



Royal Wharf London

Design + Access Statement Plots 17 + 18

Report prepared by:

GLENN HOWELLS ARCHITECTS

TOWNSHEND
Landscape Architects



Revision History

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Prepared by Glenn Howells Architects

Name Sophie Hamer

Job Title Architect

Signed

Date 25/06/15

Prepared by Glenn Howells Architects

Name Ashley Carvalho

Job Title Architectural Assistant Part 2

Signed

Date 25/06/15

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Plot 17

Plot 18

Plot 16

Plot 15

Plot 13

Plot 14

Plot 12

Plot 09

Plot 11

Plot 10

Plot 07

Plot 08

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Plot 24

Plot 22

Plot 04

Plot 03

Plot 05

Plot 21

Plot 01

Plot 02

Plot 06

Plot 20

Royal Wharf is a residential led mixed use scheme in the heart of the London Borough of Newham. The project proposes a significant opportunity to provide new family housing alongside small scale commercial, retail and leisure uses providing for the housing and amenity needs of the local community.

Submitted in July 2015, this document forms the design and access statement of the reserved matters planning application for building plots 17 and 18. The plots have been designed within the outline parameters set out in the Section 73 application which is currently being assessed by LB Newham (15/00577/VAR).

The application also covers areas of public realm including the landscaped square around 17+18, west section of the high street and roads around 13, 14 and between 15 and 16.

This design and access statement focusses on the design development of plot 17+18 with the landscape section detailing the design of the other public realm areas later in the report.

This report summarises the design process undertaken when developing proposals for this key site. It records development of the building proposals from their initial concepts at masterplanning stage, through their relationship to the Royal Wharf masterplan design code and leads onto detailed design proposals; submitted for each plot as part of this reserved matters application.

In addition, this report records the process of LBN Design Review Panel (DRP) consultation and subsequent design development undertaken based on their recommendations. The outcome of the review process has had a positive effect on the plot and landscape design with the amended scheme providing greater consideration to a wider range of issues, sensitivities and opportunities particular to the locality.

The comprehensive development of Plots 17 and 18 will include a combined 207 no. new homes in a mixture of 1, 2, and 3 bedroom apartments and mixed use commercial units at ground floor level.

As Plot 17 and 18 sit immediately adjacent to one another, they are mostly presented as such throughout this report in order that the information can be read in context.

Royal Wharf will be an exemplary landmark development. In addition to the masterplan vision as a whole, the design strategy for Plots 17 and 18 aspires to realise the full potential of this unique opportunity, which combines a large site in single ownership next to the River Thames, benefitting from views to the Thames Barrier, Canary Wharf and the Millennium Dome, to be an attractive place in Newham to live, work and play.

Achieving this requires the clear and carefully considered integration of well-designed, high quality residential buildings with both house typologies and apartments alongside business workspace, local retail and a wide range of diverse community uses including leisure and fitness.

The proposed concept focuses on family living and places shaped by building edges to make a high quality residential setting protected from the scale and hustle of neighbouring roads and public transport routes. The sensitive deployment of materials and landscape will enhance the sense of place and allow attractive private outdoor spaces creating a place where people feel they can belong within a wider contextual setting framed by famous London landmarks and city parks.

The scheme proposals also aim to build upon and engage with existing and future designs for neighbouring sites; while also generating a successful individual and site specific urban strategy. This will be achieved by learning from significant examples of urban development, both historical and contemporary from within London and from further afield.

The design proposals comprise of a rich variety of architectural elevations, unified through common materials and detail language to emulate the range of textures and materials historically present in London. Each building's aesthetic, materials and design language draws on the Royal Wharf parameter plans and design code as well as the immediate context of the detail consented Phase 01 and Phase 02 proposals.

Within each plot a number of distinct elevations are proposed, each connected at ground level either by landscaping or an architecturally detailed junction. This ensures that an articulate plot massing, which is respectful to the adjacent context and maintains the range of elevation scales required for the plot, is achieved in balance.

This design and access statement may be read alongside the *Minoco Masterplan Design and Access Statement (May 2011)* and the *addendum Royal Wharf Section 73: Phase 3 Design and Access Statement (March 2015)* for further background information on the project in its wider planning and design context.

Design Team

Client	Oxley Wharf Property Ltd
Project Manager	Roundstone Development Mgt
Masterplanning Architect	Glenn Howells Architects
Plot Design Architect	Glenn Howells Architects
Facade Concept Architect	DP Architects
Planning Consultant	Rolfe Judd Planning
Environmental Consultant	Aecom
Transport Consultant	TPP
Landscape Architect	Townshend Landscape Architects
Structural Engineers	OCSC
M+E Engineers	OCSC
Daylight Assessor	eB7

Scope of the Design and Access Statement

This design and access statement has been prepared in context of, and to comply with the The Town and Country Planning (Development Management Procedure) (England) Order 2010 and the circular Guidance on changes to the development control system 01/2006.

This document provides information on the amount, layout, scale, access and the landscaping of the proposed development and should be read alongside previously consented Minoco Wharf outline masterplan application documents pursuant to approved planning permission 11/00856/OUT, the Section 73 application which was submitted to LB Newham on 3rd March 2015 (15/00577/VAR) and accompanying relevant planning guidance.

We believe that place making is the key ingredient to creating a successful scheme and buildings will only prosper if people want to be around them. The combination of a unique location and a London setting provides a great opportunity for integrating Plot 17 and 18 into the previously consented Phase 01 and Phase 02 proposals, bounded by high quality public realm within the emerging masterplan.

The design and access statement sets out to explain in detail the resolution of the design proposed. It clearly illustrates the commitment to design and quality in the design development process to ensure that the proposed scheme realises the full potential for this site.

The report is subdivided into the following broad chapter groupings which follow the chronology of the design process undertaken:

- Introduction
- Site Context
- Royal Wharf Outline Masterplan
- Design Code
- Design Proposals
- Landscape Proposals
- Access, Environment and Community
- Site Maintenance
- Conclusion

Consultation Process DRP

The LB Newham Design Review Panel (DRP) helps to improve the quality of urban design and architecture through the borough's planning process. The panel advises on major developments in the borough and does not make planning decisions itself; but helps the council to get the best built environment for residents.

The panel includes a chair and up to three others taken from a group of 15 built environment professionals, including architects, urban designers and landscape architects.

Plot 17 and 18 were initially presented to the DRP on 14th April 2015 and subsequently presented again on 12th May 2015.

A brief synopsis of the panel's comments received during the 14th April review are recorded adjacent, with each comment having been responded to through the design process and included in the proposals presented later in in this report.

Summary

- A number of positive changes have been made to the scheme, with the outer skin of the balconies now twisted rather than skewed around the residential accommodation to make the distinct volumes more apparent from all angles. The orthogonal form of plot 17 will allow plot 18 to stand out as a special building within the masterplan area.*
 - The density of the screens on the façade help to describe the tripartite volume of the building. Their detailed design will be important and we strongly encourage the design to enable screens to be able to slide past one another to add a further layer of depth to the façade and increase the usefulness of the screens.*
 - The inner skin of the building is highly glazed and we think the distribution and arrangement of the screens could play an important role in the environmental and cooling strategy of the buildings by responding to the orientation of the various facades. To the north elevation of plot 18 their placement and density may also help mitigate the effects of overlooking. It is important that the screens are able to catch the light and therefore the metallic finish is supported. A matt finish would have an altogether different, and less striking effect.*
- Internally, the narrow access corridor looks rather tight and the applicant is encouraged to make this as generous as possible.*
 - A balustrade is likely to be required to the parapet for maintenance and should be designed in at this stage. Due to its height this building will be visible over a wide area and screening of lift overruns should also be considered. These functional elements should be incorporated as an integral part of the architecture of the building. One way of doing so would be to increase the height of the fins to the top floor.*



Detailed CGI's Phase 01 and 02 Development

Phase 01 and 02

At present Phase 01, which received detailed approval as part of the 2012 planning permission, is currently under construction and reserved matters approval was granted for the Plots 01, 03, 09, 11, 12, 15,16 and 22 within Phase 02 in 2014. Plots 13 and 14a were submitted for approval in May 2015.

The images adjacent provide an illustration of how the Phase 01 and 02 buildings have been designed and the range of architecture and landscape proposed in this section of the development.

Brief

The client's brief to the design and planning team was to explore the following issues:

- Provide attractive family housing at a mix of tenures, that comply with the S106 requirements;
 - Accessible / walkable community heart to the development, reinforcing the parameters of the outline masterplan;
 - Provision of good space for future occupancy by a range of mixed use facilities;
 - Develop a design which sits well within its own site but also respects neighboring context, both within the Royals and adjacent communities;
 - Design an appropriate mix and range of unit types for the residential accommodation;
 - Develop a better understanding of real community value that can be provided within the plot design strategy;
 - Scale testing: models / visual montages;
 - Provide a viable sustainability strategy;
 - Address existing constraints;
 - Provide spaces to meet the required range of facilities and services that support a new community, while providing that community independent identity within the development;
- Develop a clear and appropriate open space strategy, both for public realm as for private amenity spaces;
 - Develop a clear connections strategy for each plot within its wider context;
 - Prepare easily understandable information;
 - Meet the cost plan and viability testing of the S106.

This document follows a logical progression through the issues above and in conclusion measures the proposals against the aspirations of the brief.



The photograph below illustrates the location of the Royal Wharf site within the London Borough of Newham (LBN). The masterplan site boundary is shown outlined in red

Location Plan

The Royals- An Introduction

The Royals site has been developing for over two centuries. First managed as areas of pasture maintained in a low lying flood plane the context changed dramatically in the 18th and 19th centuries.

Throughout the 18th and 19th centuries the industrial revolution necessitated land east of the city be developed into industrial factories and warehousing culminating in the development of the Royal Docks which remained in use through to the 1980s.

As trade declined and Britain's economic focus shifted the Royal Wharf area steadily lost its focus as a centre for import and export. This steady decline from an industrial led centre, has left a legacy of dereliction and vacant land which is only recently being positively addressed in proposals such as the Royal Wharf masterplan.

Now the Royals area is undergoing significant change. The former historic industrial land uses are relocating to more appropriate sites and a new mixed use community is emerging including significant residential developments, led by public investment in the DLR and attraction of a riverside setting.

The airport, ExCeL, Siemens and the University of East London are amongst the new businesses. Britannia Village, Barrier Point East, Barrier Park East, Tradewinds and the land east of ExCeL illustrate significant new residential developments alongside the Royal Wharf homes. A new mixed use community is emerging.

The Royal Wharf site in this context provides the opportunity to connect existing communities with new areas of development on both sides of North Woolwich Road while creating a diverse local and intensely active new urban quarter of London.

Transport and Connections

The Royal Docks have benefited from significant public investment in the DLR and Crossrail, which will provide excellent accessibility to Canary Wharf, central London and the southeast of England.

The closest Crossrail station will be at Custom House and is expected to be complemented with feeder bus services to provide access for current and future Newham residents and businesses. Latent provision has also been made for a future DLR station on the Woolwich branch to the west of the site.

London City Airport provides both national and international connections, along with related business opportunities.

Development at the Royal Wharf site will maximise the benefits of these nodes, linking with Canning Town and supporting the bus, cycle and river networks, encouraging a greater use of the waterway and riverside through improved pedestrian links and a potential extension to the current river bus routes.



- Britannia Village
- River Thames
- Peruvian Wharf
- Royal Victoria Dock
- Future Development Site
- Vanesta Wharf
- Minoco Wharf Oil Pontoon
- Sunshine Wharf
- Manhattan Wharf
- Deanston Wharf
- Thames Barrier
- Thames Barrier Park
- Minoco and Crescent Wharf
- Lyle Park
- DLR Viaduct
- North Woolwich Road
- Barrier Point Residential Development

Existing Site

The application site (Plots 17 and 18) covers approximately 1.96 hectares of brown field land and sits within the context of two former wharfs; Vanesta Wharf and Minoco and Crescent Wharf. None of the wharfs have the status of safeguarded wharfs. The western area of the wider site houses a number of warehouses and industrial buildings; all of which are either derelict and / or in a poor state of repair. The remainder of the wider site comprises cleared vacant land and unused temporary structures.

The site is situated in the London Borough of Newham (LBN) and all but the extreme eastern part of the site was previously in the administrative area of the London Thames Gateway Development Corporation (LTGDC). The River Thames is located to the south, Barrier Point Road to the east and North Woolwich Road to the north.

The wider site forms part of a series of underdeveloped low grade industrial sites that are situated along the River Thames from the mouth of the River Lea in the west to the Tate and Lyle plant in the east. West Silvertown DLR station is located to the north west of the site and the Thames Barrier is located to the south east.

The site is currently accessed from North Woolwich Road. This is the primary route connecting the Royals to Canning Town via Silvertown Way. Along North Woolwich Road to the East, Pontoon Dock, Docklands Light Railway station is located. The Thames Barrier is in close proximity to the south of the site where the river width reaches 550 metres.

The Barrier Point residential development comprising mainly 7 - 8 storeys with an 18 storey tower on the river front, is located to the east of the site on the former Prince Regents Wharf, overlooking Thames Barrier Park. The building is a white rendered linear block running the full length of its site with stepped terraces facing Barrier Park and is raised above a decked carpark by several metres.

Thames Barrier Park is a 9 hectare park which opened in 2000. It is owned and maintained by the London Development Agency and includes a riverside walk and a sunken landscaped garden overlooking the Thames Barrier. The park also incorporates formal and informal planting as well as a children's playground and a hard surfaced area for basketball.

The Kierbeck Business Complex, which consists of warehouses and industrial units used by small businesses and for storage is an indent into the northern perimeter of the site.

Deanston Wharf stands as a brick warehouse building running approximately 350m uninterrupted along the entire length of the western site boundary. The building is in a poor state of repair.

To the west of Venesta Wharf is Lyle Park, which was established in 1924, by Tate and Lyle for factory workers within the Royal Docks area. The park comprises open green space, play areas, a football pitch, tennis courts and formal and informal planting.

To the north of the site are located a number of warehouses and former industrial buildings, one of which is Grade II listed, Silo D. To the north west of the site, adjacent to the Silvertown Quays area, is located Britannia Village a residential development which also contains a primary school. This development began in 1994 and comprises private and social housing as well as community facilities such as a village hall and a health centre.



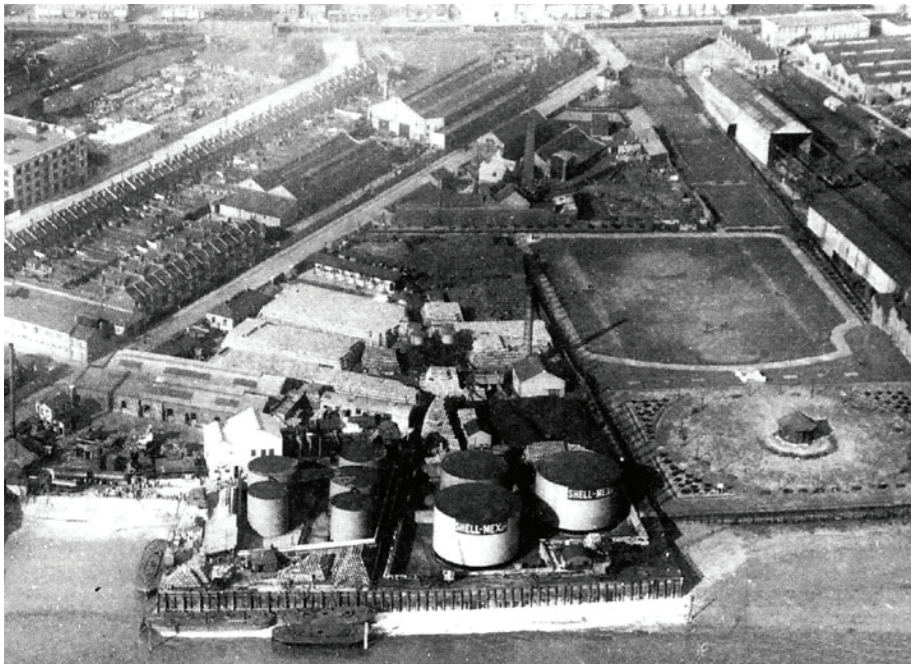
Knight's Road c1950



Aerial Photograph c1945



Aerial Photograph c1980



Lyle Park Aerial photograph c1940



Aerial Photograph c1940



Boxley Street c1959

Site History

The Royal Victoria Dock, opened in 1855, was the first dock built expressly for steam ships and the first to be connected to the national railway system through the North Woolwich branch of the Great North Eastern Railway.

The Graving and Pontoon Docks were the first to use hydraulic power to raise ships out of the water for maintenance. The King George V Dock was opened in 1921, completing the Royal group of docks which formed the largest area of impounded water in the world.

The demand for land for factories here was encouraged. One of the first to arrive, in 1852, was Samuel Silver's waterproof clothing works which gave its name to the Silvertown district. C.J.Mare built an iron works and ship-building facility at Orchard Yard, which became the world renowned Thames Ironworks. Important among the industrialists were Henry Tate and Abram Lyle who brought their refineries to the area. All this and the Royal Victoria Dock, created employment and very soon there was a huge demand for housing to accommodate the workers and their families. Thus originated new settlements such as those at Hallsville, Canning Town and North Woolwich and before long there was housing in much of what is now Custom House, Silvertown and West Silvertown.

By the 1880s the area had become a major centre of industry attracting people from all over Britain to work in the factories, docks and the Beckton Gasworks. Minoco Wharf was in the mid 1890s, an oil storage depot operated by Shell Lubricants. The adjacent Crescent Wharf was established as a chemical works in the 1890s by Brunner Mond Ltd.

Many of these industries were unhealthy or dangerous. This was highlighted on 19th January 1917 when 50 tons of TNT blew up in the Brunner Mond & Co works in Crescent Wharf, which had been given over to making munitions for the First World War. The noise of the greatest explosion in London's history could be heard as far as Southampton and Norwich. Upwards of 70,000 buildings were damaged and 73 people were killed.

Traffic through the Royal Docks reached its peak in the 1950s and early 1960s. Following the development of containerisation, technological changes and with EEC membership, Britain's trade rapidly declined. The Royal Docks were closed for general cargo handling at the end of 1981.

Such was the situation in mid 1981 when the London Docklands Development Corporation was established to secure the regeneration of the area. This was a response to a huge decline in the economy of the area brought about by the progressive closure of the docks from the 1960s onwards.

Among the projects on the new Corporation's early agenda was the proposal to build London City Airport. This was put to the Corporation in November 1981. It was pursued with great determination and following a public inquiry in 1983 work started on building the new facility in 1986. The proposal to build London City Airport was a radical break with the past and opened in 1987.

In addition, there have been a number of other significant developments in this area of the Royal Docks most notably the Thames Barrier completed in 1984.

ExCeL, the large-scale exhibition Centre on the north side of the Royal Victoria Dock opened in November 2000. It represents London's largest single site exhibition centre, with 65,000 square metres of column-free exhibition space. The listed warehouses at ExCeL west were converted at the turn of 2002 / 03. They provide a theme pub and restaurant, a nightclub, offices and apartments.

Thames Barrier Park opened in November 2000. Key features are a sunken landscaped garden, the 'Green Dock', a riverside promenade, cafe and a children's play area. The sites fringing the park are allocated for residential development; Barrier Point to the West and Tradewinds to the East.



Outline Planning Application

Generally in London the opportunity for a joined-up riverside environment along the River Thames has largely been missed because high value development enclaves, mostly concentrate on the relationship of the site to the river and not the east-west connections. There are many examples of the failure of this approach in west London.

In east London there is the opportunity to realise what has been lost in the west, a 10-mile long tapestry of walkable developments on both sides of the river stretching from Southwark to beyond the Thames Barrier, taking advantage of under used land.

To realise this fantastic opportunity, we need a clear vision, bigger than individual developments creating isolated pockets of housing as the early enterprise zone Docklands residential developments did in the 1980s.

The Royal Wharf site is located both physically and strategically central to achieving the goals outlined above. To this regard a comprehensive outline planning masterplan framework was developed from October 2009 through to May 2011, for the Royal Wharf site to play its part in achieving this strategic vision.

The resulting planning approved masterplan was the clear output of a collaborative approach with the Greater London Authority (GLA), London Borough of Newham (LBN) as well as the London Thames Gateway Development Corporation (LTGDC), all of whom played a significant role in the development of the Royal Wharf site.

This collaborative approach to the design process allowed the structuring of a carefully prepared framework which embodied best practice in urban design, aimed to improve the quality of any resultant surrounding development, encourage more ownership and opportunity on the part of local communities and would lead to a better understanding of the site and development in its context.

Outline planning permission was granted by Newham Borough Council on 30th March 2012 for the overall Masterplan on the Royal Wharf site (previously known as Minoco). The consented masterplan for the Royal Wharf development covers 15 hectares and will provide a vibrant mixed use development with up to 3,385 homes, a new school, shops, offices and restaurants. The masterplan was subdivided into 26 plots broadly reflecting the disposition of the proposed development within the project. Seven of these development parcels were brought forward as part of a detailed planning application alongside the outline masterplan.

As the implementation of the planning permission moved on to Phase 03 of development on the site it became clear that the approved outline plots within this Phase required amendment to enable them to be effectively delivered. Approvals for these amendments are being sought through a Section 73 application which was submitted to LB Newham on 3rd March 2015 (Ref: 15/00577/VAR).

With specific regard to the detailed proposals presented within this design + access statement, the enclosed designs have been developed in full accordance with the masterplan principles and design code of the Section 73. Design proposals for Plots 17 and 18 seek to reinforce the aims and objectives of the wider Royal Wharf vision.



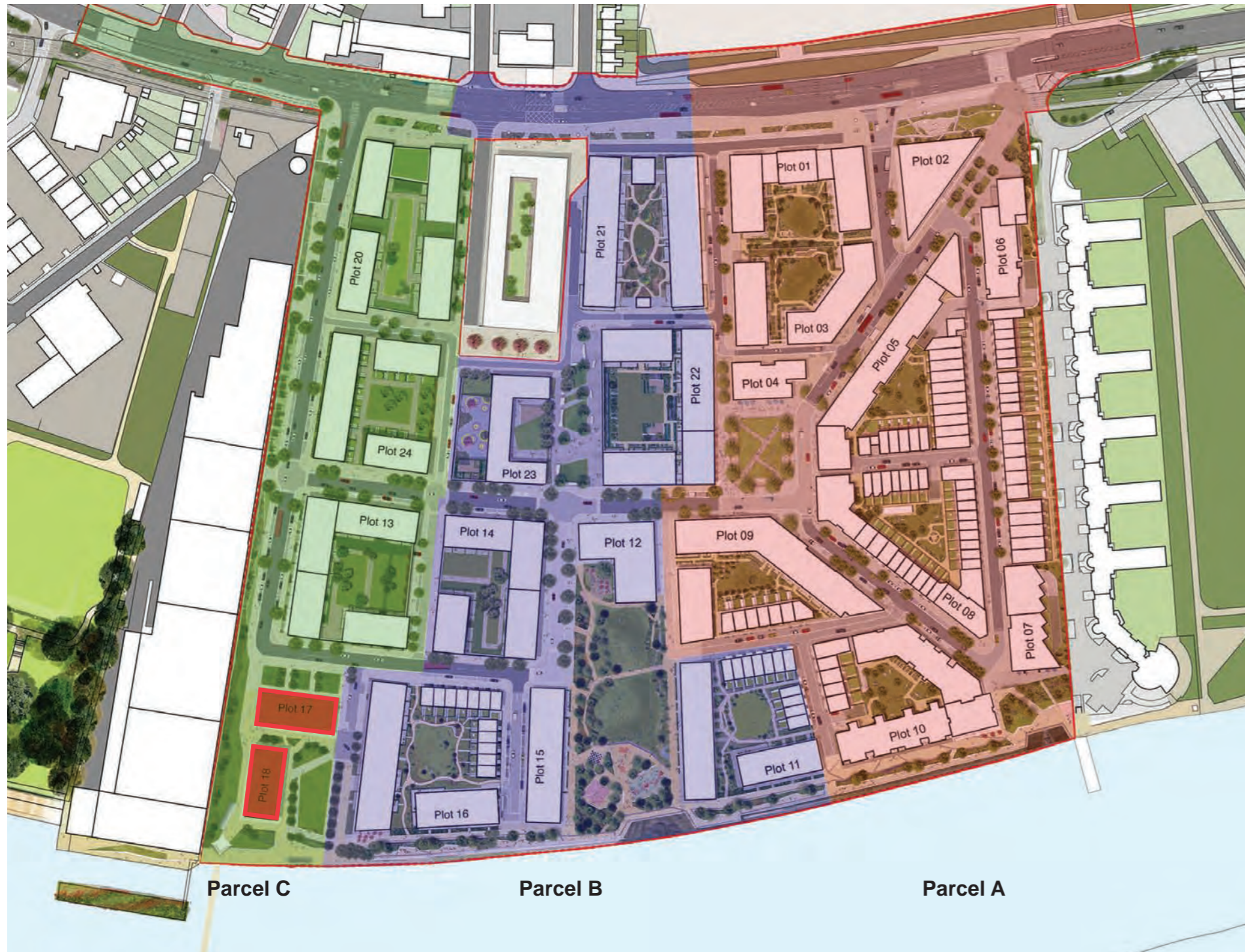
Masterplan Layout as Sought under the
S73 Planning Application Ref: 15/00577/VAR

Royal Wharf Development Schedule

The comprehensive redevelopment of the 17 Ha Royal Wharf site

(as sought under the S73 Planning Application Ref: 15/00577/VAR) to include:

- up to 337,900 m2 of residential (C3) floorspace in a mix of dwelling sizes, types and tenures
- up to 7,000 m2 of employment uses (B1)
- up to 3,250 m2 of retail floorspace (A1)
- up to 750 m2 of financial and professional floorspace (A2)
- up to 750 m2 of hot food / take away floorspace (A3 and A5)
- up to 750 m2 of pub and restaurant floorspace (A4)
- up to 9,600 m2 of “non residential institutional” floorspace to include a new primary school, creches / nursery schools and community facility (D1)
- up to 3,000 m2 of assembly and leisure floorspace to include gym and fitness centres (D2)
- new public realm including a hierarchy of open spaces including a riverside park
- creation of areas of private open space
- riverside walkway, including a link to the proposed Silvertown Pier
- two accesses on to North Woolwich Road
- internal access roads, footpaths and cycleways
- basement and undercroft car, motorcycle and cycle parking, plant, machinery and storage
- other supporting infrastructure.



Planning Parcel

The consented outline masterplan permission divides the overall masterplan site into 3no. Planning parcels for the purpose of establishing the affordable housing provision, illustrated adjacent as Parcels A, B and C.

As illustrated adjacent Plot 17 and 18 sit within parcel C. The plot design team have designed to a clearly set target brief concerning tenure, mix and quantum of units across each plot, set by the outline planning S106. It is within this framework the plot design mix has been developed.

Details concerning specific plots are contained later in this document and a summary of the plot proposals within their planning parcel context has been provided within the planning statement supporting this application.

Strategic Planning Policies and Material Considerations

Relevant planning policies and material considerations for the Royal Wharf application are noted below:

Economic development	London Plan*; The Mayor's Economic Development Strategy For London (2010);	Transport	London Plan*; the Mayor's Transport Strategy; NPPF	Ambient Noise	London Plan*; the Mayor's Ambient Noise Strategy; NPPF
Housing	London Plan*; NPPF; Housing SPG; Providing for Children and Young People's Play and Informal Recreation SPG; Housing Strategy; revised interim Housing SPG	Cross Rail	London Plan* Alteration; revised draft Cross Rail SPG (March 2010)	Context	Planning for the Historic Environment; NPPF
Affordable Housing	London Plan*; NPPF; Housing SPG, Housing Strategy; revised interim Housing SPG	Parking	London Plan*; the Mayor's Transport Strategy; NPPF	Environment	Development and Flood Risk
Density	London Plan*; NPPF; Housing SPG; revised interim Housing SPG	Employment	London Plan*; NPPF; Industrial Capacity SPG	The London Plan 2011 (amended in 2013 and 2015) for consultation and London Borough of Newham Core Strategy draft are also a material considerations.	
Urban Design	London Plan*; NPPF	Access	London Plan*; NPPF; the Mayor's Energy Strategy; Mayor's draft Climate Change Mitigation and Adaptations Strategies; Mayor's draft Water Strategy; Sustainable Design and Construction SPG	Additionally the Newham UDP comments on economic development, housing, affordable housing, density, mix of uses, regeneration, transport and employment.	
Mix of Uses	London Plan*	Tall Buildings / Views	London Plan*; RPG3A, View Management Framework SPG, draft Revised View Management Framework SPG		
Regeneration	London Plan*; The Mayor's Economic Development Strategy For London (2010);				

*London Plan 2011 (as amended in 2013 + 2015)

Purpose of Design Guidelines

As part of the Royal Wharf framework a detailed design code was prepared to support and supplement the urban design strategies of the Royal Wharf masterplan allowing architects, landscape architects and designers to maintain and engage in a design approach consistent and appropriate for this unique site. The code was written with the aim of enriching the development as a whole, through the development of a common and identifiable design language for the masterplan site.

The masterplan framework defines a clear hierarchy of built and open spaces providing a series of settings and themes to be articulated and reinforced through architectural and landscape proposals.

The purpose of this design code was to provide the following:

- Live design guidance to form the brief for architects and landscape architects
- An assessment aid for client, local authority and stakeholder design review.
- Document the aspirations of the Royal Wharf masterplan

Parameter Plans

Parameter Plans linked to the Environmental Statement established the high level spatial masterplan at Royal Wharf and identified an individual vision for each of the main places within the scheme. These parameter plans have been referenced alongside the Royal Wharf design code in the preparation of the Plot designs and used in support of the architectural, townscape and landscape proposals enclosed.

Parameter plans submitted as part of the outline application are listed below:

Parameter Plan 01	Outline Site Boundary
Parameter Plan 02	Existing Site Levels
Parameter Plan 03	Formation Level Plan
Parameter Plan 04	Flood Defence Level Plan
Parameter Plan 05	Proposed Upper Level Plan
Parameter Plan 06	Proposed Building Footprints
Parameter Plan 07	Proposed Minimum AOD Levels
Parameter Plan 08	Proposed Maximum AOD Levels
Parameter Plan 09	Public and Private Realm
Parameter Plan 10	Proposed Movement Plan

Status of Guidelines

Design code guidelines published as part of the Royal Wharf masterplan Outline Planning Application (May 2011) along with the Section 73 application which is currently being assessed by LB Newham (15/00577/VAR) have been used to form a suitable platform for the foundation of the enclosed design briefs and detailed architectural and landscape design proposals.

The design code was not written to be prescriptive to designers, but sought to inform a series of principles upon which designs may be viewed, critiqued and measured against as the masterplan aspirations are realised. It has therefore been used as a principal base for the plot design proposals which have also been prepared with reference to the following associated documents:

- Masterplan Development Specification (May 2011)
- Masterplan Design and Access Statement (May 2011)
- Masterplan Environmental Impact Assessment (May 2011)
- Section 73: Phase 3 Design and Access Statement (Addendum to Minoco Design and Access Statement and Design Code) February 2015.
- Section 73: Environmental Statement Review (February 2015)
- Masterplan Parameter Plans (March 2015)
- Transport Statement and Servicing Management Plan (March 2015)

Guidance Organisation + Hierarchy

The Royal Wharf design code is organised under the following headings:

Objectives

Objectives of the design guidance.

Framework

Site wide conditions to which buildings and landscape proposals should respond. It sets the context in terms of movement, open space structure and built form.

Settings

Identifies places within the masterplan that form specific conditions, and to which design guidance must operate at a local scale.

Interaction

The design guidance for settings across the masterplan indicated the implications for architectural expression of buildings in various locations.

This included the concept of 'marker' and 'background' buildings, in which the former are intended to be visually more important in the identification of routes, defining views or containing spaces. Background buildings and adjacent landscape designs form the principle means of achieving the masterplan vision by allowing the masterplan to be a landmark development and not a competing set of landmark buildings.

To achieve this relationship, it is essential that the process of design development within individual blocks demonstrates recognition of the specific conditions established by the design guidance.

To this regard the plot designs have been developed alongside the code to respond positively to the formal spatial relationships and frameworks established within the masterplan, as set out or implied by the design guidance.

Context

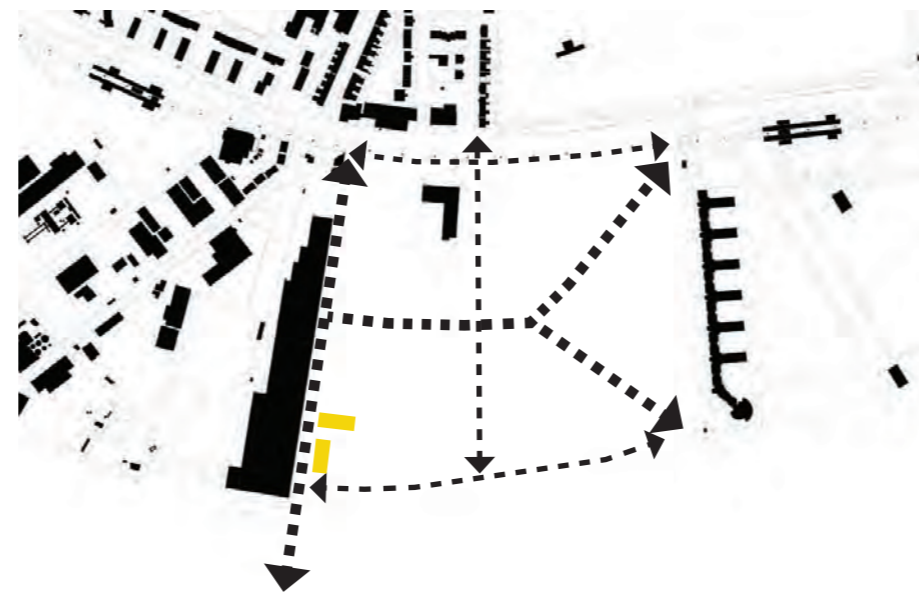
Generating a new site context is a key component of the masterplan framework. Specific criteria have been set by the masterplan to ensure plot design proposals respond to the Royal Wharf design code.

These framework items are as below, and each has been considered fully as part of the enclosed plot design. Where illustrated the proposed plot layouts have been annotated in yellow.

- Connection
- Major Spaces
- Build Form
- Urban Grain
- Sunlight + Daylight
- Drop Off
- Servicing
- Vehicular Movement
- Pedestrian Movement
- Public + Private Space
- Visual Links + Viewing Corridors

Connection

A number of strategic connections exist within the scheme. While the masterplan promotes a rich and varied tapestry of minor lanes and mews type environments the diagram below illustrates the principal strategic connections as defined by the masterplan framework which are responded to by the plot proposals. Legibility and ease of movement along these desire lines has be reinforced and protected.



Major Spaces

The clear and logical definition of the masterplans urban spaces is essential to the success of the scheme.

The diagram below illustrates how edges of major spaces have be defined with clarity in order to realise the urban framework for Royal Wharf. The hierarchy of these environments within the masterplan has been protected.



Built Form

The masterplan block plan and built form strategy is illustrated below.

The diagram illustrates the areas of the scheme that have been clearly established as urban built forms in order to define and fully articulate the streets and public spaces within the framework.

The proposed plot layouts respond to the principles of the built form strategy as illustrated below, seeking to maintain and enhance the streets and urban spaces generated by their buildings and landscapes.



Urban Grain

Within the context of the block diagram the masterplan recognises the need to break down the urban blocks and edges to promote permeability and allow visually accessible residential buildings to be delivered.

The diagram below illustrates how the masterplan and plot framework as proposed produces a fine urban grain in plan which avoids the plot being read as a large impenetrable urban block.



Sunlight + Daylight

The Proposed Development is primarily made up of residential accommodation and for this reason has been considered for adequate levels of daylight and sunlight.

The supporting Royal Wharf EIA addendum for Plots 17 and 18 includes an internal daylight assessment alongside the sunlight assessment as well as a sun-path shadow study, examining the transient as well as permanent shadow on any existing surrounding amenity space and internal proposed amenity space.

Drop-Off

Drop-off access to all buildings and front doors is a key principle of the masterplan. It is the aspiration of the Royal Wharf scheme that each front door is accessible from a drop off zone or area of visitor parking allowing deliveries and residents to easily access their homes without the need to enter a basement or undercroft parking area.

The diagram below illustrates how each plot entrance is easily assessable from local drop-off points within the scheme at ground level.



Servicing + Vehicular Access

Servicing for the residential apartments and commercial units is undertaken either from the on-street road network via front doors + residential cores. Frequencies of use are low per unit, the size of vehicles small and the length of stay for each vehicle short. The non-residential units will be managed to allow access from the principal streets at times which do not conflict with the main pedestrian movements.

The aspiration is to allow the main streets to operate in exactly the same way as a typical high street within London. Access for emergency vehicles and servicing of the residential, commercial and employment spaces is achieved across the site.



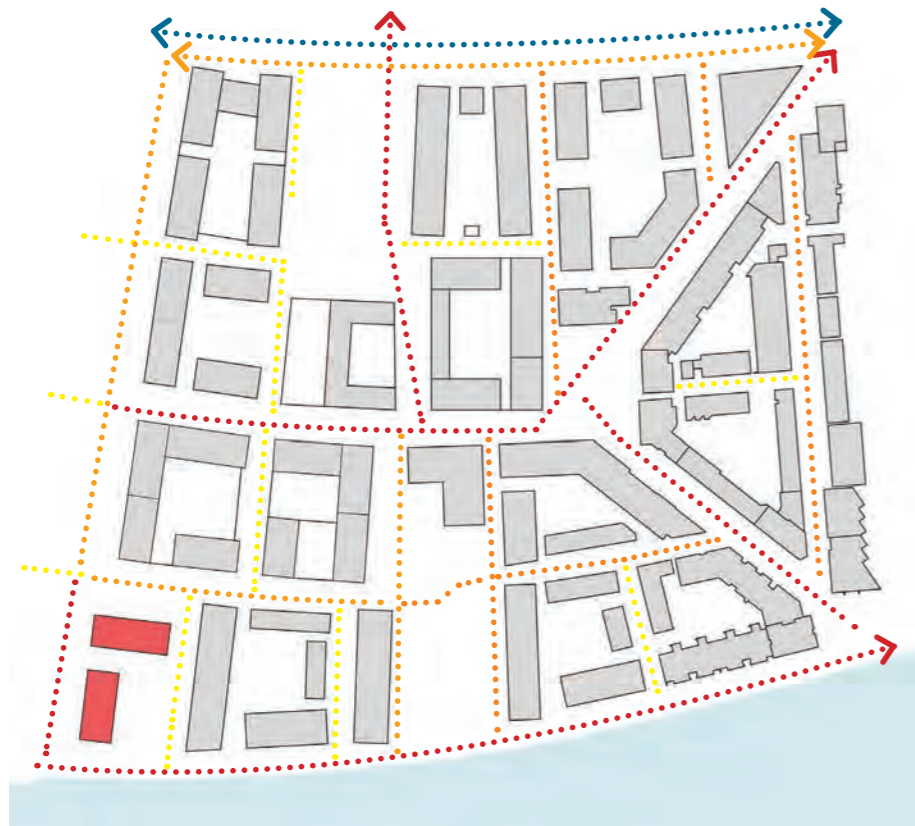
Vehicular Movement



- Primary
- Secondary
- Tertiary
- Restricted access/Pedestrian priority
- Main access road to site

Principles of vehicular movement established in the strategy above are reinforced by the plot design proposals.

Pedestrian Movement



- Primary
- Secondary
- Tertiary

Principles of pedestrian movement established in the strategy above are reinforced by the plot design proposals.

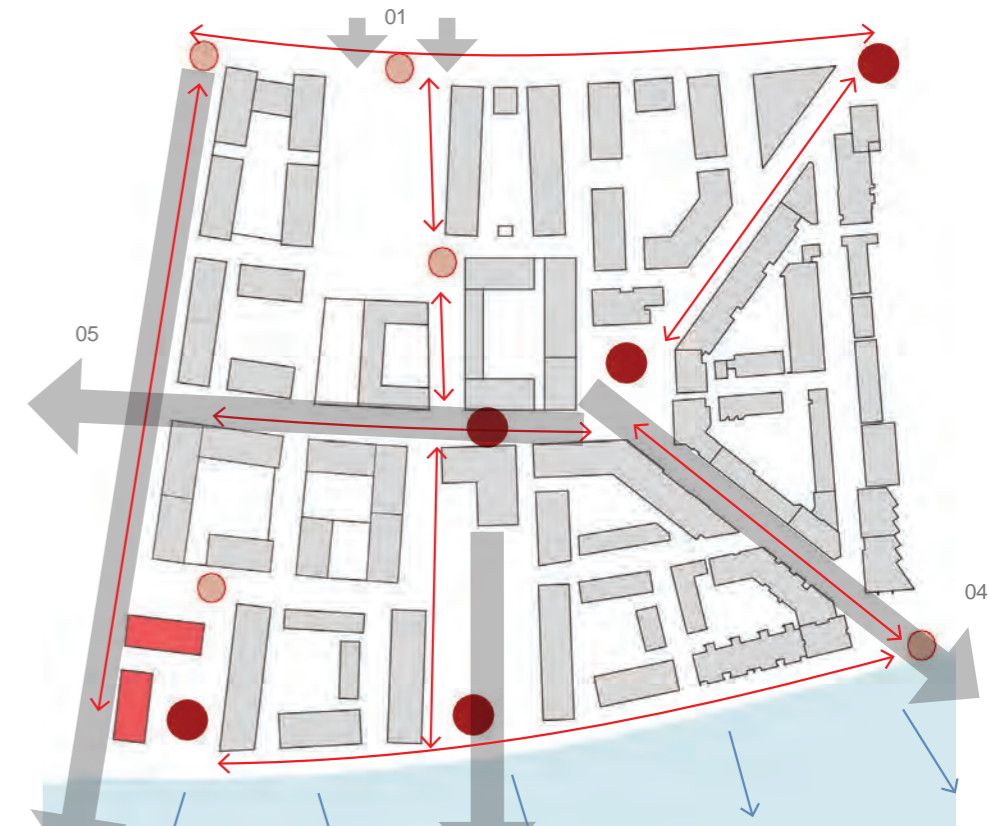
Public + Private Space



- Main Public Spaces
- Gateways
- Pocket Spaces
- Semi-private Spaces

Principles of public and private space established in the strategy above are reinforced by the plot design proposals.

Visual Links + Viewing Corridors



- Main focal points
 - Visual nodes
 - Protected Viewing Corridor
 - Visual links
 - Views across the river
- 01 Views in from Britannia Village
 02 View to the Pier
 03 View to the River
 04 View to the Thames Barrier
 05 View to Canary Wharf

Principles of the masterplan viewing corridors established in the strategy above are reinforced by the plot design proposals.

Synthesis of Urban Design, Architecture and Landscape

The Royal Wharf masterplan seeks to create a cohesive, diverse and varied townscape that synthesises the strategic masterplan principles with the urban, architectural and landscape design approaches.

To achieve this goal a dialogue has been established and maintained by the plot design team and the master planning team to ensure that plot designs were explored and tested at all scales applicable to achieving the townscape vision of the masterplan.

Additionally, the plot designs respond to the site's heritage and context as a unique riverside location in the London Borough of Newham, exploiting the finest grain of movement through the masterplan's urban spaces and high levels of tactility and articulation in its architecture and public realm.

The narrative device which unites these concepts is the idea of creating a series of legible experiences + journeys, comprising clarity of routes through the masterplan for visitors and residents of the scheme. The plot proposals seek to reinforce this goal in order to complement and reinforce the overall character of the development.

Hierarchy of Setting

The masterplan has a clear hierarchy of setting to order and provide visual clarity and subtle design divergence to the spaces formed by the overall zonal design framework.

Measuring against this spatial hierarchy, the plot designers have tested ideas against the location of place within the masterplan, in order to establish the legibility of overall scheme.

These place settings provide a backdrop of urban conditions throughout the Royal Wharf site to which the plot designs respond with expression and articulation specific to their location within the immediate and wider context.



Frontage

Building frontages will be key to the success of the plots. Strategically the masterplan aspires to create spaces defined by a range of differing building frontages to provide variety and character to each street and the development as a whole.

Buildings within the masterplan were desired to meet the ground with long lengths of facade broken down into master and subordinate orders with a clear hierarchy to the elevation. This principle has been reinforced by the plot design proposals illustrated within this document.

While plot land use is defined by the masterplan strategic parameters it is expected that the use of each plot may be read from its frontage which will articulate the facade and define the building character onto the street.

The principles set by the masterplan are illustrated adjacent in context of the new plot design proposals:

- Corner —
- Strong Edge —
- Publicly Permeable - - - - -
- Semi Private —
- Principal —



Flood Level and Formarion Level Land Use Plan

Flood Level and Formation Level Class Use

A ground floor land use plan for the Royal Wharf masterplan is illustrated left. The diagram illustrates the strategic principle of wrapping the northern edge of the site in a predominant run of B1 employment uses, allowing these functions to deal with a number of the technical challenges of the changing topography and proximity of the buildings to the DLR viaduct.

The proposed design of plots 17 and 18 complies with the use parameters for the flood and formation levels.

- Mixed Class Use
A1 to A5, B1, C3, D1 and D2
- Predominantly B1 Class Use
- Predominantly B1 / C3 Class Use
- Predominantly C3 Class Use
- Predominantly D1 Class Use



Upper Level Land Use Plan

Upper Level Class Use

An upper floor level land use plan for the masterplan has been illustrated left.

In this context the upper level residential use is defined as the predominant use over all the upper floors.

The diagram builds on the principles set out by the ground level uses plan but recognises that a number of the buildings need to be adaptable to residential uses at the upper levels.

This flexibility has allowed the detailed design of plots 17 and 18 to respond to certain site constraints with richness and sensitivity.

The design of plots 17 and 18 complies with the use parameters as illustrated.



Proposed Site Levels Plan

Proposed Site Levels

The EA flood levels of for the site has been set at +5.05m A.O.D. The proposed site levels strategy is principally defined by the aim to achieve a level of +5.05m A.O.D. grading up from the existing North Woolwich Road pavement levels; as soon as is feasible within a responsible and appropriate access strategy.

Rising above +5.05m A.O.D. allows the masterplan the flexibility to introduce terraced housing as well as a wider range of residential activities at the new masterplan ground level.

Illustrated by the adjacent diagram the thin red lines highlight the position on site where the contours achieve the flood defence level from the existing levels along North Woolwich Road. Continuing southwards the site levels continue to gently rise to a natural peak of +6.50m A.O.D. along the central east / west route, whereby the site levels gently fall to the rivers edge in a very natural and appropriate way for the site.

The proposed design of plots 17 and 18 complies with the designated criteria for the Proposed Site Levels parameters for the flood and formation levels.



Housing + Apartment Location Plan

The above plan illustrates uses at street level.



Housing / Apartment Mix

A housing / apartment plan for the masterplan has been illustrated in the diagram adjacent.

The diagram illustrates how housing within the masterplan framework may be developed to integrate with apartments as well as the mixed use buildings proposed for the site.

Where placed the housing has been grouped around mews / home zone streets protected within an massing of apartment buildings.

Designing the masterplan in this way allows for a rich mix of housing typologies and tenures to be developed within each character area.

The masterplan application documentation establishes a clear residential unit mix for the comprehensive masterplan site incorporating a range of tenures, unit sizes and typologies - this has been detailed in the development specification and design code.

The proposed design of plots 17 and 18 complies with the designated criteria for the Housing / Apartment Mix parameters.



Minimum Heights Plan

Minimum Heights AOD

In order for the masterplan to be a success a minimum level of built form needs to be achieved, to ensure enough people live in the area to animate the scheme but also to ensure streets and spaces receive an appropriate level of enclosure to form their edges.

The minimum heights strategy seeks to balance the need for occupancy density with an appropriate level of urban realm and built form density. The heights strategy must allow for a wide range of building forms and architecture to be developed within its framework while also providing certainty in the deliverability of the masterplan aspirations.

It is within this context that the minimum heights for Royal Wharf have been set.

The proposed design of plots 17 and 18 complies with the designated criteria for the Minimum Heights A.O.D parameters.

- Minimum A.O.D. Level (metres)
+11.00
- Minimum A.O.D. Level (metres)
+14.00
- Minimum A.O.D. Level (metres)
+22.00
- Minimum A.O.D. Level (metres)
+25.00
- Minimum A.O.D. Level (metres)
+32.00
- Minimum A.O.D. Level (metres)
+39.00

 Maximum A.O.D. Level (metres) +10.00	 Maximum A.O.D. Level (metres) +35.00	 Maximum A.O.D. Level (metres) +46.00
 Maximum A.O.D. Level (metres) +18.50	 Maximum A.O.D. Level (metres) +36.00	 Maximum A.O.D. Level (metres) +53.00
 Maximum A.O.D. Level (metres) +24.00	 Maximum A.O.D. Level (metres) +37.00	 Maximum A.O.D. Level (metres) +65.00
 Maximum A.O.D. Level (metres) +29.00	 Maximum A.O.D. Level (metres) +39.00	
 Maximum A.O.D. Level (metres) +32.00	 Maximum A.O.D. Level (metres) +41.00	



Maximum Heights Plan

Maximum Heights AOD

The maximum heights strategy needs to define where landmarks should be formed and those streets and areas of urban realm within the masterplan that need to be further defined and enclosed, to heighten the quality of the scheme. The diagram for maximum development sets taller buildings adjacent to existing infrastructure along North Woolwich Road, along the principal streets, riverside and main urban spaces, but limits height adjacent to the townhouses.

In some cases the maximum building heights vary within a plot to reflect the role of the building in the overall master plan framework. The tallest buildings will be located at:

- The eastern element of Plot 12, this building sits at the northern end of the new park and marks the centre of the site
- Plot 18 is located adjacent to the pier and will act as a 'marker' for this facility
- The south eastern part of Plot 10 which is the termination of the diagonal route from the central square and announces the development across the riverfront

The proposed design of plots 17 and 18 complies with the designated criteria for the Maximum Heights A.O.D parameters.

LOCATION



TYOLOGY



Warehouse

Robust edge
Predominantly brick

Civic

Strong Modelled
Stone

Mansion

Fine Elegance
Brick with Stone dressing

Marker

Special Contrast
Various Materials

Riverside

Relationship to Water
Stone Metal

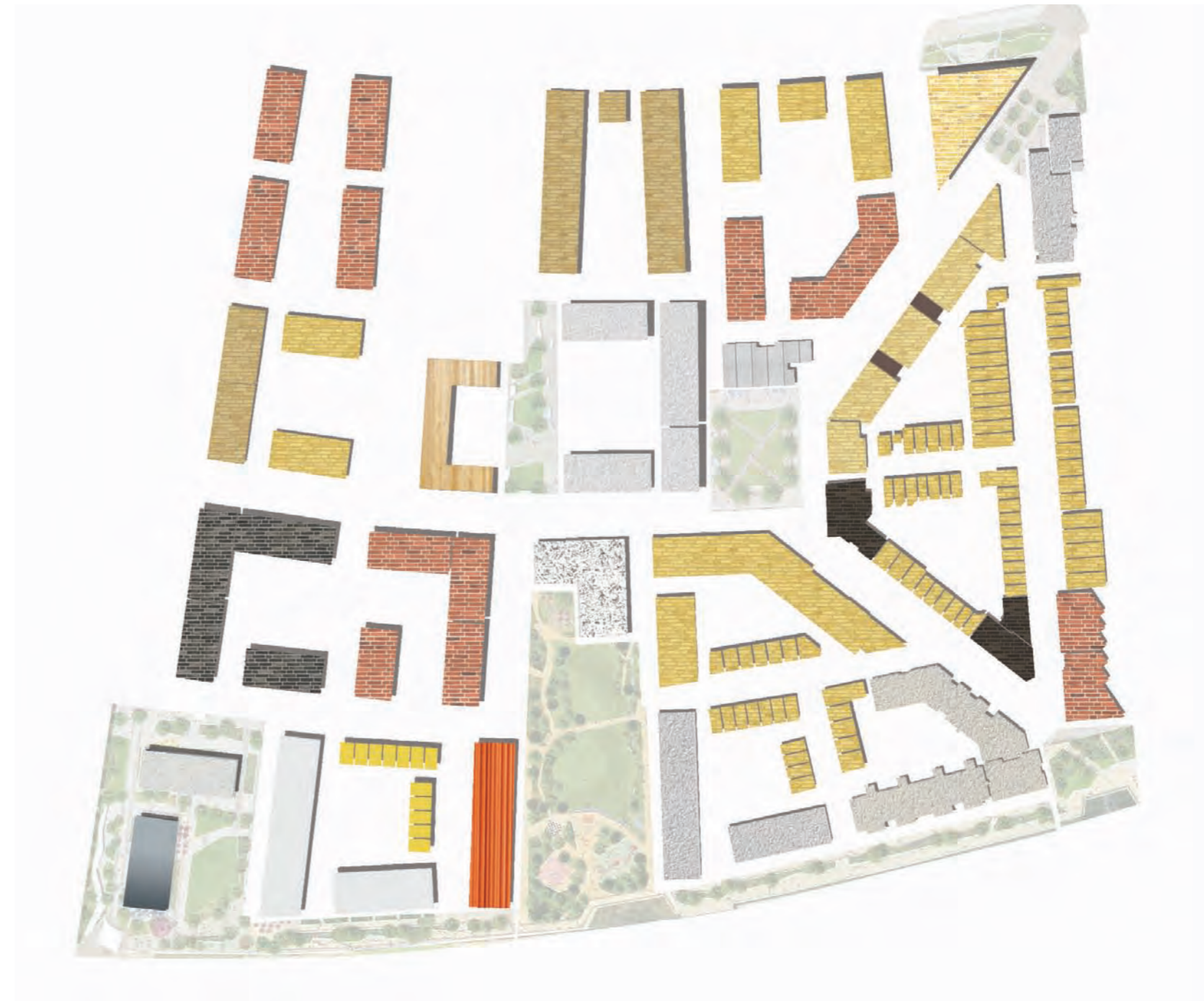
Townhouse

Mews
Brick and Stone

School

Individual
Natural Materials

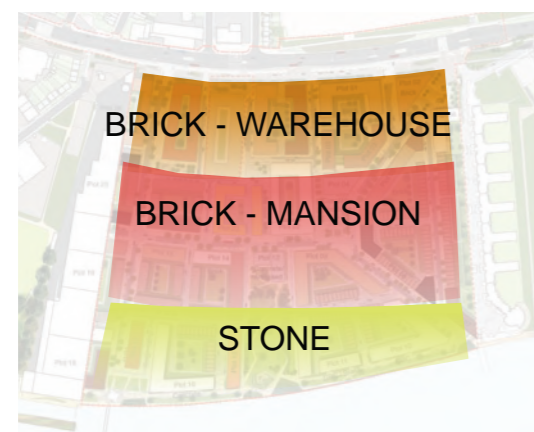
Materiality Masterplan



Initial Principles



Materials Interpretation



Building Type Concept

Masterplan Building Materiality and Typology Plan

The Royal Wharf masterplan is underpinned by an overarching materiality and set of typologies that relate to location and key site conditions. The diagrams *eft* illustrate conceptually the broad principles of character and location that were set out at the beginning of the masterplan design to represent the starting point for plot design. Through the design of the first 2 phases, the diagram *far left* has been developed and refined as a more sophisticated and deeper understanding of the masterplan and its individual plots has emerged and evolved.

The buildings along the northern edge of the masterplan that sit adjacent to the DLR and North Woolwich Road are based on Warehouse typology, taking reference from their industrial neighbours such as Millenium Mills, and form a robust edge to the site. The Warehouse typology buildings are predominantly brick, with a repetitive window arrangement.

Moving south in to the heart of the masterplan, forming the edges of the market square, Civic typology buildings can be found. These buildings have a deliberately strong architectural language that responds to their public setting.

Mansion buildings are richly detailed brick and stone buildings that have a strong presense in special locations and form a quieter background in other areas. Mansion typology buildings are highly modelled and elegant.

Riverside buildings are located along the river front and are principally stone with large scale details and elements that respond to the open river elevation that they occupy.

Marker buildings have a distinctive, sometimes contrasting or striking architectural identity and are situated at key prominent locations within the site.

Townhouses in a unifying scale throughout are mostly expressed in a buff coloured brick with stione detailing.

The school will be designed in a standalone style which will complement the surrounding context.

Plot 17 and 18 are categorised as marker buildings.



7.0 Appearance - Design Code

Plots 17 and 18 are categorised in terms of character in accordance with the masterplan design code, which relates to their position within the site. The diagram on the previous page illustrates the site wide materials and typology strategy. Initially plot 17 was envisaged as a background building to plot 18. Plot 18 is categorised as marker typology, which sets it aside as having a special or unique architectural language that may provide contrast with the other buildings within the masterplan.

Throughout the design and workshop process, it has become apparent that due to its close relationship and proximity to plot 18, that plot 17 should be expressed in the same architectural language as plot 18, so that they read as a single building. This strengthens the impact of the special architectural language that has been developed, incorporating plot 17 as part of the marker.



Royal Wharf Massing

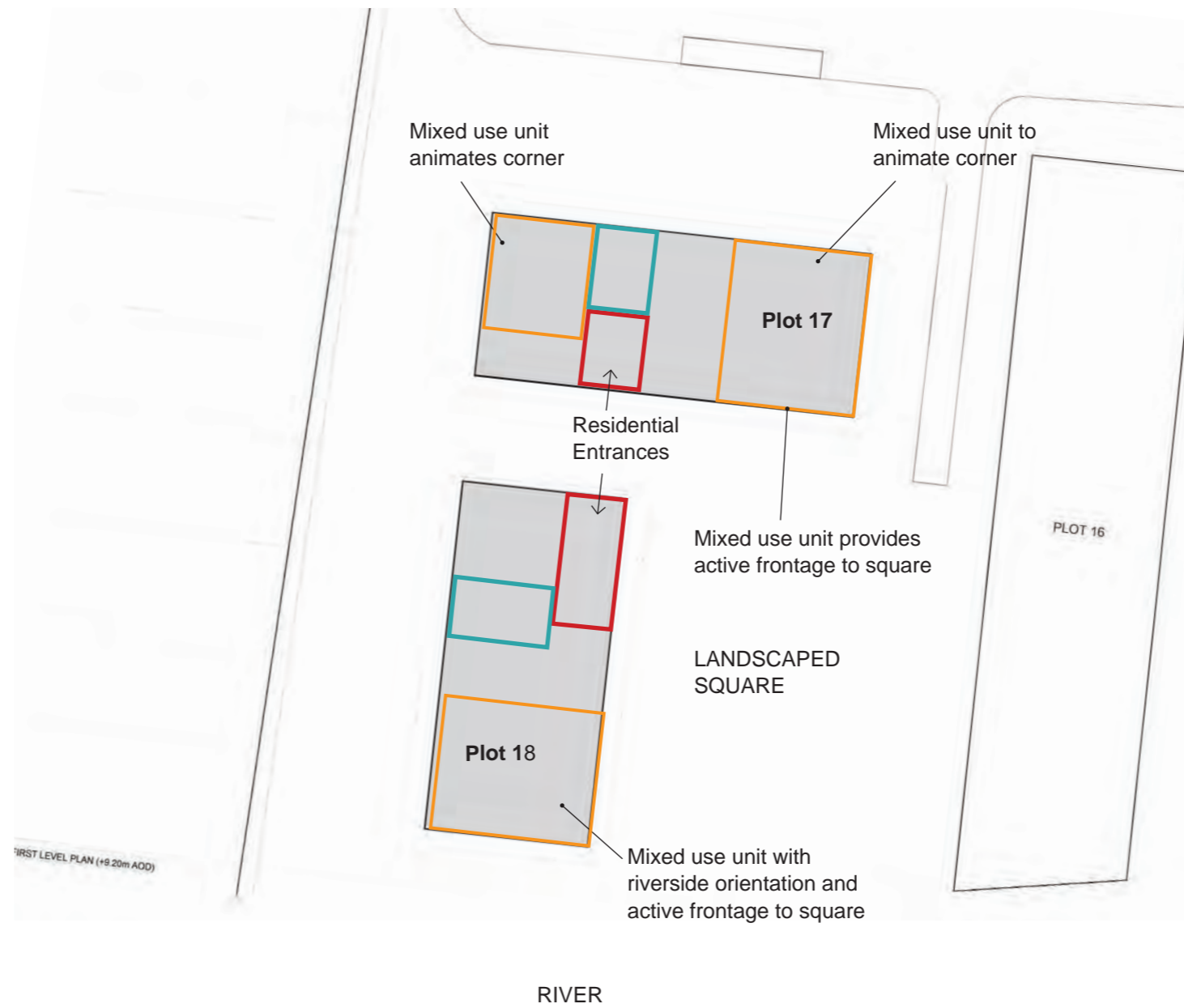
The Section 73 application sets out height and mass parameters for the buildings in the masterplan. The massing of plots 17 and 18 are in accordance with these parameters.

The parameter massing is illustrated in the site model opposite and demonstrates the starting point for the plot proposals.

The following section illustrates the general arrangement of plots 17 and 18.

Arrangement Strategy

The diagram to the right illustrates the schematic layout of the ground floor of Plot 17 and 18 in plan in its immediate landscape context.

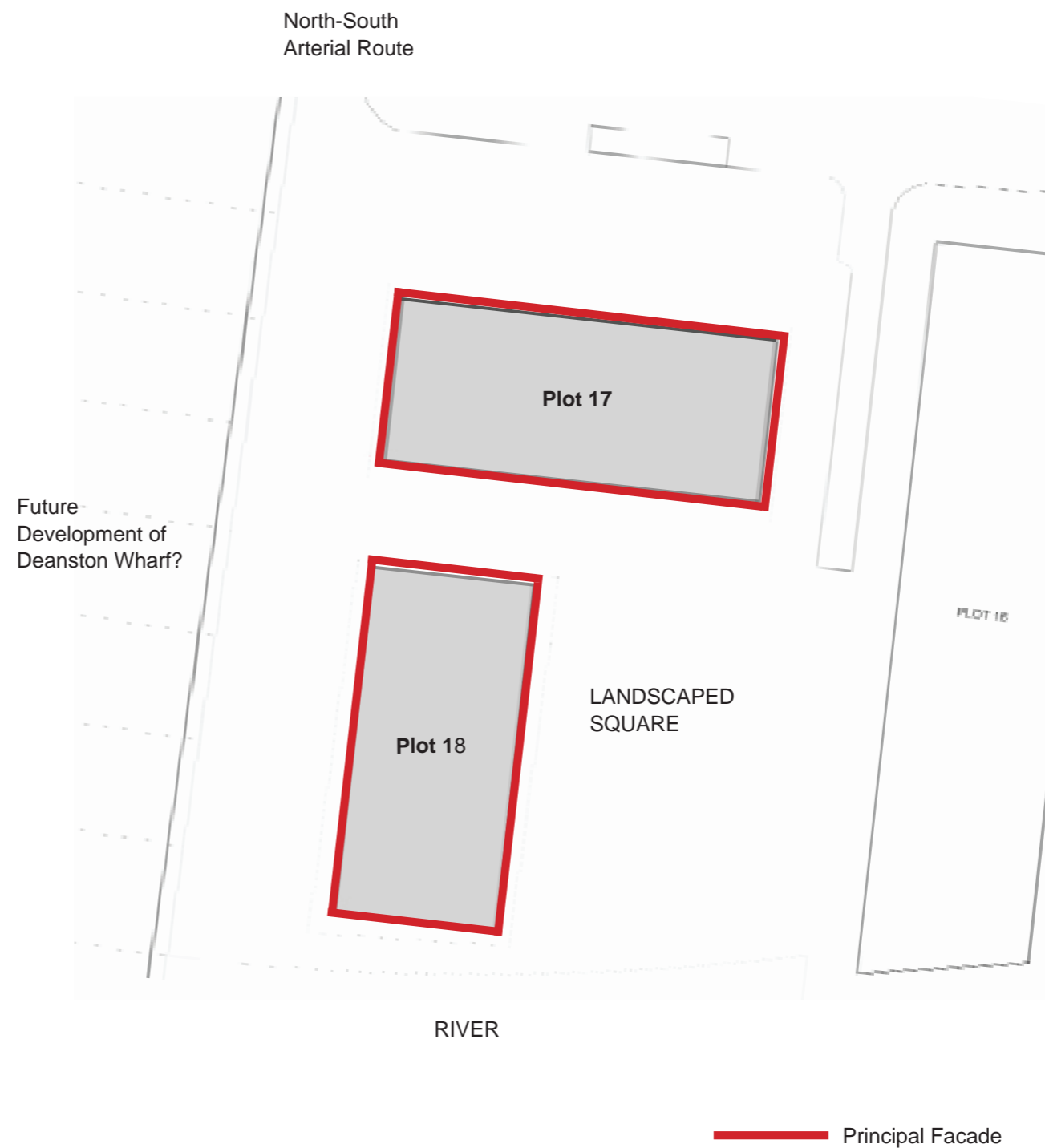


Townscape

The plot proposals seek to reinforce and enrich the variety of materials and elevation types with the masterplan.

As the buildings sit within an open space, each elevation is considered to be a principal facade, with none considered secondary.

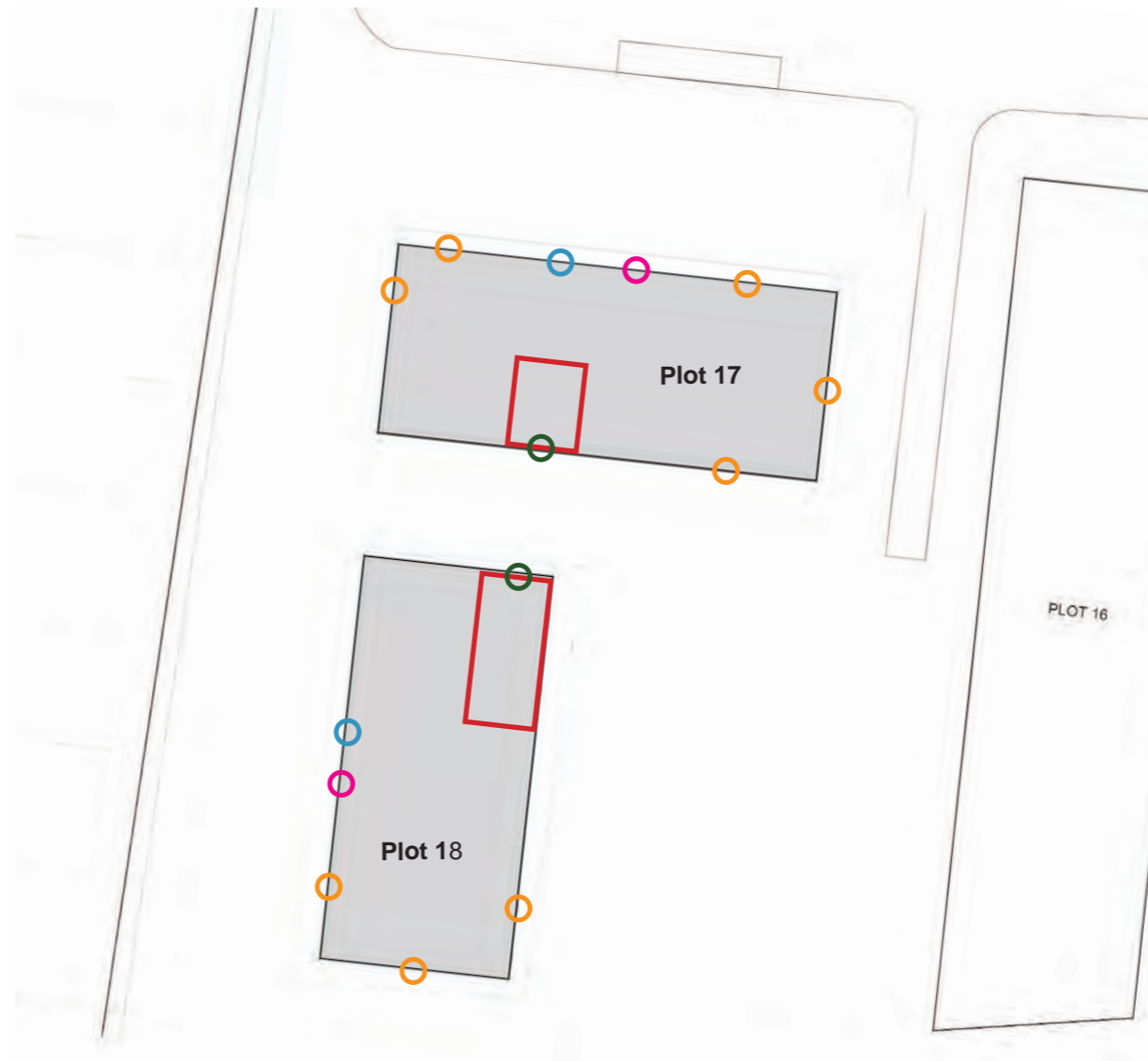
- The north elevations respond to the approach from the vehicular route between North Woolwich Road and the river
- The west elevations consider the future development of Deanston Wharf, so are also considered principal facades, as they too may sit within more open space once the site is developed to the west
- The facades between the buildings feature the main residential entrances, so are also considered to be important
- The south elevation is considered principal as it forms part of the Thames riverside composition



Access + Servicing

Access and servicing for Plot 17 and 18 follows the principles of the master plan design code. Ancillary C3 uses such as refuse presentation rooms and cycle storage areas are located either within the Ground floor or on the First floor set away from the principal elevations, thus allowing residential and mixed use units to achieve the best possible orientation.

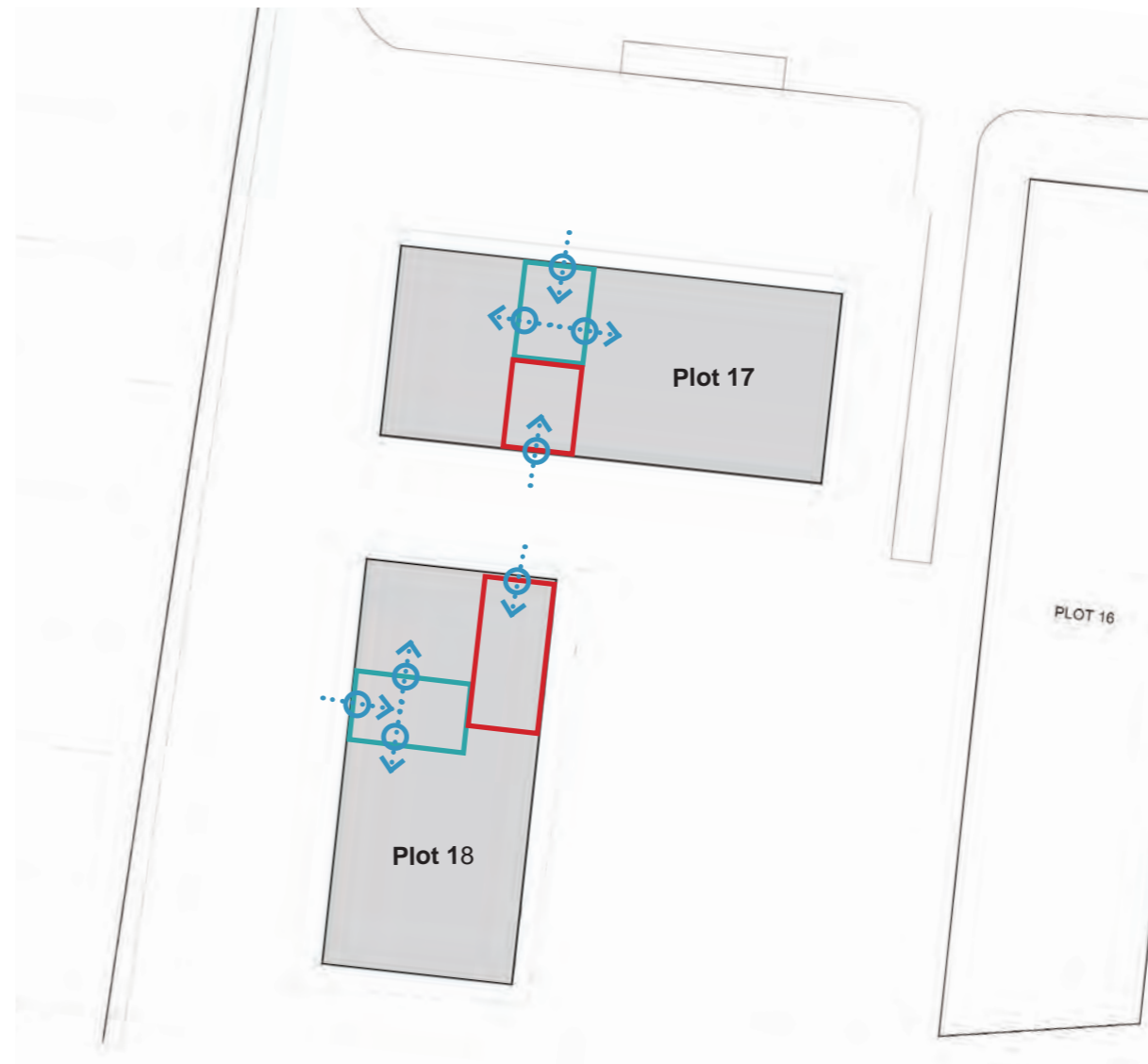
For plot 17+18, the frontage taken up by the ancillary uses is minimised by their orientation and stacking them on the first floor.



- Mixed Use
- Residential Core
- Residential Uses
- Refuse Collection Point

Entrances

Plot 17 and 18 entrances are located off the street and the park situated to the South-Eastern point of the site. Level and secure core access is provided to each plot.



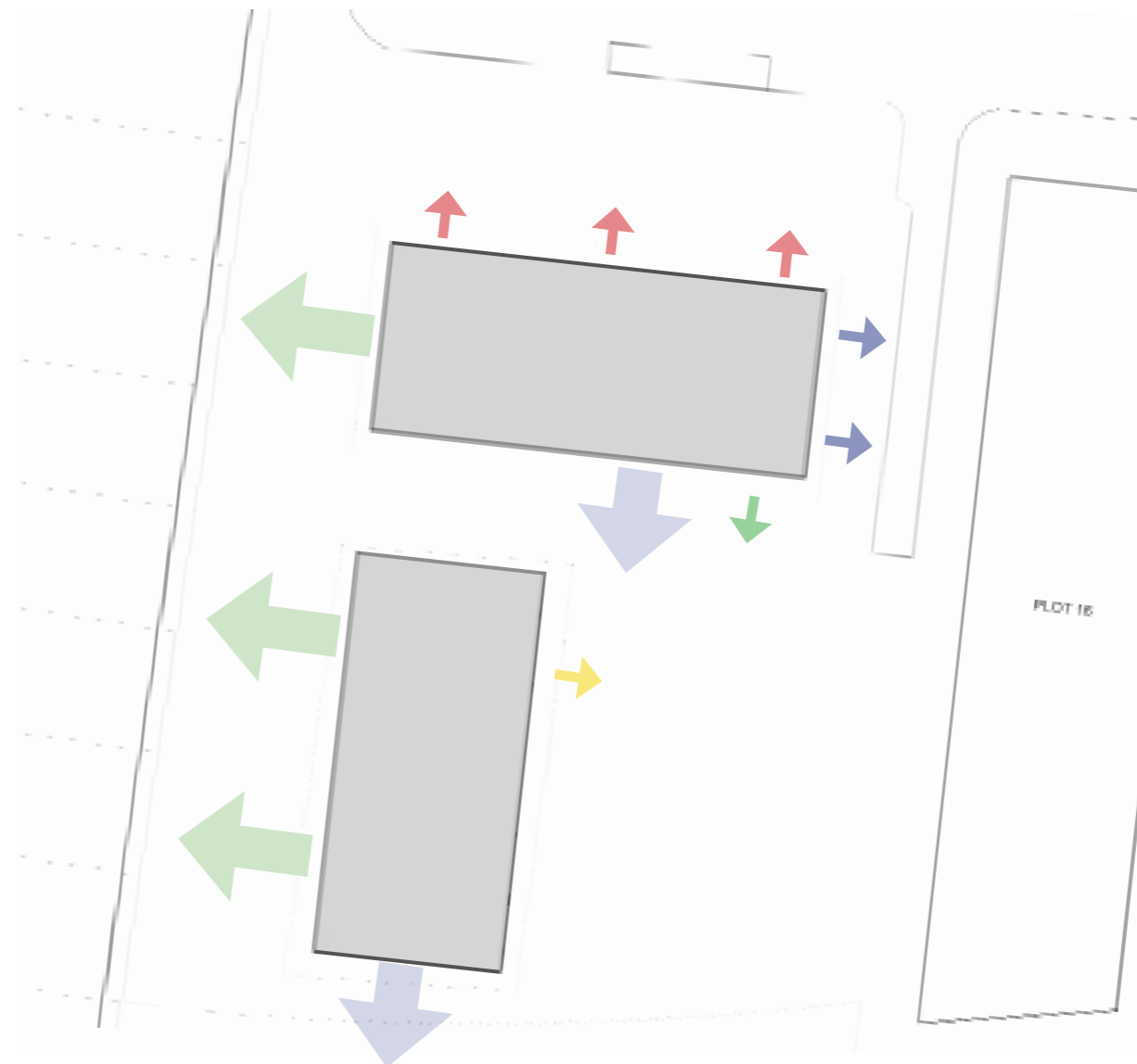
Upper Level Arrangement Strategy






Apartments are accommodated throughout the upper levels. Single-aspect north-facing units have been minimised with strategically placed core positions.



Views

The diagram below illustrates the viewing planes that have influenced the design of Plots 17 and 18.



- Long range views West to Canary Wharf and West London 
- Close View of adjacent landscaped square 
- Close views of pocket spaces 
- Close views of residential streets 
- Direct views of River Thames 



Ground Level Plan

For plot 17 and 18 landscape strategy please refer to chapter 08.

- mixed use (commercial)
- Concierge / Estates Management

Ground Level Plan

The proposed Plot 17 and 18 Ground level plan is illustrated adjacent.

A dual lobby arrangement with the main residential entrances for plot 17 + 18 positioned opposite one another, provide connectivity between the 2 buildings. The external zone between the buildings defines the entrances and gives opportunity for lighting / seating / surfaces that demarcate and announce the entrance points.

The lobby to plot 18 has frontage on to the square, giving presence and sense of ownership of the space to residents. The lobbies also benefit from glimpses of the square on approach and direct views from within out to the landscaped square.

In plot 17, mixed use units are positioned to animate the north west corner and provide active frontage to the 3 elevations facing the bus stop, plot 16 and the landscaped square. The mixed use unit in plot 18 benefits from extended views across the river and a strong connection with the clipper stop and pier.

Taxi and drop-off for residents, deliveries and refuse collection are controlled from side street outside of the landscaped square.

Mixed use units are positioned around the perimeter of plot 17 to provide active frontage to the street and the adjacent public space surrounding the plot. Residential entrances are accessed via the north and south of the plot and also houses the concierge for plot 17.

The active frontage to the Southern elevation is articulated with a considered landscaping strategy and adds interest to the public space adjacent to the plot.



Illustrative Courtyard Level Plan

Landscape to public realm indicative. For plot 17 and 18 landscape strategy please refer to chapter 08.

mixed use (commercial)

First Level Plan

The proposed Plot 17 and 18 First level plan is illustrated adjacent.

In order to free up maximum area on the ground level for active frontage, the cycle stores are situated on the first floor and accessible via a separate platform lift, or the stairs. A small amount of plant is also located at first floor level.



Illustrative Typical Upper Level Plan

Landscape to public realm indicative. For plot 17 and 18 landscape strategy please refer to chapter 08.

- 1 bed apartment
- 2 bed apartment
- 3 bed apartment

Typical Upper Level Plan

The proposed Plot 17 and 18 Typical Upper Level plan is illustrated adjacent.

The upper floors of both plot 17 and 18 have a mix of 1 bed, 2 bed and 3 bed apartments.

The Number of Single-aspect north-facing units is minimised. Private external amenity space is provided in the form of balconies from level 2 and above.

Summary Schedule

Plot 17

Residential GEA -8,407sqm

Ancillary (Plant & Storage) -333sqm

Mixed Use - Commercial GEA - 376sqm

Private Housing Mix:

1 Bed Apartments 44

2 Bed Apartments 33

3 Bed Apartments 11

Total 88

Plot 18

Residential GEA - 11,974sqm

Ancillary (Plant & Storage) -374sqm

Mixed Use - Commercial GEA - 218sqm

Private Housing Mix:

1 Bed Apartments 51

2 Bed Apartments 34

3 Bed Apartments 34

Total 119

2.0 Invited Limited Design Competition

In the interest of providing greater architectural variety and diversity to the development, it was determined as a Section 106 requirement, that an invited limited design competition be held for the facade concept design of a number of plots within Royal Wharf.

The tallest element of Plot 18 was selected as a competition plot, due to it being the tallest building on the site. Its prominent location in the southwest corner of the site, completes the river elevation composition. Due to its comparative scale, plot 18 bookends the development with Barrier Point. In the Minoco masterplan design code plot 18 is identified as a 'tall building'.

The revised masterplan detaches plot 18 from the Deanston Wharf Boundary and realigns plot 17 in order to strengthen the relationship between them and to improve the public space around which they are situated. Plot 18 remains the tallest building within the scheme.

Glenn Howells, as Design Champion for the development oversaw the competition process. Five architects were invited to submit designs for the competition based on their varied expertise and experience. Those invited architects were:

1. DP Architects (DP International)
2. Jonathan Hendry Architects
3. Adam Khan Architects
4. Guy Holloway Architects
5. John Smart Architects

John Smart Architects declined the invitation to submit an entry. The remaining 4 architects presented their schemes to the judging panel and were interviewed on 13th February 2015.

The brief required a collaborative approach with the competition entrants to design envelope ideas for the plots with the chassis and layout having been predetermined by GHA.

DP Architects's 'Seasons' design was selected as the winning scheme, based on its dynamic form, its distinctive look and the strong contrast it has to the other plots within Royal Wharf.

Following the competition the design was developed with GHA in a series of collaborative workshops that were held alongside reviews with the client and design team. The design that is now proposed has emerged as a positive result of this process.

The plots and landscape were initially introduced to the DRP on April 14th 2015 and have subsequently been developed based upon the feedback received from the panel members.

A follow up to this review was held with the DRP on the 12th May, where the revised proposals were positively received by the panel.



Tall Buildings Location Plan

Plot 18 - Masterplan Location

In June 2001, English Heritage and the Commission for Architecture and the Built Environment (CABE) published a consultation document *Guidance on Tall Buildings*. Tall buildings have to take into account many components of national and regional planning policy guidance as well as local policies. Government policy is to get the right developments in the right places. It states that tall buildings should be of the highest architectural quality and designed in full cognisance of their likely impact on their immediate surroundings and the wider environment.

Both CABE and English Heritage strongly endorse this approach, and recommend that local planning authorities should carry this out as part of their plan-making functions. Where there is a possibility of such proposals, the locations where tall buildings are, or are not appropriate should be

identified in local authority development plans or, in future, when preparing development plan documents. These should be drawn up through effective engagement with local communities and with proper regard to Government planning policies and matters such as the local environment.

Such an approach will ensure that tall buildings are properly planned as part of an exercise in place-making informed by a clear long-term vision, rather than in an ad hoc, reactive, piecemeal manner.

It is within this context that the proposals for taller buildings within The Royal Wharf masterplan have been considered and developed.

Situated at the South West corner of the site, plot 18 is identified as a landmark tall building that denotes the centre of the site, whilst enclosing and adding character to the new Linear Park.

The approved masterplan identifies plot 18 as '*A landmark tall building to mark the landing point of the Silvertown Pier Riverboat service. Additionally this building will complement (plot 10) by adding to and enhancing the (Royal Wharf) skyline along the River Thames.*'

To be acceptable, any new tall building should be in an appropriate location, should be of first-class design quality in its own right and should enhance the qualities of its immediate location and setting. It is for these reasons that Plot 18 was selected as a design competition plot, to ensure high quality design and architectural distinctiveness.

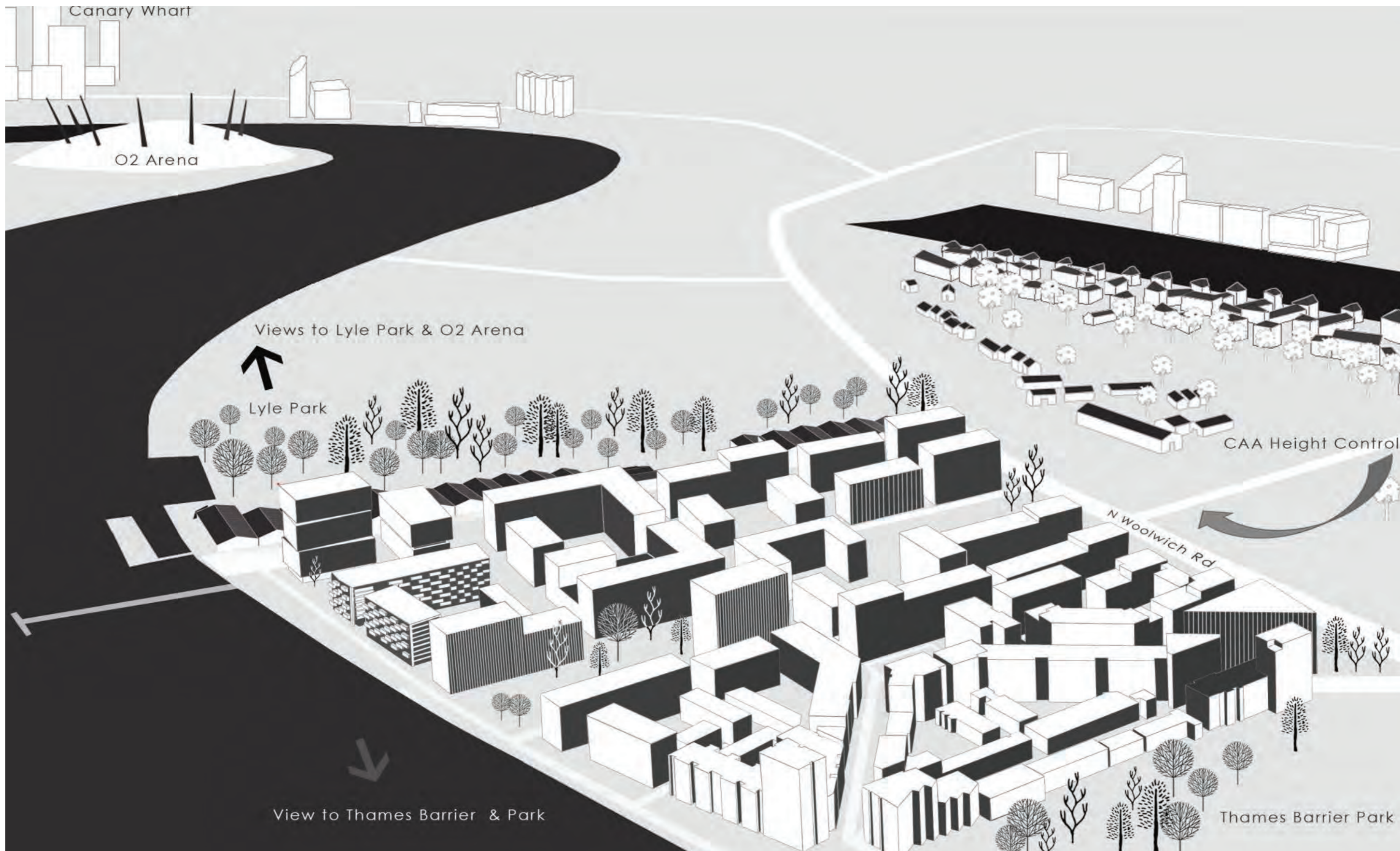




Background

In late January 2015 DPA participated in a design competition for the final waterfront Plot, Plot 18 of the Royal Wharf master plan located along the river Thames in London's Royal Wharf. The facade concept design scope was awarded to DPA in Feb 2015 whereupon collaboration on Plot 18's design development commenced.

The original competition focused primarily on presenting Plot 18 as a single landmark building. However, due to the proximity of Plot 17 to 18, it was eventually decided that the two be read as a single integrated plot with strong interrelationship between both buildings and the landscaped space around which they sit. Plot 17 and 18 are thus expressed as a pair with a shared façade language. The Design Review Panel also supported this view.





Plot 18 Location and Significance

Plots 17 and 18 are located in the third and final phase of the overall Royal Wharf masterplan and comprise of two towers. Plot 17 is 12 storeys over ground and Plot 18 is 18 storeys over ground. Ground level is predominantly double height accommodating mixed use (commercial) and ancillary spaces associated with the residential uses.

Due to civil aviation height controls that reduce progressively towards the southwest, Plot 18's beneficial south-westernmost location naturally endows it with status as the single tallest building within the entire Royal Wharf master plan with an maximum height parameter building height of 65m AOD.

Plot 18 is also significant because it importantly anchors the southwestern corner and marks the beginning of the master plan's Phase 3. With the addition of Plot 17 to its fold, Plot 18's presence is further reinforced and enhanced. Plot 18's particular design approach in terms of architectural massing creates an interesting dialogue of corresponding 'boxes' between plots which stack up in perfect alignment to each other.





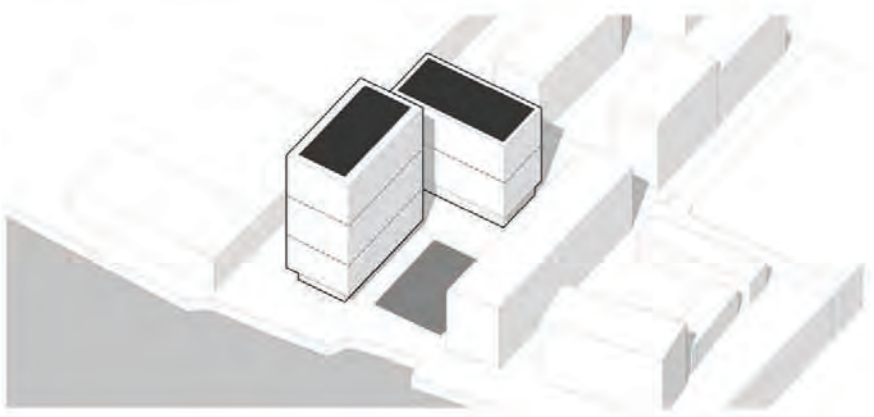
Design Approach

Being the last of the waterfront buildings along the Thames River available for design development, the central challenge was to create an architectural entity that would remain sympathetic to the adjacent buildings yet differentiate itself as an exciting landmark which would rise above all others to form a southwest 'cornerstone' for all Phase 3 developments to come. The design approach is heavily driven by the building's immediate physical adjacencies and seeks to create a harmonious, contextual relationship with the rest of the master plan while expressing a single, bold statement along the Thames waterfront.

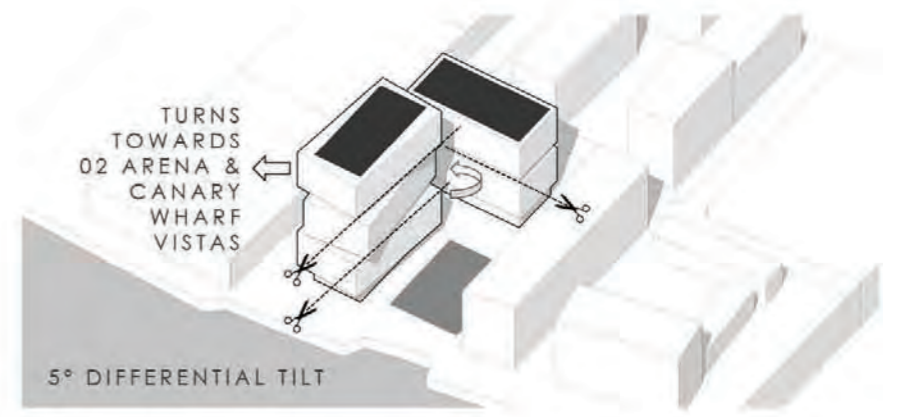
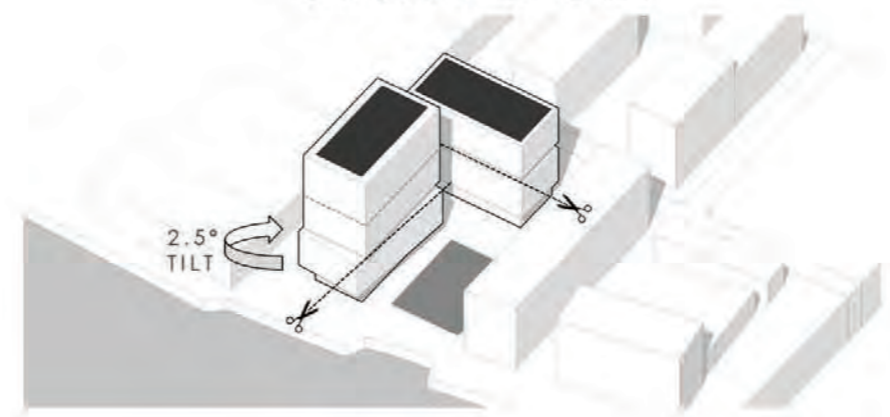
left: site massing model



ROYAL WHARF OXLEY WHARF



URBAN STORY





Relationship to Surroundings

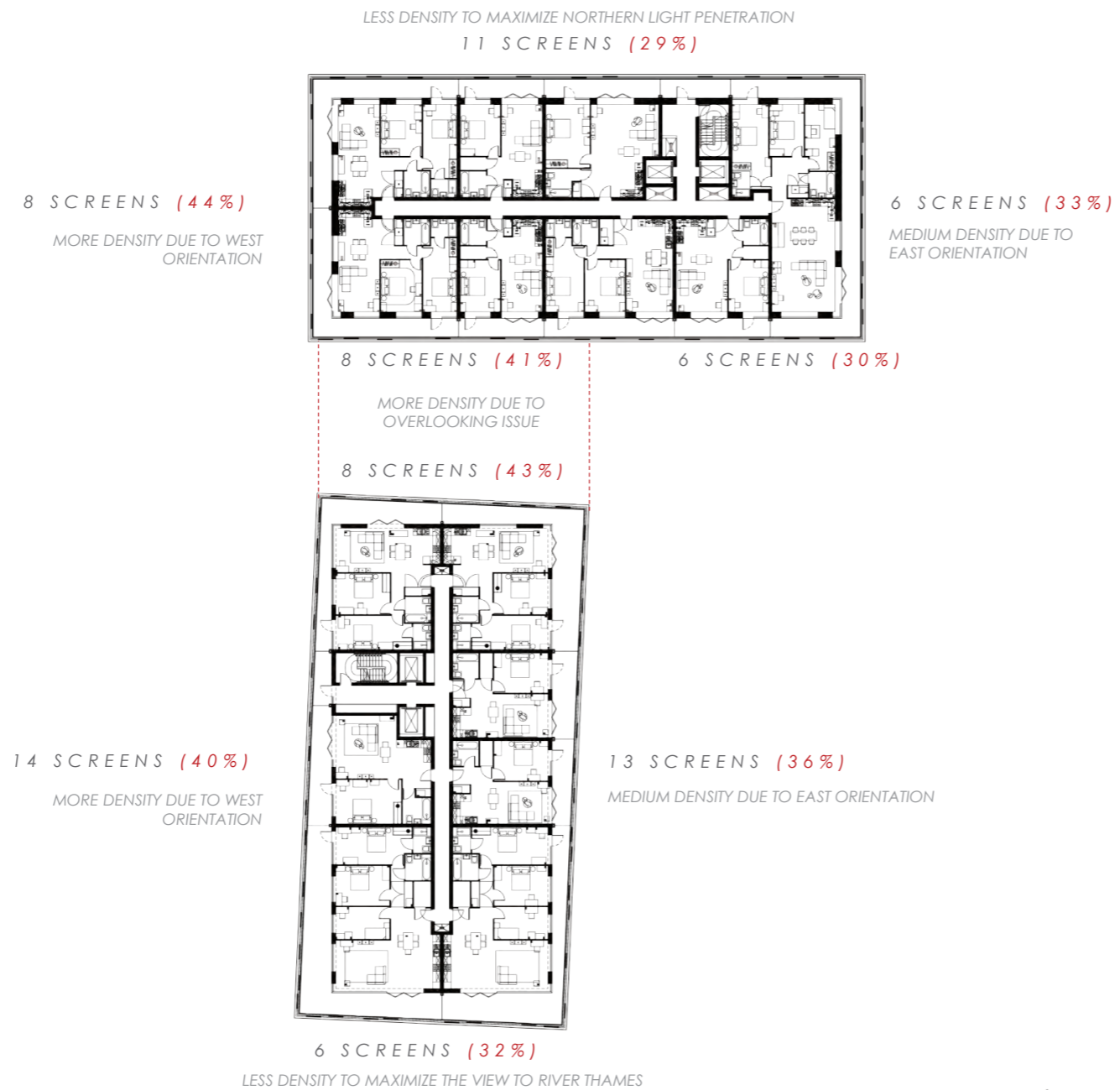
Key forces shaping the design are orientation to Canary Wharf views, proximity of Plot 18 to Plot 17, the green landscaped space immediately to the east, the future new clipper pier on the river bank to the south, and the overall waterfront building heights within the Royal Wharf master plan.

Three Subtle Layers

To create a subtle relationship with the other waterfront buildings, plot 18's contiguous apartment block is visually divided into three separate 'floating boxes'. Each 'box' tier corresponds to the three categories of building heights as viewed from the Thames and within the overall Royal Wharf master plan. The lowest box tier aligns exactly with Plot 17's lower tier and generally relates to the other low-rise blocks (ranging from 7-8 storeys) within the master plan. Plot 18's middle tier aligns exactly with Plot 17's upper tier and also generally draws reference to the rest of the mid-rise buildings (ranging from 13-14 storeys). Plot 18's uppermost 'box' floats above all other roofs in the master plan and differentiates Plot 18 from the family of waterfront buildings yet still drawing a respectful relationship to the neighbouring blocks.

above left: 3 strata of building scale
along the riverside elevation below
left: massing diagram showing the
division and movement of the mass





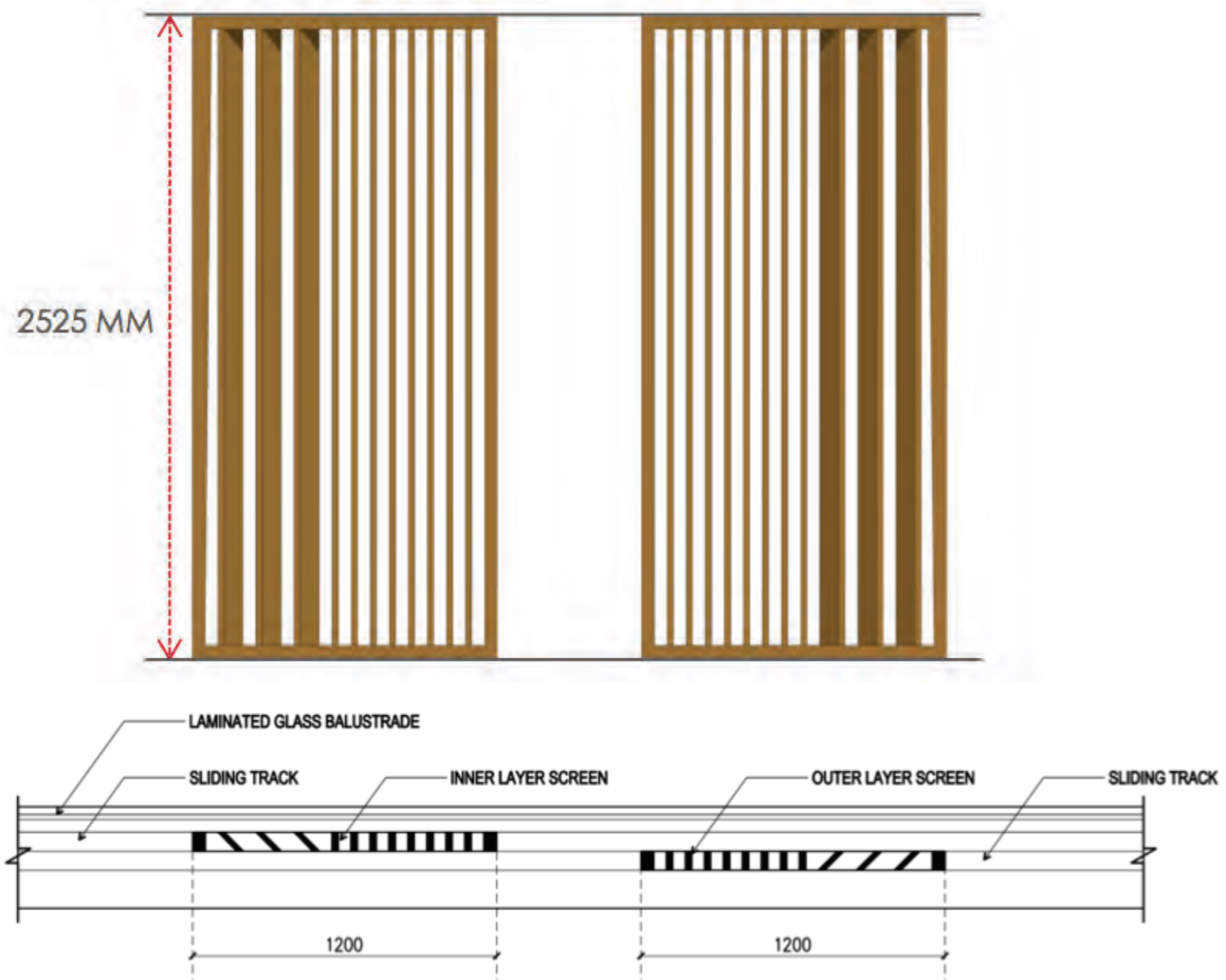
left: view of the southern elevation
above right: diagram showing the
screen density strategy



Living Facade - Climatic and Functional Response

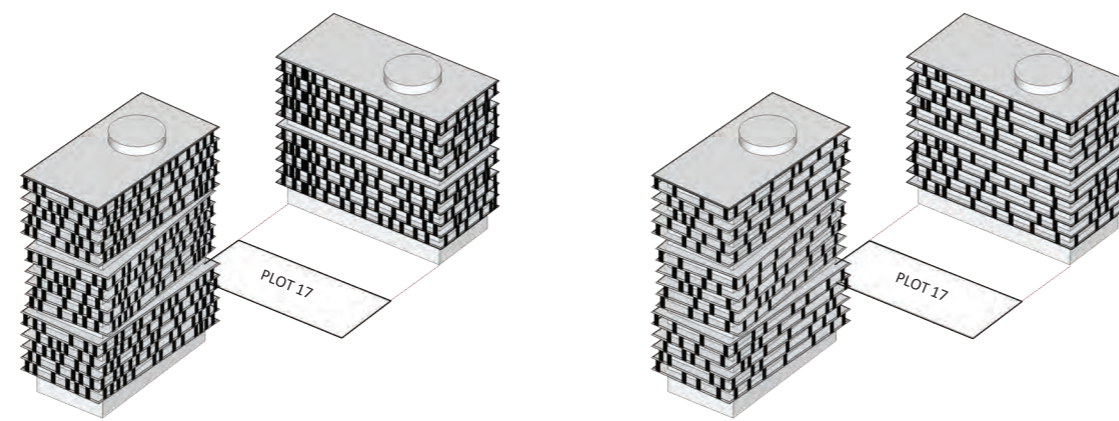
The facade is a lively, ever-changing, dynamic element that actively reflects the movements of its occupants within. The outermost architectural skin consists of movable aluminium screens which offer protection from low angle sun, address overlooking issues across plots and provide a degree of shelter against the stronger winter winds. Whilst each big 'box tier' is a legible unit in itself, subtle variations in the density of facade screening occurs within each 'box' in response to sun orientation, proximity to adjacent buildings and screen density is lightest when framing views out to the Thames River on the south.





Balcony Screens

The screens are manually moveable, top-hung on 2 sets of steel rails to create a layered effect. This also allows screens to be slid back over one other to allow a more open aspect from apartments for a flexible configuration, controlled by the individual residents.



left: close-up view of plot 18 screens
right: moveable screens indicative detail

MAXIMUM SCREEN ENCLOSURE

MINIMUM SCREEN ENCLOSURE



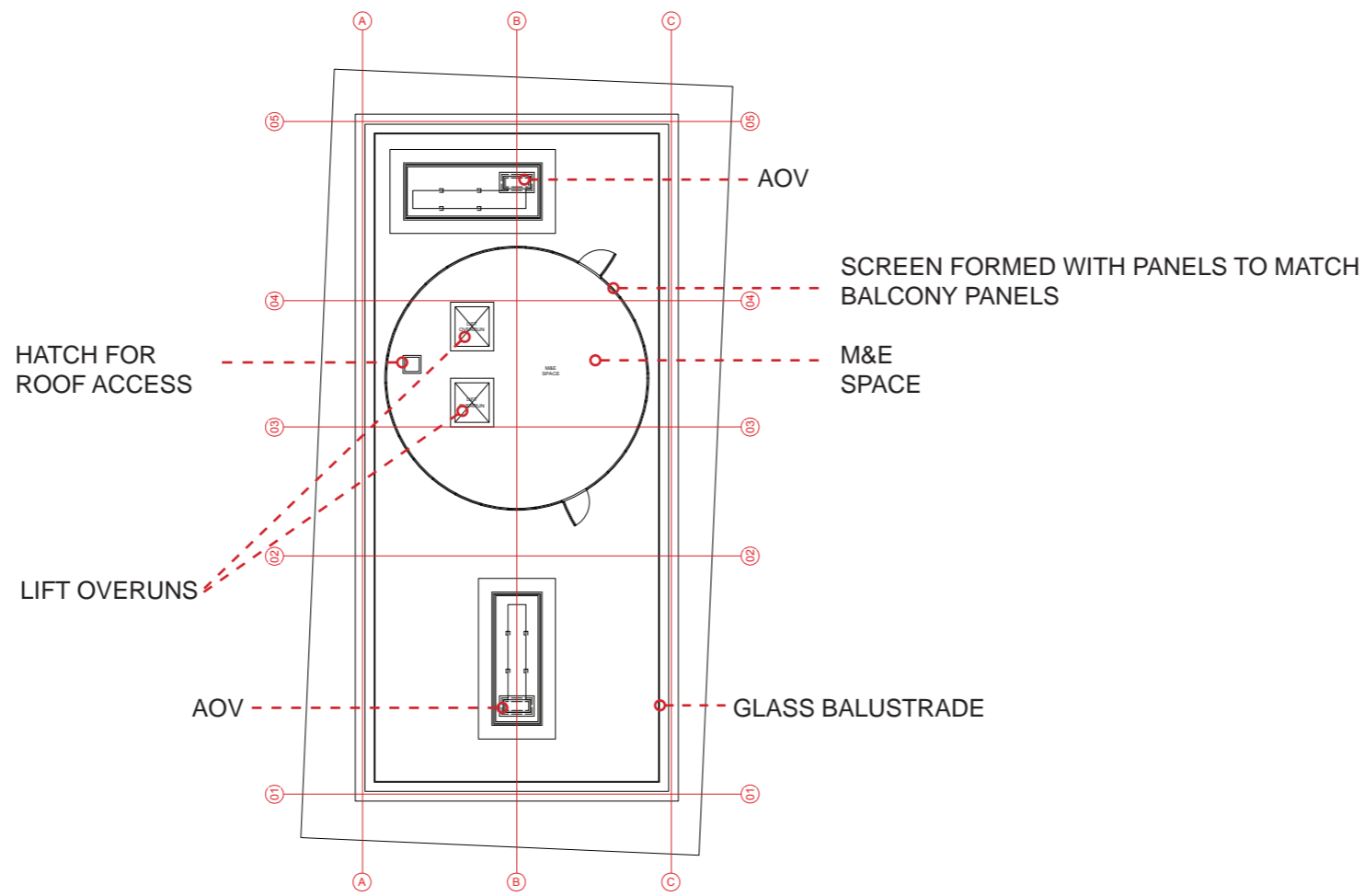
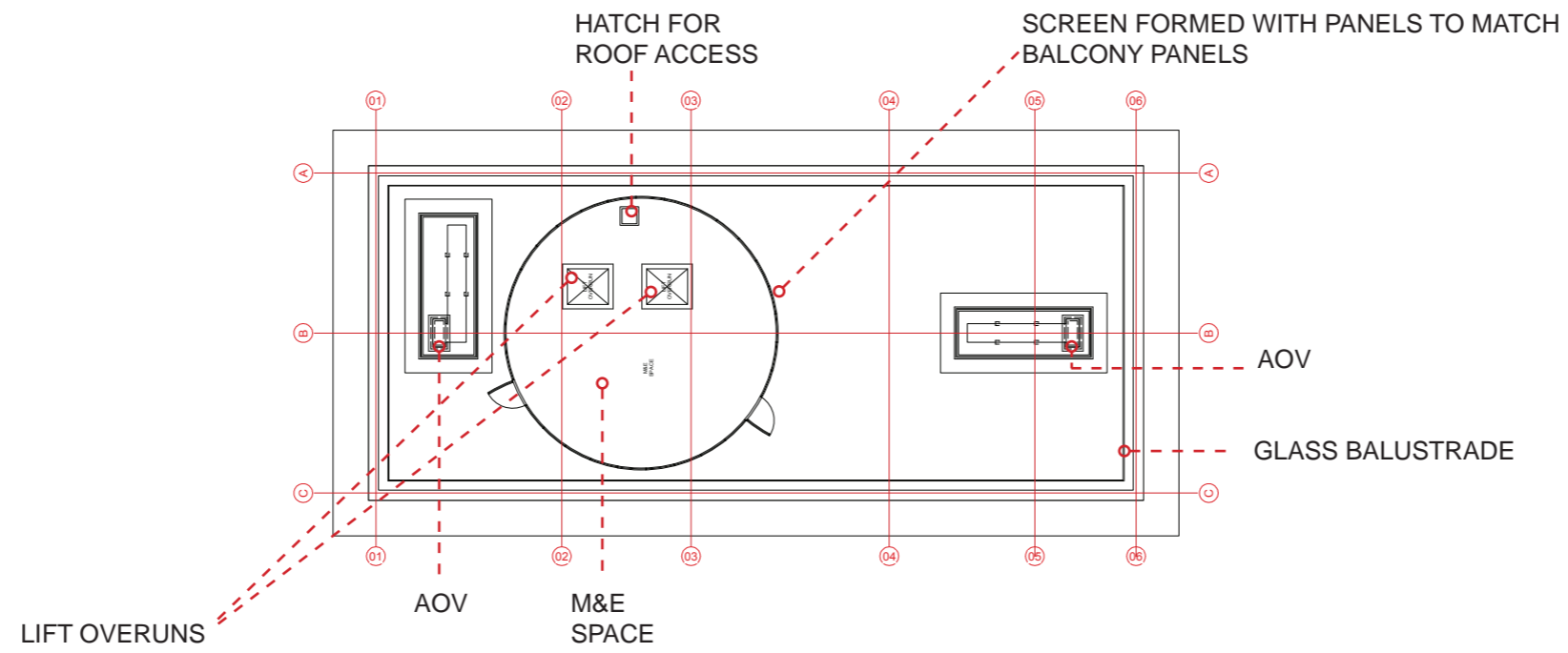


left: massing model illustrating 3 tiers
above: plot 18 southern elevation

One Twist - a Single 'Big' Gesture

The top and bottom blocks are gently rotated on a central axis, as if turning to look upon views of Canary Wharf. This rotation creates more river views for the east-facing units further behind and away from the water's edge. It also 'opens' up ground level views towards the Thames when standing within the square. The middle tier (8th to 13th storey) is then rotated in the opposite direction to engage the new pier as it leans towards the green landscaped square, overlooking the Thames barrier and park.

The subtle tectonic shift of the three building boxes unifies the housing block as a single twisting urban entity to be perceived in whole. It transcends the concept of fine grained residential-scale facades which typically express individual units by way of balcony extrusions, windows, and instead becomes a 'big object' expressing a single idea in movement. The varying quality of light captured on the façades due to its changing orientation creates visual interest. It ultimately remains in keeping with the Royal Wharf's family of rectilinear forms and draws invisible contextual lines to the rooftops of neighbouring low and mid-rise buildings yet breaks into a striking silhouette with its statement twist.



Roof Plan

The building services at roof level are generally consolidated and housed within a screened circular enclosure. The circular geometry of this enclosure reinforces Plot 18's twisting form - from an aerial perspective it suggests a notional 'axis' upon which the building rotation is generated. To avoid extending the stairwell enclosure beyond the roof finished floor level, a roof hatch is provided for maintenance access. A glass balustrade to provide fall protection for maintenance operatives accessing the roof is offset inward and away from the building's outmost perimeter edge to minimise visual impact from the ground.

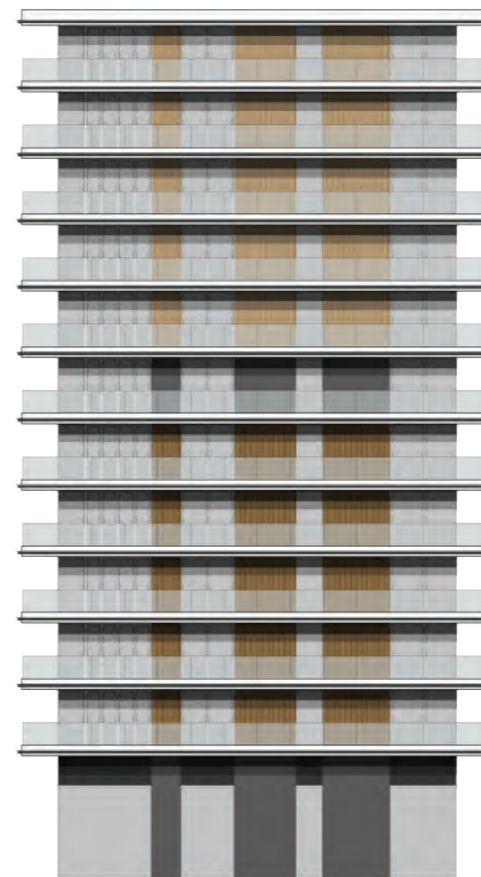
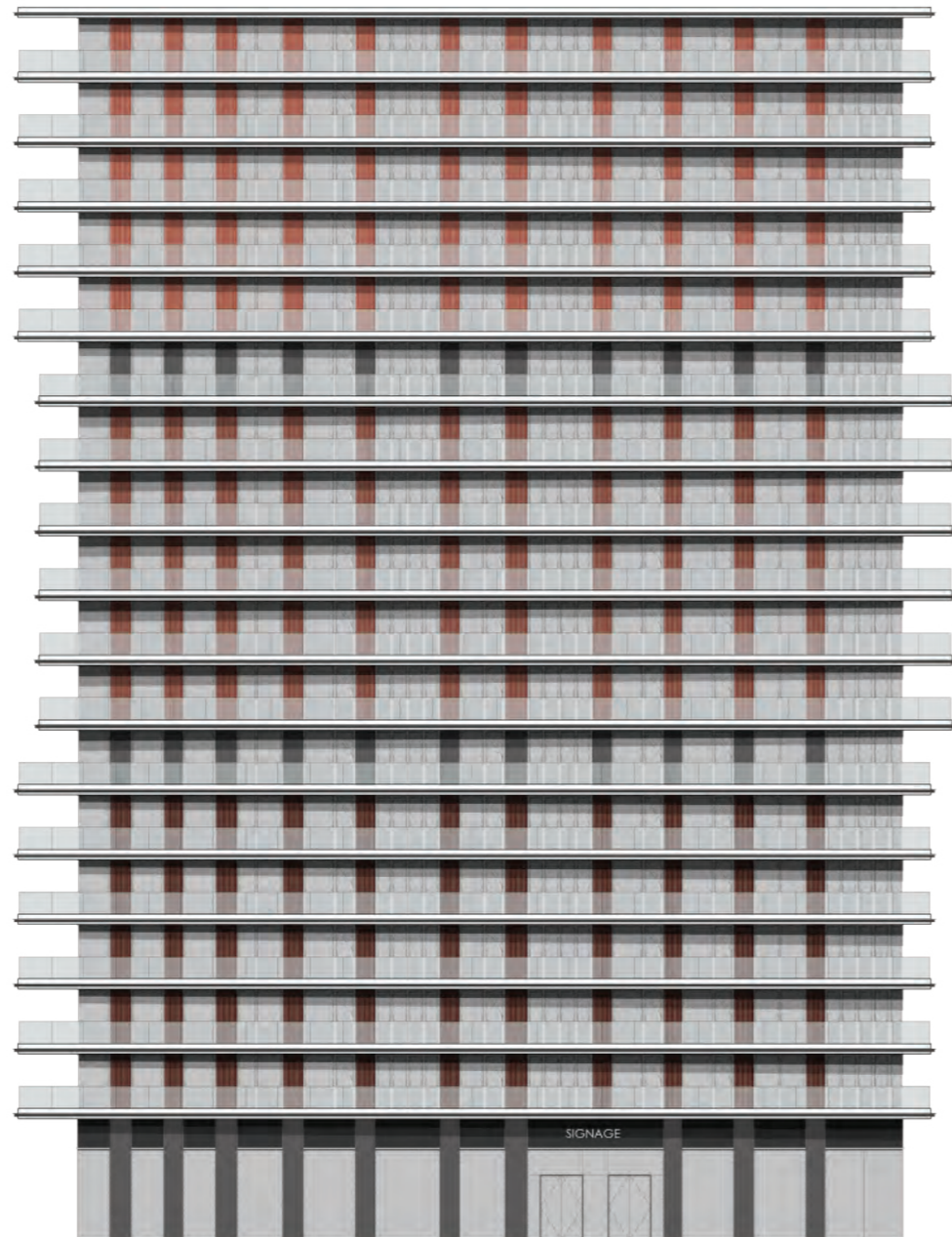
AOV fan units are locally screened with horizontal timber slats to minimise visual impact from a distance.

From the ground to roof level, all aspects of the design are crafted to reinforce this simple yet bold twist which differentiates Plot 17 and 18 from the rest of the waterfront buildings.





left: view from the plot 18 balcony looking east
right: elevation detail and section of screened facade



INTERNAL FAÇADE COLOUR GRADATION



Box Tiers - Colour Differentiation and Visual Depth

With both Plot 17 and Plot 18 residential blocks expressed as big stacked 'box-tiers' in rotation, an added layer of differentiation to each box is then introduced by way of colour variation. Each box tier's inner wall layer takes on a slightly different shade of the same hue. As such, three shades of burgundy are applied to Plot 18, one shade to each tier with the lighter shades occurring towards the top and darkest shade below. Transition floors between tiers possess grey walls and no façade screens which emphasize the break between tiers. In plot 17 the same approach to colour differentiation is applied, however a reverse hue of plot 18 is employed to create similar yet distinct characteristics between the two blocks.







Rainwater Management

Rainwater will be directed from the flat roofs of plot 17 and 18 via internal downpipes accessed from common areas. Balconies will be drained via external downpipes that will be located at partition and intermediate points. These will be coloured similar to the inner facade panels to ensure that the visual impact is minimised as much as possible.

Landscape Vision

The Landscape design for around Plots 13, 14, 17 & 18 brings forward the design for a public square as well as the design for several streets within the phase 3 masterplan.

This area sits within the Royal Wharf development, these areas form a key part of the development and are intended to integrate into previously consented plots and streets as well as anticipating future development to the west of the site.

The Role of Landscape For Royal Wharf

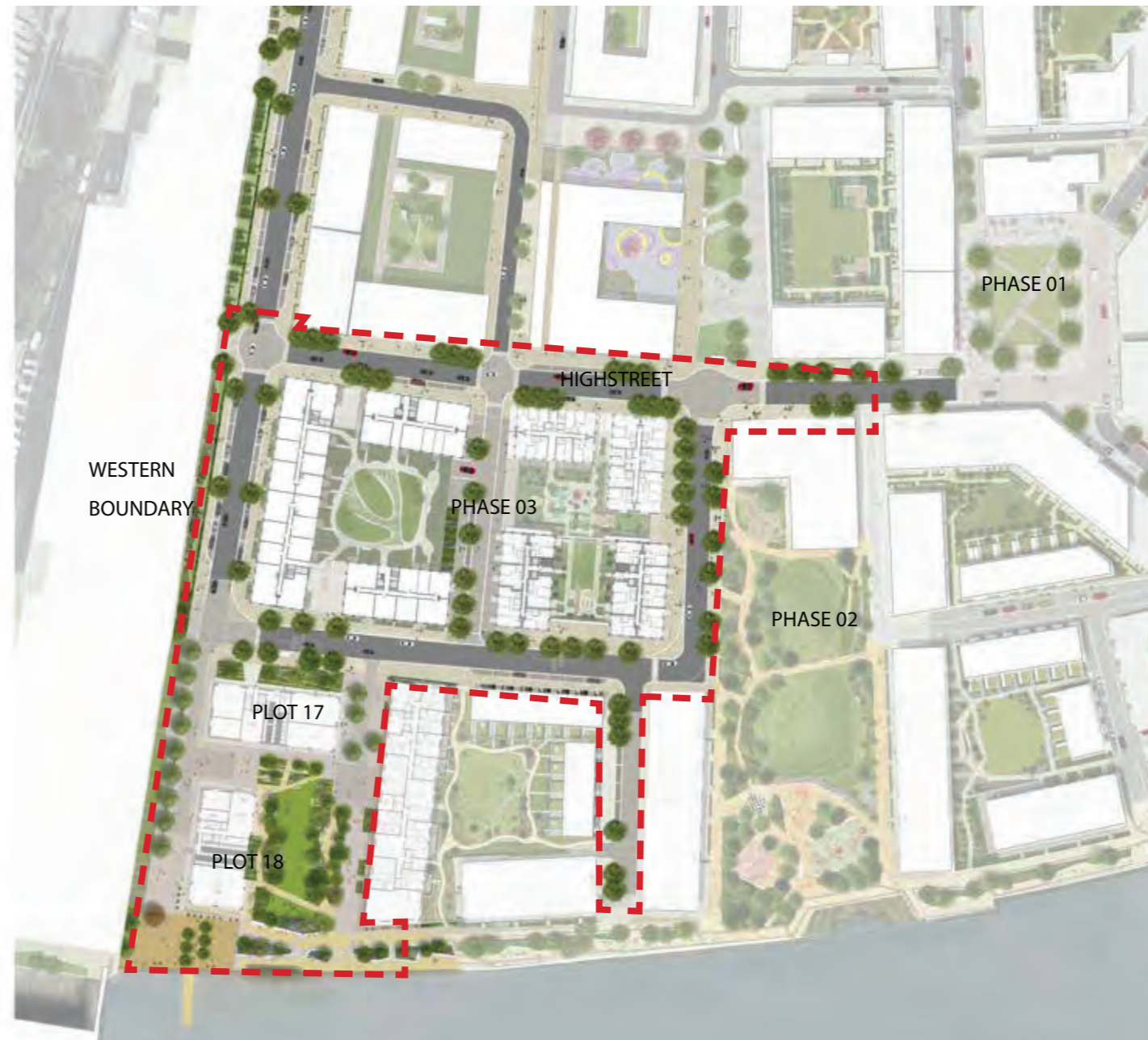
Landscape and public realm forms a key component of the Royal Wharf development. The aim of the master plan is to create an attractive, vibrant new neighbourhood in London, which will support a new population with a focus on family housing. This will be reinforced by the design of the public realm.

The structure of the public realm has been arranged around establishing a clear hierarchy of streetscapes and individual spaces, located across the master plan and include the Market Square and Royal Wharf Park.

The courtyards contribute to the amenity of the site, providing local spaces for the residents in the buildings around each garden court.

So far, reserved matters submissions have been approved for Phase 1 and much of Phase 2, bringing forward the delivery of 12 Plots and significant areas of public realm, including the market square and park along with residential courtyard gardens.

The design developed for Plots 17 and 18 and surrounding streetscape respond to the proposals being developed as part of the earlier phases, aspiring to create attractive spaces which integrate the masterplan as well as offering individual spatial diversity and distinct character.





- Family of gardens
- Community kitchen gardens
- Linear gardens along the site boundary
- Gardens with a more varied character to respond to the particulars of the plot shape/ size
- ⋯ Public spaces each with different characters, identities and functions



Gordon Square



Argyle Square



Brunswick Square



Mecklenburgh Square

The Garden Courtyards at Royal Wharf

The gardens at Royal Wharf will create a rich tapestry of spaces throughout the site. The site wide concept for the development is as a modern interpretation of the traditional residential areas in London, creating a neighbourhood, which responds to housing types, streets and spaces that have a familiar palette, hierarchy and function.

The designs have referenced the garden squares of London where there is a tradition of creating open spaces both public, and private ‘key holder’ gardens, for example, as Mecklenburgh Square Garden. These squares, although slightly different in layout and content have a familiar, simple style which people recognise and feel comfortable with. They often utilise similar elements; tree planting, shrub and herbaceous planting, lawns, seating, and focal points, generally fountains or statues or sometimes floral displays. The aspiration is that a ‘family’ of gardens is created, each one individually designed but with an over-arching identity that will help to reinforce Royal Wharf as a distinctive neighborhood.

The design beside plots 17 and 18 takes its design cue from the garden squares within the plots as it is being designed to be a local amenity, prioritising the use for residents- complementing the offer in Lyle Park to the west and the Royal Wharf Park to the east.

Design Review Process

The landscape for Plots 17 and 18 and surrounding streetscape were presented to the Design Review Panel (DRP) alongside the Architectural design. The following comments were given and have been addressed below, and in the following document:

We suggest the useful, useable space should be maximised and in particular that there are larger, more useful areas of grass on which to play and sit.

The design was revised to reorganise the vehicle access and to include a generous area of lawn.

We think that the concept would benefit from simplification, limiting and clearly defining the areas where servicing and delivery vehicles and taxis etc.

The design was revised prior to the final DRP session to respond to a revised, simplified vehicle access and servicing strategy. The final design of the space in front of Plots 17 and 18 will also take on board the verbal feedback received at the last DRP session to restrict vehicle access around the south of the space to emergency vehicles only, and space to be provided for refuse vehicles to turn around to the east and west of Plot 17.

The potential to further reduce emergency vehicle access toward the river edge should be explored.

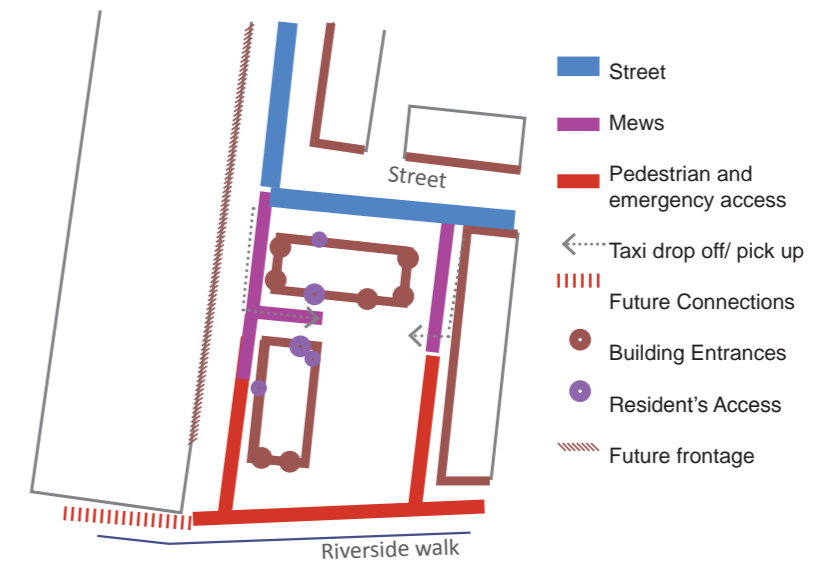
Emergency access to the Riverside Walk is still required, and connects to the fire route along neighbouring plots, but the design has been developed to create a space for refuse vehicles to turn around to the south east and south west of Plot 17 this means that access to the Riverside will only be in the event of an emergency or maintenance to the River Wall.

There seems to be the opportunity for further tree planting around the large turning head in the west of the plan.

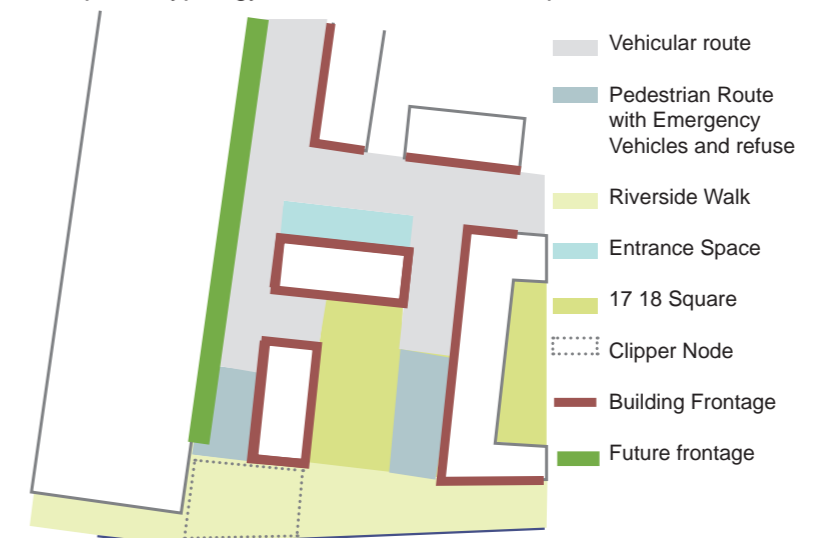
Additional tree planting has been included in the space, and positioned so that there is a clear difference with the less formal tree positions along the Riverside Walk. This is to further distinguish the space at the southern end of Plot 18 as a nodal point, differing from the Riverside Walk.

The endmost ground floor unit to plot 18 is indicated as a cafe. Given the exposed location there may be an issue with wind and we suggest designing an edge to the adjacent space with integrated seating, that provides necessary protection from the wind, but also allows customers to sit in front during sunny weather

1: Access Around Plots 17&18 Revised Proposal



2: Spatial Typology/ Character Revised Proposal



Plot 17 + 18

The areas around the buildings of Plot 17 and 18 provides 6171m² of public realm this including a public garden space and flexible areas. Within this also 659m² of play space will be provided which will add to and compliment the site wide provision.

The design has been developed to create an attractive setting and an amenity for the residents in the surrounding buildings and wider neighbourhood. The space has been designed to encourage dwell time.

The form reflects the spaces developed along the waterfront while still offering a distinct character. The space has been designed to integrate into the site wide palette of materials and planting while marking a key entrance to the development from the Thames Clipper.

Spaces:

The garden space to the south of 17 and 18 is proposed to offer play and amenity opportunities for all ages while also offering informal for relaxation and enjoyment. To the north of 17 the arrival space will allow an attractive setting to the building. Along the river, a space will open up as a node along the riverside walk, complementing the spaces being created to the east, within the masterplan.

Access and circulation:

the design will ensure that the area around Plots 17 and 18 are knitted into the wider Royal Wharf masterplan; the riverside walk will connect along the south, the street access along the western site boundary will extend southwards to the river (although vehicles will be limited). Routes will be

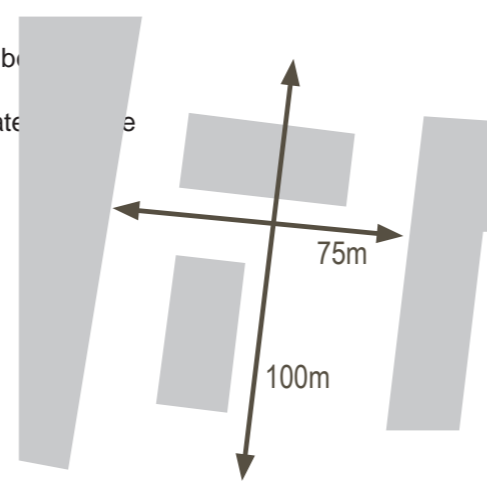
created around the garden and pathway through the garden will allow for perambulation and permeability.

Planting:

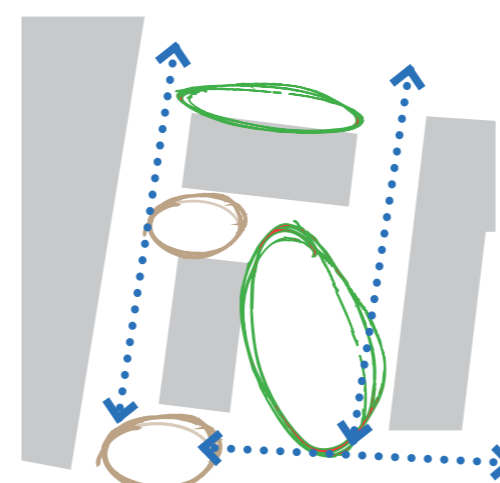
Planting will be used to emphasise the character and use of the spaces and routes. Street trees will be used to define the routes, the riverside planting will extend from the east along the river front and the square will use a mixture of shrub and herbaceous planting to create a sense of enclosure, shelter and to identify it as a garden. In contrast to the streets the tree planting will be a mixed palette of single and multi stem trees, in groups rather than lines.



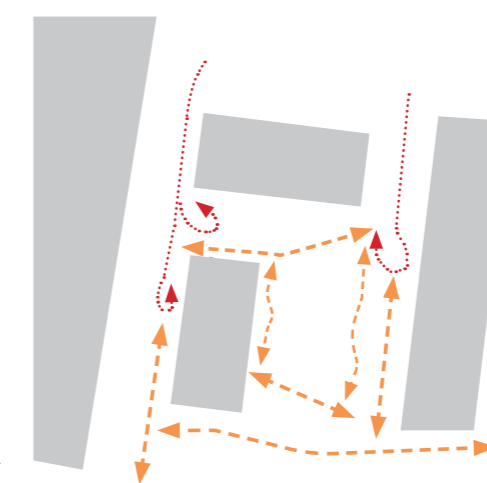
has been
incorporated
into the
design.



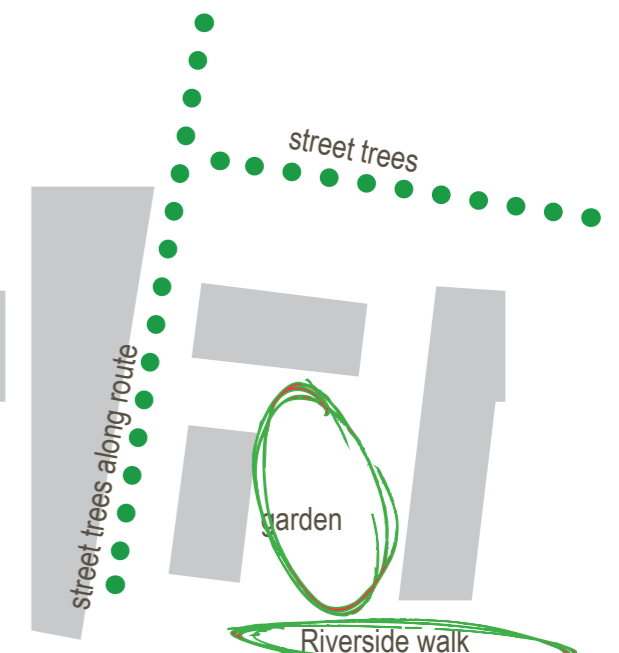
Dimension



Spaces



Access & Circulation



Planting



Illustrative masterplan

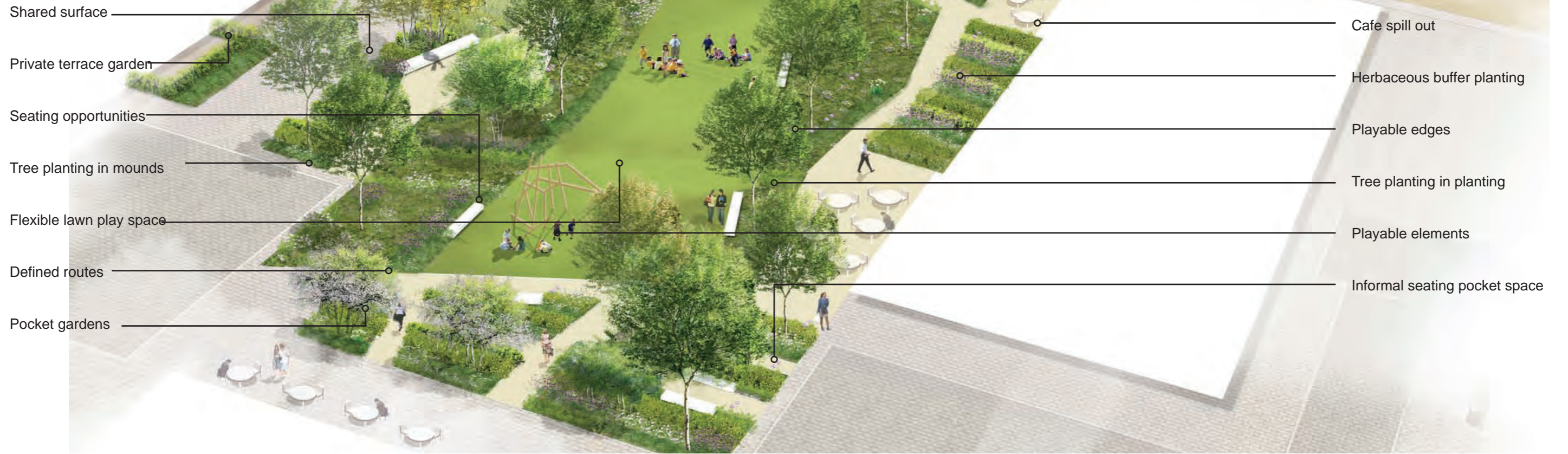
Plot 17 & 18 Masterplan

1. Playable lawn space
2. Taxi drop off/vehicle turning point
3. Street tree planting
4. Shrub and herbaceous planting beds with tree planting
5. Seating opportunities
6. Shared space
7. Riverside walk with areas of planting, seating and space for perambulation and play
8. Avenue tree planting
9. Feature tree planting
10. Cafe spill out
11. Tidal terrace
12. Future Thames Clipper Pier



Attractive shrub and herbaceous planting is punctuated by evergreen structure planting. Multi stem tree planting introduces a variation in height.

Axonometric of Plot 17/18 Garden



Precedent and character images

Planting Plot 17 & Plot 18 Garden - Planting

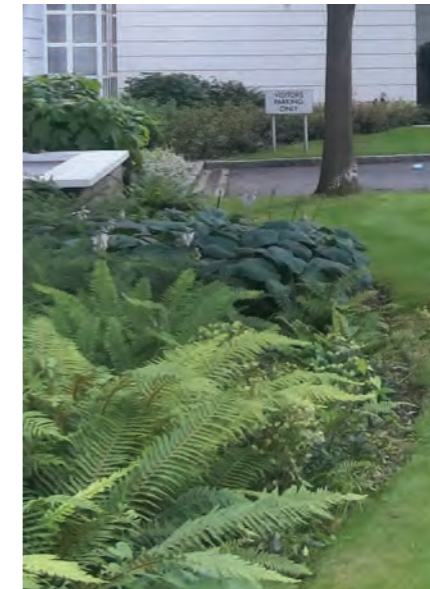
The planting within the garden will be designed to enhance the sense of a garden, whilst providing seasonal interest and variation and a structure to mitigate against the wind blowing from the south west. A base layer of evergreen planting mixes will be supplemented by seasonal plants and bulbs. Areas of planting will be separated by hedges which lead the eye through the planting and provide additional structure.

Planting species will include:

Shrubs:	Narcissus sp (daffodil)
Buxus sempervirens	Tulipa sp
Cotinus coggygria	
Lonicera nitida	Herbaceous:
Ligustrum ovalifolium	Bergenia sp
Lavandular sp.	Crocsmia lucifer
Photinia sp	Geranium sp.
Viburnum opulus	Helleborus sp.
Rosa Kent	Luzula sp
	Perovskia sp.
Bulbs:	Polystichum aculeatum
Allium	Tiarella cordifolia
Crocus	Vinca sp



Hedge planting giving definition to the areas of planting



Evergreen planting including polystichum sculeatum and luzula



Bulb planting including Tulips providing seasonal colour



Planting giving a more formal character and evergreen structure



Evergreen planting with seasonal flowers such as lavender



Feature planting including Roses



Betula pendula



Magnolia stellata



Cercidiphyllum japonicum



Salix alba 'Tristis'

The trees will be selected to create a variety of forms, colour and seasonal interest. They will be scattered through the planted areas in the garden to create a distinct contrast to the linear planting along streets.

The species of trees will be mixed. Multistem trees will have a lower habitat, creating a comfortable scale to the space they create under their canopies. The single stem trees will have the opportunity to grow to a larger size making use of the space available and benefitting from being in open ground as opposed to on a basement or podium roof slab.



Amelanchier lamarckii



Cornus controversa



Alnus cordata

Riverside Walk

The design of the section of the Riverside Walk that is being brought forward with this submission, has been developed to match the character of the Riverside Walk to the east in earlier phases.

The design of the routes, edges and the planters will complement the language of the landscape to ensure that the walk has a constant identity that is legible along its length.

Likewise, the planting design along the Riverside Walk will create variation along the length through the use of different palettes of plant colours and forms, integrating into wider proposals.



Alnus glutinosa



Escallonia macrantha



Ilex aquifolium



Crocosmia 'Lucifer'



Pennisetum



Penstemon 'Andenken an Friedrich Hahn'



Escallonia

Streetscapes

The streetscape within phase three provides an important link between the phase 1 and 2 proposals and allows for the potential future development to the west.

The masterplan identified a hierarchy of streets to ensure that a family of streets would be created, which will enhance the legibility of the site, and promote the use of a consistent palette of materials and detailing.

The streetscape consists of the following:

High Street: A central street creating a clear hierarchy and connection through the site.

Secondary Streets : Supporting movement and access

Lanes : Small lanes or alleys between blocks

Mews: Mews character streets between blocks



- High Street
- Street
- Lanes
- Mews
- Pedestrian and emergency access
with refuse access (in some areas)
- Pedestrian
- Future connections

TYOLOGY OF STREET 1. HIGH STREET



2. SECONDARY STREETS



3. LANES



4. MEWS



Streetscapes Masterplan

The High Street: The design of the High Street will continue the language of the street that has been established in earlier phases of Royal Wharf to ensure that there is a seamless continuation along its length. Street trees will run along its length creating an avenue through the centre of the site and a focal point to the route. Along its length, benches, cycle parking and some car parking and servicing bays will be provided. A change of surface at the junctions will encourage a slower vehicle speed and encourage the prioritisation of pedestrians.

Secondary Streets: The secondary streets will connect to the High Street. The route around the south of the plots 13 and 14 has been designed to facilitate bus access, so that there is a connection between the bus route and the clipper. Street trees will break up the surface carparking that will provide space for wheelchair users and visitors. Alongside the park, tree planting will ensure a green connection with the parkland planting.

The Lanes: these routes extend southwards from plots 13 and 14, and have been designed to create spaces which promote vehicle access.

Mews: Between plots 13 and 14, the mews will be enlivened through the facade design and inclusion of planting, to create an attractive edge to the route. The use of seats and carriage width will create an attractive route that will ensure that the site is permeable for users.



Master Plan

Green and Brown Roofs

The green and brown roof strategy is an important part of the environmental mitigation for the development. As such, there are opportunities to incorporate a range of living roofs such as extensive and intensive green roofs, balconies and private roof terraces across the site. These locations were summarised on Parameter Plan 09 for the site wide master plan. The existing site has a strong, post industrial, brownfield character which has informed the recommendation in the Environmental Impact Assessment carried out as part of the outline application, for there to be a split between green and brown roofs of 20% and 80% respectively.

Plots 17 and 18 will have brown roofs which will offer a number of environmental benefits:

- Reduced rainwater runoff
- Enhanced roof insulation properties
- Reduction in urban heat island effect
- Enhances roof lifespan by protecting underlying waterproofing system

These brown roofs will seek to utilise recycled material and spoil. If practicable this material will come from site, however the contaminated nature of the site means that this will be unlikely. Local wildlife will be allowed to colonise the roof over a period of time with minimal human intervention.

Biodiversity and Sustainability

Measures to address issues of sustainability are embedded within the 3 concept for the design of the landscape master plan and have been carried through to the design.

These principles include:

- Considering from the outset of the design process how the landscape will be managed and maintained in the long term.
- Creating places that are inherently flexible taking account of the future impacts of climate change, and adaptation measures that may need to be retrofitted.
- Considering the implementation of water management and recycling schemes.

At a detail level this will include:

Materials specification

- Seek to select materials from sustainable sources where fit for their purpose.
- Aim to use locally sourced materials where practicable.
- Examine the potential for retaining and reusing site materials, particularly on the brown roofs across the site.
- Seek to maximise the design life of projects by optimizing the use of durable materials that last longer, reducing the volume of water produced

over the developments' life time.

- Consider the use of prefabrication and standardization techniques to minimise waste.
- Examine the use of recycled materials.
- Specify Forest Stewardship Council (FSC) certified timber or timber certified under the Pan European Forest Certification Scheme.
- Seek to install energy efficient components including lighting.

Water Conservation

- Seek to install efficient irrigation.
- Seek to install water efficient products/ features.

Biodiversity

The proximity of the site to London City Airport has given rise to a planning condition associated to the scheme which requests that nesting birds are discouraged and that planting doesn't encourage food sources for birds.

- Contribute to a site wide network of green spaces which connect to existing green spaces in the surrounding areas, forming a connection of potential wildlife habitats and green corridors.
- Promote an environment where quality of life and quality of environment are integral to the development.
- Use planting which is attractive, and responsive to the changing seasons.

Play

Locations for play were indicated on the Parameter Plan 09 as part of the outline submission. This parameter plan identified areas that would be provided based on the benchmark scheme and the provision of private, affordable and social rented properties it proposed. These numbers were used to calculate the areas that would be required based on 10m² per child in accordance with the GLA's supplementary planning guidance on play.

As part of the master plan, the principal was established that doorstep play (for 0-5 year olds) would be provided within the courtyard gardens, play for 5-11 year olds would be provided in courtyards and in the public realm, and 11+ play provision would be within the public realm and in the parks in particular.

Provision of play is based on the idea of play trails, providing children with the opportunity to link together landscape and play elements. These play areas will include a combination of some of the following: stepping stones, balancing beams, undulating landform, and playable edges and walls as well as more formal pieces such as mini roundabouts and play houses. The play provision for 11+ year olds will also be accommodated, and will complement the provision being provided within the Royal Wharf Park to the east and the exercise trail along the riverside walk. The inclusion of play will not prohibit use by adults- there will be places where people can dwell and the lawn space will allow people to gather and spend time in the outdoors.



Play areas identified in Parameter Plan for Plots 17 & 18.



Play elements using the landform creating a trail which could be followed



Outdoor gym equipment for older users

	No of Children	Area (m2)
Under 5	20	200m2
5-11 year olds	32	320m2
12+ year olds	15	150m2

Total area required - 670m2

- Area of 12+ Play Provision in the public realm
- Area of 5-11 Play Provision in the courtyard
- Area of 0-5 Play Provision in the courtyard



Accessibility

The government circular 01/2006 states that local councils should require applicants to submit an Access Statement showing how the principles of inclusive design have been incorporated into the development and how inclusion will be maintained and managed.

The purpose of this statement is to outline the overall approach to inclusive design within the scheme in accordance with the relevant local and national planning guidance, along with how the different access principles will be implemented into the scheme and managed.

The Royal Wharf plot proposals aim to achieve the following with regard to accessible design:

- Maximise access to all parts of the development, its facilities and services for people who are residents, visitors and members of staff regardless of disability;
- To ensure that wherever possible appropriate standards for accessibility can be met at the outset as part of mainstream inclusive design;
- To meet requirements of The Building Regulations Approved Document M – Access to and Use of Buildings, 2004;

- LBN Unitary Development Plan, SPG Access for All;
- Greater London Authority's The London Plan;
- Wheelchair Accessible Housing Design Guide;
- Lifetime Homes Standards, July 2010;
- British Standard BS 8300:2009;
- Requirements and implications of the Equality Act 2010;

While frequently used documents such as Approved Document Part M and BS8300 - Design of Buildings and their Approaches to Meet the Needs of Disabled People provide general advice, other guidance may be more specific. Access standards are in a continuing state of development with no single authoritative document as a source of reference. Instead several separately authored documents have to be referred to.

Additionally planning and legislative policy and access regulations and standards govern the emerging plot design as follows:

Equality Act 2010 [Formerly Disability Discrimination Act 1995]

The developers or others may have ongoing obligations under the Act as landlords and may also have obligations as service providers where they are also providing services to the public. In the main, the Act will apply more to issues of services and information rather than to building design.

Building Regulations Part M (2004) and Part B (2002)

The Building Regulations Approved Document B - Fire Safety, and Approved Document M – Access to and Use of Buildings, 2004 are the only standards directly relevant to access. It is essential to understand that these standards require Building Control approval. 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 all reasonable standards in respect of physical access for disabled people with regard to the Equality Act.

British Standard 8300:2009 - Design of Buildings and their Approaches to Meet the Needs of Disabled People.

Where practical and reasonable it is recommended that BS 8300:2009 standards are applied to new buildings. The revised BS 8300: 2009 has been in effect since February 2009.

British Standard 9999:2008

This standard, published 2008, provides guidance for the safe evacuation of disabled people from buildings in an emergency.

Lifetime Homes Standards

The CfSH seeks to ensure that all new housing is built to ‘Lifetime Homes’ standards”

Wheelchair Housing Standards Adapted dwellings

Wheelchair Housing standards set out in the Wheelchair Housing Design Guide (2006) will be met as appropriate.

Adaptable dwellings

Best practice guidance on wheelchair accessible housing represents the standards of the Wheelchair Housing Design Guide (2006) that should be incorporated into dwelling designs from the outset to ensure that they are easily adaptable to meet the full wheelchair housing standards if required.

Where appropriate the inclusive nature and improved accessibility standards of these dwellings is discussed later in this access statement.

Parking

The required provision of accessible car parking spaces to be provided is set by local planning policies as well as the Royal Wharf outline masterplan planning conditions at 10% and will be adhered to.

Inclusive design

Inclusive design is a fundamental aspiration of the plot designs means designing beyond the minimum standards set by regulations.

The design team’s aim is to achieve a high standard of inclusive design and respond to the GLA’s and LBN’s requirements to achieve a socially, as well as a commercially successful development. An access review as part of the submission of the planning application have assisted this aspiration.

There are six overriding approaches to the design of the accommodation for all occupants and any visitors relating to the retail, community and residential buildings:

1 - To ensure that inclusive access is available at each level for occupants and visitors, as well as general public access, and that they can circulate and exit each type of accommodation with ease so that the built design does not present barriers to people with disabilities.

2 - To ensure that there are step free routes to all parts of each building and that passenger lift access is provided between all storeys.

3 - The shell and core will allow for future tenant fit out proposals to include accessible facilities for employees to access and use the back of house ancillary facilities within the retail and community spaces.

4 - To adopt as far as possible a repetitive plan form to facilitate navigation and way finding to essential facilities, for the public and occupants at all levels.

5 - To provide within the development shell and core the opportunity for the individual retail tenants to provide an inclusive environment for their staff and customers as part of their own fit out proposals.

6 - To anticipate emerging standards and public expectation.

If the design deviates from published access guidance and regulations as it progresses then approval will be sought for appropriate alternative arrangements. Such arrangements will be recorded as part of the development process.

Access Audit Approach, Landscaping and External Areas

A plot access audit has been undertaken for the design proposals under the following headings:

- Pedestrian Arrival
- Public Transport Links
- Accessible Parking
- Vehicle Pick-up / Set-down Areas
- Pedestrian Routes Through The Reserved Matters Area
- Landscape Zones

Pedestrian Arrival

The Royal Wharf site is bounded by the River Thames to the south and North Woolwich Road to the north. The principal pedestrian approach is off the North Woolwich Road to the north. The outline and reserved matters areas indicate new streets through the site serving all buildings and providing links through the site between the two nearby DLR stations (Pontoon Dock and West Silvertown).

The approach route to the detailed area of the development is principally from North Woolwich Road with a bus route and DLR stations nearby. The proposed site concept is to define a clear route through the detailed area of the scheme to link Pontoon Dock DLR Station with the new riverside park as well as allowing a potential connection to Thames Barrier Park creating a high street within the scheme off the North Woolwich Road.

Routes from the bus stops and DLR stations to and through the site will be accessible for people unable to use steps including the use of dropped kerbs, tactile paving surfaces where appropriate, adequate lighting and evenly laid surfaces.

New crossings and a landscape scheme are proposed across North Woolwich Road and the design of this area will follow accessible design guidance to ensure easy access for all.

As part of the landscape proposals throughout the detailed area, suitable seating with and without arm and backrests is proposed at suitable intervals to allow resting and accessible play areas are proposed along the routes. The new paved surfaces will be even, firm, slip resistant and provide some visual contrast to assist in wayfinding.

It is proposed that a distinctive building massing, architectural and landscaping features will create distinctive focal points and landmarks that can be used in wayfinding through the scheme. Suitable signage designed to meet good practice guidance including the “Sign Design Guide” will also be provided to supplement landmark features, though this has not been detailed at this early stage.

Public Transport Links

For the detailed area the principal public transport link is the Pontoon Dock DLR station which has lift access from street to platform level. North Woolwich Road is also served by the 24 hour accessible bus route 474 which links Canning Town through to City Airport or through to Manor House.

While not confirmed at this early stage, consideration is being given to extending the bus route to travel through the scheme with designated stops en route. This potential new route through the site is in addition to the new bus stops being generated along North Woolwich Road.

Accessible Parking

Vehicles may enter the site from North Woolwich road to the north at a number of locations. The general concept for parking at Royal Wharf is to provide all accessible residential parking adjacent to the house or residential core, which assists disabled people requiring parking close to their residence or block entrance.

Parking is provided at a maximum of 50% for apartments and at 1:1 for houses. Some parking bays will be designed so that they can be easily allocated or converted to accessible parking bays for disabled people as need arises and capable of enlargement to meet the Lifetime Homes Standard.

Most of the car parking is located in basement and undercroft areas in order to free up landscape areas at ground level. However some parking bays are provided at ground level also.

On-street parking is seen as an essential feature of the site above ground in order to create a lively animation to the newly created streets. This also serves to provide useful accessible parking and drop off facility for residential,

commercial and retail facilities on the scheme without the need to overcome level changes from basement level parking in some areas. On-street, designated parking is located off the main thoroughfares and where provided basement and undercroft level parking is provided for the apartments with direct access into the communal residential areas above provided by lift and stairs.

Vehicle Pick-up / Set-down Areas

Marked pick-up and drop-off areas are provided at a variety of locations around the scheme to serve each building, though the streetscape will be such that short-term drop-off and pick-up will be possible in many more areas without obstructing traffic flow or pedestrian routes. The marked areas will be recessed off the main vehicle routes and where there is a kerb level difference on approach to buildings, suitable dropped kerbs will be provided to gain access to and from the drop-off area.

This facility will be carefully managed and controlled. The client team will be managing the site and the parking strategy, including pick-up and set down, will be an integral and important part of the site wide strategy as will be the management of all external spaces.

Pedestrian Routes Through The Reserved Matters Area

The scheme is largely level or has a shallow gradient throughout with the intention that there is step free accessible access between all buildings and landscaped recreational areas. Generally gradients across the site are shallower than 1:60, though where gradients are steeper they are the shallowest possible gradient and typically have a level resting area for every 500mm vertical level change following good practice guidance.

Due to the existing topography of the site, the need to achieve the EA flood level as soon as possible within the scheme and the desire to maintain level routes along the facades of the buildings for accessible entry, the pedestrian priority area in the northern approach to the scheme from North Woolwich Road has unavoidable gradients of 1:25. This is set into the landscape and as stated above there are substantial level areas for resting.

A hierarchy of streets is proposed ranging from larger scale high street environments through streets and lanes to residential only mews streets. The high street and street will have a 100mm kerb level change between vehicle area and the pedestrian areas. This will have suitable dropped kerbs where appropriate at crossing points and access points to on-street parking

areas. Where pavements are created adjacent to the buildings, these are as wide as possible, aiming for a clear width of no less than 1800mm to allow two wheelchair users to pass. This may be reduced in some isolated areas but for short distances only, and in no circumstances will the width fall below 1200mm.

The quieter Lanes and mews will be kerb-free areas with the intention that they are shared between pedestrians, cycles and vehicles, though will be designed to be principally pedestrian. Traffic will be minimal in these areas though various features are proposed to maintain a safe environment for pedestrians.

The need for a “safe zone” forms part of the current thinking for shared surfaces and aims to provide a zone within which pedestrians can feel safer while having the benefit of step free access to any area of the mews or lane.

The safe zone at the outer edges of the lanes and mews will be defined using street furniture, tree planting and lighting posts aligned to create differentiation and a sense to the pedestrian they are in a “safe area”.

The outer zones will also be a contrasting tone, have a differing grade of paving and possible contrasting feature band of paving to help create some definition between the vehicle and pedestrian areas while assisting drivers in remaining within the central zone. Consideration may also be given to a low chamfered kerb which will give some indication to people with visual impairments while not impeding wheelchair users or causing a trip hazard.

In some locations, contrasting textures and colours of paving may be specified to help indicate a suggested crossing point. This will assist in wayfinding but also alert drivers to the likely presence of pedestrians crossing at certain points.

Paving surfaces will be smooth, even and well laid to avoid tripping. Uneven cobbles are not proposed. Street furniture will be grouped or aligned wherever possible to avoid obstructing routes.

Seating will be provided along routes and within landscaped areas at suitable intervals to allow people to rest regularly if required. Wherever there is a grouping of external seats, some will be specified with arm and back rests.

The use of tree grilles will be avoided and slots for drainage will have heel guards incorporated which will prevent the trapping of heels, wheels or walking aids.

Bollards will be avoided wherever possible, though where used, these will be a minimum 1000 – 1200mm high and clearly visible by contrasting the background or having a visible contrasting band so that it is visible in a variety of weather and lighting conditions. No bollards will be linked by chains or ropes.

Landscape Zones

Throughout the whole site, there will be several identified landscaped areas to include grass and hard surface recreational space including play, nature, seating, culture, formal landscape and outdoor eating opportunities.

Among other advantages, this approach provides clear features to assist in wayfinding and orientation to and around the site. Distinctive areas around the plots include the high street, riverside walk and urban squares. These comprise hard landscaped piazza, small grassed areas and tree planting to be used flexibly for a range of retail, arts and community events,

plus a variety of informal grass recreational areas between the buildings for residents use. The urban squares will be level or have suitably shallow gradients with resting spaces and have firm, evenly laid surfacing suitable for wheelchair users. Junctions with other paving and grass surfaces will be flush to allow access throughout.

Children’s “doorstep” play areas are proposed throughout the scheme. It is proposed that the surfacing will be firm safety surfacing with flush junctions where this joins the paving surfaces to ensure it is accessible for everyone and does not present a trip hazard. At detailed development stages it will be ensured that play equipment is inclusive.

Informal grass recreational areas will have level or shallow gradient paths though them which will be at least 1800mm side to allow two wheelchair users to pass.

Access Audit Buildings

Plot buildings are principally residential, though at ground floor level there are some mixed use units which may be retail, restaurant, arts, community or other uses as required.

Residential Buildings

The residential accommodation includes a variety of types from houses, to apartments of a range of sizes. The two principal types are apartments and terraced houses. The apartments are generally on one level and houses are a range of bedrooms located on ground up to 4th floor.

Residential Standards

Apartments are generally located at upper floors above multi-use accommodation, though some are located at a raised ground level. All units are accessed by stairs and lift. Terraced houses are accessed at ground level with flush thresholds. Basement and undercroft car parking for the residences is accessed via a dedicated core. Surface parking is provided throughout the site should level access be required.

Dwellings are designed to meet the requirements of the Building Regulations Part M (section for dwellings) as a minimum standard. In addition, in keeping with London Borough of Newham Planning requirements and the London Plan, all dwellings will also be designed to the Lifetime Homes Standards.

Within the detailed area, the scheme has been designed so that at least 10% of the units in each plot are fully wheelchair accessible, or have the space standards to allow easy adaptation to be fully wheelchair accessible, following guidance in the GLA Wheelchair Housing Design Guide. The provision of wheelchair accessible units includes a range of unit sizes, and as far as possible, a range of aspects.

It should be noted that all residential units are generously sized beyond minimum Lifetime Homes Standard in many cases so that the possibility of adapting more units to be more accessible is possible.

Residential Entrances and Common Parts

All upper floor apartments are accessed via the shared residential entrance lobbies which are accessible at grade directly from ground level. Raised ground floor units will also use the shared entrance areas and a lift and stair will overcome the internal level change within the lobby.

All common areas and dwelling units have been designed to meet AD M guidance for dwellings and the Lifetime Homes Standards. Level access, adequate clear opening door widths and suitable circulation space is provided for wheelchair users and other disabled people to refuse areas though it is recognised that management policies and procedures may still be required for some disabled residents.

Vertical Circulation

There are staircase and accessible lift access provisions to all residential levels. The stairs have risers of no greater than 170mm and goings no less than 250mm with continuous handrails to both sides which extend at least 300mm top and bottom of flights. The rail profile will be approximately 45mm with fixings that allow a continuous flow of the hand. Each step will be clearly visible by having suitable contrasting integral nosings and stairs will be well lit.

All lifts, serving residential floors will be specified to exceed Lifetime Homes Standard guidance as most lift cars are 1100mm wide and 2100mm deep and all meet or exceed the minimum 1100mm by 1400mm requirement. All features of the lift will be specified to meet Lifetime Homes and other good practice access guidance, including tactile and contrasting controls at 900 – 1200mm, visual and voice announcement, support rail to available walls, contrast between floor and wall surfaces, non-reflective materials and an alarm intercom system suitable for people with hearing impairments.

At each floor level, there will be a suitable sign on the landing visible when using the stair or the lift to indicate the floor reached.

Lifetime Homes Standard & Building Regulations Part M

All dwellings will be designed to meet minimum AD M requirements and Lifetime Homes Standard (LTH). Features will include:

- Suitable circulation widths which generally exceed LTH guidance;
- Suitable internal door opening clear widths of 750 - 800mm relating to corridor width;
- Suitable dwelling entrance opening width of 800mm clear;

- Level entry and flush thresholds to gardens and roof terraces;
- All units will have a suitable living area at entry level (in terrace houses this may be a dining area which can be converted to a living area if required);
- Suitable WC facilities at entry level with floor shower drain facility;
- Adequate manoeuvre space in habitable rooms including 1500mm turning circles, 1200mm clear space in front of kitchen units and generous clearance round all beds in all bedrooms which exceeds LTH guidance.

There will be the ability for adaptation including reinforced walls for grab rails, accessible detailed elements such as lever ironmongery and adequate positioning of switches and controls.

Wheelchair Accessible Units

Wheelchair accessibility has been achieved in 10% of the detailed area units in each plot across the unit mix by providing units that have adequate spatial and structural provision so that easy adaptation by through fixtures and fittings can be achieved to suit the resident's preference.

These units have been designed following the Greater London Authority "Wheelchair Accessible Housing - Best Practice Guidance" document (2008).

Features incorporated include:

- Level circulation;
- Adequate clear opening widths of 800mm to all doors and circulation areas;
- Consideration given to wheelchair charging and storage;
- Adequate manoeuvre space in all rooms including bedrooms;
- Suitable sanitary facilities with a full 1500mm wheelchair turning space.

Multi-Use Units

There are several units proposed for the detailed area which are multi-use and may include café, retail unit, community, culture and the arts uses. These are located at ground floor level at grade.

The internal fit-out of these units does not fall under the scope of this report as the units will be occupied by service providers who are likely to have duties under the Equality Act 2010 relating to provision of goods and services and relating to employment.

The unit shells will be designed to enable the tenants to meet their duties under the Equality Act for their customers and employees by maximising access as far as is practicably possible.

The detailed design has not been carried out at this early stage though features to be incorporated include:

- Level entrances with suitable flush entry mat provision;
- Suitable entrance door opening widths;
- Clear markings to glazed screens and doors;
- Provision of services to facilitate the addition of accessible toilet facilities;
- Accessible internal circulation;
- Cabling to accommodate entry controls set at appropriate heights.

Adaptability / Livability

A key aspiration of each plot design is to provide high quality family accommodation through designing for the needs of families when they move into this exciting new area of London and to allow families to grow in the area and their new homes without having to move out. Therefore buildings and spaces must be fit for current purpose and adaptable to change to accommodate future occupancy needs and technologies.

Adaptability and livability are two key characteristics fundamental to the design philosophy of the scheme. The design of each of the new buildings, with particular emphasis on the family dwellings will accommodate where possible the following criteria to ensure the buildings remain suitable for use for years to come:

- Secure private gardens
- Access to secure toddlers play area
- Natural daylight lighting each room
- Compliance to Lifetime homes standards
- Wheelchair accessibility standards built in from day one
- National Housing Federation space standards
- Secure bike storage
- Home office space
- Internet delivery spaces
- Passive surveillance

Community

The creation of a strong and coherent community identity is central to the success of the new development and will rely on careful consideration of the following criteria:

- Hierarchy of clearly identifiable community spaces – private/semi-private through to public areas
- Secure by design principles organically integrated into the design
- Local retail facilities
- Coherent design and material use
- Range of house types and apartment sizes
- Community consultation processes informing key design decisions

Community involvement needs to be encouraged to ensure that initiatives are maintained and built-upon, and to assist in spreading positive influences into the wider community beyond. To achieve a safe and secure development, key factors need to be considered as an integral part of the overall design concept.

Examples of these principles are as follows:

- Natural Surveillance- Street Ownership
- Community facilities
- Quality of Design and Materials
- Coherent Well Lit Public Realm
- Safe Secure Well Lit Car Parking

The development responds to the need of a varied community by providing a range of housing types and tenures as well as being located near existing and proposed schools and other community facilities.

Security

To achieve a safe and secure development, key factors need to be considered as an integral part of the overall design concept. Examples of these principles are as follows:

- Natural Surveillance- Street Ownership
- Community
- Quality of Design and Materials
- Coherent Well Lit Public Realm
- Safe Secure Well Lit Car Parking

Movement and surveillance across the site is vital in promoting activity and life within the development. Careful street design and lighting to the approach of the building and the avoidance of concealed areas will promote a thriving community that feels free to enjoy the public and private domain safely.

Secure by design principles have been observed and development of the scheme with the police liaison officer is proposed at the next stage of detailed design to ensure a safe and secure environment is created.

Residential Design Standards

Plot designs have been developed in line with the following design guidance documents. The list below represents a proportion of residential design standards and does not preclude compliance to specific standards in relation to tenure or land use class. Specific compliance to individual standards has been listed in bold below.

Design standards referenced:

- Homes and Communities Agency Design and Quality Standards
- Homes and Communities Agency Housing Quality Indicators
- Code for Sustainable Homes (CfSH)
- Lifetime Homes (July 2010)
- BRE Wheelchair Housing Design Guide (2006)
- Secure By Design
- Manual for Streets Department for Transport
- Standards and Quality in Development – National Housing Federation
- Building for Life
- Interim London Housing Design Guide

Sustainability

Environmental sustainability should be at the heart of good design and should be maximised by taking a holistic view of sustainability in terms of energy consumption, carbon emissions and running costs throughout the life of the development. Planning development to reduce demand on energy use in terms of heating and power, transportation and food and waste is the primary route to environmental sustainability.

Our approach to creating sustainable communities develops from gaining an understanding of local context and the character of neighbouring existing communities. At the Royal Docks it is important that we not only create a balanced and long term new community but also that it reinforces and strengthens the communities that it is located within. To achieve this it is important that we take a wider view of the site, reaching beyond partners ownerships to make sure we provide the facilities that provide local retail, housing and work requirements for this new part of the city.

A development must be capable of meeting the social, environmental and economic needs of the community it serves both in the present and for future generations.

We recognise the future needs for developments to be sustainable, responsible and integrated together with an increasing need for the implementation of Low or Zero Carbon Technologies that require active rather than transient communities. The opportunities available with Royal Wharf are unique as the project allows the potential to develop crucial issues and provide housing in close proximity to the city and due to its location is able to integrate with existing facilities and transport networks. As city living identifies measures such as prioritising the pedestrian and cycle usage over the car it allows the promotion of active streets, neighbouring squares and city parks.

Careful site analysis has been undertaken and all the opportunities and options available to produce an environmentally sustainable development have been considered. An understanding is required of the inter-relatedness of all these factors to develop a set of solutions which work on all levels.

There are a number of significant key environmental benefits which will be included in the design. The site has a variety of excellent public transport connections to offer alternatives to private car use for business and recreational purposes. Specification of recycled / recyclable materials where possible will reduce embodied energy. Specification of locally sourced construction materials where possible will reduce transport related carbon emissions. South facing living accommodation allows maximum beneficial ingress of natural light.

Energy efficiency in the buildings is controlled through a combination of the architecture, technical systems, construction and the behavior of the occupier. We believe that simple solutions which do not rely on complex technology control systems are likely to be most effective in residential design. Our team recognise that the energy use in the buildings is only a small part of the total sustainability equation and that a significant factor will be how the development responds to and influences the lifestyle choices of the community who live and work in it.

Residential units within the Royal Wharf masterplan will achieve Code for Sustainable Homes Level 4.



Site Management Strategy

To ensure Royal Wharf achieves and retains the quality aspirations set as the vision for this unique site, the site wide strategic management strategy is an essential part of the detailed design.

The site will be managed by a dedicated on site management company, allowing a very high level of facilities to be maintained both for Royal Wharf residents as well as visitors. The site Estates and Management team start work early in the life of the project to ensure all management issues are adequately addressed in the development of the design.

The site Estates and Management team (EMT) will be responsible for the set-up and operation of all matters relating to the development and will pro-actively co-ordinate the servicing of the estate, the buildings and individual households as required. They will maintain the public realm, provide a level of security for the residents of the development, assist residents with deliveries and generally guarantee the upkeep of Royal Wharf.

The extent of the services will be considerable and a brief summary of services have been listed below. Although not exhaustive, this list is indicative of the array of facilities that the team at Royal Wharf be able to offer. Further considerations would include long term maintenance, such as redecoration and resurfacing of accessways.

Proposed Services:

- Handyman & Yardman
- Residential Parking Management Service
- Maintenance of Landscaping (Shared and Public)
- Maintenance of Vehicle Gates
- Maintenance of playground facilities
- Health & Safety
- Internal Common Area Cleaning
- Refuse Store Cleaning
- Communal Window Cleaning
- Maintenance of Fire Protection Equipment
- Maintenance of Door Entry Systems
- Maintenance of Communal TV System
- Maintenance of Water Booster Pumps

Estate Management

To manage a scheme of this size effectively and to ensure the need and expectations of residents are met, it will require a permanent site based management team.

This will mean the appointment of an Estates and Management (EMT) team specific for Royal Wharf. The role of the EMT would be the first point of contact for all issues arising on site from lessees, tenants, RSL, Commercial premises, staff, visitors and developer. The EMT would be overall responsible for the provision of all services, the supervision of all contractors on site, ensuring minor repairs are dealt with, ensuring the plant and facilities on site are maintained appropriately; and needs to be flexible enough to deal with any issues relating to the site, no matter where the source is.

In addition, the scheme will have a 24 hour front of house concierge from which all day-to-day operations will be managed from this base and for example the concierge can take delivery of parcels and dry cleaning on behalf of the residents.

Building Maintenance

The EMT will be responsible for organising the maintenance to the block(s) as follows:

- Arrange for each block to have cleaners appointed to ensure that the overall appearance of the internal communal areas is kept to a high standard.
- To assist with all repairs of a minor nature, the development would have a dedicated handyman to carry out these small works. Larger repairs would require the use of specially appointed contractors who would be sourced by the EMT. There will be an element of routine maintenance such as fire alarm testing etc., which would be the responsibility of the handyman under the supervision of the EMT.
- The window cleaning regime for the communal / apartment windows will be arranged via the on site EMT. They would utilise in built systems to ensure access is achieved and that windows are cleaned safely.

Landscape Maintenance

The EMT will also be responsible for maintaining the landscaping around each of the buildings and would apply equally to the green / brown roof areas that are open to resident access.

Play Area Maintenance

The EMT will also ensure the play areas available for residents and the wider community will be safe and secure areas for children to interact and play.

This will include it being fully inspected by ROSPA on an annual basis and supported by a written report. Any remedial works noted as being required to the playground facilities will be organised by the EMT.

Facade Management Strategy - Medium Rise Mansion Blocks

Cleaning of communal windows is to be carried out routinely by the site wide management company by means of an approved cleaning system.

Cleaning of the glazing and facade sections will normally be achieved using a proprietary water fed pole system and maintained using mobile access equipment. Access to upper floors can be achieved by use of a cherry picker or similar lifting device. This strategy will be further detailed during the construction phase of the plot design process.

Service Deliveries

The requirements for servicing both the residential and commercial uses within each Royal Wharf detailed plot have been carefully considered to ensure that the building functions efficiently with minimum impact on the public realm.

Service vehicles will be able to use designated drop-off areas accessed of all principal vehicular routes as well as having access to the site concierge and EMT offices.

Waste Management Strategy

The site wide refuse collection strategy is applicable to every residential unit and subject to detailed agreement with the local authority, is as follows:

- Residents take domestic waste from the apartment to allocated refuse stores located in the basement
- Each building has its own allocated refuse store, in close proximity to the residential core
- Each refuse store has a calculated refuse capacity based on the predicted occupancy level of each apartment this will include provision for household garbage and recyclables
- Each courtyard block has an allocated waste presentation area at ground level accessed from one of the internal streets
- Periodically refuse bins are decanted from the basement stores (where present in the plot design) and placed in the waste presentation areas at ground level. The site management company in coordination with the local authority scheduled waste collections manages this process
- Local authority waste collection services remove refuse from waste presentation areas upon scheduled collection days
- The EMT removes all empty bins and transports them back to the basement refuse stores

Commercial waste will be dealt with by the tenant of each commercial unit and in accordance with BREEAM and the local authorities requirements.

Commercial waste stores are anticipated and have indicatively been designed with direct access from the retail / commercial unit, as well (where appropriate) with rear access onto side streets.

Landscape Management

Appropriate public realm management and maintenance is vital to the success of the public realm. Even the best-designed spaces need to be cared for and inappropriate behaviour needs an effective response. The designs should foster perceptions of safety and a degree of self-regulation of behaviour through encouraging active, positive uses by a diverse mix of users, while offering specific places for young people to meet.

The management of the public realm will be undertaken by a private management company for all areas within the site boundary excluding private amenity space such as terraces and balconies. The planting strip forming the boundary between the private and public realm will be maintained by the management company.

The following key factors will need to be addressed in order to sustain a high quality public realm:

- Cleanliness
- Safety and Security
- Repair and Replacement
- Horticultural Health

Cleanliness

Cleanliness is the principle indication of the quality of management of the public realm. As such, the perceived success of the development will be significantly affected by the effectiveness of the procedures established for regular pavement cleaning, litter picking, and the removal of graffiti, bill posters and chewing gum. The strategy will be applied to all elements of the scheme from roads, pedestrian paving, street furniture, drains and planting beds.

Safety and Security

A safe environment is one that is accessible to all. As well as adopting 'Secured by Design' principles in the design of the streets and spaces, long term management and maintenance of the development will be required. Well looked after places are less likely to suffer from crime as they are more likely to be visited or used, with the premise that more 'eyes on the street' will deter anti-social behaviour. Landscaping will enable clear visibility along routes with trees being clear stemmed to approximately 2.5-3 metres.

Repair and Replacement

The need for repair and replacement of finishes will be mitigated by the use of appropriate and durable materials. Nevertheless, in the long term a degree of maintenance and replacement is unavoidable. In order to ensure that the public realm remains safe and in good condition, all worn-out, damaged and broken elements will be promptly repaired or replaced. In the short term this will be carried out within the clearly defined defects liability periods of the various contractors who installed the work. The longer term solution will form part of the management plan. Vigilant and regular monitoring of every aspect of the scheme will ensure that all remedial work is carried out in a timely and thorough fashion.

Horticultural Health

The health and general condition of planted areas including trees, shrubs, perennial plants and lawns is clearly indicative of the level of care and attention a place receives. Planting, including any replacements to dead or dying material, will be maintained in accordance with a Landscape Maintenance Specification, the submission and approval of which could be controlled by the imposition of a suitably worded planning condition.

Royal Wharf aspires to be the best solution for Newham. The masterplan and plot proposals presented in this document are a product of a long, in depth and considered design process undertaken with consultation and co-operation with the London Borough of Newham, the Greater London Authority and the London Thames Gateway Development Corporation. This process has informed and matured the framework for development proposed within the scheme and has resulted in a design authored by many hands.

The success of the plot 17 and 18 scheme will be measured by the quality of the built environment it produces. It is hoped that the enclosed designs and their supporting technical drawings contribute to the transformation of this key site into a unique and exceptional place where many people enjoy living, working and playing for generations to come.

Glenn Howells Architects Birmingham
321 Bradford Street Birmingham B5 6ET
T: +44 (0)121 666 7640 F: +44(0)121 666 7641

E: mail@glennhowells.co.uk
W: www.glennhowells.co.uk

TOWNSHEND LANDSCAPE ARCHITECTS

3A Zetland House
5-25 Scrutton Street
London EC2A 4HJ
T 020 77299 9333
W www.townshendla.com

DP International (UK) Ltd
70 Cowcross Street
London
EC1M 6EJ

Tel: +44 20 3780 7357
Mobile: +44 7740 718127
www.dpa.com.sg