# Royal Wharf London

Design + Access Statement Plots 13 + 14A

2026-A-DR-01-001

Oxley

Report prepared by:

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TOWNSHEND Landscape Architects

## Revision History

| Revision | Date | By | Checked | Note |
|---|---|---|---|---|
| 00 | 13 March 2015 | CK | SH | Draft Issue |
| 01 | 20 March 2015 | CK | SH | Draft Issue |
| 02 | 25 March 2015 | CK | SH | Planning Issue |
| 03 | 08 April 2015 | CK | SH | Planning Issue |
| 04 | 06 May 2015 | SH | UL | Planning Issue |

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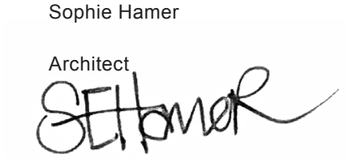
| Signed |  | Signed |  |
| Date | 08/04/15 | Date | 08/04/15 |

**CONTENTS**

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

Submitted in April 2015, this document forms the design and access statement of the reserved matters planning application for building plots 13 (Phase 03) and 14A (Phase 02). The plots have been designed within the outline parameters set out in the Section 73 application which is currently being assessed by LB Newham. (15/00577/VAR)

Plot 14 has been designed and developed in its entirety. However the plot is to be developed in 2 phases, phase A and phase B. Plot 14 is generally presented in this report as a full plot to illustrate how it functions strategically and how it is expressed in design terms. However, this reserved matters application seeks approval for 14A only.

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

In addition, this report records the process of LBN Design Review Panel (DRP) consultation and subsequent design development undertaken for Plots 13 and 14, 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 13 and 14A will include a combined 326 no. new homes in a mixture of suites, 1, 2, and 3 bedroom apartments, mixed use commercial and leisure space.

As Plot 13 and 14 sit adjacent to one another, they are mostly presented as such throughout this report in order that the information can be read in its immediate context.

Royal Wharf will be an exemplary landmark development. In addition to the masterplan vision as a whole, the design strategy for Plots 13 and 14 aspires to realise the full potential of this unique opportunity, which combines a large site in single ownership next to the River Thames, benefitting from views to the Thames Barrier, Canary Wharf and the Millennium Dome, to be an attractive place in Newham to live, work and play.

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

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

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

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

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

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

## Design Team

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

## Scope of the Design and Access Statement

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

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

We believe that place making is the key ingredient to creating a successful scheme and buildings will only prosper if people want to be around them. The combination of a unique location and a London setting provides a great opportunity for integrating Plot 13 and 14 into the previously consented Phase 01 and Phase 02 proposals, bounded by high quality public realm within the emerging masterplan.

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

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

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

## Consultation Process DRP

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

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

Plot 14 was initially presented to the DRP on 2nd June 2014. Following the revisions to the Royal Wharf masterplan, plot 14 was reworked and was further presented to the DRP alongside plot 13 on 10 March 2015.

A brief synopsis of the panel's comments received during the 10 March review are recorded adjacent, with each comment having been responded to through the design process and included in the proposals presented in this report.

Summary

*The panel welcomed this useful initial conversation about the detailed design of these plots within Phase 3 of the development and we look forward to continuing a dialogue as the schemes progress. Of the plots reviewed by the panel these are amongst the most comprehensive, with strong, rhythmic and well detailed architecture. However, we think more could be done to ensure the buildings read more emphatically as that of a mansion block type rather than a warehouse type.*

*The north-south route between the two plots is not yet delivering a safe, overlooked and welcoming place and the scope for increasing the extent of active frontage in this area should be further explored. We support the proposed variation in landscape character of the two courtyards, but refinements should be made to maximise flexible, useful garden areas.*

*We made the following points for consideration and action by the design team:*

*Building thresholds and streets*

*The extent of active residential frontage on Plot 13 is positive, with the exception of the route between the plots. There is scope for making the car parking layout much more efficient enabling the footprint of it to be reduced and freeing up more space for additional active uses along this route. In its current format the route is unlikely to feel like a safe and welcoming space, and introducing a few additional mews houses for example, here could help transform it.*

*We queried the orientation of the leisure facility in Plot 14. Rotating it to increase the extent of leisure frontage facing the park, would create a nice synergy with the park and would be a positive move if it can be achieved. If this proves problematic (due to transfer structures etc), incorporating an enlarged courtyard entrance, similar to those on Plot 13, and down playing the service yard would enhance the important park facing frontage. Regardless of the position of the leisure centre, it is very important that the glazed areas of its frontage is not obscured. Allowing views in and out will have benefits in terms of passive surveillance and offering glimpses of activity within and promoting healthy living.*

Right: Design Sketches Plots 03

*We noted the inconsistency in the building line to the south of the plots and suggested that a more consistent street edge should be maintained here. The swept paths of the bus route create pinch points around some of the corners of these plots which needs to be addressed through the detailed design of the public realm.*

*Architecture*

*We found much to admire in the architecture being developed for these plots, with a successful combination of materials and details. In particular the patterned metal screens provide a subtle link to the industrial history of the area which could be very interesting if they can be made to work as a functional part of the buildings.*

*We suggested that the architectural language should be softened, with a more defined façade hierarchy to make these buildings distinctly mansion block rather than warehouse in their typology. The buildings have a well defined base and middle but changing the architectural expression of the uppermost levels would add interest and more clearly imply the mansion block suggested by the masterplan for these plots.*

*The design of the balustrade to the raised terrace areas to ground floor apartments will be an important detail in terms of balancing the privacy expectations of occupants, allowing passive surveillance of the street and ensuring it reads as a coherent component of the masonry vocabulary of the building. We recommend that the detailed design of this element is further developed.*

*Landscaping*

*The emerging landscaping proposals for the podium gardens look quite promising and we support the variation in character across the two plots. The precedent images of the planting are compelling but we urged the design team to carefully consider species to achieve year round colour and density.*

*The geometric courtyard design of Plot 14 appears rather formal and we encourage the design team to ensure that useable, playable space is maximised.*

*We queried the green strip within the public realm to the east of Plot 14 which may somewhat undermine the civic character of the architecture.*

Following the March DRP, the proposals were revised inline with the panel's comments. The revised proposals will be presented in summary at the next Royal Wharf DRP on 14th April 2015.

Detailed CGI's Phase 01 and 02 Development

## Phase 01 and 02

At present Phase 01, which received detailed approval as part of the 2012 planning permission, is currently under construction and reserved matters approval has been granted for the Plots 01, 03, 09, 11, 12, 15,16 and 22 within Phase 02 in 2014.

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

## Brief

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

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

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

SITE CONTEXT

## Outline Planning Application

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

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

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

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

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

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

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

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

With specific regard to the detailed proposals presented within this design + access statement, the enclosed designs have been developed in full accordance with the masterplan principles and design code of the Section 73. Design proposals for Plots 13 and 14A seek to reinforce the aims and objectives of the wider Royal Wharf vision.

Left: Illustrative Masterplan Aerial Image

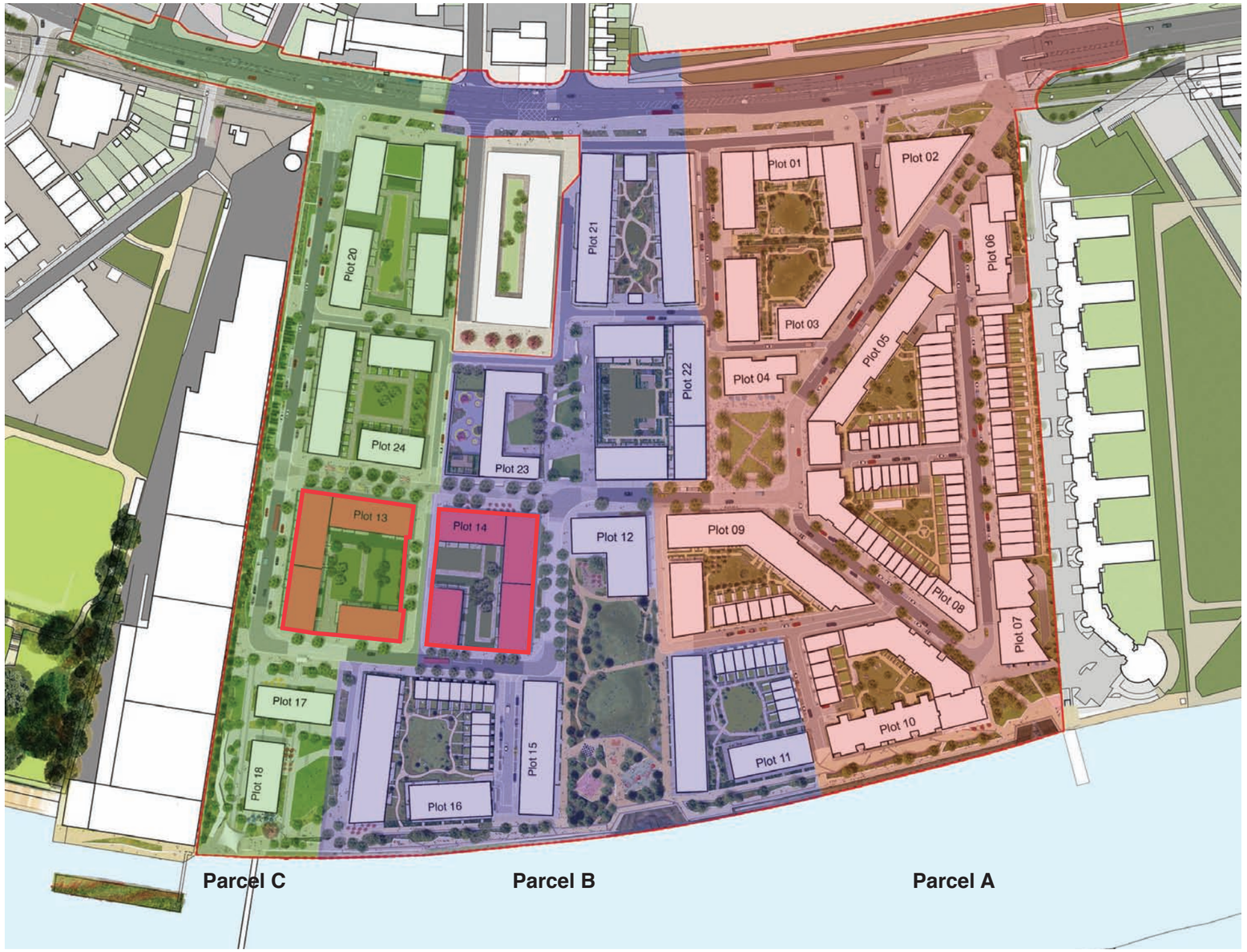

Masterplan Layout as Sought under the
S73 Planning Application Ref: 15/00577/VAR

## Royal Wharf Development Schedule

The comprehensive redevelopment of the 17 Ha Royal Wharf site

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

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




## Planning Parcel

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

As illustrated adjacent Plot 14 sits within parcel B and Plot 13 sits within Parcel C. The plot design team have designed to a clearly set target brief concerning tenure, mix and quantum of units across each plot, set by the outline planning S106. It is within this framework the plot design mix has been developed.

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

## Strategic Planning Policies and Material Considerations

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

| | | | | | |
|---|---|---|---|---|---|
| Economic development | **London Plan*; The Mayor's Economic Development Strategy For London (2010);** | Transport | **London Plan*; the Mayor's Transport Strategy; NPPF** | Ambient Noise | **London Plan*; the Mayor's Ambient Noise Strategy; NPPF** |
| Housing | **London Plan*; NPPF; Housing SPG; Providing for Children and Young People's Play and Informal Recreation SPG; Housing Strategy; revised interim Housing SPG** | Cross Rail | **London Plan* Alteration; revised draft Cross Rail SPG (March 2010)** | Context | **Planning for the Historic Environment; NPPF** |
| | | Parking | **London Plan*; the Mayor's Transport Strategy; NPPF** | Environment | **Development and Flood Risk** |
| | | Employment | **London Plan*; NPPF; Industrial Capacity SPG** | | |
| Affordable Housing | **London Plan*; NPPF; Housing SPG, Housing Strategy; revised interim Housing SPG** | Access | **London Plan*; NPPF; the Mayor's Energy Strategy; Mayor's draft Climate Change Mitigation and Adaptations Strategies; Mayor's draft Water Strategy; Sustainable Design and Construction SPG** | | |
| Density | **London Plan*; NPPF; Housing SPG; revised interim Housing SPG** | | | | |
| Urban Design | **London Plan*; NPPF** | | | | |
| Mix of Uses | **London Plan*** | Tall Buildings / Views | **London Plan*; RPG3A, View Management Framework SPG, draft Revised View Management Framework SPG** | | |
| Regeneration | **London Plan*; The Mayor's Economic Development Strategy For London (2010);** | | | | |

The London Plan 2011 (amended in 2013 and 2015) for consultation and London Borough of Newham Core Strategy draft are also a material considerations.

Additionally the Newham UDP comments on economic development, housing, affordable housing, density, mix of uses, regeneration, transport and employment.

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

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 13 and 14A) covers approximately 0.81 hectares of brown field land and sits within the context of two former wharfs; Vanesta Wharf and Minoco and Crescent Wharf. None of the wharfs have the status of safeguarded wharfs. The western area of the wider site houses a number of warehouses and industrial buildings; all of which are either derelict and / or in a poor state of repair. The remainder of the wider site comprises cleared vacant land and unused temporary structures.

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

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

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

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

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

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

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

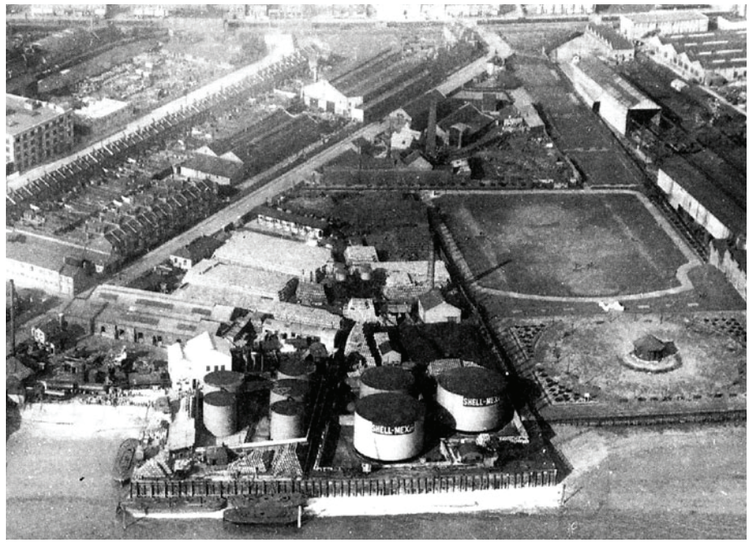
To the west of Venesta Wharf is Lyle Park, which was established in 1924, by Tate and Lyle for factory workers within the Royal Docks area. The park comprises open green space, play areas, a football pitch, tennis courts and formal and informal planting.

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

Knight’s Road c1950

Aerial Photograph c1945

Aerial Photograph c1980



Lyle Park Aerial photograph c1940

Aerial Photograph c1940

Boxley Street c1959

## Site History

The Royal Victoria Dock, opened in 1855, was the first dock built expressly for steam ships and the first to be connected to the national railway system through the North Woolwich branch of the Great North Eastern Railway. The Graving and Pontoon Docks were the first to use hydraulic power to raise ships out of the water for maintenance. The King George V Dock was opened in 1921, completing the Royal group of docks which formed the largest area of impounded water in the world.

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

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

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

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

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

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

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

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

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

DESIGN CODE + MASTERPLAN OBJECTIVES

## Purpose of Design Guidelines

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

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

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

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

## Parameter Plans

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

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

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

## Status of Guidelines

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

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

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

## Guidance Organisation + Hierarchy

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

**Objectives**

Objectives of the design guidance.

**Framework**

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

**Settings**

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

## Interaction

The design guidance for settings across the masterplan indicated the implications for architectural expression of buildings in various locations. This included the concept of ‘marker’ and ‘background’ buildings, in which the former are intended to be visually more important in the identification of routes, defining views or containing spaces.  Background buildings and adjacent landscape designs form the principle means of achieving the masterplan vision by allowing the masterplan to be a landmark development and not a competing set of landmark buildings.

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

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

## Context

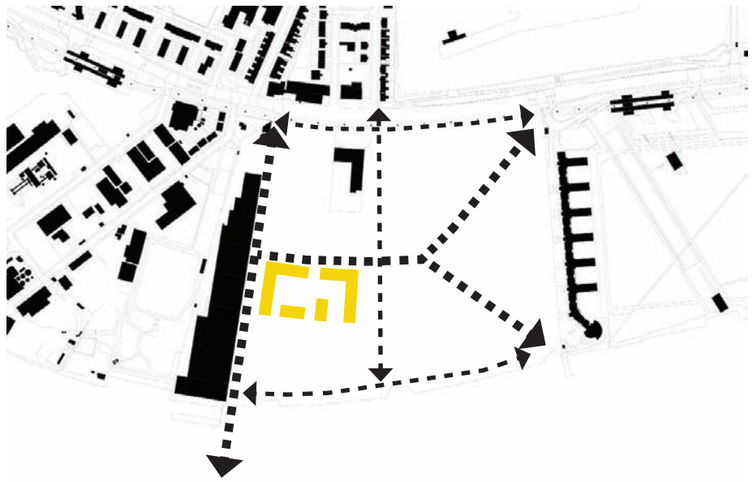
Generating a new site context is a key component of the masterplan framework.  Specific criteria have been set by the masterplan to ensure plot design proposals respond to the Royal Wharf design code.

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

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

## Connection

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



## Major Spaces

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

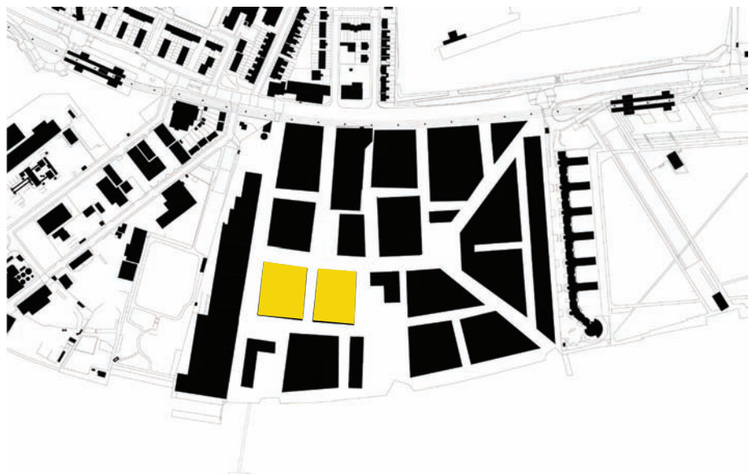
The diagram below illustrates how edges of major spaces have be defined with clarity in order to realise the urban framework for Royal Wharf. The hierarchy of these environments within the masterplan has been protected.

## Built Form

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

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

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



## Urban Grain

Within the context of the block diagram the masterplan regonises 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

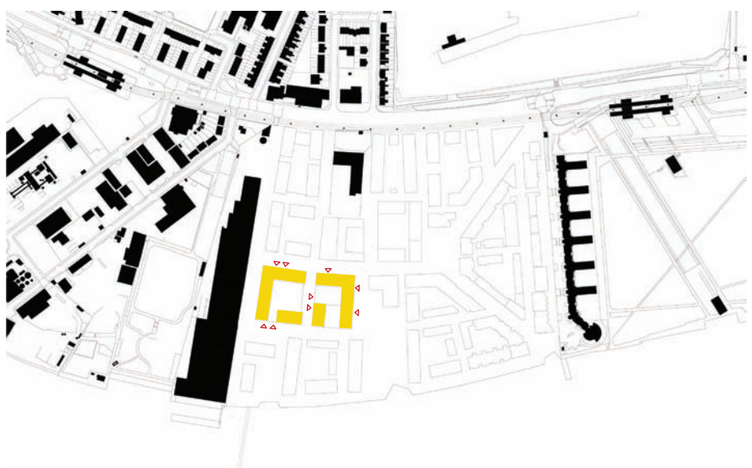
The Proposed Development is primarily made up of residential accommodation and for this reason has been considered for adequate levels of daylight and sunlight.

The supporting Royal Wharf EIA addendum for Plots 13 and 14 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 assessible from local drop-off points within the scheme at ground level.

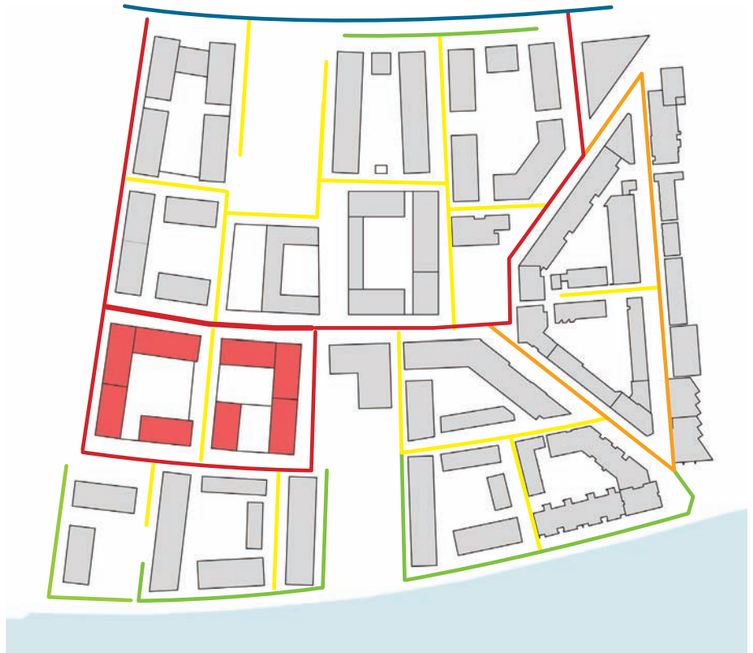


## Servicing + Vehicular Access

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

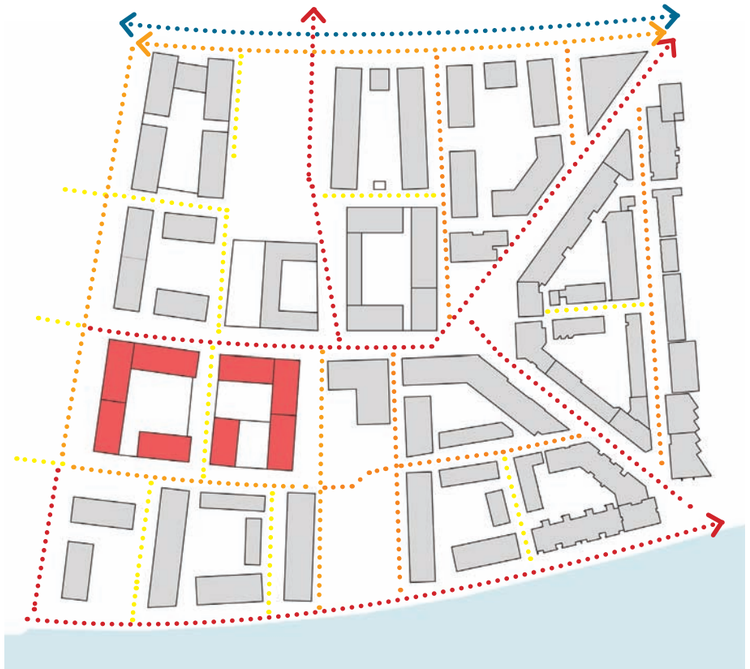
The aspiration is to allow the main streets to operate in exactly the same way as a typical high street within London.  Access for emergency vehicles and servicing of the residential, commercial and employment spaces is achieved across the site.

## Vehicular Movement




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

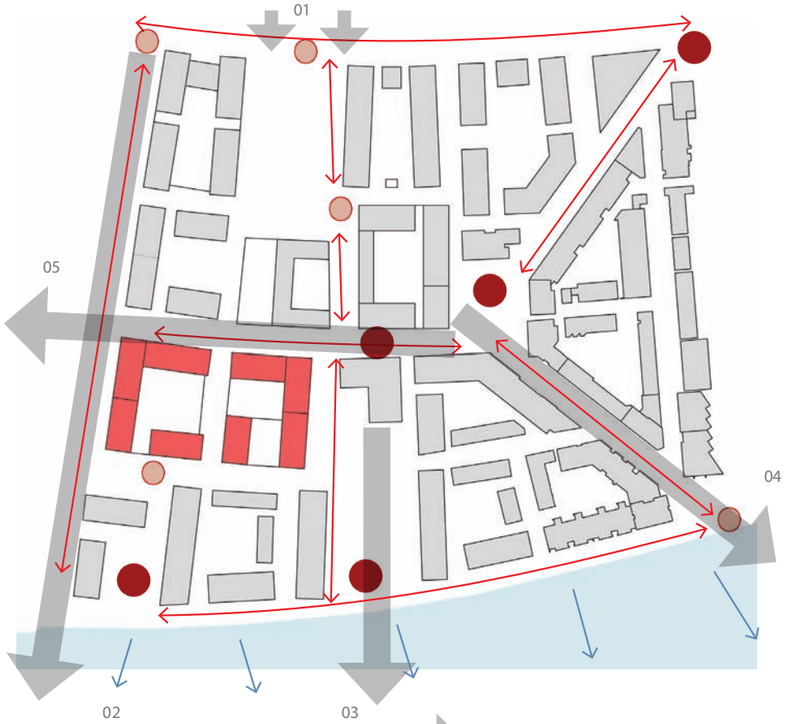
Gateways

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 Britiannia 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 13 and 14 complies with the use parameters for the flood and formation levels.

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 13 and 14 to respond to certain site constriants with richness and sensitivity.

The design of plots 13 and 14 complies with the use parameters as illustrated.


Proposed Site Levels Plan

## Proposed Site Levels

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

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

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

The proposed design of plots 13 and 14 complies with the designated criteria for the Proposed Site Levels parameters for the flood and formation levels.


Housing + Apartment Location Plan

The above plan illustrates uses at street level.

## Housing / Apartment Mix

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

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

Where placed the housing has been grouped around mews / home zone streets protected within an massing of apartment buildings.
Designing the masterplan in this way allows for a rich mix of housing typologies and tenures to be developed within each character area.

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

The proposed design of plots 13 and 14 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 13 and 14 complies with the designated criteria for the Minimum Heights A.O.D parameters.

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


Maximum Heights Plan

## Maximum Heights AOD

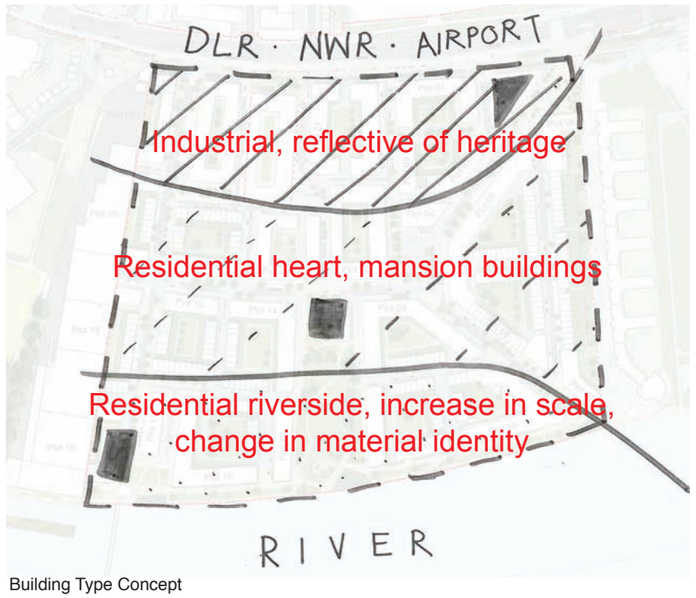
The maximum heights strategy needs to define where landmarks should be formed and those streets and areas of urban realm within the masterplan that need to be further defined and enclosed, to heighten the quality of the scheme. The diagram for maximum development sets taller buildings adjacent to existing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

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

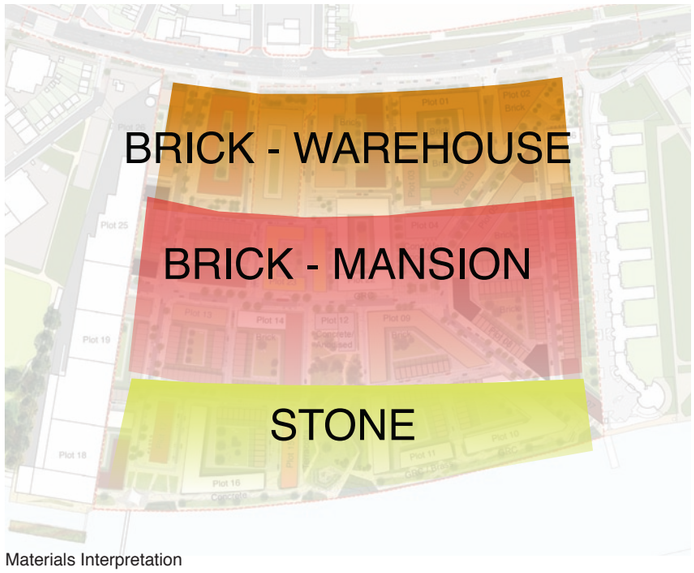
- The eastern element of Plot 12, this building sits at the northern end of the new park and marks the centre of the site
- Plot 18 is located adjacent to the pier and will act as a ‘marker’ for this facility
- The south eastern part of Plot 10 which is the termination of the diagonal route from the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

The proposed design of plots 13 and 14 complies with the designated criteria for the Maximum Heights A.O.D parameters.

## Initial Principles




Building Type Concept




Materials Interpretation

Materiality Masterplan

LOCATION

TYPOLOGY

Warehouse

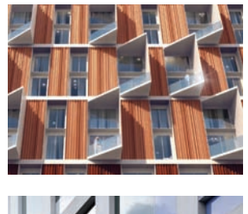
Robust edge
Predominantly brick

Civic

Strong Modelled
Stone

Mansion

Fine Elegance
Brick with Stone dressing



Marker

Special Contrast
Various Materials

Riverside

Relationship to Water
Stone Metal

Townhouse

Mews
Brick and Stone

School

Individual
Natural Materials

## Masterplan Building Materiality and Typology Plan

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

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

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

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

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

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

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

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

## Royal Wharf Massing

As part of the design process a number of urban block studies for Plot 13 and 14 were undertaken. As Plot 13 and 14 sit adjacent to one another, they are illustrated thus here to demonstrate their relationship.

The Section 73 application sets out height and mass parameters for the buildings in the masterplan. The massing of plots 13 and 14 are in accordance with these parameters.

The parameter massing is illustrated opposite and demonstrates the starting point for the plot proposals. The principles of the massing are as follows:

- Form an edge to the Park and High Street;
- Scale relationship to Phase 01 and 02 buildings, notably 12, 15 and 16;
- Entrances onto park and main streets;
- Range of façade types by typology;
- Provision for private amenities by means of courtyard;
- Integrated secure parking within basement.
- Maximise views into and out of the scheme;
- Active frontages to high street and park

Parameter Massing Principles for Plot 13 and 14

## Massing Evolution

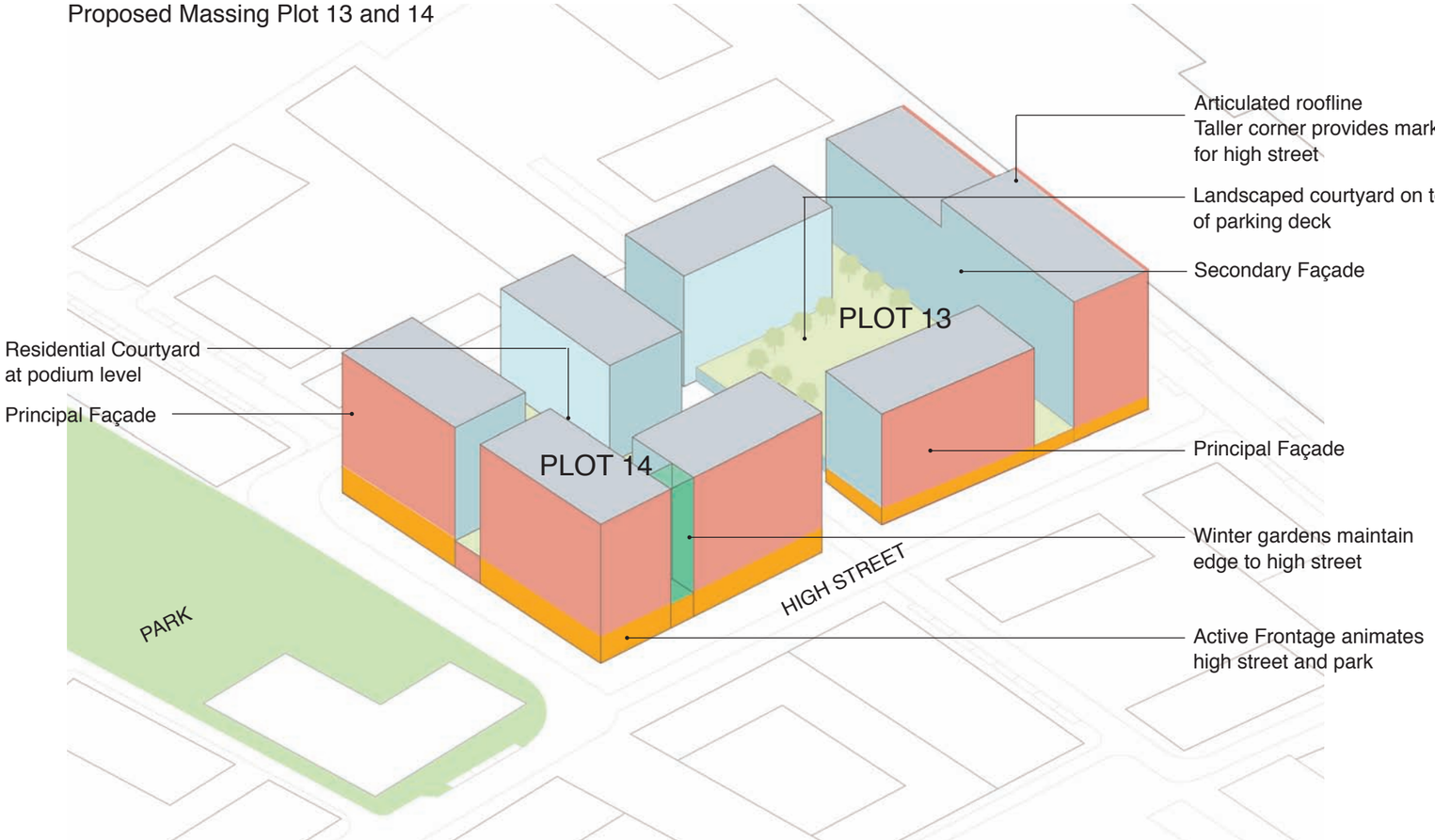
Various massing studies were carried out in order to explore articulation, orientation and minimising single aspect north-facing units for each plot. This was tested through both physical and computer models.

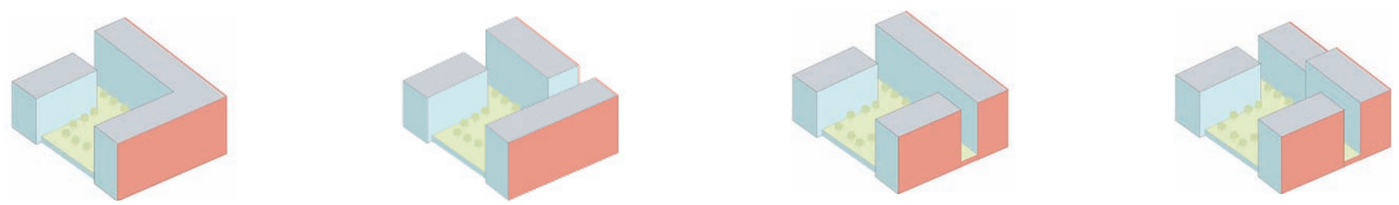
Development of initial study models has resulted in the adjacent illustrated massing diagram.

Central to the masterplan massing strategy is the intention to address the conditions above while establishing a variety of coherent and active street environments, in particular between the apartment blocks and public spaces. The massing principle for Plots 13 and 14 responds to their location, presenting definite edges to the park and defining the high street.

Plot 14 has a double height podium base with blocks varying from 6-8 storeys over. Plot 13 has a storey and a half base with blocks varying from 7-9 storeys over.

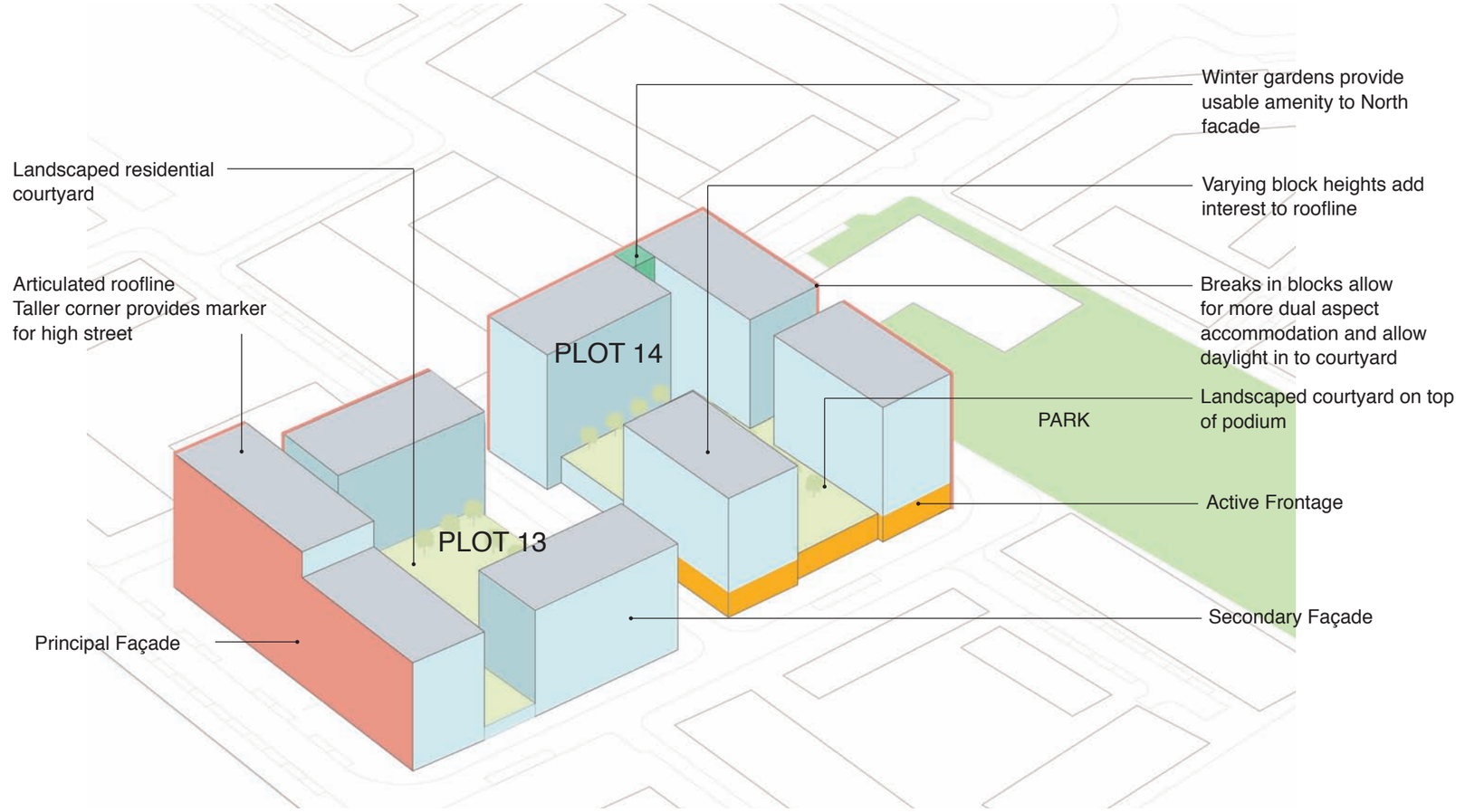
Proposed Massing Plot 13 and 14

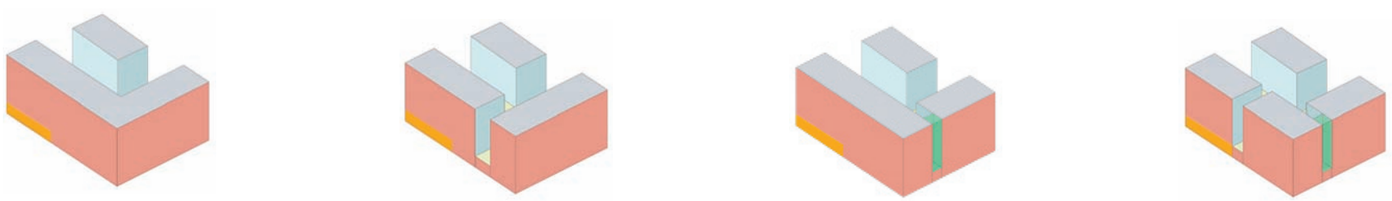


Masterplan Parameter Massing | Option 01 | Option 02 | Option 03

Plot 13: Massing Studies



Masterplan Parameter Massing | Option 01 | Option 02 | Option 03

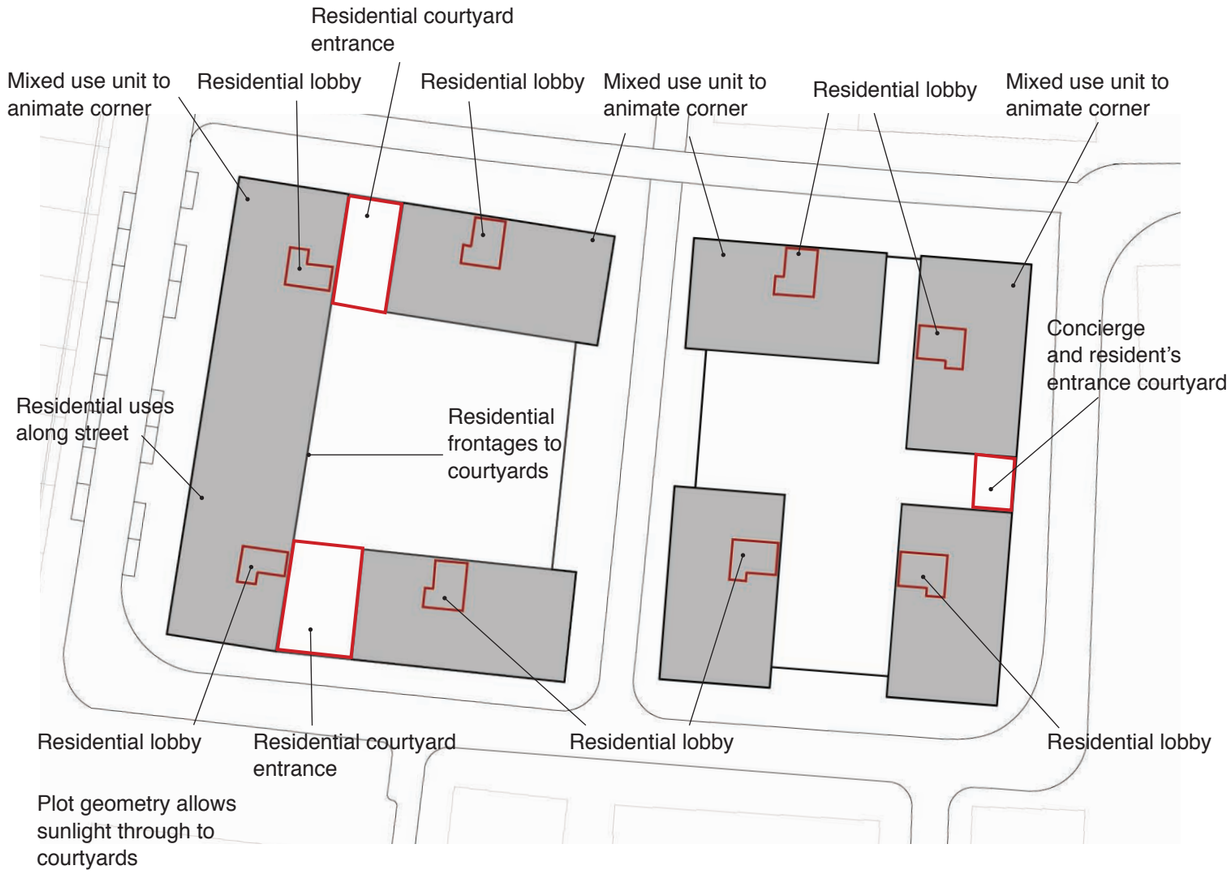
Plot 14: Massing Studies

# GENERAL ARRANGEMENT

As Plot 13 and 14 are adjacent plots, they are presented here together to demonstrate their relationship to one another.

## Arrangement Strategy

The diagram right illustrates the schematic layout of Plot 13 and 14 in plan in its immediate landscape context.



## Townscape

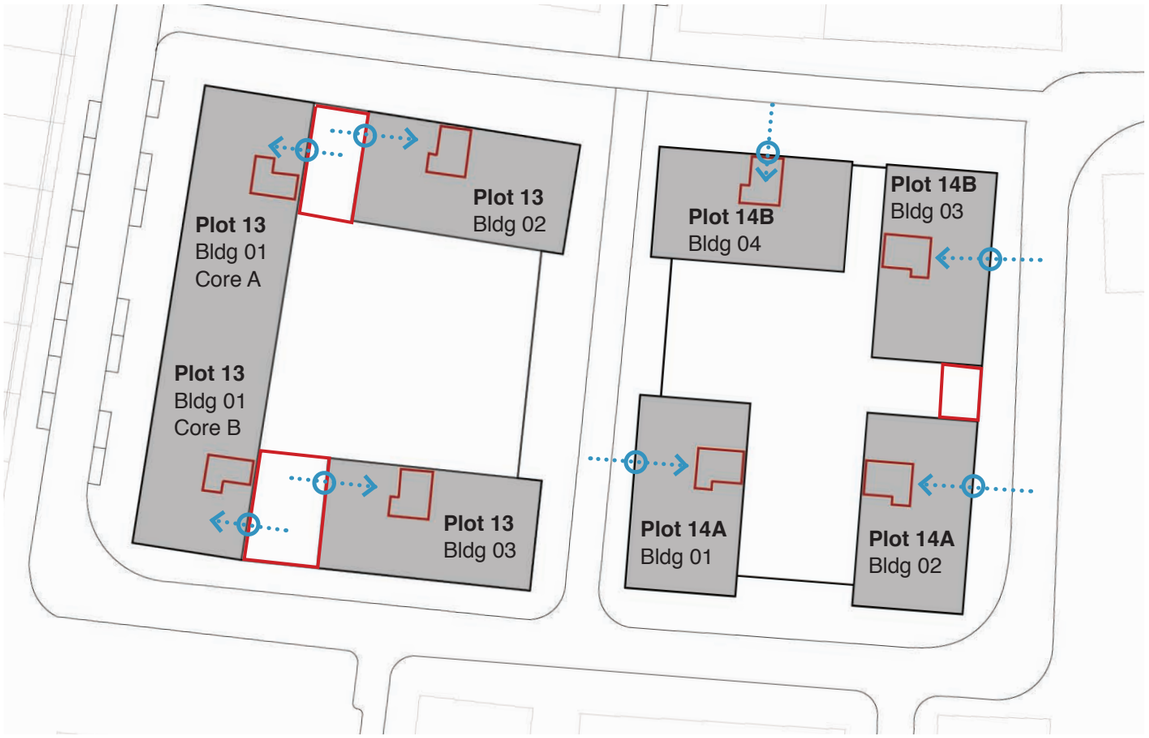
The plot proposals seek to reinforce and enrich the tapestry of materials and elevation types of the masterplan. A summary of the elevation groupings is annotated right. The principal facades define the high street and create a definite edge to the park.

## Access + Servicing

Access and servicing for Plot 13 and 14 follows the principles of the master plan design code.  Ancillary C3 uses such as refuse presentation rooms and cycle storage areas are located either within the basement or on the ground floor set away from the principal elevations, thus allowing residential and mixed use units to achieve the best possible orientation.

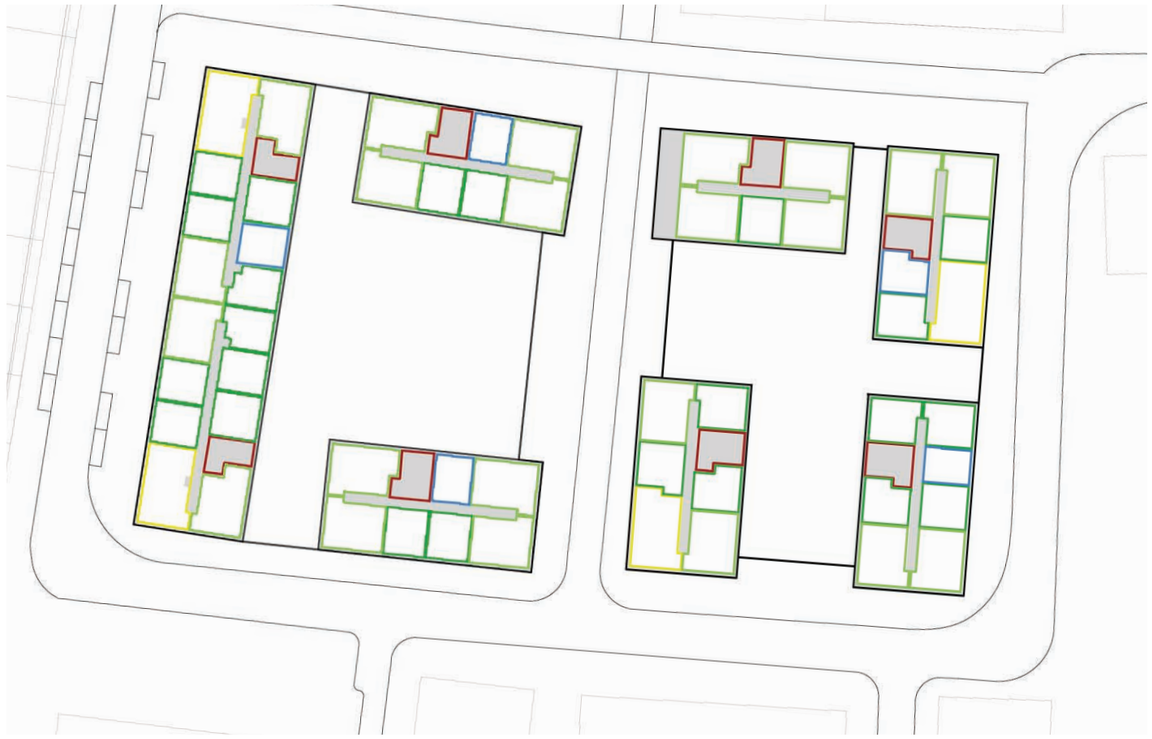
## Entrances

Each Plot has been divided into a number of buildings labeled Plot 13, Buildings 01 (a + B), 02 and 03 and Plot 14, Buildings 01, 02, 03 and 04. Plot 13 entrances are located off courtyards and Plot 14 entrances are located off the street. Level and secure core access into each residential courtyard is provided at the appropriate level.



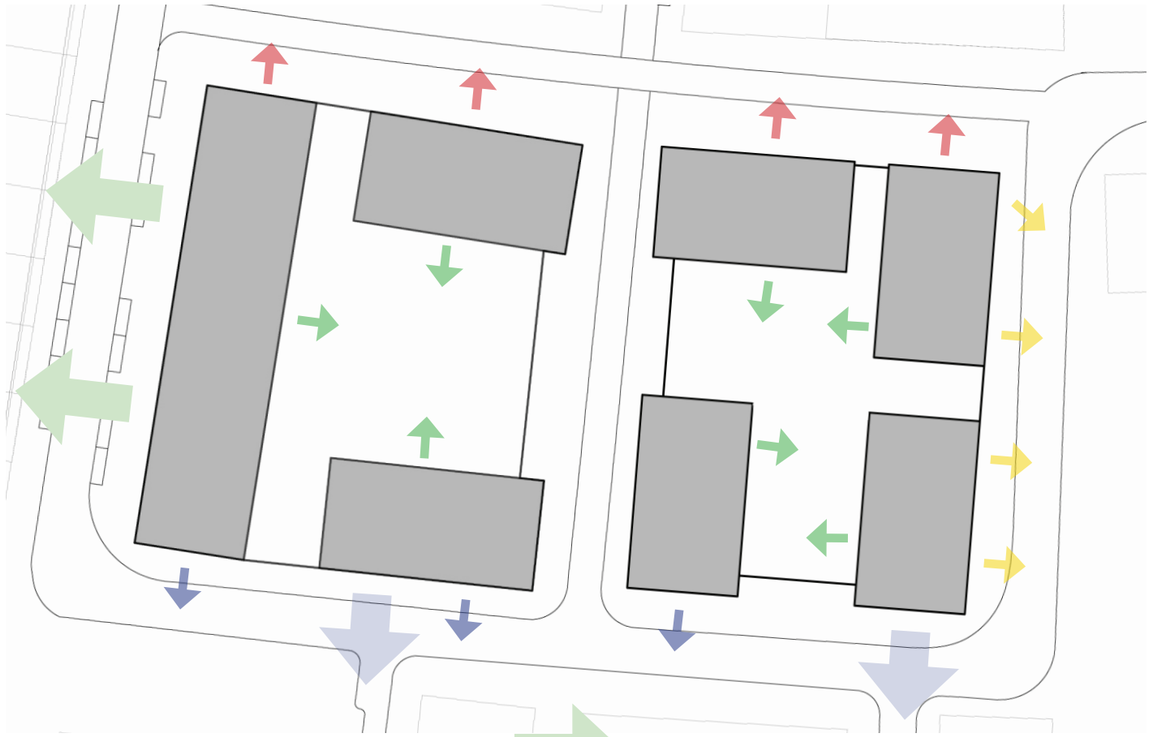
## Upper Level Arrangement Strategy

Apartments are accommodated throughout the upper levels.  Single-aspect north-facing units have been minimised with core positions strategically placed to address issues of overlooking. Located centrally to both plans are semi-private landscaped courtyards and terraces, away from the public activity and the roads.



## Views

The diagram below illustrates the viewing planes that have influenced the design of Plots 13 and 14.



- Long range views West to Canary Wharf and West London;
- Internal Views into landscaped courtyard;
- Close views of high street;
- Close views of residential streets;
- Close views of Linear Park.
- Mid range views of River Thames


Basement Level Plan

## Basement Level Plan

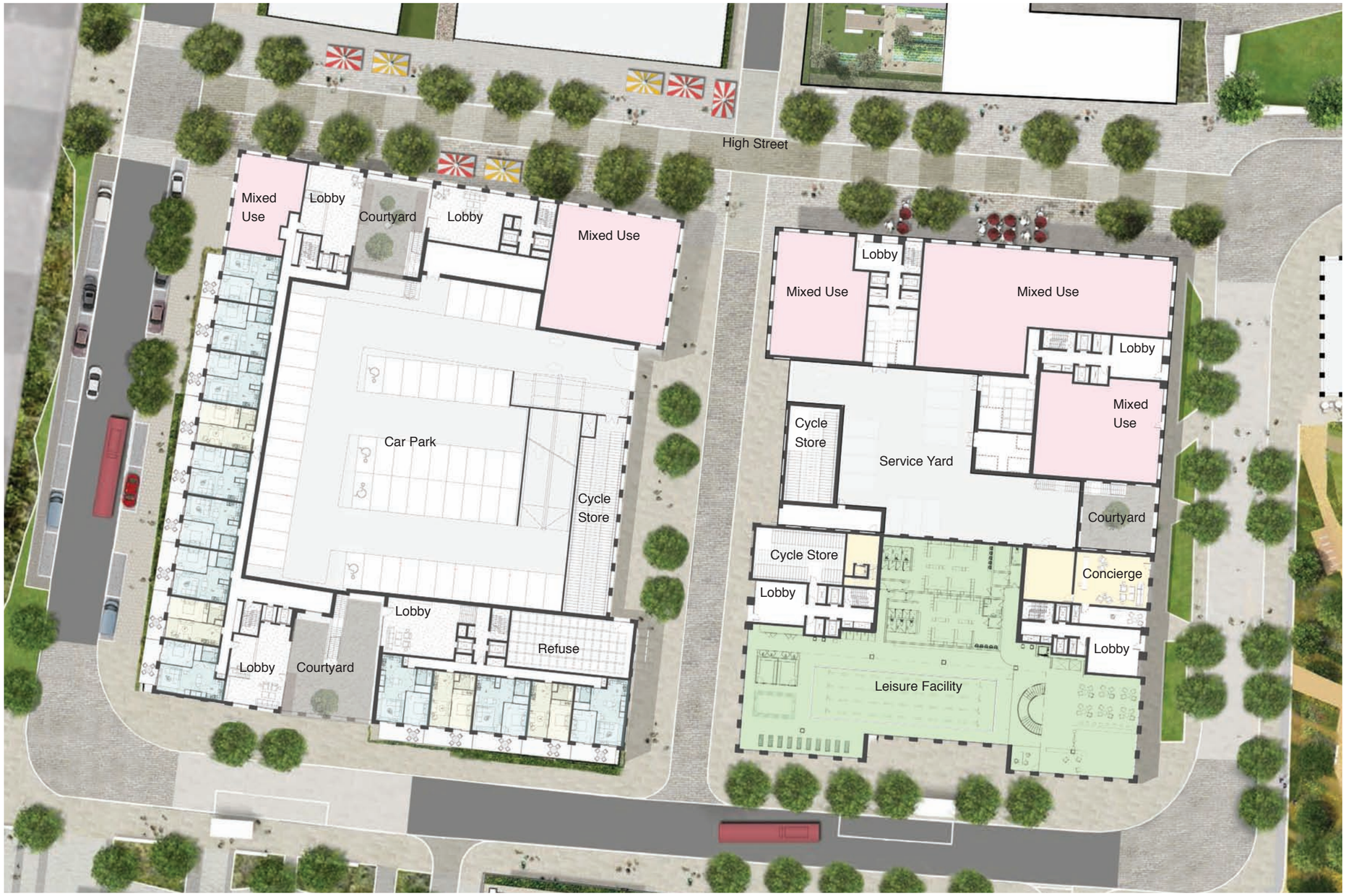
The proposed Plot 13 and 14 basement level plan is illustrated adjacent.

**Plot 13**

The basement accommodates carparking and associated residential ancillary uses. Vehicular access is via a ramp at ground level which is accessed off the side street. Circulation is provided through to Plot 14 as a means of service access for the leisure facility. Residents' access by foot is provided through 4 residential cores, adjacent to which are refuse stores providing direct access for residents from all residential floors.

**Plot 14**

Plot 14 is divided into two halves, to the south is a self contained leisure facility, parking and service access. Further parking is contained within the north element of plot 14 accessed via plot 13.




Ground Level Plan

Landscape to public realm indicative (public realm works to form separate application)
For plot 13 and 14A landscape strategy please refer to chapter 08.

suite
1 bed apartment
2 bed apartment
3 bed apartment
mixed use (commercial)
Concierge / Estates Management
Leisure

Extent of Application Key:

## Ground Level Plan

### Plot 13

Mixed use units are positioned along the northern edge of plot 13 to provide active frontage to the high street. Residential entrances are accessed via semi-private gated courtyards to the north and south of the plot.

Residential units and their associated private amenity spaces are elevated 1.1m from the external street level, allowing a degree of separation and privacy from the public activity and the road. The single storey deck to the east of the plot accommodates carparking and other residential ancillary uses. The eastern elevation is articulated and with considered landscaping adds interest to the streetscape.

### Plot 14

Similarly to plot 13, mixed use commercial units line the high street elevation and turn the corner to animate the park edge. A leisure facility with pool and gymnasium is located on the ground and mezzanine levels. Plot 14 also houses estates management and front of house concierge uses due to its central location within Royal Wharf.

Off-street residential entrances are located on each elevation, marking the separate buildings within the plot composition. A service yard is provided between the leisure and commercial accommodation for deliveries, maintenance and staff parking.


Extent of Application Key:


Ground Level Plan Presented at DRP

Landscape to public realm indicative (public realm works to form separate application)
For plot 13 and 14A landscape strategy please refer to chapter 08.

suite
1 bed apartment
2 bed apartment
3 bed apartment
mixed use (commercial)
Concierge / Estates Management
Leisure

## DRP Response Design Development

The drawing to the left illustrates the general arrangement that was presented to the DRP. Below is a record of the comments received from the DRP in *italics* with response thereafter. The plot designs have been revised in response to this to positive effect.

*The north-south route between the two plots is not yet delivering a safe, overlooked and welcoming place and the scope for increasing the extent of active frontage in this area should be further explored.*

*The extent of active residential frontage on Plot 13 is positive, with the exception of the route between the plots. There is scope for making the car parking layout much more efficient enabling the footprint of it to be reduced and freeing up more space for additional active uses along this route. In its current format the route is unlikely to feel like a safe and welcoming space, and introducing a few additional mews houses for example, here could help transform it.*

Following this DRP feedback, two alternative ground floor arrangement approaches were explored. These are illustrated in the sketches on the following page.

**Option 01:**

**Introduce non-residential uses to the ground floor in this location**

The concern with this approach is that commercial or office uses in this location would potentially reduce the impact of the presence of those uses on the high street, diluting and reducing the clarity of the high street.

**Option 02:**

**Introduce residential units to the ground floor in this location**

Due to adjacency with the leisure facility, residential uses at this level become somewhat problematic. This was the initial motivation for not placing residential windows to the east elevation of the ground floor unit on the south east corner to prevent overlooking in both directions. In order to implement clear glazing to the leisure facility in line with the DRP's comments (see page 09), it is preferred to have no windows at ground floor level directly overlooking what will be the spa / sauna area. Overlooking from residential units in this location could potentially reduce the enjoyment of this relaxation 'zone'.

In order to keep them away from principal elevations, prominent locations and residential private external amenity areas, refuse collections and deliveries will be made principally from this street. The service yard will be frequently accessed by maintenance vehicles associated with estates management. These vehicle activities are deemed to be a potential nuisance to ground floor residents in this location.

Having reviewed both alternative uses, it was felt that neither were appropriate for this setting. However, the ground level parking deck to plot 13 has been reorganised to incorporate bike storage accessible along the street to form a positive and animate use. The 2 carpark entrances have been aligned to minimise their impact. Glazing has been added to the mixed use unit to the north west corner, to contribute to ground floor level surveillance, thus reducing the extent of non-active frontage.

It is important to note that the street does currently benefit from natural surveillance from the apartments on the upper floors (above ground floor level for plot 13 and above mezzanine level for plot 14) and there are a number of uses and building entrances that exist in the current arrangement that contribute to activity in this area.

Option 01 - Ground Level Plan

Option 02 - Ground Level Plan

*We queried the orientation of the leisure facility in Plot 14. Rotating it to increase the extent of leisure frontage facing the park, would create a nice synergy with the park and would be a positive move if it can be achieved. If this proves problematic (due to transfer structures etc), incorporating an enlarged courtyard entrance, similar to those on Plot 13, and down playing the service yard would enhance the important park facing frontage.*

A courtyard overlooking the park adjacent to the concierge has been created to enhance the principal park-facing frontage. The courtyard will be accessed through a gated loggia and will provide direct access up to the upper courtyard for residents. It also presents an attractive approach to and outlook from the front-of-house concierge, which can now be a dual aspect space.

*Regardless of the position of the leisure centre, it is very important that the glazed areas of its frontage is not obscured. Allowing views in and out will have benefits in terms of passive surveillance and offering glimpses of activity within and promoting healthy living.*

This view is supported and the design team will endeavour to ensure that clear glazing is retained.

*We noted the inconsistency in the building line to the south of the plots and suggested that a more consistent street edge should be maintained here.*

This has been addressed through the realignment of the buildings.

Illustrative Courtyard Level Plan

Landscape to public realm indicative. For plot 13 and 14A landscape strategy please refer to chapter 08.

Extent of Application Key:

## Courtyard Level Plan

The proposed Plot 13 and 14 courtyard level plan is illustrated adjacent.

**Plot 13**

The top of the carpark deck is landscaped as private shared amenity space and provides an attractive outlook from the residential units above. The upper landscaped courtyard can be accessed either from the residential courtyard entrances at street level or from the residential cores.

Private residential terraces are provided to the apartments fronting onto the landscaped courtyard.

**Plot 14**

The top of the service yard and part of the leisure facility are landscaped as private shared amenity space providing an attractive outlook from the residential units above.  Access to the landscaped courtyard is from the residential cores. There is direct access to the landscaped courtyard from the residential courtyard entrance located to the east on the ground floor.

Extent of Application Key:


Illustrative Typical Upper Level Plan

Landscape to public realm indicative. For plot 13 and 14A landscape strategy please refer to chapter 08.

### Typical Upper Level Plan

The upper floors of both plot 13 and 14 have a mix of suites and 1 bed, 2 bed and 3 bed apartments.

Single-aspect north-facing units are minimised. Private external amenity space is provided in the form of balconies to the levels above courtyard level. Units to the north of plot 14 have wintergarden amenity.

**Summary Schedule**

**Plot 13**

**Residential GEA -20,453sqm**

**Ancillary (Plant & Storage) - 657sqm**

**Mixed Use - Commercial GEA - 408 sqm**

**Private Housing Mix:**

| | |
|---|---|
| **Studios** | 24 |
| **1 Bed Apartments** | 108 |
| **2 Bed Apartments** | 86 |
| **3 Bed Apartments** | 16 |
| **Total** | **234** |

Initial Sketch Design Study Plot 13 Facade

## “Heritage on the High Street”

Plot 13 forms an important High Street frontage within the Royal Wharf masterplan. The scale and massing of the building marks the western edge of the High Street.

Conceptually, the building has been developed to be mansion in character, with heavily modelled brick facades and stone and metal dressing. The plot has been developed within its wider masterplanning context and seeks to use brickwork as the main material, complementing Plot 14, and reinforcing the design code principles.

The plot design has benefitted from a clear conceptual approach such that the scheme presented here has developed from the principles of the masterplan design code, generating an architectural language and a common family of detailing that ensures each building responds to its location while remaining of a plot family; set within the wider masterplan setting.

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.

## Compliance to Parameter Plans

Parameter plans submitted as part of the Section 73 application (15/00577/VAR) are listed below and the following items are noted with regard to Plot 13:

**Parameter Plan 01, 02** Outline Site Boundary and Existing Site Levels

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

**Parameter Plan 03** Formation Level Plan

Basement car parking proposals are within the boundary as indicated on the drawing.

**Parameter Plan 04** Flood Defence Level Plan

The proposed plot design complies with the designated criteria for mixed use located to the North and C3 uses elsewhere.

**Parameter Plan 05** Proposed Upper Level Plan

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

**Parameter Plan 06** Proposed Building Footprints

The proposed design complies with the designated criteria.

**Parameter Plan 07** Proposed Minimum AOD Levels

The proposed design complies with the designated criteria.

**Parameter Plan 08** Proposed Maximum AOD Levels

The proposed design complies with the designated criteria.

**Parameter Plan 09** Proposed Public and Private Realm

The proposed design complies with the designated criteria.

**Parameter Plan 10** Proposed Movement Plan

The proposed design complies with the designated criteria.

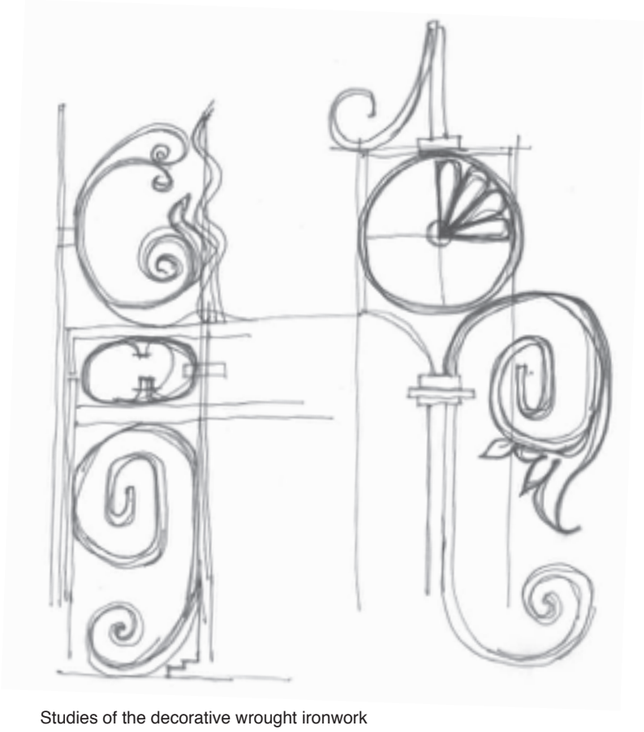
## Elevations Concept

Plot 13 has been designed as a grey-brown brick building with elegant slender horizontal stone banding. Detail and tactility is added in the form the metal ventilation screens that sit in front of the bedroom windows.

The design of the metal screens references the industrial heritage of the site. Harland and Wolff were shipbuilders who occupied a site in nearby Woolwich. Famously, the same shipbuilders built the Titanic, which embarked on its tragic voyage in 1912. When Harland and Wolff closed its Woolwich shipbuilders in 1975, the wrought iron gates that marked its entrance were saved. In the mid 1990s the gates were gifted to Lyle Park, where they now sit atop the upper terrace. It has been suggested that, due to their historical significance, the gates should be listed.

Due to its proximity to Lyle Park it was felt that the decorative metalwork featured on the gates would make a fitting tribute to this ship building heritage.

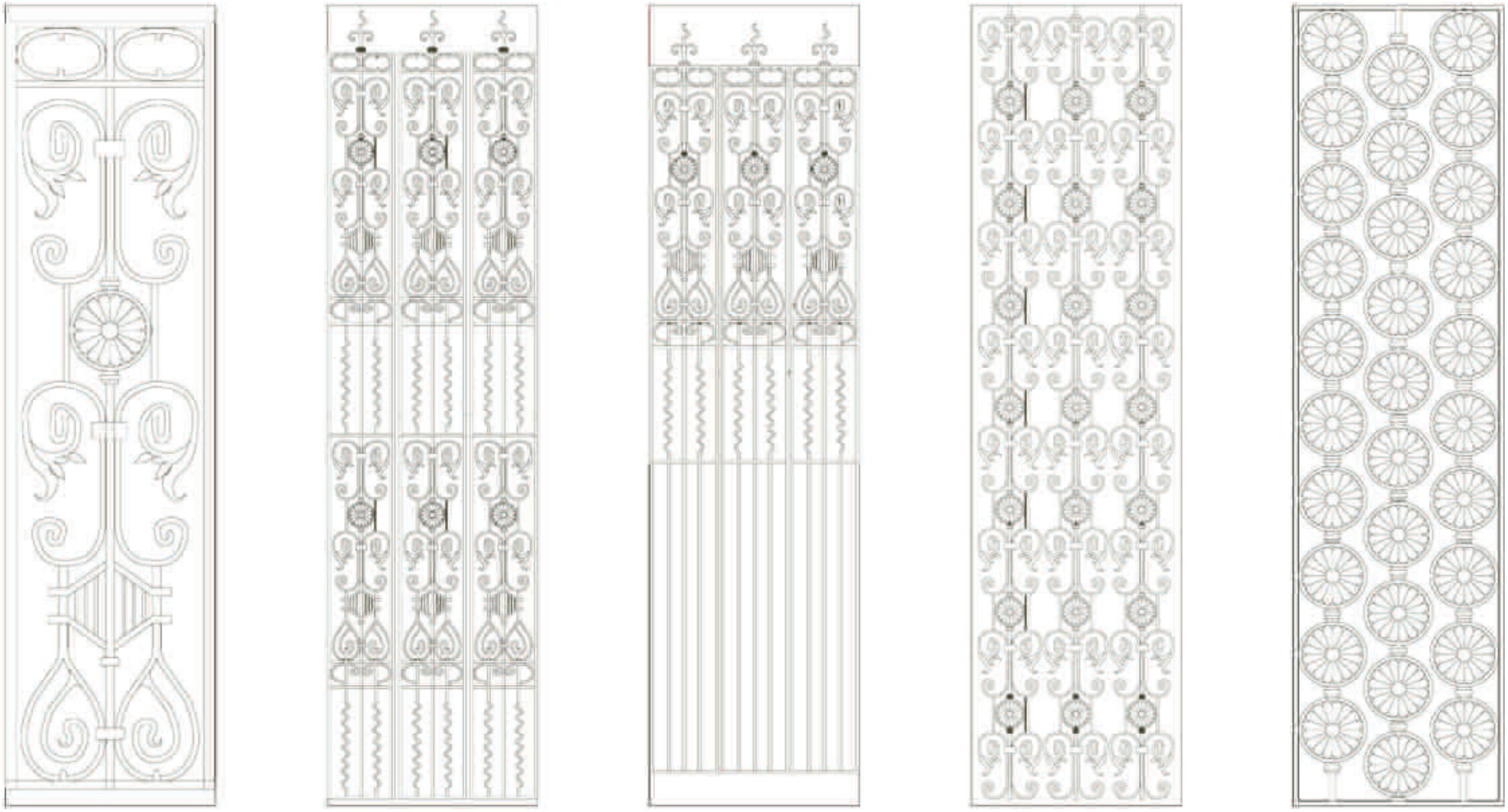
Studies were made of the detail of the iron gates and these were developed in to a series of abstracted, enlarged, repeated patterns, as a starting point for the metal ventilation screen design. The designs were further tested by means of laser cutting.



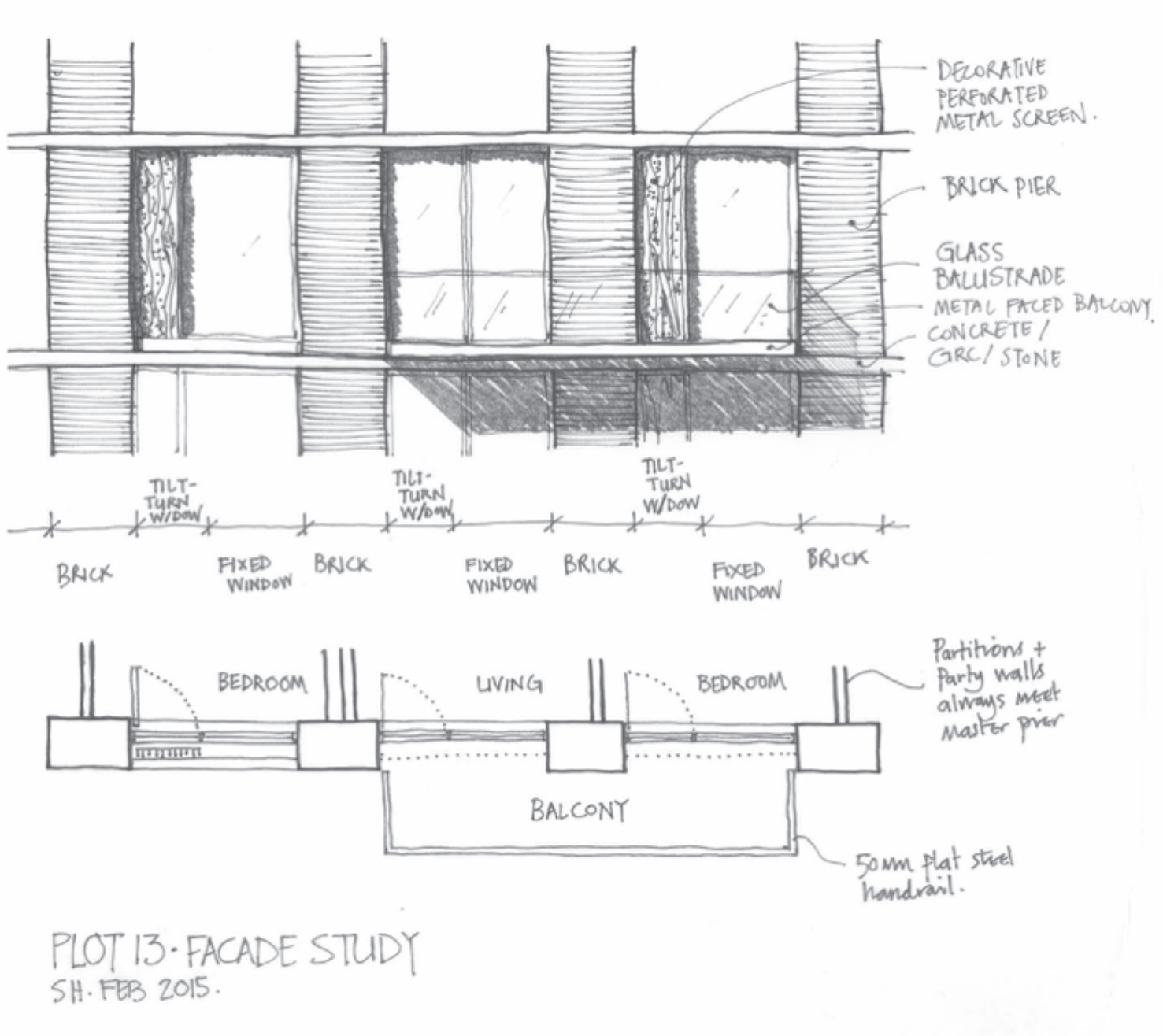
Studies of the decorative wrought ironwork

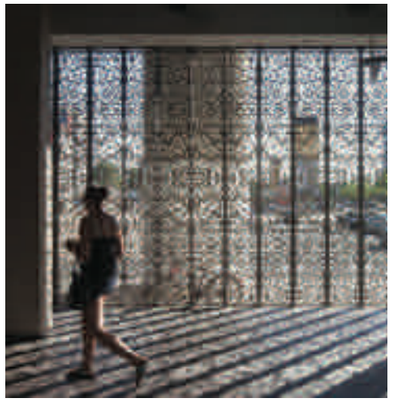
Laser cut study


The Harland and Wolff Gates in Lyle Park

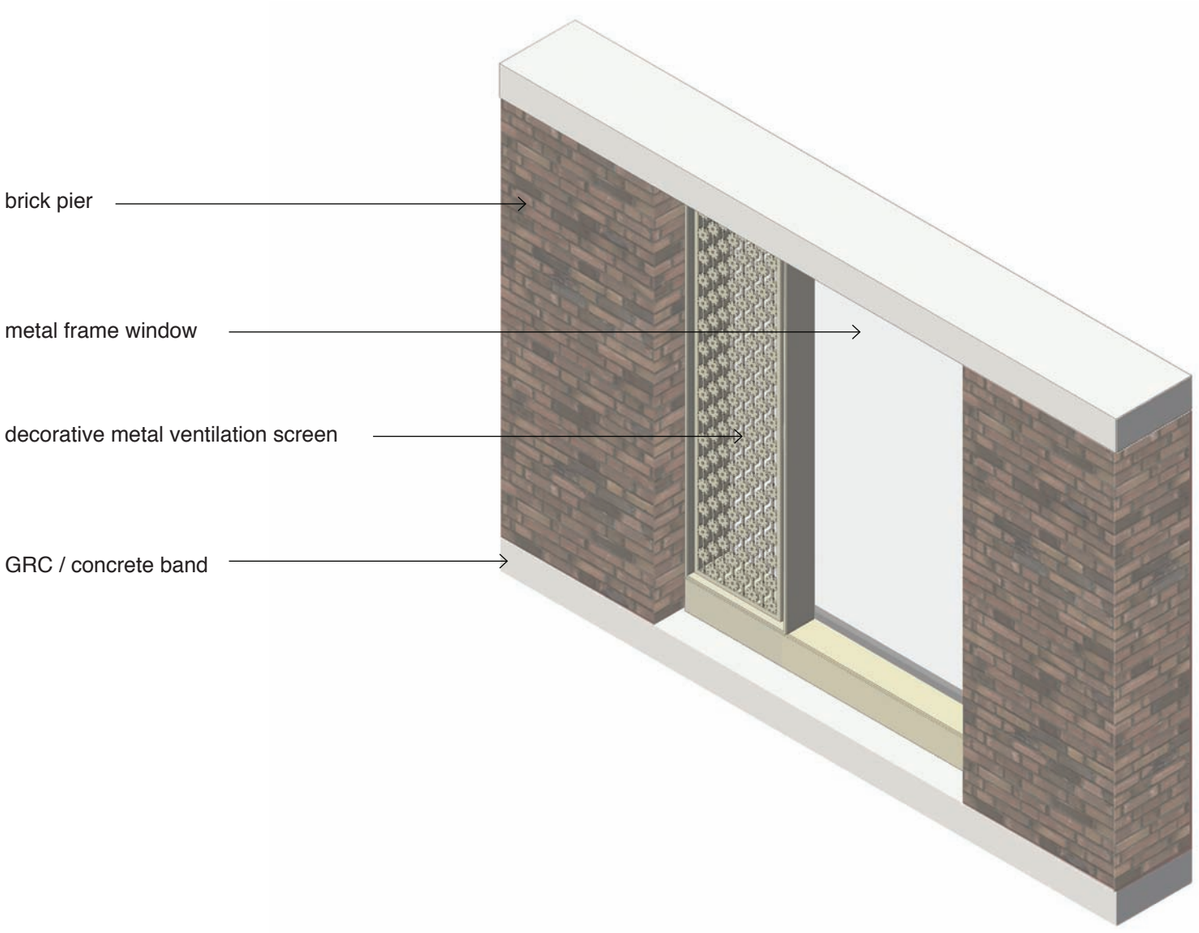


Pattern Studies



Precedent Studies for Decorative Metal Screen


brick pier
metal frame window
decorative metal ventilation screen
GRC / concrete band

## Bay Studies

Bay Development Model

Materials Palette

## DRP Response Design Development

Below is a record of the comments received from the DRP in *italics* with the responses provided thereafter. The plot designs have been revised in response to this to positive effect.

*We found much to admire in the architecture being developed for these plots, with a successful combination of materials and details. In particular the patterned metal screens provide a subtle link to the industrial history of the area which could be very interesting if they can be made to work as a functional part of the buildings.*

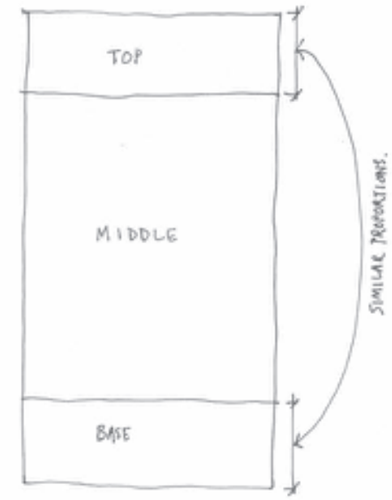
In the technical design stages that follow the planning stage, we intend to further refine the pattern design and the detail to ensure meaningful and functional integration of the ventilation screen feature into the design of plot 13.

*We suggested that the architectural language should be softened, with a more defined façade hierarchy to make these buildings distinctly mansion block rather than warehouse in their typology. The buildings have a well defined base and middle but changing the architectural expression of the uppermost levels would add interest and more clearly imply the mansion block suggested by the masterplan for these plots.*

The mansion typology, suggested by the masterplan, refers to the use of materials and character of the facade rather than a literal translation of a mansion building. Plot 13 represents a contemporary interpretation of this concept. A strong base middle top language is conveyed through materials and proportions.

The top has been designed to mirror the height of the stone base and the window head panel detail adds elegance by increasing the perceived height of the top storey window. Furthermore, the deep brick parapet has been exaggerated to emphasise the strength of the building's top.

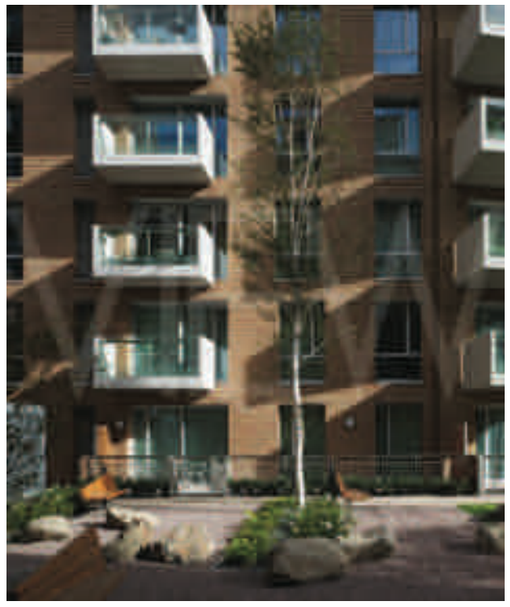
The different types of window along with the fineness of the metal screen detail differentiate plot 13 as a mansion type from the warehouse plots within the scheme.



## DRP Response Design Development continued...

*The design of the balustrade to the raised terrace areas to ground floor apartments will be an important detail in terms of balancing the privacy expectations of occupants, allowing passive surveillance of the street and ensuring it reads as a coherent component of the masonry vocabulary of the building. We recommend that the detailed design of this element is further developed.*

We explored a number of options to address this important feedback. In tandem with this we sought examples of this approach elsewhere in an urban context.



A brief appraisal of the approaches that were explored is provided below:

**Introducing masonry piers to the terrace to increase the solidity and sense of privacy.**

This idea was explored with integrated storage boxes between apartments. It was felt that this was ultimately detrimental to the overall architecture of the building. Sitting more masonry in front of the base reduced the elegance of the stone base.

**Increasing the height of the brick wall.**

Similarly to the pier approach, this diminishes the impact of the stone base and creates too much solidity along this street. This approach feels too defensive to the public realm.

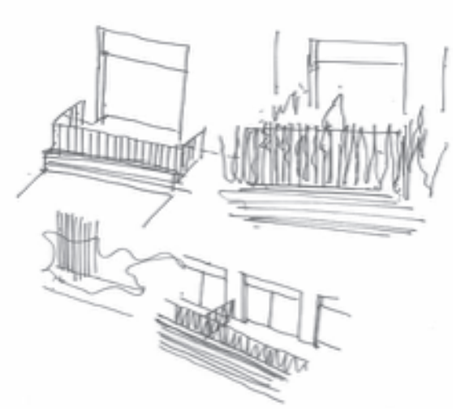
**Introducing partial opaque fritting or frosting to the balustrade glazing upto eye level.**

This approach felt somewhat cursory and was deemed inconsistent with the building's aesthetic.

**Design Study** masonry piers too heavy

**Preferred approach**

The masonry wall is increased, forming a small upstand. Replacing the glazed balustrade with crafted metalwork reinforces a sense of solidity and privacy, whilst retaining lightness and permeability, which we strongly believe contributes positively to the public realm. This semi-permeable treatment also allows passive surveillance of the street at ground level. For the masonry wall below the railings, we feel that brick is the most appropriate material at street level due to its robustness and tactility. Introducing planting in front of the wall, further reinforces the defensible zone in front of the private terraces.



Design Study Sketches

**Summary Schedule**

**Plot 14a**

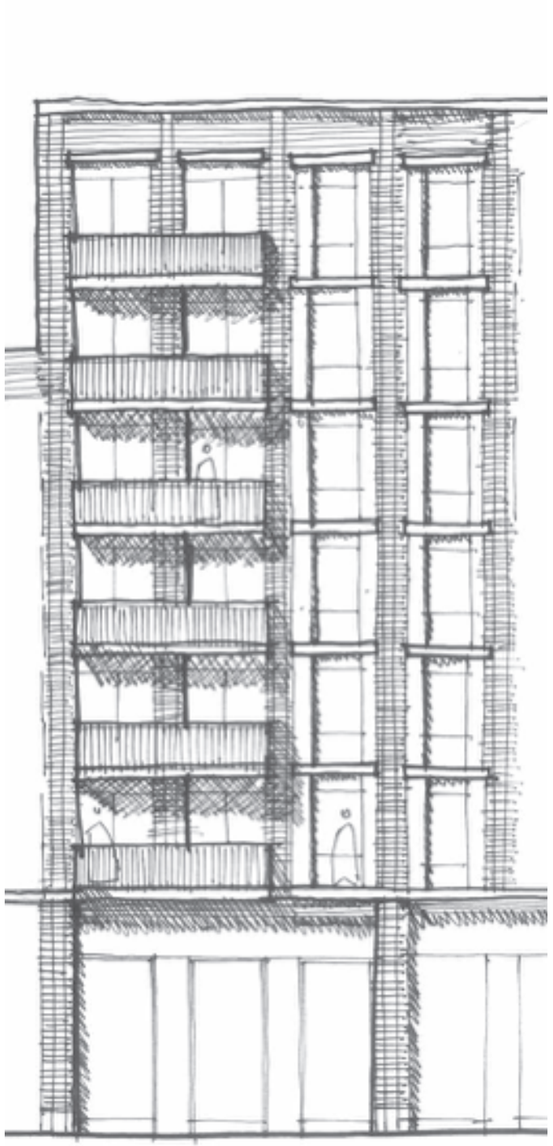
**Residential GEA - 8,981sqm**

**Ancillary (Plant & Storage) GEA - 478sqm**

**Leisure Facility GEA - 1944 sqm**

**Private Housing Mix:**

| | |
|---|---|
| **Studios** | 8 |
| **1 Bed Apartments** | 50 |
| **2 Bed Apartments** | 28 |
| **3 Bed Apartments** | 6 |
| **Total** | **92** |



Initial Sketch Design Study Plot 14 Facade

Left: Sketch Aerial View Plot 14 From North West showing High Street

**Concept**

## “Living by the park and the High Street”

Plot 14 forms an important High Street corner within the Royal Wharf masterplan.  The scale and massing of the building articulates the gateway to the park to the east between plot 12, capturing views south, towards the Thames, whilst maintaining an important civic presence on the High Street.

Conceptually, the plot has been developed within its wider masterplanning context and seeks to use brickwork as the main material, reinforcing the design code principles set out.

The plot design has benefitted from a clear conceptual approach such that the scheme presented here has developed from the principles of the masterplan design code, generating an architectural language and a common family of detailing that ensures each sub building responds to its location while remaining of a plot family; set within the wider masterplan setting.

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.

## Compliance to Parameter Plans

Parameter plans submitted as part of the Section 73 application (15/00577/VAR ) are listed below and the following items are noted with regard to Plot 14:

**Parameter Plan 01, 02** Outline Site Boundary and Existing Site Levels

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

**Parameter Plan 03** Formation Level Plan

Basement car parking proposals are within the boundary as indicated on the drawing.

**Parameter Plan 04** Flood Defence Level Plan

The proposed plot design complies with the designated criteria for mixed use located to the North and South.

**Parameter Plan 05** Proposed Upper Level Plan

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

**Parameter Plan 06** Proposed Building Footprints

The proposed design complies with the designated criteria.

**Parameter Plan 07** Proposed Minimum AOD Levels

The proposed design complies with the designated criteria.

**Parameter Plan 08** Proposed Maximum AOD Levels

The proposed design complies with the designated criteria.

**Parameter Plan 09** Proposed Public and Private Realm

The proposed design complies with the designated criteria.

**Parameter Plan 10** Proposed Movement Plan

The proposed design complies with the designated criteria.

Left: Plot 03 View From South East

Plot 14 View across the Park

## Initial DRP

Plot 14 was presented to DRP on 2nd June 2014 and it was well received. In light of this positive response, the main design principles, materiality and detailing were retained for the reworking of the building's revised plot footprint following the revisions to the masterplan.

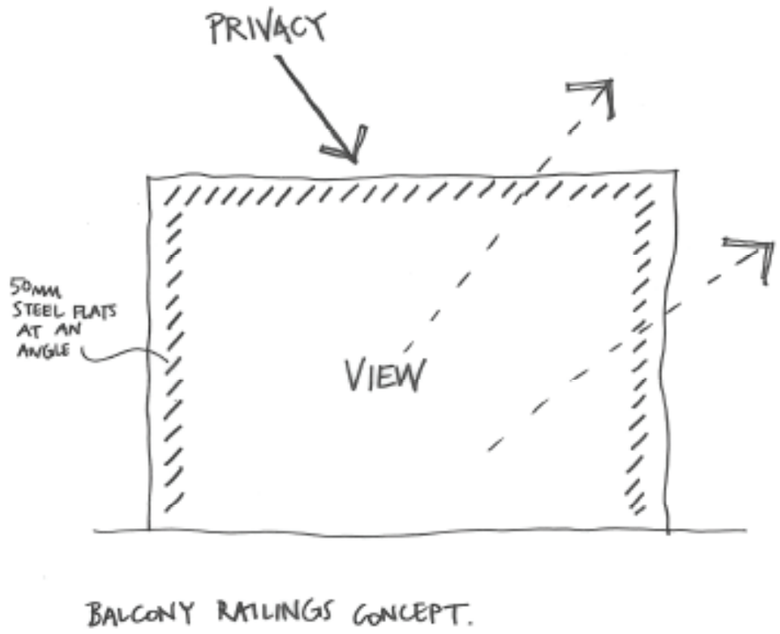
## Elevations Concept and Townscape

Plot 14 is is conceived as a modern reflection of the Mansion typology in red brick with a strong base and finer detailing to the masonry on the upper floors.

The verticality of the facade is expressed with modelled brick piers. Metal frame glazing detailed with metal spandrel panels sit within the exaggerated reveals. The metal is returned to form a lining to the reveal to add further richness to the elevation composition.

*"The proposed building looks very good. It is simple and elegantly proportioned. The clever, angled balcony is a small detail that will make an important contribution to the quality of the scheme."*

DRP June 2014




Balcony design development

## DRP Response Design Development

Below is a record of the comments received from the DRP. The plot designs have been revised in response to this to positive effect.

*We suggested that the architectural language should be softened, with a more defined façade hierarchy to make these buildings distinctly mansion block rather than warehouse in their typology. The buildings have a well defined base and middle but changing the architectural expression of the uppermost levels would add interest and more clearly imply the mansion block suggested by the masterplan for these plots.*


Similarly to plot 13, the mansion typology set out in the masterplan is intended as a starting point for materiality and facade character.
Plot 14 presents a contemporary interpretation of this concept, with a strong base, middle and top. However, following the feedback received from the DRP, we considered ways to strengthen its mansion-like qualities through materiality and proportions.

DRP Bay study

Post DRP Bay study

The masonry detail has been reworked at the top of the building to exaggerate the upper proportions of the top storey. The inner layer of masonry is continued above the head of the window, to emphasise the modelled masonry.

Stack course brickwork adds further richness to the top.

The plane that the top metal window head panel sits in has been moved back to stretch the proportion of the window reveal to elegant effect. The colour of the metalwork has been lightened to a more neutral warm stone-grey which we feel is more mansion-like than the darker grey colour previously shown.

DRP Top of Building Study

Post DRP Top of Building Study

## Bay Studies - DRP Design


Bay Development Model

Materials Palette

The following pages present the key townscape elevations for plot 13 and 14.

## North Elevation - High Street

PLOT 09

PLOT 12

PLOT 14

PLOT 13

**East Elevation - Linear Park**

PLOT 14

PLOT 23 (SCHOOL)

## South Elevation

PLOT 13

PLOT 14

PLOT 12

**West Elevation**

PLOT 17

PLOT 18

**West Elevation**

PLOT 14

## East Elevation

PLOT 13

## Plot 14 Phasing

As mentioned earlier in this report, plot 14 has been designed and developed in its entirety. However, the plot is to be developed in 2 phases, starting with phase A. The diagram to the right illustrates this. This application is for Plot 14A only.

The following pages demonstrate how 14A functions as a standalone building in the interim before 14B comes forward.

## General Arrangements Plot 14A

Basement Level Plan

Courtyard Level Plan

Ground Level Plan

Upper Level Plan

## Cycle Storage + Use

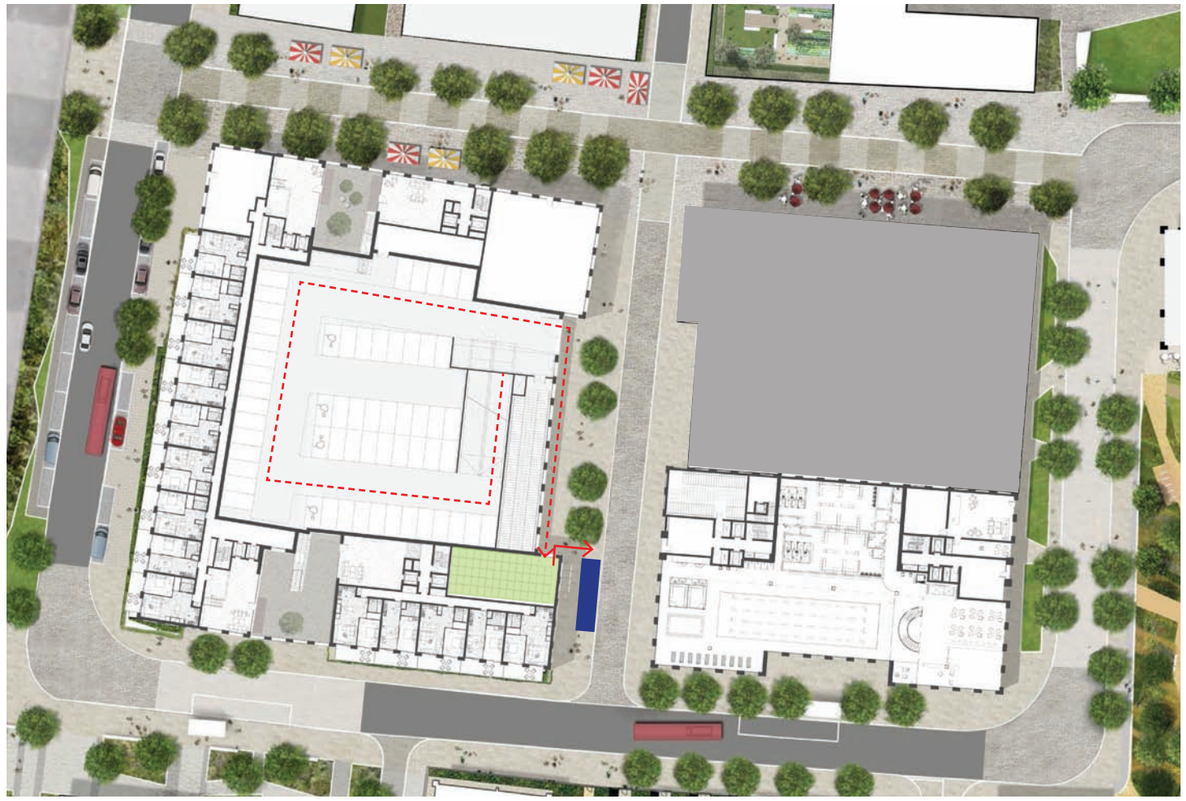
The Royal Wharf masterplan is well served for cycle routes within Newham and sits adjacent to designated routes integrated within the wider London cycle network.  North Woolwich Road and Royal Wharf internal streets are identified as having facilities to help cyclists, such as cycle lanes, bus lanes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

Cycle use is promoted for plot 13 and 14A by the provision of cycle stores built into the ground floor arrangements. The cycle stores are accessible externally off the street.  The stores have been designed as such to minimise the impact on the building facades. 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.

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


Ground Level Plan

Basement Level Plan



Ground Level Plan

Waste Vehicle Loading Bay

Waste Presentation Room

Refuse Store

Refuse Route to Presentation Room

Refuse to Street Route

# CYCLE AND REFUSE STRATEGY

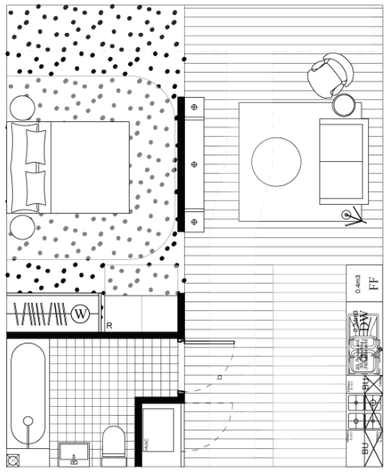
## Refuse Strategy

The proposed refuse strategy for Plots 13 + 14A  is presented adjacent.

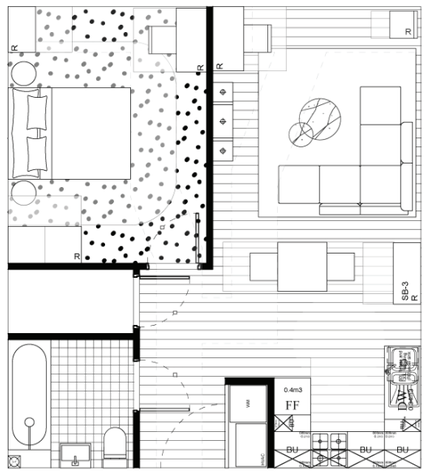
The proposals have been developed with consideration to the overall management strategy for the Royal Wharf site and in line with LBN Waste Management Guidelines for Architects and Property Developers.

Plot 13 and 14A refuse stores are located within the basement to maximise active frontages on the ground floor. When refsue is due to be collected refuse bins are transported up from basement stores using a waste bin tug and placed in the waste presentation room located on the ground floor at street level. The site management company in coordination with the local authority scheduled waste collections manages this process. After the waste collection, the EMT removes all empty bins and transports them back to the basement refuse stores.

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 loading bays.  Specific commercial unit arrangements will be agreed with the local authority upon occupancy of the unit.



Suite



1 Bed


2 Bed


3 Bed

Typical Suite, 1, 2 and 3 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 13 and 14a brings forwards the design for two 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 13 and 14a sit within the Royal Wharf development, surrounded by streets which are being brought forward through a later detailed application as part of the development of Phase 3.

## The Role of Landscape For Royal Wharf

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

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

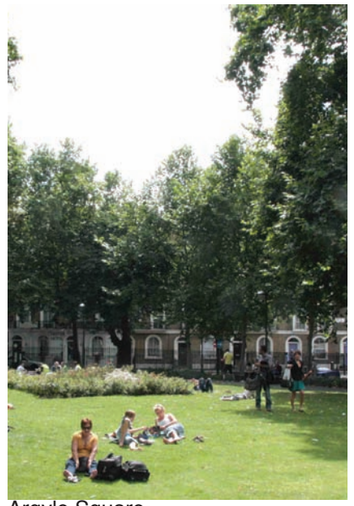
The courtyards contribute to the amenity of the site, providing local spaces for the residents in the buildings around each garden court.

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

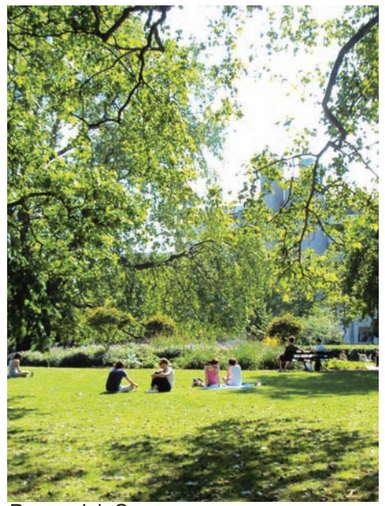
The designs developed for Plots 13 and 14a respond to the proposals being developed as part of the earlier phases, aspiring to create attractive, residential garden spaces.

- 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 over-arching 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 and western boundary.

## Design Review Process

The landscape for Plots 13 and 14 were presented to the Design Review Panel (DRP) alongside the Architectural design. The following comments were given and have been addressed below, and in the following document:

The emerging landscaping proposals for the podium gardens look quite promising and we support the variation in character across the two plots. The precedent images of the planting are compelling but we urged the design team to carefully consider species to achieve year round colour and density.

The planting palette included further in this document has taken this comment on board to ensure that there is sufficient structure and evergreen species in the mix to provide interest through the year.

The geometric courtyard design of Plot 14 appears rather formal and we encourage the design team to ensure that useable, playable space is maximised.

The design presented within this report, reflects a simplified layout. The layout has been developed to consider the size of planting beds, and the distribution and character of the playable spaces.

We queried the green strip within the public realm to the east of Plot 14 which may somewhat undermine the civic character of the architecture.

The design of all of the streets around plots 13 and 14a are to be developed and will be presented to the Design Review Panel prior to a future reserved matters submission.

## Plot 13 Courtyard Garden

The Plot 13 courtyard garden will provide 1807m2 of communal space, of which 140m2 will be play space.

The design of the plot 13 courtyard garden has been developed to create an attractive amenity space for the surrounding residents that can provide a semiprivate space away from the public realm.  The form is broadly organic, designed with flowing lines and gently curving pathways between areas of lawn and planting.

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.

Access:

The garden will be accessed from a number of entry points, the building cores, the garden level apartments; and via a staircase from street level entry courts to the north and south of the plot.

Circulation:

A primary footpath flows around the garden, providing a connection to the various subspaces and entrances.

Spaces:

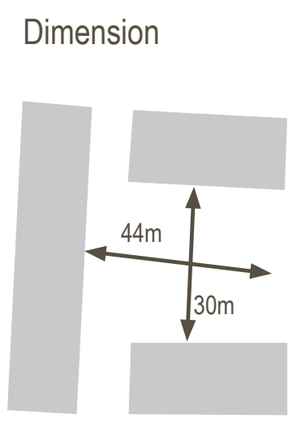
The design of the garden has created a number of subspaces of varying sizes.  3 central lawns provide a central focus and are complemented by the routes between them which are activated by the locating of community gardens.  Pocket spaces along the eastern side of the garden are sheltered by planting and provide intimate dwelling spaces.

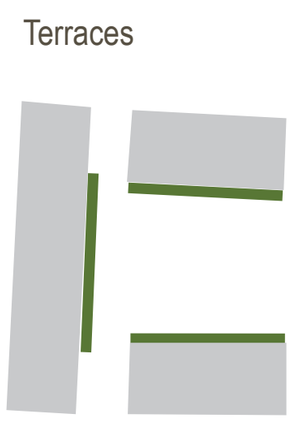
Landform:

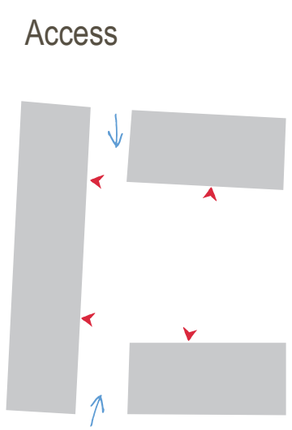
The central lawns will be gently sculpted to create playable spaces in the centre of the garden.

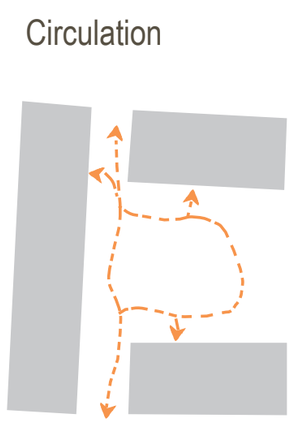
Planting:

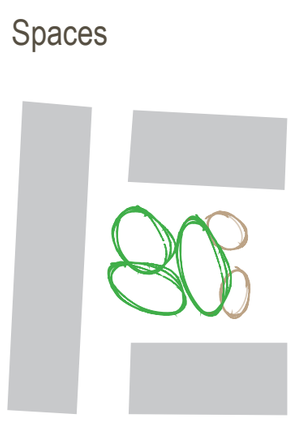
Planting will be used to emphasise and complement the enclosure created by the landform and to create attractive buffers between spaces, including between the terraces and the garden.

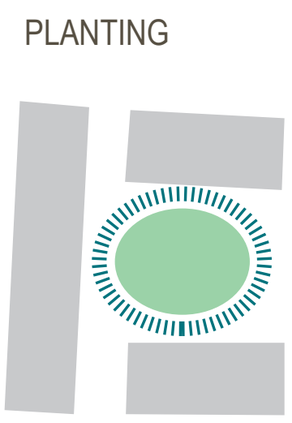


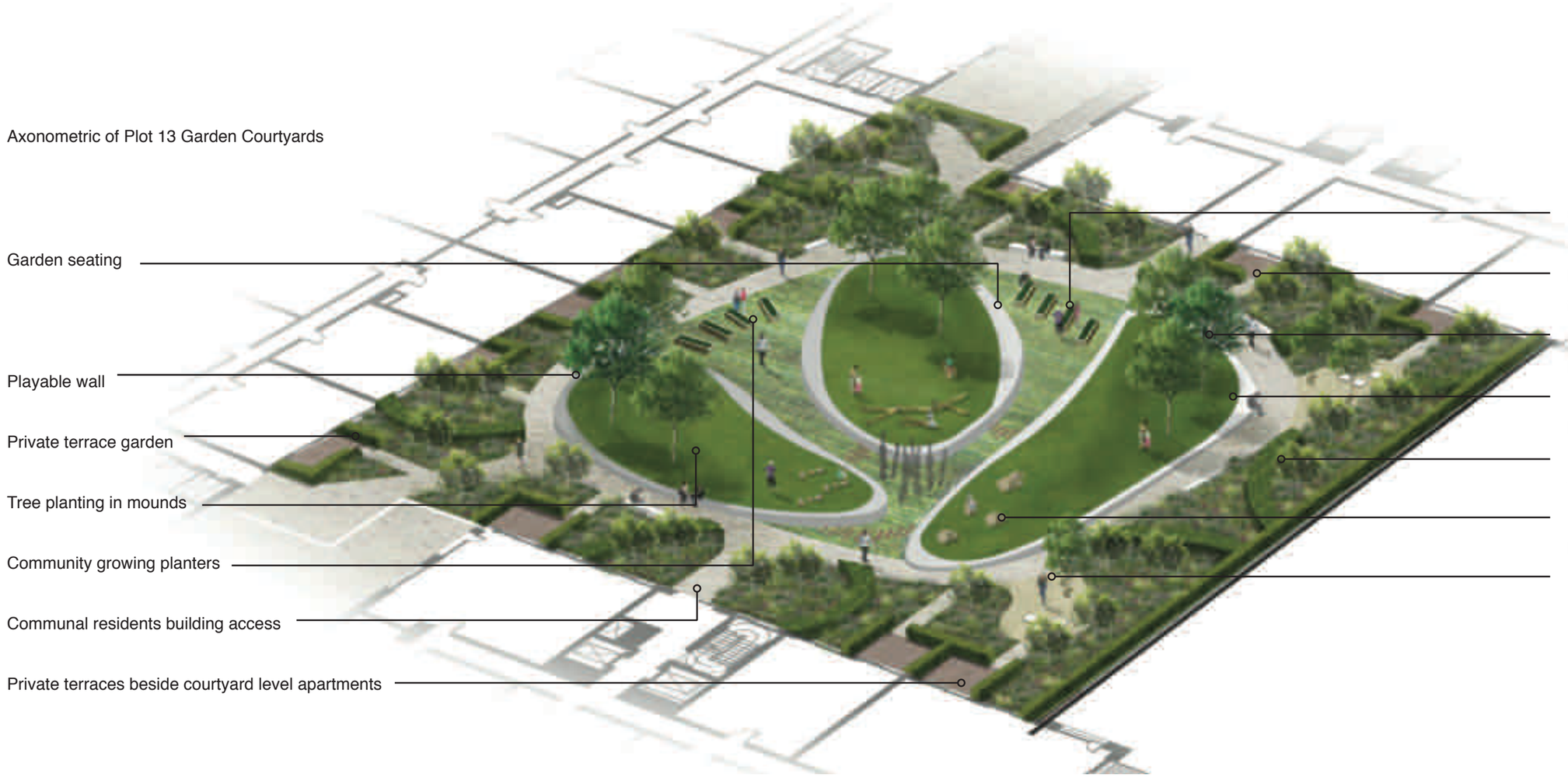

Plot 13 Courtyard Gardens Master Plan

## Plot 13 Courtyard Garden

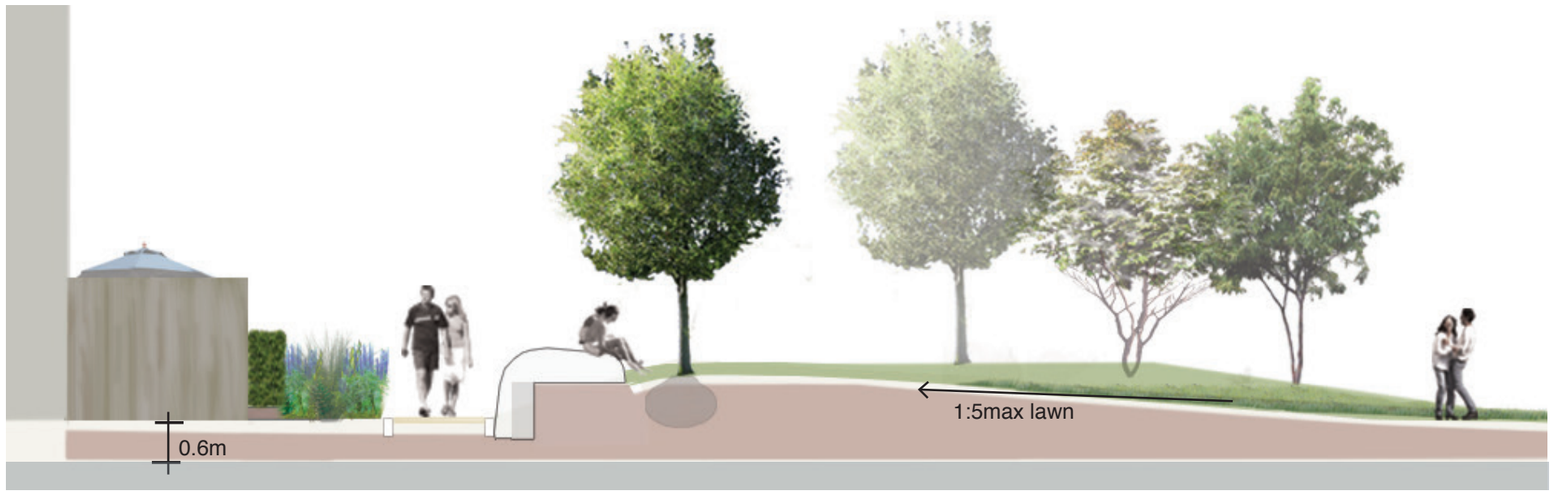
1. Private terrace gardens around the courtyard perimeter
2. Communal access
3. Courtyard entrance space at lower level with access to street
4. Bound gravel pocket space
5. Landscaped mounding with tree planting
6. Bench seating
7. Playable seat/wall
8. Community garden areas/plant boxes
9. Resin bound pathway
10. Shrub and herbaceous planting

Sweeping planting of varying heights to enclose spaces giving an intimate enclosed character. The planting forms will complement the design of the courtyard.

Axonometric of Plot 13 Garden Courtyards




Section Through Plot 13 Courtyard Garden




Garden Terrace

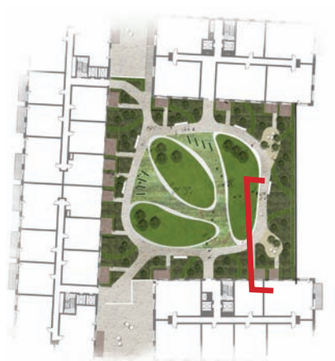
Buffer planting

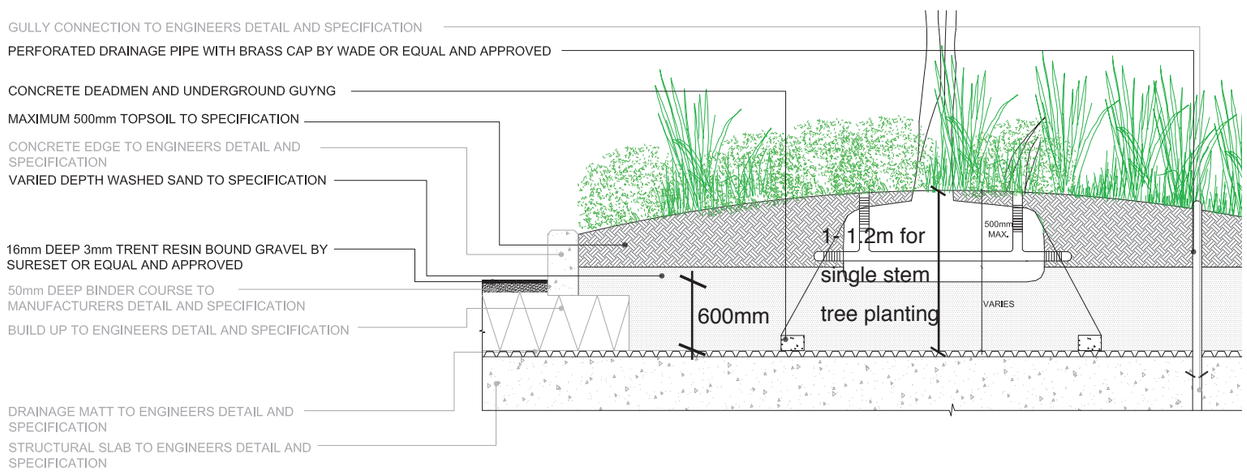
Garden path

Playable edge

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

Gently undulating lawn






Detail to show tree planting above slab

## Plot 14a Courtyard Garden

The Plot 14a courtyard garden will provide 494m2 of communal space, of which 43m2 will be play space.  The design of the Plot 14a courtyard garden has been developed to respond to provide a private, communal amenity space for the residents while integrating into the future 14b development.

Terraces:

Around the perimeter of the garden, private amenity space will be created accessible from the corresponding garden level apartments.  These will generally be 2.5-3m deep alongside the apartments to comfortably allow a table and chairs to be set up.  Buffer planting exists outside residents bedrooms ensuring both privacy and pleasant views into lush planting.

Access:

The gardens will be accessed from a number of entry points around the perimeter; from the building cores and from the garden level apartments.

Linear Grid Layout

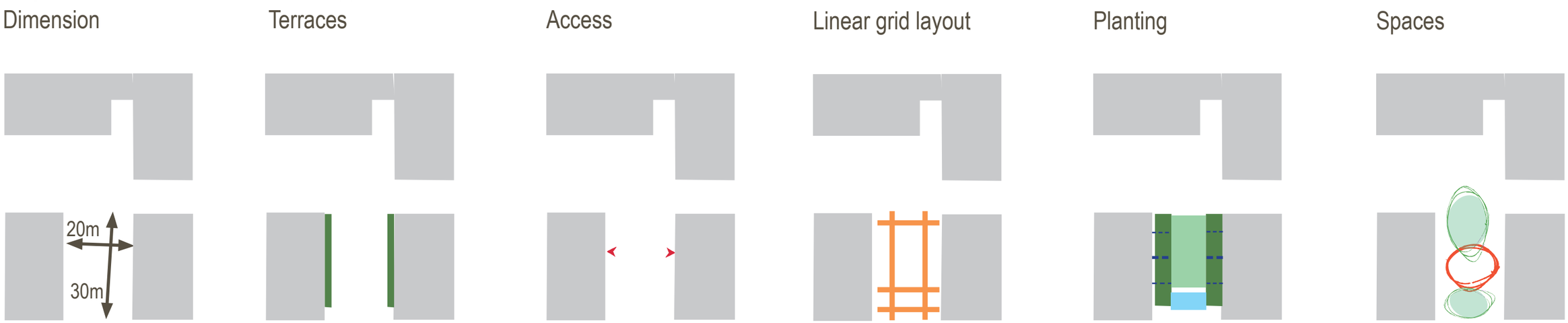
The layout of the garden is based on a simple grid form, complementing the architectural facade designs, and contrasting with the design within Plot 13. The grid has been used to arrange paths, planting and areas of lawn.

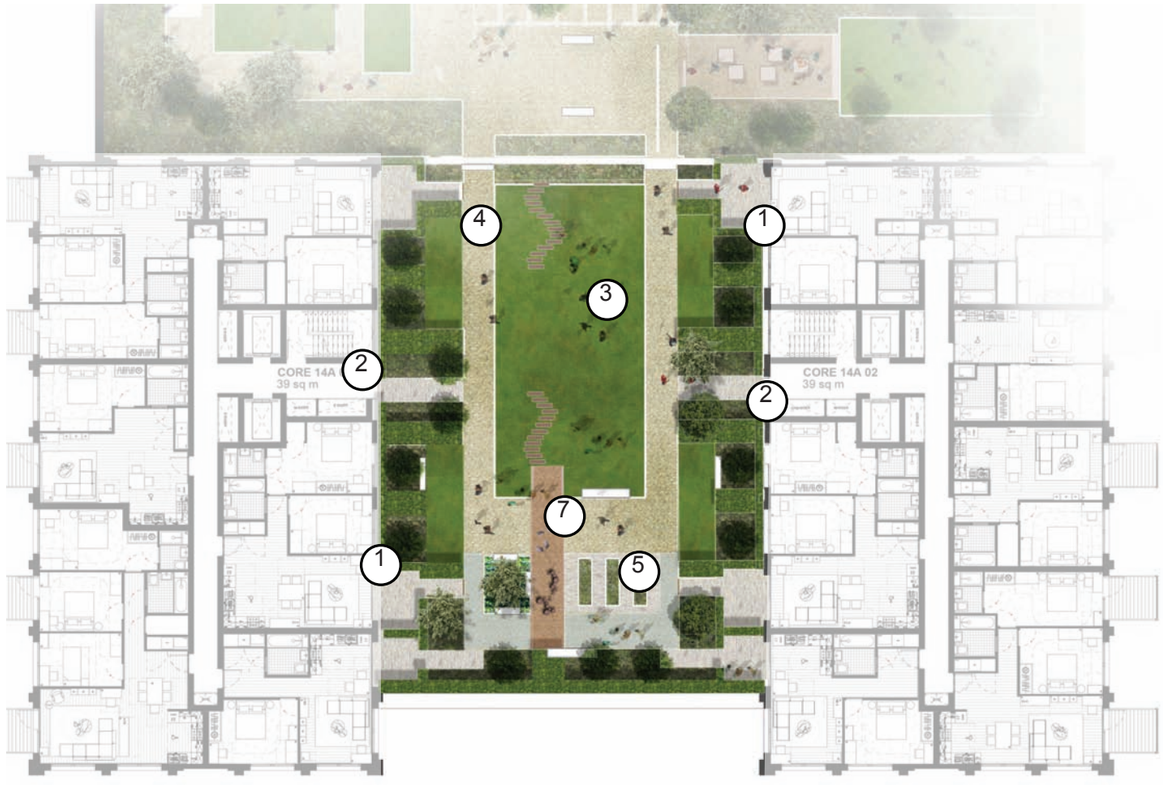
Planting:

Formal structure planting will provide compliment the courtyard's geometric layout and heighten enclosure in the garden, these areas will also be used to create focal points within the garden.  Small trees will be located within the planting beds at the edge of the courtyard further enclosing the space while feature tree planting is located more centrally acting as focal features.  To the south of the space there is a small community garden proposed which will activate the space offering further amenity for residents.

Spaces:

The courtyard design has a formal layout consisting of 3 main spaces, a centrally located hard space offers seating opportunities and provides a central meeting point for residents this is complemented by a large area of lawn and a more intimate resident garden space. These areas are tied together through a centrally located playtrail promoting activity and movement through the garden.






Plot 14 Courtyard Garden Master Plan

1. Private terrace gardens
2. Communal access
3. Undulating lawn and planting with tree planting
4. Bound gravel path
5. Community garden boxes
6. Seating
7. Play trail

Planting of a formal character reflecting the geometry of the space.

Axonometric of Plot 14 Garden Courtyards

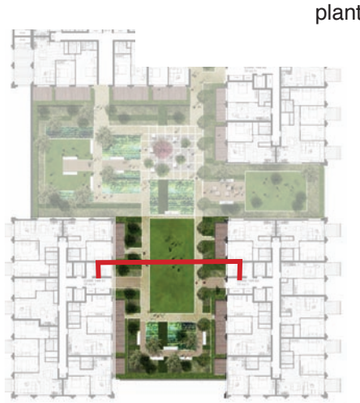







Section Through Plot 09 Courtyard Garden


Private terrace | Shrub and herbaceous planting | Pathway | Gently undulating lawn | Play strip | Gently undulating lawn | Pathway | Shrub and herbaceous planting | Private terrace



## Planting Plot 13 & Plot 14

The planting within Plot 13 will be designed to reflect the informal character of the space and provide seasonal interest and variation. A base layer of evergreen planting mixes will be supplemented by seasonal plants and bulbs. Areas of planting will be separated by flowing hedges which lead the eye through the planting and provide additional structure.

Within Plot 14 the planting palette will be one of a more formal character. A balanced mix of evergreen structure planting and herbaceous planting offering seasonal interest is proposed. Linear hedge planting creates a rhythm complementing the surrounding architecture.

Planting species will include:

Shrubs:

Buxus sempervirens

Cotinus coggygria

Lonicera nitida

Ligustrum ovalifolium

Lavandular sp.

Photinia sp

Viburnum opulus

Rosa Kent

Bulbs:

Allium

Crocus

Narcissus sp (daffodil)

Tulipa sp

Herbaceous:

Bergenia sp

Crocosmia lucifer

Geranium sp.

Helleborus sp.

Luzula sp

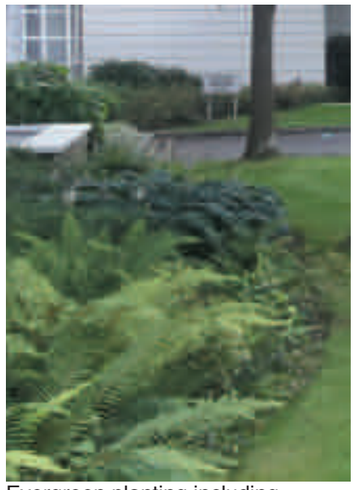
Perovskia sp.

Polystichum aculeatum

Tiarella cordifolia

Vinca sp

Plot 13's hedge planting giving definition to the areas of planting



Evergreen planting including polystichum sculeatum and luzula

Bulb planting including Tulips providing seasonal colour

Plot 14's planting giving a more formal character

Evergreen planting with seasonal flowers such as lavender

Feature planting including Roses

## 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 13 and 14 are both above a building slab.  The minimum buildup has been designed at 600mm.  The formation of mounding and use of planters has increased the soil depth to allow for a mixture of single stem and multi stem trees to be planted.

The tree planting aims to;

- reinforce the visual character of the gardens and create focal points
- 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 the Plot 13 garden has provide an informal variety of species and positioning through the garden.  The mixture of multistems and single stems create further variation in form and texture.  The species have been selected for their spring and autumn colour.

Plot 13 Tree

Magnolia kobus

Cornus controversa

Crataegus prunifolia

Hamamelis x intermidia ‘Jelena’

Acer palmatum (multi-stem)

The trees within Plot 14a will be selected to soften the formal layout. The lines of trees along the eastern and western edges will be mirrored with a pair of Malus Red Sentinal in the centre, and a Betula albosinensis at each corner of the lawn. Along the southern side of the garden there is an Amelanchier lamarckii on each side of the garden and single stem Prunus yedoensis along the southern side, providing an attractive display of blossom in the spring and allowing views underneath the canopy.

A Cornus kousa will be planted as a focal tree to the south ouf the lawn.

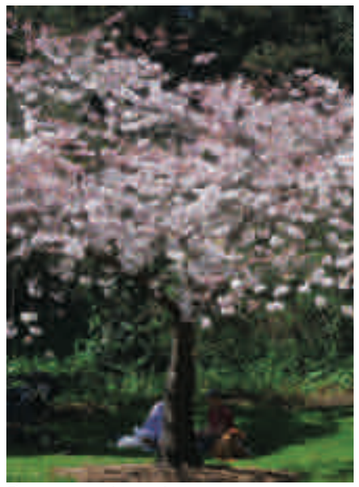
Plot 14 Tree

Betula albosinensis

Malus Red Sentinal

Cornus kousa

Amelanchier lamarckii



Prunus yedoensis

## 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 13 and 14a 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 and public realm 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 for Plots 13 & Plot 14a.

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

Plot 13

| | No of Children | Area (m2) |
|---|---|---|
| Under 5 | 10 | 100m2 |
| 5-11 year olds | 04 | 40m2 |
| 12+ year olds | 03 | 30m2 |

Total area required - 170m2

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

Plot 14a

| | No of Children | Area (m2) |
|---|---|---|
| Under 5 | 3 | 32m2 |
| 5-11 year olds | 01 | 11m2 |
| 12+ year olds | 01 | 11m2 |

Total area required - 54m2


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

ACCESS + ENVIRONMENT + COMMUNITY

## 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 accessibly standards of these dwelling 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 Silverton).

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 rip hazard.

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

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

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

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

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

**Landscape Zones**

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

Among other advantages, this approach provides clear features to assist in wayfinding and orientation to and around the site.  Distinctive areas around the plots include the high street, riverside walk and urban squares. These comprise hard landscaped piazza, small grassed areas and tree planting to be used flexibly for a range of retail, arts and community events, plus  a variety of informal grass recreational areas between the buildings for residents use. The urban squares will be level or have suitably shallow gradients with resting spaces and have firm, evenly laid surfacing suitable for wheelchair users. Junctions with other paving and grass surfaces will be flush to allow access throughout.

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

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

## Access Audit Buildings

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

**Residential Buildings**

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

**Residential Standards**

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

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

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

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

**Residential Entrances and Common Parts**

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

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

**Vertical Circulation**

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

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

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

**Lifetime Homes Standard & Building Regulations Part M**

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

- Suitable circulation widths which generally exceed LTH guidance;
- Suitable internal door opening clear widths of 750 - 800mm relating to corridor width;
- Suitable dwelling entrance opening width of 800mm clear;
- Level entry and flush thresholds to gardens and roof terraces;
- All units will have a suitable living area at entry level (in terrace houses this may be a dining area which can be converted to a living area if required);
- Suitable WC facilities at entry level with floor shower drain facility;
- Adequate manoeuvre space in habitable rooms including 1500mm turning circles, 1200mm clear space in front of kitchen units and generous clearance round all beds in all bedrooms which exceeds LTH guidance.

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

**Wheelchair Accessible Units**

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

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

Features incorporated include:

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

**Multi-Use Units**

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

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

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

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

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

## Adaptability / Livability

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

Adaptability and livability are two key characteristics fundamental to the design philosophy of the scheme. The design of the 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.

# CONCLUSION

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

The success of the 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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