



Royal Wharf London

Design + Access Statement Plots 01 + 03 + 09

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Revision History

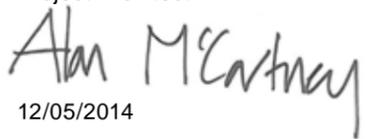
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Royal Wharf Phase 02 (formally Minoco Wharf) is a residential led mixed use scheme in the heart of the London Borough of Newham. The project represents a second phase of development of the planning-approved 2012 Minoco outline masterplan (reference 11/00856/OUT) and proposes a significant opportunity to provide new family housing alongside small scale commercial and retail uses providing for the housing and amenity needs of the local community.

Submitted in May 2014, this document forms the design and access statement of the reserved matters planning application for building plots coming forward as a second phase of development within the masterplan consent; known as Plots 01 + 03 and 09.

The project is to be the first stepping stone between the previously consented residential led development known as Royal Wharf Phase 01 and the scheme moving west from the Phase 01 consent. Proposals for Plots 01 + 03 and 09 aim to build on the momentum already established in the area by the first phase detailed works.

This report summarises the design and access audit 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 design review panel (DRP) consultation and subsequent resulting design development undertaken for Plots 01 + 03 and 09, as recommended by the DRP. The outcome of the review process has had a positive effect on each plot 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 01 + 03 and 09 will include 487 new homes in a mixture of 1, 2, 3 and 4 bedroom apartments and townhouses, (C3); alongside retail floorspace (A1), financial and professional floorspace (A2), hot food / take away floorspace (A3 and A5), pub and restaurant floorspace (A4) and employment uses (B1).

New elements of public realm including external paving with an interface to the Consented Phase 01 development works will stand alongside large areas of private courtyards and semi private open space.

Royal Wharf seeks to be an exemplary residential development. The design strategy aspires to realise the full potential of this unique site, benefiting from its location in the heart of the London Borough of Newhams Royal Docks, and providing a new district of growth; thus achieving a vision of an attractive and sustainable development within which to live, work and play.

Royal Wharf will be an exemplary landmark development. In addition to the masterplan vision as a whole, the design strategy for Plots 01 + 03 and 09 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 goal requires the clear and carefully considered integration of well-designed, high quality residential buildings, both house typologies and apartments alongside business workspace, local retail and a wide range of diverse community uses.

A desire to create special places summarises the team's approach for the Royal Wharf masterplan. We aspire to create neighbourhoods where work, leisure and home life all come together.

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.

Within Plots 01 + 03 and 09 a total of 499 new homes will be built, designed to have a spectacular access to the new community and public amenity of the Royal Wharf masterplan.

The design proposals comprise a rich variety of architectural elevations, unified through a common material 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 consented parameter plans of the consented Royal Wharf outline permission and design code as well as the immediate context of the detail consented Phase 01 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) 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 (Plot 01 + 03)	Glenn Howells Architects
Plot Design Architect (Plot 09)	Feilden Clegg Bradley Studios
Planning Consultant	Rolf Judd Planning
Environmental Consultant	URS Corporation Ltd
Transport Consultant	TPP
Energy Consultant	OCSC
Landscape Architect	Townshend Landscape Architects
Public Relations	Remarkable Group
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 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 01 + 03 and 09 into the previously consented Phase 01 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 Design Code
- Design Development
- Technical Design Strategies
- Landscape Proposals
- Access Audit
- Conclusion

Consultation Process DRP

The 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.

Royal Wharf Plots 01 + 03 and 09 were formally presented to the DRP on 02 April 2014 and subsequently revised proposals in line with the panel's comments were represented in summary on 30 April 2014.

A brief synopsis of the panel's comments received during the 02 April review are recorded adjacent, with each comment having been responded to through the design process and included in the proposals presented in this report:

Plot 01 + 03

- Further development of threshold and access points into each building;
- More detail to be provided on waste, servicing and bicycle storage;
- Massing would benefit from further refinement, particularly with further articulation at roof level;
- Reduce the extent of raised courtyard proposed to Plot 03 (previously at 2 storeys, reduced to 1 storey over adjacent Plot 01 courtyard level;

Plot 09

- Explore further enclosure of the public square;
- Recompose the northern portion of the plot to maximise mixed uses at ground level and residential frontage;
- Generate identifiable residential entrances;
- Examine relationship to Plot 12;
- Further develop the ground level elevation strategy;
- Establish a clear and distinct language for the housing typologies as well as the courtyard elevations;

Landscape

- Confirmation required over the soil depth in the courtyard for trees;
- General improvements required to the landscape design;
- Describe opportunities for the landscape to contribute to quality of life biodiversity and outdoor play
- Individual character of each plot's courtyard space.



Right: Design Sketches Plots 03



Detailed CGI's Phase 01 Development

Phase 01

Phase 01 detailed planning consent at Royal Wharf was received at the same time as the outline masterplan planning permission. The images adjacent provide an illustration of how the Phase 01 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 the 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 plans presented in this report illustrate a body of work that aims to present a solid grounding and set of detailed parameters that not only establish the quality of design for each plot within its own site boundary but also seeks to establish strong design principles; upon which the further detailed development of neighbouring sites can be measured ultimately to realise the vision of the Royal Wharf masterplan.



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 01, 03 + 09) covers approximately 1.77 hectares of brown field land and sits within the context of three former wharves; Vanesta and Crescent Wharves to the west and Minoco Wharf immediately around the plots. None of the wharfs have the status of safeguarded wharves. 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 norther 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.



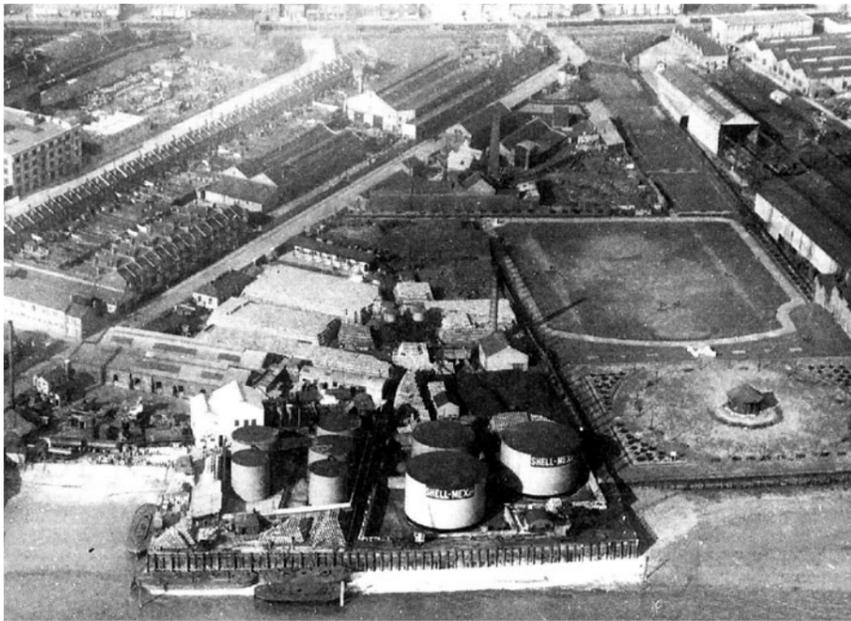
Knight's Road c1950



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.

But, to realise this fantastic opportunity, we need a really 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.

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.

With specific regard to the detailed proposals presented within this design + access statement, the enclosed designs have been developed in full support of the masterplan principals and design code previously established. Design proposals for Plots 01 + 03 and 09 seek to reinforce the aims and objectives of the wider Royal Wharf vision.

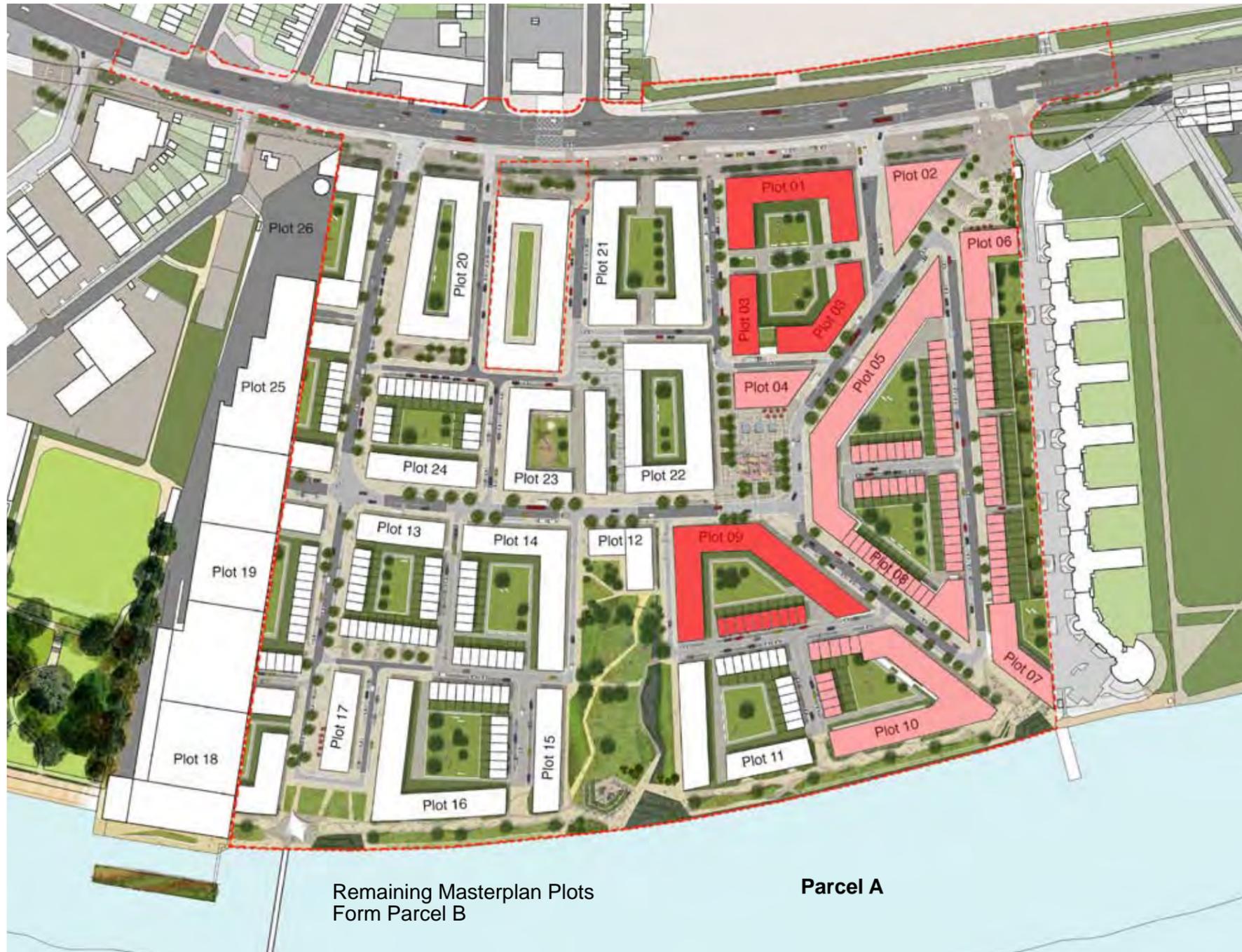
In order to audit and ensure compliance of the emerging designs within the consented design code, the original master planning team has been retained and involved with the detailed design process throughout its evolution and the project seeking detailed planning approval is considered as a welcome and well-considered development of the aspirations and objectives established by the wider Royal Wharf framework. An artist's impression of the completed masterplan in its immediate context is illustrated adjacent.



Royal Wharf Development Schedule

The comprehensive redevelopment of the 17 Ha Royal Wharf (formally Minoco) site to include:

- up to 330,000 m2 of residential (C3) floorspace in a mix of dwelling sizes, types and tenures
- up to 15,000 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 A

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

Within Parcel A, viability assessments were undertaken during the detailed planning approvals process, establishing clear numbers of units and the required housing mix for the extent of the parcel.

As illustrated adjacent Plots 01, 03 and 09 sit within Parcel A and form the last of the detailed design elements of this portion of the masterplan. As noted above the plot design team have benefited from a clearly set target brief concerning tenure, mix and quantum of units across each plot. 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; draft	Transport	London Plan; the Mayor’s Transport Strategy; PPG13	Tall Buildings / Views	London Plan; RPG3A, View Management Framework SPG, draft Revised View Management Framework SPG
Housing	London Plan; PPS3; 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)	Ambient Noise	London Plan; the Mayor’s Ambient Noise Strategy; PPG24
Affordable Housing	London Plan; PPS3; Housing SPG, Housing Strategy; revised interim Housing SPG	Parking	London Plan; the Mayor’s Transport Strategy; PPG13	Context	Planning for the Historic Environment Development and Flood Risk
Density	London Plan; PPS3; Housing SPG; revised interim Housing SPG	Employment	London Plan; PPS4; Industrial Capacity SPG	Environment	
Urban Design	London Plan; PPS1	Access	London Plan; PPS1, PPS1 supplement; PPS3; PPG13; PPS22; draft PPS Planning for a Low Carbon Future in a Changing Climate; the Mayor’s Energy Strategy; Mayor’s draft Climate Change Mitigation and Adaptations Strategies; Mayor’s draft Water Strategy; Sustainable Design and Construction SPG	The draft replacement London Plan (October 2009) for consultation and London Borough of Newham Core Strategy draft are also a material considerations.	
Mix of Uses	London Plan			Additionally the Newham UDP comments on economic development, housing, affordable housing, density, mix of uses, regeneration, transport and employment.	
Regeneration	London Plan; the Mayor’s Economic Development Strategy; draft replacement Economic Development Strategy				

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	Site Location Plan
Parameter Plan 02	Application Boundary
Parameter Plan 03	Existing Site Levels
Parameter Plan 04	Basement Level Plan
Parameter Plan 05	Flood Defence Level Plan
Parameter Plan 06	Proposed Upper Level Plan
Parameter Plan 07	Proposed Building Footprints
Parameter Plan 08	Proposed Minimum AOD Levels
Parameter Plan 09	Proposed Maximum AOD Levels
Parameter Plan 10	Movement Plan
Parameter Plan 11	Public Realm

Status of Guidelines

Design code guidelines published as part of the Royal Wharf masterplan Outline Planning Application (May 2011) 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)
- Masterplan Parameter Plans (May 2011)

Guidance Organisation + Hierarchy

The Royal Wharf design code was 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.

Design code instructions were set in bold and listed as bullet points, as below.

- **Design Code Instruction**

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 01, 03 + 09 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 townhouses 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.



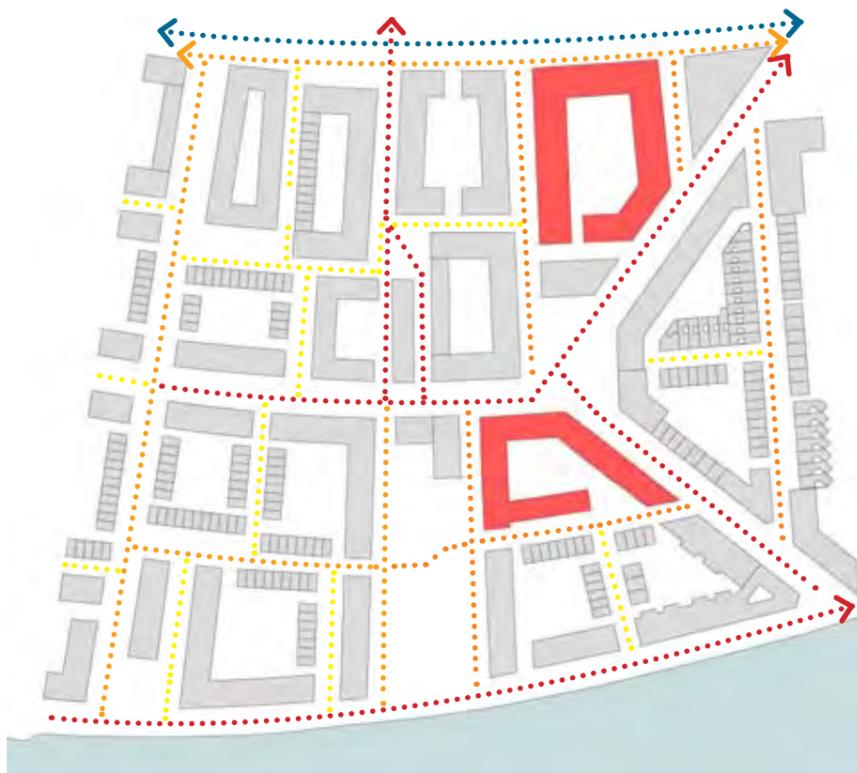
Vehicular Movement



- 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.

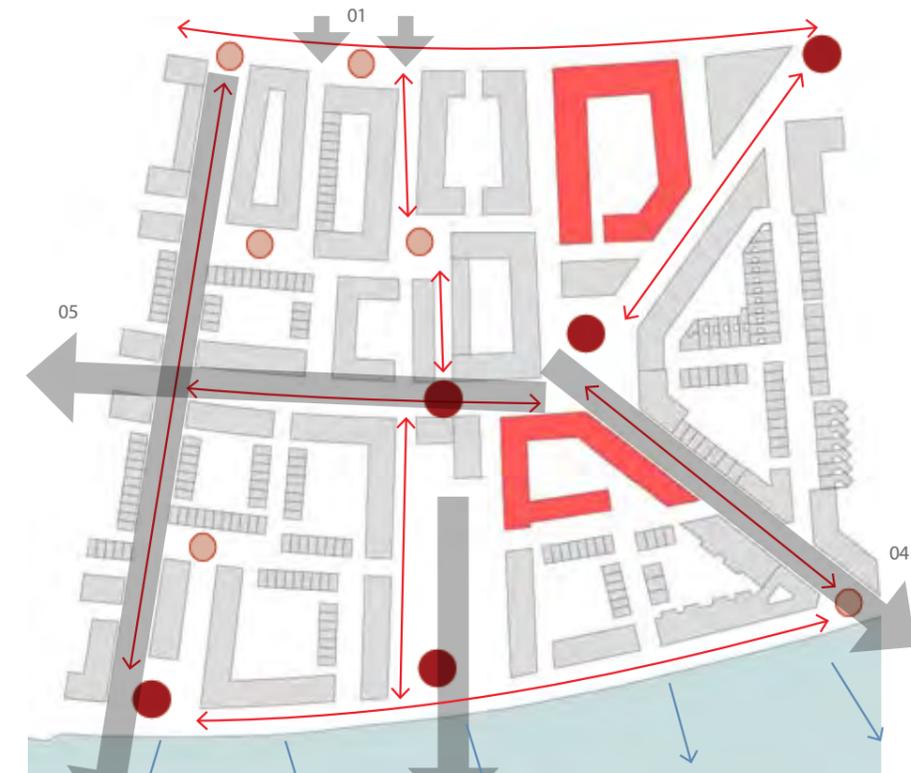
Public + Private Space



- 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
- Visual links
- Views across the river
- Protected Viewing Corridor
- 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 01, 03 and 09 complies with the use parameters for the flood and formation levels (refer to drawings and to the Design Proposals section of this report on page 51).

- 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 01, 03 and 09 to respond to certain site constraints with richness and sensitivity.

The design of plots 01, 03 and 09 complies with the use parameters as illustrated.

The proposed design of plots 01, 03 and 09 complies with the designated criteria for the Upper Level Use Class parameters (refer to drawings and to the Design Proposals section of this report on page 51).



Proposed Site Levels Plan

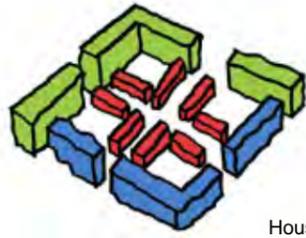
Proposed Site Levels

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 +6.35m 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 01, 03 and 09 complies with the designated criteria for the Proposed Site Levels parameters for the flood and formation levels (refer to drawings for levels information and to the Design Proposals section of this report on page 51).



Housing and Apartments In Context



The sketches adjacent illustrate the Royal Wharf strategy for organisation of the houses adjacent to the apartment buildings. Houses have been grouped as the inner core to a citadel type urban block with the taller mixed uses and apartments framing and protecting the inner core of resident's homes.



Housing + Apartment Location Plan



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 01, 03 and 09 complies with the designated criteria for the Housing / Apartment Mix parameters.



Minimum Heights Plan

Minimum Heights AOD

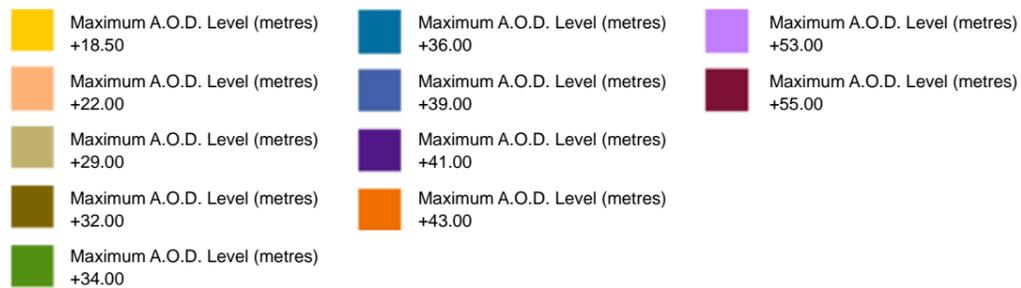
In order for the masterplan to be a success a minimum level of built form needs to be achieved, to ensure enough people live in the area to animate the scheme but also to ensure streets and spaces receive an appropriate level of enclosure to form their edges.

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 01, 03 and 09 complies with the designated criteria for the Minimum Heights A.O.D parameters (also refer to the Design Proposals section of this report on page 51).

- 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 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 principle 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 (maximum of 58.0m (AOD)), this building sits at the northern end of the new park and marks the centre of the site
- The southern element of Plot 18 (maximum of 58.0m (AOD)) is located adjacent to the pier and will act as a 'marker' for this facility
- The south eastern part of Plot 10 (maximum of 58.0m (AOD)) which is the termination of the diagonal route from the central square and announces the development across the riverfront

The proposed design of plots 01, 03 and 09 complies with the designated criteria for the Maximum Heights A.O.D parameters (also refer to the Design Proposals section of this report on page 51).





Concept

“To create a landmark development not a landmark building”

Many modern residential developments primarily respond to commercially driven issues, aspiring to create value by providing a critical volume of units. As a result these schemes inevitably respond to a series of issues unrelated to their context, local architecture, or to the needs of the local community. They often sit as alien forms within an urban context and thus prevent adjacent future developments of any kind to integrate their built form into a holistic urban framework.

“Making another piece of the city”

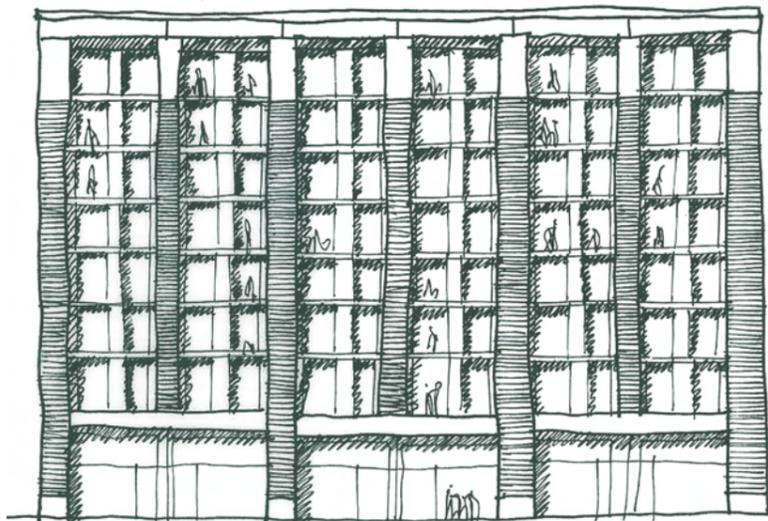
Conceptually, the site has been developed as a new piece of Newham within a wider considered masterplanning context. High quality public and private spaces formed by definite built edges seek to add value to local context.

The vision is to be achieved by the implementation of a number of site

strategies initiated by the Royal Wharf masterplan. These have been carefully developed and critically assessed across a range of various scales to ensure the best possible design is realised for Plots 01 and 03.

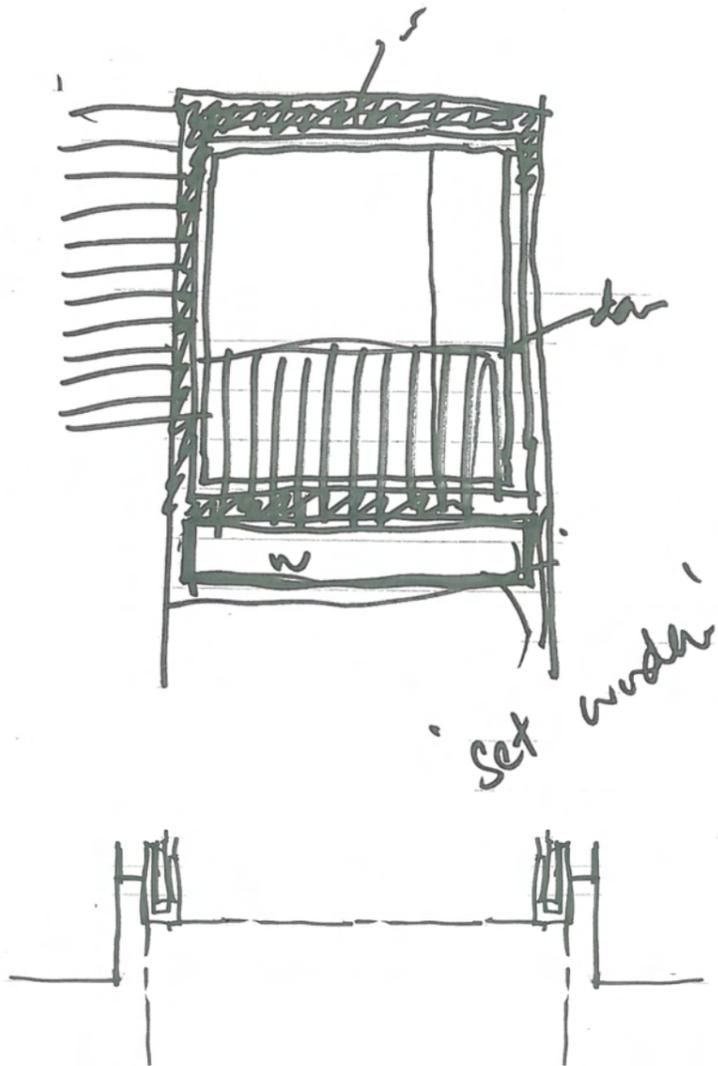
The plot design process has benefited from a clear conceptual idea that the scheme should be developed contextually as defined by the masterplan design code, by generating an architectural language and a common family of detailing that ensures each building responds to its location while remaining of a plot family.

Principles of mass, form, land use and quantum have all been established by the Royal Wharf masterplan parameters and have been used to inform the basis of the plot design presented. The masterplan block layouts have been refined to respond to issues of environmental sustainability, local context and planning policy to realise the potential of this site.

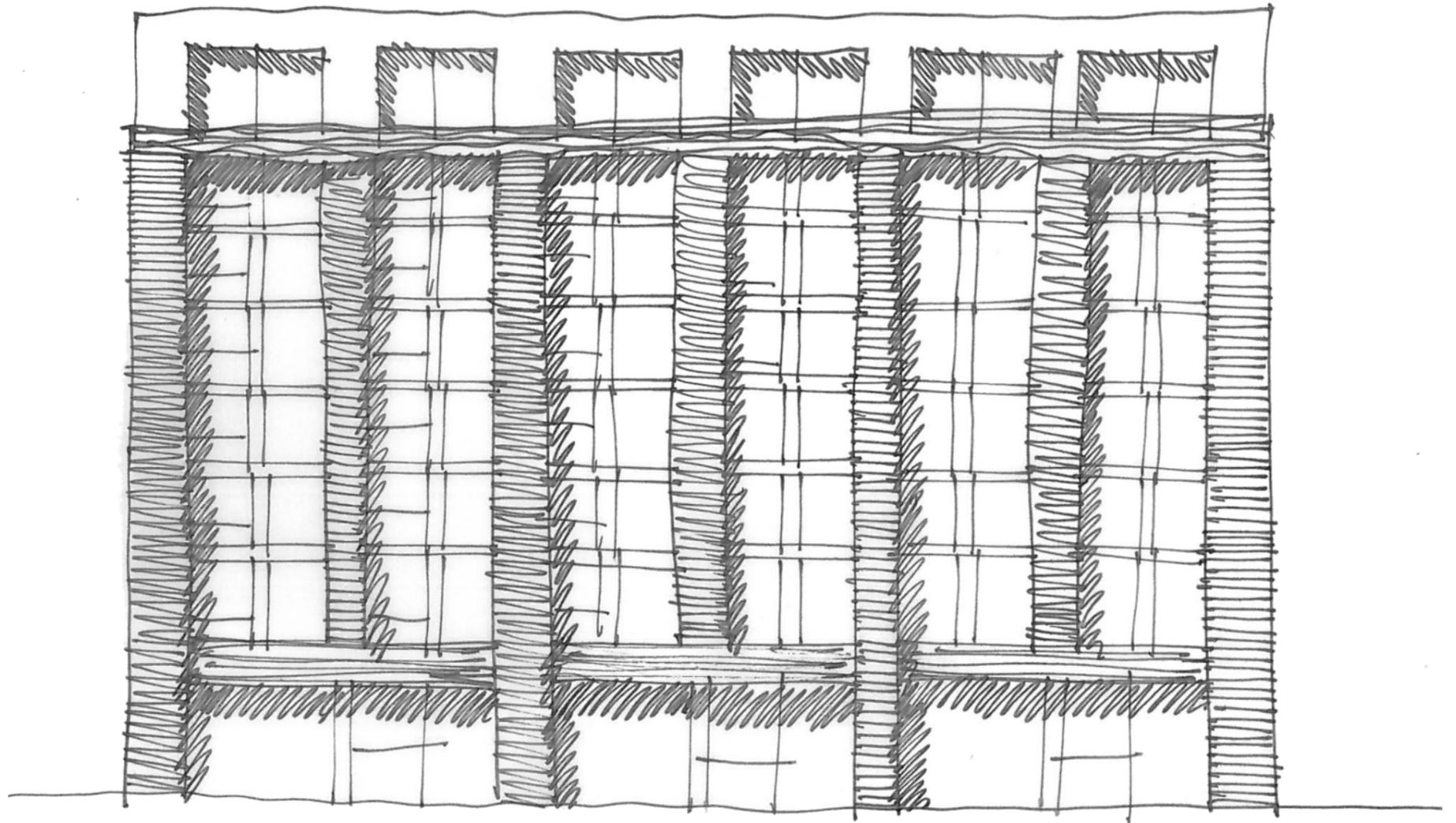


Sketch Design Study Plot 03 High Street Facade

Left: Sketch Aerial View Plots 01 + 03 From North East



Typical Window Study Sketch



Facade Design Sketch Plot 03

Summary Schedule

Plot 01

GEA Residential - 14'815 sqm

GEA Commercial - 572 sqm

Energy Centre (Subject to detailed development) - 1'019 sqm

Private Housing Mix:

Studios	9
1 Bed Apartments	28
2 Bed Apartments	30
3 Bed Apartments	26
4 Bed Apartments	1
Total	94

Shared Ownership Housing Mix:

1 Bed Apartments	17
2 Bed Apartments	29
Total	46

TOTAL 140

Plot 03

GEA Residential - 16'484 sqm

GEA Commercial - 529.3 sqm

Parking Structure - 3'036 sqm

Private Housing Mix:

Studios	36
1 Bed Apartments	16
2 Bed Apartments	36
3 Bed Apartments	57
4 Bed Apartments	2
Total	147

Shared Ownership Housing Mix:

1 Bed Apartments	0
2 Bed Apartments	0
Total	0

TOTAL 147



Compliance to Parameter Plans

Further to compliance with the principles established by the Royal Wharf design code and masterplanning framework Plots 01 + 03 also sit within a planning parameter schema.

Parameter plans submitted as part of the outline application are listed below and the following items are noted with regard to Plots 01 + 03:

Parameter Plan 01, 02 + 03 Location and Levels Plans

The proposed development sits within the outline site application boundary as identified and complies with the parameter.

Parameter Plan 04 Basement Level Plan

The proposed plot design complies with the designated criteria for mixed use frontages onto North Woolwich Road as well as the location of the energy centre. Undercroft parking proposals are set within the boundary as indicated on the drawing and have been refined in detail to respond to structural and supporting technical requirements.

Parameter Plan 05 Flood Defence Level Plan

The proposed design complies with the designated criteria for mixed use frontages onto North Woolwich Road. B1 units are proposed along the western edge of the plot as well as supporting C3 ancillary uses.

Parameter Plan 06 Proposed Upper Level Plan

The proposed design complies with the designated criteria for use class orientation around the plot.

Parameter Plan 07 Proposed Building Footprints

The proposed development sits within the masterplan parameters excluding a small area of increased separation between buildings to the western edge of the plot, created to facilitate a more generous landscape environment for both cars entering the carpark and residents entering the landscape courtyard adjacent to one another.

The proposed flue location has moved from the west inside corner to the east inside corner of Plot 01 to comply with environmental health legislation ensuring the flues vent higher than the tallest position on the plot.

Parameter Plan 08 Proposed Minimum AOD Levels

The proposed design complies with the designated criteria

Parameter Plan 09 Proposed Maximum AOD Levels

The proposed design complies with the maximum AOD levels except for localised areas of parapet wall only on Plot 03 at eighth floor level. Finished roof level matched the proposed maximum AOD value with the parapet wall extending 80 cm higher providing articulation to the top of the building in line with DRP comments.

Parameter Plan 10 Movement Plan

The proposed design complies with the designated criteria

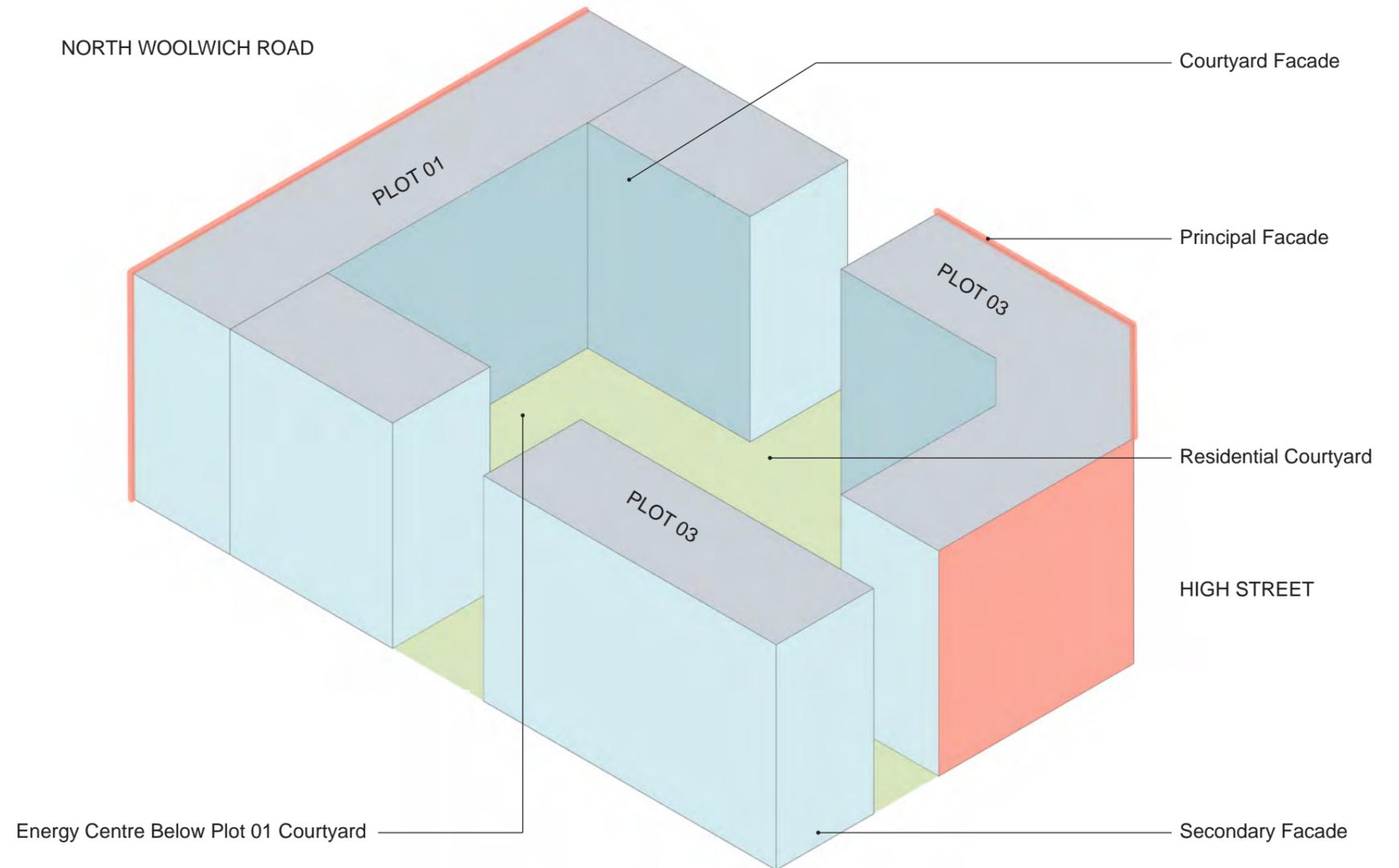
Parameter Plan 11 Public Realm

The proposed design complies with the designated criteria

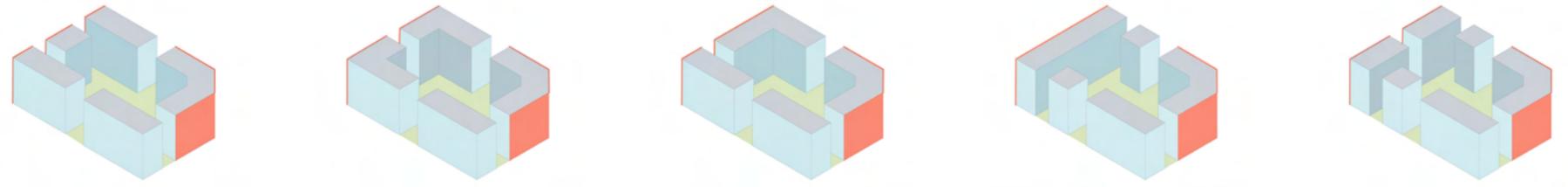
Royal Wharf Massing

As part of the 2011 masterplan a number of urban block studies for Plots 01 + 03 site were undertaken. The design principles explored for this masterplan zone are highlighted below and stand as a starting point for the updated design proposals:

- Perimeter development / urban block development;
- Distinct plot character;
- Maximise views into and out of the scheme;
- Simple massing to North Woolwich Road level onto the High Street;
- Scale relationship to Phase 01 buildings;
- Entrances onto main streets;
- Range of facade types;
- Provision for local amenities;
- Integrated and hidden secure parking as basement and undercroft.



Royal Wharf Outline Masterplan Massing Illustrated Plots 01 + 03



Summary of Massing Studies Undertaken for Plots 01 + 03

Massing Evolution

In order to realise the opportunity to provide contemporary family housing a number of massing concepts have been explored for the Plot 01 + 03 site. Development of initial study models has resulted in the adjacent illustrated massing diagram.

The following issues have been developed and addressed at a larger scale and as an evolution of the masterplan scheme, in line with design comments received by the LBN DRP:

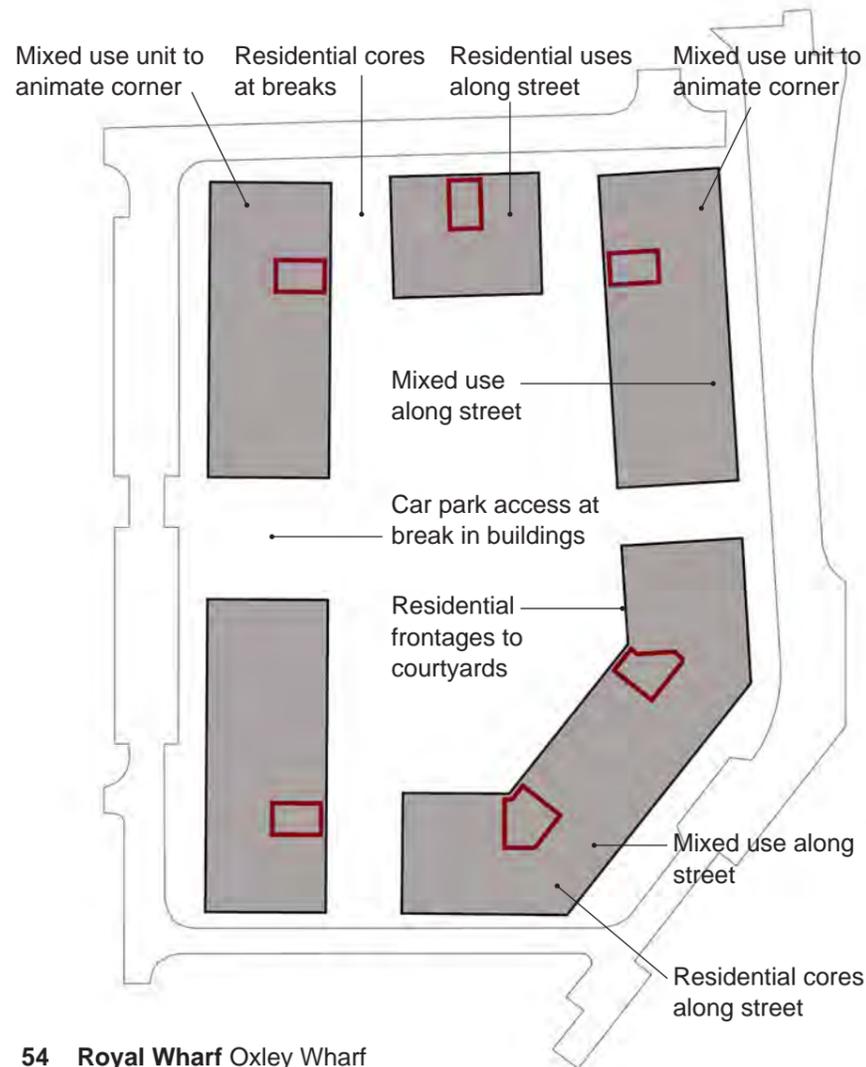
- Facade articulation;
- Requirement for no single aspect north facing units;
- Amenity space provided as balcony and winter gardens;
- Energy centre location and flue position;
- Articulation at roof level;
- Provision of roof terraces;
- Cycle store access at grade;
- Animation of North Woolwich Road and the High Street;
- Greater consideration of the sun path
- Responding to the DLR.



Lower Levels Arrangement Strategy

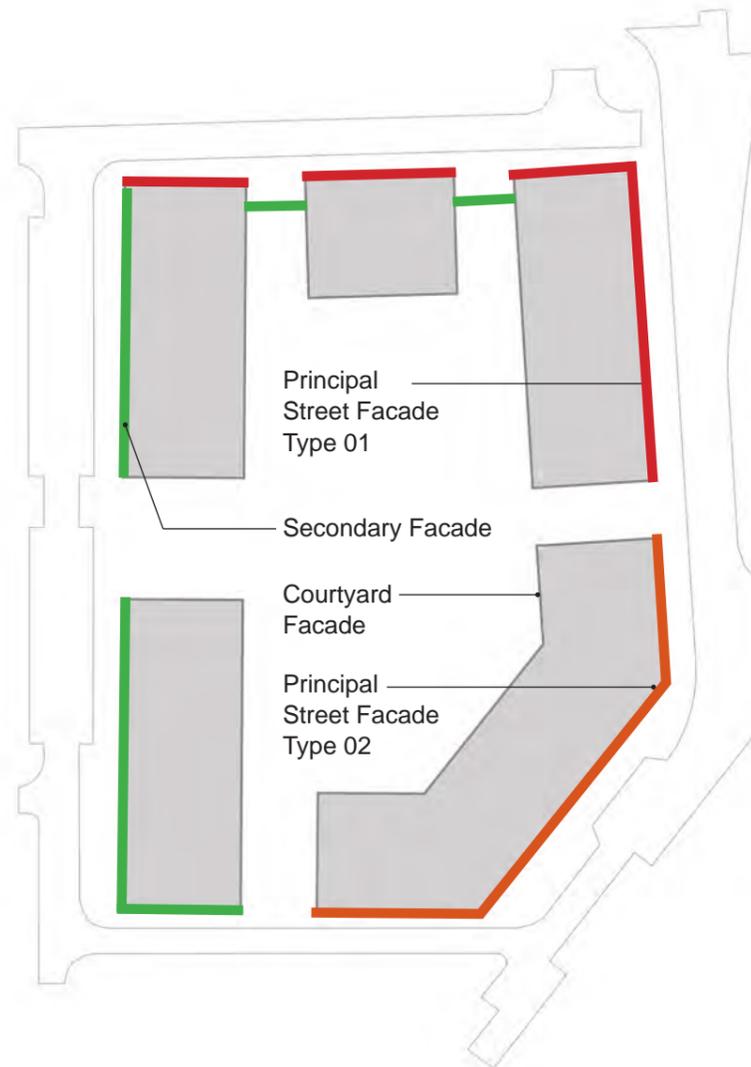
With reference to the masterplan land use parameters, the lower floor arrangement plans of Plots 01 + 03 have been evolved to provide a variety of mixed uses.

The diagram below illustrates the schematic layout of the lower levels.



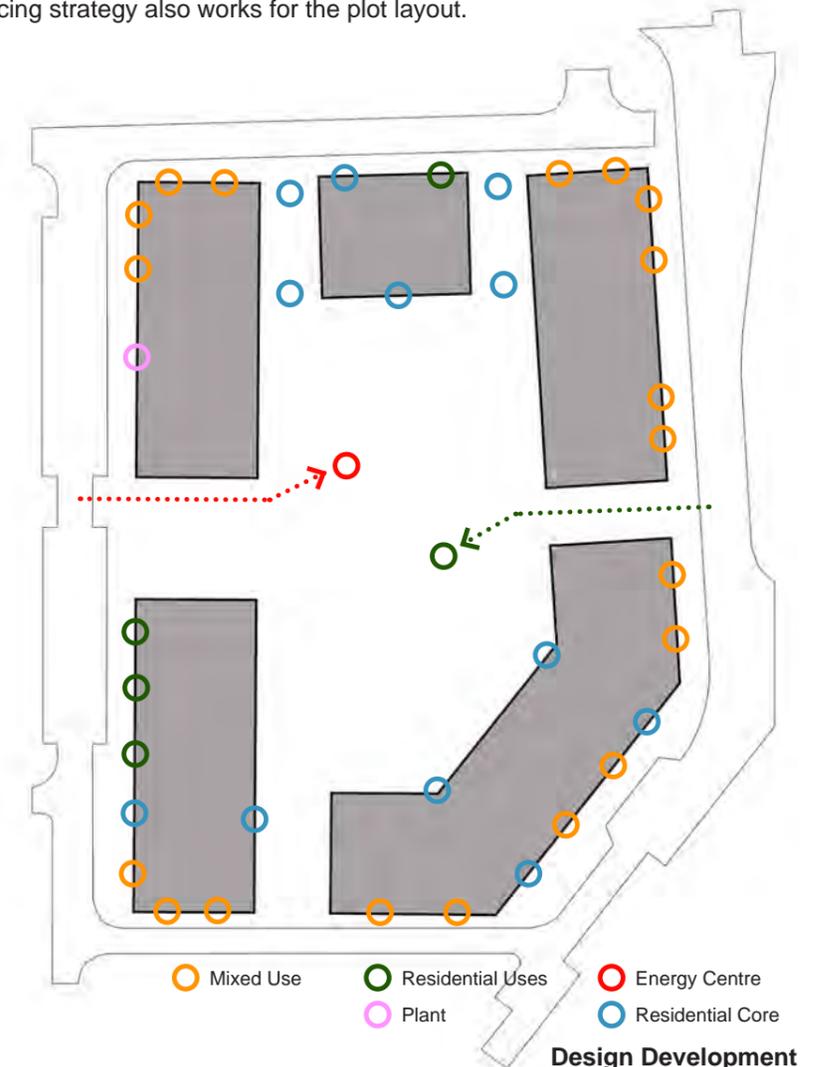
Townscape

As illustrated earlier in this document the Royal Wharf masterplan design code proposes a range of different elevation types along the length of each plot to form the masterplan street frontages framework. The plot proposals seek to reinforce and enrich this tapestry of materials and elevation types. A summary of the high level elevation groupings is annotated below.



Access + Servicing

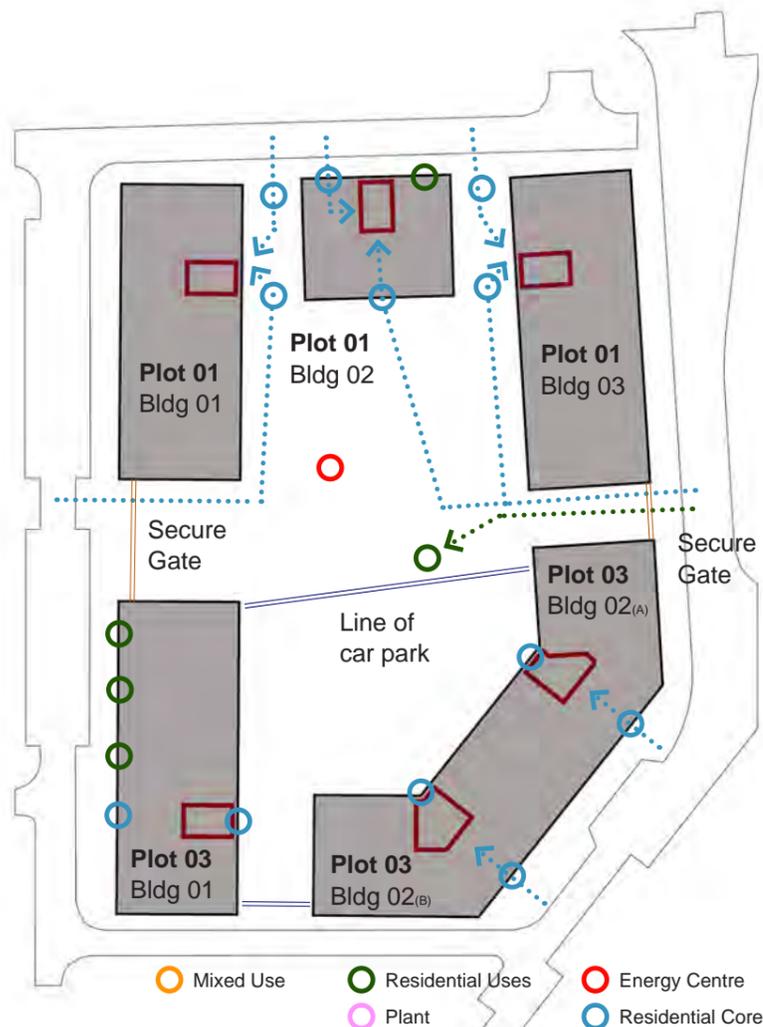
Owing to the hierarchal importance of North Woolwich Road and the new High Street, as well as the desire to ensure mixed uses are the predominant activity visible around the plot, residential plant and service zones located in the base have been strategically placed centrally in the plan or located along the western edge of the development zone. This strategy allows the principal pedestrian routes to benefit from active frontages while ensuring the servicing strategy also works for the plot layout.



Entrances

Each Plot has been divided into a number of buildings labeled Plot 01, Buildings 01, 02 and 03 and Plot 03 Buildings 01 and 02. Each has its own entrance core placed as features along the main street facades.

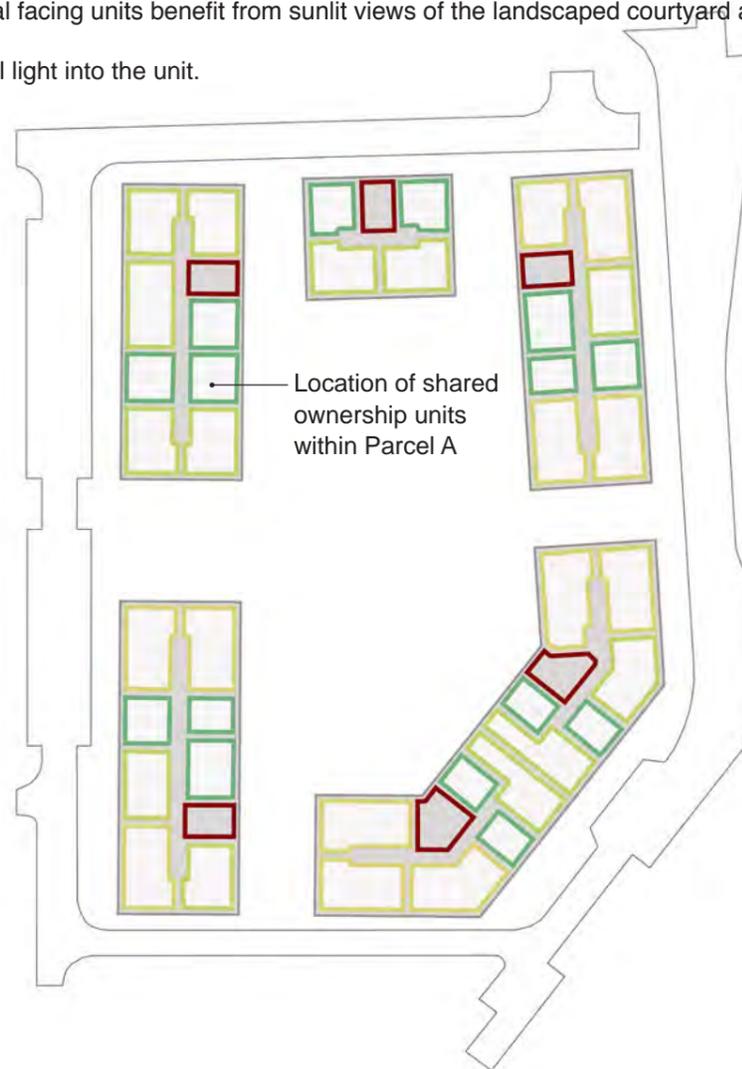
Additionally, level and secure core access into each residential courtyard is provided at the appropriate level.



Upper Level Arrangement Strategy

Above grade all of the upper level plans contain only apartments. Single-aspect north-facing units have been avoided with core positions strategically placed to address issues of overlooking and adjacency.

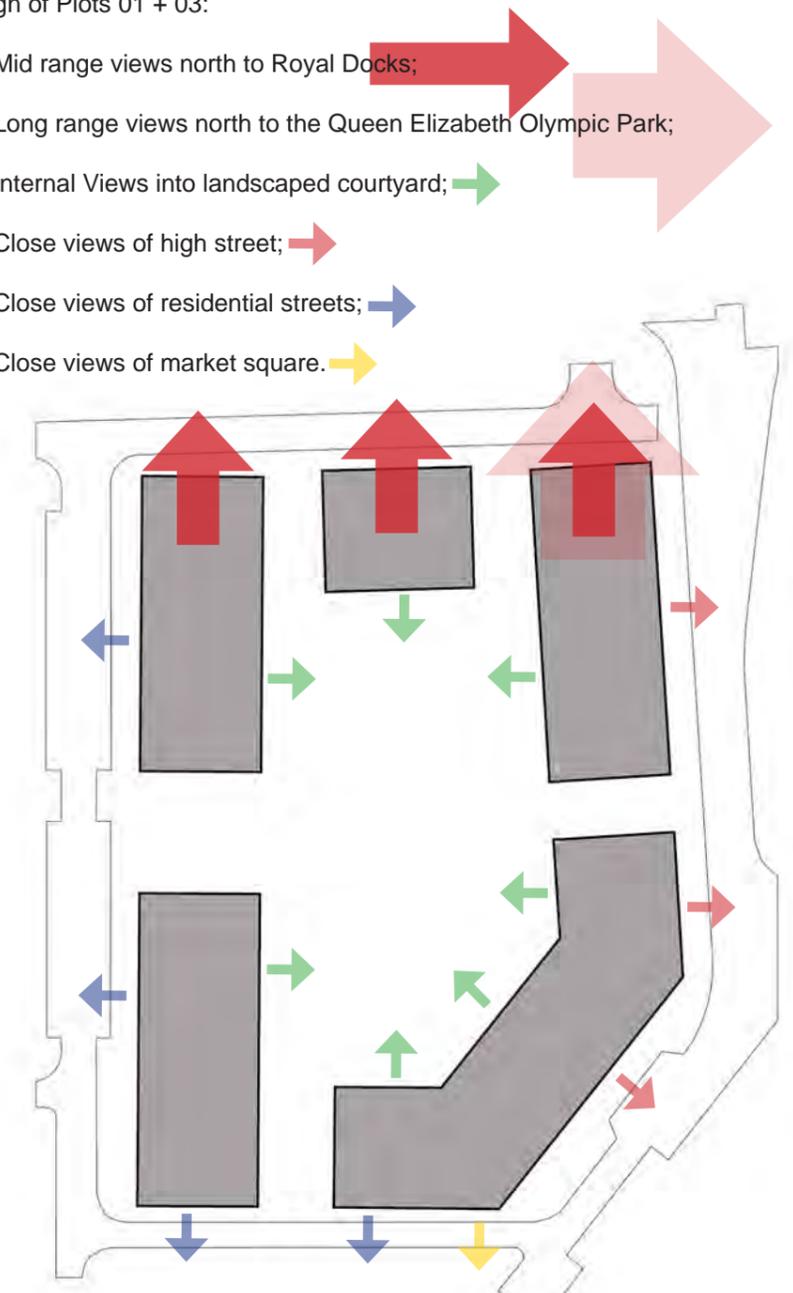
Located centrally to the plan is the semi-private landscaped courtyard and private gardens, protected from the hustle and bustle of the main streets. All internal facing units benefit from sunlit views of the landscaped courtyard and natural light into the unit.

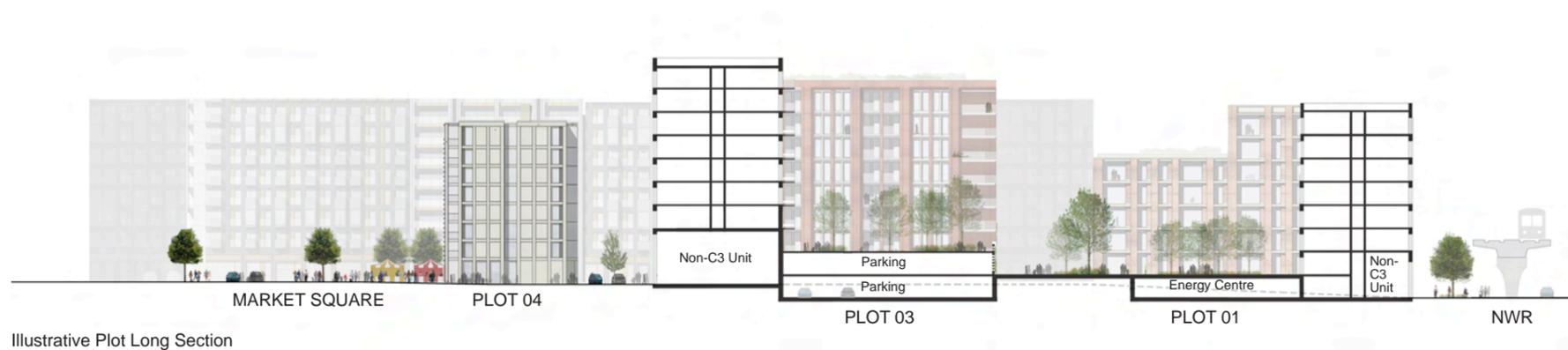


Views

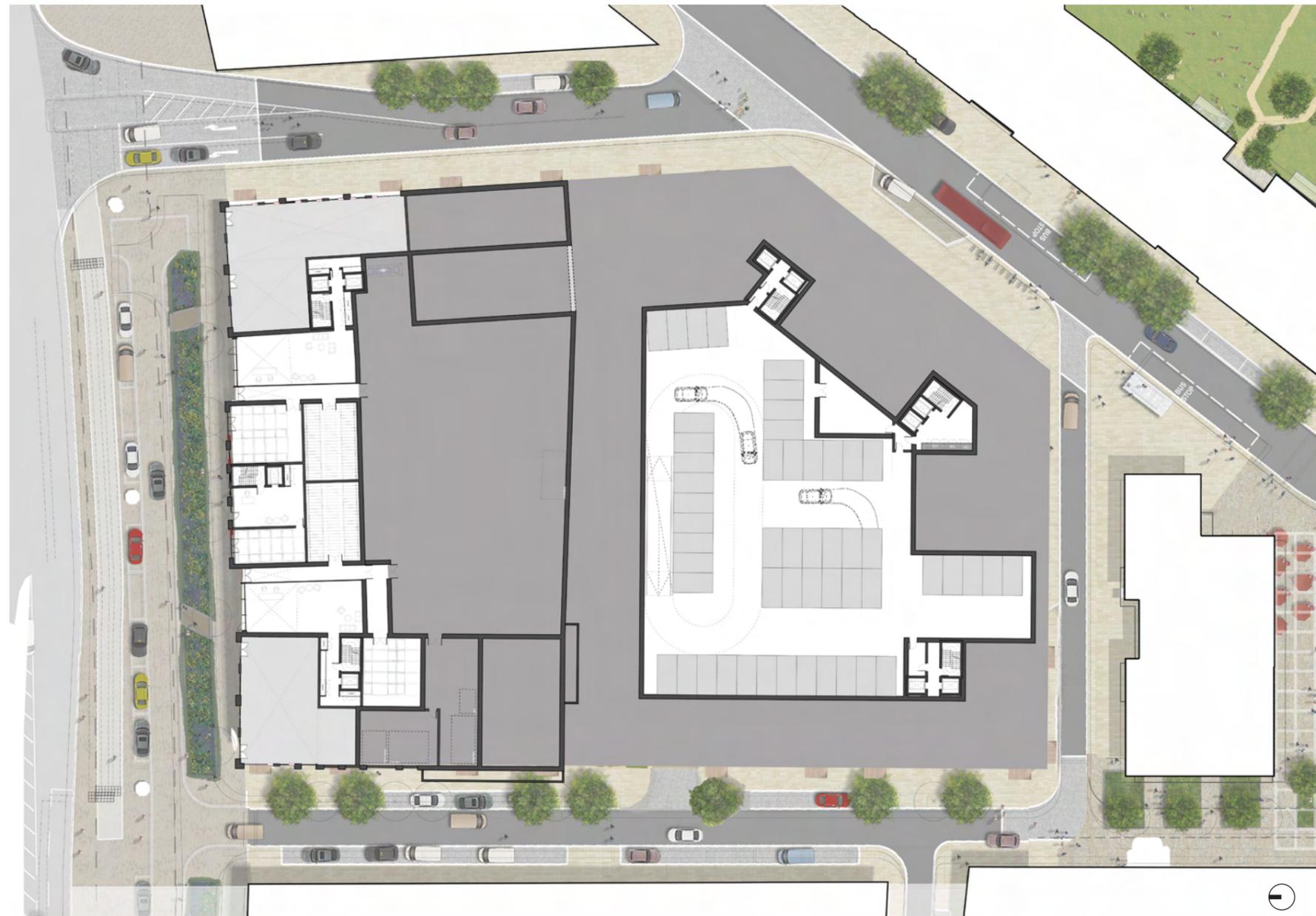
The diagram below illustrates the viewing planes that have influenced the design of Plots 01 + 03:

- Mid range views north to Royal Docks; →
- Long range views north to the Queen Elizabeth Olympic Park; →
- Internal Views into landscaped courtyard; →
- Close views of high street; →
- Close views of residential streets; →
- Close views of market square. →





Illustrative Plot Long Section



Illustrative Lower Ground Level Plan

Lower Ground Level Plan

The proposed Plot 01 + 03 lower ground level plan is illustrated adjacent.

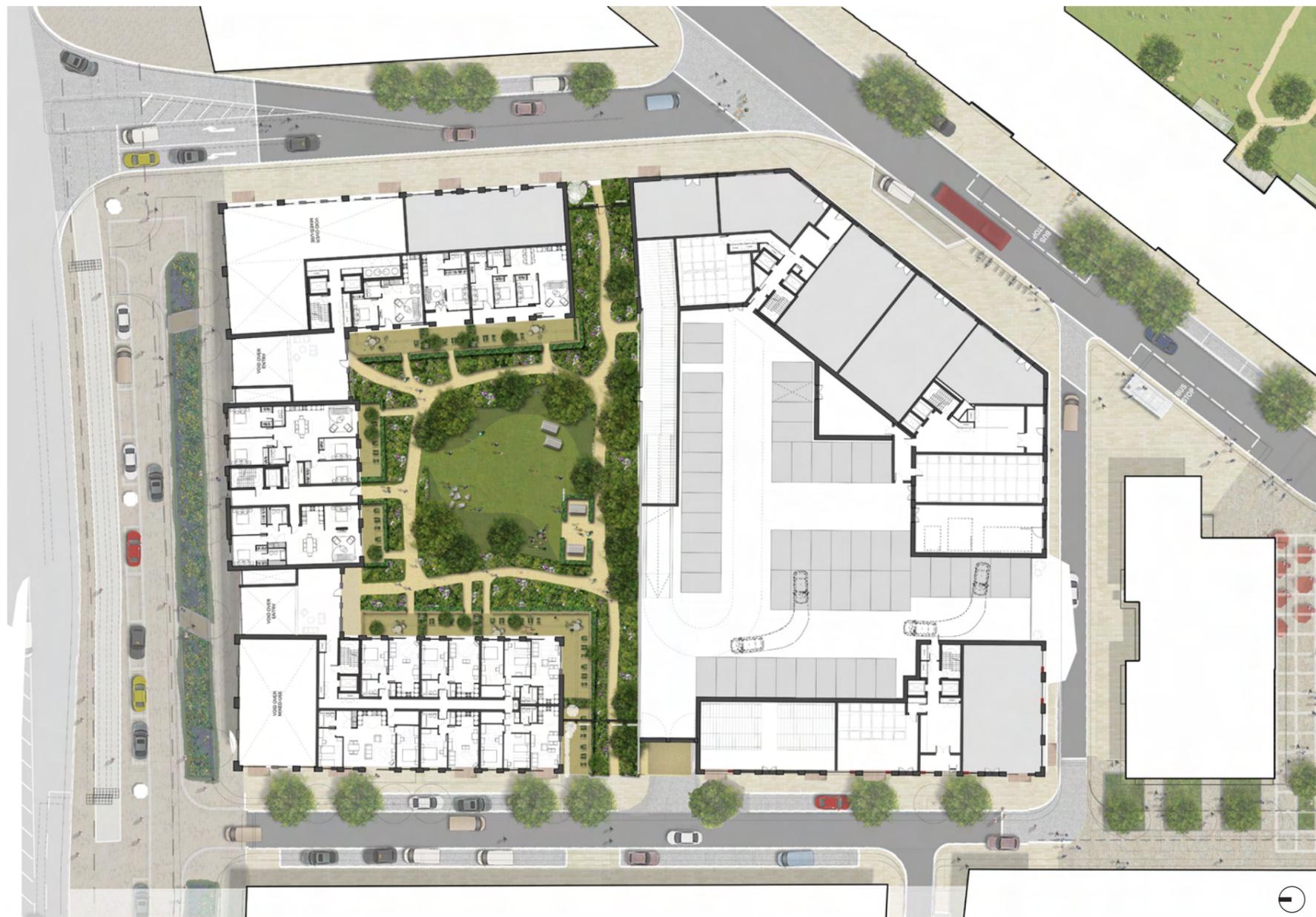
Along North Woolwich Road the facade is principally glazed to promote a visual relationship with unit occupants and residential cores.

Multiple residential cores have been placed to the edge of the building footprint, allowing a maximum amount of area to be provided as residential entrance and for a maximum amount of mixed use typologies to animate the street.

Cycle store and ancillary C3 uses are located adjacent to the residential cores with minimum street frontage provided.

The energy centre for the Royal Wharf site is proposed within the curtilage of Plot 01.

Basement car parking is located centrally within the Plot 03 plan accessed via a vehicular ramp from above.



Illustrative Ground Level Plan

Ground Level Plan

Ground level for Plots 01 + 03 has been set at circa +5m AOD in accordance with the EA flood defense level. It principally consists of mixed use commercial units wrapping around the plot perimeter. Entrances to these units animate the facade by providing a range of access points along the building frontage. These are complemented by additional residential core entry points.

Vehicular access to the car park is located west of Plot 03 provided off the street with the minimum number of vehicular movements. Adjacent to the car park entrance and in between each building a large volume of landscaped planting is proposed to articulate and green the view between the plots while also minimising the impact of the car park entrance.

Where residential units are proposed at this level the external pavement level is notably below the apartment level giving a strong degree of private raised terrace acting as defensible external space for the unit.



Illustrative First Floor Level Plan

First Floor Level Plan

At first floor level both residential courtyards are accessible to the residents of Plots 01 and 03. Typically, where retail units front the main streets these extend into double height voids at this point in the plan.

Perimeter residential terraces are provided to the apartments fronting onto the landscape courtyards.

Shared ownership units are located in the north west corner of Plot 01 in building 01-01 at all levels.



Illustrative Typical Upper Level Plan

Typical Upper Level Plan

The upper level plan contains C3 uses only and is dominated by the semi-private and private garden spaces allocated to the apartments.

Breaks in the building mass allow sunlight and additional daylight to penetrate the courtyard landscape spaces and allow a large number of apartments the enjoyment dual aspect arrangement.

Each of the apartments has been carefully considered in design and layout to maximise views, daylight levels and internal spatial arrangement, to achieve the highest quality residential experience for the proposed scheme.

Direct level access out of each of the apartment buildings has been provided onto the landscape terrace to ensure full accessibility by each of the residents of the scheme.

A step change has been provided between the courtyards of Plots 01 and 03 to accommodate the car park, to promote privacy and a provide level of definition and separation between the two plot's landscape spaces.

Consistency in detailing and quality of landscape will ensure a harmonious relationship across all of the out door spaces.

Elevations Concept and Townscape

For Plots 01 + 03 the Royal Wharf masterplan envisaged that the building design should employ a range of materials, scale and language that references the architectural character already evident across Phase 01 and which creates an identity appropriate to each of the facade settings.

Plot 01 is to be predominantly dressed in brickwork and is conceived as a reflection of an East London warehouse building aesthetic. Plot 03 is to be predominantly dressed in a finer brick and is conceived as a reflection of central London's C18th and C19th mansion apartment buildings.

Following a strategy of applying a limited number of carefully selected materials across the plots, several local physical constraints have also been considered to inform a suitable design solution for each facade:

Municipal Hierarchy and Scale

A hierarchy of scale for each building has been established to determine the importance of the facade within its context, subsequently informing the level of detail applied to the facade.

Human Scale to Detailing

In contrast to the Municipal scale required to promote each building in its urban context a further and finer level of residential detailing has been applied to ensure the buildings read as a cohesive residential scheme.

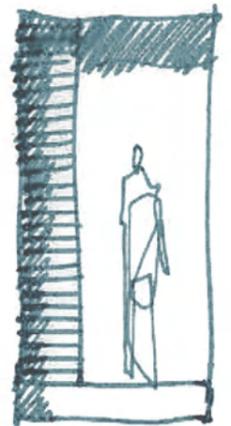
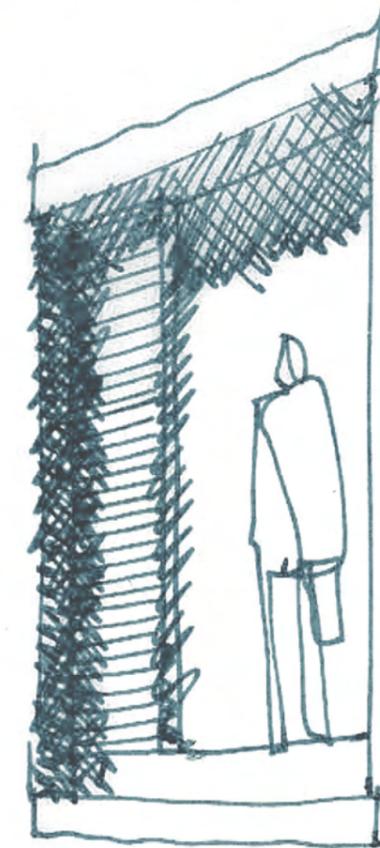
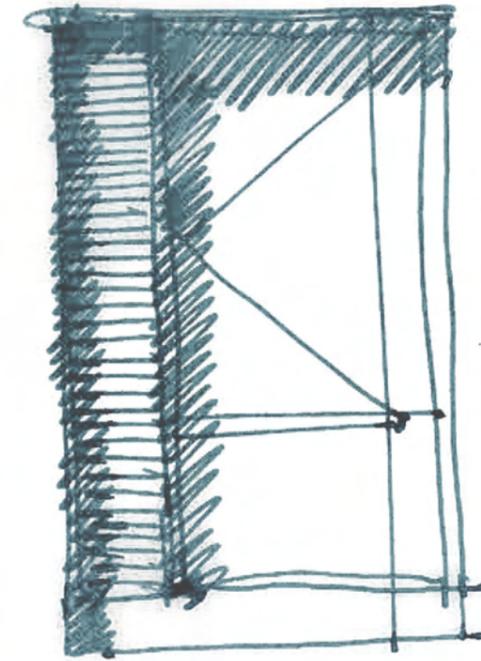
Robust Materials

It is of importance to specify a palette of materials that reflects a modern development of its time as well as contributing to the future historic character of the Royal Wharf area. To this regard brick detailing for plots 01 and 03 is proposed to be complemented with reconstituted stonework and metalwork detailing.

Respectful to the Surrounding Context

Good design can ensure that local significant buildings of interest maintain their status through smart framing and scale of elevations.

These principles have been incorporated into the design of each facade proposed across plots 01 and 03.



Plot 01 Window Design Study Sketches

Elevation Design

The following pages illustrate a summary of design development undertaken for each building plot, presented as below:

- Design principles
- Precedents
- Bay elevations for the main facade types



Plot 01 Initial Window Design Study Bay Model



Plot 01 - East London Warehouse

Plot 01 fulfils an important role in connecting the Royal Wharf site to North Woolwich Road and existing residential developments further afield. The principal North Woolwich Road elevation also sits alongside a previously consented masterplan plot (Plot 02).

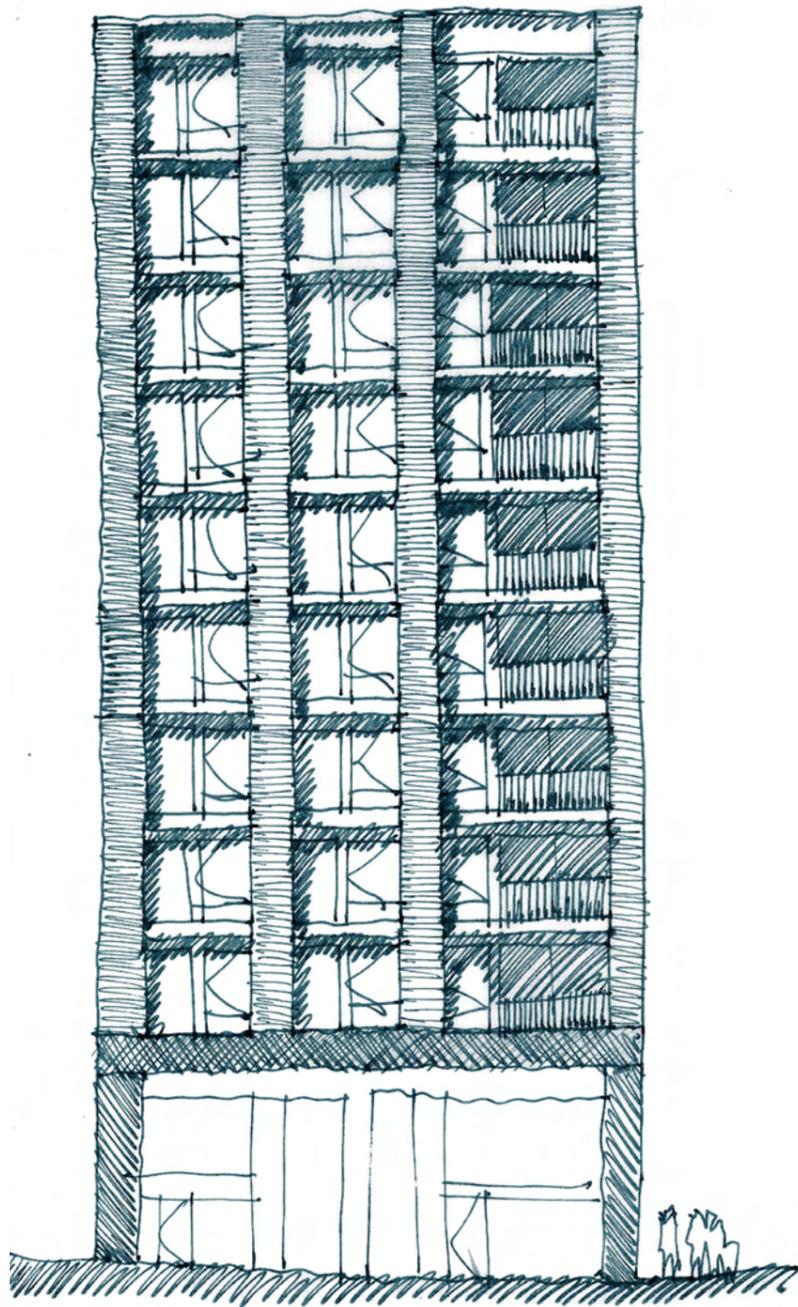
In response to the robust requirements of its location adjacent to the DLR and NWR, Plot 01 has been conceived conceptually as an East London warehouse building typology. In order to establish its own clear identity Plot 01 has been allowed to complement the scale of surrounding plots whilst also contrasting with Plots 06 (stone), 02 (stone and brick jewel) and 03 (brick mansion) which sit immediately adjacent.



The proposed elevations consist of a brick vertical column upon a reconstituted stone base to the mixed use units below. Window surrounds have been carefully detailed to appear crafted from another brick layer while also reading as articulate against the main masonry piers of the facade. Shadows and fine modern glazing systems will be used to give the building a sense of delicacy and permanence along the new North Woolwich Road elevation.

The sketches adjacent illustrate the evolution of the design, along with the major architectural details.

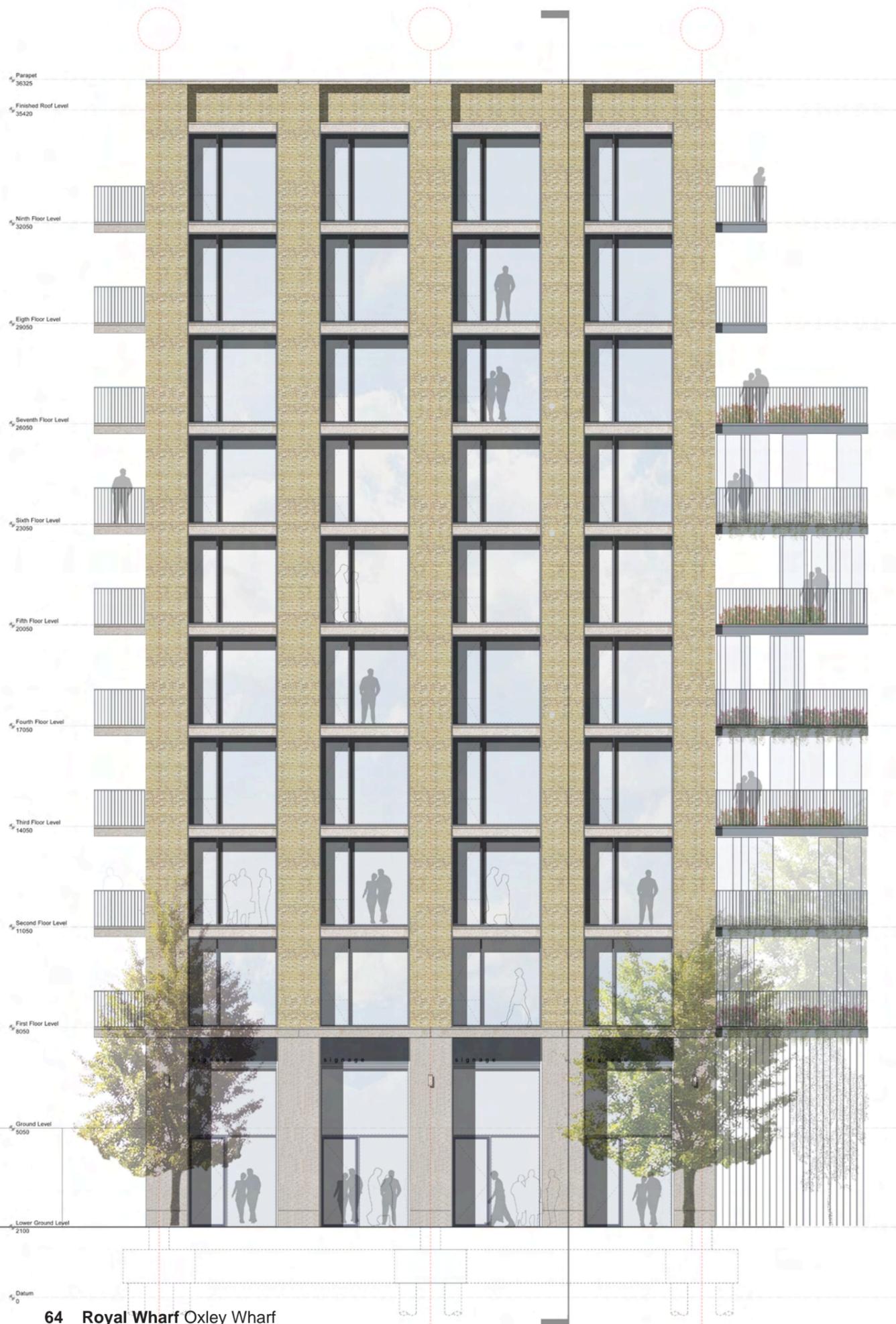
Precedent Study For Plot 01



Sketch Bay Study For Plot 01



North Woolwich Road Image





Above: Bay Elevation Study Plot 01 Courtyard Elevation
 Left: Bay Elevation Study Plot 01 North Elevation



Precedent Study For Plot 03



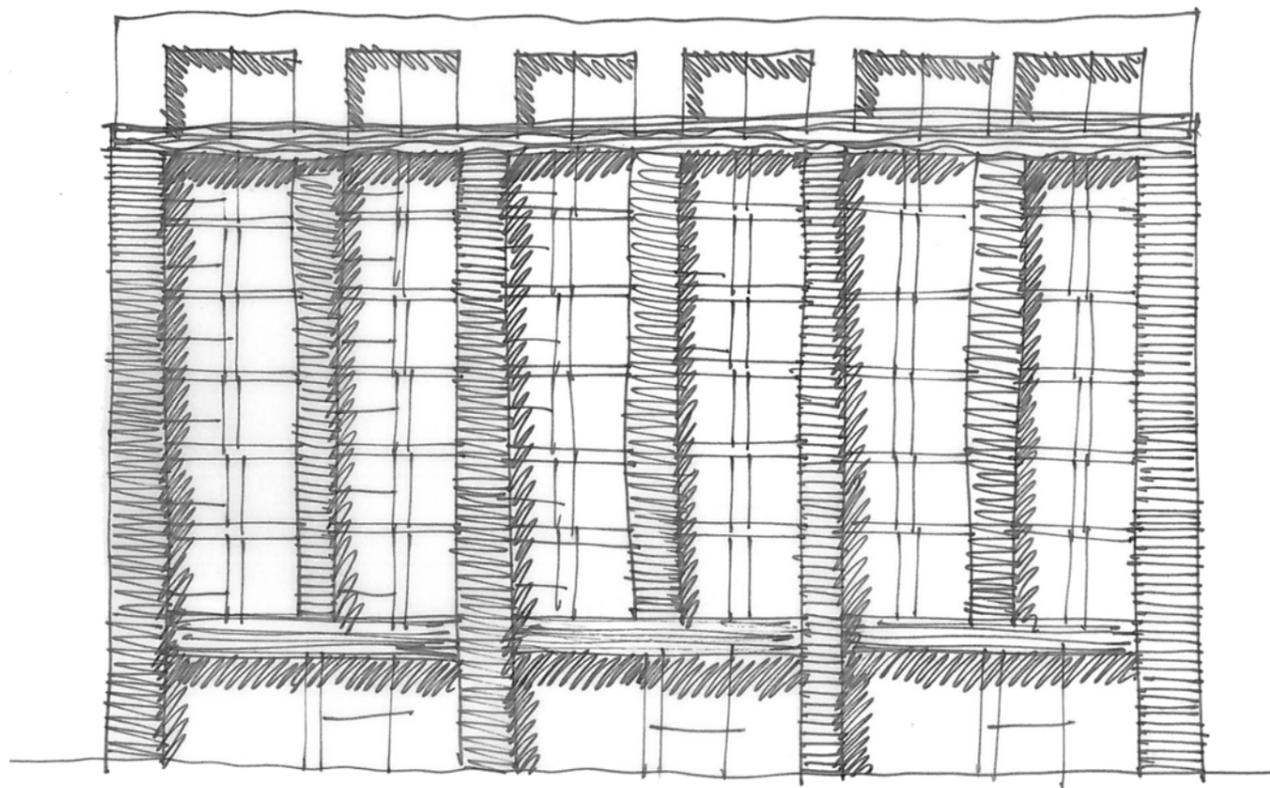
Plot 03 - London Mansion Block

Plot 03 principally fronts the new Royal Wharf High Street and as such is designed to respond to the reduced human scale of the street hierarchy and the close proximity from which it will be viewed. The building has been conceived in a finer architectural language than Plot 01, as a red brick London mansion house with a main body of brickwork dressed in locations with precast stone and metal detailing.

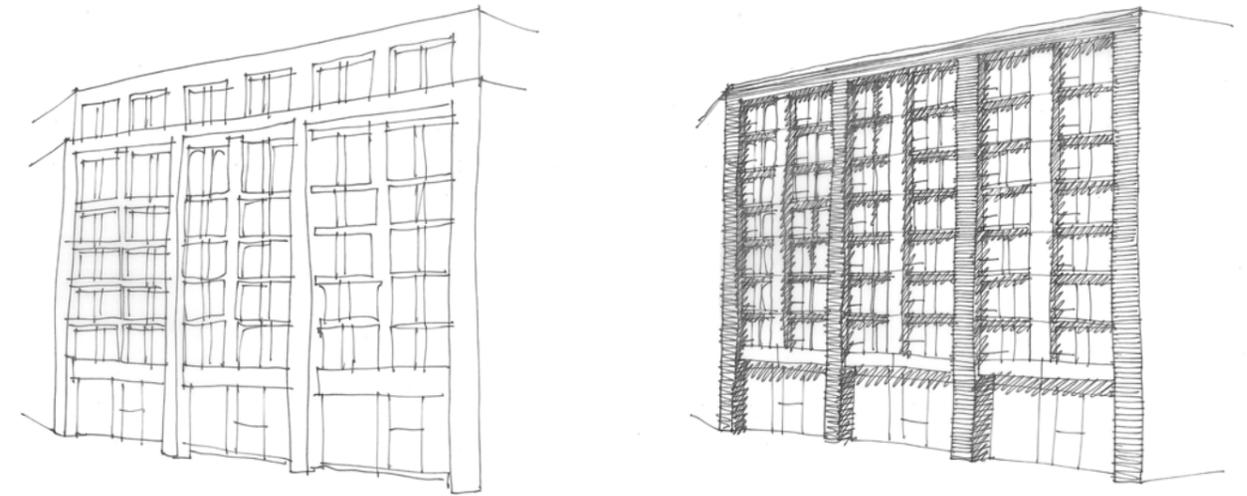
The facade clearly articulates each floor level while concealing the various unit typologies behind a single repeated facade element to present a more civic character to the high street.

The master brick piers extend the bays down to street level with mixed use units articulated with bespoke stone lintels between the brick piers.

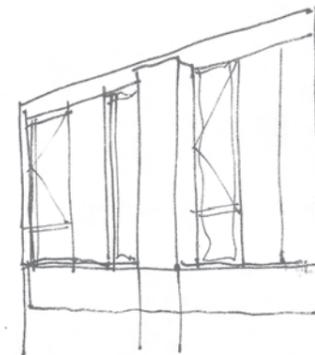
To further accentuate the building's central top level, the uppermost storey fronting onto the high street has been designed as a stone plinth. This material change alongside additional metal panelling proposed as part of the glazing system adds further richness to the facade.



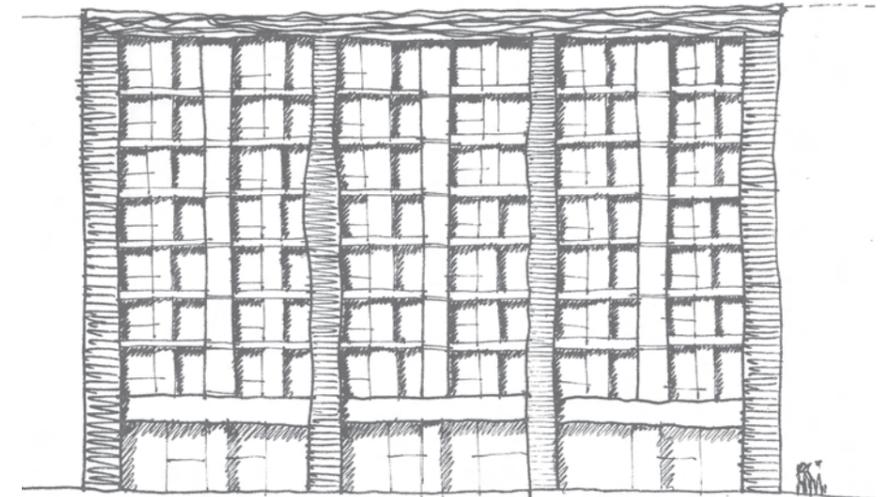
Plot 03 Bay Study



Design Sketches Plot 03 High Street Facade



Window Reveal

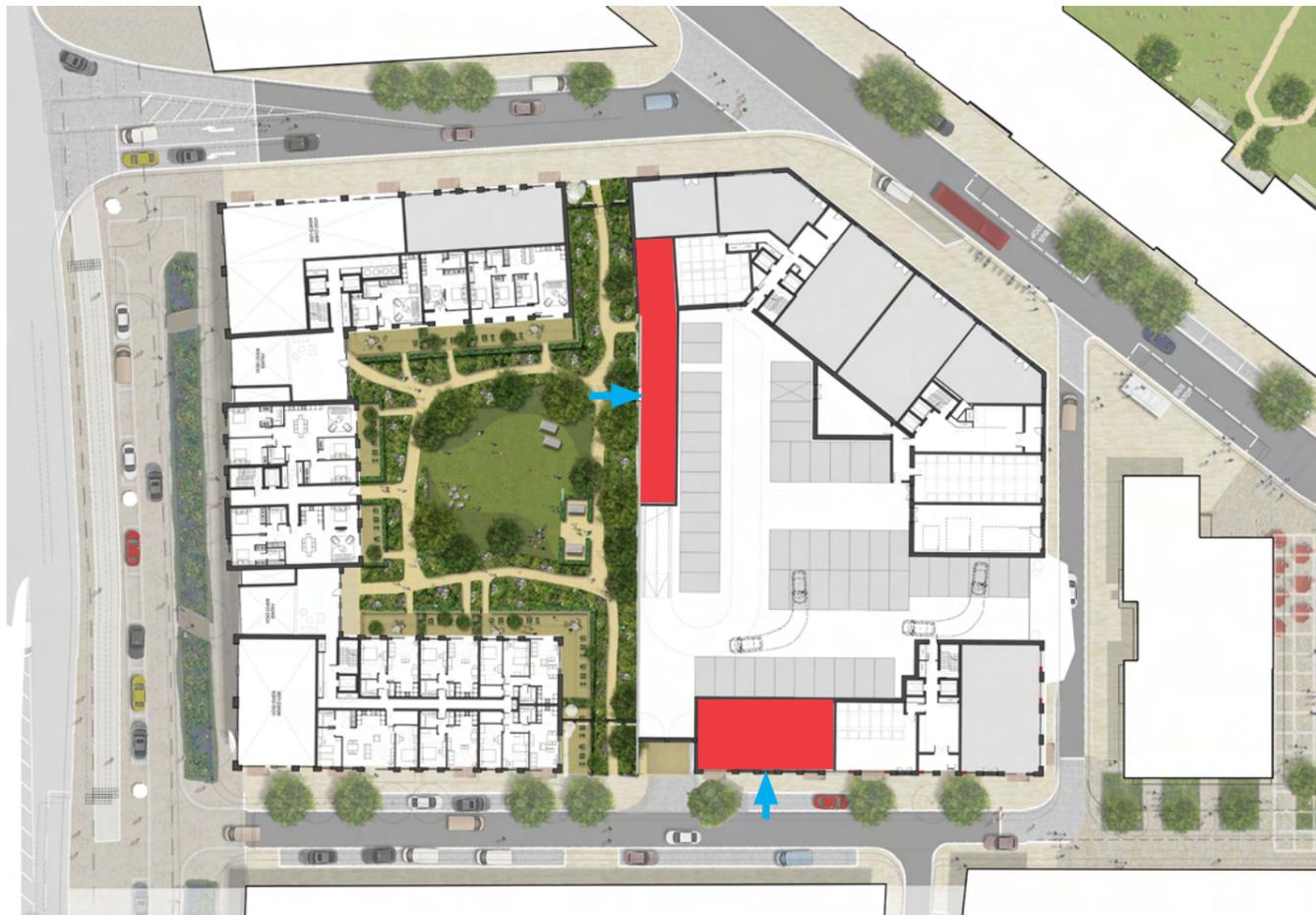
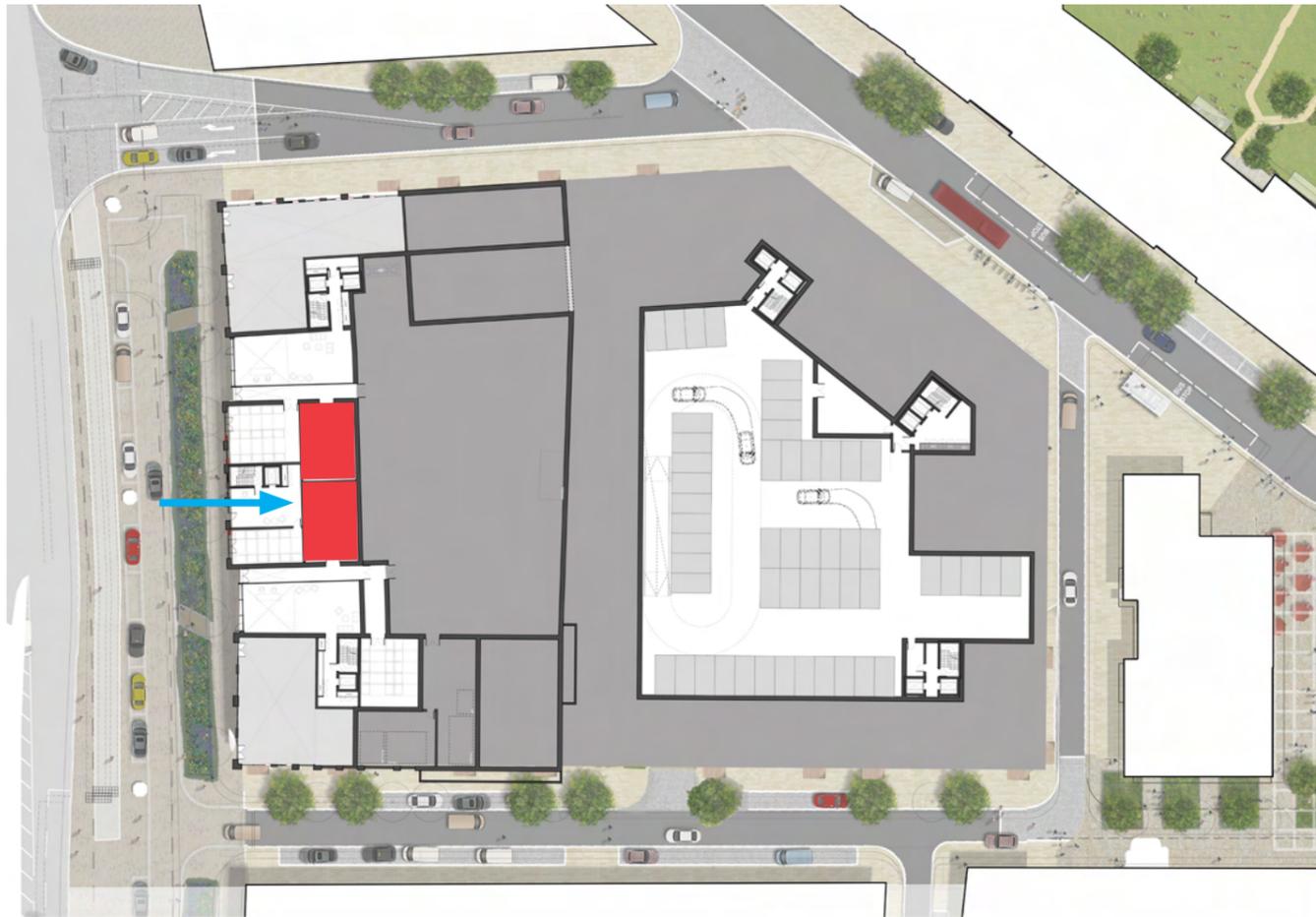


Sketch Bay Study For Plot 03





Above: Bay Elevation Study Plot 03 Building 01 Street Elevation
 Left: Bay Elevation Study Plot 03 Building 02 Street Elevation



➡ Cycle Store Access Point

■ Cycle Store

Cycle Storage + Use

The Royal Wharf masterplan is well served for cycle routes within Newham and sits adjacent to designated routes integrated within the wider London cycle network. North Woolwich Road and Royal Wharf internal streets are identified as having facilities to help cyclists, such as cycle lanes, bus lanes and advanced stop lines at traffic signals.

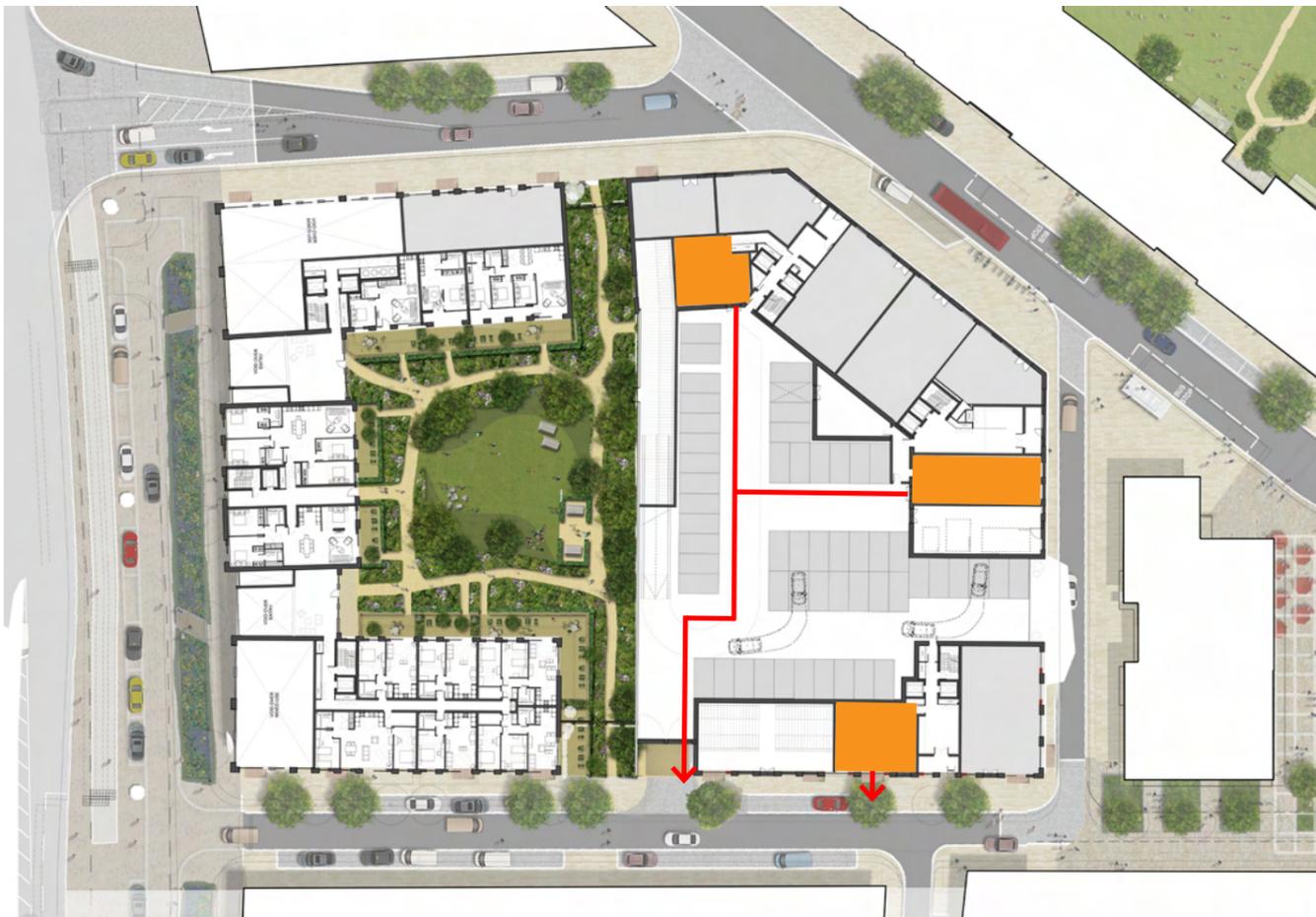
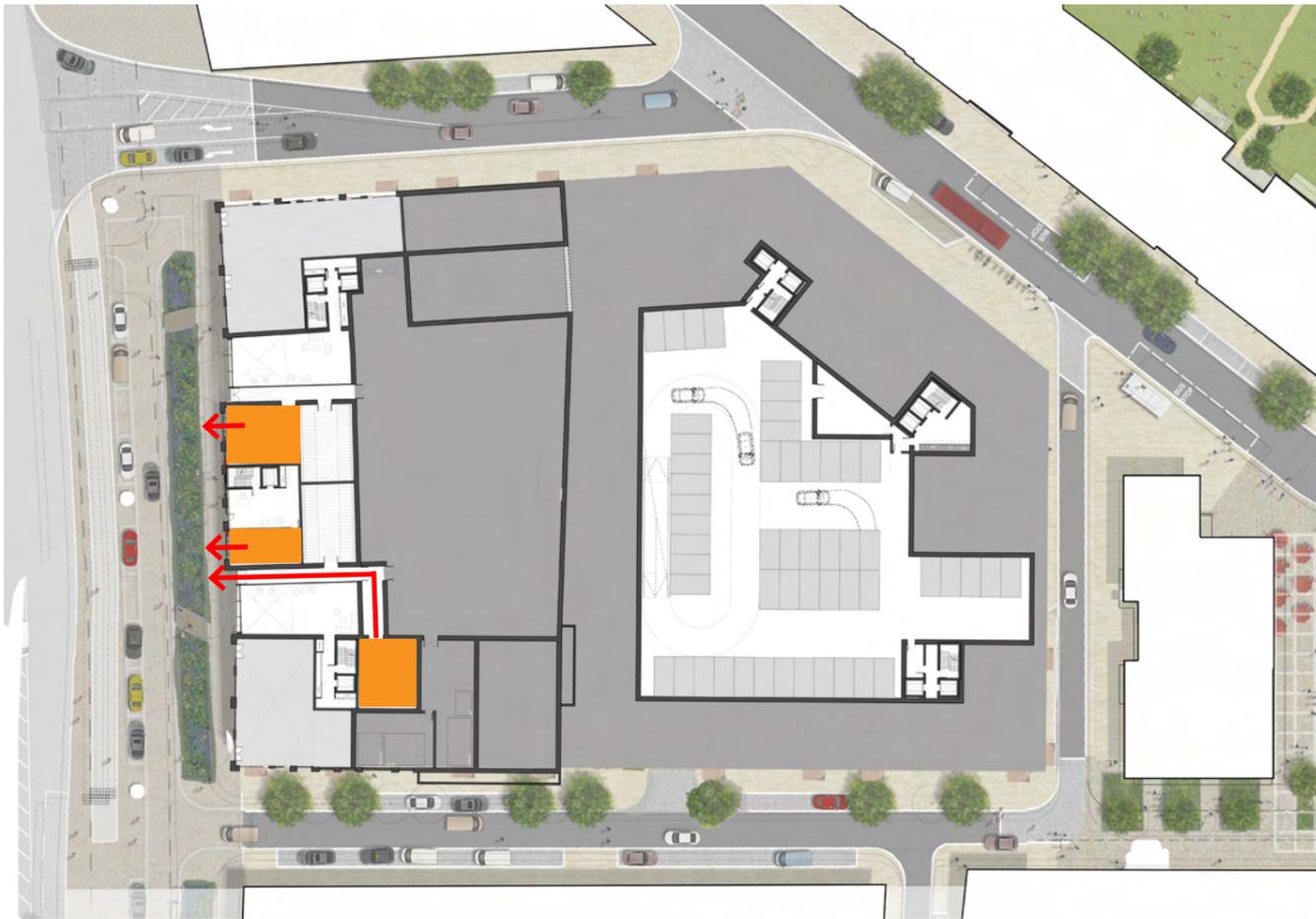
Cycle use is promoted for plor 01 and 03 by the provision of cycle stores built into the ground floors typically adjacent to the residential access cores. The ratio of parking has been assessed against CfSH requirements and is provided to promote the wider use of bicycles as transport thus reducing the need for short car journeys and the associated CO2 emissions. Provision is as the ratio below:

Apartments

Studios or 1 bedroom dwellings – storage for 1 cycle per dwelling

2, 3 or 4 bedroom dwellings – storage for 2 cycles per dwelling

To save space within the plot footprint cycle storage is proposed in Josta 2 tier cycle racks.



Refuse Strategy

The proposed refuse strategy for Plots 01 + 03 uses is presented adjacent. The proposals have been developed with consideration to the overall management strategy for the Royal Wharf site and in line with LBN Waste Management Guidelines for Architects and Property Developers.

Commercial units will be serviced via designated BOH areas from within each unit and service access for both residential and commercial uses will be from dedicated on street lay bys. Specific commercial unit arrangements will be agreed with the local authority upon occupancy of the unit.

Provisions for residential bins are as follows:

Typically - 250 L / unit provided by 1100 L Eurobins

Plot Proposals:

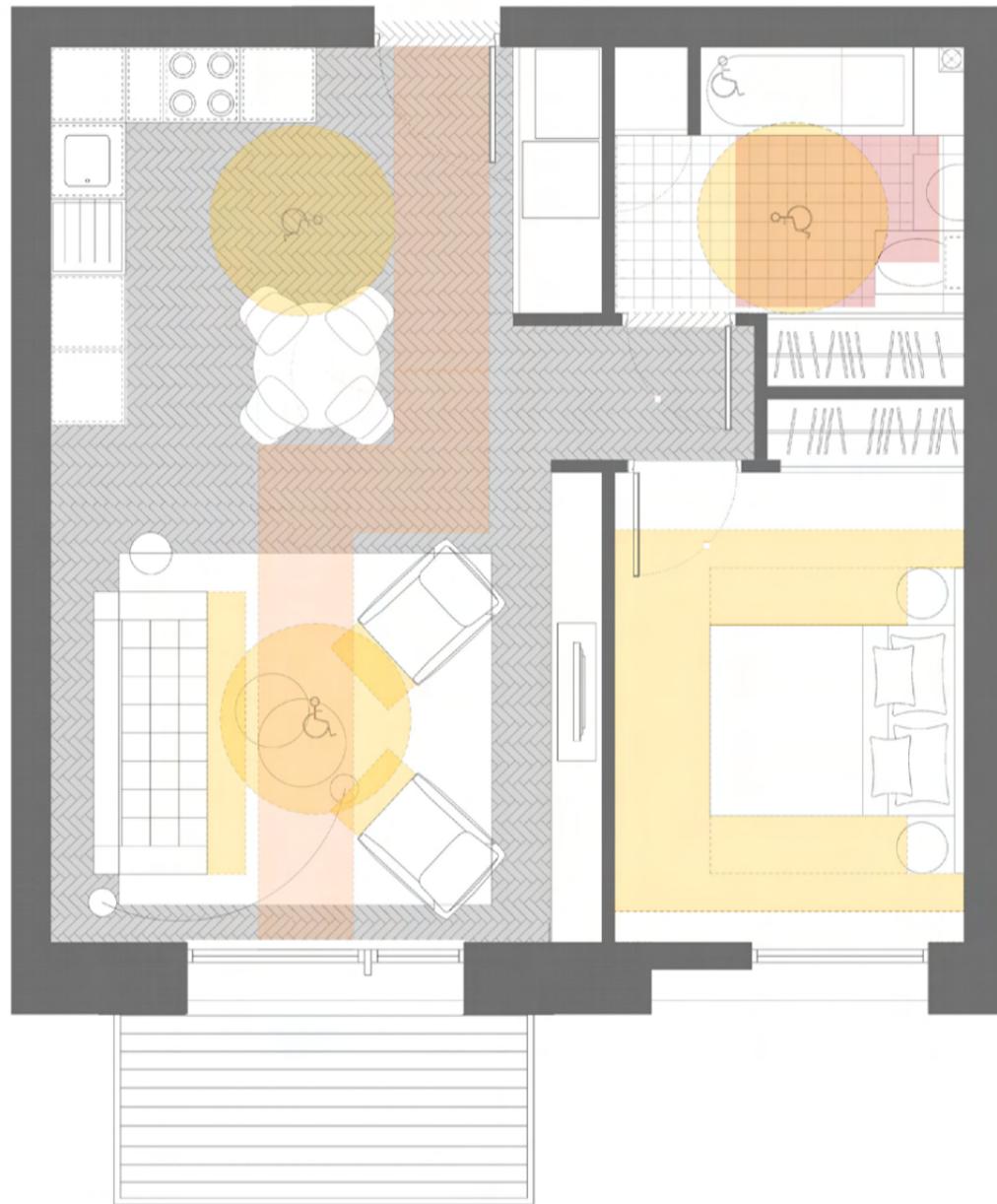
Plot 01 (140 no. Apartments)

3 no. separate refuse presentation rooms providing a total of 42 no. 1100 eurobins (including 30% additional allowance for recycling).

Plot 03 (147 no. Apartments)

3 no. separate refuse presentation rooms providing a total of 44 no. 1100 eurobins (including 30% additional allowance for recycling).

- Refuse Store
- Refuse to Street Route



Typical 1 And 2 Bed Apartment Layouts

Apartment Typology

Plot apartment typologies have been developed specifically to respond to a number of criteria in order to maximise the amenity and quality of the homes being provided. Each apartment building will be planned to incorporate the following:

- An efficient layout which minimises the amount of vertical circulation.
- Be organised to create more family orientated design
- Be generous in terms of their size
- Maximise the amount of natural light
- Provide access to external terraces
- Maximise the surrounding environmental conditions

The apartment buildings have been designed across cores of no more than 8 units per core, to ensure there are a limited number of apartments surrounding a circulation space. This principle will create a sense of ownership and will generate a greater interaction between residents. Each core has been designed to contain a mix of apartments types and sizes to promote variety. Units within each plot, are specifically placed based on their size and the number of habitable rooms provided.

As the scheme will present spectacular views when looking both into the courtyards as well as out onto the new public realm, it has been essential to place units strategically to achieve these vistas and where possible dual aspect apartments have been provided.

Cores have been designed to maximise the potential for dual aspect units and larger 2 + 3 bed units, with 1 beds and suite units typically located central to each building plan. North-facing single-aspect units are not proposed.

The design team has determined a framework of plan typologies that allow the internal planning of each building core to respond to its immediate contextual and environmental conditions.

In addition to the internal planning of the building the success of the apartments will require a range of common areas and circulation routes to sit comfortably together providing a diverse approach to building design, facade layout and ancillary space access to ensure the day to day use of the building is not detrimental to the residential setting.

A range of private spaces associated with the apartments are proposed. As part of the wider space strategy, the apartment courtyards and car park roof terraces are intentionally well enclosed, clearly defining private amenity space from public. The courtyard spaces are generous enough to receive good lighting levels during the day and enclosed in the centre to offer a sense of security during the evening / night.

The spaces are designated for resident access only. The high levels of natural surveillance allow portions of the spaces to be child friendly and secure. Trees, semi-mature planting and landscape furniture will be strategically positioned, able to offer areas of privacy and shade during the day. Lower level residential units will be provided with extended accessible defensible space, in front of all windows and secondary entrances addressing the proximity of the public realm to the unit.

Landscape Vision

The landscape design for Plots 01, 03 and 09 bring forwards the design for the courtyard gardens. These gardens will be places which will afford the Plot Residents an amenity space which is attractive to look out over and is appealing for residents of all ages to use.

Plots 01, 03 and 09 sit within the Royal Wharf master plan surrounded by streets which were brought forward with the detailed Phase 1 application. These streets were designed to establish a hierachy, using a familiar language of materials and elements for carriageways, kerbs, and footpaths, that will enable the development to feel like a recognisable part of the wider city.

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.

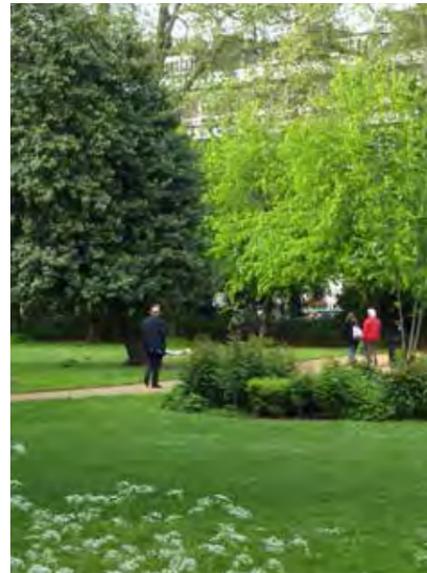
Phase 1 of Royal Wharf received a detailed planning consent alongside the outline master plan consent. This brought forwards a number of streets, the entrance space, the Market Square, the first section of North Woolwich Road and the Riverside Park. As well as these areas of public realm, residential courtyard gardens are being delivered in Plots 02, 05, 08, and 10 as well as a residents kitchen garden along the eastern boundary of the site.

The designs developed for Plots 02, 03, and 09 respond to the proposals being developed as part of Phase 1, embracing the streets and spaces that are being delivered alongside them.





- 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



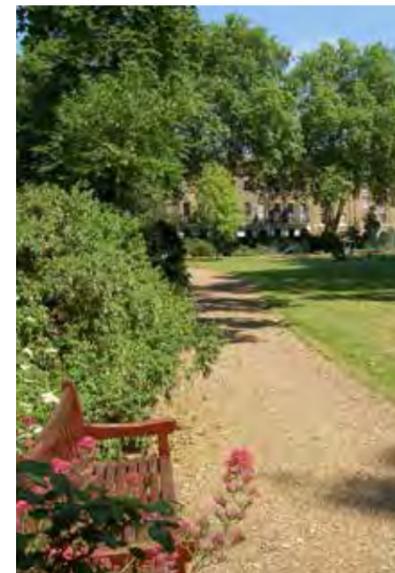
Gordon Square



Argyle Square



Brunswick Square



Mecklenburgh Square

The Garden Courtyards at Royal Wharf

The gardens at Royal Wharf have been conceived as a family of private spaces only accessible to the residents of the surrounding buildings. 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 overarching identity that will help to reinforce Royal Wharf as a distinctive neighbourhood.

There are some opportunities for an alternative approach where the function is significantly different, such as the communal kitchen gardens, or where the size or shape is different, such as the linear gardens along the eastern boundary, which are also being developed as part of phase 1 (consented).

Design Review Process

The landscape was presented to the Design Review Panel (DRP) alongside the Architecture. The following comments were given and have been addressed below, and in the following document:

Plot 01, Plot 03 and Plot 09:

[The landscaping within these spaces is disappointing and needs to become more specific to the spatial characteristics, orientation and potential use of the courtyard. The opportunities for the landscape to bring delight to the scheme, create unique identities and enhance quality of life has not yet been successfully exploited.](#)

The panel were presented with concept layouts for the Garden Courtyards at this presentation. We feel that the variety of form, scale and surrounding buildings creates an inherent variation between the gardens. While on plan they have a communality in language, the detail will create rich variation. The designs have been developed to respond to the individuality of each space; we have explored the use of varying planting palettes, colour, activity and form so that the individual character comes through. Much as the way in which variation finds itself into London Garden Squares, the designs have subtle variations in planting and focal points, for example, Plot 01 has a barbeque area and a tree planting palette which will provide an attractive display in Spring, Plot 03 has some of the same trees

so that there is a visual continuity between the spaces, these are supplemented with more shade tolerant species. Plot 09 uses trees which will provide colourful displays in Spring and Autumn and will also have a flower garden which will be a visual focal point within the garden.

Plot 01 and Plot 03:

[The raised courtyard to plot 3 results in a substantial level change between it and the courtyard to Plot 1. This rules out the potential for its use as one unified space.](#)

The scheme presented to the DRP included a 6m level change between the courtyard spaces. The subsequent design development to address this resulted in the rearrangement of internal accommodation which reduced the level change to 3m. The wall has been used as a positive element within the Plot 01 Garden by using it to increase the sense of planted enclosure in the garden. A variety of climbers will be grown up the wall to create a green backdrop, plants include Schisandra grandiflora, Lonicera henryi, and hydrangea anomala.

The balustrade along the top of the wall is proposed to be a simple metal railing to allow planting to grow through the bars and to maintain visual connection between the spaces.

The intention is for the spaces to remain separate, each one demised to the residents of the respective plots. If access were required between the spaces, a ramp in excess of 45m would be required in addition to a lift. The ramp would sit above the section of the Plot 01 garden that is not on slab. On balance, we feel that the spaces work better as two spaces and that the garden benefits from a section that is not on slab by allowing for less constrained tree planting.

[We questioned whether the soil depth in the courtyard will be sufficient for tree planting – particularly in the locations shown.](#)

Sections have been provided illustrating how tree planting will be achieved above the slab through the use of landform which will create depths of up to 1.2m for tree planting which we have specified previously to establish successful landscapes on slabs.

[Further detail requested for the opportunities for landscape to contribute to quality of life biodiversity, outdoor play and individual character](#)

Quality of life

The gardens have been designed as a centrepiece for plots providing a visual delight that is accessible for all surrounding residents to enjoy. Private amenity

spaces are created around the perimeter, areas within the garden include lawn space, barbeque space and play space as well as places for people to sit on their own or in groups. The design also allows for people in Plot 01 to use the courtyard as a way of accessing the rest of Royal Wharf in a more direct route than going via North Woolwich Road.

Biodiversity

Planting will be designed to create varied landscapes that can change according to the season through flowers and leaf colour and form. Given the proximity to London City Airport, a balance has been struck between the physical needs of the airport and the need for biodiversity within the city. We have tried to avoid planting which will provide food for birds, such as berrying plants, and focussed on nectar rich plants for bees which are not a significant part of birds food supply.

Outdoor Play

Play has been allowed for and is described in more detail further in this chapter.

Individual Character

As described previously, the Garden Courtyards in Plots 01, 03 and 09 are part of a family of courtyards proposed across the site which are private and accessed by

the residents of the individual plots.

On plan, there is a commonality between the gardens, in detail variation and individuality will be visible through the use of varying planting palettes and landscape features.

Plot 09

[We questioned whether the soil depth in the courtyard will be sufficient for tree planting – particularly in the locations shown.](#)

The scheme presented to the DRP was on a basement slab. This has since been removed from the scheme. The garden is now on open ground.

[Further detail requested for the opportunities for landscape to contribute to quality of life biodiversity, outdoor play and individual character](#)

Quality of life

The garden has been designed as a visual delight for the surrounding homes. The proposed flower garden will create a particular sense of surprise and individuality within the garden. Around the perimeter of the garden there will be private amenity spaces for the ground floor residents providing direct access into the

garden. Within the garden a variety of features and elements will be included including doorstep play, picnic benches, lawn space and walking around the flower garden which will be complemented by the use of seasonal plants throughout the rest of the garden.

Biodiversity

As described for Plots 01 and 03, the planting palette will be a balance to create a visually delightful landscape in close proximity to London City Airport which means that birds should not be encouraged.

Outdoor Play

Play has been allowed for and is described in more detail further in this chapter.

Individual Character

The form of the Plot 09 courtyard is strongly influenced by the containment that the surrounding buildings provide. The variation in architecture and access arrangements has led to a varied perimeter arrangement within the garden, formed around a central lawn. To the south, the height and form of the housing will allow generous amounts of light to reach the northern side of the garden where the flower garden is proposed to be located.

Plot 01 and 03 Courtyard Garden

Plot 01 will provide 1,441m² of communal garden space, of which 190m² will be play space. Plot 03 will provide 1,055m² of communal garden space, of which 190m² will be play space.

The design of the Plot 01 and 03 courtyard gardens have evolved as a pair of spaces which will be seen together from the surrounding apartments.

Terraces:

Around the gardens there will be private amenity space created which is accessible from the corresponding garden level apartment. The terraces will be 2.5-3m deep to comfortably allow a table and chairs to be set up

Entrances:

The gardens will be accessed from a number of entry points, which are directly accessible from the building cores, the garden level apartments; and for the northern garden, from the streets to the east and west of the plot. The access from the street to the garden will allow residents in Plot 01 to pass through the garden to the rest of the Royal Wharf development without going via North Woolwich Road.

Spaces:

The gardens have been designed to subtly create subspaces to allow different people to use the spaces at the same time without feeling that they are

encroaching on other users.

Landform:

The definition and enclosure of these subspaces will be created through the inclusion of landform which will wrap around the spaces. These mounds will create a groundplane that is playable, and that people can lie on facing southwards, towards the sun.

Planting:

Planting will be used to emphasise and complement the enclosure created by the landform and to create attractive buffers between spaces, including between the terraces and the garden.

Terraces

Entrances

Spaces

Landform

Planting



PLOT 01



Plot 01 and 03 Courtyard Garden

1. Terrace gardens around the courtyard perimeter
2. Communal access
3. Access to street to/from Plot 01
4. Bound gravel path
5. Landscaped mounding with tree planting
6. Seating
7. Play
8. BBQ area
9. Deck
10. Access to carpark



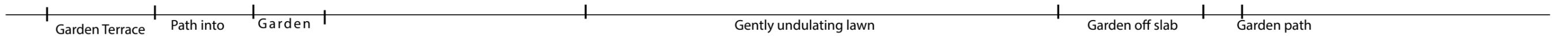
Planting of varying heights to enclose spaces

Plot 01 and 03 Courtyard Gardens Master Plan

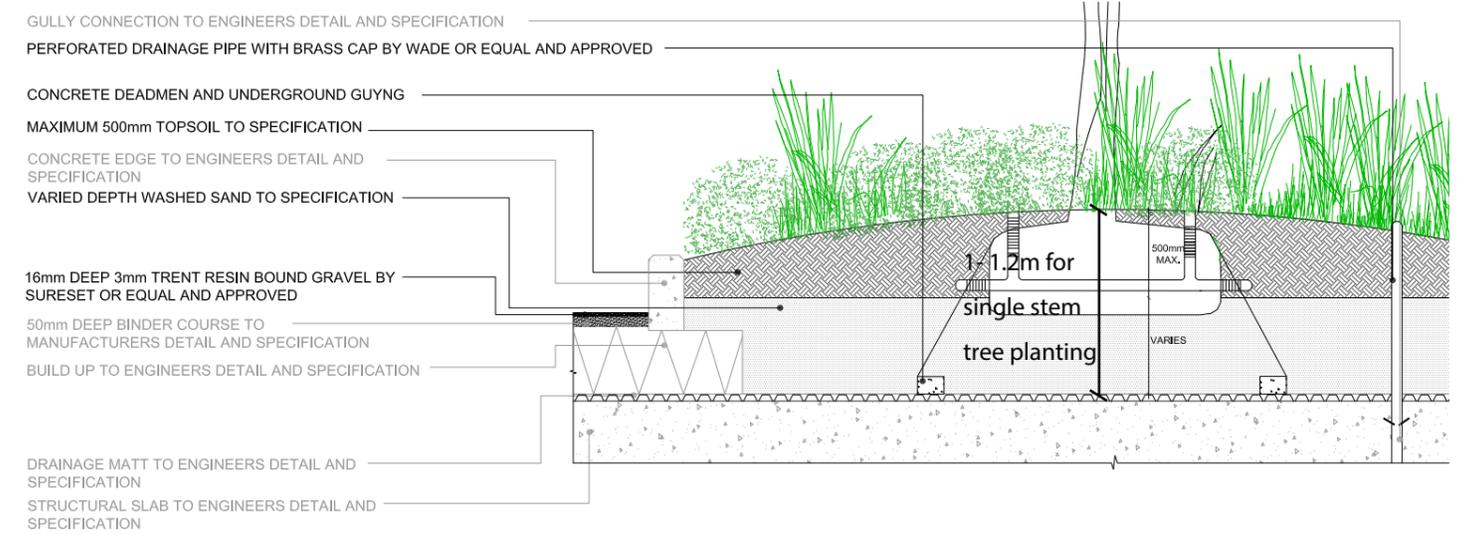
Axonometric of Plot 01 and Plot 03 Garden Courtyards



Section Through Plot 01 Courtyard Garden



Mounded landform creating sufficient planting depth above the basement slab for trees and shrubs



Detail to show tree planting above slab

Plot 09 Courtyard Garden

The Plot 09 courtyard garden will provide 1893m² of communal space, of which 140m² will be play space. The design of the Plot 09 courtyard gardens has been developed to respond to provide a private, communal amenity space for the residents in the surrounding buildings.

Terraces:

Around the perimeter of the garden private amenity space will be created accessible from the corresponding garden level apartment and house. These will generally be 2.5-3m deep alongside the apartments to comfortably allow a table and chairs to be set up. Deeper gardens have been designed alongside the houses, these will access the courtyard gardens via a garden path.

Entrances:

The gardens will be accessed from a number of entry points around the perimeter; from the building cores, from the garden level apartments, and from the gardens along the southern side of the space. There will also be access from the street into the courtyard which will allow access to apartments and to the bin and bike stores which will create daily activity within the garden.

Planting:

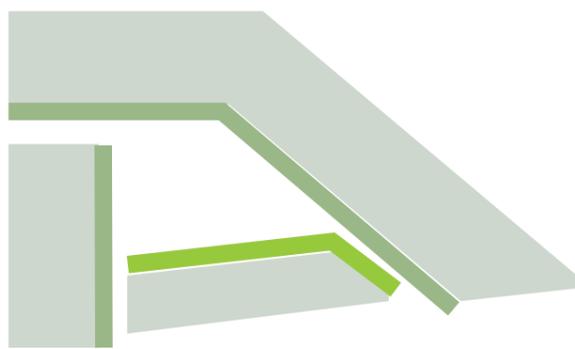
The planting will provide structure and enclosure in the garden and will also be used to create focal points within the garden. A flower garden is located at the north eastern corner of the garden. Planting here will be designed to create

displays of colour and scent in the spring and summer months. Pergolas arching over the footpaths will be used for scented climbers such as roses.

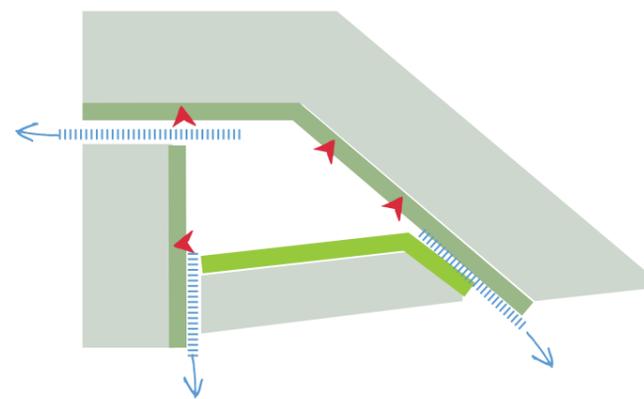
Spaces:

The garden design has two principal spaces, the flower garden and the central lawn, with perimeter landscaping creating a buffer between ground floor residents and the garden users. Landform and planting will be used to imply pockets of space for users.

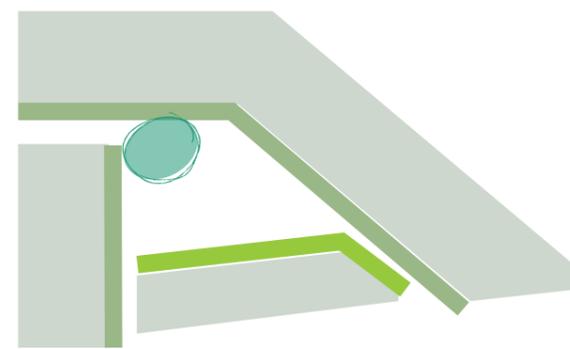
Terraces and Gardens



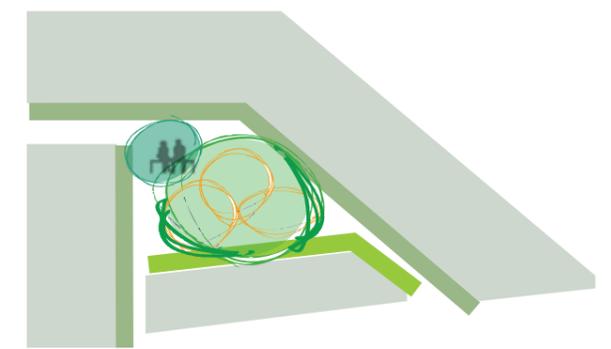
Entrances



Planting Focal Point



Spaces





1. Terrace gardens around the courtyard perimeter
2. Back garden spaces for the houses
3. Communal access
4. Access to street to/from the garden
5. Bound gravel path
6. Undulating lawn and planting with tree planting
7. Flower garden with paths passing under pergolas with scented climbers
8. Seating
9. Play
10. Front gardens in front of the houses

Plot 09 Courtyard Garden Master Plan

Axonometric of Plot 09 Garden Courtyards

Communal access to building core

Private garden terrace

Pergolas with scented flowering climbers

Flower garden

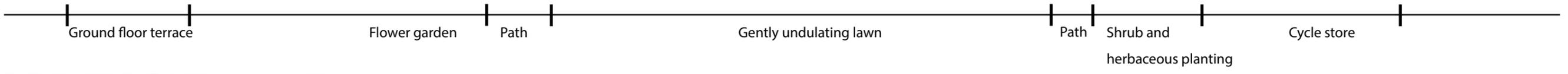
Access to street

'Doorstep' play

Lawn with gentle landform



Section Through Plot 09 Courtyard Garden



Planting

The planting will be designed to provide structure and height in the spaces and to provide seasonal interest and variation. In each plot, a base layer of shrub planting will be enhanced with herbaceous planting.

Within Plot 01, the planting will be used to create a sense of enclosure, complimented by the use of climbers including Parthenocissus, hydrangea and Hedera sp. along the Plot 03 carpark wall.

The planting in Plot 01 will be lighter, creating a greater sense of openness.

Planting species will include:

Shrubs:

Buxus sempervirens

Cotinus coggygria

Lonicera nitida

Ligustrum ovalifolium

Lavandular sp.

Photinia sp

Viburnum opulus

Rosa Kent

Herbaceous:

Bergenia sp

Crocosmia lucifer

Geranium sp.

Helleborus sp.

Luzula sp

Perovskia sp.

Polystichum aculeatum

Tiarella cordifolia

Vinca sp

Bulbs:

Allium

Crocus(Crocus)

Narcissus sp (daffodil)

Tulipa sp



Shrub planting providing enclosure



Evergreen planting including polystichum sculeatum and luzula



Bulb planting including Tulips providing seasonal colour



Gently mounded lawns



Evergreen planting with seasonal flowers such as lavender



Shurb planting against garden boundary



Feature planting including Roses

Plot 09 Flower Garden



Crisium rivulare 'Atropurpureum'



Knautia macedonica



Penstemon 'Raven'



Salvia nemorosa 'Ostfriesland'



Echinops ritro



Geranium 'Johnson Blue'



Verbena bonariensis



Sanguisorba officinalis 'Red Thunder'



Helenium 'dark beauty'



Lavendula 'Helmsdale'



Acanthus mollis



Gaura lindheimeri

Within Plot 09, pergola structures will lead to a flower garden in the north west corner of the garden, providing a focal point to the garden which will include a mixture of flowering plants including roses and seasonal bulb planting such as Tulips and Alliums. The planting palette consists of adaptive plants which will not rely on high levels of maintenance or irrigation.

Tree Planting

Tree planting in the courtyards will create height within the garden and create a veil between users of the gardens and residents in the surrounding apartments and houses.

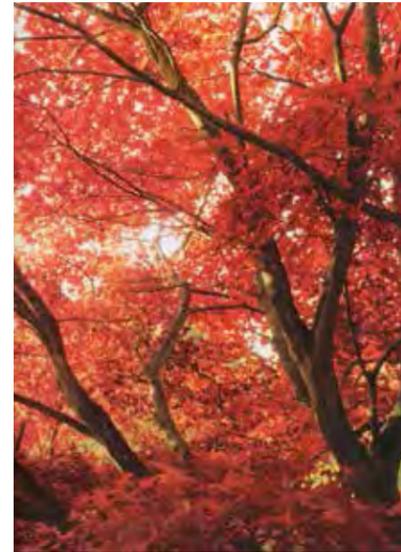
Courtyards 01 and 03 are above a basement slab. As described earlier, the formation of mounding in the planting areas has increased the soil depth to allow for a mixture of single stem and multi stem trees. Plot 09 is not above a structure and will mean that the depth of the tree pits are not constrained.

The tree planting aims to;

- reinforce the visual character of the gardens
- enhance wildlife habitats in an urban area
- promote sustainable planting
- improve local biodiversity by selecting plants with known benefits to local fauna

The tree planting in each garden courtyard will create visual variation between each space.

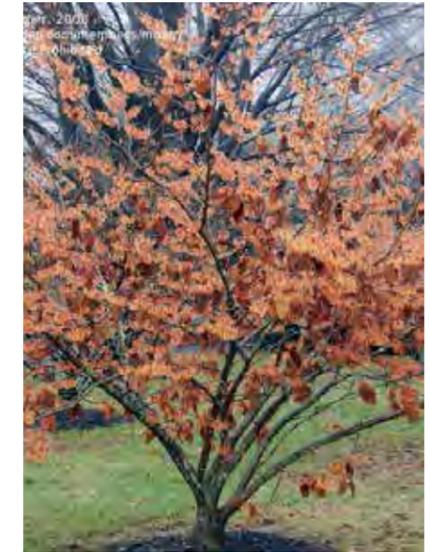
Plot 09 Tree Planting



Acer palmatum (multi-stem)



Magnolia kobus



Hamamelis x intermedia 'Jelena'



Crataegus prunifolia



Cornus 'Eddies White Wonder'



Prunus 'accolade'

Plot 01 Tree Planting



Malus Transitoria



Prunus yedoensis

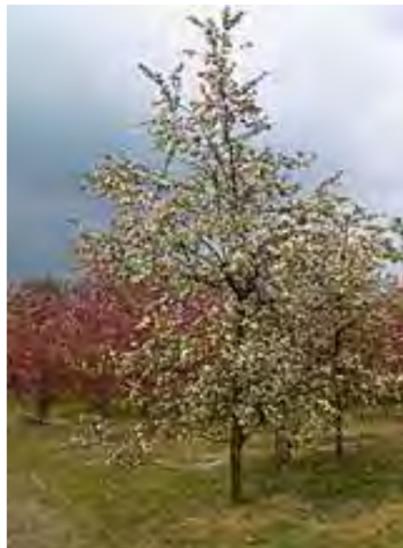
Plot 03 Tree Planting



Betula albosinensis



Magnolia stellata



Malus Red Sentinel



Malus Evereste



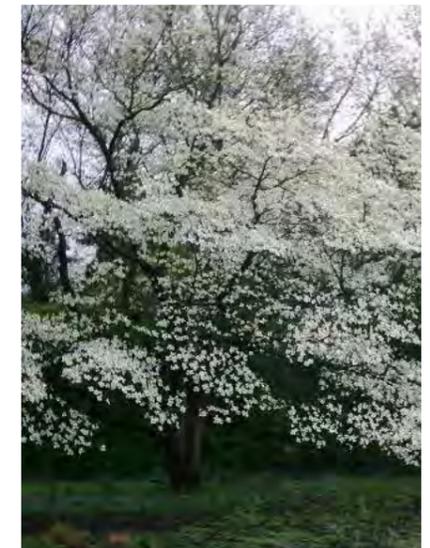
Amelanchier lamarckii



Malus Red Sentinel



Cornus kousa



Cornus Eddies White Wonder

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 01, 03 and 09 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 principle concept for the design of the landscape master plan and have been carried through to the design of Plots 01 and 03.

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.

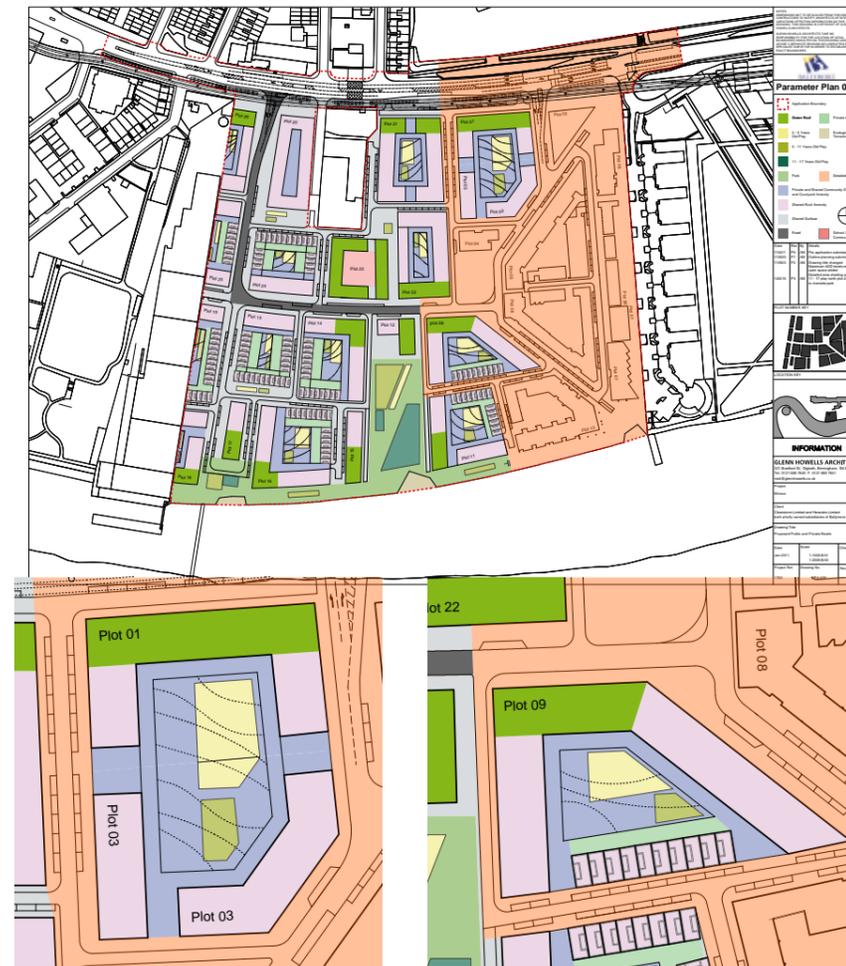
As part of the master plan, the principal was established that doorstep play (for 0-5 year olds) would be provided within the courtyard gardens, play for 5-11 year olds would be provided in courtyards and in the public realm, and 11+ play provision would be within the public realm and in the parks in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

The schedule of accommodation for Plots 01, 03, and 09 that are being brought forwards in this application have been used to recalculate the areas of play required to ensure that there is sufficient provision across the site, and that it is located in the appropriate locations.

Provision of play within the courtyards 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.

Play provision for 11+ will be in the parks which is being brought forwards in a later stage. The gardens will not prohibit use by older children- there will be places which they can sit and meet friends, the spaces in the public realm will provide an opportunity for more lively, active uses.



Play areas identified in Parameter Plan 09 for Plots 01, 03 and 09



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

Location of Play

Plot 01

	No of Children	Area (m2)
Under 5	14	140m2
5-11 year olds	05	50m2
12+ year olds	04	40m2

Plot 03

	No of Children	Area (m2)
Under 5	12	120m2
5-11 year olds	07	70m2
12+ year olds	03	30m2

Plot 09

	No of Children	Area (m2)
Under 5	10	100m2
5-11 year olds	04	40m2
12+ year olds	02	20m2



- 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



- 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



- 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:

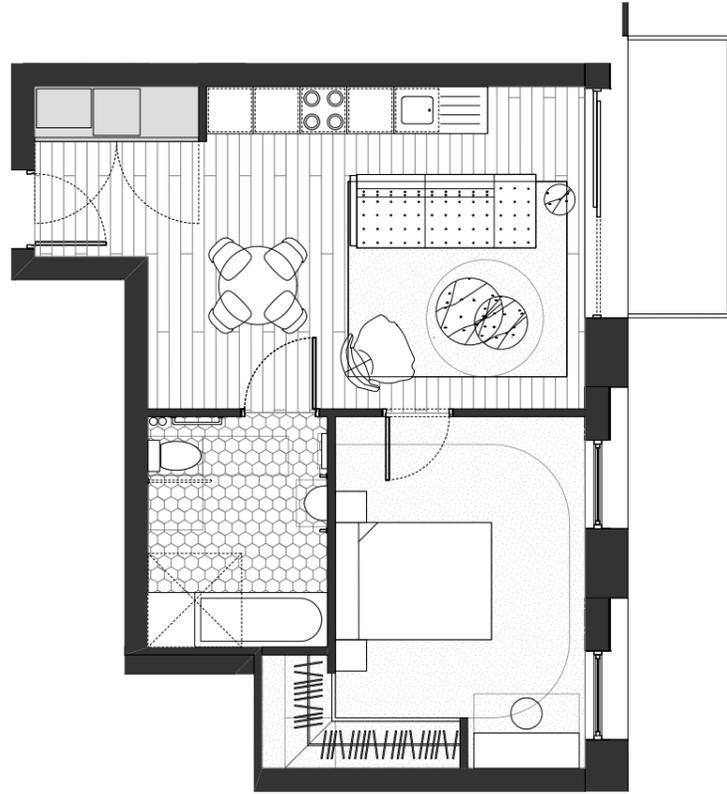
- Level circulation;
- Adequate clear opening widths of 800mm to all doors and circulation areas;
- Consideration given to wheelchair charging and storage;
- Adequate manoeuvre space in all rooms including bedrooms;
- Suitable sanitary facilities with a full 1500mm wheelchair turning space.

Multi-Use Units

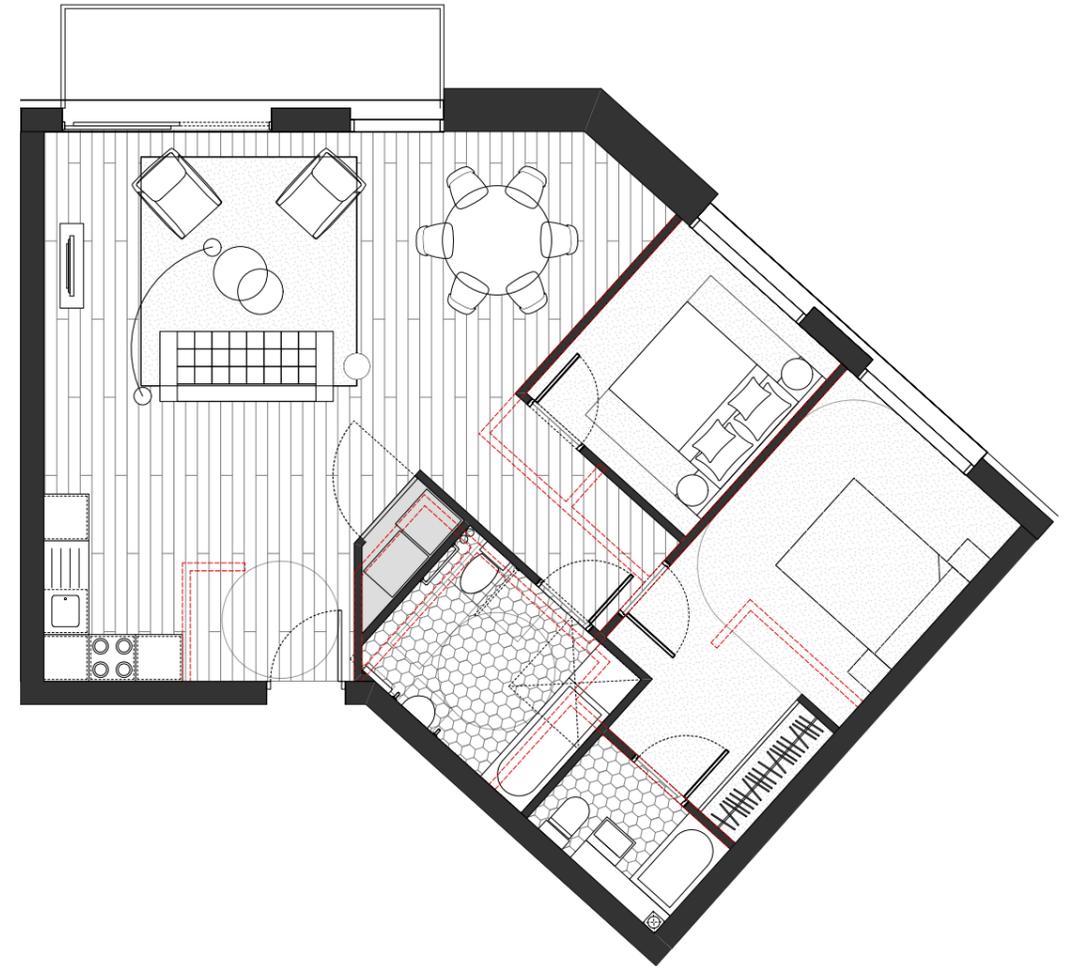
There are several units proposed for the detailed area which are multi-use and may include café, retail unit, community, culture and the arts uses. These are located at ground floor level at grade.

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.

Wheelchair Accessible Units



Typical 1 Bed Wheelchair Unit



Typical 2 Bed Wheelchair Unit

Wheelchair Accessible Units



Typical 1 Bed Wheelchair Unit



Typical 2 Bed Wheelchair Unit

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 corporation 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 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.

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GEA Residential – 22,098 sqm

GEA Commercial – 840 sqm

Mix:

Studios	7
1 Bed Apartments	49
2 Bed Apartments	109
3 Bed Apartments	15
4 Bed Apartments	19
4 Bed Townhouses	7
TOTAL	200

Introduction

Plot 9 sits immediately to the south of the Square, within the central area of Royal Wharf.

It comprises perimeter apartment blocks forming three sides, with the southern edge defined by a terrace of four storey houses. In addition to the residential accommodation there are significant commercial frontages to the northern edges.

The townscape character of the plot perimeter varies on all four sides. To the north, it forms the edge of the town square, on a primary street within Royal Wharf. To the west it partly faces a substantial residential tower but has a south westerly aspect towards the park and river beyond. The other two perimeters form residential streets of different character. The street to the north east leads directly from the Square and has an axial river view of the Thames Barrier. It provides a clear pedestrian route to the riverside walk, but will have limited vehicular traffic. The southern street is a residential mews which is likely to attract little vehicular or pedestrian traffic other than local residents.

The design has been developed using the masterplan strategies and parameters to achieve the appropriate mix and layouts. Designs have been presented to the Design Review Panel on two occasions and comments led to a number of changes in relation to massing, building line, and internal layouts.

The proposals comply with the masterplan parameter plans: OPA-001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011

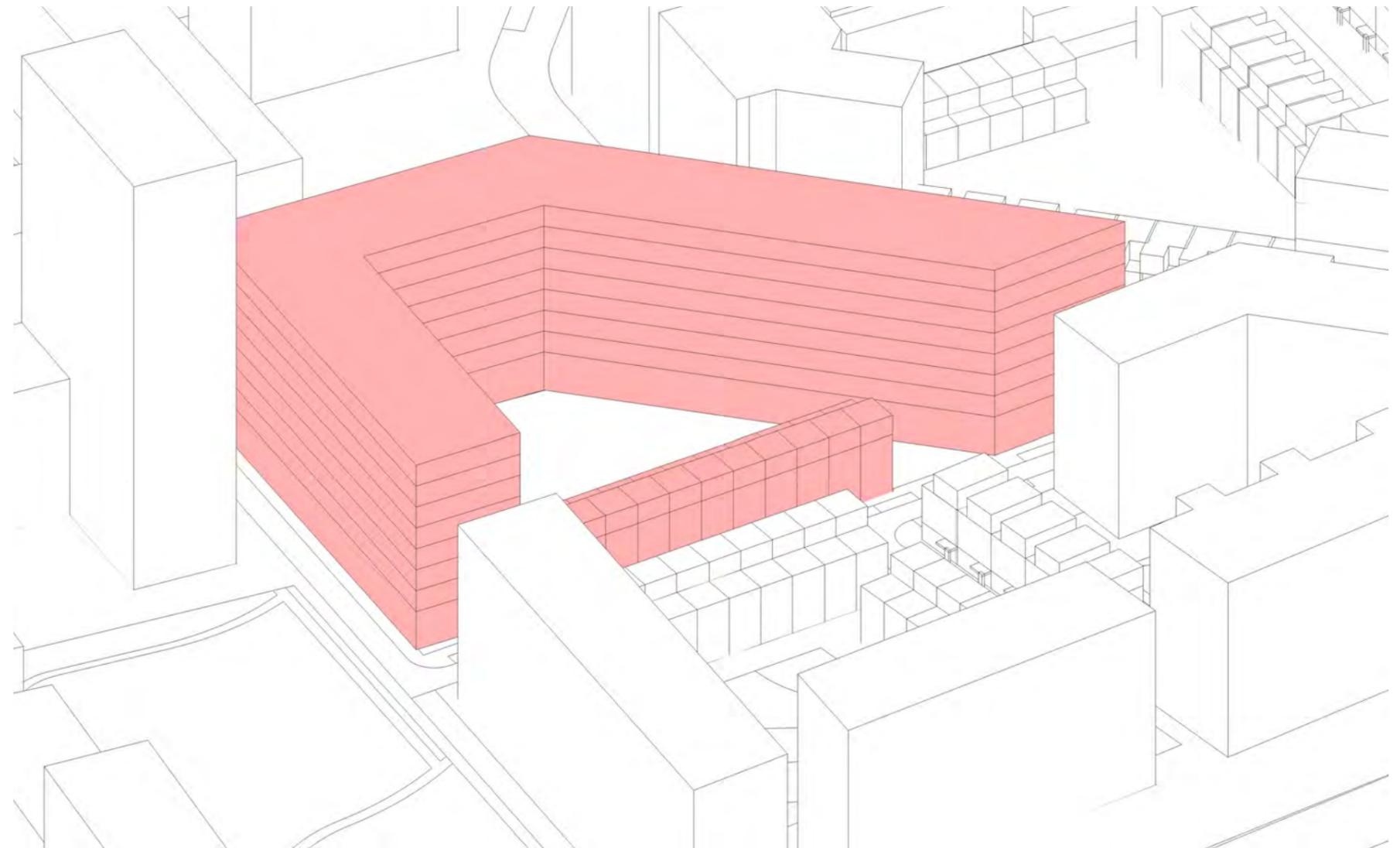
Massing

The scale and massing strategy for Plot 9 broadly follows the parameters set out in the Masterplan, which is then refined to respond to the detailed design of the blocks.

The Plot addresses the southern edge of the Square with seven floors of residential accommodation above a generous commercial ground floor. Blocks of this scale form the perimeter of the plot on three sides. The southern frontage comprises four storey town houses.

Care has been taken to ensure that the change in scale and form are integrated into a coherent perimeter condition, which also addresses the needs of the neighbouring public realm.

The diagrams opposite illustrate a number of strategic developments from the consented masterplan.

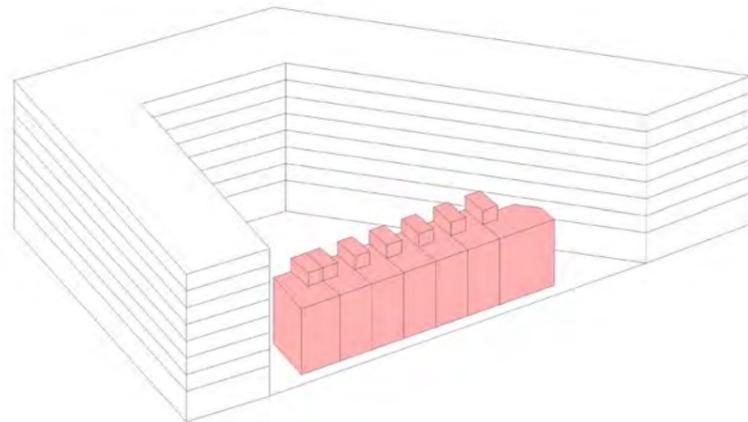


Masterplan massing

Step 1

The Houses

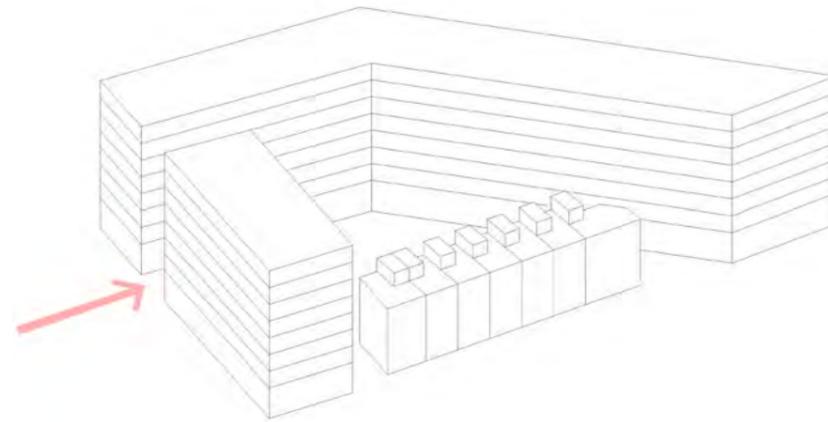
- The gable walls of the housing terrace respond to the geometry of the adjacent buildings. The terrace is set back from the street to create front gardens. The back of pavement line is defined by boundary walls and railings.



Step 2

Western Limb

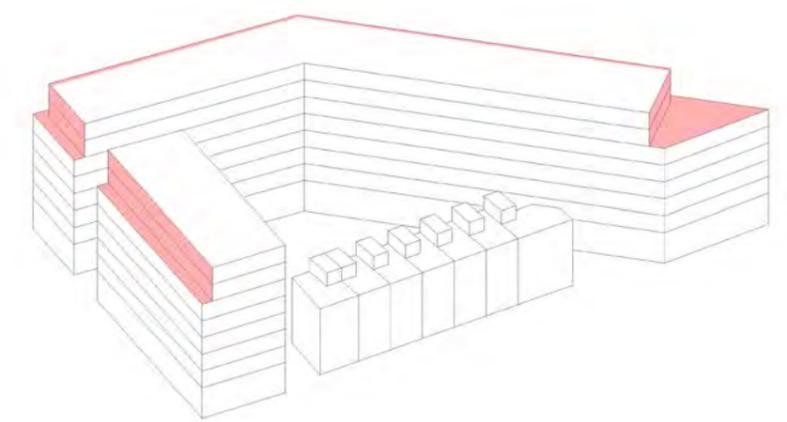
- Western limb of the apartment block is broken to allow daylight to penetrate well into the courtyard and provide views in and out.



Step 3

Top Two Storeys

- The top two storeys of the apartment street elevations are set back to reduce overshadowing and improve the proportions of the elevations and articulate the roofline.

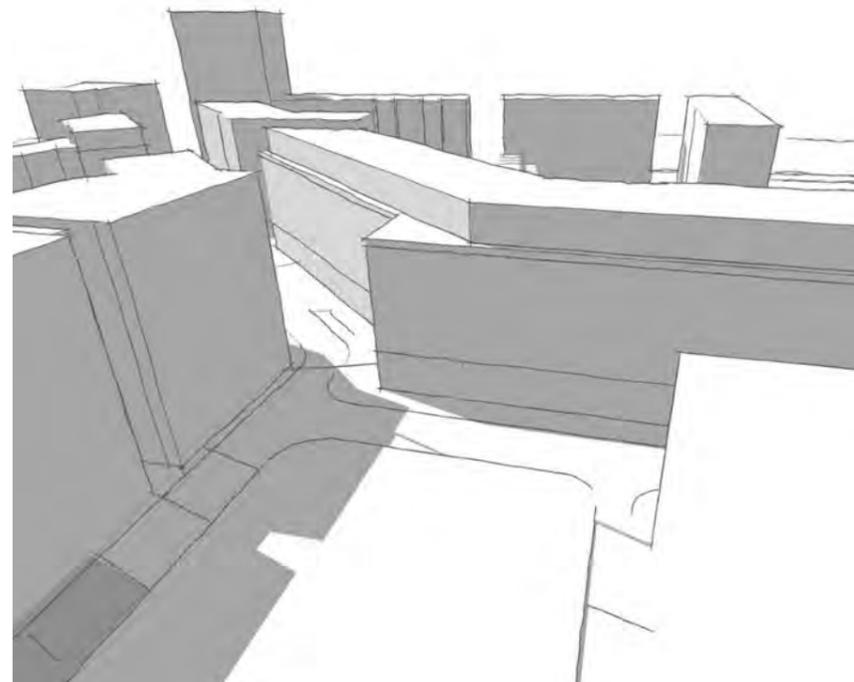


Addressing the square

The DRP acknowledged that the proposals were in line with the consented masterplan. However, they felt that the building line did not provide enough enclosure to the southern edge of the Square. Consequently a design study was conducted to seek a solution that enhanced this function whilst also providing good quality living spaces.

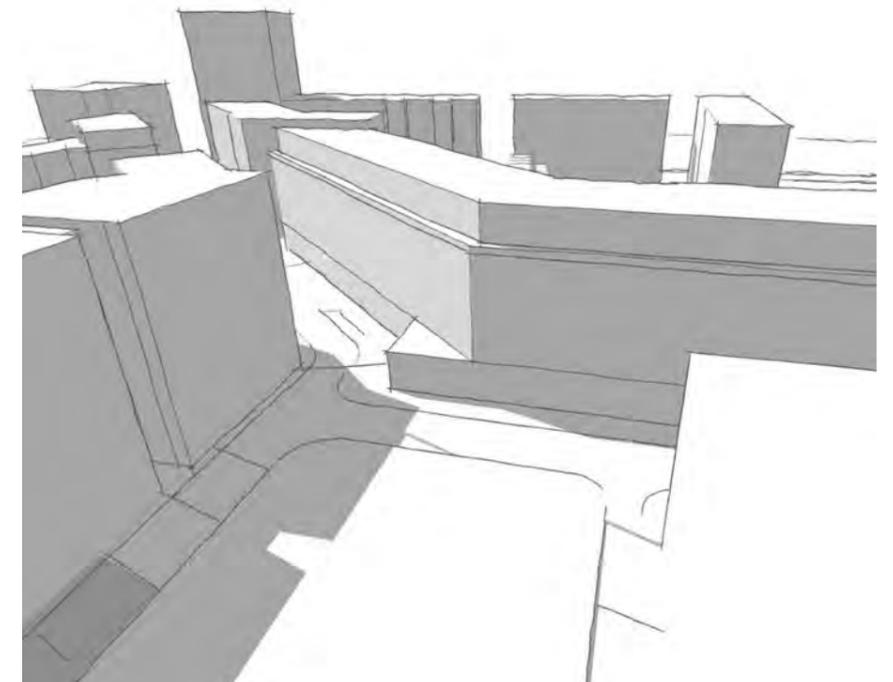
Block fully extended to parapet level

This option increases the length of the elevation facing on to the square, to provide more enclosure. This addresses the issue but the increased length of the block creates significantly more north facing residential accommodation and more overshadowing to the Square. It also restricted views to Pier 7 of the Thames Barrier, which was felt to be important by the GLA during the masterplan design process.



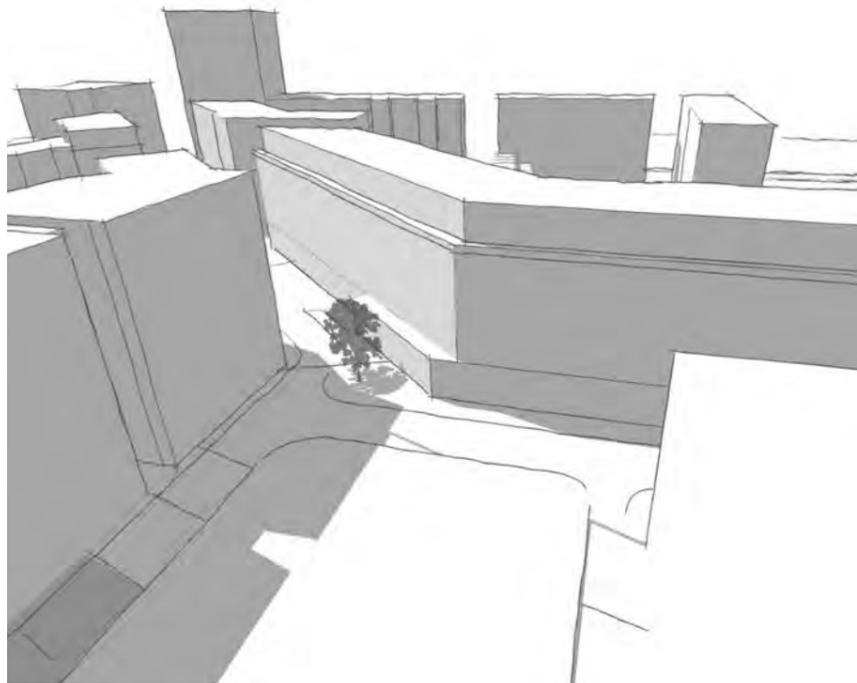
Block fully extended at ground floor only

This option overcomes the north facing apartment, and overshadowing issues, however the views of Pier 7 from the Square are lost and the terrace created at first floor level is far too large to be meaningfully used by the adjacent apartments.



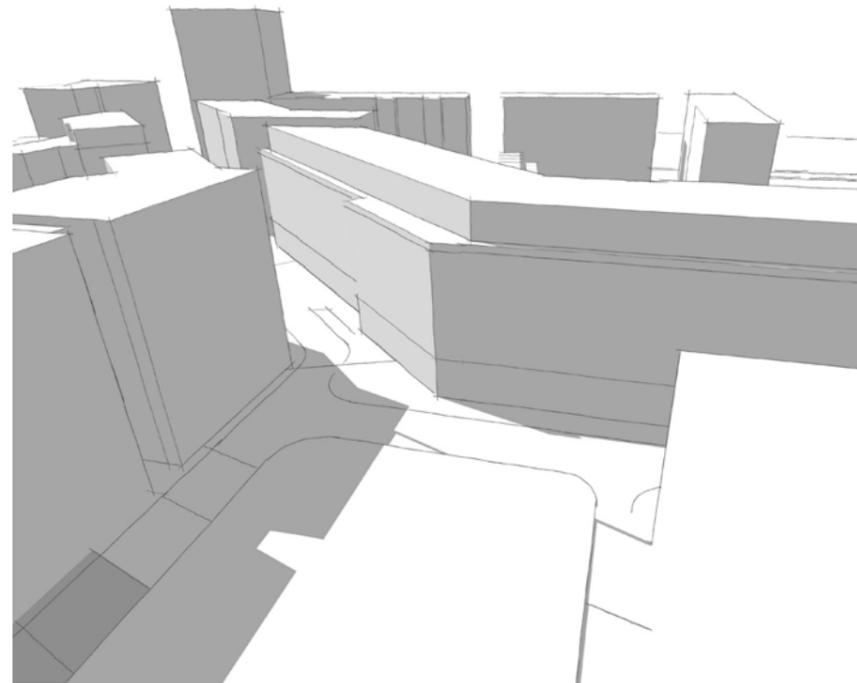
Block partially extended at ground level only

This option creates an appropriate public gesture at street level, and a clear resolution of the square elevation. It also creates a set back further down the residential street which defines a logical front garden zone for the residential properties. However its effect on the enclosure of the square is limited.



Block partially extended to parapet level

This provides the advantages of the previous option with slightly better enclosure of the square. It also creates the opportunity for larger terraces to the apartments on the corner of the square which will permit the use of generous external furniture and planting, thus adding to the animation of the elevation at a significant point in the urban realm.



Streets

The commercial units to the north create an active frontage along the southern edge of the Square. All other street frontages are animated by entrances to residential units. All ground level residential units are duplexes or terraced houses, in order to avoid bedrooms at street level, and also to create front doors and gardens along the streets.

Street (North East)

The façade adjacent to the Square continues the commercial frontage to complete the civic character of the Square. Beyond the corner of the Square, the materials begin to change and the façade steps back from the pavement line to create front gardens for the residential properties accessed directly from the street. Towards the southern end of the plot the façade also reduces in height by a storey to reflect the height of the adjacent building on Plot 10.

South

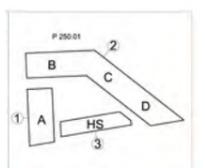
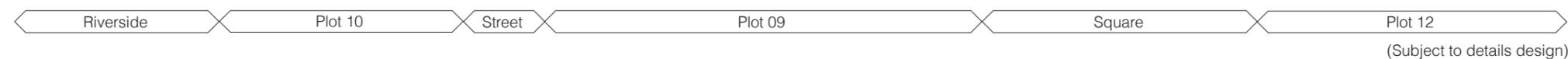
The southern edge of the plot is completed with a terrace of four storey houses. The terrace is set back from the building line established by the apartments, to create front gardens, protected from the street by railings.

Street (West)

The continuous wrap of apartment blocks is broken at the north west corner. This provides an opportunity to enhance the amenity space within the courtyard, but is also a response to the impact of Plot 12, which contains a tall residential building, likely to cause a degree of overshadowing and potentially, overlooking. By breaking the block at this point the length of façade affected is minimised. Beyond the influence of the Plot 12 building, the facades provide enclosure to the main park and benefit from generous south westerly views across the park to the river.



Street elevation with context



Key plan

Town Houses

A number of amendments were made to the terrace of houses during the design process.

Building line

The terrace has been set back to provide front gardens to the houses. At the same time the back of pavement line aligns with the apartment blocks at either end of the street and is unified with railings in front of the houses. This familiar approach to the relationship between houses and streets will help to define the character of this street and its relationship within the hierarchy of public realm within Royal Wharf.



Ground Floor as presented DRP 1 26.03.2014

End of terrace houses

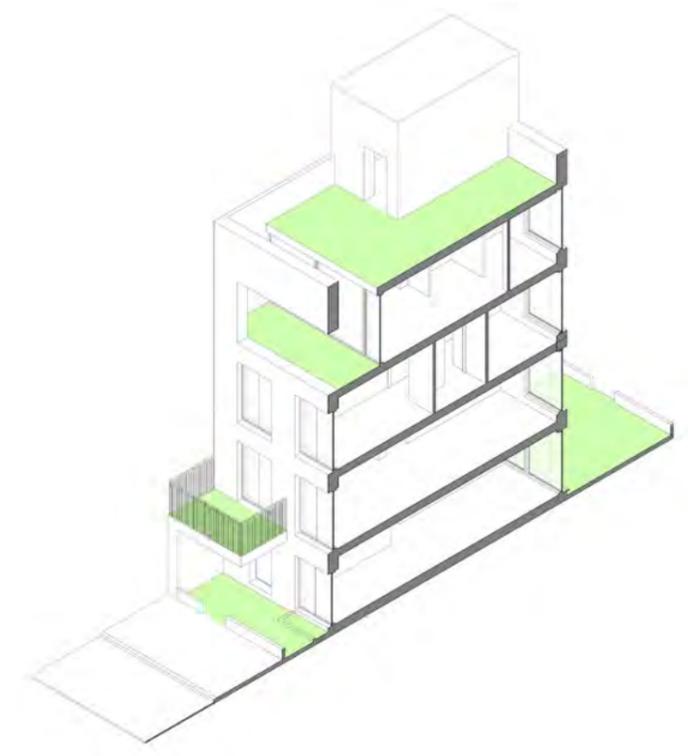
Both ends of the terrace are formed with unique houses which respond to the geometry of the adjacent blocks, leading to a more legible street line and well defined courtyard entrances at each end.



Ground Floor as presented DRP 2 29.04.2014

Amenity space

The orientation of the terrace means that rear gardens are shaded, and overlooked by the apartments. To mitigate this, they are provided with roof terraces and south facing balconies to the living rooms and master bedrooms.



Section through townhouse showing amenity space

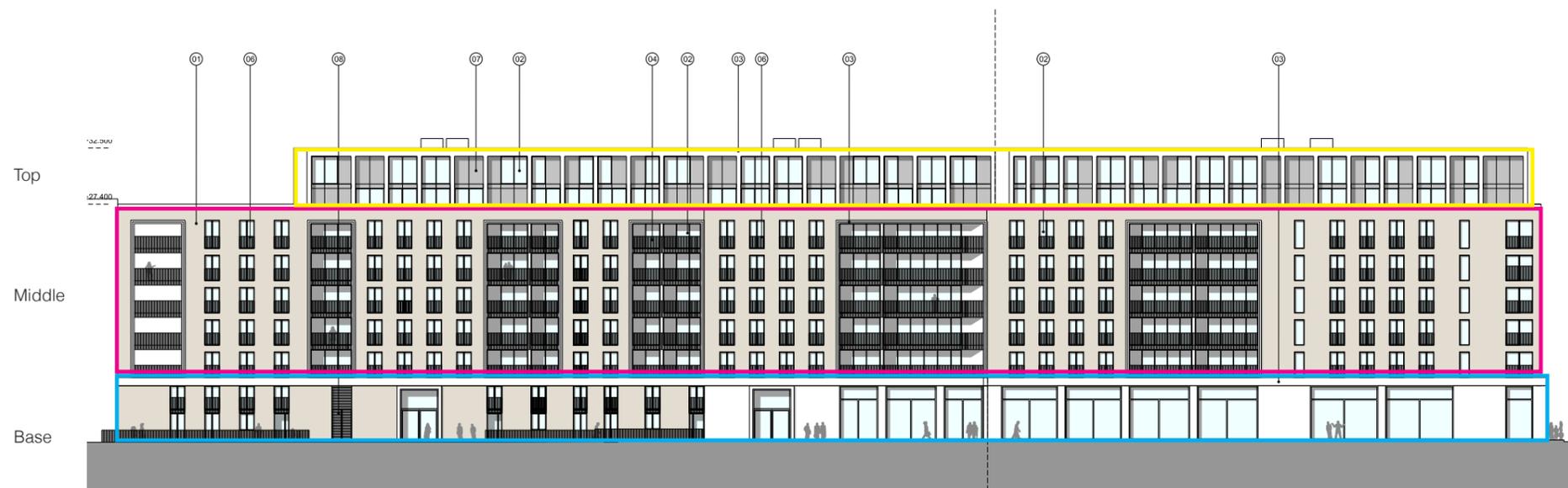


Elevation precedents

Elevations

As outlined in the Masterplan Design Code, the elevation strategies are based on an exploration of mansion block typologies, which are used in this part of the site to create a different character from the plots adjacent to the DLR or those along the river edge.

Mansion blocks are prevalent throughout London and their scale and familiarity makes them extremely relevant precedent for the centre of Royal Wharf. The images opposite show a range of buildings where brick has been used in combination with stone or render to create facades of the scale and texture which generate much of central London's street character.



Typical road elevation - vertical articulation



Typical courtyard elevation - grid and infill

Composition

In order to create a sense of order and scale to the elevations they are typically divided into three distinct parts.

The lower section is generally two storeys high and forms a base for the composition. It also identifies the nature of the accommodation as either commercial units, which are twice the height of typical residential floors, or as duplexes, where both storeys are expressed within a double height language.

The central section is created by the five repeating floors of apartments, and therefore has well-ordered arrangements of windows and balconies. The arrangement of balconies is carefully considered to give a balanced proportion of masonry to void along the elevations. This gives a rhythm to the facade which helps to animate the block and reduce its perceived scale.

The top two storeys are set back from the main building line to reduce the apparent height of the block when viewed from the street and provide amenity space to the duplexes this element contains. Again this is expressed as a single, double height element to complete the composition.

In contrast the courtyard elevations use a framework of masonry elements to contain a variety of elements creating a more varied elevation to the amenity space.



Street Elevations

The dominant material selected for the street elevations of Plot 9 is brick, in accordance with the Masterplan. In addition, precast stone is used to varying extents to differentiate the different aspects and typologies.

The commercial frontage to the Square is clad in precast stone, to create a more formal and civic presence. The upper façade of this block also has several precast elements set within the brickwork. Elsewhere the extent of stonework is reduced but it is still used for plinths and copings to articulate the elevations and for the flank walls of recessed balconies and apartment entrances to give a degree of modelling to the perspective views along the streets. The light tone of the precast stone will also help the daylight penetration within the apartments with recessed balconies.



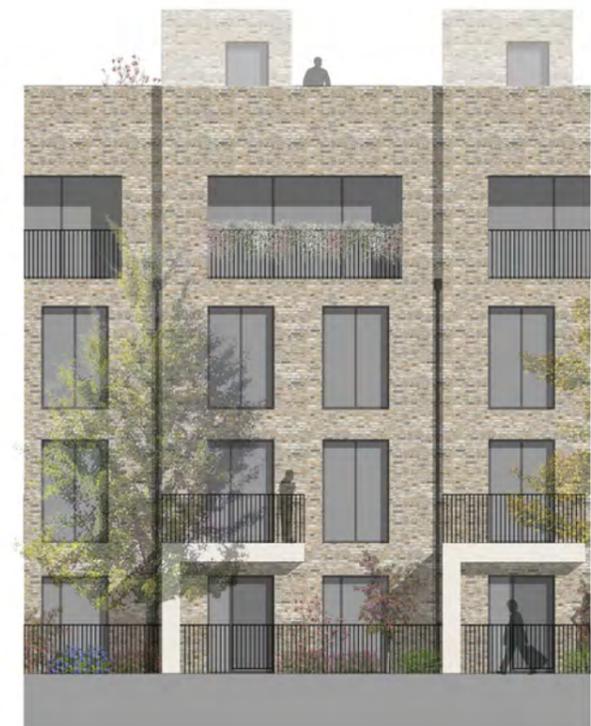
Courtyard Elevations

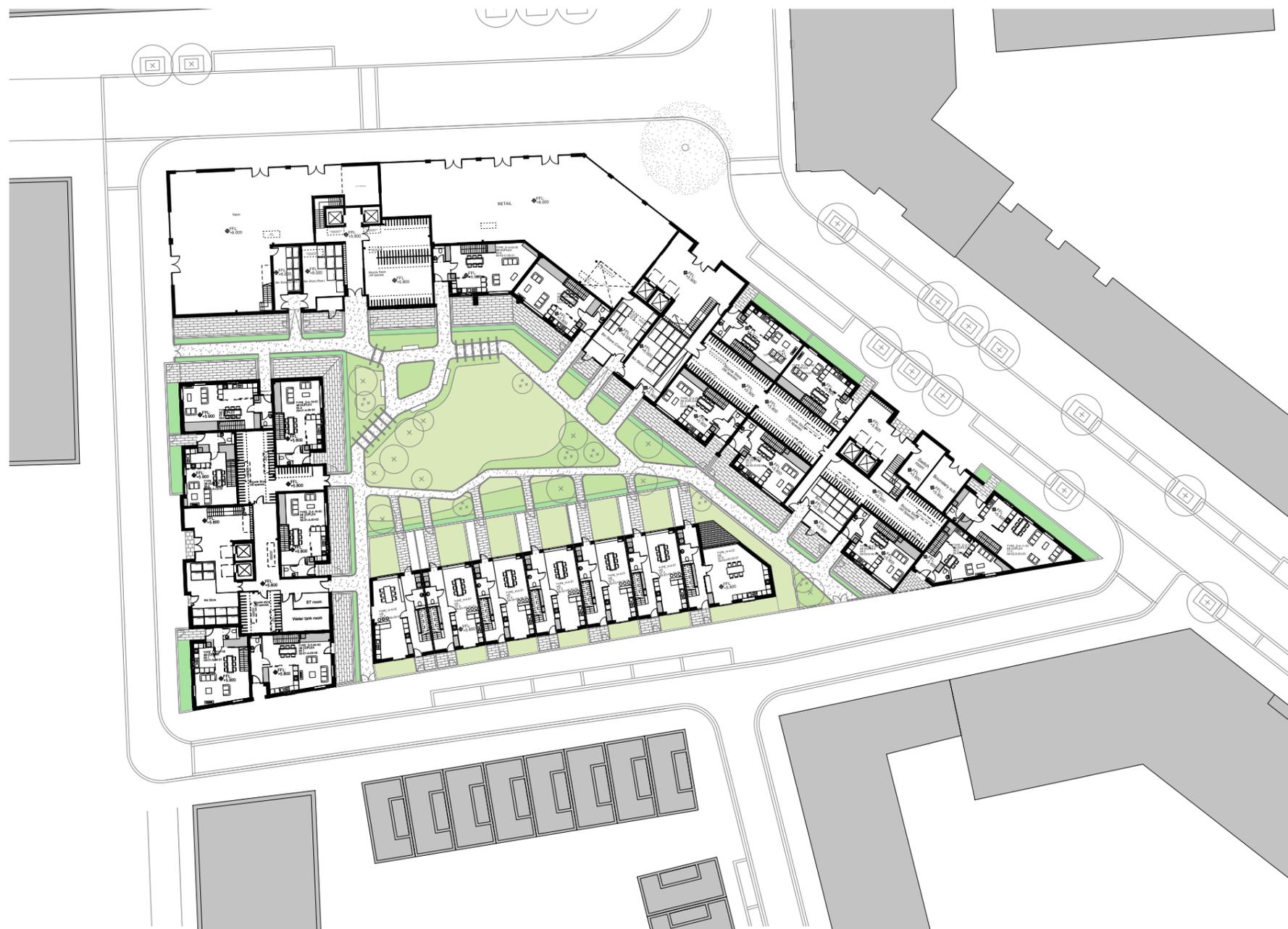
Within the courtyards the language of the elevations changes, although the materials palette remains very similar.

The elevations retain the tripartite horizontal composition, although this is overridden with a more dominant grid of brick piers with band courses to mark the floors. Within this framework the elevation is composed of recessed or projecting balconies, together with cast stone panels and full height glazing. Recessed balconies are detailed as the street facing balconies, whereas the projecting balconies have glass balustrades, to increase transparency. Frosted glass screens provide privacy for adjacent projecting balconies.

Mews Elevation

The south elevation of the plot is framed by the end elevations of the apartment blocks, but the majority of the frontage is formed by four storey townhouses. The language here is deliberately downplayed. Simple brick facades behind metal railings with cast stone canopies to mark entrances.





Ground floor plan

Ground Floor Plan

The ground floor shows the commercial accommodation clearly orientated towards the public areas of the site, with servicing dealt with to the rear.

Significant areas of the remaining ground floor are given over to communal facilities for the apartments such as generous entrance lobbies, refuse stores and cycle stores. However the street frontages are generally well punctuated with communal entrances to the upper level apartments, and also entrances to duplex apartments. The southern mews gives access to the town houses and also has two access points for the shared courtyard.

The courtyard provides access to a number of duplexes as well as service access to the apartments and commercial units.



First floor plan

First Floor Plan

Double height commercial units occupy the first floor level space facing the square. The duplex bedrooms are all at this level and the remainder of the space is given over to storage, accessed from the cores, for the apartments above.



Typical floor plan

Typical upper floor

The typical upper level plans repeat over five storeys and comprise apartments of various sizes arranged around cores.

Outward facing apartments generally have recessed balconies whereas the courtyard facing balconies combine recessed and projecting balconies to create more animated facades.

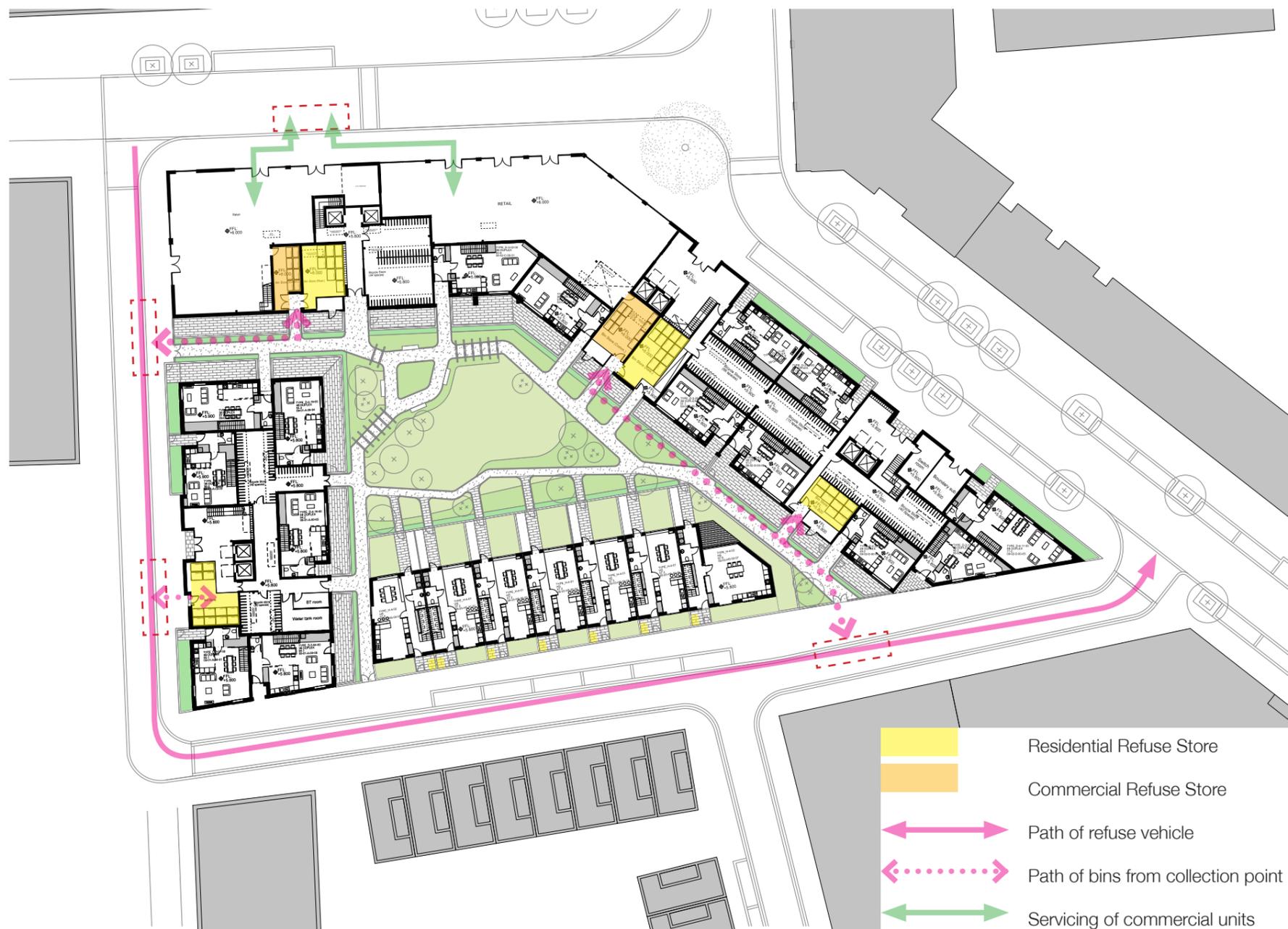
Cores typically are set within the heart of the plan, to shorten corridor lengths, with two lifts and a top lit stair. The north east core arrangement is slightly different to reduce the amount of north facing rooms within the apartments.



Seventh floor plan

Penthouse Level

The top two floors contain apartments facing the courtyard and duplexes facing the street. The latter are set back to create outdoor terraces set behind the parapet. There is a large shared roof terrace in the south east corner, where the top floors are cut back to tie the building heights in with the adjacent building on Plot 10.



Refuse and servicing strategy

Servicing waste and refuse strategy

Servicing of Commercial Units

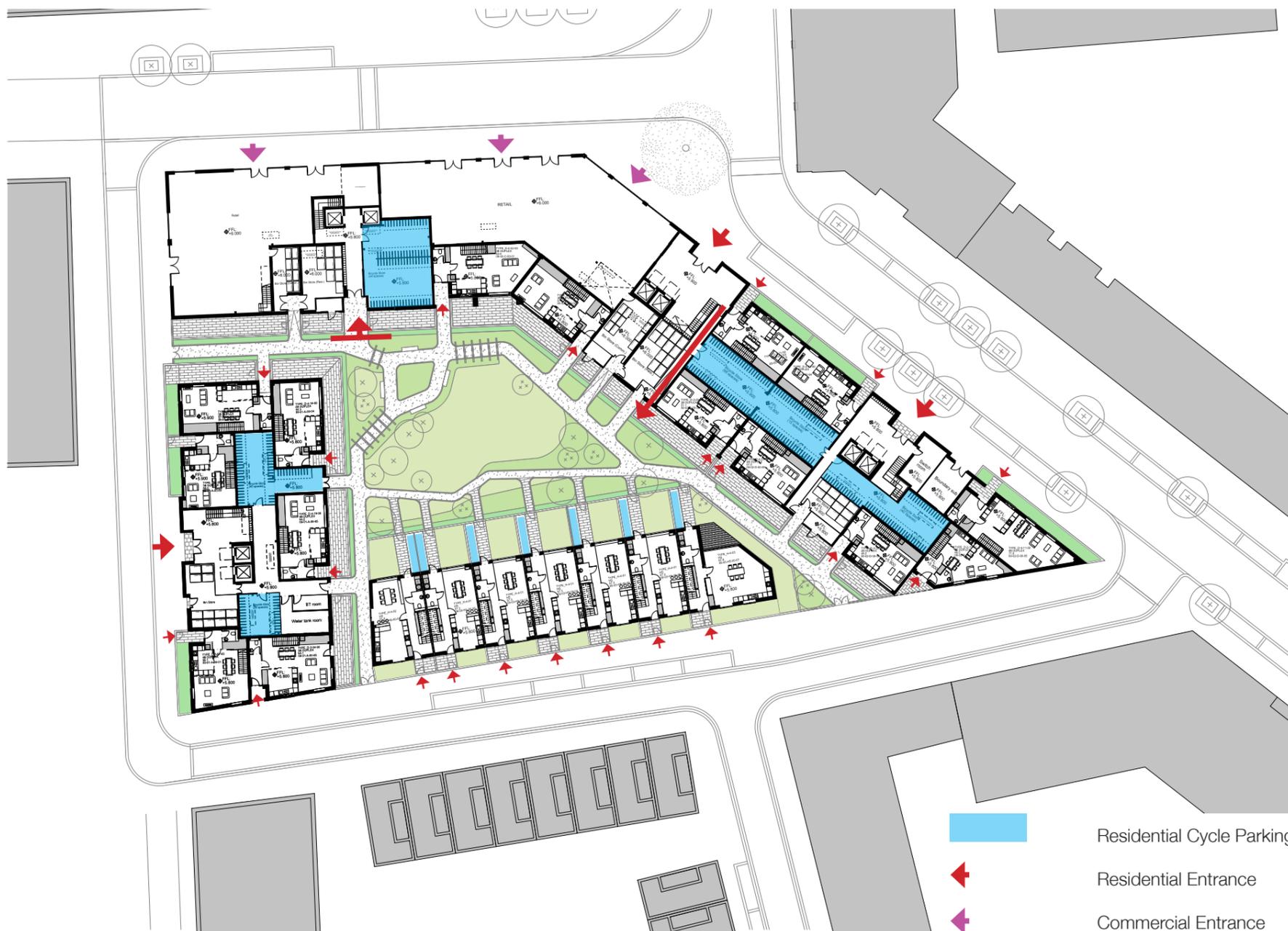
Servicing for plot 09 has been carefully considered to reduce the visual impact on the public realm. Service vehicles will use a designated drop-off zone along the northern street.

Waste and Refuse

All refuse stores are compliant with Part H of the Building Regulations and have been designed in accordance with Newham's Waste Management Guidelines.

The residential waste and refuse is stored at ground floor in four designated bin stores; each of these stores is in proximity of a respective residential entrance and has direct external level access. The commercial refuse is stored in the back of the commercial unit in a separate refuse store. Refuse storage for the townhouses is included within the space along the house frontage and carefully designed to be included within the landscape and garden wall design.

All waste and refuse storage has been sized to accommodate a weekly collection. The waste collection vehicles will park adjacent to the refuse store or at the closest point along the street. Operatives will then wheel the containers from the store to the vehicle and back.



Parking and street access strategy

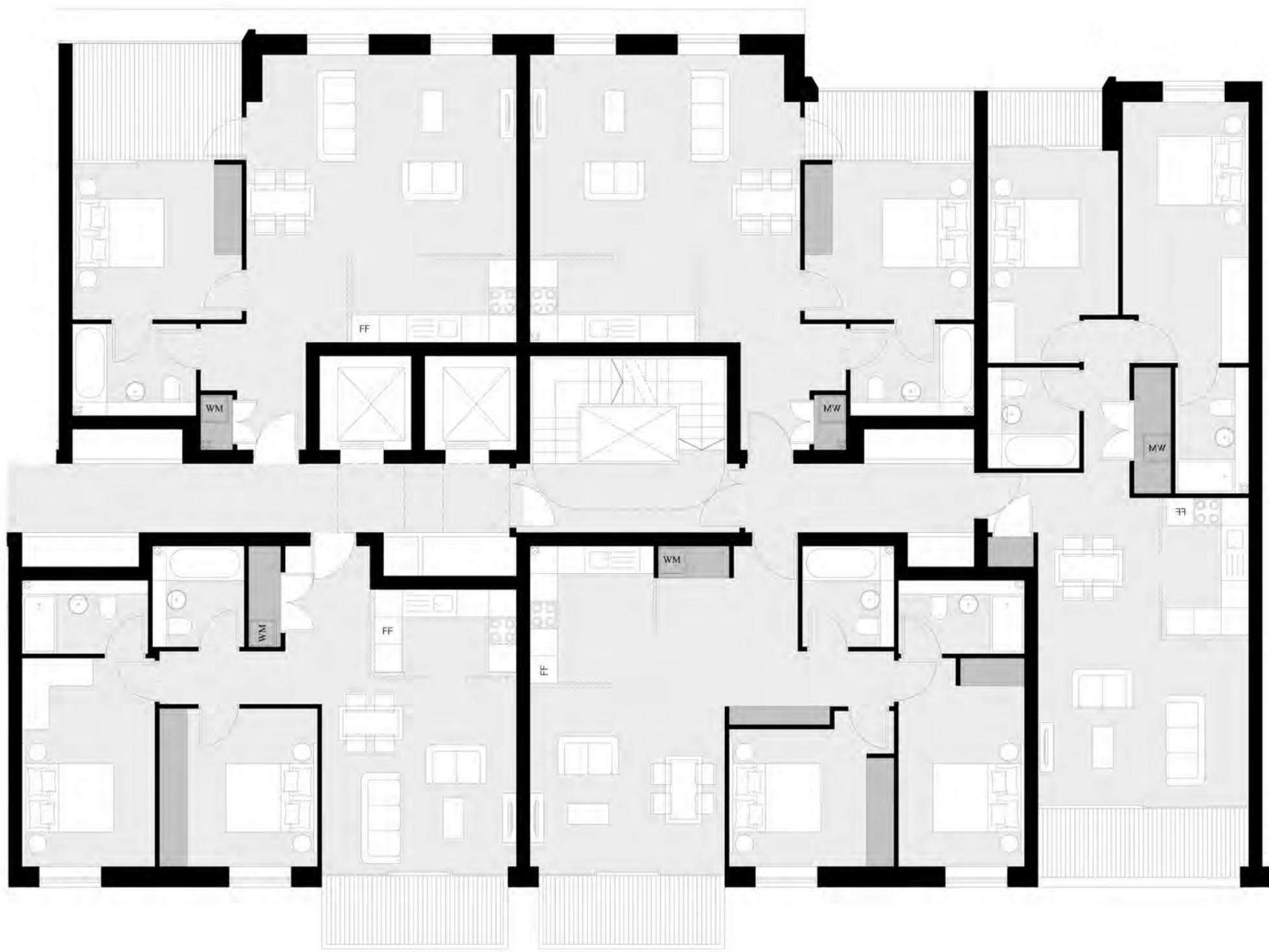
Cycle and vehicle parking, pedestrian entrances

Plot 09 is extremely well connected by public transport, with DLR stations and bus stops close by. A designated cycle route into central London also runs along North Woolwich Road.

Car parking provision for Plot 09 is described in the Transport Statement.

Resident's cycle parking is provided at ground level in secured cycle stores. The total number of provided (227 spaces) allows for 1 space for each 1 or 2 bed unit and 2 spaces for each 3 or 4 bed unit, complying with London Design Housing Guide recommendations and Code for Sustainable Homes Level 4. The ground floor duplexes and townhouses have their own dedicated secure cycle storage within their private amenity space.

Sheffield cycle racks for public cycle parking are also provided along the pavements.



1:100 Typical Core Arrangement

Apartments

The apartments have been designed using the following criteria:

- meet or exceed the LDHA guidelines
- minimise the amount of horizontal communal circulation.
- maximise the amount of natural light
- respond to orientation and the character of neighbouring buildings

Cores are designed to provide efficient access to apartments. As well as two lifts, each core has a generous top lit stair well to provide opportunities for interaction between neighbours on route to and from their homes. Each core serves between five and eight apartments. Keeping the number of apartments per core low allows a greater sense of ownership of shared space and keeps the travel distance from core to front door to less than 15m in over 85% of apartments.

In line with the Masterplan, there is a broad mix of apartment types and sizes, ranging from suites to four bedroom units. Although all apartments on this plot are for private sale, there is a mix of at least three different sized apartments within each core. This is to encourage a broad mix of residents within each core and therefore increase the range of use patterns. Generous ground floor

lobbies contain shared facilities such as post boxes and provide access to cycle stores and the shared courtyard. There are also a number of larger stores for those residents requiring more storage space.

Layout of apartments has sought to maximize daylight and views, and minimize overlooking. There are no single aspect apartments facing north. The internal layout of the apartments has been carefully considered to create generous and practical spaces within the space standards. Conventionally apartment layouts are heavily influenced by the fire escape requirements of the Building Regulations. This requires bedrooms to have a direct exit from the apartment without passing kitchen and living space. This inevitably leads to lobbied entrances and often creates cramped entrances to units. To overcome this, all apartments are fitted with a sprinkler fire suppression system. This allows much more flexibility in terms of layout, and all apartments are typically entered directly into open plan living space, giving a much more generous feeling of space and avoiding floor area being taken up by circulation space.

All apartments have access to their own private balcony, and some, such as the dual aspect units, have access to a second balcony. Windows are generally full height with Juliette balconies, to help encourage an active facade to the street.



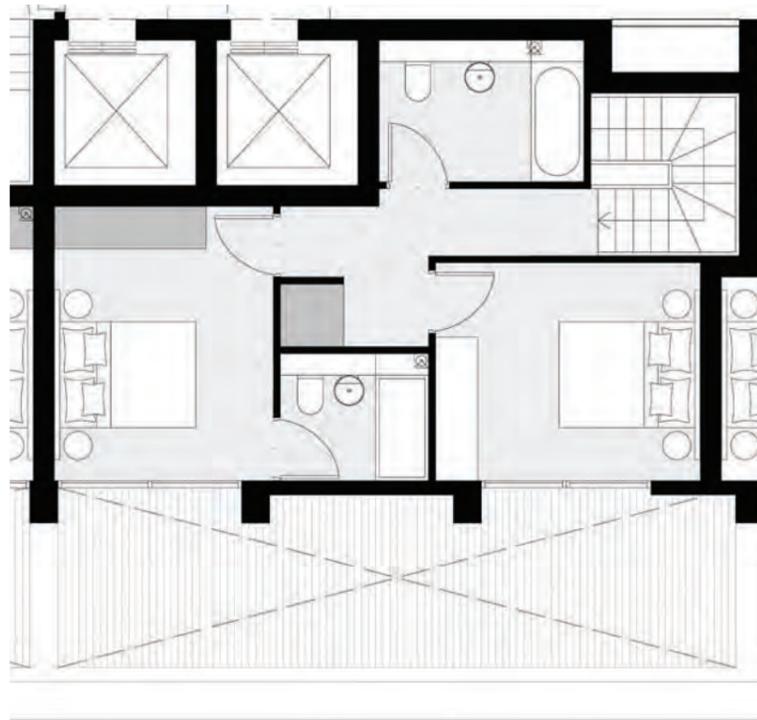
Ground Floor
 Typical 3 bed duplex



First Floor



Seventh Floor
 Typical 2 bed duplex

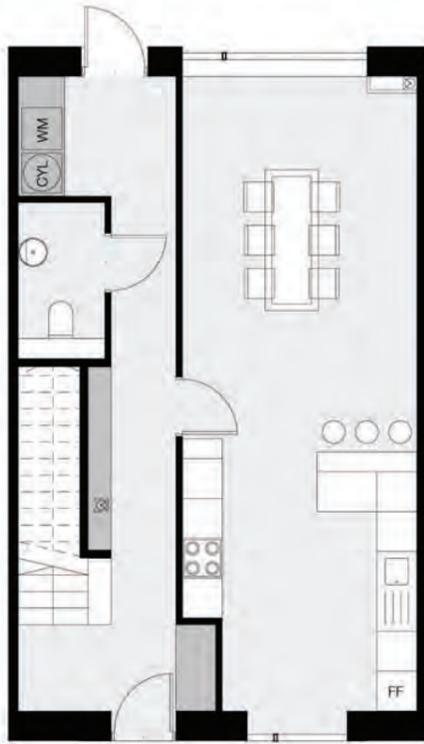


Eighth Floor

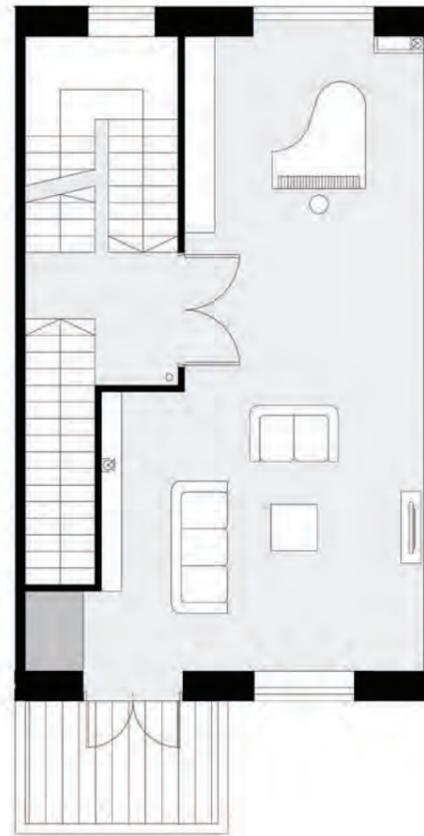
Duplexes

Duplexes are proposed in two distinct locations; at both street and roof levels. At street level there are a number of different public or semi-public functions such as commercial units and communal entrances to the apartments. The spaces between these functions are occupied by a variety of two, three, or four bedroom duplex units. These units provide a slightly different offer to single storey apartments and they create a degree of activity at street level which is often missing from large scale developments. Typically these units have a small hard paved front garden behind railings, leading to individual front doors. Living accommodation is provided on the ground floor, with bedrooms occupying the upper floor.

There are also duplexes at roof level within the apartment blocks, accessed from the apartment cores. These are generally on the street facing elevations, and are part of the elevational strategy to create an attic storey when viewed from the street. They have living accommodation on the entrance level and have access to full width private balconies behind the parapet, overlooking the street. Bedrooms are on the upper floor accessed via a private accommodation stair within the unit.



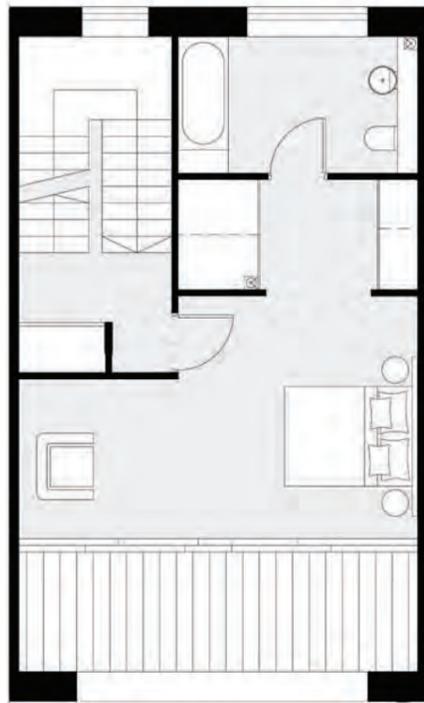
Ground Floor
 Typical 4 Bed Townhouse



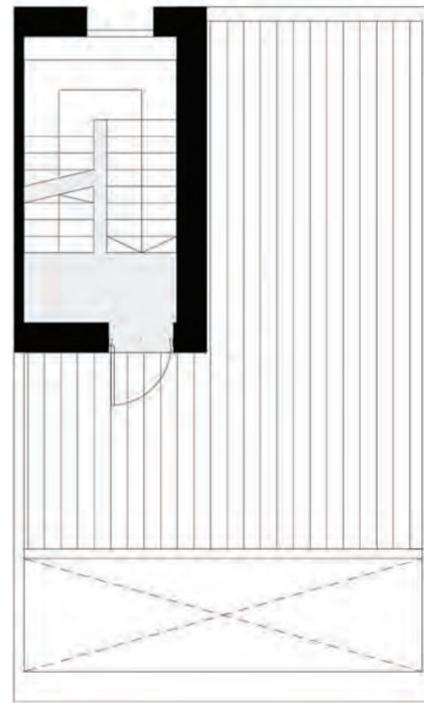
First Floor



Second Floor



Third Floor



Roof Plan

Townhouses

The design of the terraced houses aims to create high quality modern homes which have a tangible connection to traditional London terraces, without resorting to pastiche. The scale, materials and relationship to the street follow traditional and successful models. The predominant material is stock brickwork with cast stone dressings and metal railings.

The entrance is protected by a cast stone balcony above, supported on a pier to provide privacy. Ground floor accommodation contains generous entry spaces leading directly to a private back garden. Kitchen and dining rooms are also at this level. The first floor contains a large, dual aspect living space, with generous ceiling height. Bedrooms are located on the two upper floors. The master bedroom also has access to south facing balcony set behind the façade for privacy.

Although all houses have their own gardens the orientation of the terrace means that these are always shady. To compensate for this the houses all have access to their own large sunny roof terraces.