Design standards

Service providers and public authorities carrying out their functions do not have to remove or alter a physical feature of a building for a period of 10 years from construction or installation if it accords with the relevant objectives, design considerations and provisions in Approved Document M. They may still need to consider a reasonable means of avoiding the feature.

2.1.9 CONSULTATION

As the development is a new build project, there is currently no established access group or staff forum with whom to consult.

Efforts will be made to identify local interested groups as part of the planning process if there is one available.

2.2 GENERAL PRINCIPLES

2.2.1 ACCESS AIMS

The Proposed Development has been designed to incorporate the following access principles:

To follow design guidance given in relevant British Standards and other currently published good practice guidance about meeting the needs of disabled people;

The following key points about inclusive design are from Commission For Architecture and Built Environment (CABE)'s 2006 publication *The Principles of Inclusive Design - They Include You*, which also gives more detailed explanations of each point:

- Inclusive design places people at the heart of the design process;
- Inclusive design acknowledges diversity and difference;
- Inclusive design offers choice where a single design solution cannot accommodate all users;
- Inclusive design provides for flexibility in use; and
- Inclusive design provides buildings and environments that are convenient and enjoyable to use for everyone.

2.2.2 SUMMARY OF ACCESS PROVISIONS

The proposals for the Proposed Development at this stage demonstrate that a good level of inclusive design can be achieved by the principles set out by the Parameters and Floorspace ranges.

The key access provisions for the Proposed Development include:

- Drop-off: Drop-off/pick-up points for taxis, Dial-a-Ride and community transport minibuses will be available in close proximity to building entrances;
- Parking: Accessible on-street visitor car-parking spaces (Blue Badge) will be available in close proximity to building entrances as part of the unloading provision with undercroft parking for residents;
- Good accessible transport links;
- Legibility and wayfinding: Logical and compact layout of facilities will facilitate wayfinding for people who are blind or partially sighted;
- Pedestrian routes: These will be designed to be safe and inclusive for all pedestrians in line with Department for Transport guidance with accessible link to nearby residential neighbourhoods (Poplar) and transport hubs;
- Routes will be step-free, level or gently-sloping with gradients at 1:21 or gentler;
- Planting and landscape features will include seats and resting places at a minimum of every 50m;
- Accessible cycle parking will be provided on plot and on street;
- Entrances: These will be clearly distinguished on the facade to facilitate orientation and wayfinding; and will be easy to enter with automatic or easily openable doorways.
- Office accommodation: This will be designed to the appropriate Building Regulation Standards including Approved Documents Part M Volume 2 and Part K;
- Residential accommodation: This will be designed to the appropriate Building Regulation Standards including Approved Documents Part M Volume 1 and Part K and London Plan housing standards. Ten percent will be wheelchair accessible;
- Serviced apartments: These will be designed to the appropriate Building Regulation Standards including Approved Documents Part M Volume 2 and Part K and London Plan hotel / hostel standards. Ten percent will be wheelchair accessible;
- A fire-fighting lift will be provided in each core which will assist in the evacuation of disabled people who cannot use stairs.

2.3 ARRIVAL

2.3.1 TRANSPORT CONNECTIONS

Public transport accessibility levels

Accessible transport facilities are key elements of urban developments.

The Site will have a high Public Transport Accessibility Level (PTAL) rating of 6a once Crossrail is complete.

The PTAL is an indication of the frequency, reliability and distance of public transport services close to a site; it does not take the accessibility of transport services into account. However, the PTAL is important to the access strategy because it is used to evaluate the reliance on cars that current and future users of the building are likely to have, with the implication that less reliance on cars corresponds to a greater reliance on public transport.

Buses

There is convenient access to accessible public bus services for the development with bus stops along Canada Square about 5 minutes walk from the Site. Buses in Poplar are further afield beyond the Aspen Way Footbridge. All London buses (except two 'heritage' routes) are accessible buses that 'kneel' to minimise height differences between the bus floor and pavement, and have ramps and space inside for wheelchair and pushchair users. However, not all disabled people can use them and therefore setting-down bays for drop-off by vehicle are essential and will be provided along the spine route of North Quay Way.

London Underground, DLR and Rail

The development has excellent DLR links and sits in close proximity to West India Quay and Poplar (DLR), stations and the new Crossrail expected to open in 2021.

Drop off (on street)

Due to its high Public Transport Accessibility Level (PTAL) rating, there will be limited accessible car parking for residents in the basement and none at street level.

Drop-off and pick up zones will be provided on street within 50m of building entrances.

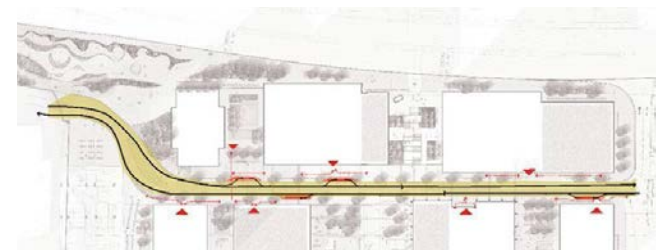
Taxis will have raised kerb access for wheelchair users in kerb-free areas.

2.3.2 CYCLES AND MOBILITY SCOOTERS

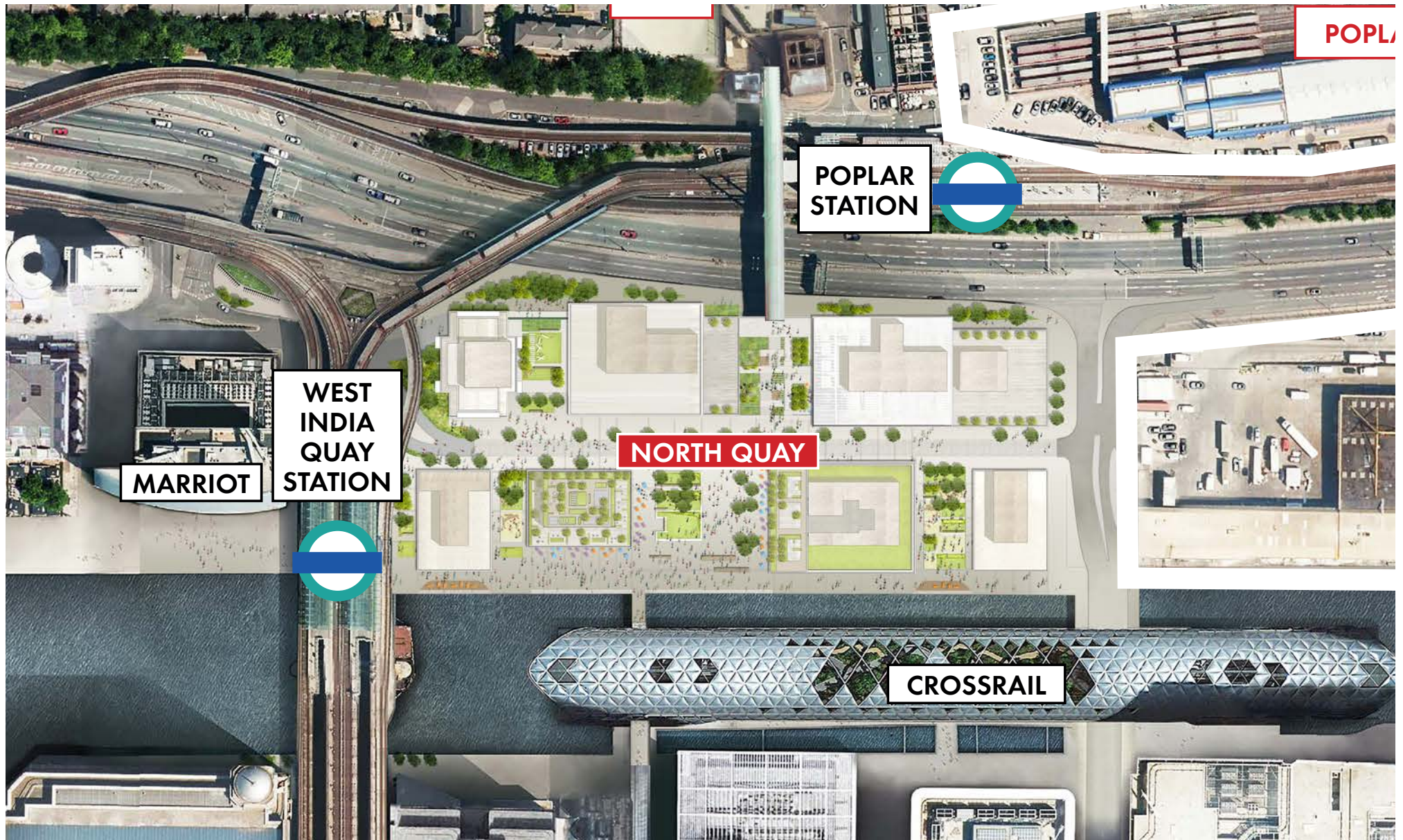
The required number of cycle parking spaces will be provided at either basement or ground level (depending on the building) for residents and staff and on street for visitors. Each residential building will have its own cycle parking with lift access and, in some cases, ramped access.

Office accommodation will also have bike hub parking in the basement via lift access.

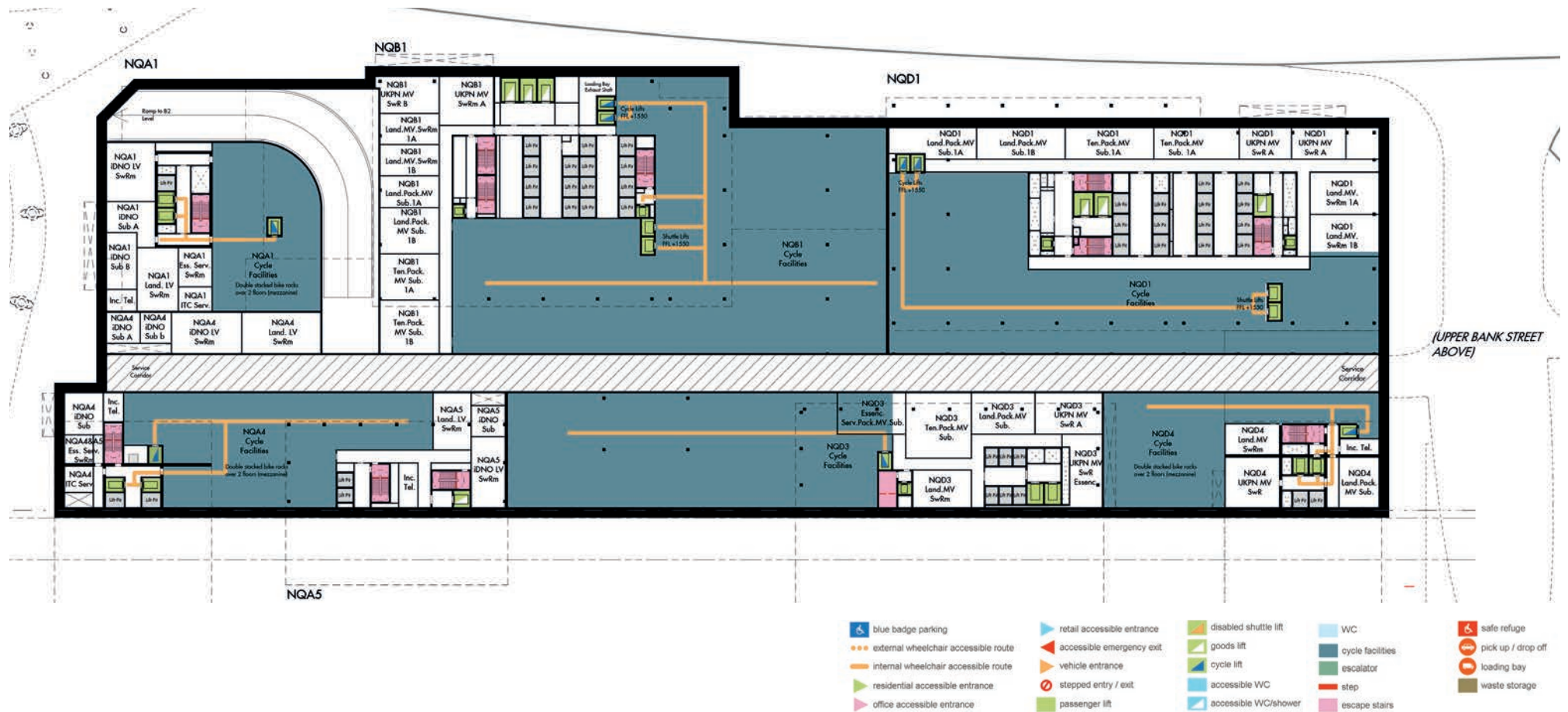
In all provisions, 5% of the total provision will be accessible single tier wider stands that can accommodate larger, adapted cycles or bicycles used by disabled cyclists in line with the London Cycling Design Standards.



Indicative LDA plan of on-street shared drop off and loading bays



Building locations of the Indicative Scheme.



Indicative Scheme Basement -1 level showing cycle parking



Indicative Scheme Basement -2 level showing car parking

2.4 MASTERPLAN AND PUBLIC REALM

2.4.1 DESCRIPTION

The following section describes access provisions in the Indicative Scheme to help demonstrate how the principles could be applied to any future detailed development.

A new central street, North Quay Way, will run through the Masterplan with pedestrian routes and pocket parks leading of this route creating a new public realm network. These will connect existing neighbourhoods to the north with the rest of Canary Wharf to the south.

There will be for key routes through the site:

- North Quay Way
- Aspen Way Gardens
- Upper Bank Street
- Crossrail to Aspen Way Footbridge

There will be a number of key public realm spaces as follows:

- Quay Square
- Dock Gardens
- The Delta
- Poplar Plaza
- Garden Square
- Quayside

2.4.2 LEVELS

North Quay Way will run relatively level at approx +6.2m AOD across much of the Site. The levels will drop gently at its east end to approx +6.1m AOD where it connects with the existing level of Upper Bank Street. The levels south to north drop by 2m over a long distance.

2.4.3 NORTH QUAY WAY

North Quay Way will form a key route running through the Site in an east-west orientation, providing two-way vehicular and pedestrian access and connectivity between Upper Bank Street and Hertsmere Road.

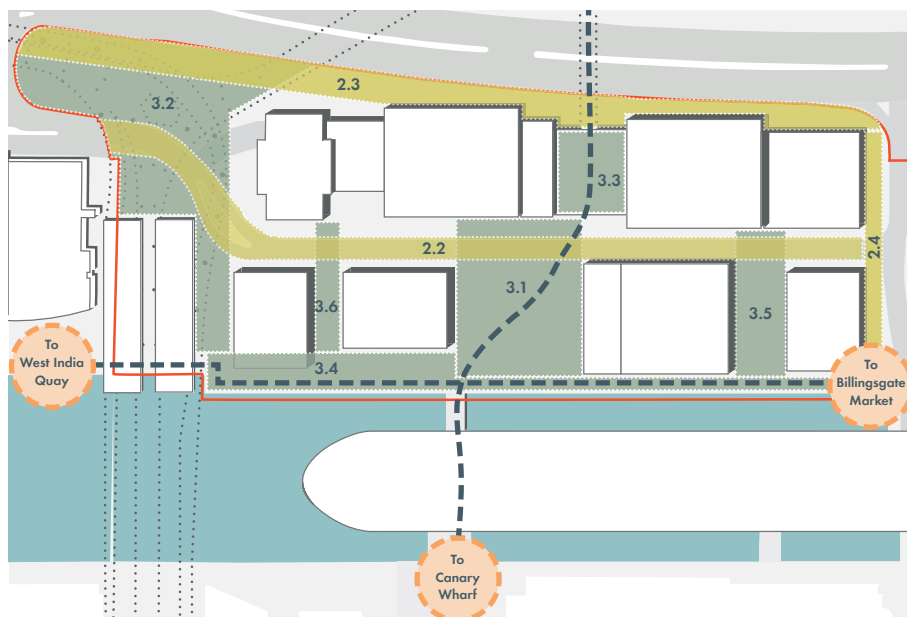
The street acts as an east-west spine through the Masterplan connecting all of the building plots together and the key open spaces. It will be animated by a variety of ground and upper ground floor uses; including bars, restaurants, retail, office reception lobbies and may include residential and serviced apartment entry lobbies and communal spaces.

Streetscape Design

North Quay Way will be a fairly busy street with frequent pedestrian movement and occasional vehicular traffic; including cars, taxis and servicing vehicles. It is expected that pedestrian flows will be high passing across the street from Quay Square through to Poplar Plaza as they will be moving two-way north-south.

The street will be relatively long but its length is broken up by Quay Square, Garden Square, Dock Square and Poplar Plaza. These key civic spaces will punctuate the length of the street and offer a varied character to the street.

There will be a tree planting zone on at least one side with inset accessible drop off and loading bays spaced along this zone. The paving detailing will ensure some form of tactile and tonal definition for blind and partially sighted people between the vehicle and pedestrian route. This route will ultimately have pedestrian priority.



The different Routes and Spaces within the Masterplan shown here in the context of the Indicative Scheme, each annotated with their corresponding chapter number

ROUTES

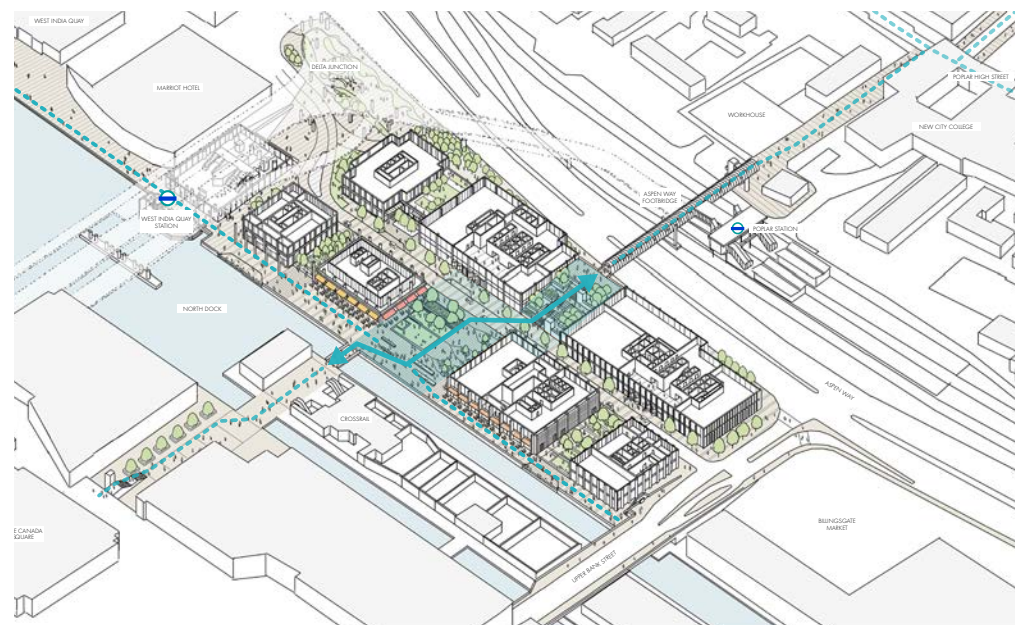
- 2.2 North Quay Way
- 2.3 Aspen Way Gardens
- 2.4 Upper Bank Street pathway

— Key routes formed from interconnecting Routes and Spaces

SPACES

- 3.1 Quay Square
- 3.2 The Delta
- 3.3 Poplar Plaza
- 3.4 Quayside
- 3.5 Dock Square
- 3.6 Garden Square

Street layout plan



Connectivity with surrounding links and neighbourhoods

2.4.4 ASPEN WAY GARDENS

Aspen Way is an existing multi-lane busy primary road forming the northern edge to the Site. It has limited pedestrian movement along its edge principally limited to connecting Poplar DLR station with Canary Wharf. The levels are dictated by the existing streetscape although this only varies by 600mm and should not pose any access difficulties.

The Proposed Development will provide an extension of the Aspen Way Footbridge connection into the Site and provide a two-way east-west cycle and pedestrian route as a more pleasant landscaped linear space. A new pair of lifts will provide step-free access over Aspen Way to link to the existing bridge and Poplar DLR and landscaped terraces in Poplar Plaza (10.4.10) linking in to the upper level retail units.

2.4.5 UPPER BANK STREET

Upper Bank Street is an existing primary road along the eastern edge of the Site forming an important vehicular entrance and exit to the Canary Wharf estate from Aspen Way. The greatest difference in ground levels throughout the Site will occur along Upper Bank Street due to the existing levels of the footpath and

highway as it connects Aspen Way to the Canary Wharf estate. At its junction with Aspen Way, this is approx. 4.2m AOD and then rises to approx. 6.0m AOD where it will interface with North Quay Way, rising further to approx. 9.8m AOD as it crosses through Crossrail Place. All thresholds into building entrances however will remain level despite the 500mm difference in some external spaces.

With development of the Site and future development on Billingsgate there is an opportunity enhance cycle and pedestrian crossing. This route will also have drop-off points, seating and enhanced public realm.

2.4.6 CROSSRAIL TO ASPEN WAY FOOTBRIDGE

This pedestrian route is the most important through the scheme linking key transport hubs from the Poplar DLR station to the West India Quay and the new Crossrail expected to open in 2021. The route will traverse via Poplar Plaza (10.4.10), which will be fully accessible with lift and stepped access.

2.4.7 QUAY SQUARE

Quay Square is the main formal open space within the Site and sits centrally in the Masterplan. It will be animated by a mix of uses at ground floor including bars, restaurants, and shops. On the upper floors a mix of commercial and residential uses will overlook the Square.

Quay Square will be designed as a south facing square and will be similar to an urban piazza capable of hosting a variety of uses. It will have a combination of hard and soft landscape and serve as a public space with ample seating including arm and backrests.

Quay Square will fall gently away from a level of approximately 6.2m AOD on North Quay Way down to the Quayside. This level change would take place evenly across the space and achieve gradients in the region of 1:100 giving the impression of being almost flat.

2.4.8 DOCK SQUARE

Dock Square will be a garden space located in the south-east of North Quay, between plots NQ.D3 and NQ.D4 and adjacent to The Quayside. It is intended as a quieter and greener amenity space for tenants/residents of adjacent buildings and to the wider population of North Quay.



Indicative masterplan - ground floor routes



Artist impression of refurbished bridge link with clear sightlines and good access widths



Proposed steps and lifts to bridge link

All diagrams are based on the Indicative Scheme and are for illustrative purposes only

2.4.9 THE DELTA

The Delta is an area of open space located under the existing elevated DLR tracks at the western end of the Site. The space is currently under used and urban in character and will be landscaped and softened with creative lighting. It will be developed as a collection of spaces that enable the east-west cycle route and pedestrian connectivity.

2.4.10 POPLAR PLAZA

Poplar Plaza occupies development plot NO.C1 and is an important formal open space linking the Site with Aspen Way Footbridge, Poplar DLR station and Poplar beyond.

Poplar Plaza will be a tiered space managing the changes of level from the existing Aspen Way Footbridge down to North Quay Way via a series of gentle steps and terraces and passenger lift access. The existing bridge link will also be refurbished to improve lighting, tonal contrast and wayfinding.

2.4.11 GARDEN SQUARE

Garden Square will be a small garden space located in the south-west of North Quay, between Development Plots NO.A4 and NO.A5 and adjacent to The Quayside. As with the

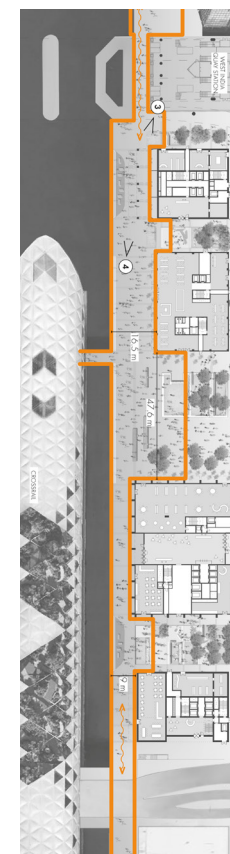
Dock Square, the garden is intended as a more intimate space. It will sit at approx +6.2m AOD but its ground plane may be sculpted to create a defined landscape and structure to the garden.

2.4.12 QUAYSIDE

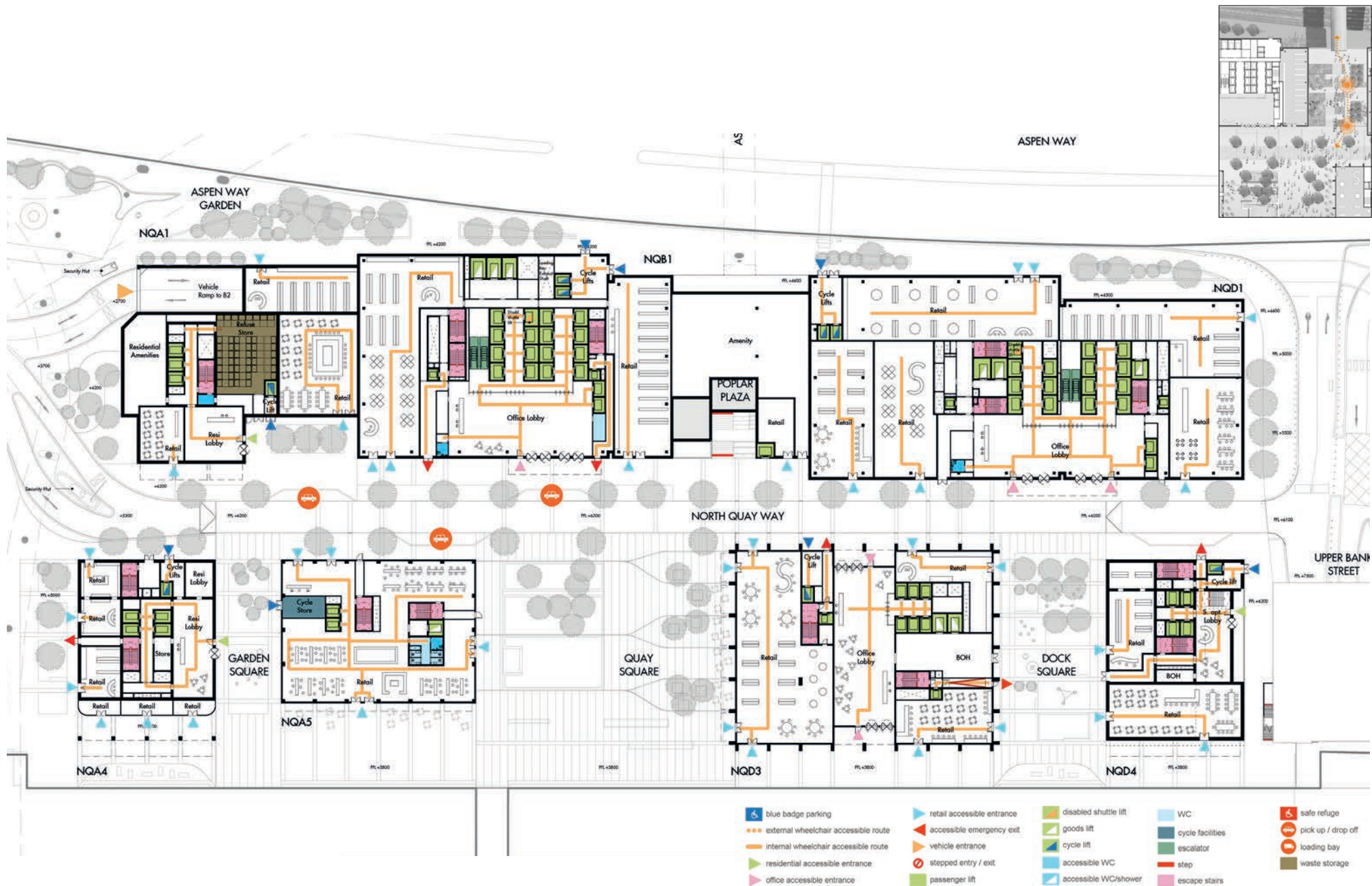
The Quayside will be located along the southern edge of North Quay, located adjacent to the water's edge and across from the existing Crossrail Place building. It will be a predominantly hard landscaped open space. It will connect through to the existing West India Quay under the DLR Station to the west and enable future connection under Upper Bank Street to Billingsgate to the east.

The levels of the Quayside will be guided by the requirements to bridge over the existing listed banana dock wall and to connect to existing ground levels under West India Quay Station and to the Crossrail bridge. The water edge may sit at a lower level than Quay Square, with terraced seating dropping to the waterside. The existing dock water level varies at approx +3.95 to +4.35 AOD, with the 1 in 10 year flood level at approximately +5.3m AOD.

Any edge protection such as railings will need to allow boats to moor whilst unprotected edges will also ensure the safety of blind and partially sighted people, e.g. tactile paving. Such details will be developed at the next design stage.



Proposed quayside zone



Ground floor Indicative Scheme showing landscaping with lift and step connection to Aspen Way Footbridge

2.5 COMMERCIAL PLOTS - GENERAL PRINCIPLES

2.5.1 INTRODUCTION

There will be the potential within the Masterplan to allow for 3 office buildings - NQ.B1, NQ.D2, and NQ.D3 plus one smaller retail building. The 3 office buildings just apply to the Indicative Scheme but potentially more could be built out under the Outline Planning Permission. In principle they will offer flexible floor plates to larger tenants or subdivided into areas for smaller tenants. There are likely to be retail units at ground and mezzanine levels, with office activities located on floors above.

2.5.2 SMALL BUILDING (NQA5)

There will be one low level small building for food, beverage and dining use to act as focus of more human scale interest within the Site and as a landmark within their immediate context, activating the public realm. These will be designed to meet Building Regulations Part M (Volume 2) standards and subject to tenant fit-out.

2.5.3 ENTRANCES

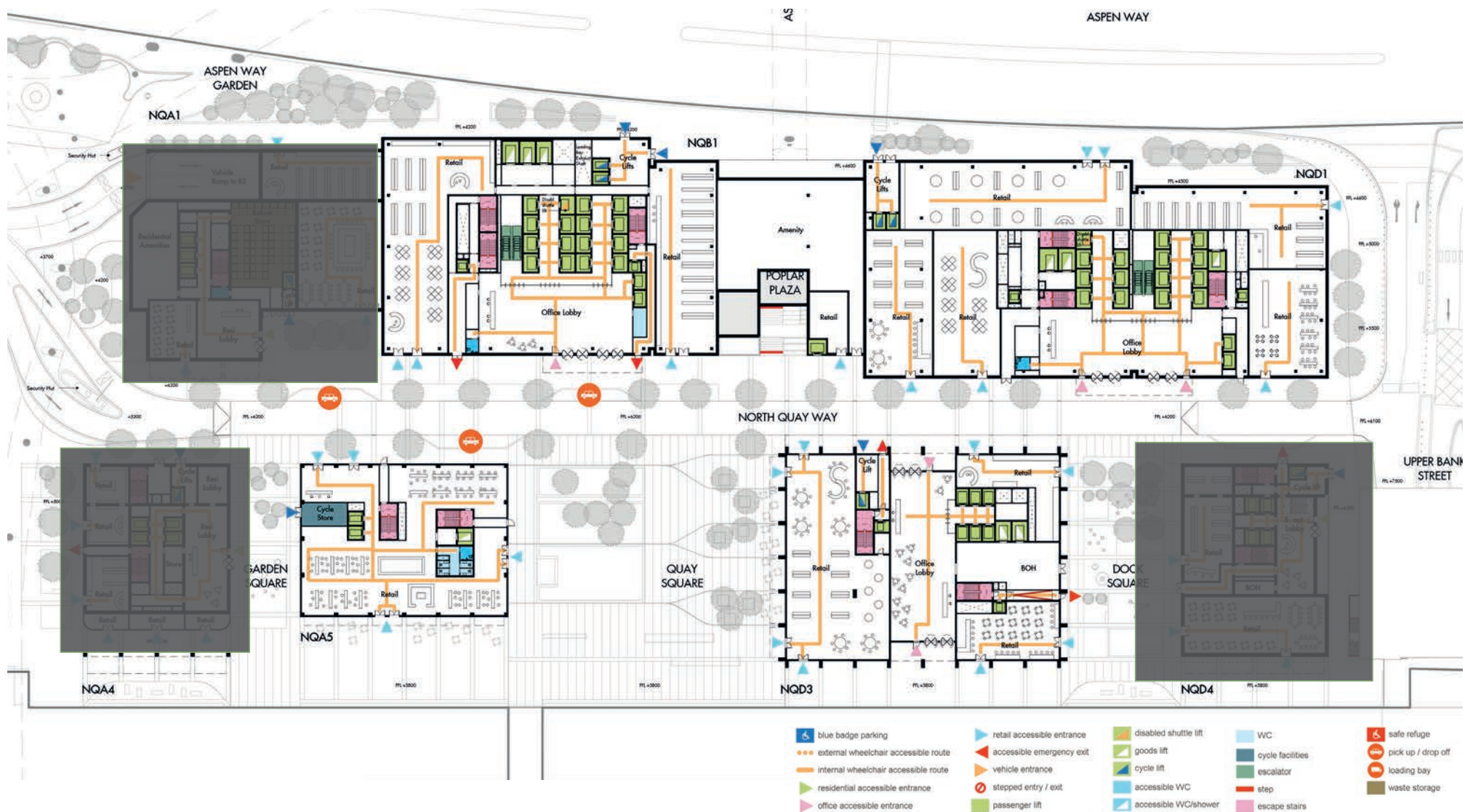
Access from street level to office space on upper floors will be through a communal lobby entrance, shared by tenants of each building. In general, all entrance doors to all plots will be designed to meet the Building Regulations Part M (Volume 2) standards and include:

- An external level landing and accessible threshold;
- Weather protection to all manually opening swing doors;
- Accessible doors allowing for a clear opening width of 1000mm for each leaf;
- Manifestations to glazed screens and doors to meet Park K, (where glazed sections are wider than 400mm);
- Intercoms located to suit all users (including wheelchair users) and have a speech reinforcement system;
- Transitional lighting between the exterior and interior of the building;
- A large mat (or similar) to remove water from shoes and wheels of wheelchairs and buggies;
- Highly reflective internal finishes

2.5.4 RECEPTION AND LOBBIES

All plots will be individually designed according to the *North Quay Design Guidelines* (NQ.PA.04) and subject to tenant fit out. As a rule, reception areas will be designed to meet Building Regulations Part M (Volume 2) standards and include:

- adequate circulation space to the front and behind counters for wheelchair circulation.
- a lowered section at 760mm height to suit communication with wheelchair users and those of shorter stature.
- a permanent hearing induction loop will be installed at the counter.
- lighting and a suitable plain background will ensure that the face of reception staff is not in shadow to assist people who are lip-reading.
- any seating provided in the reception area have adequate space for wheelchair users to sit alongside companions and some seating provided with backrests and armrests.
- security barriers will have a wider section of 1200mm in addition to the standard barriers to the office lift and stair cores;
- an accessible WC in close proximity for staff and visitors.



Indicative Scheme ground floor commercial / office plots location plan

2.5.5 RETAIL AND CAFE AREA AT GROUND LEVEL

These facilities will be provided as shell and core, with the tenant(s) responsible for meeting Part M requirements, including accessible entrances and sanitary facilities.

2.5.6 HORIZONTAL CIRCULATION

The office accommodation will be mainly open plan

Corridors within the vertical circulations cores to the stairs, lifts and sanitary accommodation will be a minimum of 1500mm wide.

2.5.7 VERTICAL CIRCULATION

Lifts

The office blocks will have multiple passenger lifts, depending on the plot, extending from the cycle parking at basement level to upper stories, serving the office accommodation exclusively. Some plots will also have escalators.

The basement lifts will also be used for fire-fighting/evacuation that can be used to evacuate disabled people in case of an emergency.

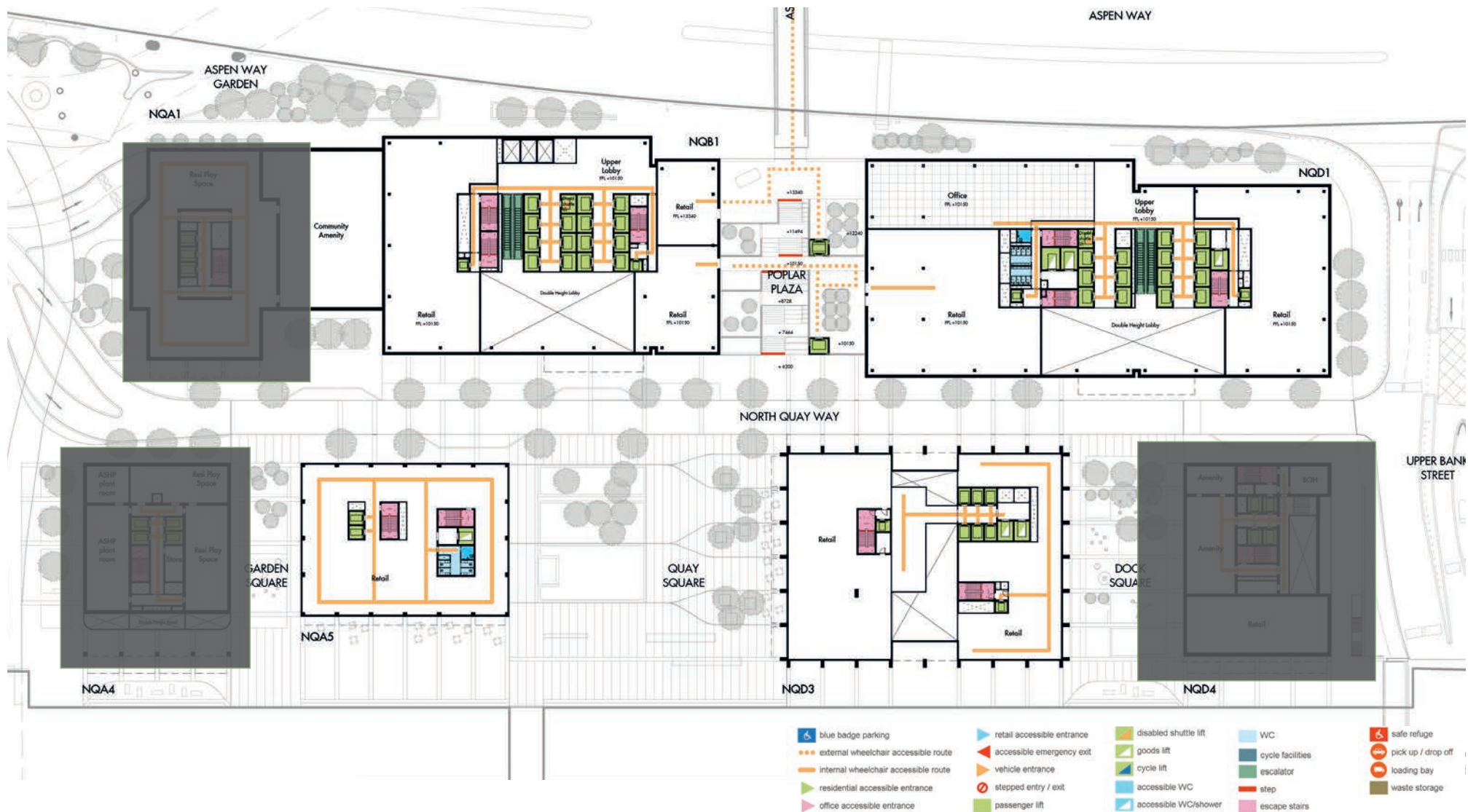
Lifts will meet Part M standards as a minimum with controls and call buttons in suitable locations and with audible and visible indicators for lift and door movement and location of lift.

Stairs

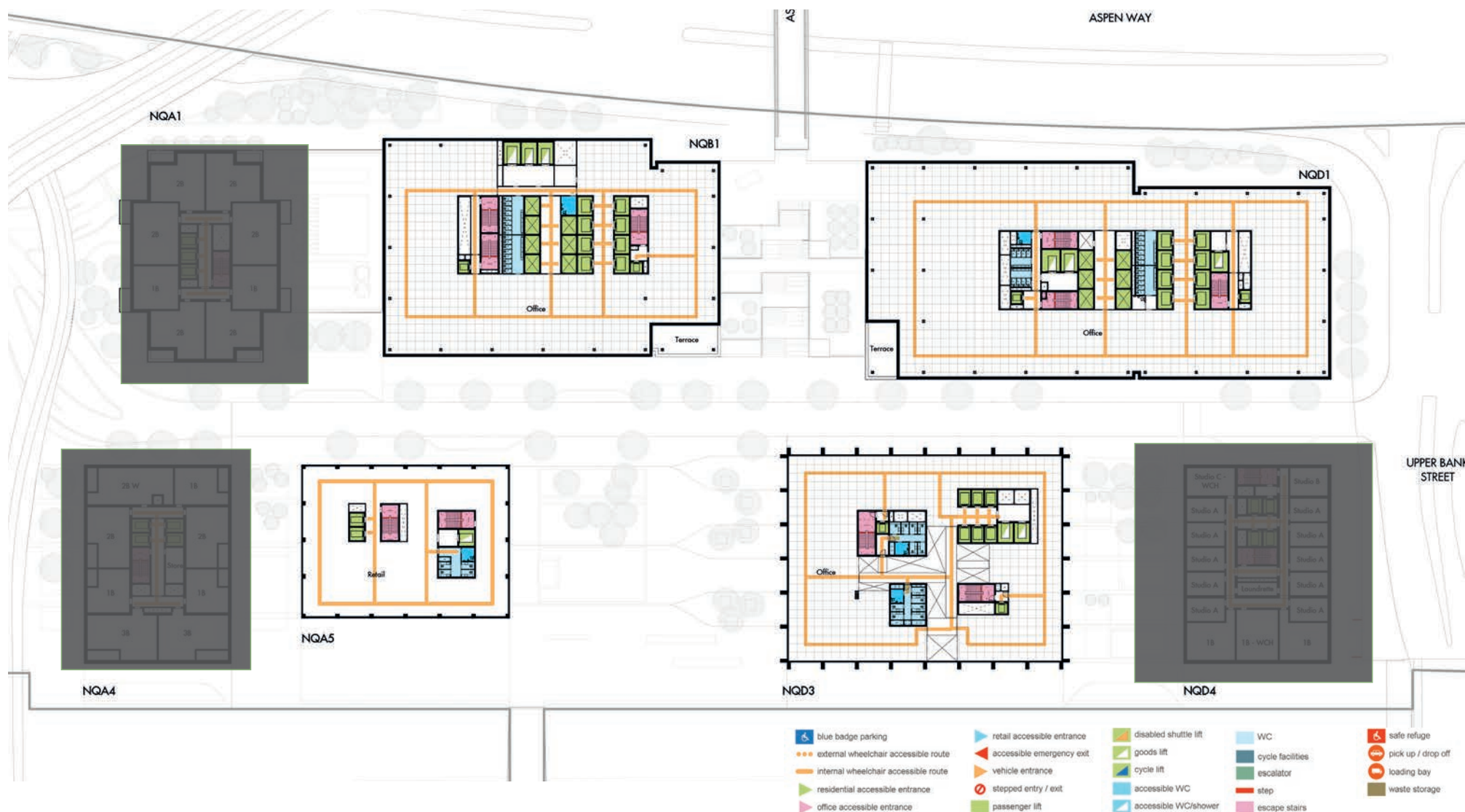
All stairs will meet Part K standards for general access stairs.

2.5.8 BACK OF HOUSE FACILITIES FOR STAFF AND SERVICE AREAS

Where there are back of house staff changing and WC facilities provided, these will include unisex wheelchair accessible facilities.



Indicative Scheme first floor commercial / office plots plan



Indicative Scheme typical lower floor commercial / office plots plan

2.5.9 CORE SANITARY PROVISION

Accessible sanitary accommodation will be provided within 40m of the offices on all floor levels. All facilities will meet the requirements of AD Part M as follows:

- There is no wider 1200mm cubicle provided as this is solely office accommodation and not expected to be visited by shoppers or parents with children.
- At least one cubicle in each set will be suitable for ambulant disabled people with outward opening door, grab rails and potential to raise the toilet seat.
- The wheelchair accessible facilities will provide alternative left and right hand transfer on each floor and will also switch transfer sides on alternative floors to provide a choice of transfer for wheelchair users.
- All wheelchair accessible provision will meet standards of Approved Document M including:
- travel distances to the accommodation not greater than 40m from any part of the office floor
- size of 1500 x 2200mm with outward opening door
- fittings meeting requirements of ADM Diagrams 18 and 19
- Good visual contrast of fittings against floor and walls

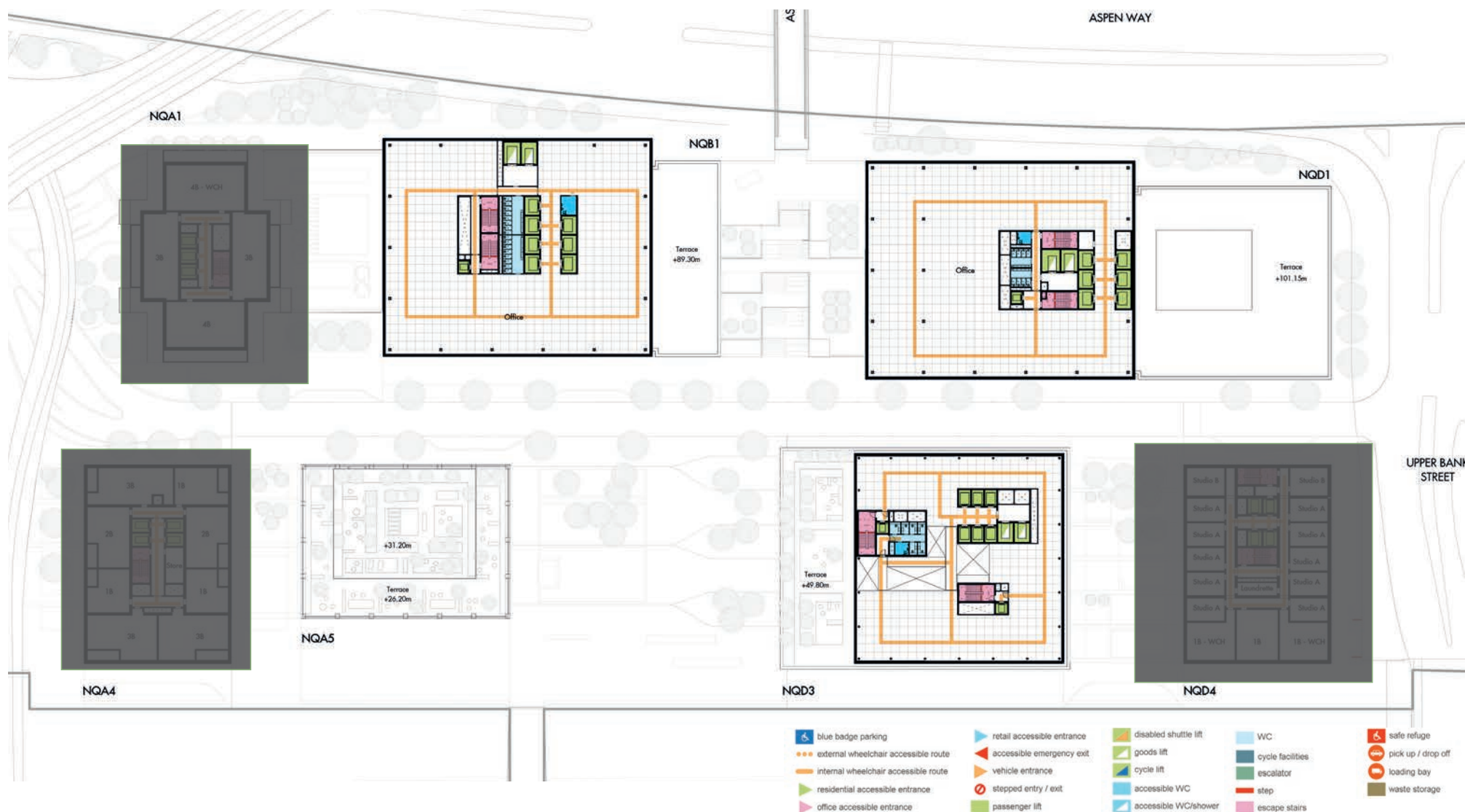
2.5.10 EMERGENCY EGRESS

The fire strategy for all buildings will take precedence over this section. The strategy will include best practice procedures for the evacuation of disabled people from all parts of the buildings, based on BS 9999:2017 and Regulatory Reform (Fire Safety) Order Supplementary Guidance.

The following measures for the evacuation of disabled staff and visitors will be considered:

- Designated escape routes from each part of the building that allow wheelchair users and others to reach a safe area to await assistance;
- Use of two fire-fighting/ evacuation lifts to safely evacuate disabled people from all parts of the office accommodation
- Provision of safe refuges with a two-way communications system, within reach of a wheelchair user, to allow direct communication with the team organising the evacuation in accordance with BS 9999:2017;
- Alarm systems that provide visual as well as audible signals in isolated locations such as WCs; and
- Management procedures that include the appointment and training of staff to assist with the evacuation of disabled people.

- Where evacuation chairs are required to carry people to a place of safety in areas accessed by stairs they will be regularly maintained and inspected.
- The use of suitable warning systems, such as vibrating pagers may be considered for individual members of staff, following a Personal Emergency Egress Plan (PEEP) assessment.



Indicative Scheme typical upper floor commercial / office plots plan

2.6 RESIDENTIAL PLOTS - GENERAL PRINCIPLES

2.6.1 INTRODUCTION

The Masterplan allows for flexible Live/Stay buildings in Development Zones NQ.A and NQ.D. These may include a range of C3 residential use tenures including market residential, affordable residential, private rented, or C4 use co-living. The Masterplan also allows for C1 serviced apartments and student accommodation.

The unit typologies will offer a wide variety of sizes ranging from studios up to 4-bedroom apartments including 10% wheelchair adaptable (Cat 3) across all typologies and sizes.

All residential dwellings and live/stay rooms are to be located above the first floor level with no habitable rooms located at ground/first floor level.

The following pages use the Indicative Scheme to demonstrate the access principles that will be applied to the subsequent Reserved Matters Applications.



Indicative Scheme ground floor residential plots plan

2.6.2 ENTRANCE

All entrances will be covered and the thresholds will be level. This will also comply with the emerging Design Guideline 8 *Public realm* in the High Density Living SPD February 2020.

Further details will be subject to detail design and it is expected to comply with Part M (Volume 1) standards, including entry systems such as video or audio entry systems, pass card systems and similar will be designed and located to be used by visitors and residents. Building users should be able to activate such a system with a closed fist and with minimal force.

2.6.3 RECEPTION AND LOBBY

The reception areas, including the reception desks, will be designed at a later stage and it is expected to comply with Part M.

All receptions will have at least one unisex wheelchair-accessible toilet.

2.6.4 CIRCULATION

In each plot the residential accommodation will be organized around a central core comprising the vertical circulation, and corridors have been minimised and crossing-corridors doors for fire reasons reduced to the minimum.

All communal corridors will be generally 1500 mm or wider, and no less than 1200 mm in any case, allowing sufficient space for wheelchair users to easily manoeuvre, and to pass in opposite directions. And there will be a 1500 mm x 1500 mm turning space outside each wheelchair accessible, or easily adaptable, dwelling as a minimum.

Doors in communal routes will have a clear opening width of 850 mm through a single leaf door, or one leaf of a double leaf door, unless power operated or held open; and will have 300 mm clear space to the leading edge on the pull side of the doors and 200 mm clear space in the push side.

Lifts

Standards 15 and 16 of London Plan Housing SPG (March 2016) requires that all dwellings entered at the seventh floor (eighth storey) and above should be served by at least two lifts; and it is desirable that every wheelchair user dwelling is served by more than one lift.

In accordance with all above, all of the dwellings in the Development will have access to at least two lifts.

All car lifts will be for eight or more people, with a minimum internal car size of 1100 mm x 1400 mm (the minimum dimensions for AD Part M). All lift doorways will provide a minimum clear opening width of 800 mm and there will be a clear landing of at least 1500 x 1500 mm in front of all lift entrances.

Car controls and further details will be designed in later stage according AD Part M and the guidance of BS 8300 where relevant.

Stairs

All stairs will be designed to meet the requirements of Part K for 'general access stair', and will be detailed at a later stage, including dimensions that suit ambulant disabled people, tonal contrast to aid people with impaired sight, and handrails extended 300 mm beyond the top and bottom riser.



Indicative Scheme first floor residential plots plan

2.6.5 COMMUNAL RESIDENTIAL AMENITIES

All routes to the amenities will be step-free and will meet the requirements of Part M Category 2 and 3.

All amenities will be detailed at a later stage, and it is expected that will be accessible for all residents including wheelchair users.

If sanitary facilities are provided within the amenities spaces, at least one unisex wheelchair-accessible toilet will be provided.

2.6.6 COMMUNAL OPEN SPACE

Access to communal open space from any dwelling will be step-free and will meet the requirements of Part M Category 2 and 3. Communal doors to open spaces will have nominally level threshold.

Any play areas will be designed with reference to accessible play guidance, such as the GLA Play and Informal Recreation SPG

During detailed design consideration will be given to ensure that the open spaces are accessible for all and that surfaces, structures and plants do not become a hazard.

2.6.7 REFUSE STORES

The refuse strategy will be finalised at the Reserved Matters Application stage. In principle, all buildings rely on compactors located in the loading bays at Basement level 2. A small refuse store may be located close to the individual building cores for temporary storage of bins, which then should be wheeled to the compactors in the loading bay.

The routes from the dwellings to the refuse store will be step-free and will be accessible to all residents including wheelchair users. The horizontal distance between any dwelling and its refuse collection point will be less than thirty metres (via lift) to ensure compliance with Part H of the Building Regulations.

2.6.8 EMERGENCY ESCAPE

Normal provisions for residential buildings will apply to the development whereby only the residents of an affected unit will evacuate. Others are protected as the dwellings themselves function as safe refuges.

Early warning and multiple escape routes from the car parking areas will be part of the evacuation strategy.

2.6.9 UNIT TYPOLOGIES

In line with the London Plan 2016, ninety per cent of the dwellings will be designed to meet Building Regulation requirement M4(2) 'accessible and adaptable dwellings'; and ten per cent of the dwellings will be designed to meet Building Regulation requirement M4(3) 'wheelchair user dwellings'. This will also include 10% of student accommodation.

Wheelchair user dwellings will be distributed throughout the development, across type, size and level, as far as possible to ensure that:

- Households that need wheelchair accessible units are not clustered together; and
- Wheelchair users have as much choice about the location and level of their home as anybody else, as far as possible.



Indicative Scheme typical lower floor residential plots plan

2.6.10 INTERNAL PROVISIONS - CATEGORY M4(2)

The following features are the minimum access provisions required by AD-M, category 2 units, which have been reviewed against the proposed design:

- All entrance doors to have a minimum clear opening width of 850mm, with a clear approach space to the door of 300 mm on the leading edge of the door maintained for a minimum distance of 1200 mm beyond it;
- All internal corridors and clear opening widths of doors conform the requirements of Approved Document M, Section 2;
- Adequate circulation space for wheelchair users is provided in all habitable rooms, including space in bedrooms, space to access windows, and space in front of all kitchen units;
- All dwellings are single-storey and have a bathroom which is designed according the provisions of Approved Document M, including a provision for a level access shower;
- Bathroom walls will be capable of supporting grab rails, seats and other adaptations;
- Doors to the bathroom requiring ease access to them will open outwards;

- Switches and sockets will meet Approved Document M with regard to location, height and contrast, subject to detailed design.

Further details will be detailed at the appropriate stage of design development.

2.6.11 INTERNAL PROVISIONS - CATEGORY M4(3)

The provision made to meet Building Regulation requirement M4(3) can be two types:

- (2)(a): To allow a simple adaptation of the dwelling to meet the needs of occupants who use wheelchairs. Dwellings will be defined as a Wheelchair adaptable.
- (2)(b): To meet the needs of occupants who use wheelchairs. Dwellings will be defined as a Wheelchair accessible.

Wheelchair adaptable dwellings are intended to be capable of becoming wheelchair accessible through easy adaptations that do not require structural or service modifications, or moving walls. They have greater flexibility in their internal layout, such as bathroom or kitchen layouts.

Wheelchair accessible dwellings are intended to be readily usable by wheelchair users at the point of completion.

Wheelchair user dwellings will be designed as a wheelchair accessible only where the local authority is responsible for allocating or nominating a person to live in that dwelling.

For the purposes of the Proposed Development, and as a site wide principle, the wheelchair user dwellings will be designed as follows:

- Market and Intermediate wheelchair user units will be designed as Wheelchair adaptable units;
- Affordable /Social Rented wheelchair user dwellings will be designed as Wheelchair Accessible units.
- The following features are the minimum access provisions required by AD-M, category 3 units, which have been reviewed against the proposed design:
- All entrance doors to have a minimum clear opening width of 850mm, with a clear approach space to the door of 300 mm on the leading edge of the door maintained for a minimum distance of 1800 mm beyond it, and a clear approach of 200 mm on the following edge of the door maintained for a minimum distance of 1500 mm beyond it.
- All dwellings have a provision of a space of 1100 mm deep by 1700 mm wide close to the private entrance, to store and charge a wheelchair.



Indicative Scheme typical upper floor residential plots plan

- All internal corridors and clear opening widths of doors conform the requirements of Approved Document M, Section 3;
- Adequate circulation space for wheelchair users is provided in all habitable rooms, including space in bedrooms, space to access windows, and space in front of all kitchen units;
- All dwellings are single-storey and have a bathroom which is designed according the provisions of Approved Document M, including an installed level access shower;
- Dwellings of four or more bedspaces will have a separate WC/cloakroom that will meet the provisions of Approved Document M;
- Doors to the accessible bathrooms will open outwards;
- Ceiling and bathroom walls will be capable of supporting grab rails, seats and other adaptations;
- Switches and sockets will meet Approved Document M with regard to location, height and contrast, subject to detailed design.

2.6.12 CO-LIVING UNITS

Whilst the London Housing SPG (March 2016) does not apply to specialist forms of housing, which are not in the C3 use class, the Development will adopt these standards to offer accessible housing choice.

All the facilities will have approaches and internal circulation routes that meet AD M Volume 2.

The interior fit-out will be developed at a later stage but arrangements will be designed to be accessible to all users and provide adequate wheelchair access. All areas available for tenants and visitors use will have step-free access and will be designed in accordance with AD M, BS8300 and other best practice guidance. General principles will require that:

- All Co-Living units will be designed to meet the needs of people with sensory impairments;
- 90% of the Co-Living units will be designed to meet the needs of ambulant disabled people;
- 10% of the Co-Living units will be provided as wheelchair user bedrooms and will be designed to AD M Volume 2 Sleeping Accommodation standards and will be delivered as adaptable units;

- Communal working spaces, lounge, dining and laundry areas will be designed to AD M Volume 2 Non-dwellings;
- 10% of the Co-Living shared kitchens will be designed with reference to BS 8300 and building regulation M4(3) for accessible kitchen design guidance.

2.6.13 STUDENT HOUSING

The design of student housing, in the event that student accommodation will be included in the development, will be designed to comply with AD M Volume 2 and emerging London Plan Policy H17.

2.7 APPENDIX 1 | REFERENCES FOR INCLUSIVE DESIGN

2.7.1 LEGISLATION

Equality Act 2010

The Equality Act 2010 ('the Act') combines and supersedes previous separate discrimination legislation (including the Disability Discrimination Act 1995 as amended ('the DDA') and the disability discrimination provisions of SENDA 2001 for England, Wales and Scotland. People are protected from discrimination and harassment based on 'protected characteristics'; victimising anyone as a result of action taken in connection with the Act is also unlawful. There are nine different protected characteristics under the Act which have different levels of protection depending on the context (such as employment, provision of goods and services or the provision of education). This Access Statement focuses on the protected characteristic of disability; the definition of disability is essentially the same as under the DDA.

The types of discrimination that can arise in relation to disability are:

- Direct disability discrimination;
- Indirect disability discrimination;

- Treating disabled people unfavourably because of something arising in consequence of their disability without justification; and
- A failure to make reasonable adjustments for disabled people ('the RA duty'). The RA duty works in different ways depending on who requests the reasonable adjustments to be made, for example an employee or a member of the public.

The Act also provides protection for people who are treated less favourably because of their relationship with a disabled person (such as a carer) or for people treated less favourably because they are mistakenly believed to be disabled. A disabled person can always be treated more favourably than a non-disabled person.

If an employer is a listed public authority (such as a local authority) they will be subject to the public sector equality duty. If the employer is not a public authority but carries out a public function as part of its work, it will be covered by the general part of the equality duty in relation to the exercise of that function.

The public sector equality duty seeks to promote equality from within an organisation and the general duty requires the organisation to have due regard to the need to:

- Eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by the Act;
- Advance equality of opportunity between persons who share a relevant protected characteristic and those who do not; and
- Foster good relations between persons who share a protected characteristic and those who do not.
- Due regard must be given to these three aims when undertaking procurement and to comply with procurement law, consideration must be given to the extent to which equality considerations are relevant and proportionate to the subject matter of the contract.
- Most of the listed public authorities are also subject to the specific duty (which operates slightly differently in England and Wales). This involves reporting requirements to demonstrate compliance with the three aims of the general duty. The public sector equality duties are relevant both to the design and the management of the built environment.

The Reasonable Adjustment Duty and specific building provisions

The Equality Act does not contain any specific requirements for the built environment and therefore has no relevance to 'compliance' in respect of physical building standards.

Statutory Consents

When considering a reasonable adjustment to a physical feature, the Act does not override the need to obtain consents such as planning permission, building regulations approval, listed building consent, scheduled monument consent and fire regulations. If the consent is not given, there is still a duty to consider a reasonable means of avoiding the feature.

2.7.2 STANDARDS AND POLICIES RELEVANT TO ACCESS

Building Regulations 2010

- The Building Regulations 2010, Approved Document M (Access to and use of buildings) Volume 1: Dwellings. Volume 2: Building other than dwellings, HM Government, 2015 edition.
- The Building Regulations 2010, Approved Document K: Protection from falling, collision and impact, HM Government, 2013 edition.
- Approved Document B (Fire safety) – Volume 1: Dwellings (2019 edition)

- Approved Document B (Fire safety) – Volume 2: Buildings other than dwellings (2019 edition)
- The Regulations make clear that designs other than those shown in the document can be approved if they are justified as being equally or more effective. Approval confers acceptance that the building meets the regulations in respect of physical access for disabled people.

National Planning Policy

- National Planning Policy Framework (NPPF), Ministry of Housing, Communities and Local Government, 2019.

The NPPF states that all developments should be designed to be inclusive and that this should be addressed by local policies.

London Planning Policy and Guidance

- The London Plan: Spatial Development Strategy for Greater London consolidated with alterations since 2011, Mayor of London, March 2016.

Relevant policies relating to access and design standards are summarised in the Standards section below.

- The Draft London Plan – Intend to Publish version (December 2019)
- The new London Plan is anticipated to be adopted be published in 2020. Once adopted,

the document will replace the current 2016 Local Plan.

- Housing Supplementary Planning Guidance, London Plan 2016
- Social Infrastructure Supplementary Planning Guidance May 2015, London Plan 2015

This London Plan SPG outlines an approach for delivering and implementing inclusive access. It includes principles, policies and processes for achieving inclusive design in London.

Tower Hamlets Policy and Guidance

- London Borough of Tower Hamlets Local Plan 2031: Managing growth and sharing the benefits (Adopted January 2020)
- HIGH DENSITY LIVING Supplementary planning document. Consultation draft, February 2020

2.7.3 REFERENCES

British Standards

- British Standard 8300:2018 Design of Buildings of an Accessible and Inclusive Built Environment
BS8300-1 - External Environment Code of Practice
BS8300-2 : Building Code of Practice
- BS 9999:2017 Code of practice for fire safety in the design, management and use of buildings, British Standards Institution, 2017.
- BS EN 81-28:2018, Safety rules for the construction and installation of lifts. Remote alarm on passenger and goods passenger lifts, British Standards Institution, 2018.
- BS EN 81-41:2010, Safety rules for the construction and installation of lifts. Special lifts for the transport of persons and goods. Vertical lifting platforms intended for use by persons with impaired mobility, British Standards Institution, 2010.
- BS EN 81-70:2018, Safety rules for the construction and installation of lifts. Particular applications for passenger and goods passenger lifts. Accessibility to lifts for persons including persons with disability, British Standards Institution, 2018.

- BS 5656-2:2004 Safety rules for the construction and installation of escalators and moving walks - covering disabled access, British Standards Institution, 2004.
- DD CEN/TS 15209:2008 Tactile paving surface indicators produced from concrete, clay and stone, British Standards Institution, 2008.
- BS 5395-1:2010 Stairs. Code of practice for the design of stairs with straight flights and winders, British Standards Institution, 2010.
- BS5656-2 2004 Safety rules for construction of installation of escalators and moving walks -covering disabled access, BSI 2004
- BS 7000-6:2005 Design Management Systems. Managing inclusive design. Guide, British Standards Institution, 2005.
- BS 5499-4:2013 Safety signs. Code of practice for escape route signing, British Standards Institution, 2013.
- BS 8501:2002 Graphical symbols and signs. Public information symbols, British Standards Institute, 2002.

International Standards

- ISO 7176-28:2012, Wheelchairs - Part 28: Requirements and test methods for stairclimbing devices, British Standards Institution, 2012.
- ISO 9386-1:2000, Power-operated lifting platforms for persons with impaired mobility, British Standards Institution, 2000.

Access Statements

- Guidance on Information Requirements and Validation, Department for Communities and Local Government, 2010.
- Design and Access Statements: How to Write, Read and Use Them, Design Council (CABE), 2006.

Sanitary Accommodation

- Good Loo Design Guide, CAE, RIBA Enterprises, 2004.
- Changing Places: the practical guide, Changing Places Consortium, undated.
- BS6465-2: 2017 Sanitary installations Part 2: Space recommendations - Code of practice, British Standards Institution, 2017.

Urban Design / External Environment / Landscape / Transport

- Inclusive Urban Design: A guide to creating accessible public spaces, David Bonnett Associates, BSI, 2013.
- Inclusive Mobility: Making Transportation accessible for passengers and pedestrians., Department for Transport, 2005.
- Improving Walkability: Good Practice Guidance on Improving Pedestrian Conditions as Part of Development Opportunities, Transport for London, 2005.
- Guidance on the Use of Tactile Paving Surfaces, Department for Transport 2007.
- Traffic Advisory Leaflet 5/95 Parking for Disabled People, Department for Transport, 1995..
- Inclusive Design for Getting Outdoors IDGO, Legacy website <http://www.idgo.ac.uk/>, 2011.
- London Cycling Design Standards, TfL, 2014.

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- The Colour, Light and Contrast Manual: Designing and Managing Inclusive Built Environments, Bright, K., Cook, G., Wiley-Blackwell, 2010.
- Sign Design Guide: a guide to inclusive signage, JMU and the Sign Design Guide, 2000.

Buildings

- Designing for Accessibility, CAE/RIBA Publishing, 2012.
- Inclusive Design Toolkit, Design Council, 2014
- Building Sight: a Handbook of Building and Interior Design Solutions to Include the Needs of Visually Impaired People, Barker, Barrick and Wilson, RNIB/HMSO, 1995.

Office And Commercial

- Workplace health, safety and welfare. Workplace (Health, Safety and Welfare) Regulations 1992. Approved Code of Practice L24, HSE Books ,1992.
- The Accessible Office: Designing the Inclusive Workplace, JMU Access Partnership, Royal National Institute of Blind People, 2005.
- Open for business: Taking the Risk out of 2004, Employers' Forum on Disability, 2003.

Hotels

- Accessible Hotels in London, GLA, March 2010.
- London Plan 2015 policy 4.5.
- London Tourism Action Plan 2009 – 2013, London Development Agency, 2009.

Heritage

- Streets for all (8 regional manuals), English Heritage, 2005.
- Easy Access to Historic Landscapes, English Heritage, 2015.
- Access Plans : A guide, Heritage Lottery Fund, 2002.

APPENDIX 3: FIRE STATEMENT

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1. Introduction

- 1.1 Arup has been commissioned by Canary Wharf (North Quay) Ltd to produce a Fire Statement to support an Outline Planning Application (OPA) to enable the redevelopment of the North Quay site, Aspen Way, London ("the Site"). An application for Listed Building Consent (LBC) is also being submitted.
- 1.2 The applications will seek permission for:

Application NQ.1: Outline Planning Application (all matters reserved) – Application for the mixed-use redevelopment of the Site comprising demolition of existing buildings and structures and the erection of buildings comprising business floorspace, hotel/serviced apartments, residential, co-living, student housing, retail, community and leisure and sui generis uses with associated infrastructure, parking and servicing space, public realm, highways and access works.

Application NQ.2: Listed Building Consent – Application to stabilise listed quay wall and any associated/necessary remedial works as well as demolition of the false quay in connection with Application NQ.1.
- 1.3 In order to test and validate the OPA, an Indicative Scheme showing the potential location of buildings, uses and open spaces has been produced. This scheme provides a vehicle for examining the possible architectural, environmental, operational and social impacts of the project.
- 1.4 This Fire Statement describes the fundamental, high-level fire safety considerations and overall fire strategy for the Proposed Development based on the Indicative Scheme, which will be developed into a fire strategy for each of the individual buildings following Reserved Matters Applications (RMAs). The building usage types and geometry of the Indicative Scheme have been considered in the development of this Fire Statement.
- 1.5 The strategic principles and requirements outlined within this Fire Statement shall be incorporated within the specific fire statements or fire strategy reports associated with the RMAs for each of the buildings within the Proposed Development.
- 1.6 The North Quay site ("the Site") is bounded by Canary Wharf Crossrail Station to the south, Aspen Way (A1261) to the north, Hertsmere Road to the west and Billingsgate Market to the east. The West India Quay Docklands Light Railway (DLR) station and Delta Junction are located on the western side of the Site and the Site also incorporates parts of North Dock, Upper Bank Street and Aspen Way.
- 1.7 As outlined in the Mayor of London's Intend to Publish (December 2019) version of The London Plan, all major development proposals should be submitted with a Fire Statement in line with the requirements of Policy D12 Fire safety.
- 1.8 Policy D12 requires that all developments "*must achieve the highest standards of fire safety and ensure that they;*"
 1. identify suitable positioned unobstructed outside space:
 - a) for fire appliances to be positioned on
 - b) appropriate for use as an evacuation assembly point

2. *are designed to incorporate appropriate features which reduce the risk to life and the risk of serious injury in the event of a fire; including appropriate fire alarm systems and passive and active fire safety measures*
3. *are constructed in an appropriate way to minimise the risk of fire spread*
4. *provide suitable and convenient means of escape, and associated evacuation strategy for all building users*
5. *develop a robust strategy for evacuation which can be periodically updated and published and which all building users can have confidence in*
6. *provide suitable access and equipment for firefighting which is appropriate for the size and use of the development."*

This Fire Statement document describes how the above requirements are met for the Proposed Development through outlining the fire strategy principles on a masterplan and building-specific level based on the Indicative Scheme.

- 1.9 In order to comply with the requirements of Policy D12 and the functional requirements of the Building Regulations 2010 (incorporating the Building (Amendment) Regulations 2018), the design to date has primarily followed the guidance available within:
 - BS 9999:2017 "*Fire safety in the design, management and use of buildings – Code of practice*".
 - BS 9991:2015 "*Fire safety in the design, management and use of residential buildings – Code of practice*".
 - Approved Document B (2019 edition) (specifically where the guidance in this document supersedes BS 9999 or BS 9991 e.g. around the facade construction).
- 1.10 Reference to solutions agreed with LBTH Building Control as recorded within the Canary Wharf Framework Agreement are also included where relevant. The Canary Wharf Framework Agreement is a document produced by Arup for Canary Wharf which clearly sets out expectations to enable a consistent fire safety design approach to Canary Wharf developments. The Framework Agreement highlights fire safety design solutions that have been previously agreed as meeting the Functional Requirements of the Building Regulations with the regulatory approving authorities (London Borough of Tower Hamlets Building Control and London Fire Brigade).

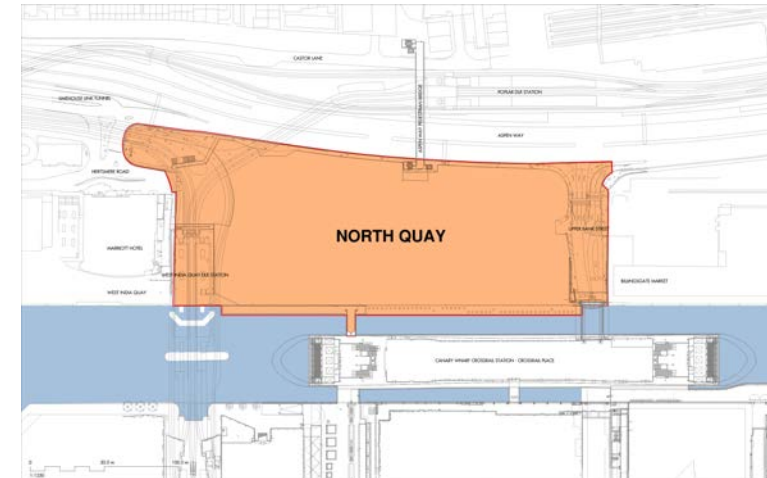


Figure 1: North Quay Site.

2. Masterplan Strategy

- 2.1 North Quay is a proposed mixed-use development situated at Canary Wharf. The Site location is provided in Figure 1.
- 2.2 The Indicative Scheme of the development principally considered by this Fire Statement consists of 7 buildings: 3 office (NQ.B1, NQ.D1/D2, NQ.D3), 2 residential (NQ.A1, NQ.A4), 1 serviced apartment (NQ.D4) and 1 retail (NQ.A5). The Indicative Scheme features a double level basement. Figure 2 shows a 3D massing render of the Indicative Scheme.
- 2.3 This Fire Statement covers the Indicative Scheme as per the above, however it is acknowledged that there are other development scenarios that may come forward under the OPA, which would be further assessed at RMA stage. All fire strategies developed during the RMA stage shall reflect the emerging schemes.

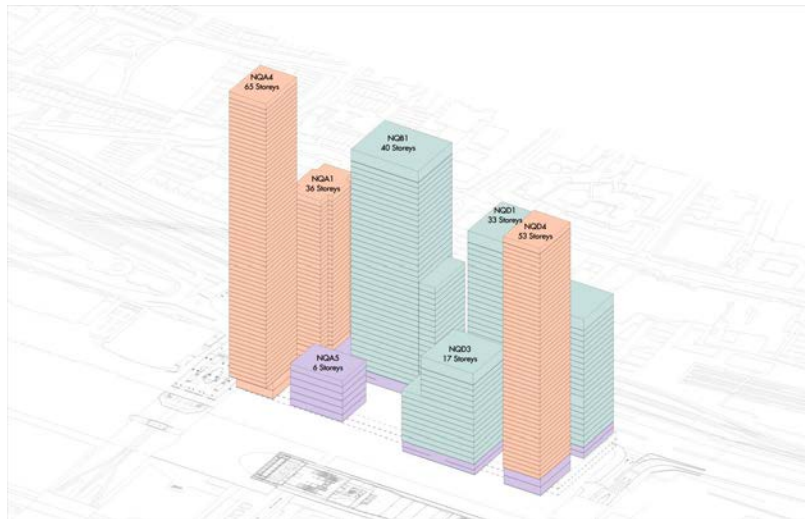


Figure 2: North Quay Indicative Scheme Massing.

Fire service access

- 2.4 Fire service access is not possible from Aspen Way due to the busyness of the road and the physical barrier between the road and pavement, preventing the fire service from stopping and accessing the buildings.
- 2.5 The Masterplan strategy shall therefore rely on fire service access from Hertsmere Road and Upper Bank Street to the central road through the Site (North Quay Way), highlighted in Annex A – North Quay Masterplan strategy mark-up.

- 2.6 The fire and rescue service access roadway will be provided to allow pumping appliances to be positioned within 18m of, and in sight of, any fire main inlet points serving the buildings.
- 2.7 Fire hydrants are to be provided along North Quay Way, with the exact locations to be determined following RMAs. These must be provided within 90m of fire main inlets, measured on a route suitable for laying hose, and not be more than 90m apart.
- 2.8 Entry to fire-fighting shafts is provided either: directly from open air, or by way of a protected corridor not exceeding 18m in length. Access routes to fire-fighting shafts are shown in Annex A – North Quay Masterplan strategy mark-up. Suitably landscaped areas may be used to provide fire service access.
- 2.9 Any route relied upon for fire and rescue service vehicle access will be suitably constructed. London Fire Brigade (LFB) Guidance Note 29 requires the following (for high reach appliances):
- Min. width between kerbs = 3.7m
 - Min. clearance height = 4.0m
 - Min. carrying capacity = 23T

Assembly points

- 2.10 The Indicative Scheme features three communal 'square' spaces; Garden Square, Quay Square and Dock Square. These external areas, together with the promenade space to the south of the development (see Annex A – North Quay Masterplan strategy mark-up) could be used as the assembly point for the buildings. These locations are well positioned and of sufficient size to ensure the safety of people in an evacuation situation. The building-specific fire strategies developed following RMAs shall specify assembly points for each building. These shall be areas located away from the building evacuating.

3. Main fire protection features common to all buildings

- 3.1 The fire strategies for individual buildings within the Proposed Development are to be developed in greater detail during the RMA process. However, high-level principles have been outlined based on the massing proposal and usage types. A summary of the proposed buildings in the Indicative Scheme is given below:

Table 1: Summary of proposed buildings.

Building ref.	Main usage type	Storeys	Height of top-most occ. floor (m)	Approx. floor area (m ²)	Risk profile ¹
Basement	Cycle facilities, plant rooms, disabled parking, loading bay	2	10.85 (depth)	14,000	A1/B1, A2
NQ.A1	Residential ²	36	124.6	605	Ci1
NQ.A4	Residential ²	65	216.6	620	Ci1
NQ.A5	Retail	6	31.2	680	B2
NQ.B1	Office	38	160.3	1,530	A1
NQ.D1/D2	Office	32	132.6	2,050	A1
NQ.D3	Co-working Office ³	17	69.4	1,360	B1
NQ.D4	Serviced Apartments ²	53	178.2	620	Cii1

¹ Risk profile in line with BS 9999 considering the provision of sprinklers on all buildings. The profile stated applies to the majority of areas of each building. It should be noted that certain areas will fall outside this risk profile (e.g. plant rooms, ground floor retail spaces), which are to be captured by the detailed fire strategy as the design develops.

² Throughout the concept design stage, feasibility studies have been conducted into the residential buildings. These evaluated the potential for residential, serviced apartments or student accommodation uses. Risk profiles with Ci and Cii are identified in BS 9999, but covered in more depth in BS 9991; therefore the latter is used as the guidance document.

³ Whilst the detailed design of the office space of NQ.D3 is not determined at this stage, conceptual discussions have considered co-working office spaces. Therefore, NQ.D3 is presented as a co-working office in this Fire Statement to present and discuss different scenarios for this particular document. Namely, the increased risk profile due to the co-working use of the office space – an increased percentage of occupants are expected to be 'awake and unfamiliar'.

Fire safety systems

Detection and alarm systems

- 3.2 Automatic fire detection and alarm systems will be provided in accordance with BS 5839-6 for the residential buildings and BS 5839-1 for all other building types, including serviced apartments and all basement areas.

Emergency lighting

- 3.3 Emergency lighting will be provided in accordance with BS 5266-1.

Escape signage

- 3.4 Escape signage will be provided in accordance with BS 5499-1 and BS 5499-4.

Automatic suppression system

- 3.5 Sprinkler protection will be provided throughout all buildings on the Proposed Development in accordance with BS 9251 for residential buildings and BS EN 12845 for all other building types, including basement areas.

Emergency power

- 3.6 Emergency power will be provided to all life safety systems (sprinkler pumps, firefighting lifts, fire detection and alarm, etc). For some systems this will require a generator or second feed from an independent substation.

Systems for fire-fighting

- 3.7 Systems relied upon for fire-fighting (such as ventilation system for each fire-fighting lobby) are discussed in Sections 3.21 to 3.24.

Means of escape

Horizontal exit widths

- 3.8 The following exit width factors will be adopted for the applicable risk profiles:

- Risk profile A1: 3.3 mm per person
- Risk profile B1: 3.6 mm per person
- Risk profile B2: 4.1 mm per person

- 3.9 For doors serving more than 60 people the required clear width is the one calculated using these factors or 1050mm, whichever is the largest. For doors serving less than 60 people the absolute minimum clear door width provided will be 850mm.

- 3.10 Final exits will be the same width as the stair they serve to not restrict the flow of escaping occupants. If the anticipated occupancy is to be greater than 60, the door must open in direction of escape.

Disabled occupants

- 3.11 Provision will be made for the means of escape of disabled occupants by the inclusion of a lift suitable for evacuation within each building core. The lift will serve all occupied levels, including basement levels. This may be combined with the fire-fighting lift. In buildings where there is a single fire-fighting shaft, an additional evacuation lift will be provided.

- 3.12 All stair lobbies will contain a refuge point and a two-way communication system to the fire control centre complying with BS 5839-9. Each area of refuge within a fire-fighting lobby will be provided with access to the firefighting lift that can be used for evacuation, enabling step-free egress. Lifts used during emergency evacuation should be manually operated by a trained member of staff. This will need to be included in the fire safety management plan and staff training.

Internal fire spread

- 3.13 Wall and ceiling linings will achieve the following surface spread of flame classifications according to BS EN 13501-1, in line with standard guidance:
- Within circulation spaces: B-s3, d2
 - Rooms larger than 30 m² (or 4 m² in residential buildings): C-s3, d2
 - Rooms smaller than 30 m² (or 4 m² in residential buildings): D-s3, d2

Structural fire resistance

- 3.14 In Sections 5 to 7, minimum fire resistance periods are given based on the risk profiles within Table 1. In future stages of the design, structural fire engineering analyses may be completed to demonstrate that a lower period of fire resistance is appropriate for the types of fires anticipated in large open plan compartments to meet the requirements of the Building Regulations.

External fire spread

- 3.15 All buildings at North Quay are to be sprinklered. Where two neighbouring buildings are provided with sprinklers and floor-to-floor compartmentation, it is anticipated that the separation distances are sufficient to avoid having to provide fire rating to the facade.
- 3.16 External fire spread assessments will be required as the design develops, to confirm whether any façades will require protection.

External wall construction

- 3.17 All work will conform to the current Building Regulations 2010 (as amended), including the latest revision in The Building (Amendment) Regulations 2018 which stipulates Regulation 7 requirements for external walls.
- 3.18 In the Indicative Scheme residential buildings NQ.A1 and NQ.A4 are 'relevant' buildings. Whilst a hotel/boarding house use building is not considered 'relevant' under Regulation 7(4), the enhanced requirements for external wall construction are also intended to be applied to serviced apartment and student accommodation use buildings (NQ.D4).
- 3.19 Therefore, all materials which form part of an external wall or specified attachment, including insulation and external surfaces but excluding permitted exceptions, shall be constructed of materials achieving Class A1 or A2-s1, d0 when tested and classified to BS EN 13501-1.
- 3.20 For retail and office use buildings NQ.A5, NQ.B1, NQ.D1/D2 and NQ.D3, all materials which form part of an external wall (including insulation products) shall achieve a reaction to fire performance of Class A2-s3, d2 or better, and the external surface achieve Class B-s3, d2 or better, when tested and classified to BS EN 13501-1.

Fire-fighting provisions

- 3.21 All areas of the floor plate within all buildings will be accessible within 60m of a fire-fighting shaft as per hose length requirements. Buildings with a floor area over 900m² are provided with at least two fire-fighting shafts.

- 3.22 Both basement levels will be accessed by the fire-fighting shafts of all buildings.

- 3.23 The fire-fighting shafts contain:

- A firefighting stair
- A ventilated firefighting lobby
- A firefighting lift
- A wet riser main (dry riser for the retail building)

- 3.24 The firefighting lobby will be mechanically ventilated using a proprietary mechanically-assisted smoke shaft. This will be further developed in the later design stages.

Fire service access

- 3.25 Access for fire service personnel into each building is from the central access road. Fire service personnel will position pumping appliances within 18m of, and in sight of, any inlet points. Personnel will then enter the building via a protected corridor to the fire-fighting shafts.

Fire safety management

- 3.26 Buildings other than residential shall be provided with a dedicated fire control centre (FCC) which shall be located at ground level with easy access for Fire Brigade.
- 3.27 In addition, a site-wide FCC may be required which links back to the Estate Control Centre located on the existing Canary Wharf site.
- 3.28 As the design develops following RMA stage, aspects of the fire strategies that rely on ongoing fire safety management will be developed and shall be clearly identified in the corresponding fire strategy reports. A fire safety management plan will then need to be developed prior to occupation of the buildings by the eventual operator to incorporate these requirements and demonstrate compliance with the Regulatory Reform (Fire Safety) Order 2005.
- 3.29 The fire safety management plan will need to ensure that any potential future modifications to the building are taken into account and do not compromise the base build fire safety/protection measures.

4. Basement strategy

Evacuation strategy

- 4.1 The North Quay masterplan features a site-wide two level basement. In the Indicative Scheme, the basement houses cycle facilities, plant rooms, sprinkler tank rooms, disabled parking and loading bays. The basement is connected by service corridors.
- 4.2 Consideration will be given in the next design stage as to whether the evacuation from the basement will be phased or simultaneous, however sufficient means of escape are provided to accommodate for a simultaneous evacuation of the basement.
- 4.3 Retail, business, community and leisure (e.g. gym) uses could come forward at basement level in alternative development scenarios. In this event, the additional uses of the basement would be assessed as the fire strategy is developed.

Travel distance limits

- 4.4 Escape from most areas of the basement except plant rooms shall be within the following limits:
 - One-way travel: 26m
 - Two-way travel: 65m
- 4.5 Escape from plant rooms shall be within the following limits:
 - One-way travel: 22m (18m in non-sprinkler protected electrical rooms)
 - Two-way travel: 55m (45m in non-sprinkler protected electrical rooms)

Vertical means of escape

- 4.6 The basement will be provided with sufficient escape stairs to ensure all occupants can escape safely. For higher occupancy areas, such as cycle stores, access to multiple stairs will be provided. Evacuation lifts will also be provided, as required, within occupied basement levels as per 3.11 and 3.12.

Structural fire resistance

- 4.7 As the basement supports the structures of buildings requiring 120 minutes structural fire resistance, elements of structure of the basement shall also achieve 120 minutes fire resistance period.

Ventilation

- 4.8 The basement requires specific systems in addition to those described in Sections 3.2 to 3.7. A smoke ventilation system will be provided to all areas which shall achieve 6ac/h or 10ac/h depending on the fire risk of the area, in line with the Canary Wharf Framework Agreement. Both extract and make up air shall be allowed for, as necessary. Coordination of smoke ventilation shafts into the buildings, or landscaping, will be required. The loading bay and parking areas will

require a dedicated ventilation system which will not be combined with the overall basement ventilation system.

5. Residential strategy

Evacuation strategy

- 5.1 The residential buildings (NQ.A1, NQ.A4 in the Indicative Scheme) will utilise a stay-put evacuation strategy. The apartment of fire origin will evacuate on detection of a fire. Occupants within other apartments shall stay-put whilst the fire is contained and tackled by the fire and rescue service within the origin apartment (unless instructed otherwise by fire and rescue services).
- 5.2 It is proposed that the serviced apartment building (NQ.D4 in the Indicative Scheme) will utilise a simultaneous evacuation strategy. Upon detection of a fire, all floors shall evacuate simultaneously. However a phased evacuation regime, whereby one floor or group of floors would evacuate at a time, may be investigated at RMA stage.
- 5.3 The evacuation regimes described in 5.2 shall also apply if one of the residential or serviced apartment buildings was to be designed for student accommodation.

Travel distance limits

- 5.4 The apartments will be open plan (no protected entrance hall provided within the apartments) and sprinkler protected, so travel distances in the residential common corridors (measured from the apartment front door to the stair or a lobby) shall be within the following limits:
- One-way travel: 15m
 - Two-way travel: 60m
- 5.5 The guidance constraints given above from BS 9991 are limited to rectangular flats with an equivalent plan area of 192m². The largest apartment in the Indicative Scheme is a 4-bed apartment, with an area of 110m². The above prescriptive limits within BS 9991 are therefore applicable.

Vertical means of escape

- 5.6 In the residential buildings, a single stair will be provided. The stair will be robustly protected by a lobby and separate common corridors, and travel distances to the stair are within the limits of BS 9991.
- 5.7 The serviced apartment building will be provided with two stairs. The stairs will be 1200mm wide to provide sufficient capacity to support the simultaneous evacuation strategy. This shall also apply if one of the residential or serviced apartment buildings was to be designed for student accommodation.

Structural fire resistance

- 5.8 As per BS 9991:2015, elements of structure shall achieve 120 minutes fire resistance period.

Compartmentation

- 5.9 The evacuation strategy relies on the residential buildings being fully sprinklered throughout and each apartment being separated by construction achieving at least 60 minutes fire resistance period to form a compartment.

6. Office strategy

Evacuation strategy

- 6.1 Office buildings (NQ.B1, NQ.D1/D2 and NQD3 in the Indicative Scheme) will utilise a phased evacuation strategy. Typically, two floors will form an evacuation zone – the floor of fire origin and the floor above.

Travel distance limits

- 6.2 Escape from all open-plan office areas shall be within the following limits:
- One-way travel: 26m
 - Two-way travel: 65m
- 6.3 If any space is to be designed as a co-working office, the risk profile increases from A1 to B1 and the following limits apply:
- One-way travel: 24m
 - Two-way travel: 60m

Vertical means of escape

- 6.4 All occupants shall have access to at least two escape routes and two stairs. NQ.B1 will be provided with 2 stairs (1100mm wide), NQ.D1/D2 will be provided with 3 stairs (1100mm wide), and NQ.D3 will be provided with at least 2 stairs, to provide sufficient vertical escape capacity.

Structural fire resistance

- 6.5 As per BS 9999:2017, elements of structure shall achieve 120 minutes fire resistance period.

Compartmentation

- 6.6 Each floor shall be separated by construction achieving at least 120 minutes fire resistance period.

7. Retail strategy

Evacuation strategy

- 7.1 The retail building (NQ.A5 in the Indicative Scheme) will utilise a phased evacuation strategy. The occupants within a single compartment will evacuate simultaneously. It is anticipated that multiple floors will evacuate as a single evacuation zone due to possible open connections between floors.

Travel distance limits

- 7.2 Escape from all areas shall be within the following limits:
- One-way travel: 20m
 - Two-way travel: 50m

Vertical means of escape

- 7.3 At least two stairs are to be provided, based on the floor area and expected occupancy. A third stair may be required depending on detailed building design (e.g. open connections between floors).
- 7.4 At least one of the stairs will be designed as a fire-fighting shaft. The fire-fighting lift will be used to support the means of escape of people who require assistance.

Structural fire resistance

- 7.5 As per BS 9999:2017, elements of structure shall achieve 90 minutes fire resistance period.

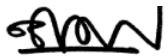
Compartmentation

- 7.6 Compartmentation shall be provided to separate evacuation zones by way of construction achieving 90 minutes fire resistance period, in line with the evacuation strategy.

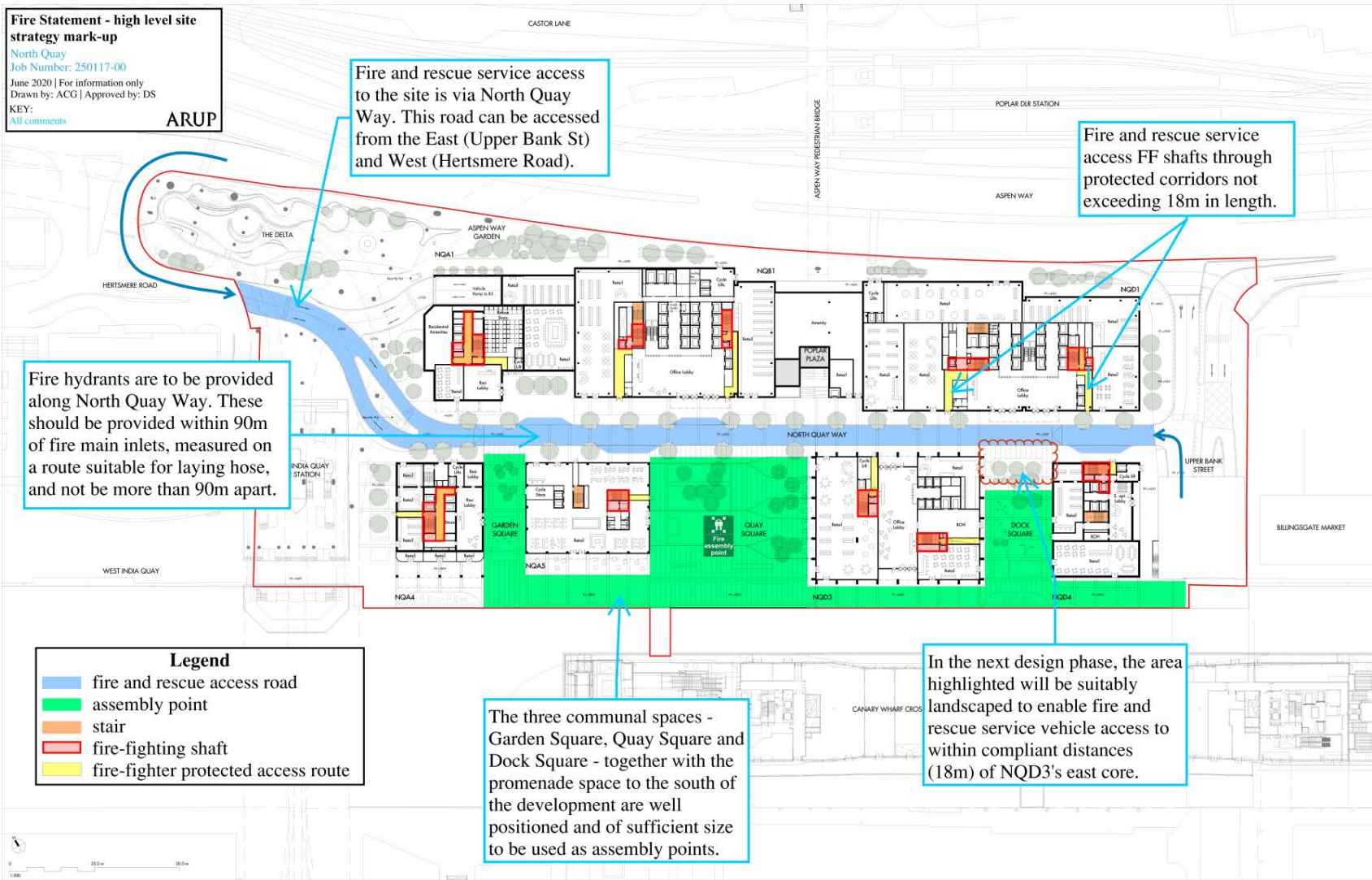
8. Verification

8.1 This report has been checked and approved by:

David Stow
Associate Director | Fire Engineering
BSc(Hons) CEng MIFireE



Annex A – North Quay Masterplan strategy mark-up



APPENDIX 4: GLOSSARY

Active Frontages

A building front that promotes activity and encourages movement between the building at public realm level and the adjacent public realm by the way the building front is designed or orientated.

A building provides active frontage if the building at public realm level avoids blank walls or obscured frontages, includes windows and openings, and provides a variety of uses. It must contribute to natural surveillance and support the visual and physical relationship between the building and the external public realm.

Residential and office entrance lobbies, retail units and other building parts, whether for public or private uses, can therefore be deemed to have an active frontage if designed in accordance with the above.

Amenity

A positive element or elements that contribute to the overall character or enjoyment of an area. For example, open land, trees, historic buildings and the inter-relationship between them, or less tangible factors such as tranquillity.

The Applicant

Canary Wharf (North Quay) Ltd

Building

A Building is an occupiable built structure that may be built within development zones set by the Parameter Plans

Building Line

Where the elevation of a building should meet the ground.

Building Structure

Any building or part of building including a colonnade, portico, undercroft or passage.

Business use

The use for which purposes of offices, research and development or industry, providing that such use can be carried out in a residential area without detriment to the amenity of that area.

Character

A term relating to 'Conservation Areas' or 'Listed Building', but also to the appearance of any rural or urban location in terms of its landscape or the layout of streets and open spaces, often giving places their own distinct identity.

Conservation Area

Areas of special architectural or historic interest defined by the local authority, the character or appearance of which it is desirable to preserve or enhance.

Control Documents

The Specified Parameters are set out in the three Control Documents: the Parameter Plans, the Development Specification and the Design Guidelines.

Cumulative Impact

A number of developments in a locality or a continuous activity over time that together may have an increased impact on the environment, local community or economy.

Density

In the case of residential development, a measurement of either the number of habitable rooms per hectare or the number of dwellings per hectare

Design Guidelines

The Design Guidelines set out the guidelines by which any Reserved Matters Applications would need to follow if they are to be considered acceptable.

Development Plan

A Development Plan comprises a set of documents that set out the policies and proposals for the development and land use of an area. The relevant Development Plan for LBTH is the London Plan (2011) and the LBTH Local Plan which consists of the Core Strategy (2010) and Managing Development Document (MDD, 2013).

Development Plot

A building that can arrive within a Development Zone, which is defined by a maximum height and envelope. Development Zones may contain single or multiple Development Plots.

Development Specification

The Development Specification sets out a written account of the Parameter Plans and describes the OPA and the type and quantity of development that could be provided within each of the Development Zones across the OPA Site as a whole.

Development Zone

Areas within which buildings can arrive, which are defined by a maximum length, width and height.

The Environmental Statement for the Outline Planning Application

The 'Environmental Statement' for the 'Outline Planning Application' or the 'ES'.

Environmental Impact Assessment (EIA)

A procedure to be followed for certain types of project to ensure that decisions are made in full knowledge of any likely significant effects on the environment.

Equalisation Statement

A document which is submitted with each 'Reserved Matters' application in order to ensure that the 'Proposed Development' is built out in accordance with the 'Specified Parameters' and ranges set out in the OPA. The 'Equalisation Statement' will confirm that the remaining balance of uses for which 'Outline Planning Permission' has been granted is capable of being delivered in a manner that satisfies the requirements of the 'Specified Parameters' and any relevant planning conditions or planning obligations..

Frontage

Portion of building envelope built out to the Building Line.

Ground Level

The floor of a building that is at or nearest to the level of the ground around the building.

Hard/Soft Landscaping

Hard landscaping is the provision of features such as paving, lighting, seating, etc. whilst soft landscaping is the provision of plants, shrubs and trees to improve the quality of the environment.

Inclusive design

Designing the built environment, including buildings and their surrounding spaces, to ensure that they can be accessed and used by everyone.

Indicative Scheme

The Indicative Scheme demonstrates one interpretation of the Specified Parameters.

Jelly Mould

The shape formed from the maximum development parameters.

Limit of Deviation

The extent to which defined boundaries and levels may deviate from those shown on plan.

Listed Building

A building or structure of special architectural or historic interest. 'Listed Buildings' are graded I, II* or II with grade I being the highest.

Listed Building Consent Application

The 'Listed Building Consent Application' (Application NQ.2: Listed Building Consent). Application to stabilise listed quay wall and any associated/necessary remedial works as well as demolition of the false quay in connection with Application NQ.1.

The Masterplan

The Proposed Development takes the form of a Masterplan and as such, these terms can be used interchangeably.

Masterplan Framework

The culmination of the Parameter Plans, Development Specification and the Design Guidelines.

Mixed use (or mixed use development)

Provision of a mix of complementary uses, such as residential, community and leisure uses, on a site or within a particular area.

Outline Planning Application (OPA)

The 'Outline Planning Application' for the 'Outline Planning Application Site' or the 'OPA Site'.

Outline Planning Permission (OPP)

The type of planning permission which is being sought for the 'Proposed Development' of the 'OPA Site'

Overlooking

A term used to describe the effect when a development or building affords an outlook over adjoining land or property, often causing loss of privacy.

Parameter Plans

The Parameter Plans define the extent of the proposed routes, open spaces and Development Zones across the OPA Site against a series of minimum or maximum dimensions. Each of these component parts is identified as a Development Zone which is identified by a letter (e.g. Development Zone NQ.A).

Permitted Uses

Those uses which are permitted on North Quay, defined in the Development Specification.

Phasing or Phased Development

The phased construction of the development into manageable parts.

Planning Obligation

A legally enforceable obligation entered into under Section 106 of the Town and Country Planning Act 1990 to mitigate the impacts of a development proposal. Sometimes called 'Section 106' agreement.

Predominantly

Equates to at least 51% of the specified use, length, area, frontage, etc.

Predominant Use

The use which dominates by occupying the largest amount of floor area within the building.

The Proposed Development

The applications ('Outline Planning Application' and 'Listed Building Consent') will be made for the 'Proposed Development'.

Public Open Space

Public Open Space is defined as those areas where access for the public is permitted. In accordance with the definitions set out in the Local Plan 2031 (adopted 2020) it does not include areas of water or incidental areas, such as road verges, or streets (unless these form part of a link in the open space network)

Reserved Matters

The 'Outline Planning Application' seeks approval for 'Specified Parameters' relating to the use and amount of the 'Proposed Development' and reserves details relating to matters of access, appearance, landscaping, layout and scale ('Reserved Matters'), for approval in 'Reserved Matters Applications'.

Reserved Matters Application

A 'Reserved Matters Application' seeks the approval of one or more Reserved Matters (See 'First Reserved Matters Application')

Retail

Use Classes A1, A2, A3, A4 and A5 as defined by the Town and Country Planning (Use Classes) Order 1987 (as amended).

Retail Floorspace

Total floor area of the property that is associated with all retail uses. Usually measured in square metres. May be expressed as a net figure (the sales area) or in gross (including storage, preparation and staff areas). Refer to Development Specification for permitted floorspace.

Secured by Design

The national police scheme which aims to minimise crime and opportunities to commit crime through better design of buildings and places.

Setbacks

Where the Frontage of a building is not extended to the limits of the building envelope.

Site

The 'Outline Planning Application Site' or 'OPA Site'. The site area enclosed by the 'Outline Planning Application' red-line boundary on application drawings.

Specified Parameters

The Proposed Development will be defined by Specified Parameters. The Specified Parameters are set out in the three Control Documents.

Swing Block/Plot

A 'Development Plot' which has no predominant use allocation and therefore can be allocated to any of the permitted uses in any combination.

Upper Floor

Any floor located above ground and upper ground (or mezzanine) floor.

Upper Ground Level

A floor halfway between the ground floor and the next higher floor, typically known as a mezzanine.

1 in 100 yr Flood Level

A 1 in 100 year flood level is an event that has the probability of occurring 0.1% per year.

