

PENINSULA SQUARE

Design and Access Statement



Lifschutz Davidson Sandilands

LDS REF: 1202_doc 067_DAS

May 2023

executive summary

This Design and Access Statement has been prepared by Lifschutz Davidson Sandilands on behalf of Crosstree Real Estate Partners ('the Applicant') in support of a full planning application for the site at One Peninsula Square (previously known as Plot NO201). The site forms part of the Greenwich Peninsula which is undergoing a vast transformation.

The application seeks planning consent for a Purpose-Built Student Accommodation (PBSA) development. It consists of a 36-storey building comprising 820 student rooms, amenity space, ground floor commercial/retail floorspace (Use Class E) and associated landscaping, plant, servicing and parking. 10% of rooms are proposed to be wheelchair adapted or adaptable. The scheme also provides 35% affordable student rooms.

Planning permission for a residential development was granted in 2018 (ref. 15/3552/F). This consisted of a building of very similar scale, massing and design to the scheme proposed in this application. The new proposal is wholly consistent with the design intent and ethos of the previous planning consent.

This Design and Access Statement should be read in conjunction with the other planning documents and drawings submitted as part of this application. A list of the pre-application meetings and consultation events that have taken place has been included within chapter 02 of this document.

The proposals contained within this report are at a strategic level and are presented in order to record the principles of the design as developed with the design team listed within this report and are subject to coordination, development, verification and consultation with the Local Authority. All areas and associated residential figures quoted are subject to design development and survey.

The report seeks to highlight where further investigation, research and design input are required to establish the detailed scheme. Requirements for further input will become apparent as the design is progressed.

Greenwich Peninsula is currently undergoing a period of rapid growth, with a variety of new developments and communities across the peninsula, of which this project forms a key component. The site is located in a key strategic location with the O2 arena to the north, North Greenwich station to the west and the new design district to the south.

The overall approach to the development seeks to stitch the site into the wider Greenwich Peninsula masterplan.



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acronym definitions

“CRE” means Crosstree Real Estate Partners

“LDS” means Lifschutz Davidson Sandilands

“RBG” means Royal Borough of Greenwich

“OPP” means Outline Planning Permission

“PP” means Parameter Plan

“QRP” means Quality Review Panel

“RMA” means Reserved Matters Application

“S73” means Section 73

“S106” means Section 106

“SbD” means Secured by Design

“TfL” means Transport for London

“LDS” means Lifschutz Davidson Sandilands

“MIMO” means Move in move out

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consultant team

professional team

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vertical transport consultant:

ARUP

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Montague Evans

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wind consultant:

Windtech

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London
EC1R 0AT

aviation consultant:

Swanson Aviation Consultancy

3rd Floor, Marlborough House
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N3 2SZ



01 view looking south - proposed scheme

The proposed scheme will provide a student accommodation tower building raised on a communal podium, on a brownfield site currently lying vacant.

The podium building almost fills the extent of the site and provides new ground floor retail frontage onto Peninsula Square along with a double height student residential entrance, shared student internal amenity provision, plant and back of house space. A 34-storey tower, providing student rooms and additional shared internal amenity provision, is located at the centre of the site and sits over the two storey podium base.

On-plot cycle parking is provided at ground level within the podium base, the podium roof forms the communal garden area with direct access from the circulation core of the tower building and shared student amenity located at level 1.

This proposed high quality development provides:

- a scheme that responds to the scale of the Greenwich Peninsula and emerging context of the 2019 Knight Dragon masterplan
- retail / commercial units to serve the wider community
- active frontage onto Peninsula Square
- high quality student accommodation in a range of typologies
- extensive high quality internal and external shared amenity spaces
- carefully considered public realm
- a fully accessible environment
- sustainable, robust buildings constructed in high quality materials

The proposals are designed in accordance with the following design standards:

- The London Plan, 2021
- Mayor's Housing Supplementary Planning guidance, March 2016
- Approved Document Part M of the Building Regulations 2015, including M1, M2 and M3
- Royal Borough of Greenwich 'New Developments - Guidance Notes for the Storage and collection of waste and recycling materials' (April 2018)
- Secure by Design: Placing design between crime and the community

project brief

background

The site benefits from a previous planning permission for a residential scheme comprising 262 units that was granted consent in 2018 (ref. 15/3552/F) for Anschutz Entertainment Group (AEG), but which has since elapsed.

The site is in the process of being purchased by Crosstree Real Estate Partners LLP from AEG and LDS were commissioned in August 2021 to develop proposals for a new planning submission for a Purpose-Built Student Accommodation (PBSA) development.

project introduction

Peninsula Square is a student accommodation led development with 820 new student rooms and associated internal and external amenity and ground floor retail use.

Across Greenwich Peninsula, there are numerous new residential and hotel developments that are either planned, under construction or recently completed. Formerly industrial land, the area around the site is today characterised by emerging new development, including the O2 Arena, Gateway Pavilion, Design District and Ravensbourne University.

The Peninsula Square project brief includes the following key points:

- develop a proposal consistent with design principles, massing and architectural approach of the previously consented residential scheme
- optimise the use of the site to provide a range of different sized high quality student accommodation bedrooms with generous amenity
- provide high quality retail spaces to activate the existing public realm
- provide high quality student internal and external amenity uses

The proposed development provides:

- a scheme that responds to the scale of the future emerging context
- retail / commercial units to serve the future wider community
- active frontages to the existing public realm
- high quality student homes in a variety of typologies
- high quality communal amenity spaces
- a fully accessible environment
- a sustainable, robust building constructed in high quality materials

scheme credentials

areas

The site area is approx. 3,276sqm, which equates to approximately 0.33 hectares.

Total GEA: 31,543 sqm / 339,526 sqft

Total GIA: 28,004 sqm / 301,432 sqft

Total NIA: 20,058 sqm / 215,902 sqft

Student accommodation (NIA): 15,217 sqm / 163,794 sqft

Retail (NIA): 1,321 sqm / 14,219 sqft

Refer to the schedule of accommodation within this document for a full breakdown of areas.

external amenity space

All student rooms are provided with:

- access to a communal landscaped podium at level 01
- access to a communal roof terrace at level 34

The total amount of accessible external student amenity space is 2,206 sqm / 21,807 sqft.

internal amenity space

The internal amenity provision is primarily split across the mezzanine, level 01 and level 34. The total amount of internal student amenity space is 1,300 sqm / 14,000 sqft, which amounts to 1.59 sqm per student.

units

The scheme comprises a single student accommodation block, which includes:

No. of student rooms: 820

No. of habitable rooms: 1,158

room mix

35% / 288no cluster rooms

65% / 532no studio rooms

10% of the cluster and studio rooms will be wheelchair adapted or adaptable.

tenure unit

65% standard student rooms

35% affordable student rooms

parking

It is not proposed to provide any additional parking spaces within the site.

cycle parking

Student long-stay: 615no. (located within secured cycle stores, to be split between 5% wide Sheffield stands, 5% standard Sheffield stands & 90% two-tier stands)

Student visitor: 22no. (located within the public realm)

Retail long-stay: 30no.

residential guidance

The proposals are designed in accordance with the following design standards:

The London Plan, 2021

Approved Document Part M of the Building Regulations 2015, including M1, M2 and M3

Homes for Students

building design

The scheme includes a 2 storey podium and 34 storey tower comprising internal student amenity and student accommodation. This document sets out the basis for the design, including site and context analysis, relationship to the wider masterplan, explanation of the design and appearance of the building and landscape. Later sections also include a more technical description setting out how the scheme will function.

Note:

The proposals included within this report represent a moment in time, they are work in progress, and subject to further design development, coordination, specialist consultant input, consultation. No guarantee is given to the accuracy or correctness of areas/numbers stated within this report. An allowance of at least 5% should be allowed on the net areas for survey irregularities, design development etc.

sqm - sqft calculated using a factor of 10.7642

project aim and objectives

Peninsula Square offers an exceptional opportunity for students to live in a vibrant and well-connected part of London.

The proposals will deliver the following:



820 high-quality new student homes

35%

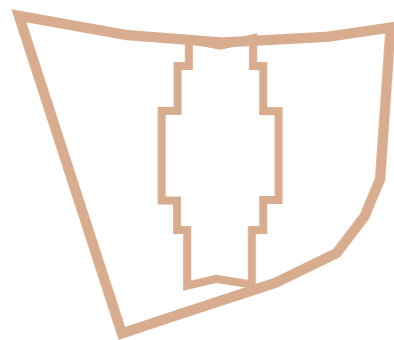
35% affordable student beds - a significantly higher offer than the previously consented scheme



a boost to the local economy and businesses with increased spending



freeing up 250-300 homes for local families



a new gateway building as you exit out of North Greenwich underground and bus interchange



a more lively, vibrant place, with new places to shop, eat and drink



larger rooms, community, internal and external amenity spaces than comparative schemes



review ways of increasing the efficiency of construction and provide a scheme that has a holistic approach to sustainability

01

site location

- site location
- the site
- public transport connections
- site history
- existing context
- immediate context
- Peninsula Square
- surrounding context
- height constraints
- LCA flight protection surface
- significant views across the Peninsula
- site constraints & opportunities
- boundary conditions
- existing open spaces
- movement + arrival to the site
- surveys

site location

The site lies within the Royal Borough of Greenwich (RBG), located at the northern tip of Greenwich Peninsula directly adjacent to The O2 and North Greenwich Underground Station. Historic Greenwich Park and the heart of Greenwich Village lie to the south west of the site, accessed via the A102.



- key:
- 01 Canary Wharf
 - 02 Wood Wharf
 - 03 Blackwall Tunnel
 - 04 The O2
 - 05 Emirates Airline
 - 06 Existing Gas Cylinder
 - 07 Old Royal Naval College
 - 08 University of Greenwich
 - 09 Greenwich Ecology Park
 - 10 Thames River
 - 11 Silvertown Flyover
 - 12 The Crystal
 - 13 ExCeL London
 - 14 Thames Barrier
 - bus station
 - underground station
 - Royal Borough of Greenwich
 - 2019 masterplan application
 - 2002 masterplan application
 - RBG North Greenwich District Centre
 - local development sites
 - local listed building
 - site boundary/N0201 plot

- 01 context and landmarks**
- The site was included within the Greenwich Peninsula 2002 Masterplan
 - The site does not sit within the proposed application boundary for the updated 2019 Knight Dragon masterplan



02 aerial view of the site looking west

Greenwich Peninsula is identified as a Strategic Development Location within the RGB Core Strategy (Section 3.3. policy H1, proposals map). It was formerly industrial land, and today is characterised by emerging new development, including the O2, Gateway Pavilion, Design District and Ravensbourne University, however much of it today still remains derelict.

In 2015, a masterplan application for the Peninsula was made by Knight Dragon. That application excluded the site (referred to as NO201 in the 2015 Masterplan) due to AEG's previous ownership and previous planning consent. Subsequent to the 2015 application, the masterplan was further updated in 2019 and planning consent was secured in 2022.

Planning permission for a new residential development on Plot NO201 was granted in 2018 (ref. 15/3552/F).

Although set back from the riverfront, development on the site will benefit from views to the river especially from higher vantage points. Significant views will be towards Canary Wharf and the Dockland to the west and Victoria Docks and the Thames Barrier to the east. The extent of these river views will be dependant on future adjacent development.

- key:
- 01 Canary Wharf
 - 02 Wood Wharf
 - 03 Blackwall Tunnel
 - 04 The O2
 - 05 Emirates Airline
 - 06 Existing Gas Cylinder
 - 07 Old Royal Naval College
 - 08 University of Greenwich
 - 09 Greenwich Ecology Park
 - 10 Thames River
 - 11 Silvertown Flyover
 - 12 The Crystal



the site

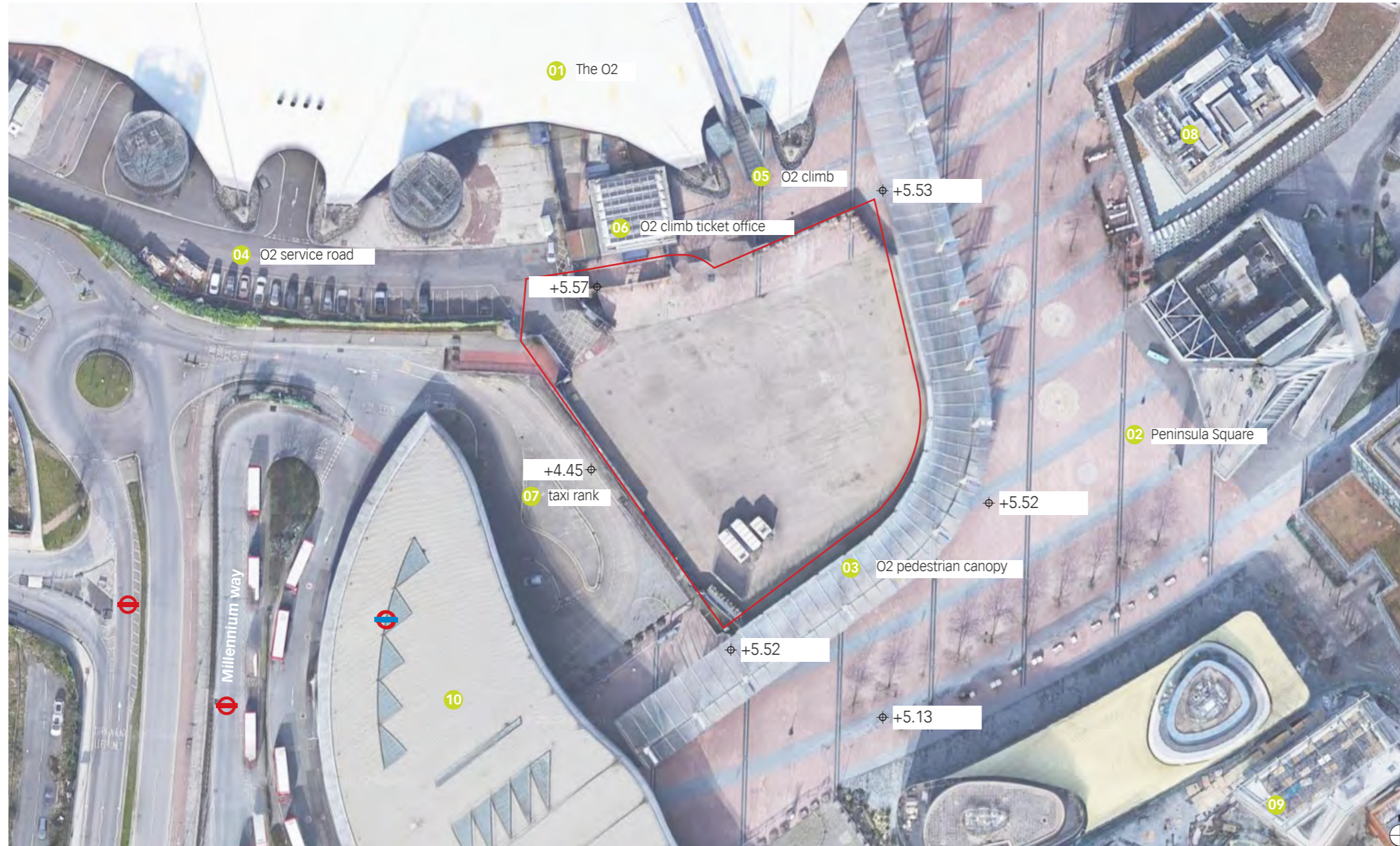
The site has excellent public transport links; North Greenwich tube station provides rapid transit to Canary Wharf and the City, whilst North Greenwich bus station provides local connections into the heart of Greenwich. There is also good local road connectivity with the Blackwall Tunnel emerging nearby and other major roads lying to the south. A number of cycle routes also feed into the site.

The area features a significant quantum of new development on and around the Peninsula. In addition to the 2019 Knight Dragon Masterplan, further new and emerging developments include Wood Wharf, the Hallsville Quarter, Upper Riverside and Woolwich Royal Arsenal to the east.



01 aerial view of the site looking east





02 birds-eye site location plan

The site occupies 0.42 ha of vacant land, part of the former gas works. Located at the northern end of the Peninsula, the site sits between The O2, North Greenwich Station and Peninsula Square, providing a different character to each edge of the site.

The site is formed as an irregular triangle, with a curved face onto Peninsula Square. It's extent is defined by The O2 perimeter access road to the north, North Greenwich station and the TfL taxi rank to the south west and the covered pedestrian route connecting The O2 to the station entrance to the south east.

The site itself is predominately flat with a level drop of approximately 0.8m from east to west along the southern perimeter. The western boundary of the site is formed by a retaining wall. Access to the site along this edge is via steps and a ramp.

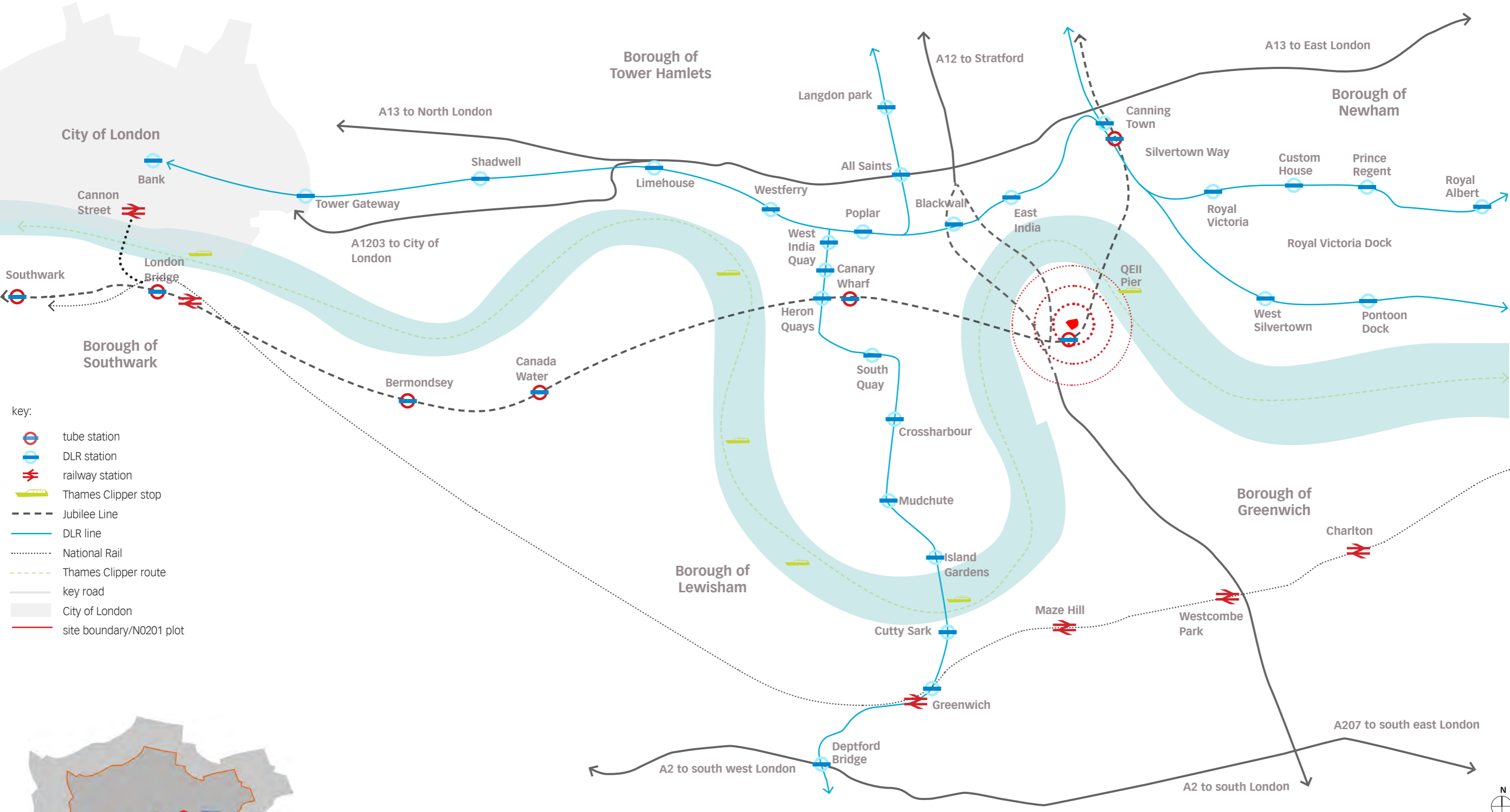
The proximity of the North Greenwich station box to the south of development constrains the site use due to the presence of a 3m wide 'right of access' zone along the southern edge of the site, provided for the purpose of inspecting, maintaining, repairing, demolishing or rebuilding the station box. The proximity of the station box has also been considered within the design of the proposed building's substructure.

key:

- 01 The O2
- 02 Peninsula Square
- 03 O2 pedestrian canopy
- 04 O2 service road
- 05 O2 climb
- 06 O2 climb ticket office
- 07 taxi rank
- 08 Ravensbourne University
- 09 Design District
- 10 North Greenwich Station
- site boundary



public transport connections

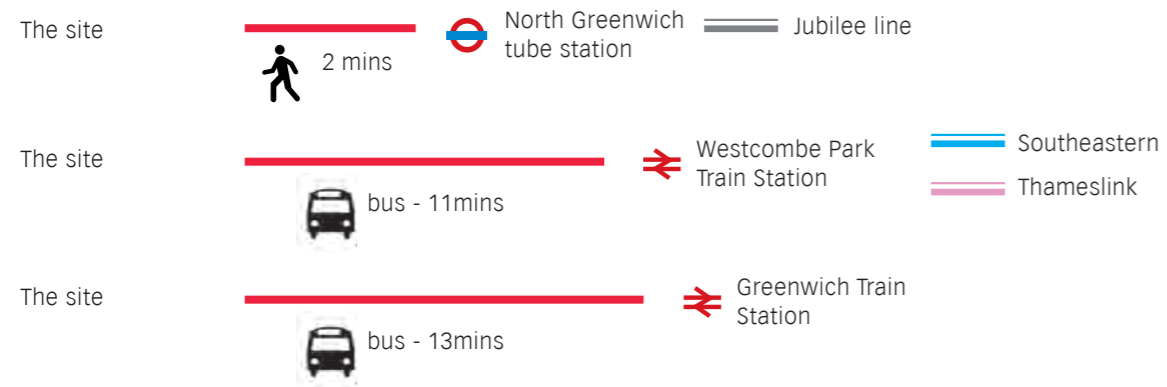


- key:
- tube station
 - DLR station
 - railway station
 - Thames Clipper stop
 - Jubilee Line
 - DLR line
 - National Rail
 - Thames Clipper route
 - key road
 - City of London
 - site boundary/N0201 plot

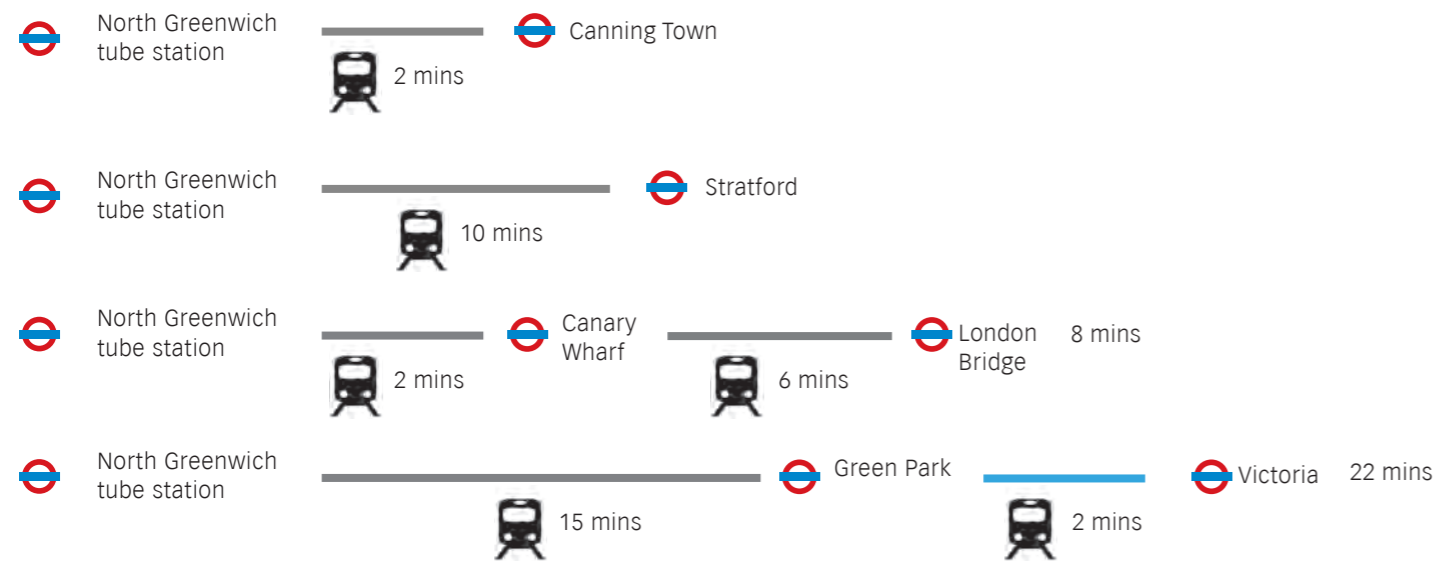


01 connectivity and transport links to the site

Local connections:



London connections:



International connections:



Notes:
Journey times taken from Google Maps journey planner

site history

Greenwich Peninsula today is a patchwork of vacant sites (some of which are inhabited by car parking and other temporary uses), parks, industrial structures and emerging new development. The site is within an area originally known as the Greenwich Marshes / Bugsby's Marshes. The Peninsula was only inhabited after it was drained by Dutch engineers in the 16th century, and used as pasture land. In the 17th century, Blackwall Point, the tip of the peninsula was a location where pirates' corpses were displayed in cages as a deterrent towards other pirates.

In the 19th century the Peninsula was industrialised and for over a 100 years was dominated by gasworks. Blackwall Point Power Station was located on the eastern shore, including the Victoria linoleum works (later the Victoria Deep Water Terminal handling container traffic). By the late 20th century the gasworks, power station and other industries had closed leaving Greenwich Peninsula a heavily contaminated post industrial wasteland.

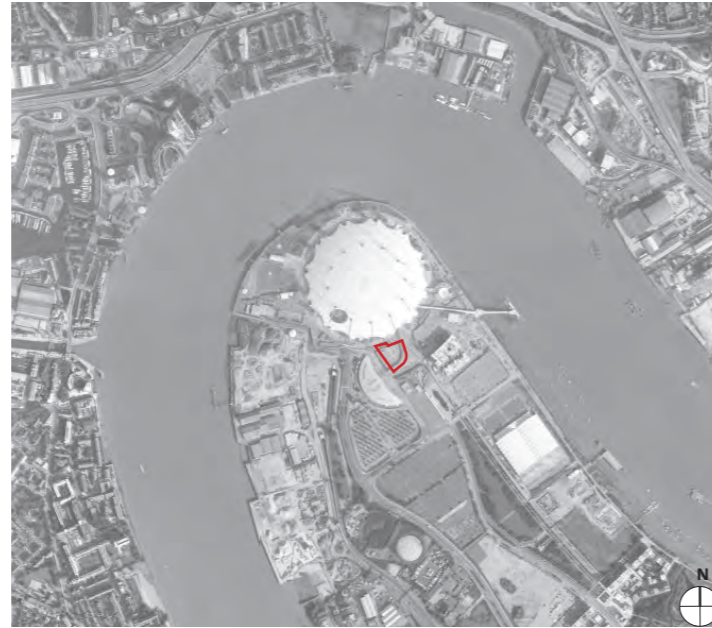
Some industrial uses remain on the western side of the Peninsula, including Alcatel, the recently closed (September 2009) Tunnel Refiners glucose plant (until about 2008 part of Tate & Lyle), and two large marine aggregate terminals on the Delta Metals and Victoria Deep Water Terminal sites. One of the two gas holders remains, a symbol of the peninsula's past.

The Peninsula remained relatively remote from central London until the construction of the Blackwall Tunnel in 1897 and in 1999 North Greenwich Underground station opened in connection with the Millennium celebrations.

The O2, formally known as the Millennium Dome, was constructed to house the 'Millennium Experience', a major exhibition (1 January to 31 December 2000) celebrating the beginning of the third millennium. Since the dome structure has been retained, forming an entertainment hub for Greenwich and the city beyond. The Thames Clipper pier on the eastern bank of the peninsula was similarly retained.

The site is visible from around the Peninsula. The images on the page opposite illustrate

- site visibility from a number of approach points
- southerly views from the site over Peninsula Square, west towards Canary Wharf and in several places to the river Thames
- the potential for excellent views of The O2, the River Thames and Canary Wharf beyond



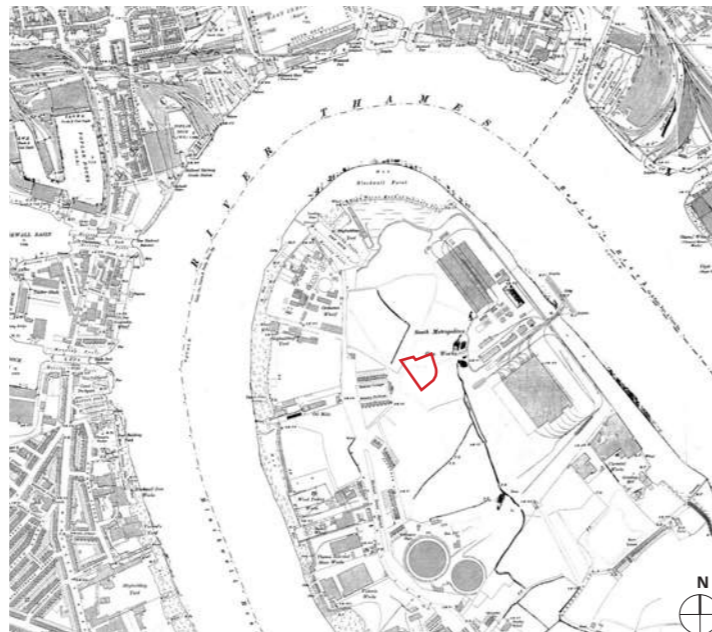
01 Greenwich Peninsula today 2015



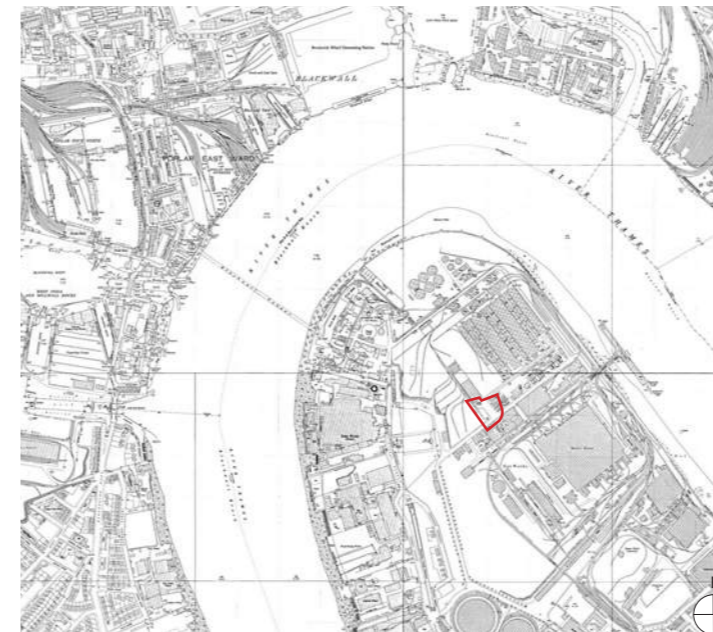
02 Greenwich Peninsula 1869



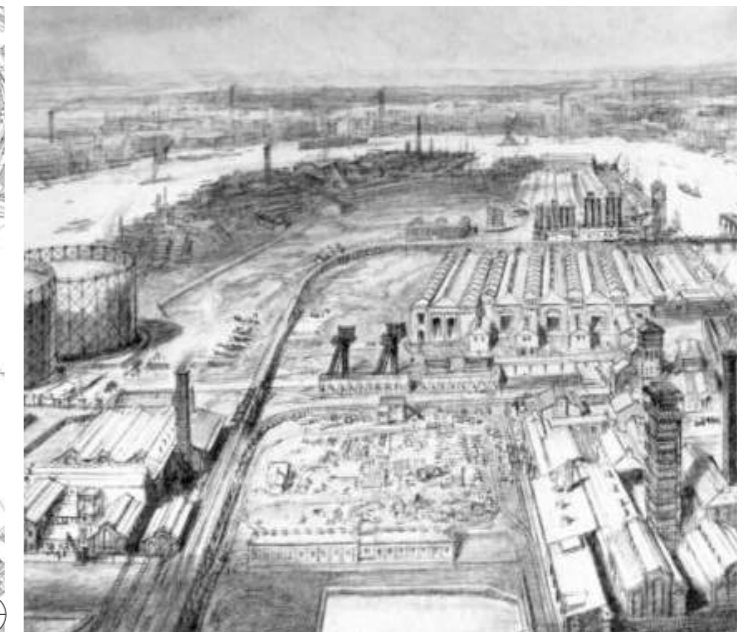
03 artists Impression, Greenwich Peninsula pre-industrialisation



04 Greenwich Peninsula 1896



05 historic map Greenwich Peninsula 1952

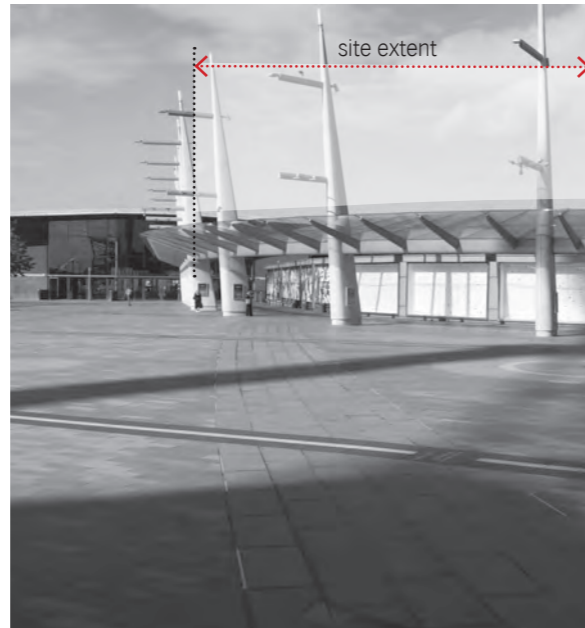


06 artists Impression, East Greenwich Gasworks and Peninsula, 19-20th Century

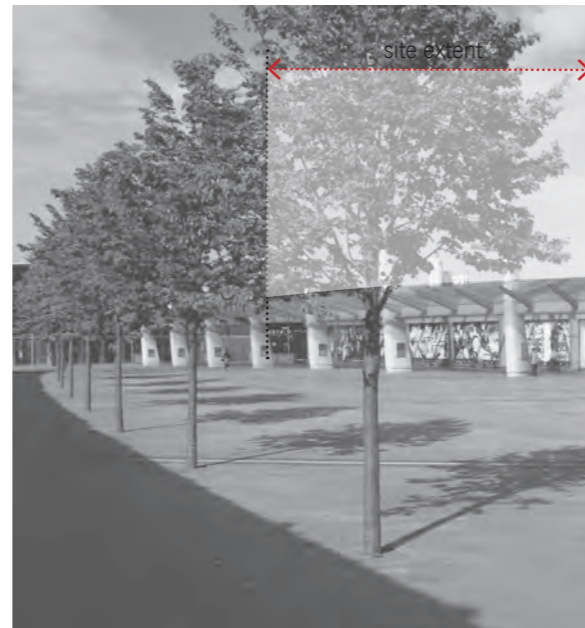
key:
— site boundary/ N0201 plot



07 visibility from station



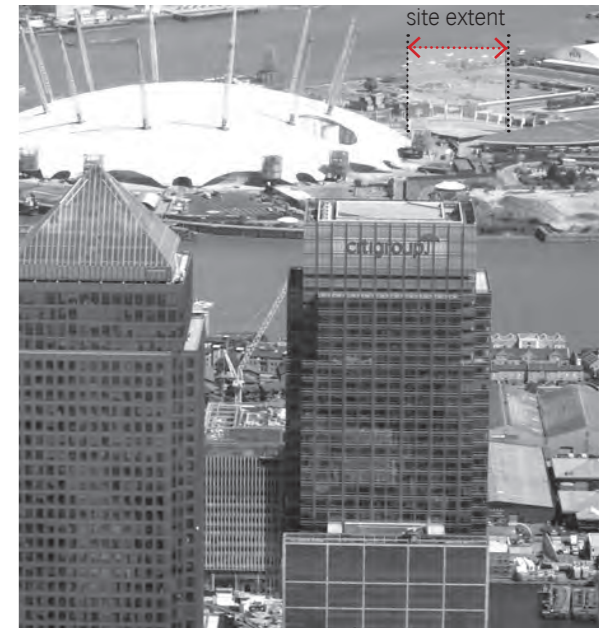
08 visibility from public square



09 visibility approaching from pier



10 visibility from The O2



11 visibility from Canary Wharf



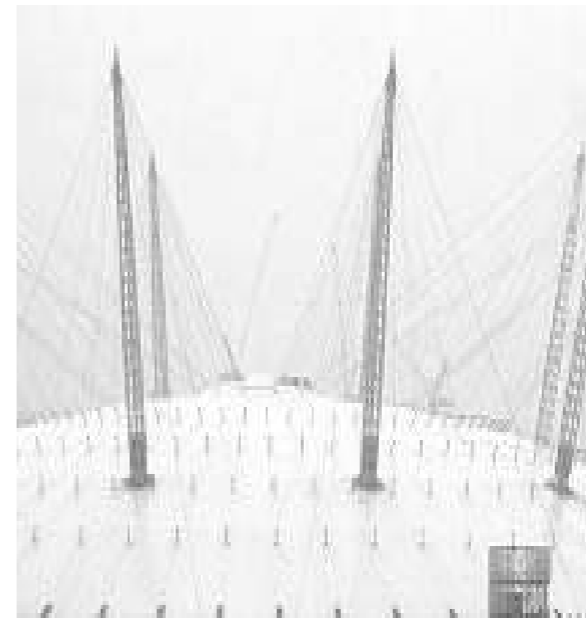
12 view towards station



13 view towards square and new Farrell office building



14 view towards pier



15 view towards The O2



16 view towards Canary Wharf



immediate context

Peninsula Square benefits from direct access from the North Greenwich Station, and forms the terminus of the north-south route across the Peninsula Masterplan through Central Park and Green Place. Thus it is the main arrival point to the Peninsula for visitors arriving by bus, foot or rail, and from which they then disperse across the Peninsula.

The Square is characterised by a mix a building types and uses. The entrances to the station and to The O2 are linked by a glass canopy which curves around the south eastern side of Plot N0201 and forms the western edge of the square.

The remaining two edges of the square are defined by a series of buildings that represent a variety of architectural styles; Ravensbourne College of Design & Communication by FOA (plot N0203) to the north east, Terry Farrell's office building (plot N0204), to the east and the Gateway pavilion by Marks Barfield to the south.

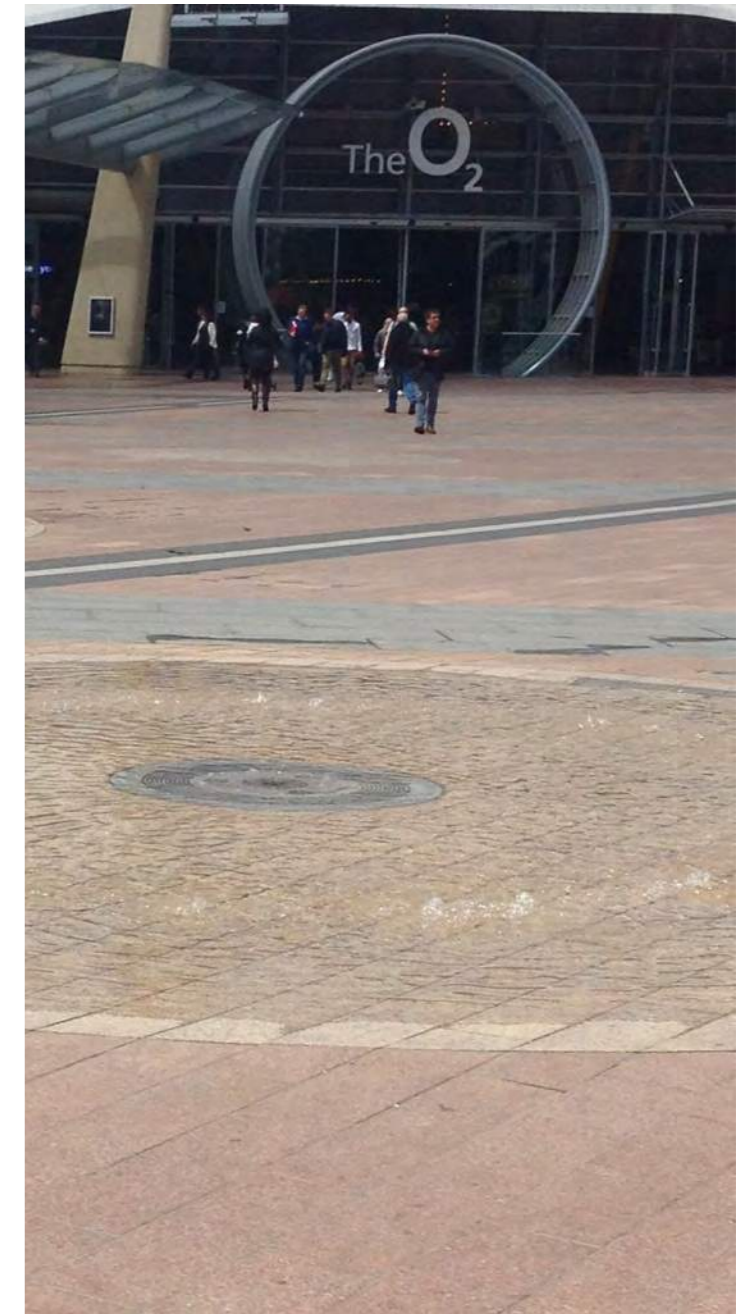
Ravensbourne College of Design & Communication is a new centre of education within Greenwich Peninsula. Its highly patterned facade design forms a striking element on the north edge of the square. Neighbouring this, the Terry Farrell office building facade expresses a linear patterning treatment. The buildings are distinct in their facade treatments with no visual continuity in their appearance, but create a varied setting for development.

Peninsula Square has a civic character created by hard surfaces and retail frontage/spill out space. It has distinct 'pink' paving laid out in circular bands generated by the geometry of the dome structure. There is relatively little 'soft' landscaping other than a row of trees running parallel to the Gateway Pavilion.



O2 entrance

01 Richard Rogers (2000)



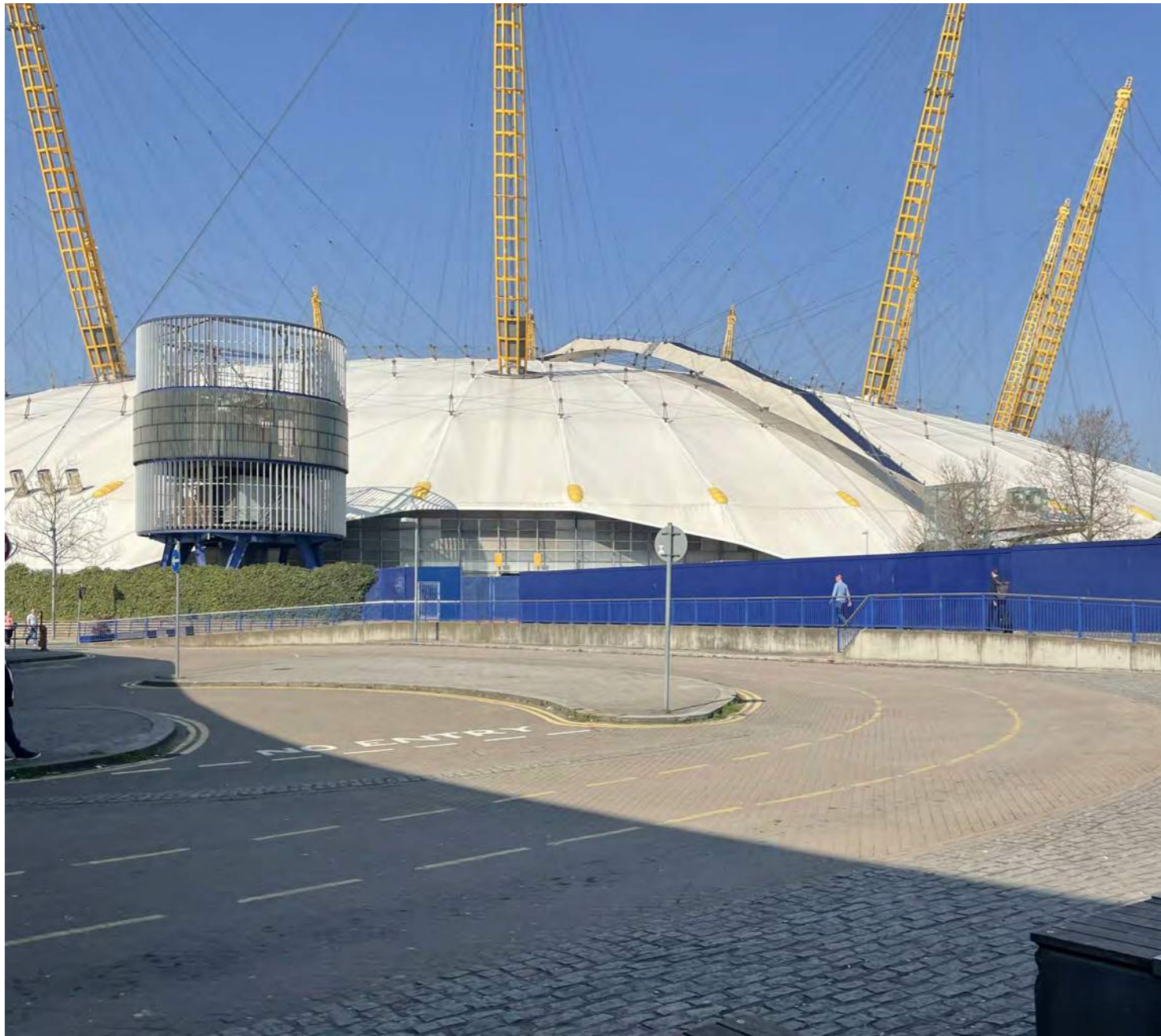
surface/paving

02 Peninsula Square

key:

— site boundary / N0201 plot





taxi rank
03 view looking north of existing taxi rank



North Greenwich bus station
04 Alsop, Lyall and Störmer (1999)

immediate context



Ravensbourne College and offices

05 Foreign Office Architects (2010)



The O2 canopy + station entrance

06 station - Alsop, Lyall and Störmer (1999)



Design District

07 SelgasCano (2000)



Gateway Pavilion

08 Marks Barfield Architects (2014)

Peninsula Square



01 view of Peninsula Square looking north



02 view of Peninsula Square looking west



InterContinental London hotel site

03 RKTl architects (construction now completed)



Peninsula Central East

04 Skidmore, Owings & Merrill LLP (SOM) (consented 2014)



height constraints

height constraints

The peninsula is subject to height guidance and constraints which impact development proposals on the site, the principal elements of which are summarised below.

Flight Protection Surface (FPS)

The Peninsula Square development is located 2,900m to the west of London City Airport ('LCA') and under the Flight Protection Safeguarding Surface for LCA, which limits the built height on the site to a maximum of approximately +120m AOD.

The height of the proposed scheme is consistent with the 2018 consented residential scheme.

The project team re-consulted with Swanwood Aviation in November 2022 following minor modifications made by LCA to the length of the runway. Swanwood Aviation in turn consulted with LCA and it was confirmed that the development has been designed such that no part of the fixed permanent structures will penetrate the Flight Protection Surface of the airport.

use of cranes during construction

The final details of the types and locations of cranes have not been determined at this stage, but the construction and logistics plan will cover the construction of the upper floors without penetrating the relevant safeguarding surface.

guidance on tall buildings (CABE and English Heritage) - 2007

The following information is provided by CABE within their guidance on designing tall buildings:

'Cities and their skylines evolve. In the right place, tall buildings can make positive contributions to city life. They can be excellent works of architecture in their own right; some of the best post-war examples are now listed buildings. Individually, or in groups, they affect the image and identity of a city as a whole. In the right place they can serve as beacons of regeneration, and stimulate further investment.'

key:

— site boundary



'Applicants seeking planning permission for tall buildings should ensure therefore that the following criteria are fully addressed:

- *the relationship to context*
- *the effect on the historic context*
- *the effect on world heritage sites*
- *the relationship to transport infrastructure*
- *the architectural quality of the building*
- *the sustainable design and construction of the proposal*
- *the credibility of the design, both technically and financially*
- *the contribution to public space and facilities*
- *the effect on the local environment*
- *the contribution made to the permeability of a site and the wider area*
- *the provision of a well-designed environment*

proposal for taller development on the site

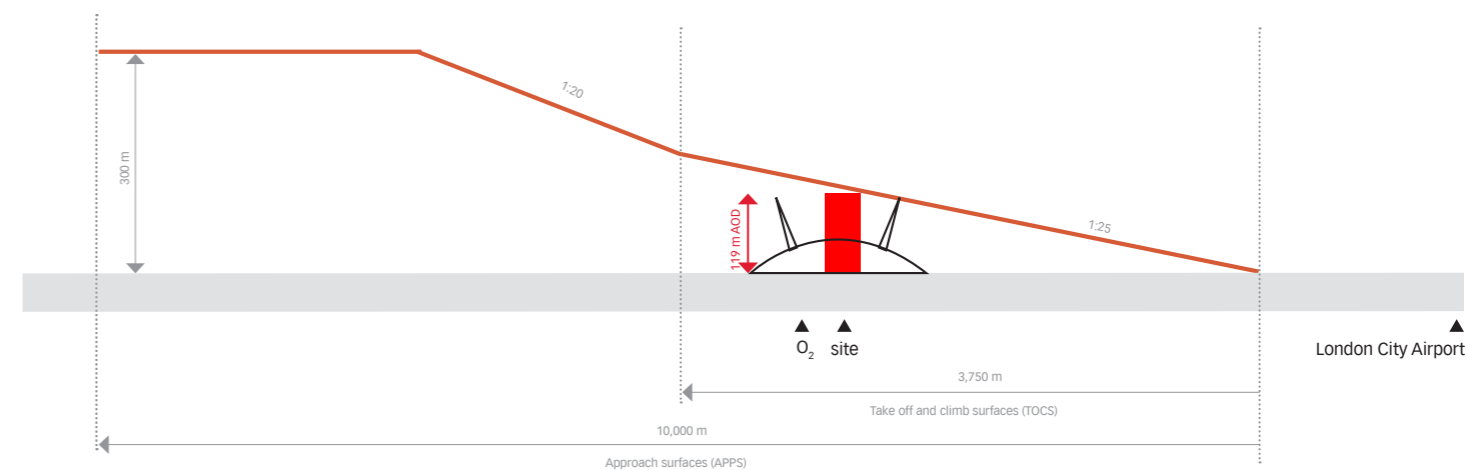
For the following reasons, the site is suitable for the provision of a tall building based on the local guidance and consultation with RBG:

- RBG identifies Greenwich Peninsula as a suitable location for tall buildings (*Greenwich Local Plan: Core strategy and Detail Policies page 96, figure 2*).
- the outline consent for the 2015 masterplan proposes developments adjacent to the site of up to 113.5m AOD to the west of Plot N0201 site stepping up to 133.5m AOD at its highest point.
- the Aviation Assessment allows for a development up to +120m AOD on the site
- due to the site location adjacent to The O2, a tall building will not create overshadowing issues on surrounding development.
- at an initial consultation with Royal Borough of Greenwich on the 04.02.15 and in subsequent pre-app meetings, taller development on the site was supported.
- within Opportunity Area where planning policy seeks to optimise the development potential of sites.

London City Airport restrictions



01 London City Airport restrictions



key:

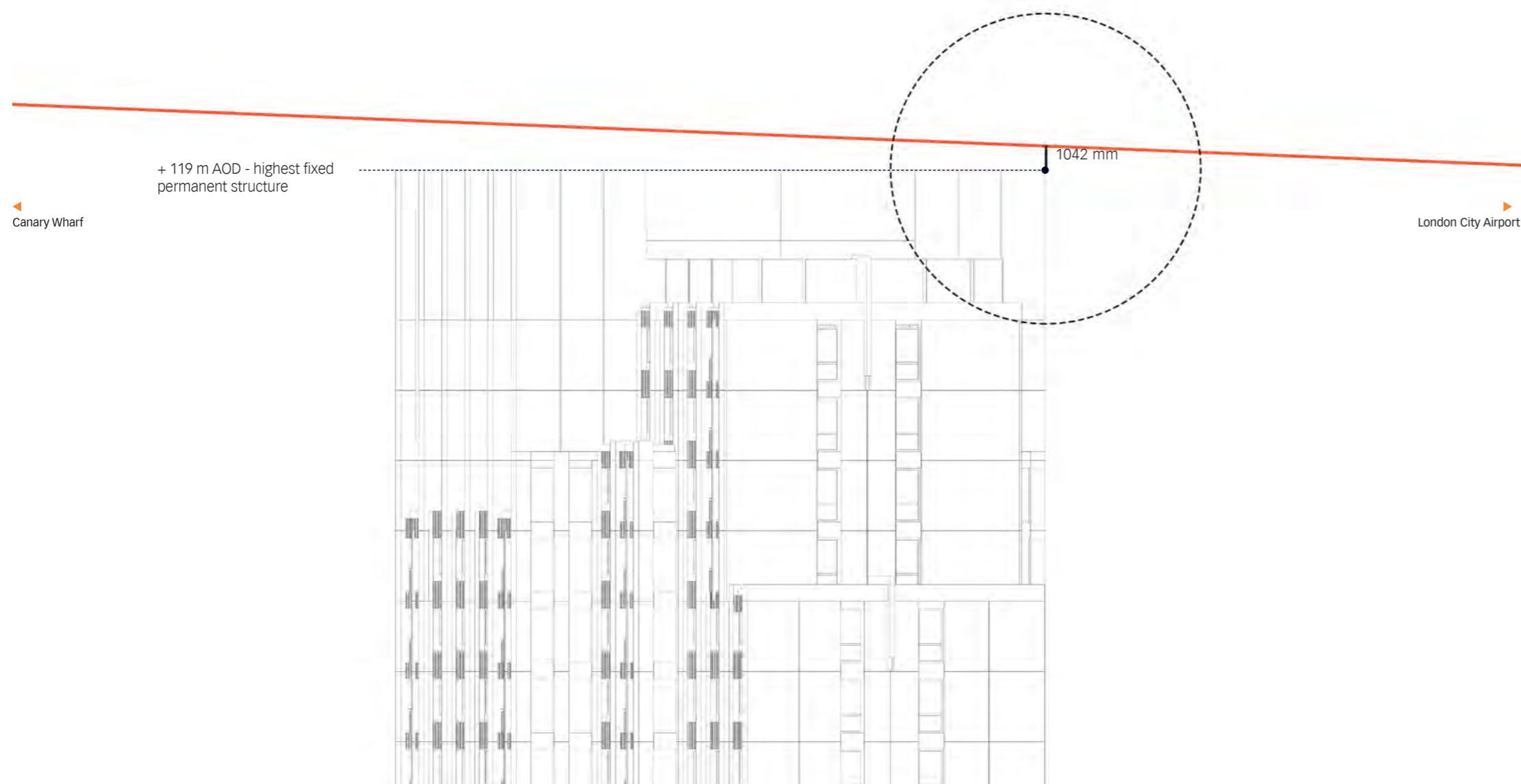
— site boundary

— London City Airport's (LCA) flight protection surface

LCA flight protection surface

Consultation was undertaken with Swanson Aviation Consultancy as part of the consented application in 2018. The project team re-consulted with Swanwood Aviation in November 2022 to ensure the proposed development does not have a detrimental effect on the operations of London City Airport (2022 11 28 Peninsular Sq Aviation Safeguarding Assessment).

The diagram opposite highlights how the proposal sits more than 1m below the maximum height limitation.

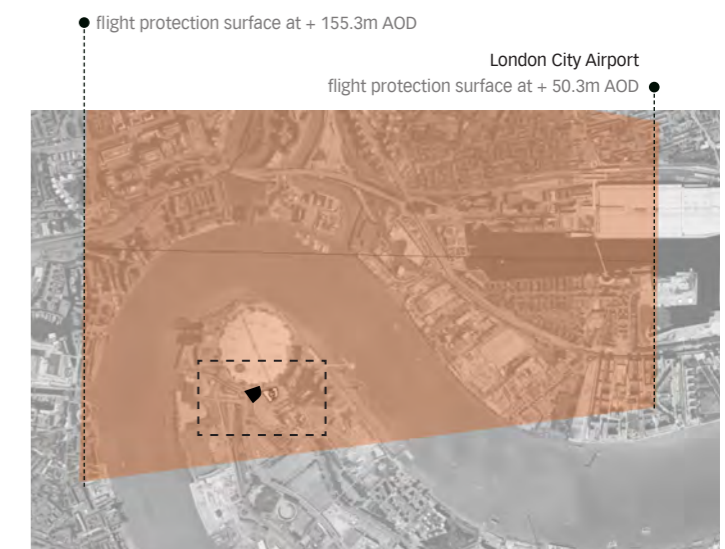


02 Detailed section illustrating London City Airport Flight Protection Surface (FPS) relative to proposed building restrictions

key:



key plan:

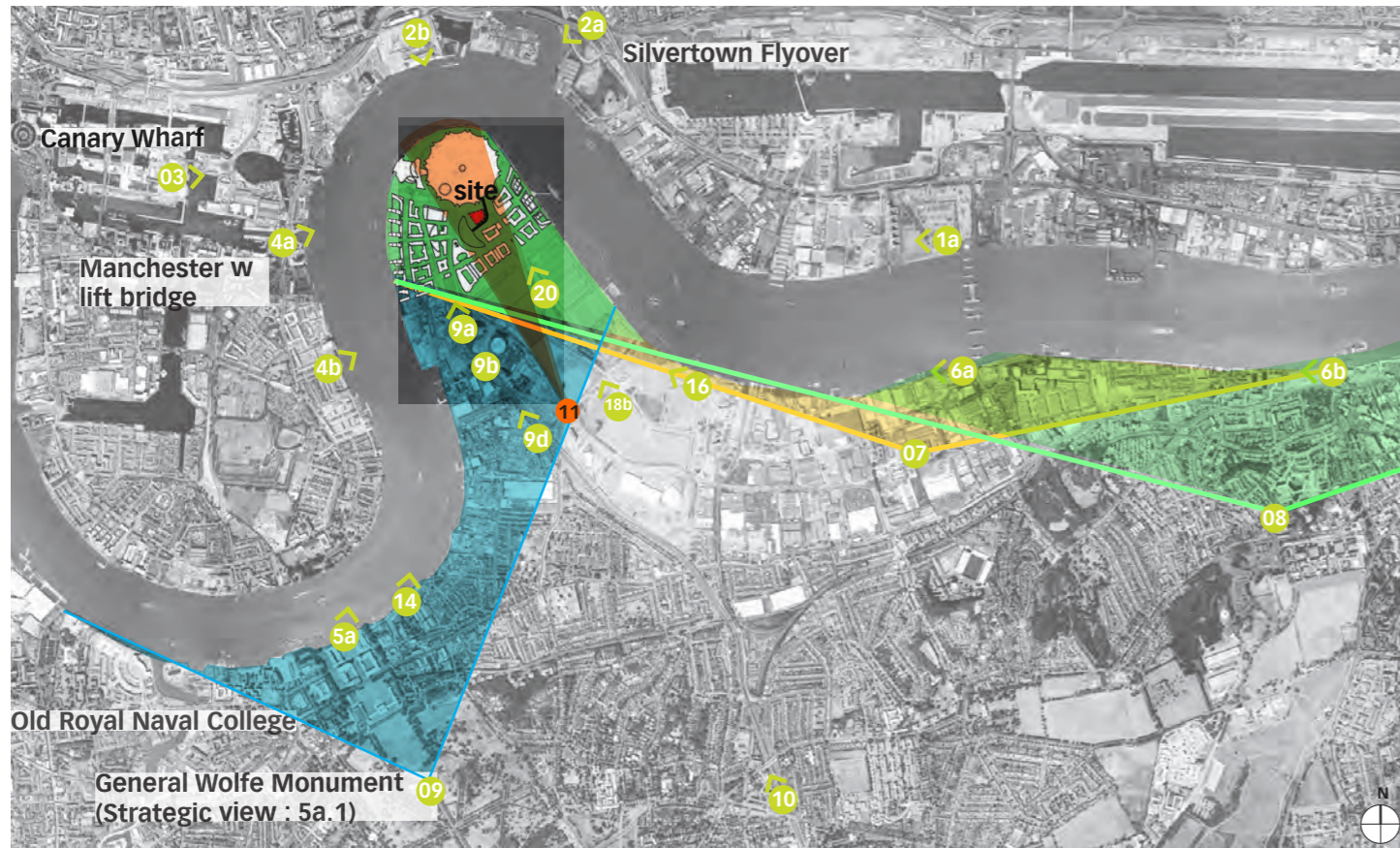


London City Airport's flight protection surface

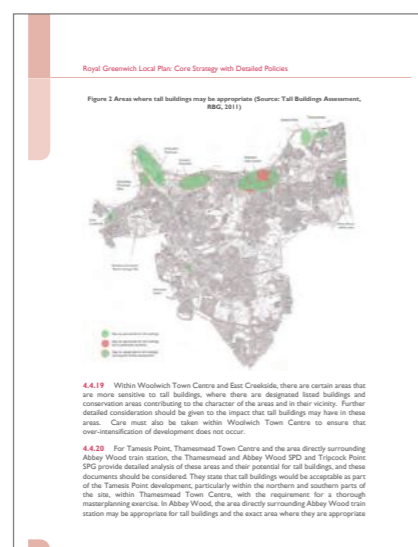


significant views across the Peninsula

Locally significant views across the Peninsula



02 locally significant views across the Peninsula (details extracted from LBG Core Strategy and the 2002 and 2015 Masterplan Applications. Information provided by Montagu Evans.



04

key:

- 00 Local views forming part of the Townscape assessment in the 2002 Farrell masterplan application
- 00 Additional local views forming part of the Townscape assessment in the 2015 Allies & Morrison masterplan application

The Wolfe Monument view.



03a existing non-verified view from Assessment Point 5A.1 (Wolfe Monument)



03b simulated non-verified view from Assessment Point 5A.1 (Wolfe Monument) with the newly consented 2015 Peninsula Masterplan - residential proposal in red

Note: The panoramic views on this page simulate the visual impact of the consented and proposed massing on Greenwich Peninsula from the protected view point of the Wolfe Monument. It is only intended to be a rough and approximate representation and is not a substitute for formal townscape analysis.

03 study of the Wolfe Monument view (These images are illustrative only, please refer to the section on townscape views within this document for an accurate representation).

key:

- Plot N0201 as proposed
- Plot N0301 as consented
- Peninsula Quays proposal (ref: 13/0684/O)
- 2015 Knight Dragon masterplan as consented

04 areas where tall buildings may be appropriated (tall buildings assessment, RBG, 2011) set out in the Royal Greenwich Local Plan: Core Strategy with Detailed Policy, p 96 figure 2.

05 the 'inverted cone' principle of preferred maximum storey heights around the World Heritage Site. Information extract from Maritime Greenwich, Important Views and Tall Buildings November 2006, Plan 4

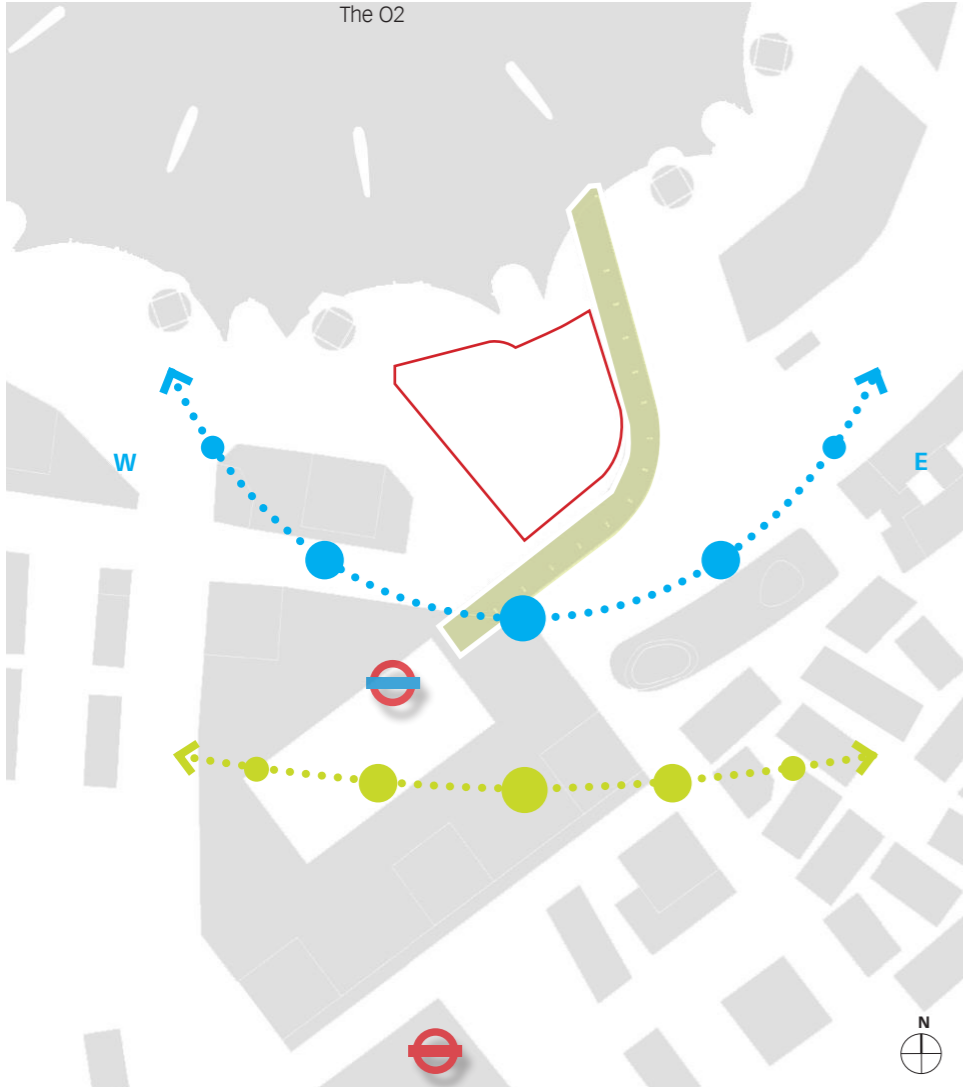
key:

- may be appropriate for tall buildings
- may be appropriate but particularly sensitive
- may be appropriate but requires further review

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site constraints & opportunities

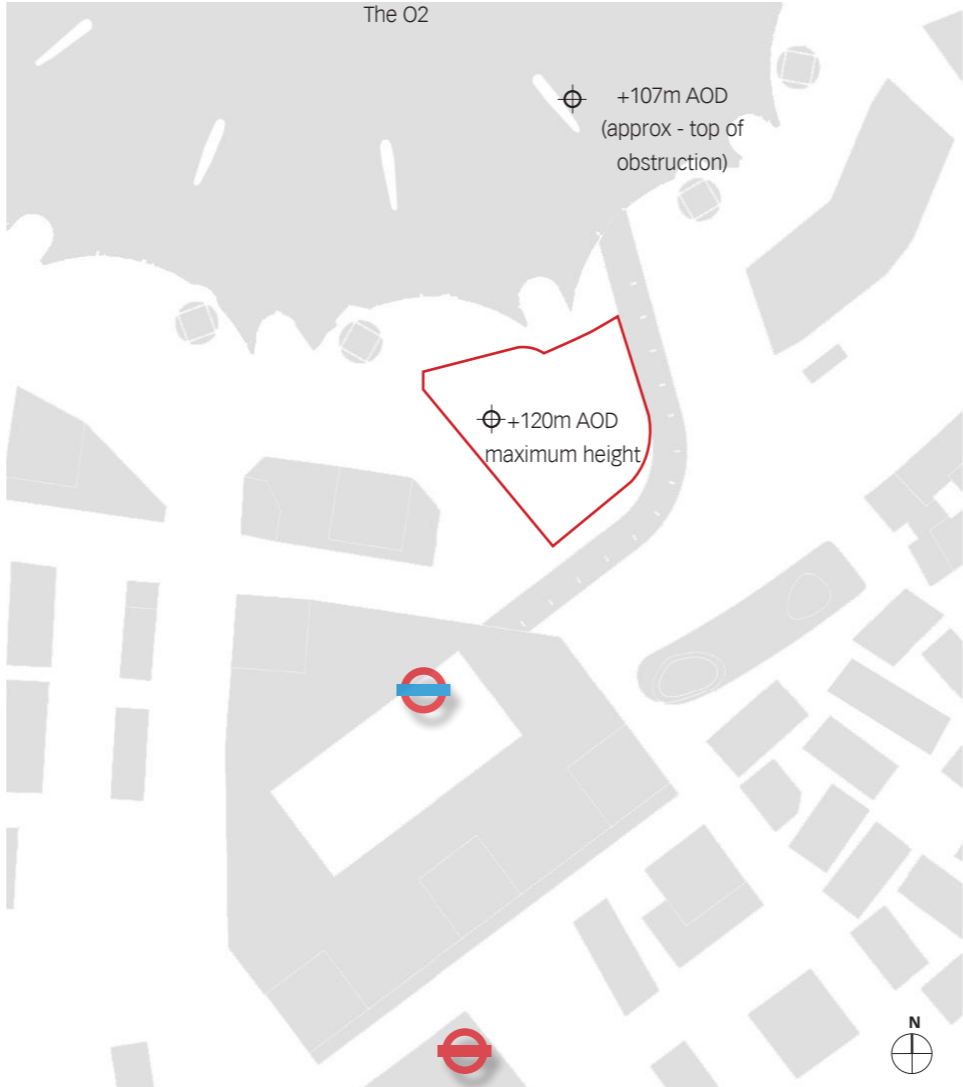
A number of key constraints and opportunities have informed the current design, these are identified on the following pages.



01 orientation and environmental considerations

- Proposals have been developed with regard to environmental conditions on the site, in particular wind and sunlight/daylight

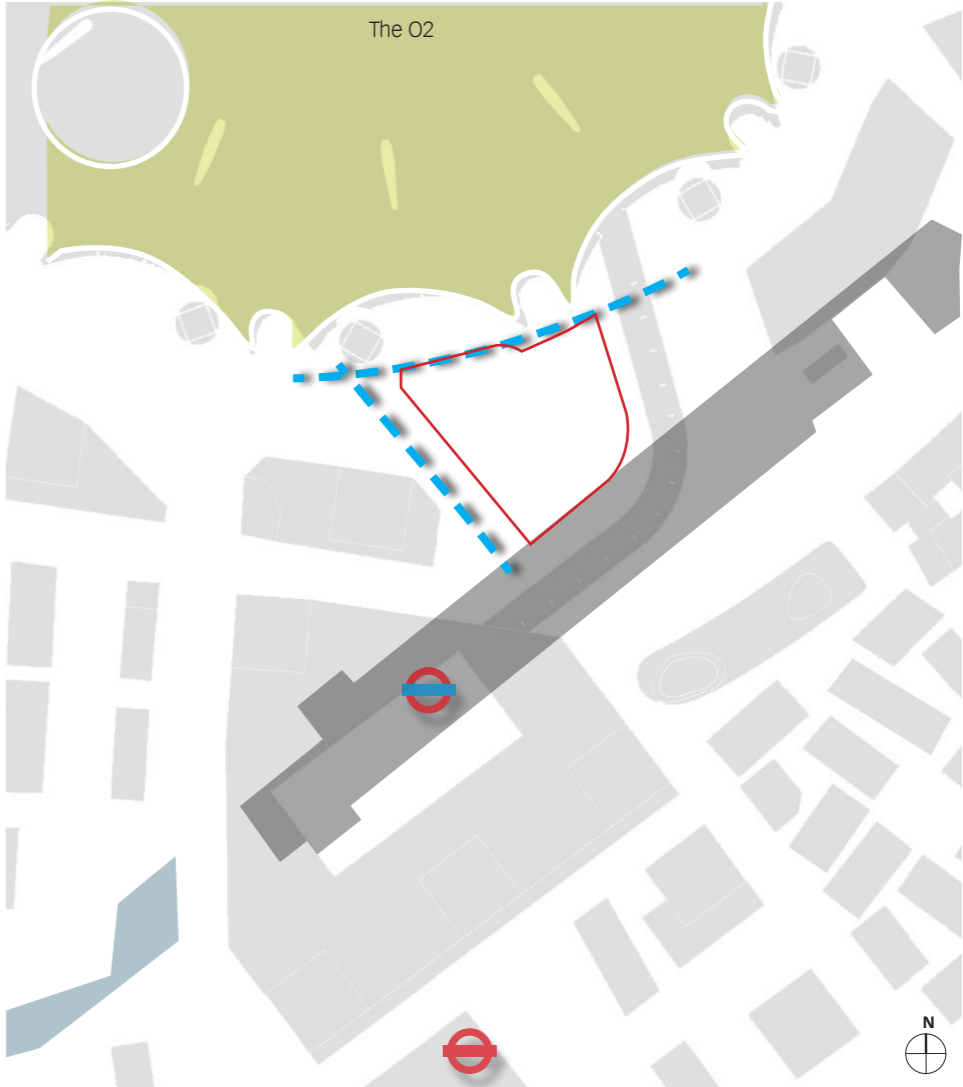
- key:
- site boundary
 - existing canopy
 - typical summer sun path (approximate)
 - typical winter sun path (approximate)
 - North Greenwich bus and tube station



02 height constraints

- The site falls within the lateral extension of the London City Airport's (LCA) Obstacle Limitation Surfaces (OLS) set out by the Civil Aviation Authority which defines the maximum permitted building height

- key:
- site boundary
 - City Airport flight restriction zone (take off and climb surfaces)
 - North Greenwich bus and tube station



03 acoustic constraints

- Key considerations:
- Proximity to The O2
 - Proximity, and potential future expansion of, London City Airport
 - Proximity to the North Greenwich Station

- key:
- site boundary
 - area with potential acoustic proximity issues
 - high noise level frontage
 - LUL station box
 - North Greenwich bus and tube station



04 existing ground constraints (levels shown in meters AOD)

- The site was formerly occupied by gas works as such is likely to suffer from ground contamination
- Historical information suggests possible location of deep concrete foundation in the south-west area of the site
- A retaining wall forms the western edge of the site. This results from a level change of just under 1m from east to west around the perimeter of the site.

key:

- site boundary
- contaminated ground zone
- potential deep foundations
- LUL station box
- ⊖ North Greenwich bus and tube station

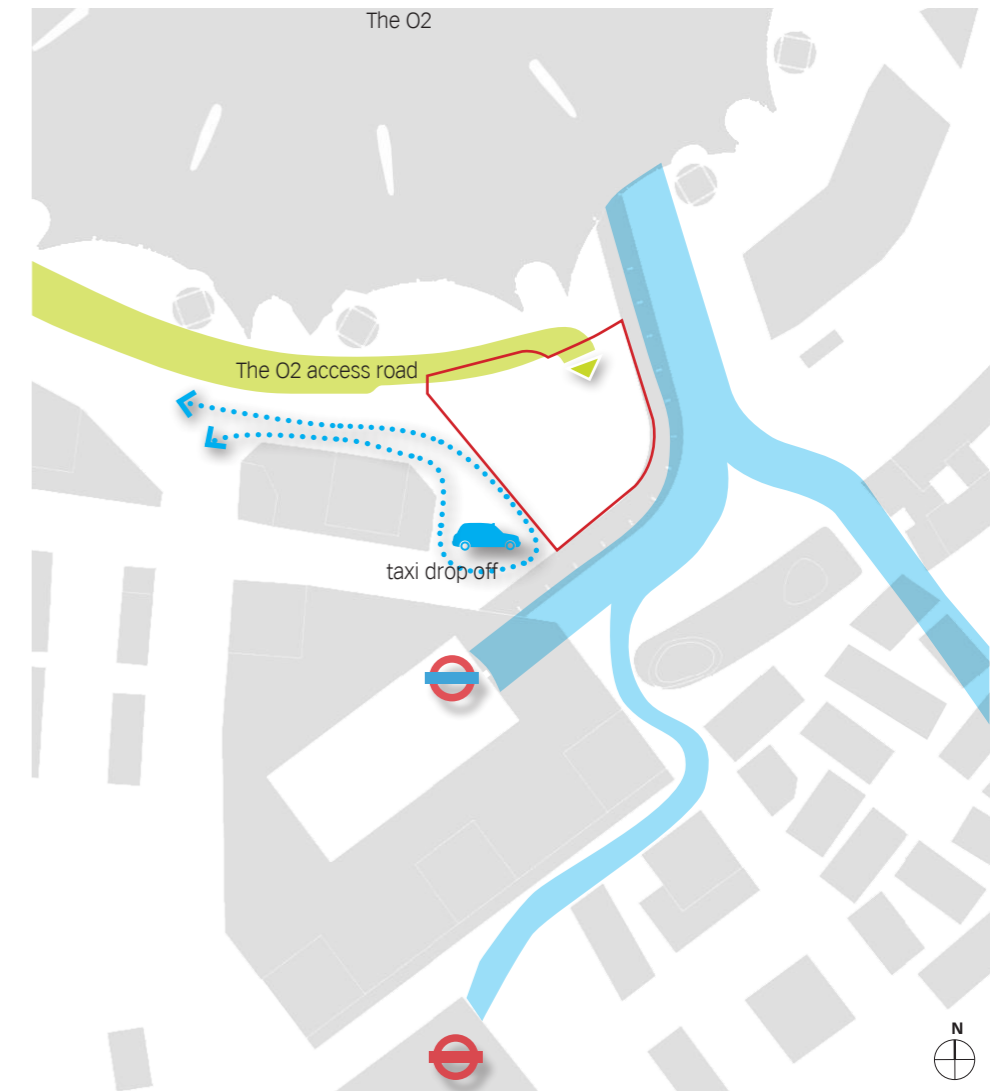


05 underground constraints : London Underground Ltd (LUL)

- LUL have a 3m right of access zone within the site area, and running along the southern edge of the site boundary, for the purpose of inspecting, maintaining, repairing, demolishing or rebuilding their property
- LUL have a right of support shelter and protection for their property within a 15m zone (inclusive of a 3m access zone) within the site area and running along the southern edge of the site boundary

key:

- site boundary
- LUL station box edge
- 15m LUL right of support shelter
- 3m LUL right of access
- ⊖ North Greenwich bus and tube station



06 ground access and movements across the site

- Pedestrian arrival to the site is primarily from the south west
- Vehicular access is via The O2 service road that runs around The O2
- Taxi access is via the taxi drop off located adjacent to the western edge of the site

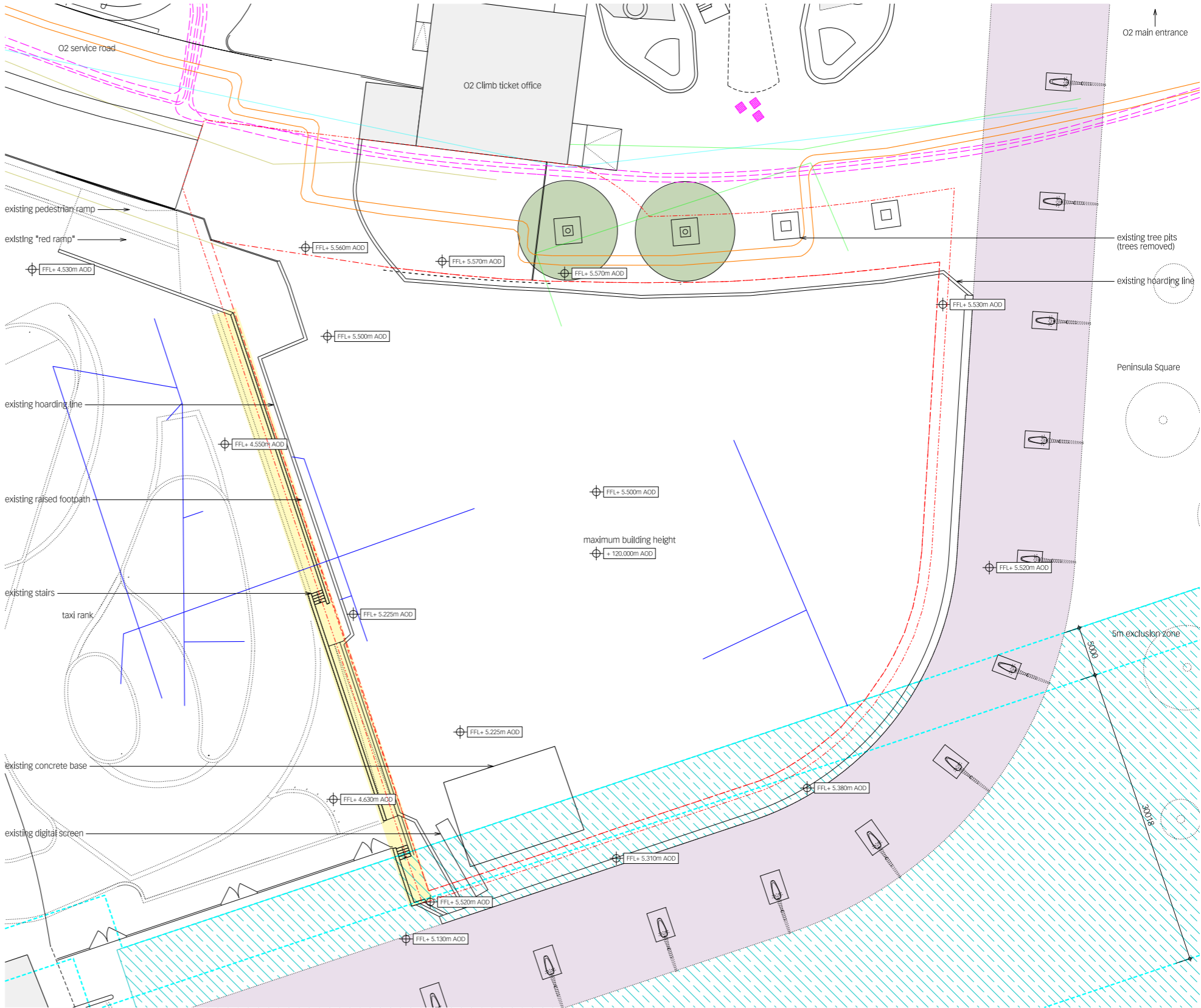
key:

- site boundary
- refuse/plant/service routes
- ▲ car park access
- pedestrian routes
- ⋯ taxi drop off route
- ⊖ North Greenwich bus and tube station

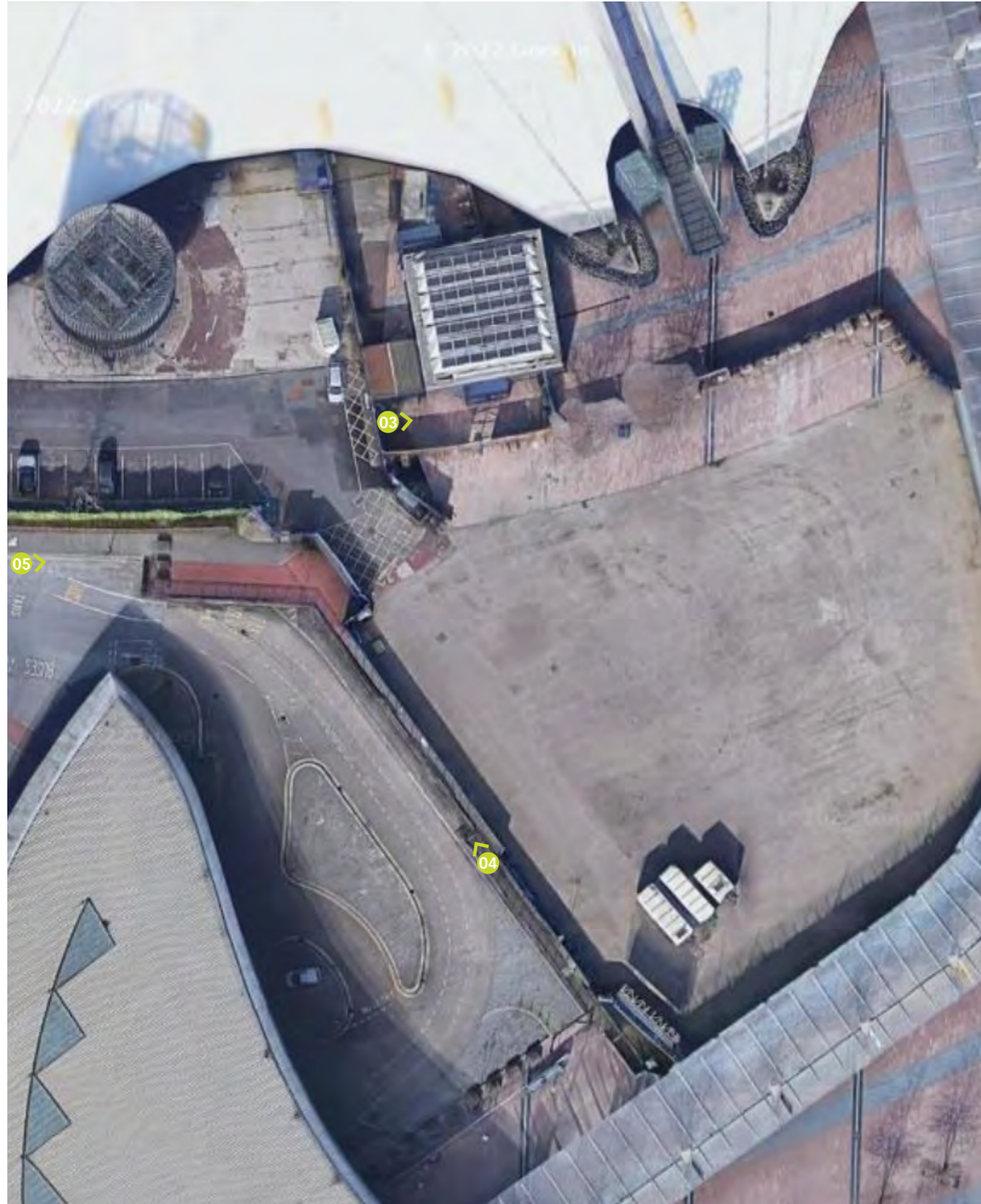
site constraints plan

The site has numerous physical constraints which are highlighted on the previous pages. The site constraints plan illustrated opposite seeks to consolidate these constraints onto a single drawing for clarity. The highlighted constraints include the following:

- North Greenwich station box
- existing trees
- level variations
- existing below ground services
- concrete bases



01 site constraints plan



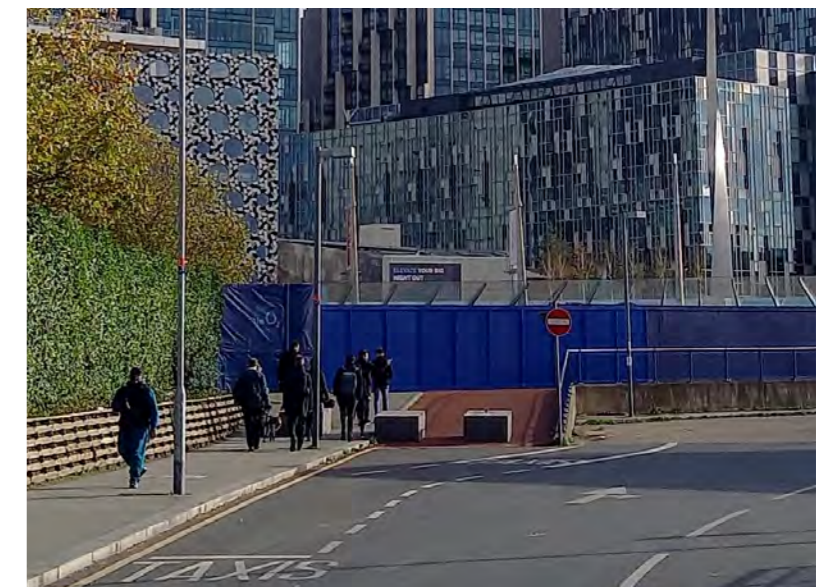
02 aerial view of the site



03 service area to the north of the site



04 footpath to the west of the site



05 existing ramp providing level access to the site

The site is bound by a pedestrian footpath to the west, a servicing area to the north-west, the O2 to the north and Peninsula Square to the south and east.

The raised footpath to the west of the site appears to be located within the site boundary. The lower footpath, at taxi rank level, is significantly lower level than the site itself, thus providing limited access opportunity.

An existing ramp to the north-west provides level access to the site and a servicing area to the north is proposed to be incorporated into the proposed servicing strategy.

existing open spaces

New public realm provides an urban framework which creates the setting for emerging development.

A public river walk connects the Peninsula to its wider setting and provides public access to the water front. 'Central Park' is a linear open space that runs north south most of the length of the peninsula. The park will form a 'green' spine connecting future residential neighbourhoods, and is terminated at the north by Peninsula Square.

Much new development is currently underway providing frontage to Central Park and the river walk. These include Parkside North, Bugsby's Reach North residential development and East Riverside on the eastern edge of the Peninsula. These developments are characterised by high rise residential blocks providing a river aspect where possible and otherwise high level views.

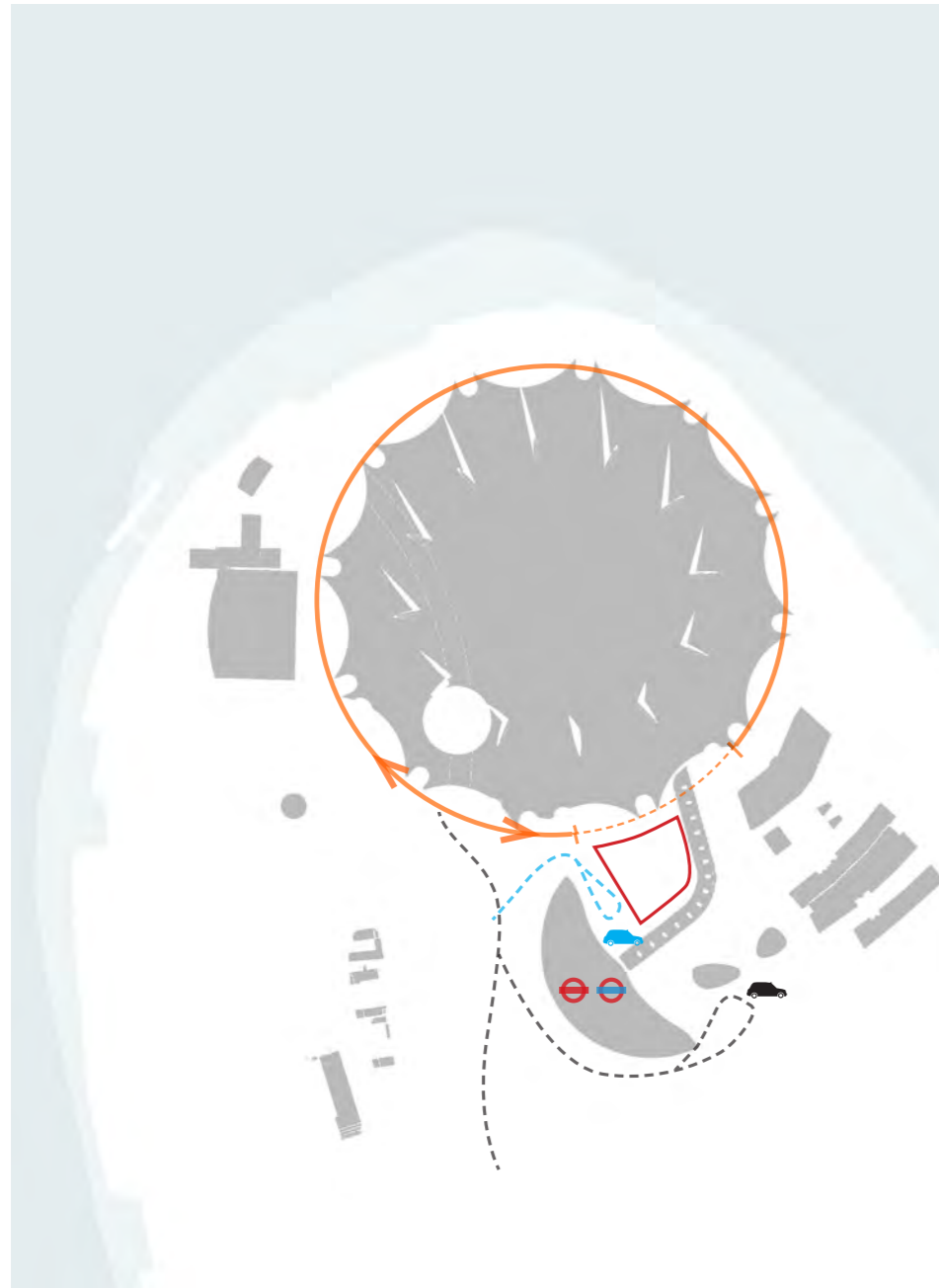


01 open space framework

key:
— site boundary / N0201 plot

key:
— site boundary / N0201 plot
 open green spaces
 design district
 Peninsula Square
 river walk
 future enlargement of central Park
→ connections
⊗ North Greenwich bus and tube station

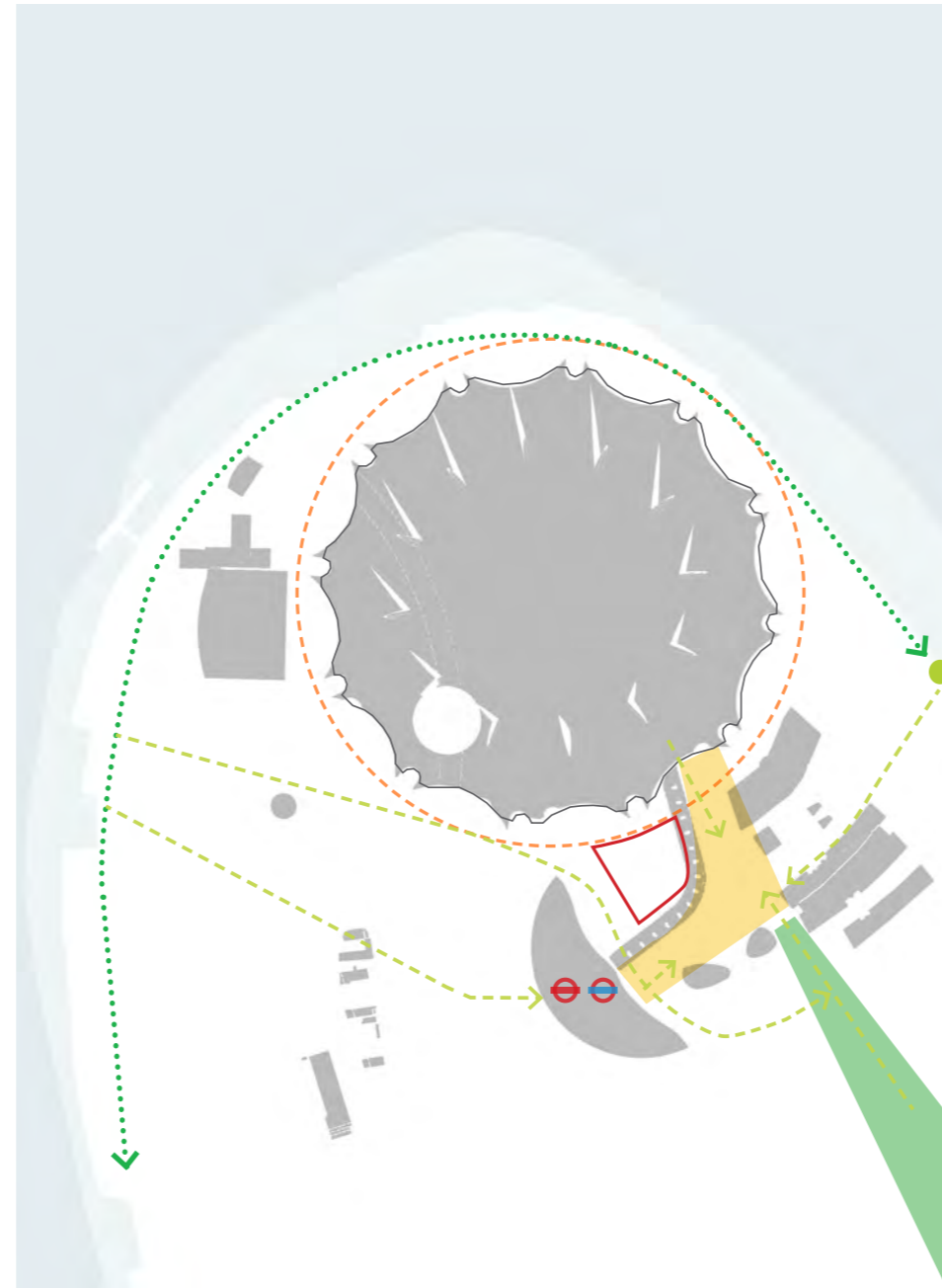




02 vehicular access

key:

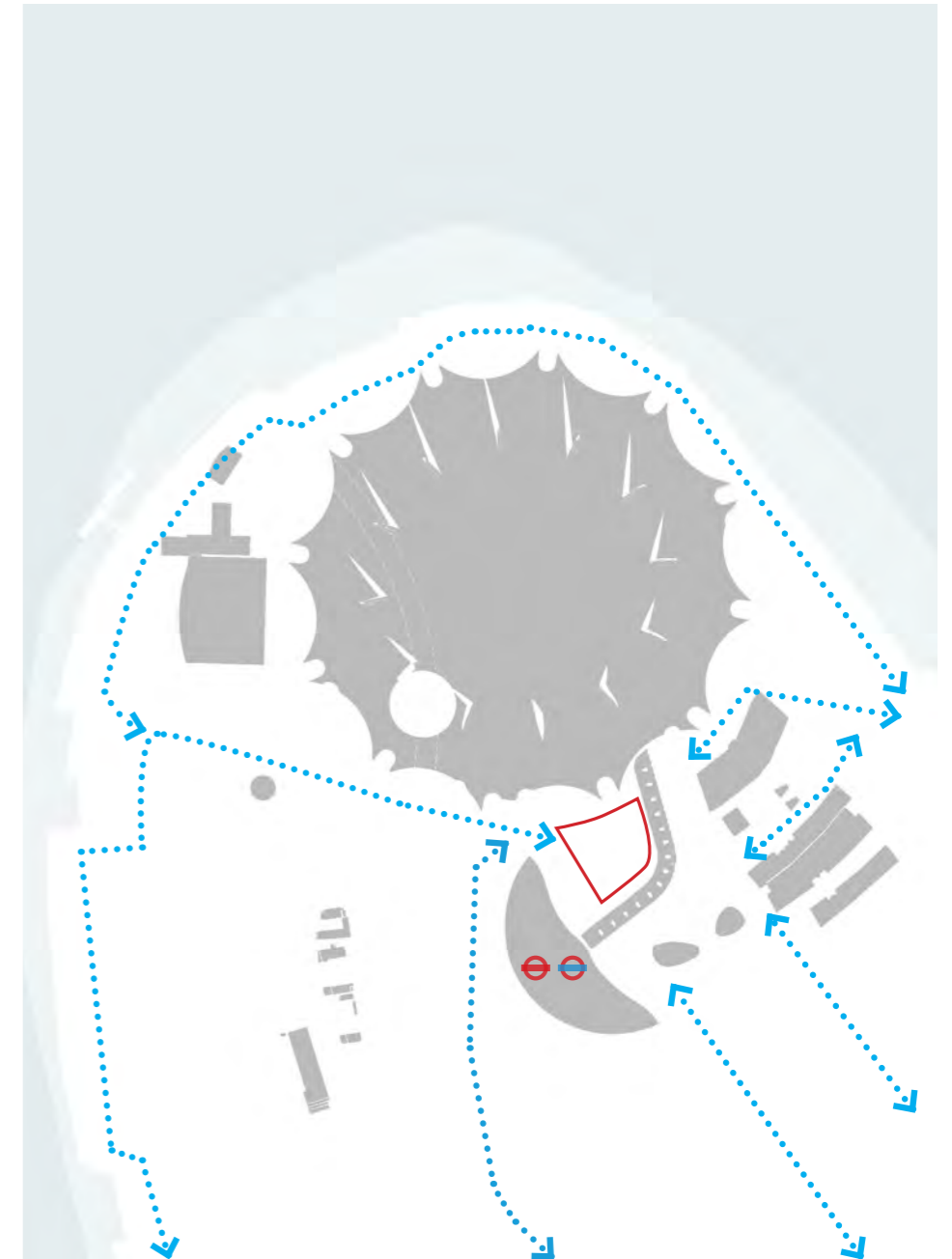
- plot boundary / N0201 plot
- ☁ taxi drop off
- 🚗 car drop off
- The O2 service road
- ⊖ North Greenwich bus and tube station



03 open space + scale of Peninsula Square

key:

- plot boundary / N0201 plot
- - - The O2 access road
- Central Park
- Peninsula Square
- ⋯ River Thames walk
- - - > pedestrian movement
- North Greenwich Pier
- ⊖ North Greenwich bus and tube station



04 cycle routes

key:

- plot boundary / N0201 plot
- ⋯ > main cycle routes
- ⊖ North Greenwich bus and tube station

02

planning

- planning context and land use principles
- Peninsula Masterplan
- 2010 planning consent (office building)
- 2015 planning application (residential building)
- 2018 planning consent (residential building)
- the need for PBSA in RGB
- PBSA schemes and university campus proximity
- London student market snapshot
- consultation

planning context and land use principles

planning policy

The development plan for the Royal Borough of Greenwich (RBG) comprises the London Plan 2021; RBG Core Strategy with Development Management Policies (CSDMP) (July 2014)

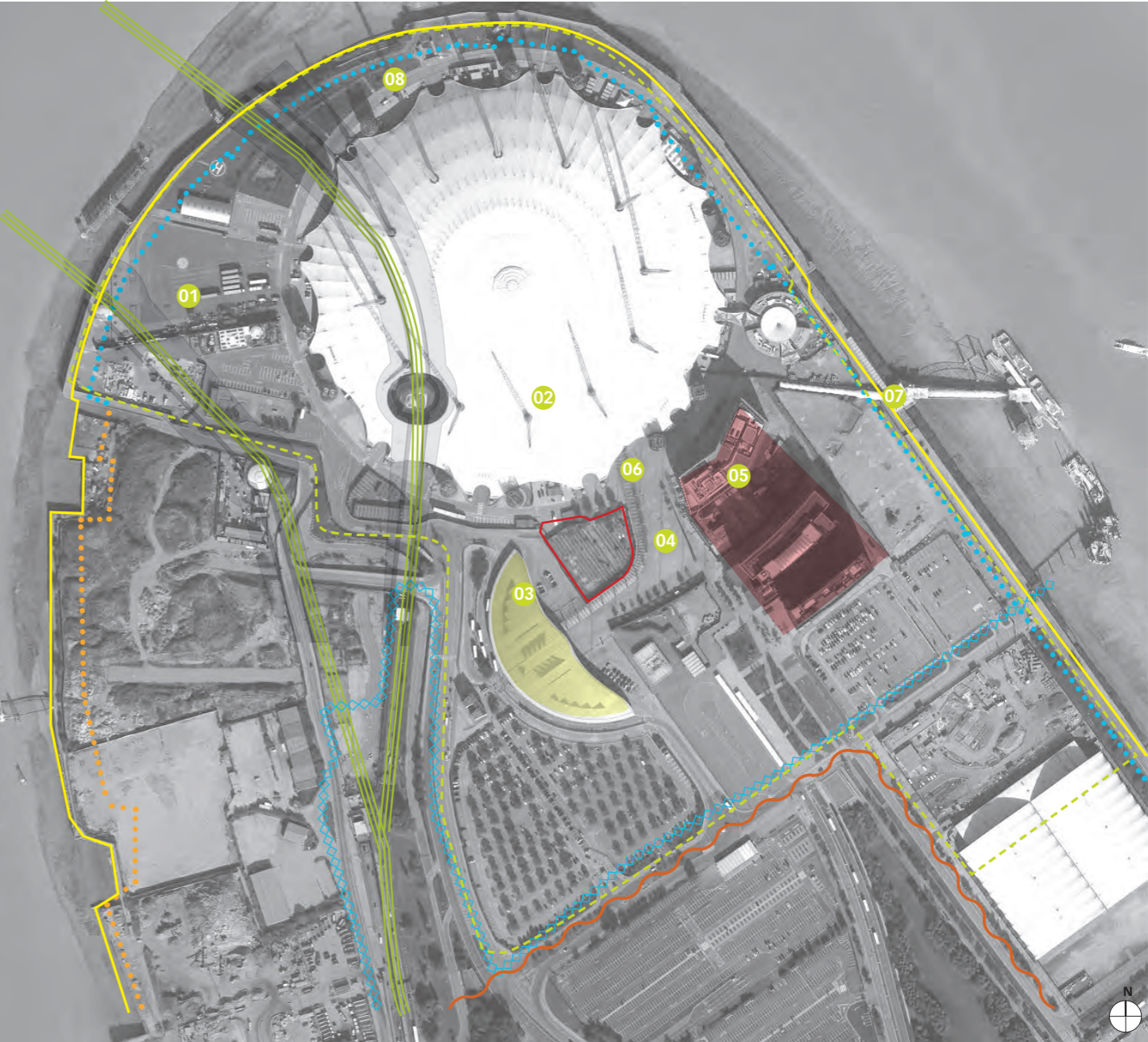
planning history - the Peninsula

Following the construction works carried out for the Millennium celebrations, a masterplan for the Peninsula was prepared by Farrell and Partners in 2002 (application ref. 02/2903/O). the masterplan received consent in 2003, permitting development of a mixed use scheme including up to 10,010 dwellings. The masterplan adopts and extends a number of elements inherited from the previous phase of work, including the alignment of Millennium Way, East and West Parkside, and Edmund Halley Way. The O2 and the Thames Clipper pier on the eastern bank were retained.

A revised masterplan for the Peninsula was prepared by Allies & Morrison on behalf of Knight Dragon (application ref. 15/0716/O). This new masterplan was granted outline consent in September 2015. Since this consent, several reserved matters application have been approved by RBG for plots to the south of the Peninsula and construction has already commenced.

In 2019, the masterplan was revised (application ref. 19/2733/O). The 2019 masterplan is an evolution of the 2015 Masterplan, which sets out the vision for Greenwich Peninsula and comprises two neighbourhoods, Brickfields and Peninsula Central.

- key:
- 01 NO301 hotel site (construction completed)
 - 02 The O2
 - 03 North Greenwich Station
 - 04 Peninsula Square
 - 05 Completed redevelopment
 - 06 O2 pedestrian canopy
 - 07 QEII pier
 - 08 Millennium Park
 - 09 AEG car park
 - 10 Emirates Airline
- site boundary / N0201 plot
 - riverside walk policy (RBG Core Strategy, proposals map, policy IM(b))
 - new/ improved walk (RBG Core Strategy, proposals map, policy IM(b))
 - Strategic Development Location Section 3.3., H1
 - strategic route policy
 - North Greenwich District Centre, (RBG Core Strategy, proposals map, policy TCS+6)
 - River crossing safeguard area (RBG Core Strategy, proposals map, policy M8+15)
 - Thames policy area W2 (RBG Core Strategy, proposals map, policy DH(k))
 - completed redevelopment
 - North Greenwich Station



01 RBG Core Strategy 2014 - planning context

- The site is located within the Royal Borough of Greenwich
- The site forms part of the 'North Greenwich District Centre' area

- key:
- site boundary





02 massing of the 2002 Peninsula Masterplan - viewed from the south west



03 massing of the 2002 Peninsula Masterplan - viewed from the north east over the O2



04 2002 Peninsula Masterplan by Farrell and Partners

Peninsula Masterplan 2002

The overall plan is characterised by lower density in the south, principally residential use, building to higher densities and taller massing on the north and west of the peninsula. The higher densities also recognised a change in use, with a commercial heart to the scheme centred on Peninsula Square and the North Greenwich transport hub.

A series of reserved matters application were subsequently consented, increasing the density / heights proposed in contained areas. Of particular relevance to the site is the Meridian Delta consent in 2013 for the Peninsula Quays area, and the Hotel and conference centre at plot N0301.

key:
— site boundary



Peninsula Masterplan 2015

Whilst the plan form of the masterplan retains a high level of similarity with the 2002 masterplan due to existing infrastructure, a number of significant amendments are proposed, not least in the overall massing of the Peninsula. The key differences between the 2002 consented masterplan and the proposed 2015 masterplan are as follows:

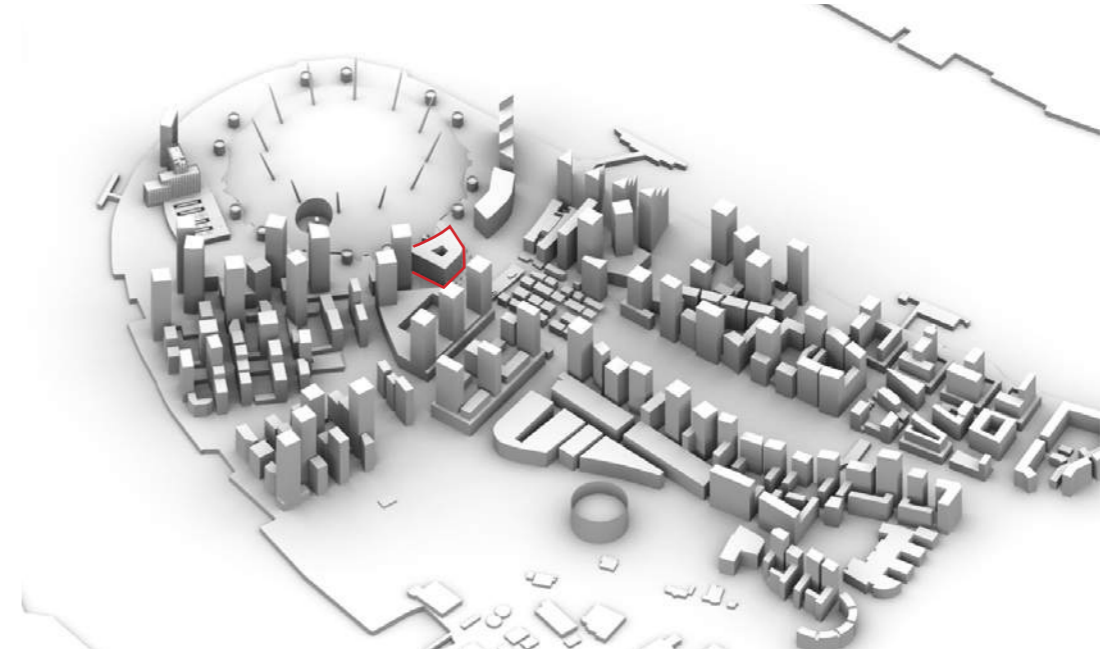
- An increase in residential floor space and a significant decrease in the amount of B1 office space proposed, most notably in reconfiguring the central commercial area of the 2002 masterplan, located around Peninsula Square.
- A significant increase in height parameters and massing, most notably to either side of Central Park and the north western area between Plot N0201 and the river.
- A unified transport hub replaces existing transport infrastructure, notably North Greenwich station as it currently stands.
- A proposed 'Design District' featuring low density development opens Plot N0201 up to views and permeability considerations with Central Park.
- The adjacent images (02 and 03) show the 'illustrative' massing of the masterplan as visually represented in the document. This is one possible interpretation of the massing limitations set out in the consented masterplan parameter plans, which will be subject to detailed applications for each of the buildings within the scope of the plan.



01 2015 Peninsula Masterplan by Allies and Morrison for Knight Dragon



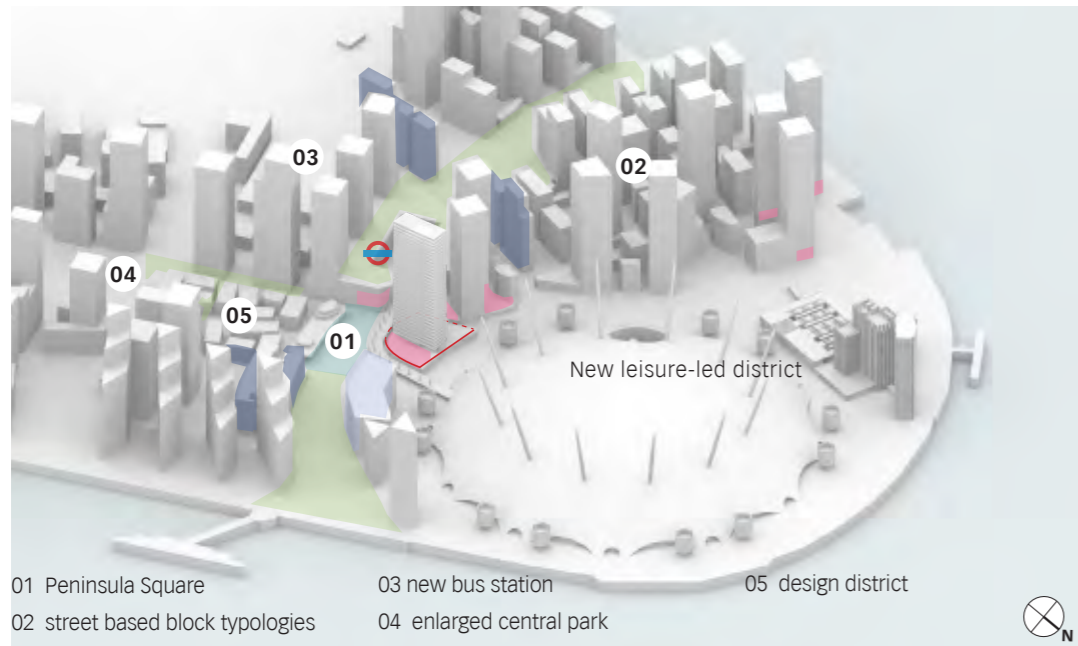
04 physical model of the 2015 Peninsula Masterplan - view looking to Canary Wharf



02 illustrative massing of the 2015 Peninsula Masterplan - viewed from the south west



03 illustrative massing of the 2015 Peninsula Masterplan - viewed from the north east over the O2



01 Peninsula Square 03 new bus station 05 design district
02 street based block typologies 04 enlarged central park

05 axonometric - proposals in Knight Dragon 2019 Masterplan



key:
 plot NO201 max envelope
 taller buildings
 intermediate
 lower buildings

06 (left) axonometric view of NO201 developable envelope within the outline parameter massing consented in the 2015 masterplan application, Allies & Morrison
(right) height parameters plan for the 2019 masterplan context, Allies & Morrison



07 2019 Latest review of the Peninsula Masterplan by Allies and Morrison for Knight Dragon

The Peninsula Masterplan went through revisions after 2015 grant, ending with the latest application 19/2733/O, resolution to grant in November 2021.

The changes include:

- The removal of up to 38,693 sqm of film/media studio floorspace due to a new large scale film studio to be located within Barking and Dagenham.
- Increase of 1,757 residential units (taking the total number of residential units from 15,730 to 17,487),
- An increase in the level of B1 floorspace by 22,137 sqm to 68,700.
- Introduction of a new primary school
- Introduction of up to 8000 sqm Theatre (Sui Generis)
- Revised proposals for the new bus station
- Improving east-west and north-south connections on the Greenwich Peninsula
- Reduction in residential car parking spaces from a ratio of 0.25 to 0.1



08 physical model of the 2019 Peninsula Masterplan showing the 2015 permitted residential scheme and in grey the revised areas - viewed from the south over the O2

2010 planning consent (office building)

The site has previously been granted several planning permissions which are summarised within this chapter.

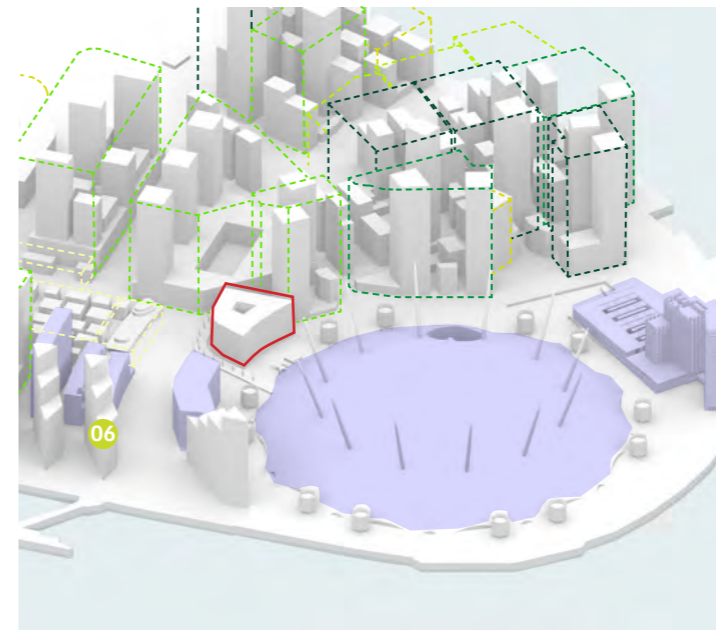
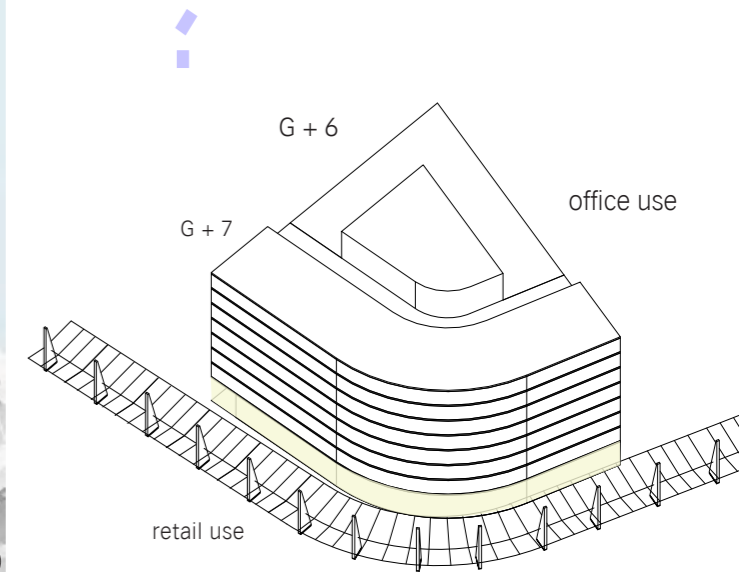
Eight-storey office scheme

In March 2010, RBG granted detailed permission (10/0280/F) for an eight-storey office building on plot NO201 designed by LDS. The consented scheme featured 18,659 sqm GEA of office floor space (Class B1) and 2,339 sqm GEA of retail/food and drink floor space (Class A1, A2, A3, A4, A5) and associated landscaping on the site.

The building was developed in line with the principles established by the 'Masterplan Design Code' for the 2002 masterplan, with the following considerations relating to the development of Plot NO201:

- primary retail frontage is to be facing into Peninsula Square with active, lively and uninterrupted frontages edging the public space.
- The entrance to the upper office floors is noted as facing the taxi drop-off adjacent to the tube station.
- The location of the service and deliveries entrance is proposed to the north-west corner of the site, facing the perimeter service road around The O2. The Design Code noted that the presence of such service areas should be minimised within the development

Despite extensive market testing of the office scheme at the time, the viability of office use on the peninsula proved to be lower than expected, and has subsequently been one of the most significant drivers behind the further development of the overall peninsula masterplan. However, in reconsidering the site for residential use, the above considerations have continued to be of relevance.



key:

- 01 N0301 Hotel site (under construction)
- 02 Peninsula quays masterplan (consented)
- 03 Ravensbourne college and offices (completed)
- 04 Peninsula Central East (consented 2004)
- 05 Peninsula Riverside 1 & 2 (under construction)
- 06 Peninsula Central East (consented 2014)
- site boundary
- - - consulted reserved matters applications
- ⊖ tube station
- existing buildings

01 plan (above) and axonometric (below) view of Plot NO201 consented office scheme (2010) within 2002 masterplan context, Farrell Architects (with 2013 consented Meridian Delta Peninsula Quays proposal)

Note: Information has been taken from drawings prepared by Swanke Hayden Connell Architects on behalf of Meridian Delta Ltd.

02 plan and axonometric view of Plot NO201 consented office scheme (2010) within 2015 masterplan application context, Allies & Morrison for Knight Dragon.

03 detailed planning permission for Plot NO201 office development, December 2009 (10/0280/F)



04 view of the 2015 application scheme from the north-east from O2 entrance



05 level 01 plan - 2015 application scheme

This page illustrate the 2015 application scheme (Planning reference: 15/3552/F) designed by LDS, the application was submitted and subsequently withdrawn.

planning consent summary

	proposed sqm	sqft
GEA	44,035	474,000
Total courtyard open space area	730 sqm	7,858 sqft

- 395 units (916 habitable rooms):
- 315 are accommodated in the tower
- 80 are accommodated in the podium

Unit density: 960 units/ha

Habitable room density: 2,231 hab. rooms/ha

key:

- - - NO201 plot boundary
- market tenure
- affordable tenure
- ⊗ view location

key plan



2018 planning consent (residential building) - summary

Lifschutz Davidson Sandilands were subsequently re-appointed in 2017 to prepare design proposals and a new planning application for a residential development at plot NO201.

It was a reappraised scheme to create a singular elegant tall building with high residential quality.

The following pages illustrate the 2018 application scheme in context, and summarises the key points as raised by RBG on the scheme

planning consent summary

	proposed sqm	sqft
GEA	32,787	352,918
Total communal area	189 sqm	2,034 sqft

- 262 units (714 habitable rooms):
- 59 are affordable
- 25 are WCH type

Unit density: 624 units/ha

Habitable room density: 1,700 hab. rooms/ha

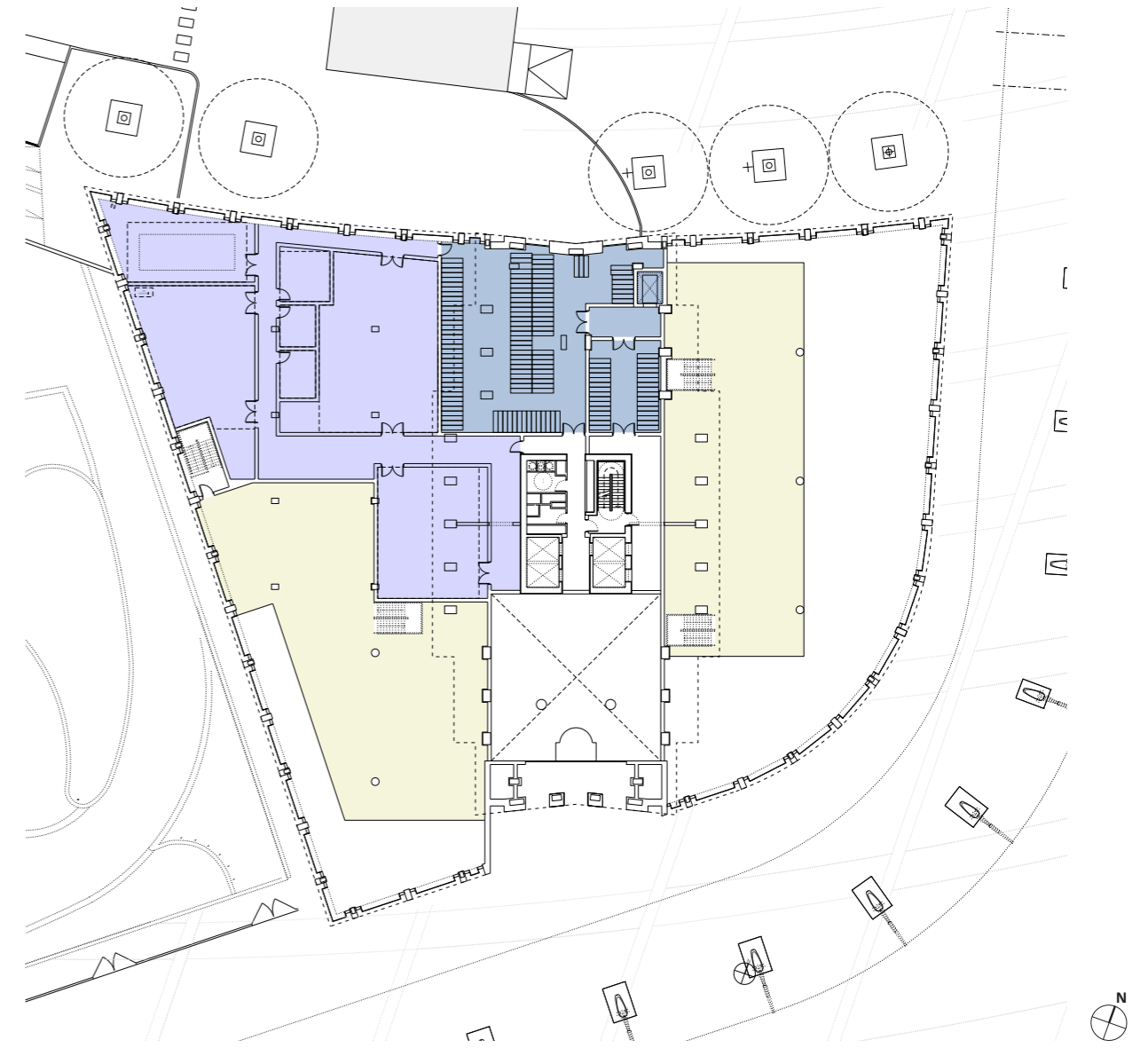
key plan



01 view of the 2018 application scheme from the entrance to North Greenwich Station



01 ground floor



02 mezzanine floor

key plan



key:

- site boundary
- retail
- plant
- cycle storage
- car parking
- residential lobby

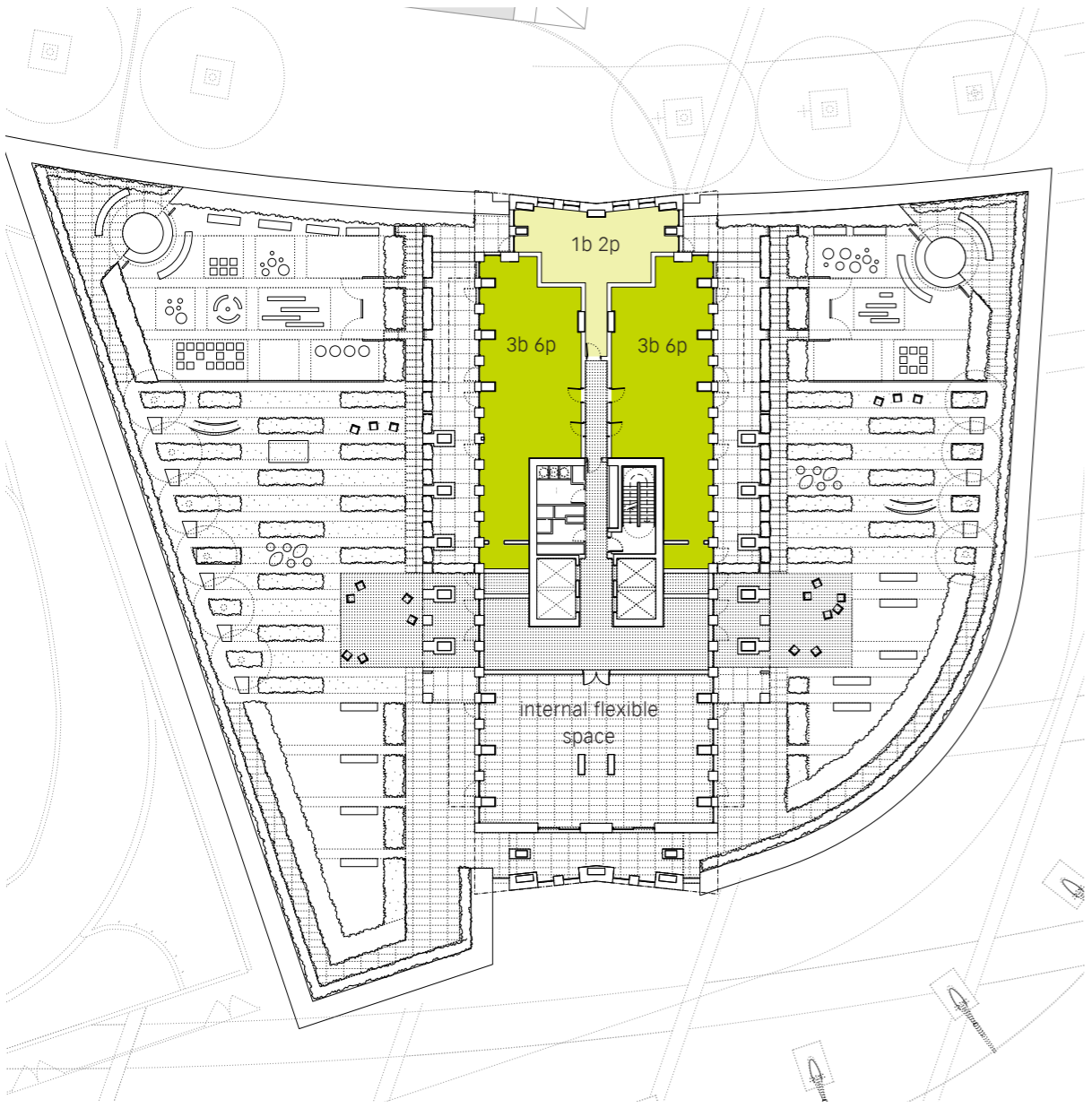
01 ground floor areas:

retail GF	898 + 411 = 1309 sqm
retail MEZ	356+395=752 sqm
total retail	2061 sqm
lobby	222 sqm
refuse	320 sqm
parking / plant area	702 sqm

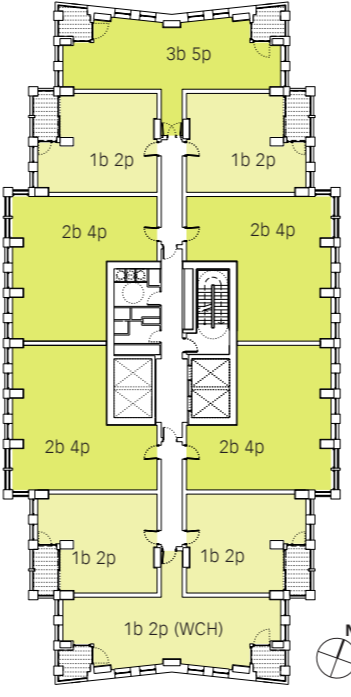
02 mezzanine floor areas:

retail	356+395=752 sqm
plant area	590 sqm
Cycle store	335 sqm - 209 units

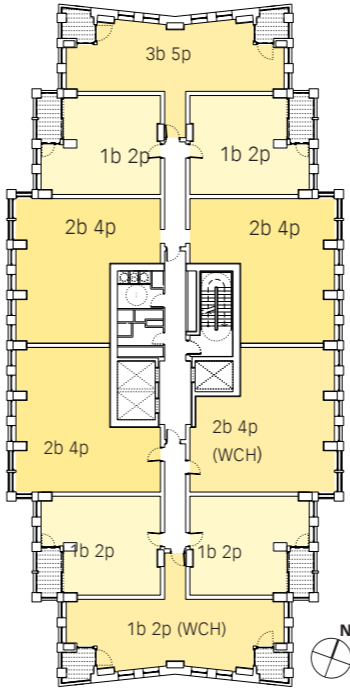
2018 planning consent (residential building) - floor plans



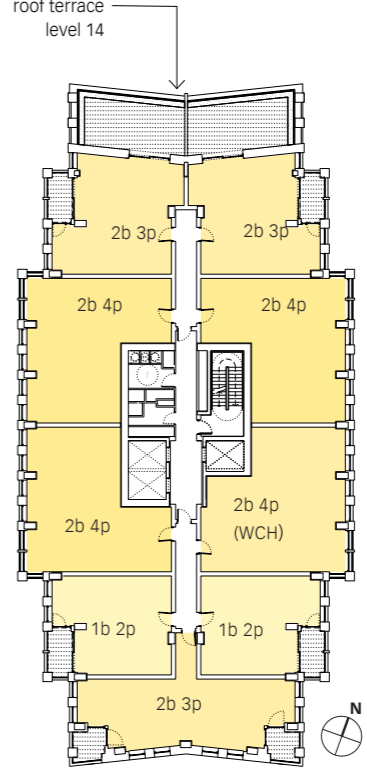
01 first floor



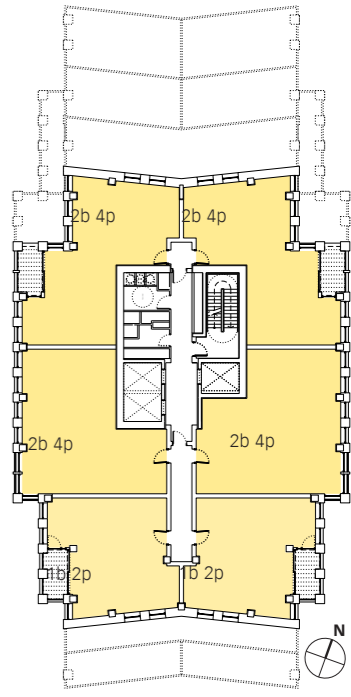
02 typical lower floor level 5-7 (affordable tenure)



03 typical lower level floor level 9-12 (market tenure)



04 mid level floor 14-17 (market tenure)



05 upper level floor level 29-30 (market tenure)

- key:
- site boundary
 - 1 bed / 2 person (market)
 - 2 bed / 3 -4 person (market)
 - 3 bed / 5+ person (market)
 - 1 bed / 2 person (affordable)
 - 2 bed / 3 -4 person (affordable)
 - 3 bed / 5+ person (affordable)
 - ♿ accessible/adaptable units

demand

Peninsula Square offers an exceptional opportunity for students to live in PBSA.

- only 27% of Greenwich's full-time students live in PBSA. This is a very high student to bed ratio of 3.9 (i.e. 2,880 beds for 11,140 students)
- more than 21,000 students attend Greenwich Universities, but only 11,140 students live in the Borough
- 49% of students live in private rented residential accommodation, where there is supply and affordability issues
- both the University of Greenwich and Ravensbourne University have plans to grow
- Greenwich only provides 3% of London's operational PBSA stock
- next door to Ravensbourne University (with 2,500 students)
- short bus journey to University of Greenwich
- the scheme would free up family homes
- London ranked no.1 as the 'best student city' by the QS World Student Rankings

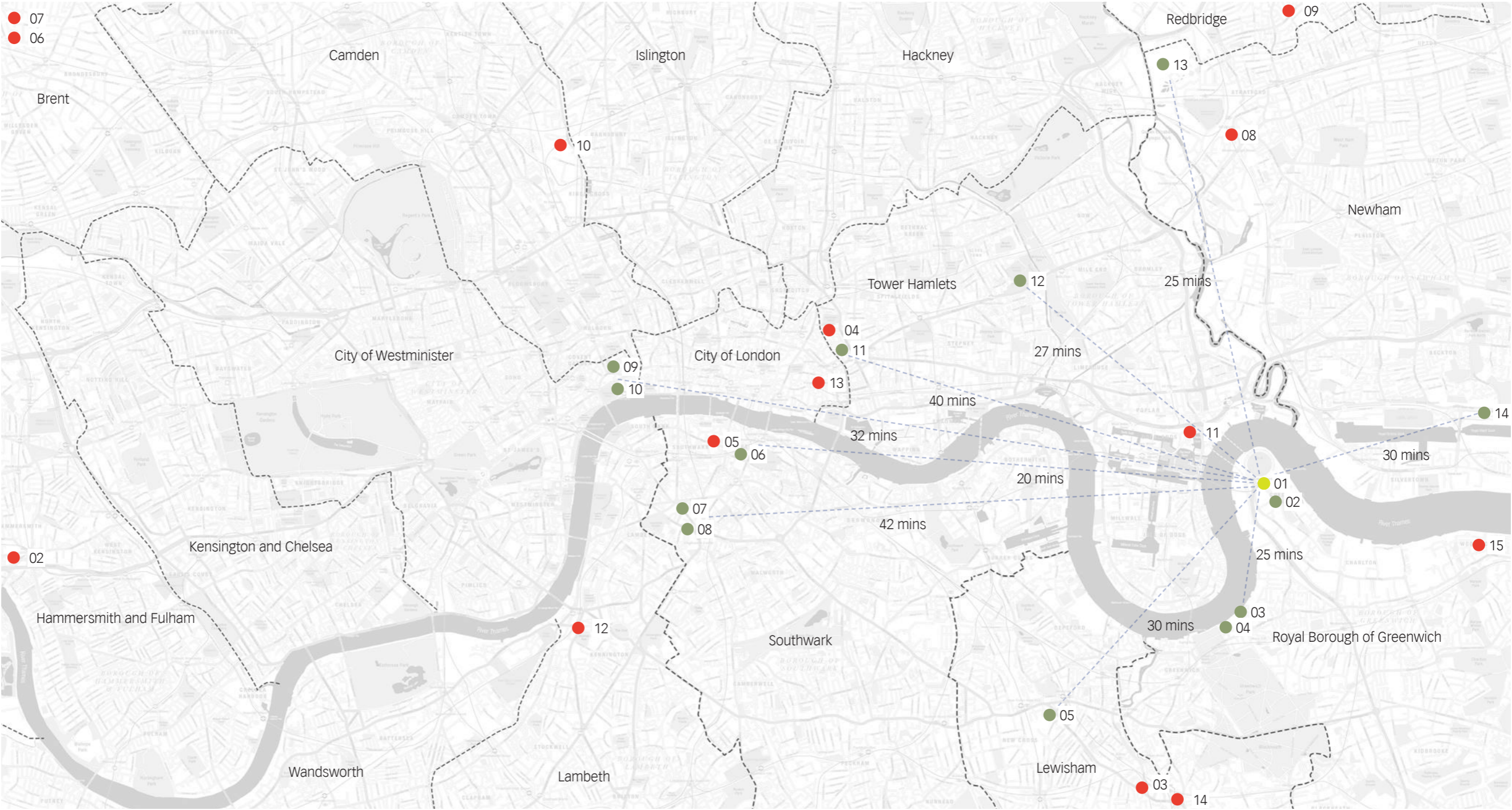
supply

- 350,000 students across London, with 28,000 more expected in five years
- only 100,000 PBSA beds available, with 29% not living in PBSA
- only 318 student-beds in the pipeline across Greenwich
- most students who live in PBSA attend local universities
- Greenwich only provides 3% of London's operational PBSA stock
- next door to Ravensbourne University (with 2,500 students)
- short bus journey to University of Greenwich
- the site benefits from strong transport connection



01 night vision of the Peninsula Masterplan by Allies and Morrison for Knight Dragon

PBSA schemes and university campus proximity



01 location plan

key:

- site
- PBSA comparison site
- university campus
- travel times (TfL journeyplanner)

PBSA scheme locations:

- 01. Peninsula Square - Royal Borough of Greenwich
- 02. 181 Talgarth Road - Hammersmith and Fulham
- 03. Chapter Lewisham - Lewisham
- 04. Chapter Spitalfields - Tower Hamlets
- 05. iQ Paris Gardens - Southwark
- 06. Pavilion Wembley - Brent
- 07. Scape Wembley - Brent
- 08. The Stratford Yards - Newham
- 09. The Valentine - Redbridge
- 10. Urbanest Kings Cross - Camden
- 11. Urbanest Trafalgar Way - Tower Hamlets
- 12. Urbanest Vauxhall - Lambeth
- 13. Urbanest City Vine Street
- 14. Vita Lewisham - Lewisham
- 15. Woolwich Catholic Club - Royal Borough of Greenwich

university campuses:

- 01. Peninsula Square - Royal Borough of Greenwich
- 02. Ravensbourne College (2,600 students)
- 03. University of Greenwich (19,000 students)
- 04. Trinity Laban (1,250 students)
- 05. Goldsmiths (8,400 students)
- 06. Kings, Guys Campus (30,000 students)
- 07. University of Arts, LCC (5,000 students)
- 08. London Southbank (17,000 students)
- 09. LSE (11,000 students)
- 10. Kings, Strand Campus (30,000 students)
- 11. London Met, Aldgate (9,250 students)
- 12. Queen Mary (27,000 students)
- 13. UAL/UCL (10,500 students)
- 14. University of East London (17,000 students)



London is the UK's largest student market but suffer from significant undersupply

Full-Time Students and Existing / Potential Supply of Beds

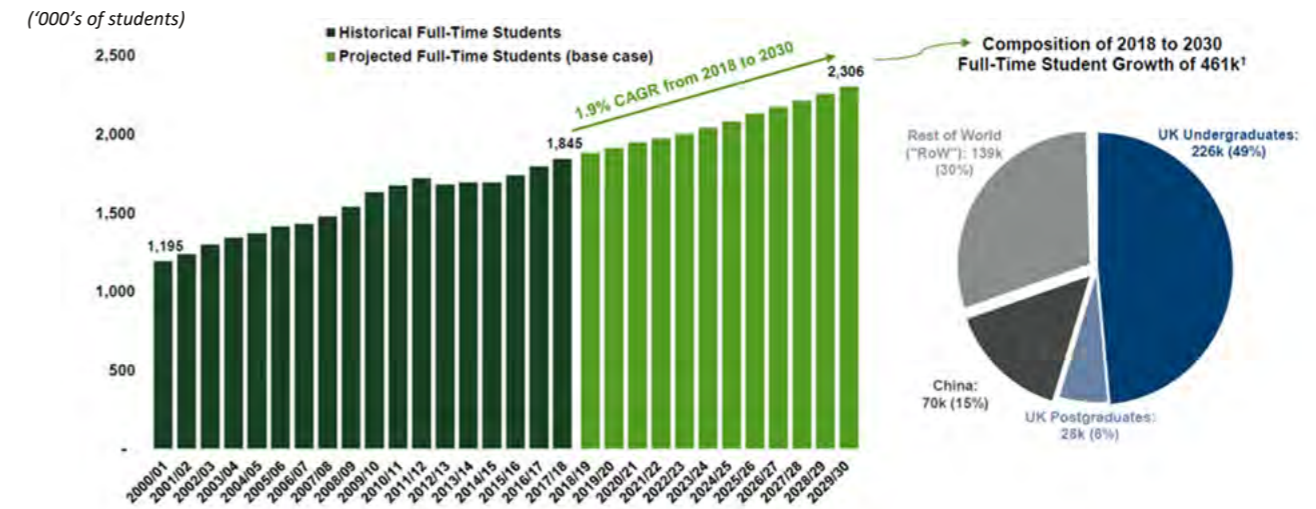
University City	FT students	Existing PBSA bed spaces	Estimated % of students in PBSA	Potential supply PBSA bed space	Total potential future bed spaces	Current number of bed spaces per student	Future number of bed spaces per student*
Leicester	37,711	22,950	61	2,111	25,061	0.61	0.66
York	22,949	9,778	43	492	10,270	0.43	0.45
Bristol	44,834	16,763	37	4,229	20,992	0.37	0.47
Cardiff	34,292	16,657	49	3,266	19,923	0.49	0.58
Sheffield	51,818	26,955	52	5,165	32,120	0.52	0.62
Exeter	22,065	9,188	42	2,963	12,151	0.42	0.55
Edinburgh	54,498	18,553	34	2,626	21,179	0.34	0.39
Birmingham	70,546	25,096	36	6,086	31,182	0.36	0.44
Nottingham	57,150	26,959	47	5,650	32,609	0.47	0.57
Oxford	33,216	8,380	25	1,856	10,236	0.25	0.31
Cambridge	37,736	4,213	11	1,203	5,416	0.11	0.14
London	311,611	93,106	30	17,603	110,709	0.30	0.35
Glasgow	59,963	19,003	32	4,747	23,750	0.32	0.40
Liverpool	50,664	28,117	55	5,185	33,302	0.55	0.66
Brighton	33,493	8,436	25	2,244	10,680	0.25	0.32
Leeds	54,680	23,310	43	4,956	28,266	0.43	0.52
Manchester	65,549	27,173	41	6,551	33,724	0.41	0.51
Bournemouth	18,808	7,163	38	1,106	8,269	0.38	0.44
Loughborough	16,070	7,661	48	681	8,342	0.48	0.52
Aberdeen	21,524	8,036	37	1,949	9,985	0.37	0.46
Bath	23,142	7,524	33	1,723	9,247	0.33	0.40
Newcastle	57,947	22,390	39	2,408	24,798	0.39	0.43
Southampton	32,279	13,711	42	1,872	15,583	0.42	0.48
Coventry	50,513	18,974	38	6,517	25,491	0.38	0.50
UK	1,858,813	640,000	34	149,225	749,225	0.34	0.42

London's PBSA market is highly undersupplied with 3.4 full time students per available bed versus 2.9 in the wider UK, with the current potential pipeline only reducing this ratio to 2.8 (assuming no growth in student numbers)

Source: Knight Frank

Source: Green Strett advisors, Cushman & Wakefield, UCAS, HESA, Tetlock/Good Judgement Project - Forecasting Methodology, Knight Frank

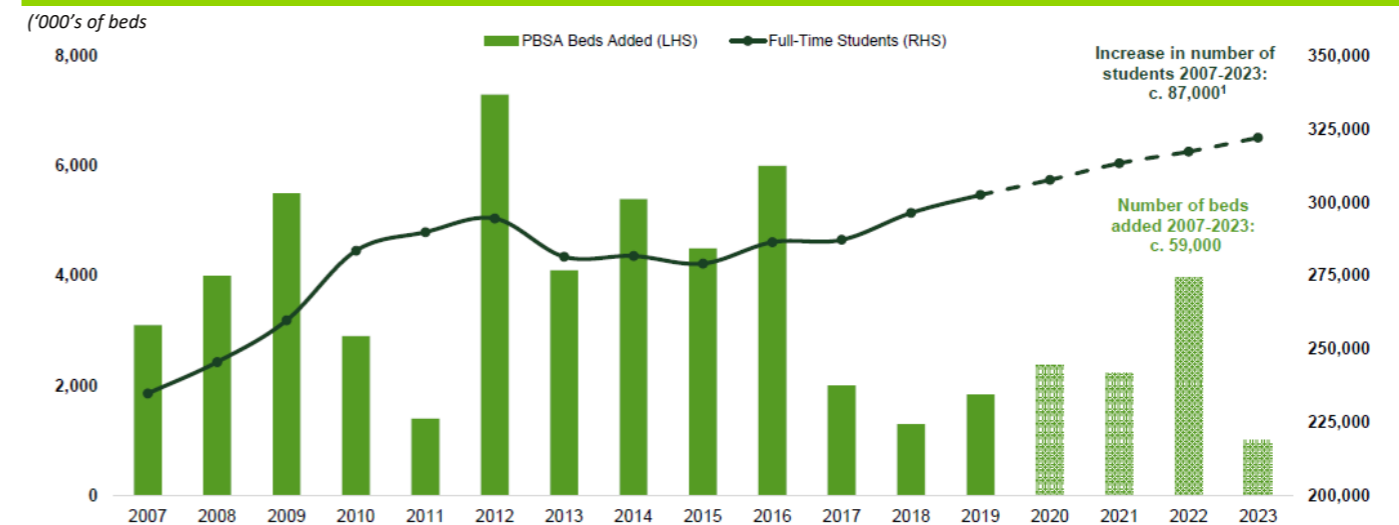
Projected Full-Time Students in the UK



UK full-time student population expected to rise 25% from 1.8m to 2.3m by 2029/30 with international students accounting for 45% of this projected growth

Source: Green Street Advisors

London PBSA Supply Pipeline vs. Full-Time Students



London added c.10 PBSA beds for every 14 new students over the last decade and projected student growth set to continue to exceed the supply pipeline

Source: Green Street Advisors

consultation

Extensive consultation has been undertaken with the Royal Borough of Greenwich and other statutory and non-statutory bodies as part of the consultation process. This consultation is summarised below.

Consultees include:

- Leader of the Council and Cabinet Member for Regeneration
- Greenwich Peninsula ward councillors
- Transport for London (TfL)
- Greater London Authority
- Knight Dragon
- public and local amenity groups
- AEG
- Ravensbourne University London
- Greenwich Council officers

The key dates in the consultation process can be summarised as follows:

RBG: pre-application meeting #1 on 11.04.22

RBG: pre-application meeting # on 30.08.22

RBG: pre-application meeting #3 on 20.10.22

RBG: Pre application meeting #4 on 14.12.22

GLA: pre-application meeting #1 on 14.11.22

Councillor meeting on 26.10.22

- Councillor David Gardner, RBG

Leader of the Council meeting on 08.11.22

- Cllr Anthony Okereke, Leader, RBG
- Cllr Aiden Smith, Cabinet Member for Regeneration, RBG

Public exhibition on 12.11.22

Public exhibition on 14.11.22

Ward Councillor meeting on 05.12.22

- Councillor David Gardner, RBG
- Councillor Nick Williams, RBG

Ward Councillor meeting on 06.12.22

- Councillor Denise Scott-Mc-Donald, RBG

RBG Planning Board briefing #1 on 11.01.23

Public exhibition events were promoted with a wide range of online and offline methods. The key channels are outlined below:

- social media adverts across a 0.5 mile radius
- a dedicated consultation website was launched on *www.peninsulasquare.co.uk*, promoting the dates later in the month. Those who were unable to attend could view and download the materials presented. A total of 1,324 people visited the website during this phase.
- flyers hand delivered residential buildings/concierges within a 0.5 mile radius of the site
- posters displayed across the area, including residential buildings and local businesses
- letters issued to key community and business groups
- online and print adverts in the Greenwich News Shopper
- a dedicated email address on *peninsulasquare@londoncommunications.co.uk*, and a free phone number on 0800 148 8197, so that members of the public could get in touch with the team and leave their feedback

Further detail can be found within the SCI submitted as part of the application.

03

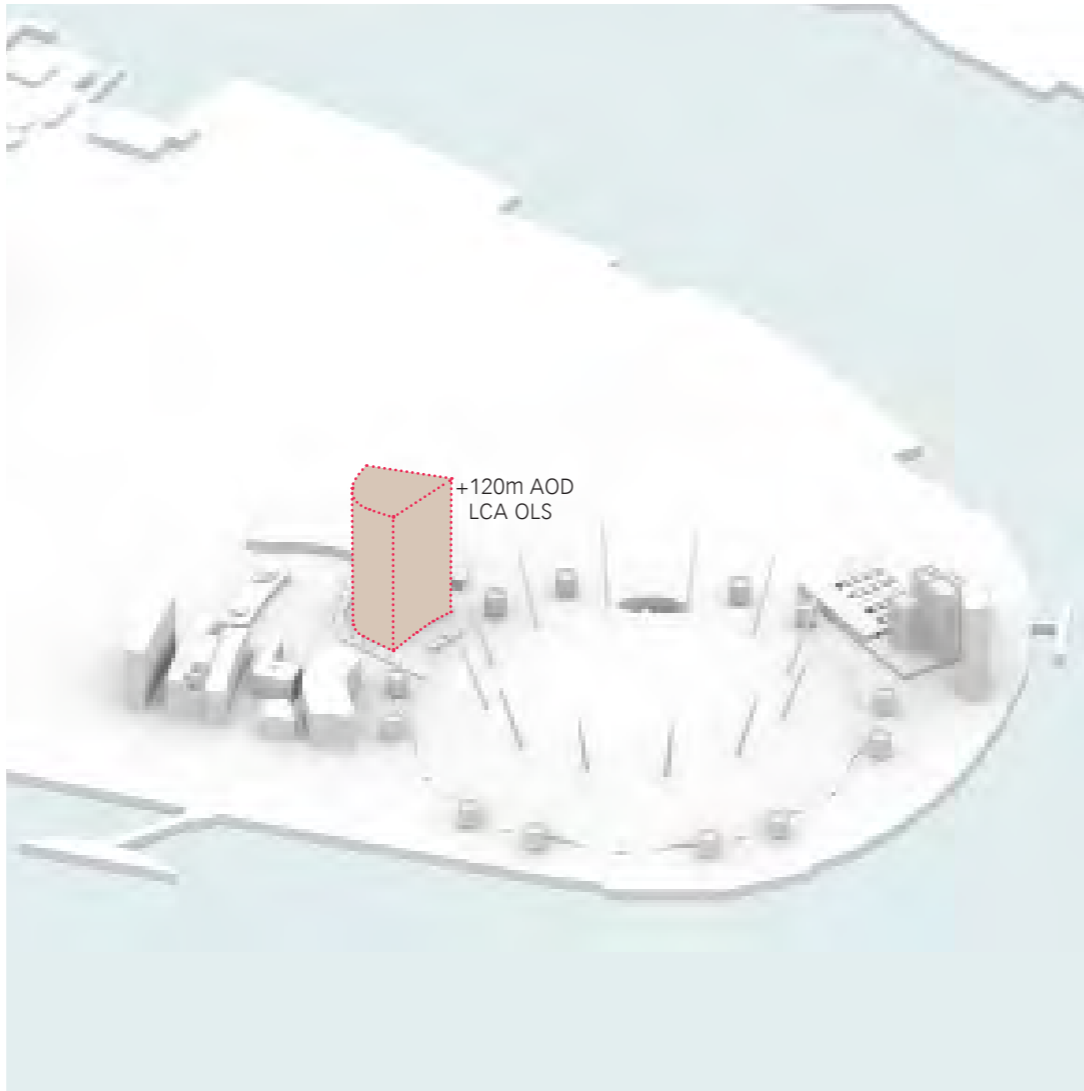
concept design

- massing developments
- design principles
- proposed scheme
- enlarged typical floor plan
- affordable student accommodation offer
- proposed core layout
- proposed sections
- accommodation schedule
- area schedule

massing development in relation to previous masterplan iterations

The adjacent diagrams illustrate the full extent of the site extruded to +120m aod (which is the development high limit over plot N0201 set by the London City Airport OSL) in relation to the approved 2002 masterplan.

The 2002 masterplan is an outline consent, and as such provides a maximum buildable envelope rather than detailed building proposals. Image 03 on the adjacent page illustrates the massing constraints of the masterplan, with development of up to a maximum of 133m aod to the west of the site.



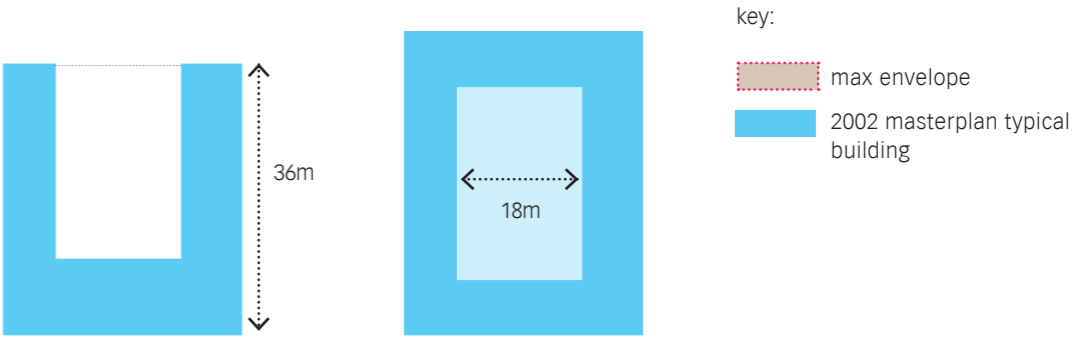
existing context + proposed scheme massing

key:
 max envelope

01 (above) Axonometric view of N0201 developable envelope within the existing context



illustrative masterplan (2002) + proposed scheme massing



02 (above) Axonometric view of N0201 developable envelope within the 2002 consented Masterplan and later consented context.
 (below) Typical block typology envisaged in the 2002 masterplan



massing development in relation to previous masterplan iterations



consented outline parameters plan for Greenwich peninsula

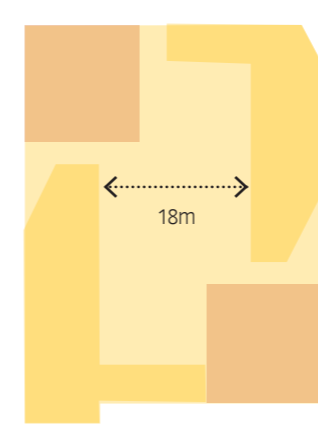
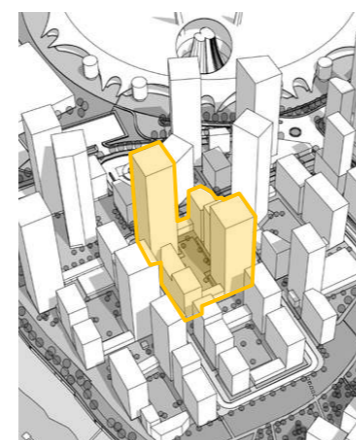


illustrative 2015 masterplan with dotted indicative outline parameters



- key:
- max envelope
 - max height 133.5m AOD
 - max height 123.5m AOD
 - max height 113.5m AOD
 - max height 100m AOD
 - max height 75m AOD
 - max height 35m AOD
 - max height 25m AOD

03 (above) Axonometric view of the developable envelope within the outline parameter massing consented in the masterplan application, Allies & Morrison
(below) Height parameters plan for the masterplan context, Allies & Morrison



- key:
- plot N0201 max envelope
 - max height 133.5m AOD
 - max height 123.5m AOD
 - max height 113.5m AOD
 - max height 100m AOD
 - max height 75m AOD
 - max height 35m AOD
 - max height 25m AOD

04 (above) Axonometric view of proposed massing within the illustrative Masterplan
(below) Typical block typology within the illustrative masterplan

massing development - concept

The diagrams on these pages show how the proposals respond to the fixed and changing elements within its immediate context.

fixed context

The diagrams on this page show how the proposals relate to the 'fixed' context. The podium responds to the extents of the site and creates new frontages to Peninsula Square, the eastern curve of the podium base is defined through a relationship with the existing glass canopy.

The tower element benefits from 360 degree views around the Peninsula with direct views to the River Thames around and over The O2. The views associated with the lower massing of The O2 are 'fixed' in that they will remain unchanged despite the future redevelopment of the Peninsula.

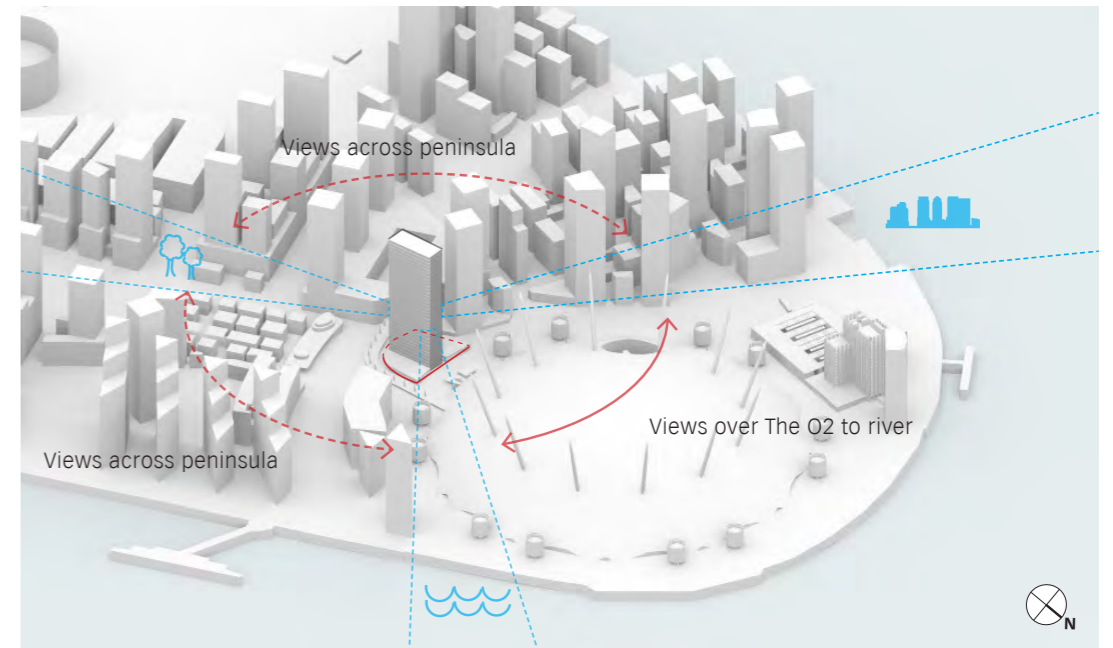
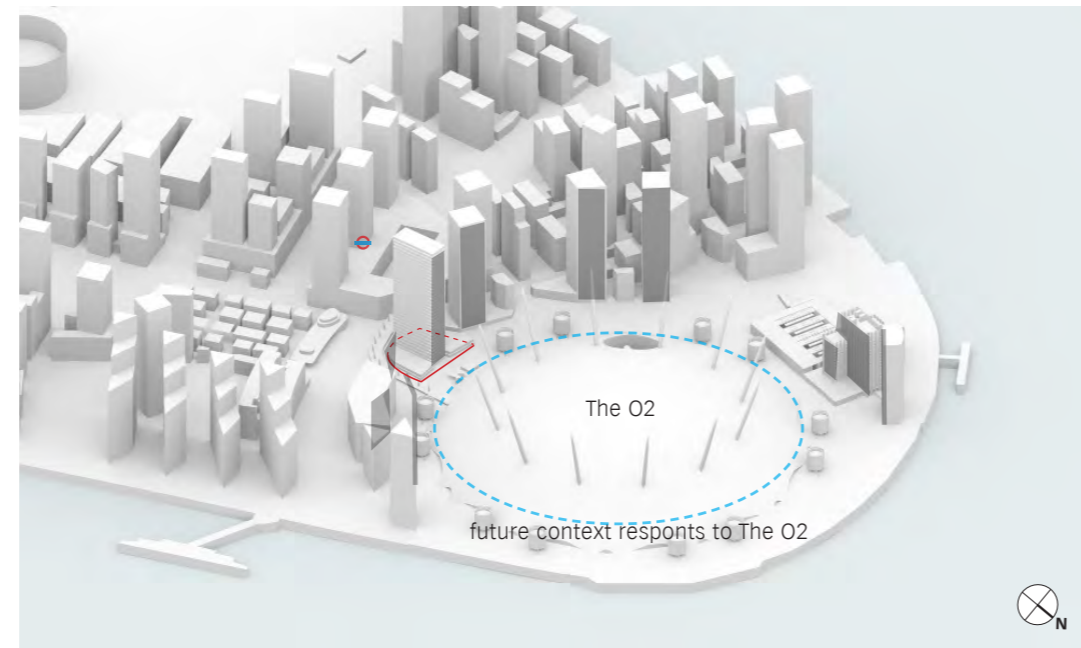
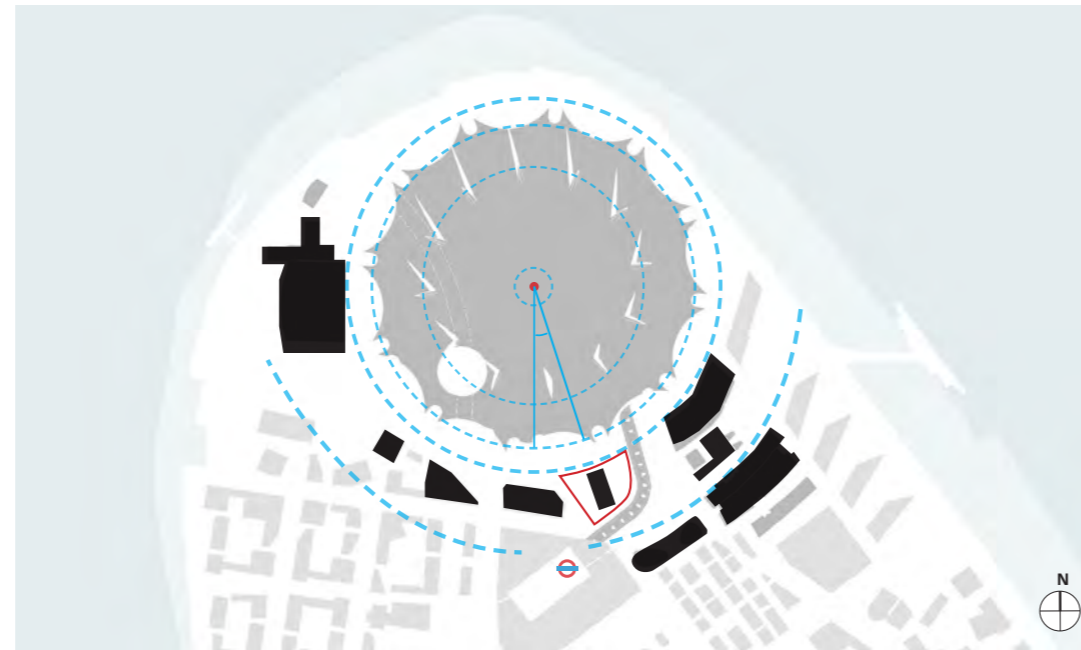
future context - 2019 masterplan

Proposals also look to respond to the future context, and in particular the relationship with other buildings of height in the immediate area. Whilst the scale of the podium reflects that of Peninsula Square and the typical courtyard blocks within the 2002 masterplan, the height of the tower element is comparable to the 2019 masterplan.

The existing and proposed context forms a radial relationship to the centre of The O2. The proposed massing is set out on the centre of The O2 structure and enforces this relationship.

Views around the edges and over of The O2 benefit the northern portion of the site. The site benefits from 360 degree views across the Peninsula. These are defined and capitalised on by the points of the triangular form

Despite the changing nature of the surrounding area, Peninsula Square remains a key element within the 2019 masterplan and supports the proposed relationship between podium and public space.



key:

— site boundary



01 plan and axo - relationship to The O2 - proposals in Knight Dragon 2019 Masterplan

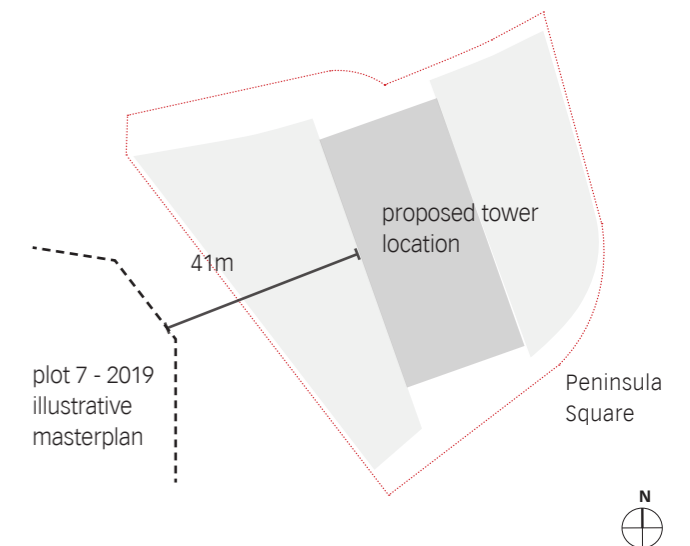
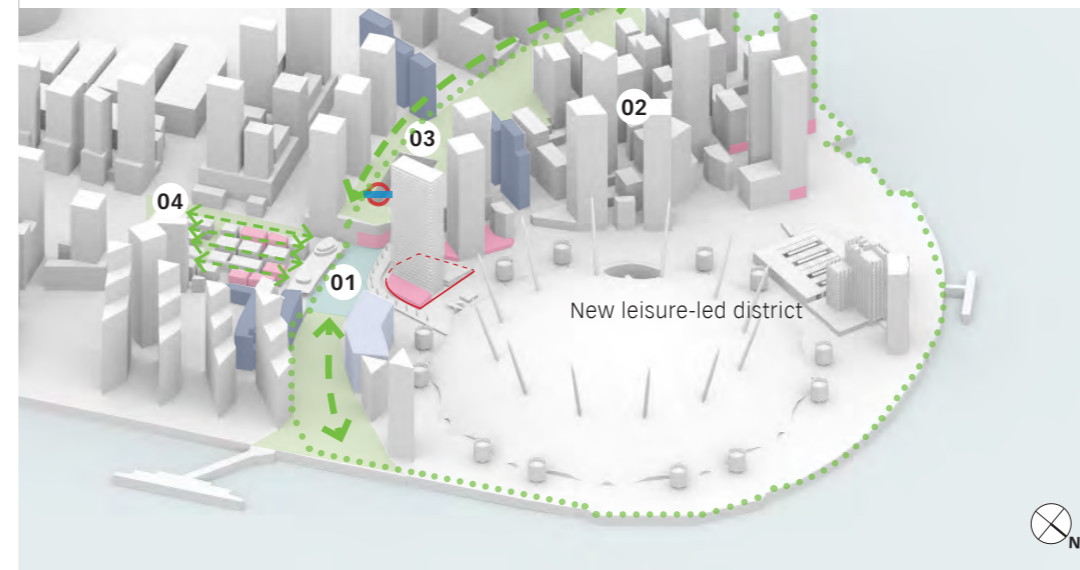
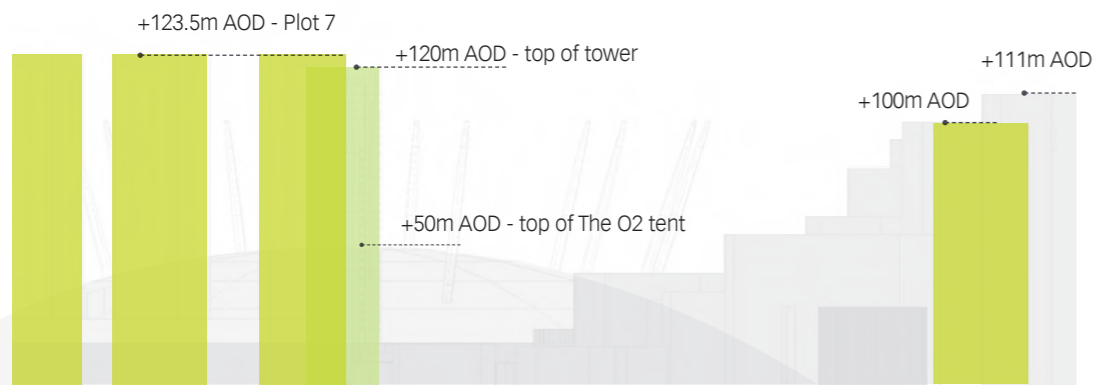
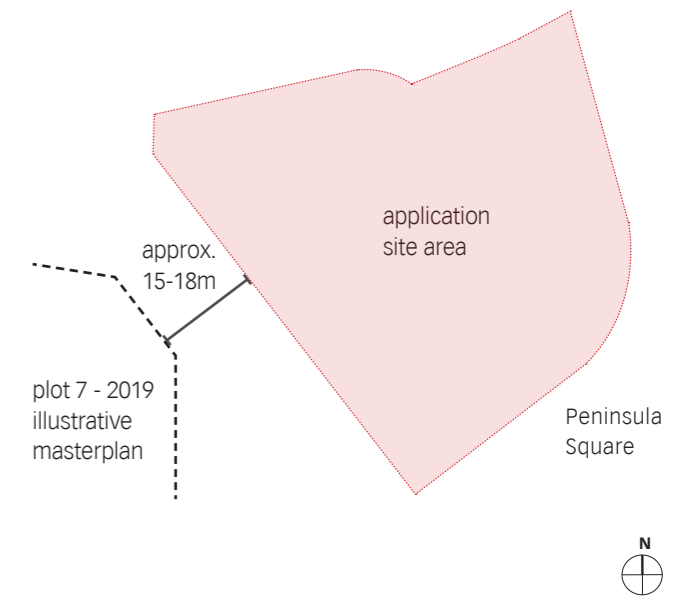
02 plan and axo - benefits from key views - proposals in Knight Dragon 2019 Masterplan

key:

- site boundary
- buildings on axis with The O2
- ⋯ radial set out of The O2
- ⊕ transport hub as proposed in 2019 Knight Dragon Masterplan

key:

- site boundary
- proposed tower (NO201)
- ↔ views over The O2
- ⋯ unobstructed views
- ⊕ transport hub as proposed in 2019 Knight Dragon Masterplan



03 plan and sectional diagram - maximum parameter massing - illustrative proposals in KD 2019 Masterplan

- The consented parameter plans for the 2019 masterplan allow for high rise development approximately 18m from the north western edge of the site boundary.
- The proposed massing is located away from the western edge of the site and the illustrative massing

key:

- site boundary
- The O2
- proposed tower (NO201)
- 2019 illustrative context (low-mid rise) and existing context
- 2019 illustrative context (high rise)

04 plan and axo - relationship to public realm - proposals in Knight Dragon 2019 Masterplan

key:

- site boundary
- residential ground floor use
- retail ground floor use
- educational
- commercial
- public spaces
- routes and connections
- new leisure-led District Centre
- transport hub

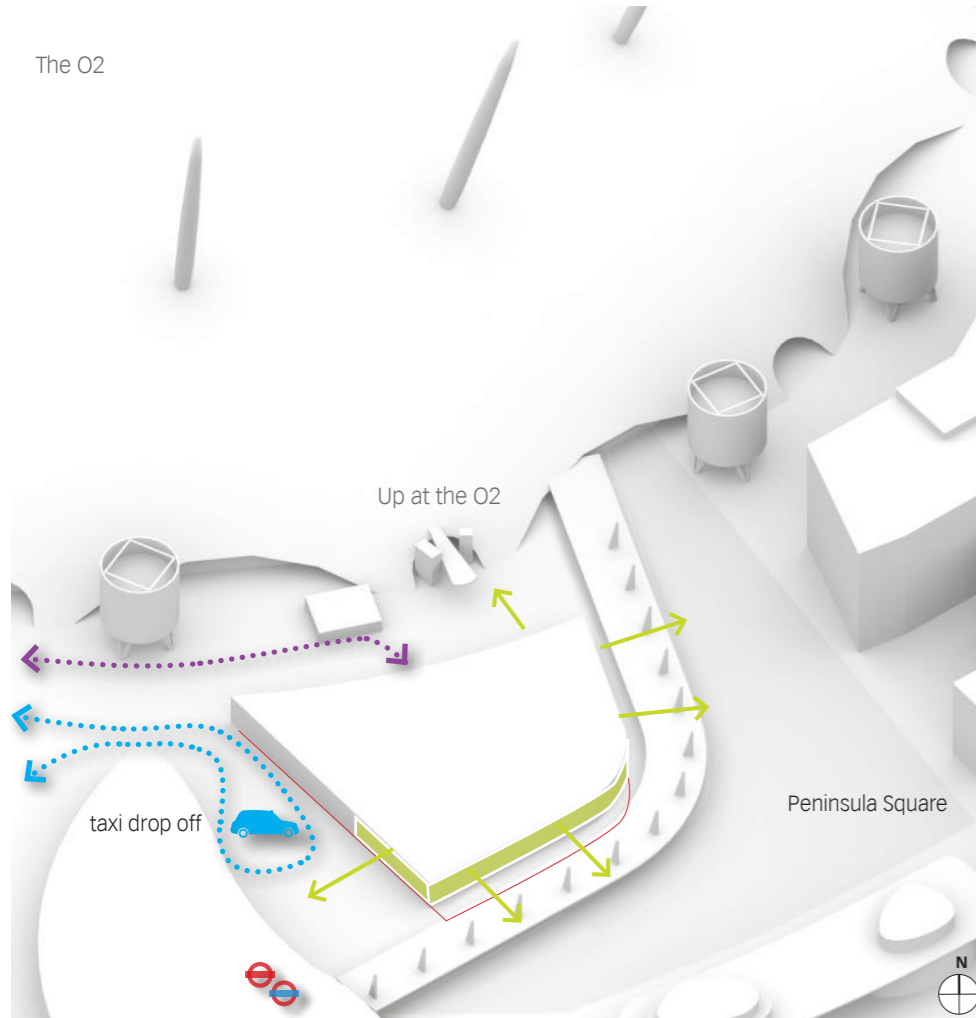
05 diagram - proximity to 2019 illustrative masterplan

The tower is set c.41m away from the illustrative Knight Dragon masterplan to avoid overlooking issues and allow for plot 7 to be designed to achieve sufficient levels of daylight/sunlight.

- 01 Peninsula Square
- 02 street based block typologies
- 03 new Meridian Quays park and landscape bridge
- 04 enlarged central park

design principles

The diagrams on these pages illustrate the design principles of the scheme and explain the spatial arrangement, massing principles and internal organisation of spaces.



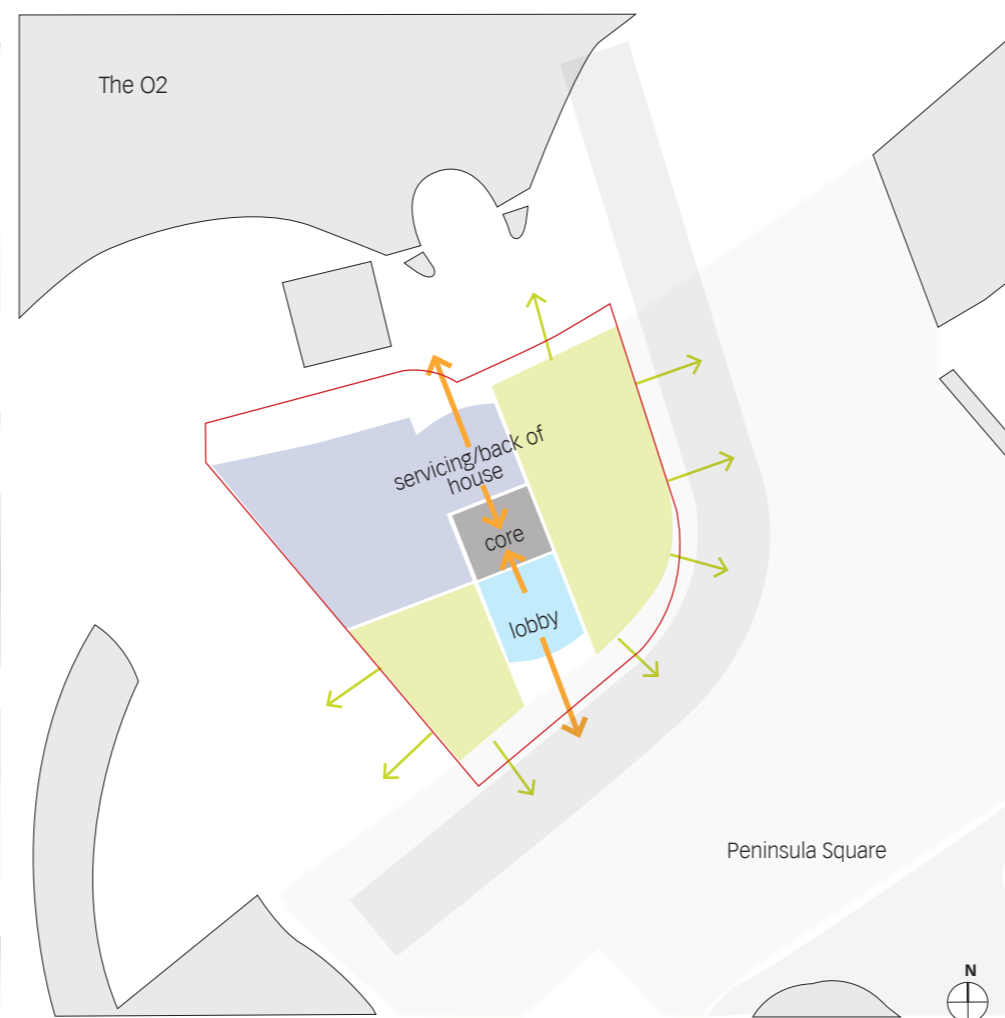
01 podium base + active frontage

The podium base extends across the majority of the site area, set back on along the southern edge due to LUL rights of access.

The podium provides the active frontage to the public spaces around the site edge with back of house areas positioned to the north adjacent to the service access via The O2 service road (existing)

key:

- site boundary
- Peninsula Square
- active frontage
- ← → existing taxi drop off
- ← → service access via O2 service road
- ⊖ ⊖ North Greenwich bus and tube station



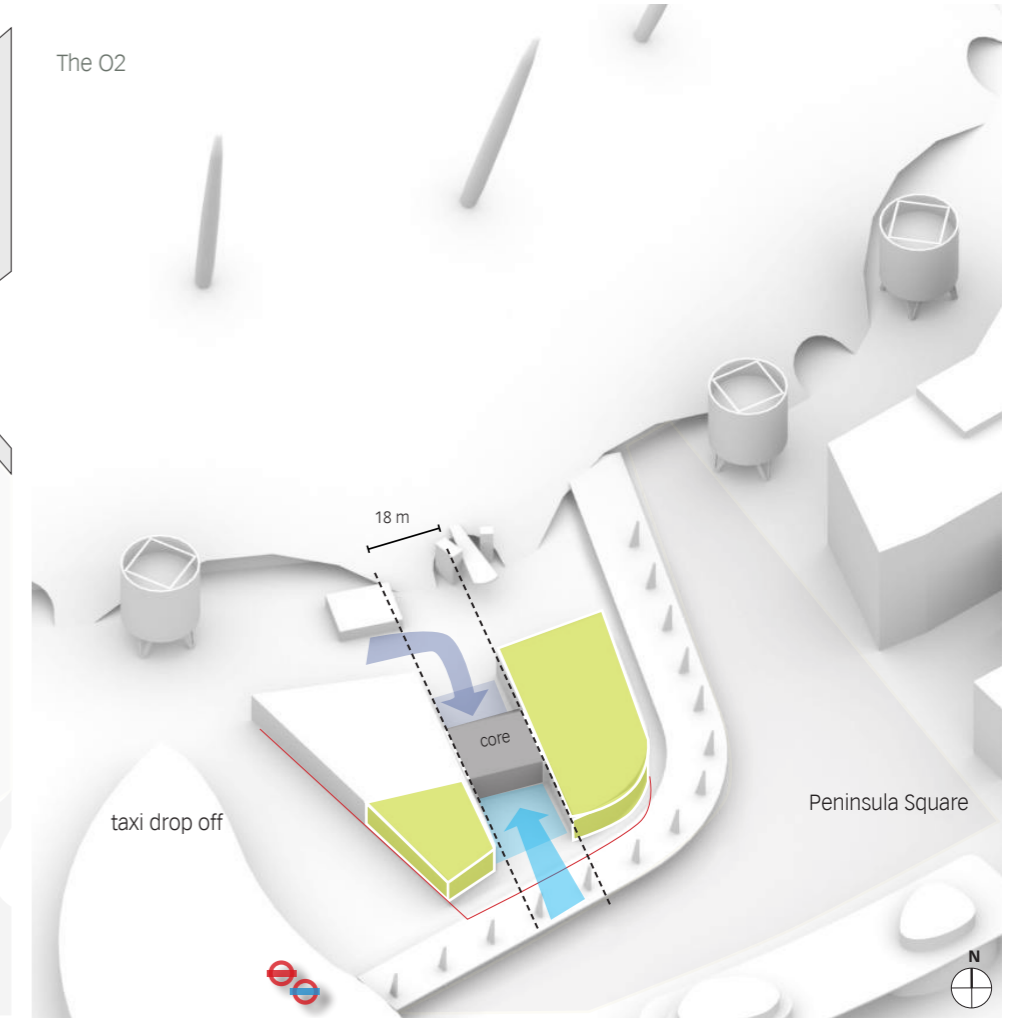
02 ground floor plan and configuration

The ground floor maximises active frontage, forming a direct relationship between the retail uses and Peninsula Square

The core is organised centrally to allow for a split of services, with active frontage and main entrances to the south east and services to the north relating to The O2 service road.

key:

- site application line
- active frontage
- back of house
- student access
- connectivity to core
- residential core



03 podium massing + relationship to Peninsula Square

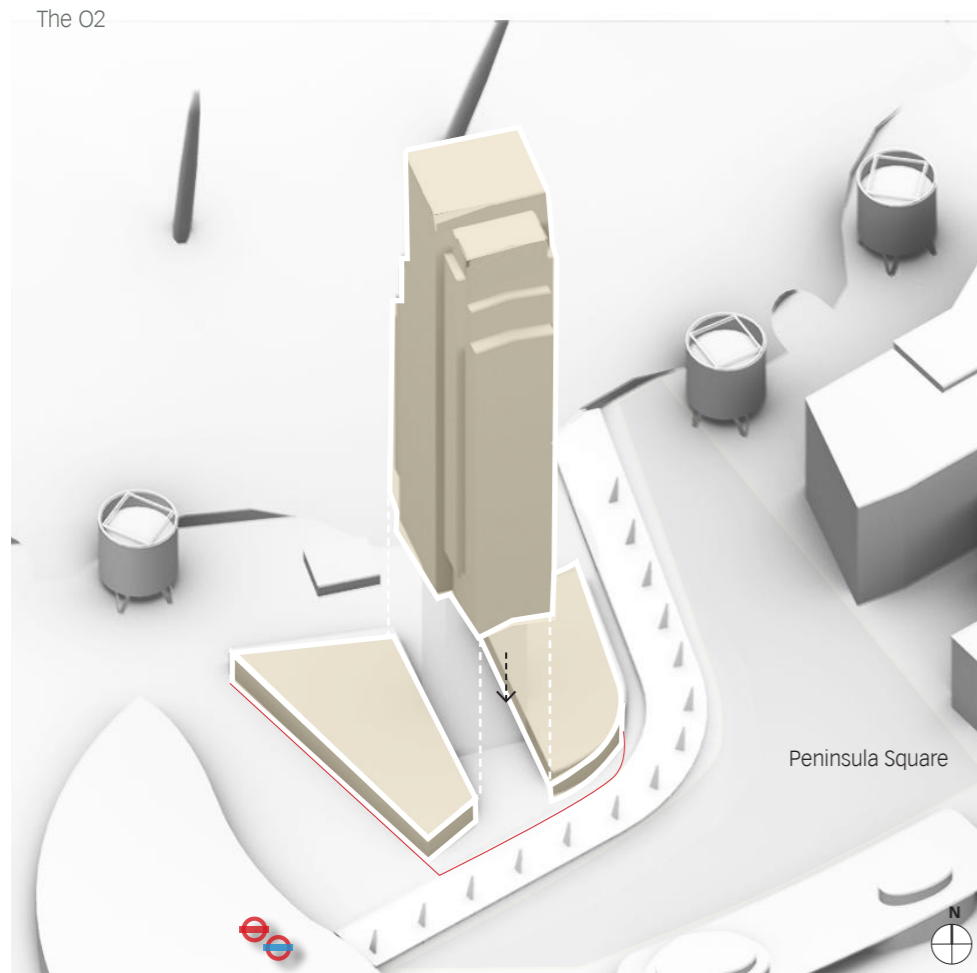
The podium is organised into two primary sections split by the student entrance and core. Retail units are located to the east and south-west providing active frontages.

Back of house areas are positioned to the north to allow for services access.

key:

- site boundary
- Peninsula Square
- active frontage
- student lobby
- back of house access
- ⊖ ⊖ North Greenwich bus and tube station

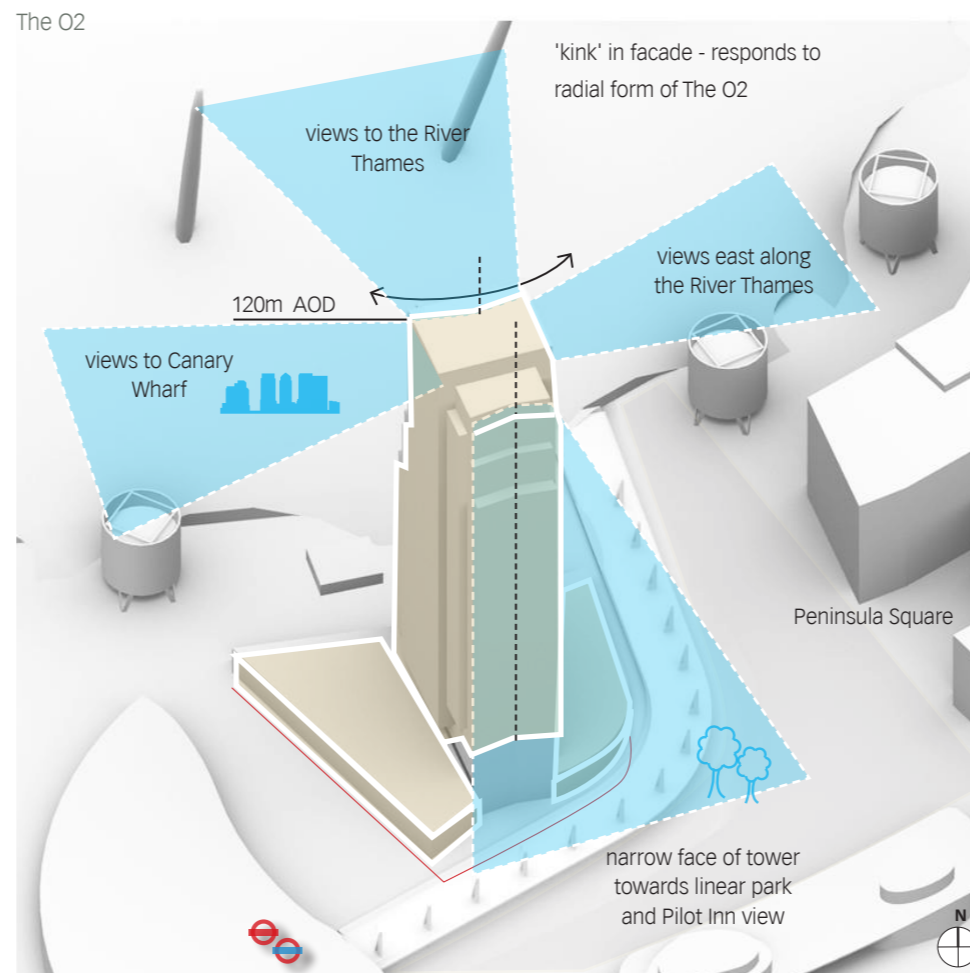
key:



04 massing elements

The building is comprised of two main elements - tower and podium
 The tower is grounded with the podium base (made up of two elements) siding it on two sides

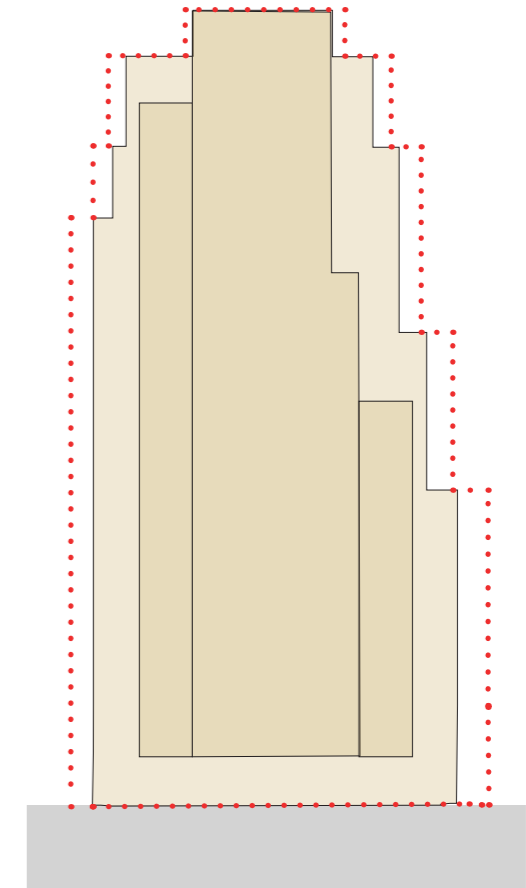
- key:
- site boundary
 - Peninsula Square
 - tower and podium base
 - core
 - ⊖ ⊕ North Greenwich bus and tube station



05 heights

Step backs within the tower relate to datums within the surrounding context, such as The O2, Ravensbourne college and the future Knight Dragon Masterplan for the area.
 A greater setback to the north allows the tower to react to The O2 dome.
 The narrow southerly face of the tower faces central park and is visible in View 11, The Pilot Inn, (as set out a in the Royal Greenwich Local Plan: Core Strategy with Detailed Policy)

- key:
- site boundary
 - Peninsula Square
 - tower and podium base
 - 'halo' element
 - articulation to facade
 - ⊖ ⊕ North Greenwich bus and tube station

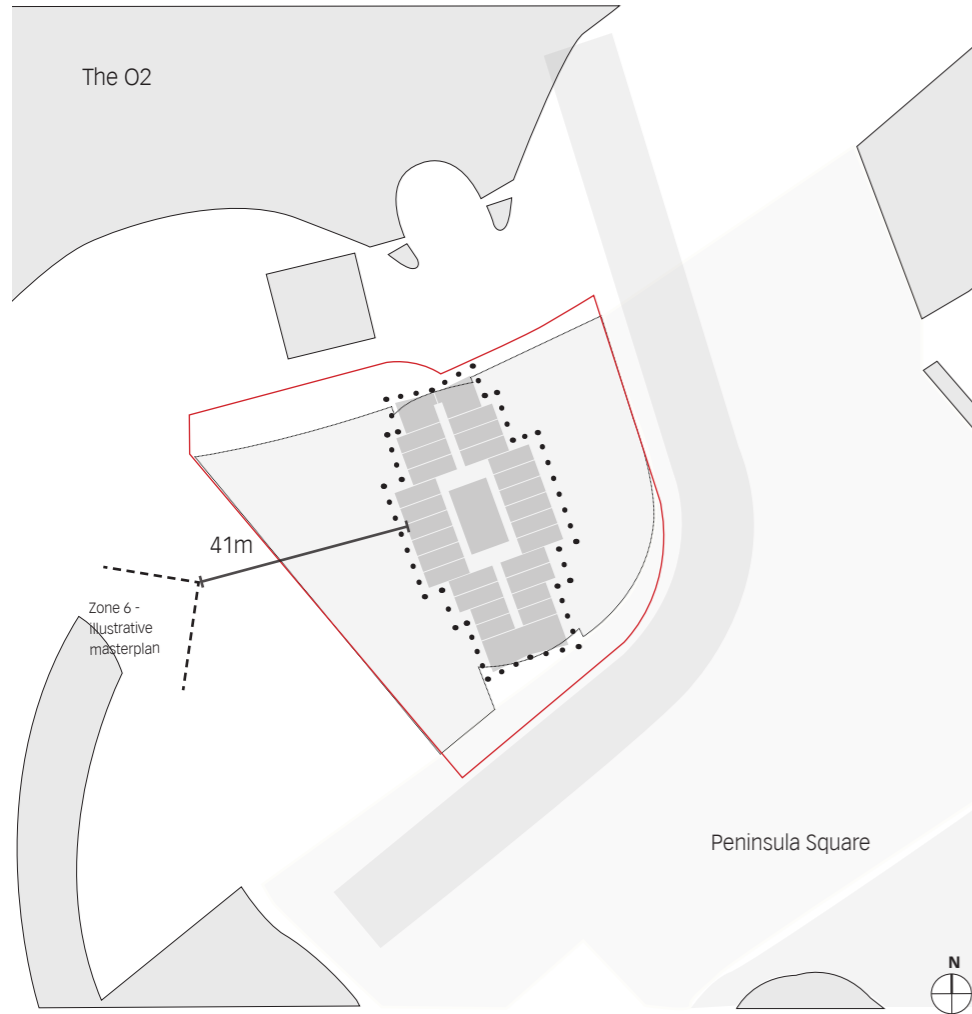


06 maintain the external architectural appearance of the consented scheme as far as possible

The elevational treatment, materiality and massing are to be kept as close to that of the 2018 consented scheme and is to retain the architectural quality of the previous proposal

- key:
- ⋯ outline of 2018 consented residential scheme

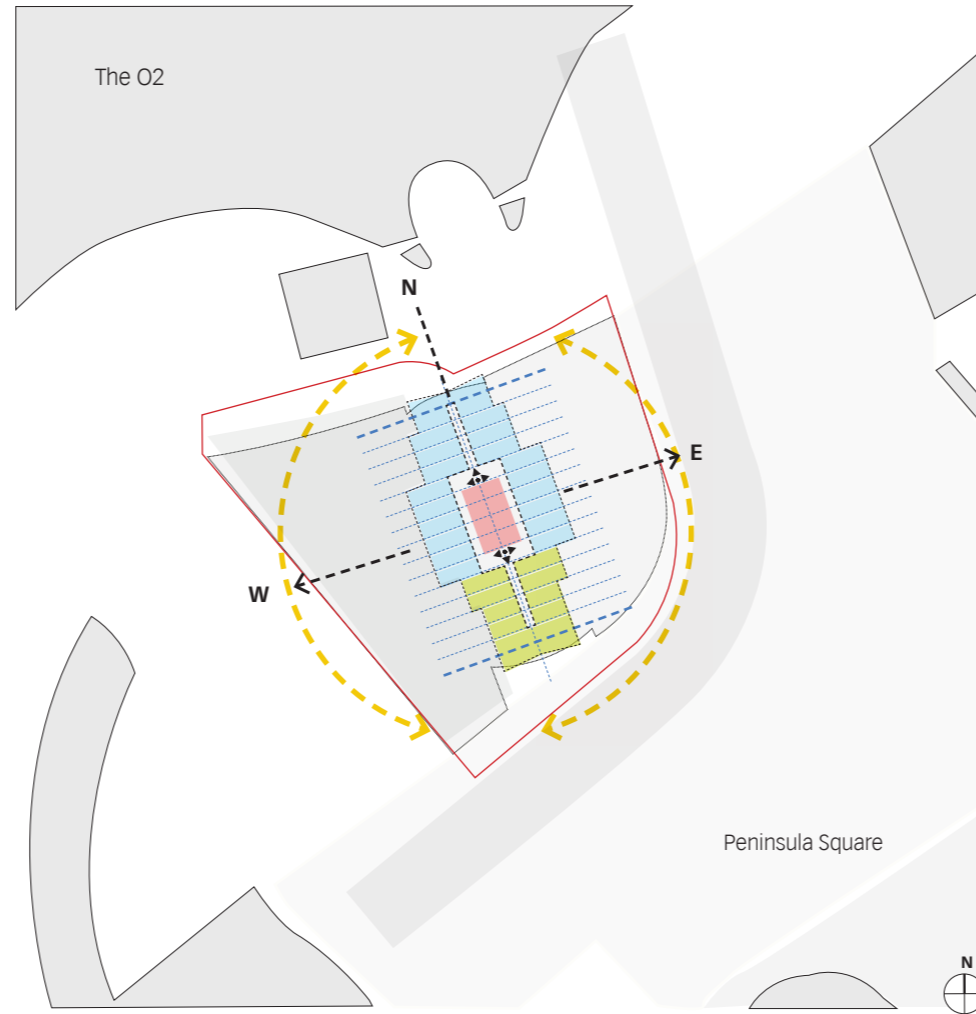
design principles



07 keep proposal within the envelope of the consented scheme

The proposal sits within the consented building massing with a reduced floorplate
 The tower is set 41m away from the illustrative Knight Dragon masterplan to avoid overlooking issues and allow for zone 6 to be designed to achieve sufficient levels of daylight/sunlight

- key:
- site boundary
 - outline of consented scheme
 - student rooms



08 student accommodation - division and functionality

Floor plates accommodate up to 29 units per floor. Cluster units are located to the south of the plan and have access to a large south facing shared common room. A range of studios are provided across the remainder of the floor plan.
 The tower is located at the centre of the site, orientated north to maximise daylight and sunlight to the student rooms and minimise single aspect north facing rooms. A facade grid of 2850mm is provided to suit the student residential use.

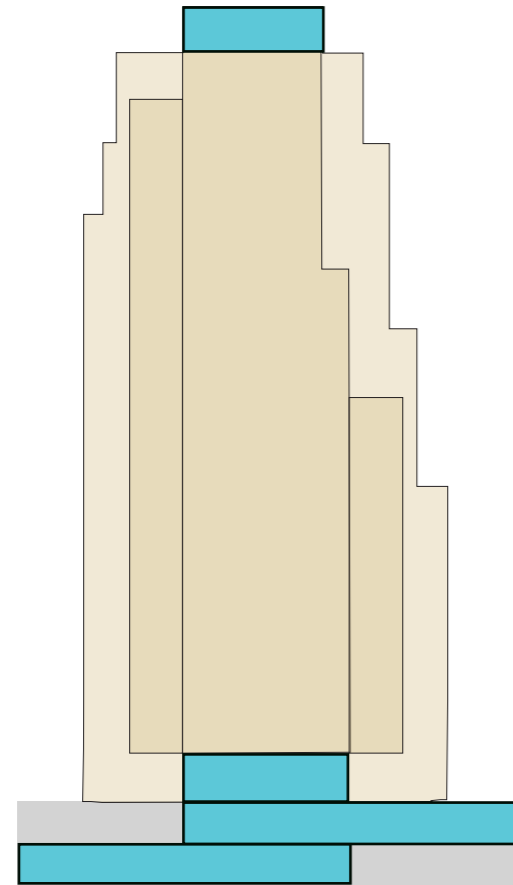
- key:
- site boundary
 - studio rooms
 - cluster rooms



09 second stair added

A second fire escape stair has been added in line with current/future changes to legislation. This will make the building safer to escape from and for firefighters to tackle a fire

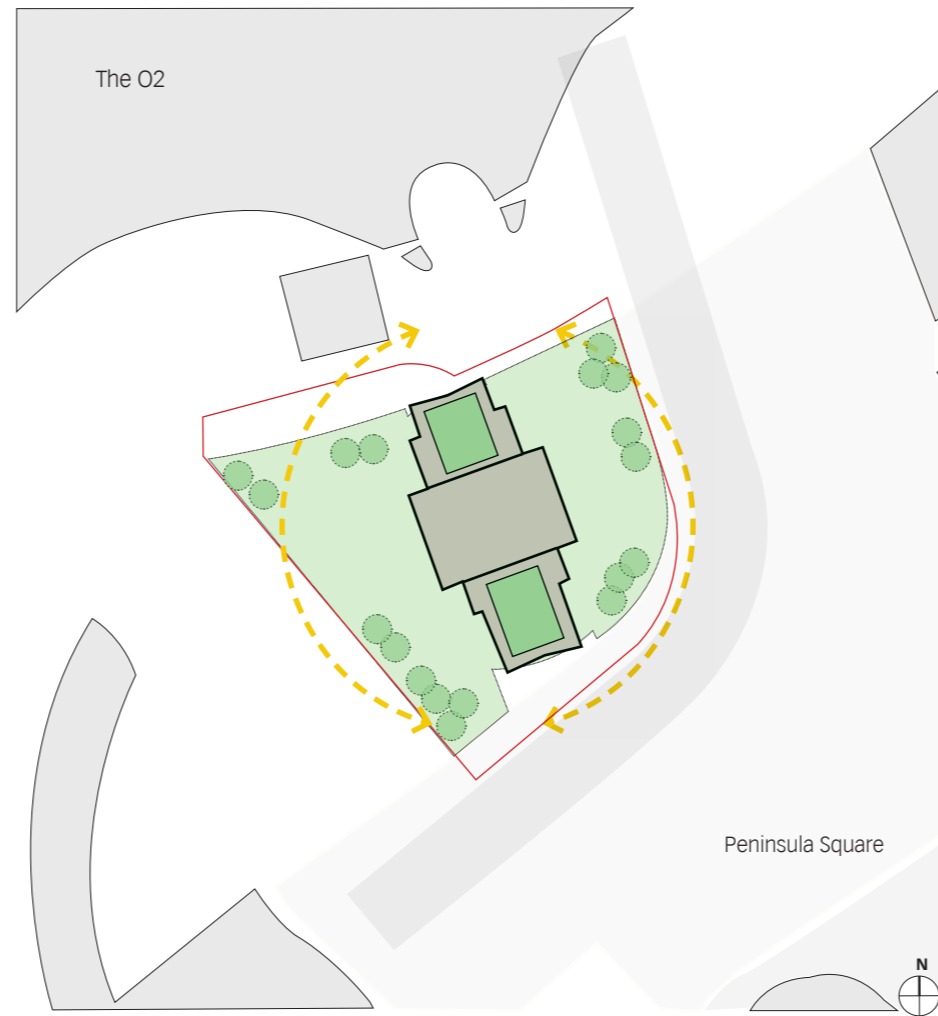
- key:
- site boundary
 - escape stair
 - student rooms



10 location of internal shared amenity

The internal shared student amenity is to be focussed around several key areas that have direct relationships with the external shared amenity. The internal amenity will primarily be at mezzanine, level 1 (access to podium terrace) and level 34 (access to roof terraces).

key:
 internal shared amenity



11 location of external shared amenity

High quality external shared amenity is to be provided at levels 01 and 34. The tower is located at the centre of the site, orientated north to allow good sunlight to the communal gardens through out the day

key:
 site boundary
 external shared amenity (podium)
 external shared amenity (level 34)

proposed scheme - visual



01 view looking south - proposed scheme



01 key plan and basic landscaping strategy (not to scale)

key:

- | | | | | |
|---------------------------|-------------------------------|------------------|--------------------|-----------------------------------|
| 01 residential tower | 06 North Greenwich Station | 11 taxi drop-off | residential access | student residential core |
| 02 podium building | 07 Peninsula Spire | 12 Up at The O2 | retail entrance | student residential accommodation |
| 03 shared garden | 08 Ravensbourne College | | service entrance | communal garden |
| 04 Peninsula Square | 09 The O2 pedestrian canopy | | | private amenity space |
| 05 The O2 - main entrance | 10 Greenwich Gateway Pavilion | | | |

public realm and open space

The relationship between the building, ground floor usage and the surrounding public realm has formed a key part of the development of the scheme.

The ground floor of the podium building will provide retail space that brings activity and animation onto the existing public space. This is kept as a continuous frontage on either side of the student residential entrance lobby to maximise the potential use. The residential entrance is located on the south of the site close to the entrance to North Greenwich Station. The quieter building perimeter on the north west and northern faces of the podium is utilised for service and back of house spaces, in order to keep the service frontage away from the public realm of Peninsula Square.

The shared external amenity for the students is located at first floor level above the podium and provides the setting on either side of the tower. The garden is accessible directly from the tower core and shared internal student amenity and forms a key visual element from the surrounding public realm through the provision of both low level and high level planting.

Servicing and vehicular access is via The O2 perimeter service route to the north of the building. External service bays are provided.

levels

Level access is provided to all building entrances. The ground floor slab is set at one level to avoid steps within the internal arrangement. An existing external north to south level change around the site of approx 0.3m, results in a low ramp (1:35) towards the entrance to the tower located on the southern edge of the site (1:35) and a small incline between the M25 service road and the northern facade (1:40) to allow level access into the cycle store and back of house areas. The retail doors are located to provide retail units with level access on to Peninsula Square.

key:

- site boundary



proposed scheme - ground floor

ground floor plan

The ground floor is laid out to maximise the retail frontage onto Peninsula Square, provide clearly identifiable entrances to the residential tower, and to use the quieter sections of the perimeter for back of house and maintenance.

Retail areas, shown in light yellow extend around the south west, south, east and north eastern perimeter of the site. The application seeks consent for commercial/ retail floorspace (Use Class E), with the precise separation of the space into units to be established at a later date.

The student accommodation entrance to the tower is located on the southern end of the tower form, accessed via a low gradient ramp. The positioning of the tower entrance is marked through a set back in the form and a new landscaped area forming a fore court open directly to the south.

The north west corner of the ground floor houses refuse, cycle storage and plant areas accessed directly from The O2 service road and the red ramp. The ground level plant space accommodates the electrical substation providing off street access. The loading bay is located north of the refuse store providing access to the store within 15m.

The refuse storage provides for the student residential and retail areas, with access for collection from the north and west.

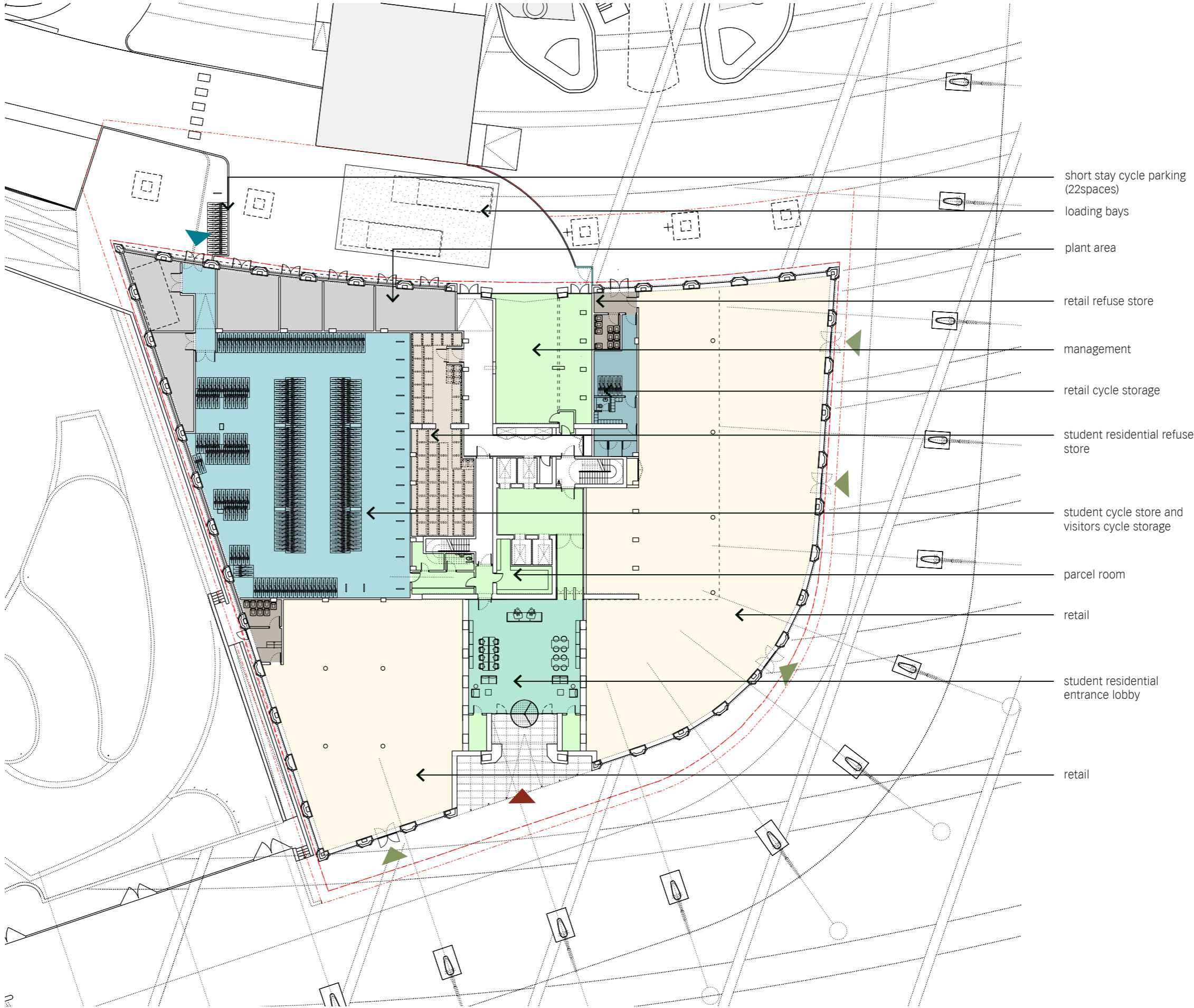
An additional 2 separate entrances are also provided on the north elevation for access to the cycle storage area. and back of house areas.

areas:

GEA	2,951 sqm
GIA	2,822 sqm
retail GIA	1,297 sqm
student internal amenity GIA	128 sqm

key:

	retail
	plant
	refuse
	entrance lobby
	cycle storage
	student management



mezzanine floor plan

A mezzanine floor within the podium provides space for high quality internal shared amenity as well as additional plant area. The mezzanine extends part way across the larger extent of the podium.

The retail area wrapping the eastern edge of the building is double height.

The internal student amenity (highlighted in green) will provide flexible spaces for students to work and relax. The uses of this area are explored later in this document

Plant areas (highlighted in grey) are positioned to the north-western edge of the podium with connectivity to the core. The positioning at mezzanine level allows direct ventilation to the building facades on the north perimeter hidden from the public open space of Peninsula Square.

areas:

GEA 2,265 sqm

GIA 2,117 sqm

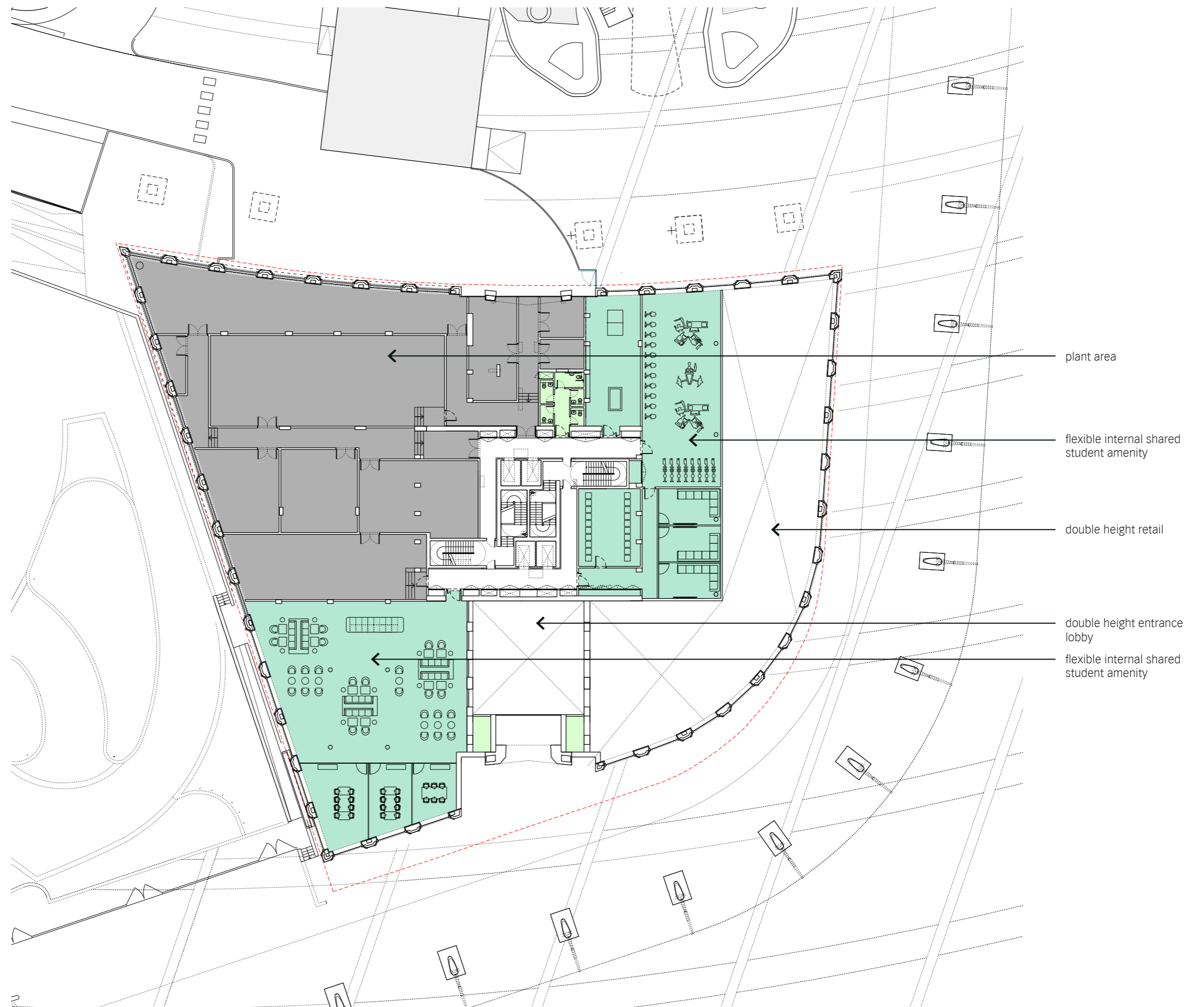
student internal amenity GIA 812 sqm

Note:

internal amenity is shown indicatively and is subject to further development

key:

- internal student amenity
- plant



proposed scheme - level 1 (podium garden)

level 01 floor plan (podium garden)

communal garden

The development will provide a communal gardens for student use at first floor level. The garden is accessible from both the core and the level 1 internal student amenity. The gardens sit either side of the tower and is open to the south, it will therefore receive good levels of sunlight.

private amenity space

The scheme includes two generous lounge areas at podium level, this high quality internal shared amenity benefits from a direct connection to the podium gardens,

student accomodation

Student rooms are located from level 01 to level 33. These are split between studio rooms and cluster rooms, all cluster rooms have access to additional internal private amenity. 5% will be wheelchair accessible from opening, a further 5% will be designed as adaptable for potential future conversion. 35% of all student rooms will be affordable.

unit accommodation:

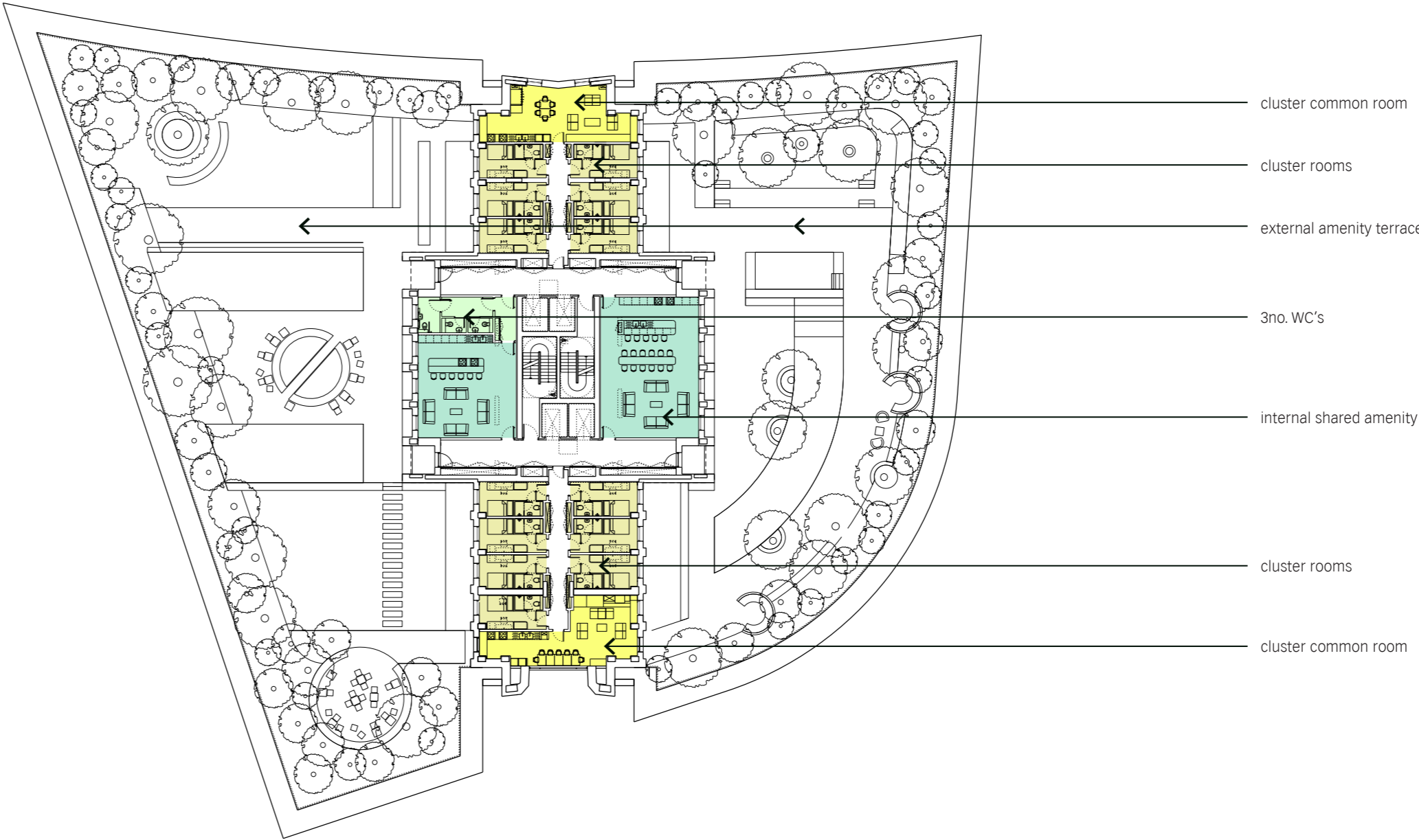
13 rooms per floor
 unit mix:
 cluster rooms 13 no.

areas:

GEA 754 sqm
 GIA 651 sqm
 student internal amenity GIA 140 sqm

key:

- cluster room
- cluster common room
- internal shared amenity



levels 05-13

unit accommodation:

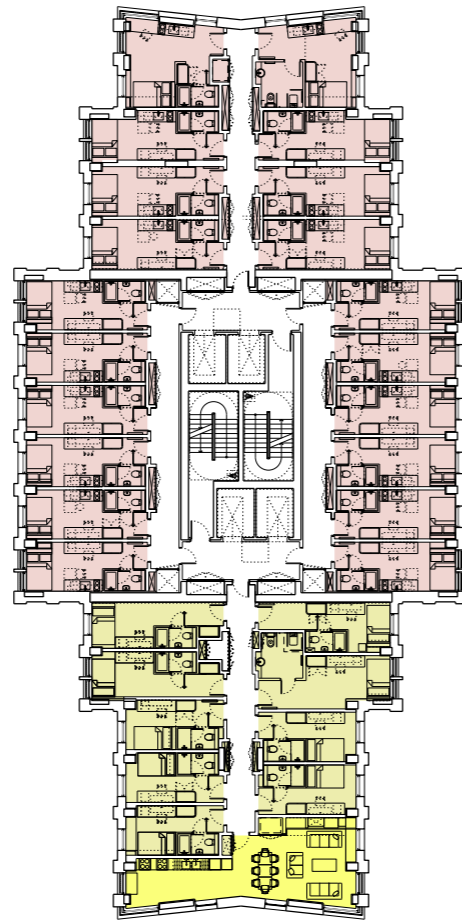
29 rooms per floor

unit mix:

cluster rooms	9no.
17 sqm studios	14no.
18 sqm studios	4no.
23 sqm studios	2no.

areas:

GEA	865 sqm
GIA	784 sqm



key:

- studio room
- cluster room
- cluster common room

levels 20-21

unit accommodation:

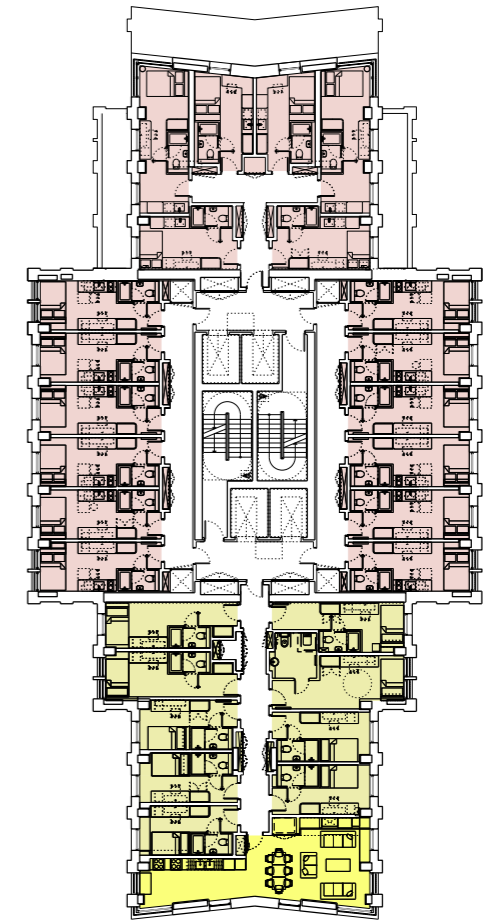
27 rooms per floor

unit mix:

cluster rooms	9no.
16 sqm studios	4no.
17 sqm studios	12no.
19 sqm studios	2no.

areas:

GEA	802 sqm
GIA	724 sqm



proposed scheme - typical floors

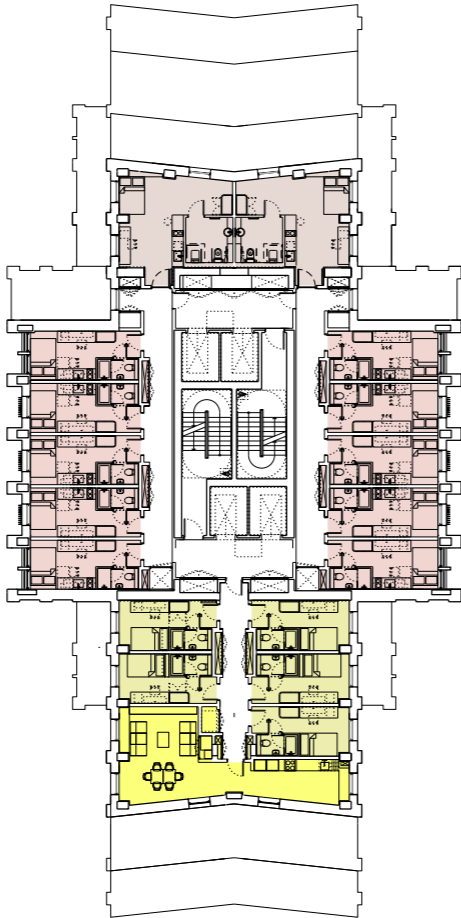
level 33

unit accommodation:

- 17 rooms per floor
- unit mix:
 - cluster rooms 5no.
 - 16 sqm studios 10no.
 - 29 sqm studios 2no.

areas:

- GEA 595 sqm
- GIA 527 sqm



level 34

unit accommodation:

0 rooms per floor

areas:

- GEA 342 sqm
- GIA 293 sqm
- student internal amenity GIA 183 sqm

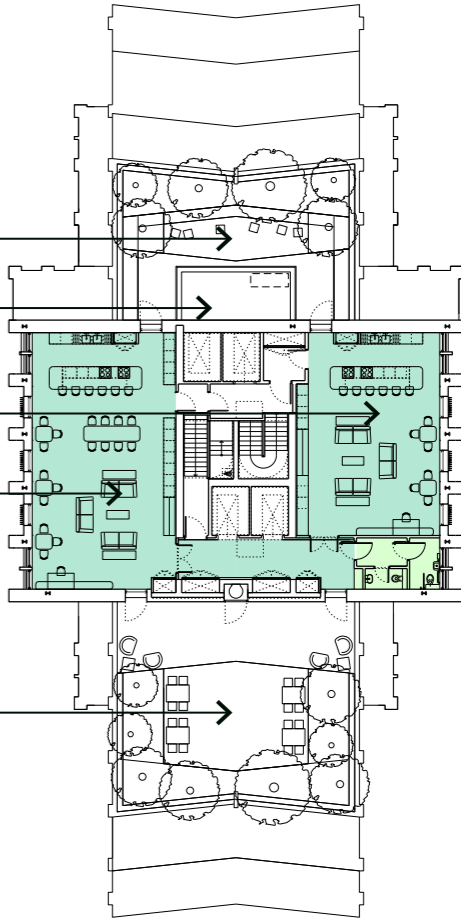
external amenity terrace

plant

lounge / eating place

lounge / eating place

external amenity terrace



key:

- studio room
- cluster room
- cluster common room
- internal shared amenity

enlarged typical floor plan

levels 05-13

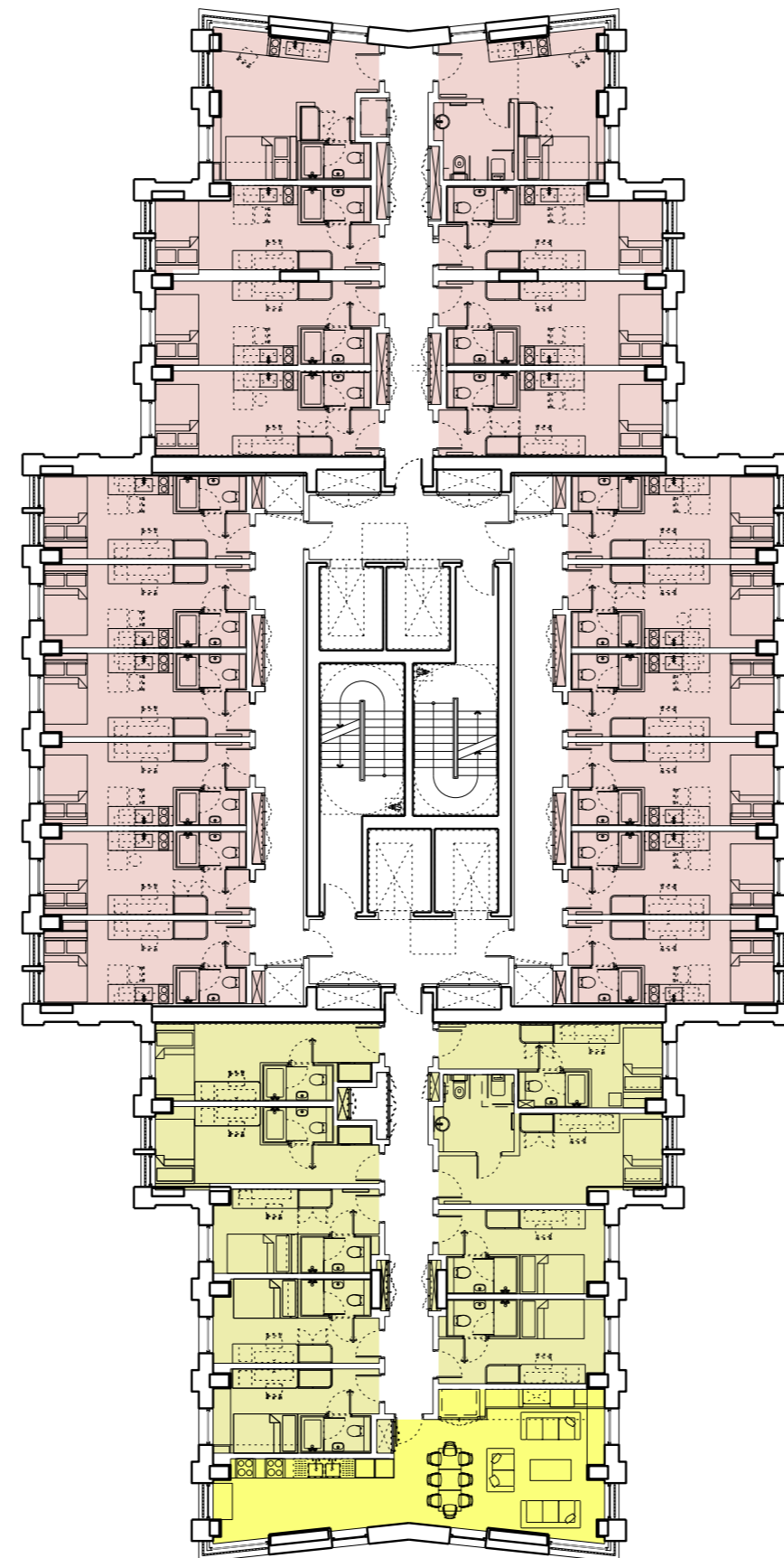
unit accommodation:
29 rooms per floor

unit mix:

cluster rooms	9no.
17 sqm studios	14no.
18 sqm studios	4no.
23 sqm studios	2no.

areas:

GEA	865 sqm
GIA	784 sqm



studios (DDA) 23.9 sqm

studios 17.6 sqm

studios 18.5 sqm

studios 17 sqm

cluster room 15.3 sqm

cluster room (DDA) 21.5 sqm

cluster room 13.6 sqm

cluster common room 40 sqm
(4.4 sqm per room)

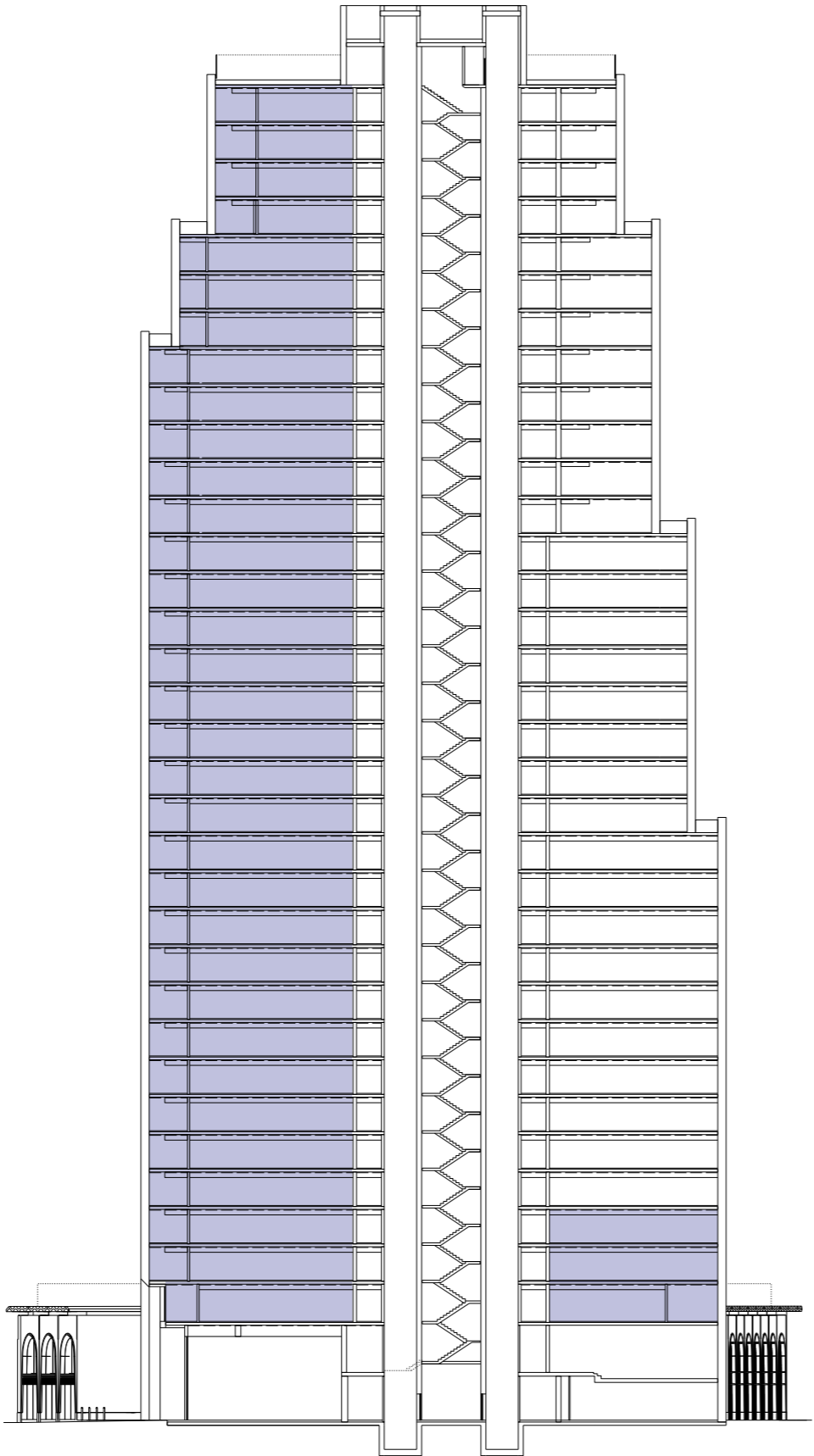
key:

- studio room
- cluster room
- cluster common room

affordable student accommodation offer

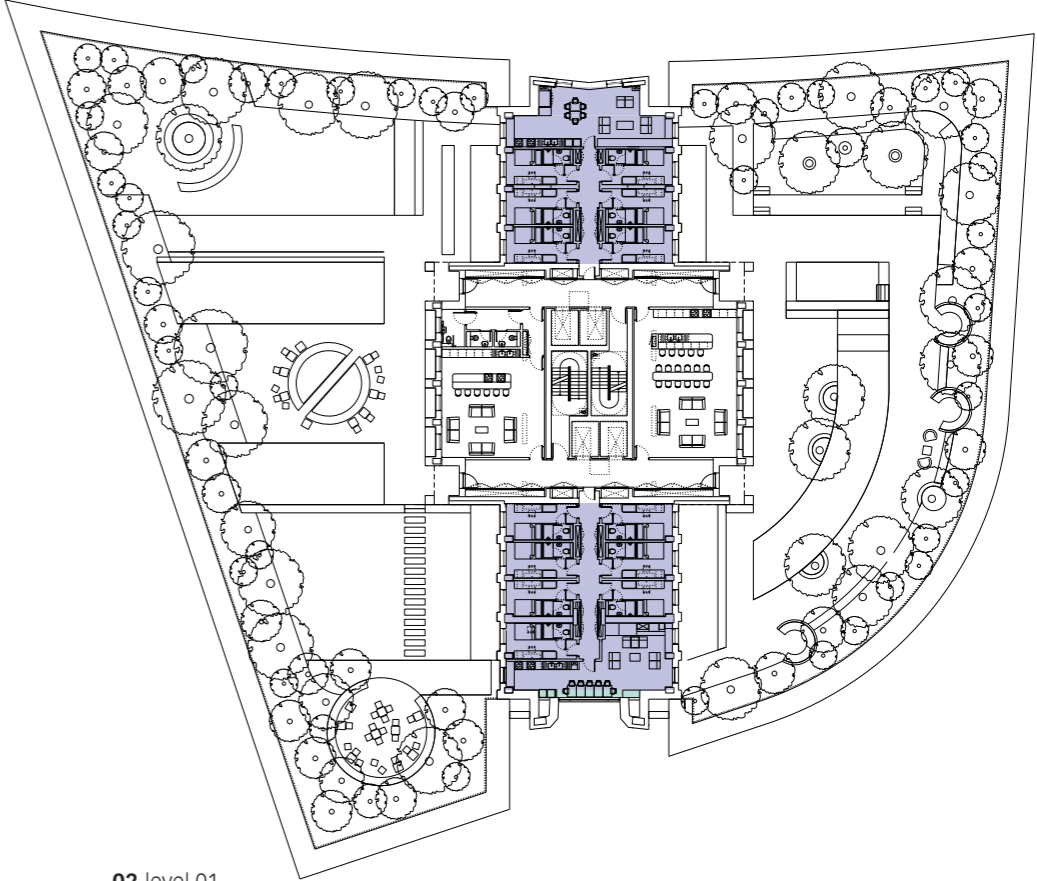
The affordable student accommodation offer fully complies with the London Plan and this will be a Fast Track planning application, as confirmed by the GLA.

The scheme provides 35% affordable student bedrooms split across the scheme and illustrated opposite.

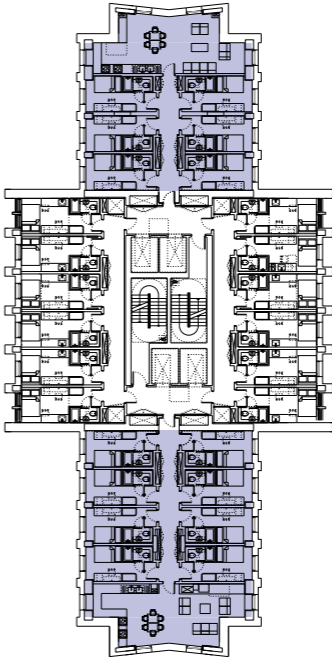


01 section - proposed scheme

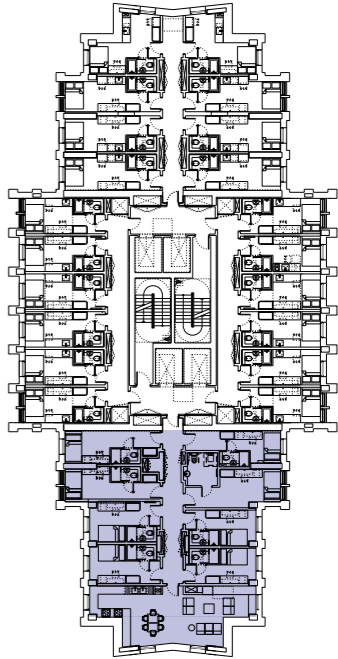
key:
affordable student rooms



02 level 01

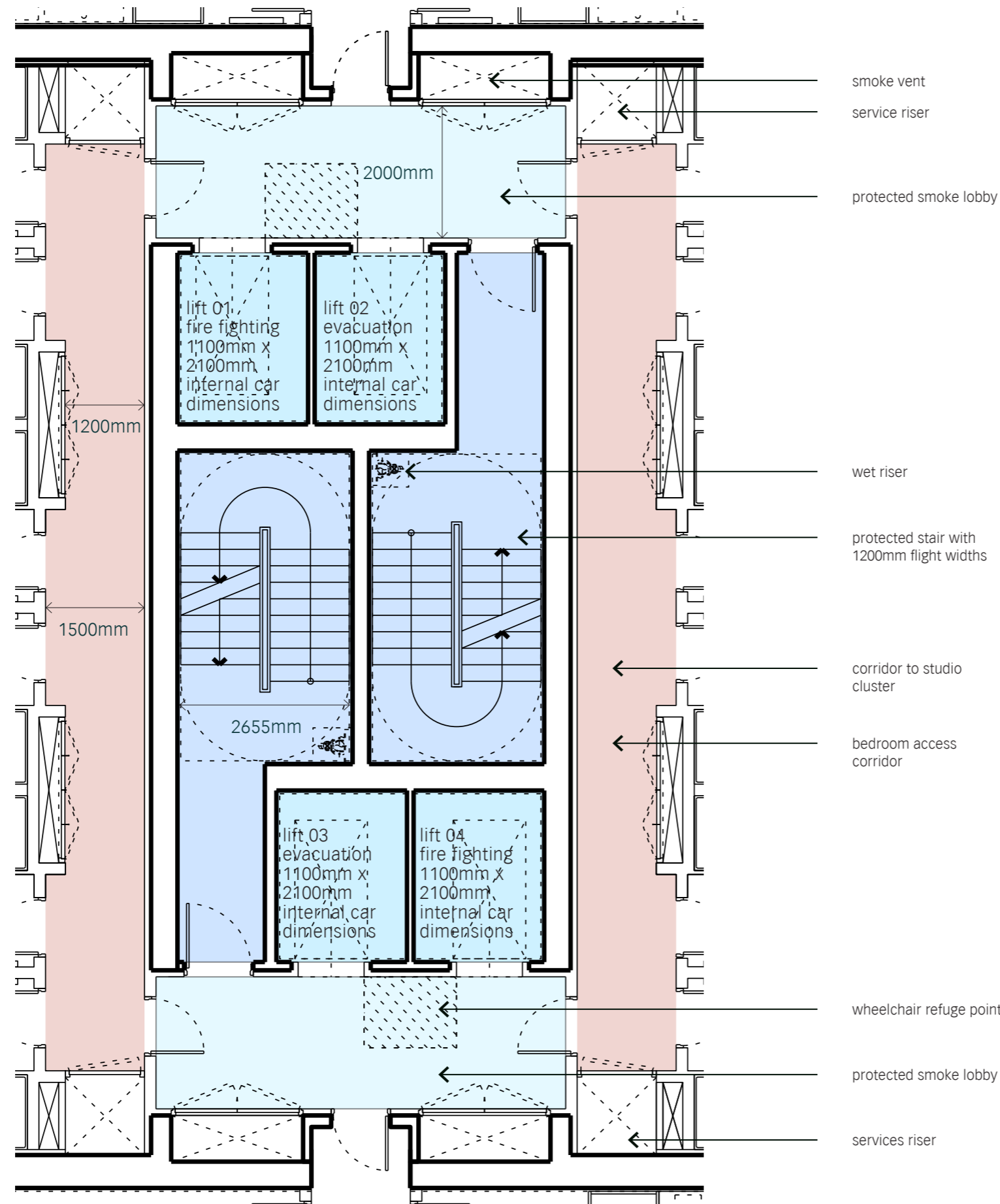


03 levels 02-03



04 level 04

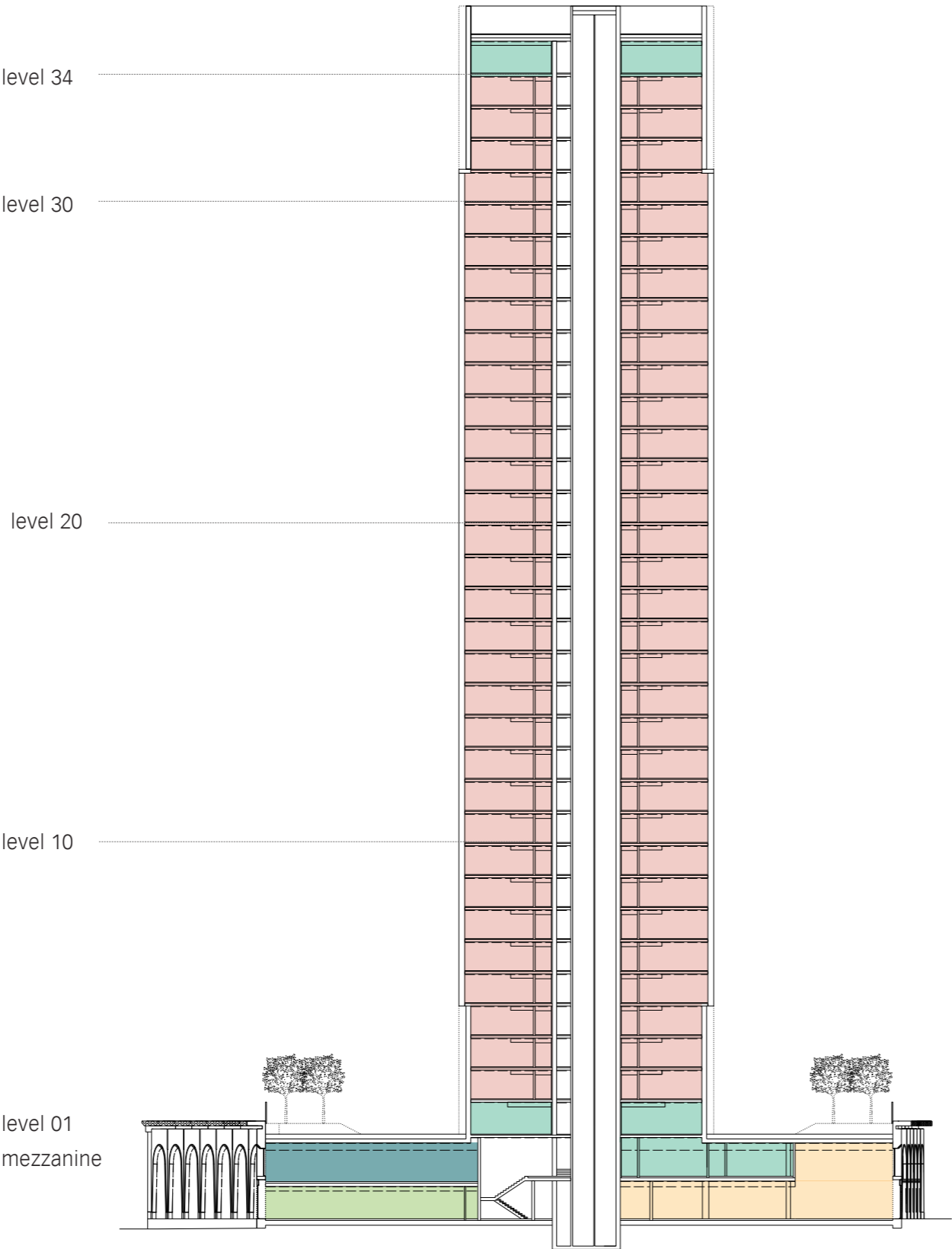
proposed core layout



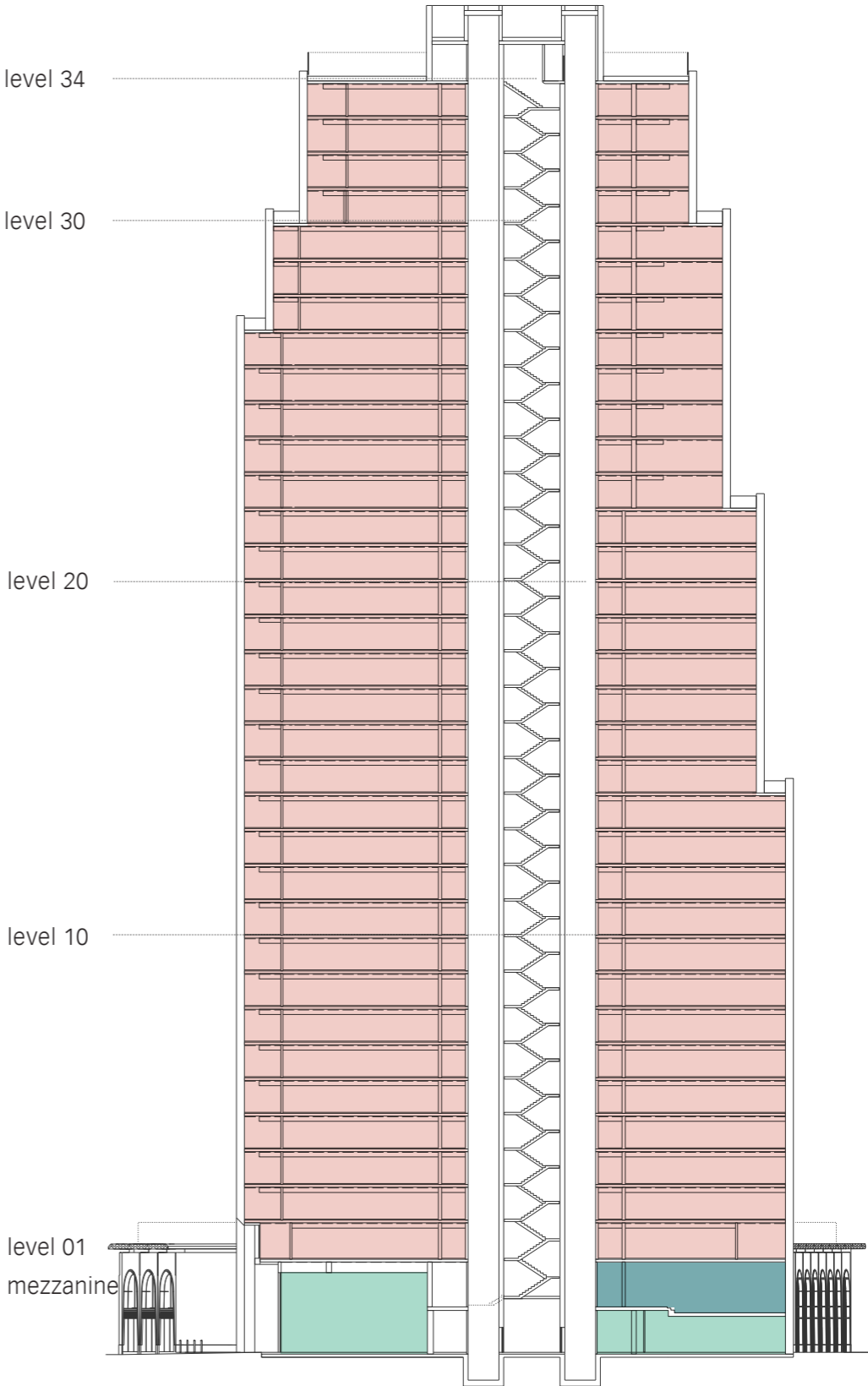
The drawing opposite illustrates the typical tower level core plan. The core comprises 4no passenger lifts and 2no escape stairs, each providing direct egress to outside at ground floor.

Each escape stair, in addition to 1 firefighting and 1 evacuation lift, is accessed via separate protected firefighting lobbies located to the north and south of the core.

proposed sections

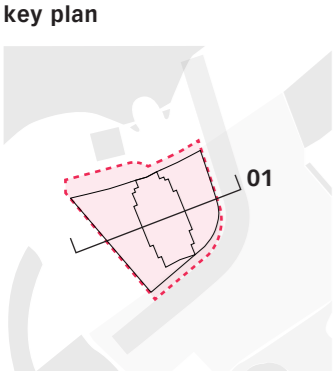


01 section - proposed scheme



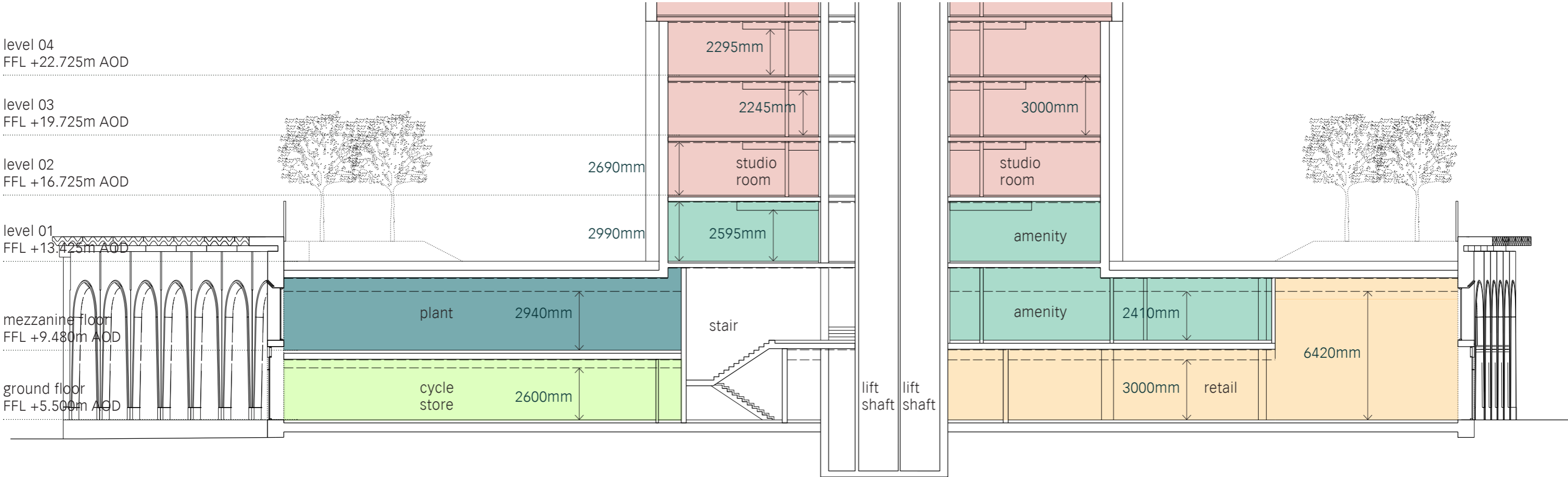
02 section - proposed scheme

- key:**
- - - consented scheme boundary
 - student residential
 - plant
 - retail
 - amenity space

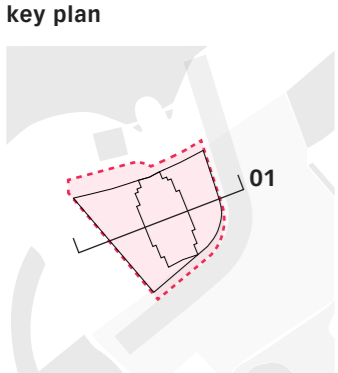


proposed scheme - podium section

The section opposite shows the general arrangement of the podium levels, for more detailed floor to floor build ups please refer to the detailed sections shown later in this document.



03 enlarged cross section through podium



- key:**
- student residential
 - plant
 - retail
 - amenity space
 - cycle store

accommodation schedule

T +44 (0)20 8600 4800
F +44 (0)20 8600 4700

Level	number of rooms																	
	cluster rooms					DDA rooms	studio rooms							DDA rooms		total rooms		
	12.7 sqm	13.6 sqm	14.6 sqm	15.2 sqm	16.3 sqm	21.5 sqm	15.7 sqm	16.5 sqm	17 sqm	17.8 sqm	18.5 sqm	20 sqm	22.5 sqm	28 sqm	22.5 sqm	28 sqm		
01	3	10															13	
02		14					12										26	
03		14					12										26	
04		2	1	2	2	1	12			4	4						28	
05		5		1	2	1		12	2	4		1			1		29	
06		5		1	2	1		12	2	4		1		1			29	
07		5		1	2	1		12	2	4		1		1			29	
08		5		1	2	1		12	2	4		1		1			29	
09		5		1	2	1		12	2	4		1		1			29	
10		5		1	2	1		12	2	4		1		1			29	
11		5		1	2	1		12	2	4		1		1			29	
12		5		1	2	1		12	2	4		1		1			29	
13		5		1	2	1		12	2	4		1		1			29	
14		5		1	2	1		12		4			1		1		27	
15		5		1	2	1		12		4			1		1		27	
16		5		1	2	1		12		4			1		1		27	
17		5		1	2	1		12		4			1		1		27	
18		5		1	2	1		12		4			1		1		27	
19		5		1	2	1			4	12		2					27	
20		5		1	2	1			4	12		2					27	
21		5		1	2	1			4	12		2					27	
22		5		1	2	1				12	2	2					25	
23		5			4					12	2	2					25	
24		5			4					10		2	2				23	
25		5			4					10		2	2				23	
26		5			4					10		2	2				23	
27		3			4					10		2	2				21	
28		3			4					10		2	2				21	
29		3			4					10		2	2				21	
30		1			4					10						2	17	
31			1		4		6	4								2	17	
32		5					6	4								2	17	
33		5					6	4								2	17	
34																	0	
total bedrooms	3	170	2	20	74	19	54	12	310	26	72	10	21	5	9	13	820	
% of total rooms	0.4%	20.7%	0.2%	2.4%	9.0%	2.3%	6.6%	1.5%	37.8%	3.2%	8.8%	1.2%	2.6%	0.6%	1.1%	1.6%	100.0%	
% cluster to studio rooms	35%						65%											
no. of rooms	288						532											
average room size sqm	15.0						17.8											16.4

no. affordable rooms	288
% of affordable rooms	35%

overall areas summary (sq m)																					TOTAL AREA						
student accomodation (including cluster common rooms)			internal sharded student amenity			circulation (shared corridors and core)			plant room (all)			refuse (student residential and retail)			cycle storage (student residential and retail)			retail			GEA		GIA		NIA		
	GEA	GIA	NIA	GEA	GIA	NIA	GEA	GIA	NIA	GEA	GIA	NIA	GEA	GIA	NIA	GEA	GIA	NIA	GEA	GIA	NIA	sq m	sq ft	sq m	sq ft	sq m	sq ft
GF	0	0	0	421	406	353	150	131		185	165	162	188	182	146	564	542	530	1,408	1,341	1321	2,916	31387.5324	2,767	29783.7113	2,512	27038.9
MZ	0	0	0	997	923	887	431	338		987	924	705	0	0	0	0	0	0	0	0	0	2,415	25994.8185	2,185	23519.1215	1,592	17136.1
PODIUM (L01)	356	293	249	198	171	163	158	127		0	0	0	0	0	0	0	0	0	0	0	0	712	7663.8968	591	6361.4649	412	4434.7
L02 - L33	25,007	21,938	14,968	0	0	0				0	0	0	0	0	0	0	0	0	0	0	0	25,007	269172.8473	21,938	236138.4382	14,968	161114.1
L34	0	0	0	273	220	216	73	63		0	0	0	0	0	0	0	0	0	0	0	0	346	3724.3094	283	3046.1837	216	2325.0
RF	0	0	0	0	0	0	0	0	0	342	300	0	0	0	0	0	0	0	0	0	0	342	3681.2538	300	3229.17	0	0.0
TOTAL	25,363	22,231	15,217	1,889	1,720	1,619	812	659	0	1,172	1,389	867	188	182	146	564	542	530	1,408	1,341	1,321	31,396	337,943	27,764	298,849	19,700	212,049

notes

GEA - Gross External Area
 GIA - Gross Internal Area
 NIA - Net Internal Area

An allowance of at least -5% should be allowed on the net areas for survey irregularities, design development etc.
 sqm - sqft calculated using a factor of 10.7639

* NIA includes all student bedrooms (including bathroom risers), amenity and BOH spaces. All shared internal circulation is excluded.

02 proposed area schedule (ref: 1202.07.06 AA_Schedule of Accommodation)

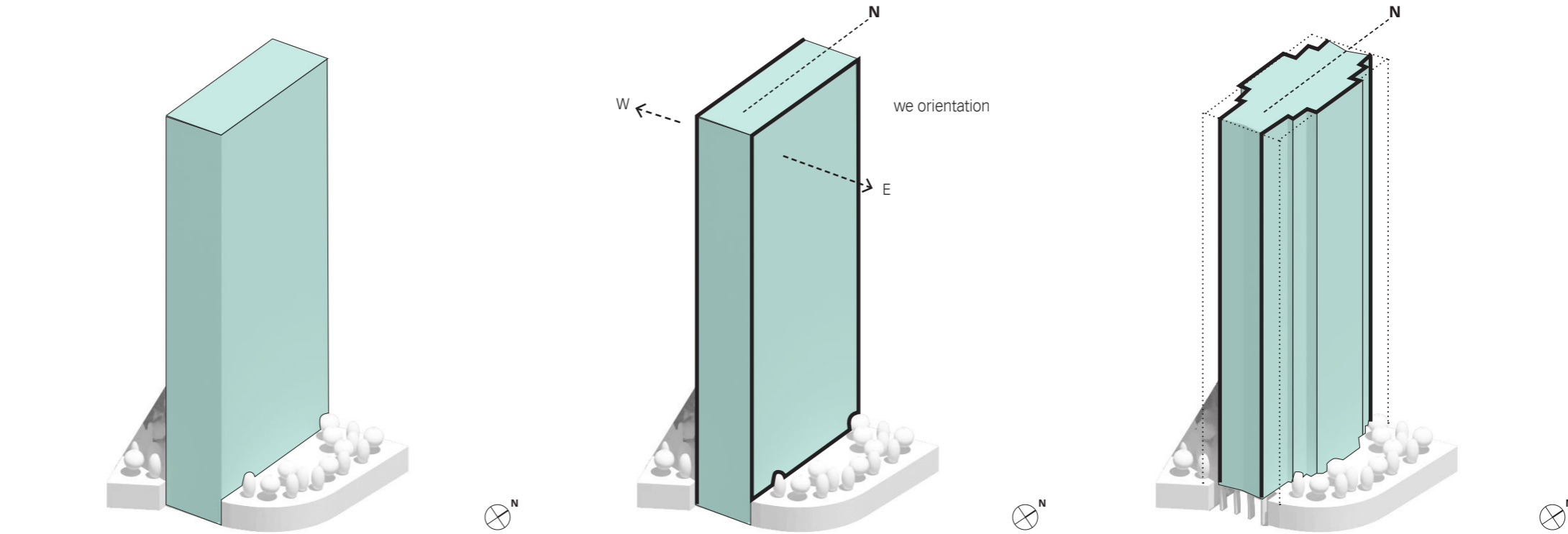
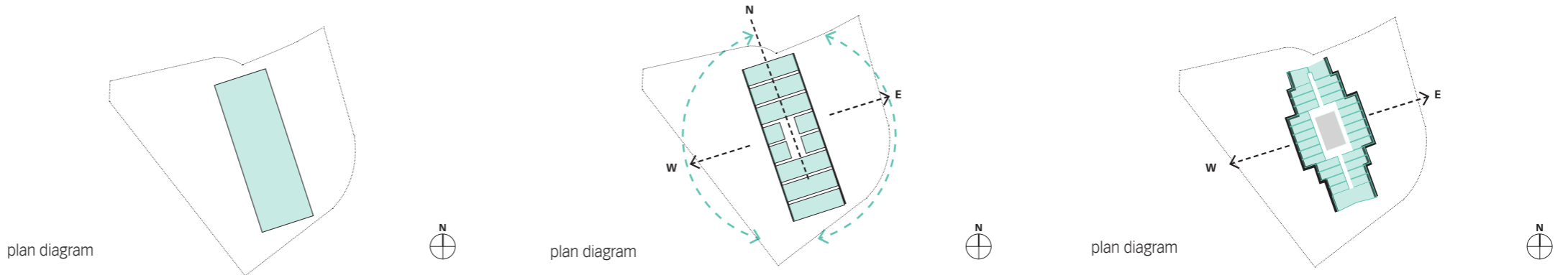
04

external appearance

- facade development - concept
- facade development - articulation
- façade articulation
- bay study
- elevations - consented scheme
- elevations - proposed scheme
- comparative visuals
- materials

facade development - concept

The diagrams on these pages show how the facade development responds to the emerging context and to Peninsula Square, with an emphasis on slenderness, whilst also providing high quality internal layouts.



a single tower

(above: plan, below: axonometric)

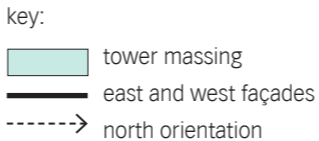
A single tower on the site located on a podium base provides ground level active frontage on to Peninsula Square and residents with a podium level garden.



orientation

(above: plan, below: axonometric)

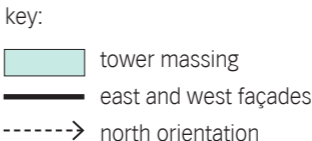
The building is orientated to maximise the sunlight/daylight and prevent overheating to the student rooms.



profile of plan

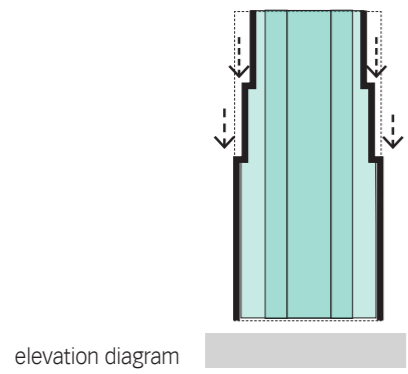
(above: plan, below: axonometric)

The tower plan is stepped to retain the character of the consented scheme and to provide visual interest.

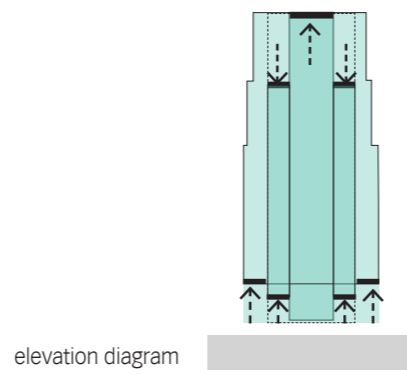


key:
— site boundary

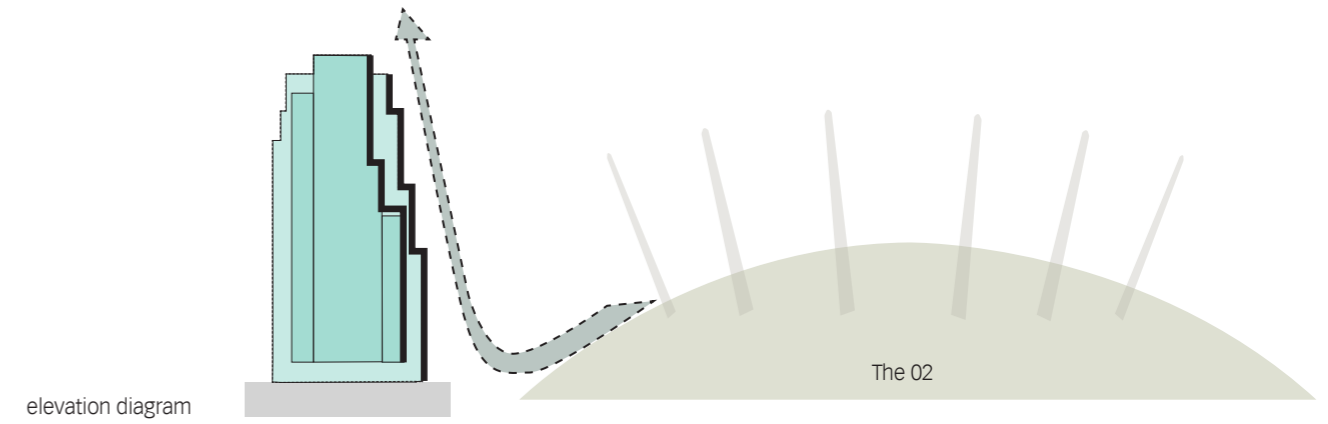




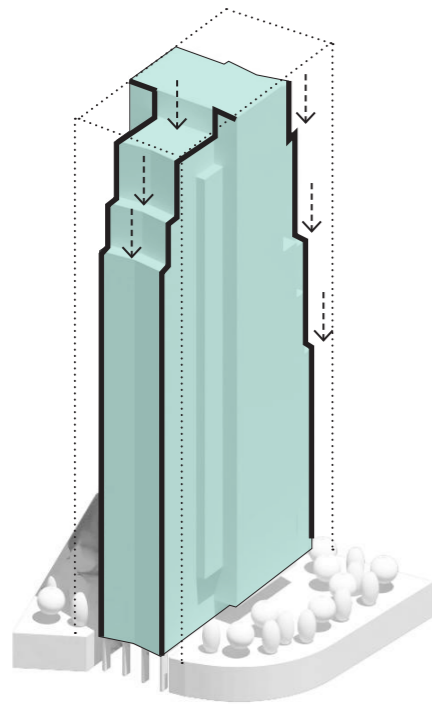
elevation diagram



elevation diagram



elevation diagram

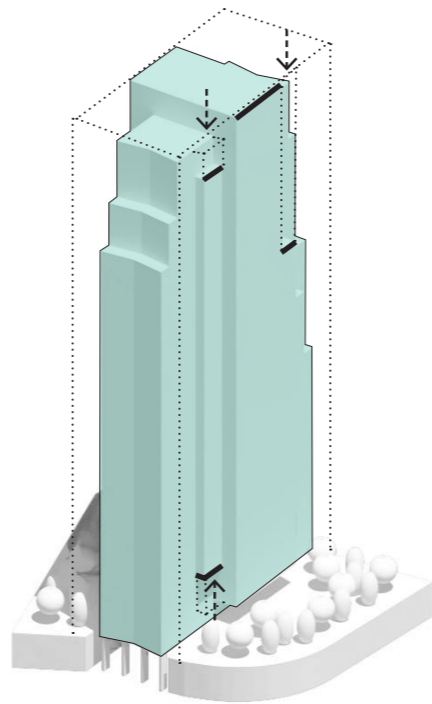


profile slenderness

(above: elevation, below: axonometric)

The tower is stepped in profile to increase its visual slenderness to the wider faces of the tower, the east and west façades and provides a distinct form in the skyline.

- key:
- tower massing
 - north and south façades
 - steps in massing

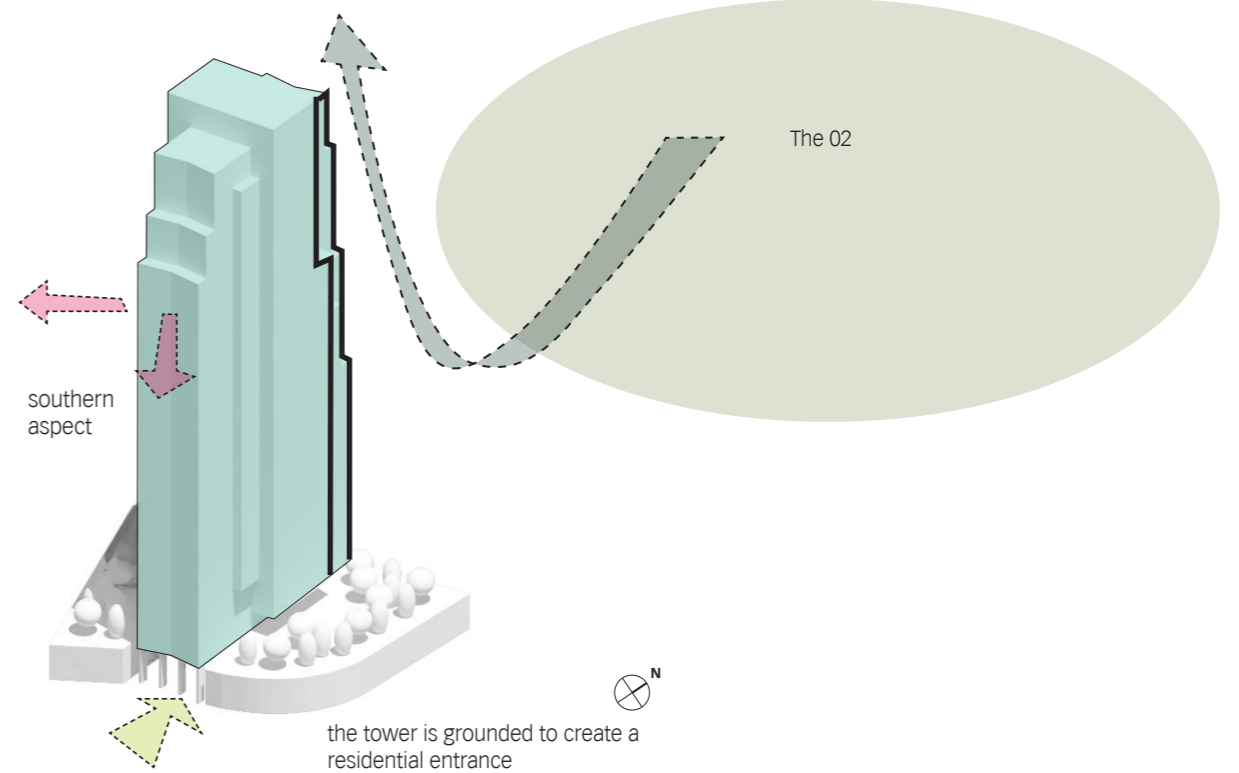


articulation of facade

(above: elevation, below: axonometric)

The tower is stepped in along its wider face to provide interest and reduce the appearance of mass.

- key:
- tower massing
 - stepped façades
 - steps in massing



react to context

(above: elevation, below: axonometric)

The base of the tower is grounded to create a residential entrance. The tower form is further articulated with an asymmetrical stepping to react to The O2 which is the dominant form on the Peninsula.

- key:
- tower massing
 - stepped façades
 - southern aspect
 - entrance
 - massing reacts to The O2

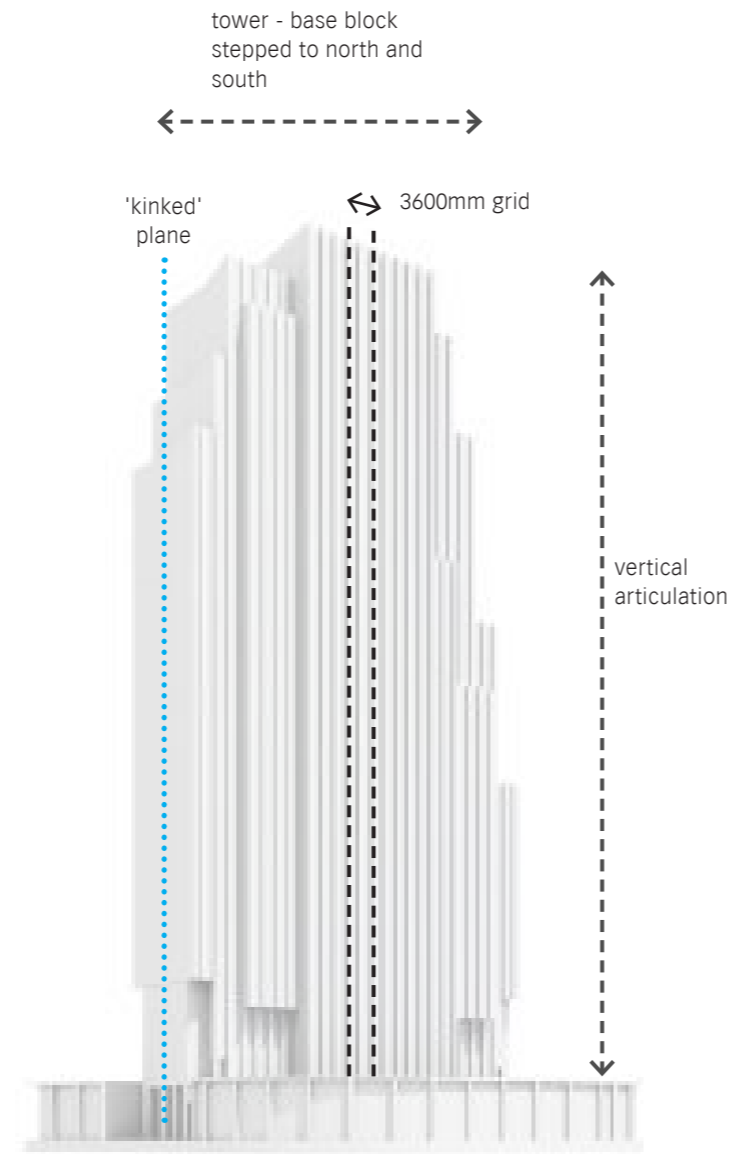
facade articulation - 2018 consented scheme vs. proposed scheme

The adjacent diagrams illustrate the concept development of the façades from initial massing refinement through to the finer articulation.

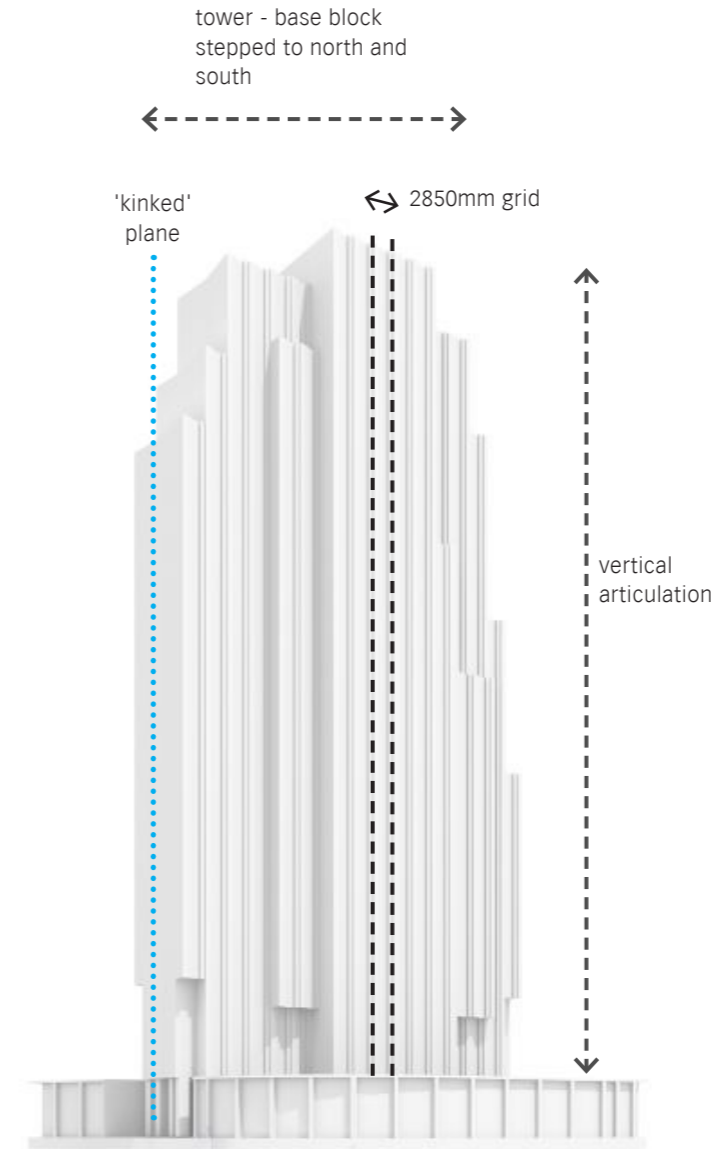
The 2018 consented residential and proposed schemes are shown side by side to illustrate the similarities between the two schemes.

Articulation and development of the façade builds upon the concepts of grid, base, top, corner and depth. The articulation of the façades relates both to the scale of the long distance views and the local context.

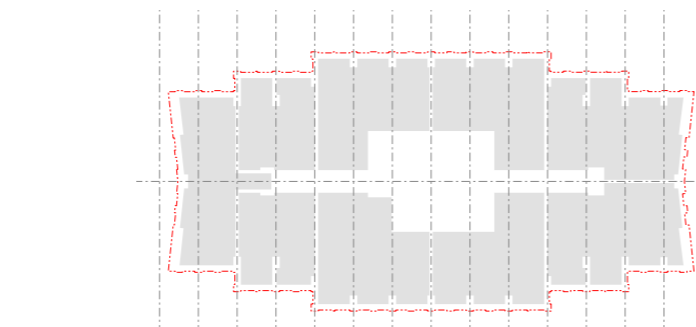
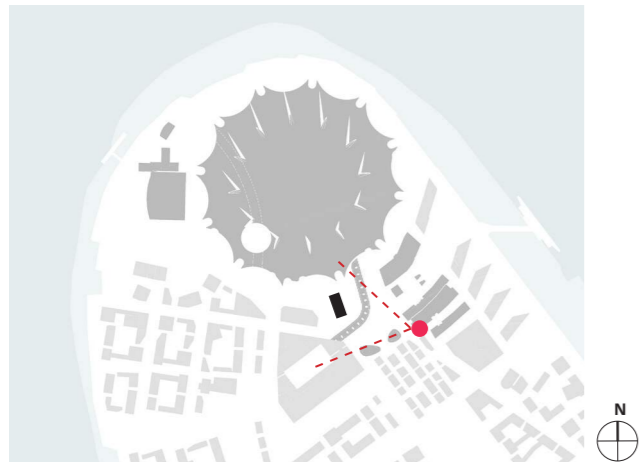
The massing and articulation follows the design intent of the consented scheme and retains the same architectural quality.



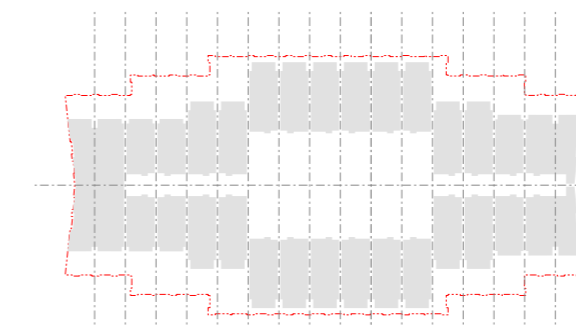
01 tower elevation (west) - consented scheme
vertical articulation



03 tower elevation (west) - proposed scheme
vertical articulation

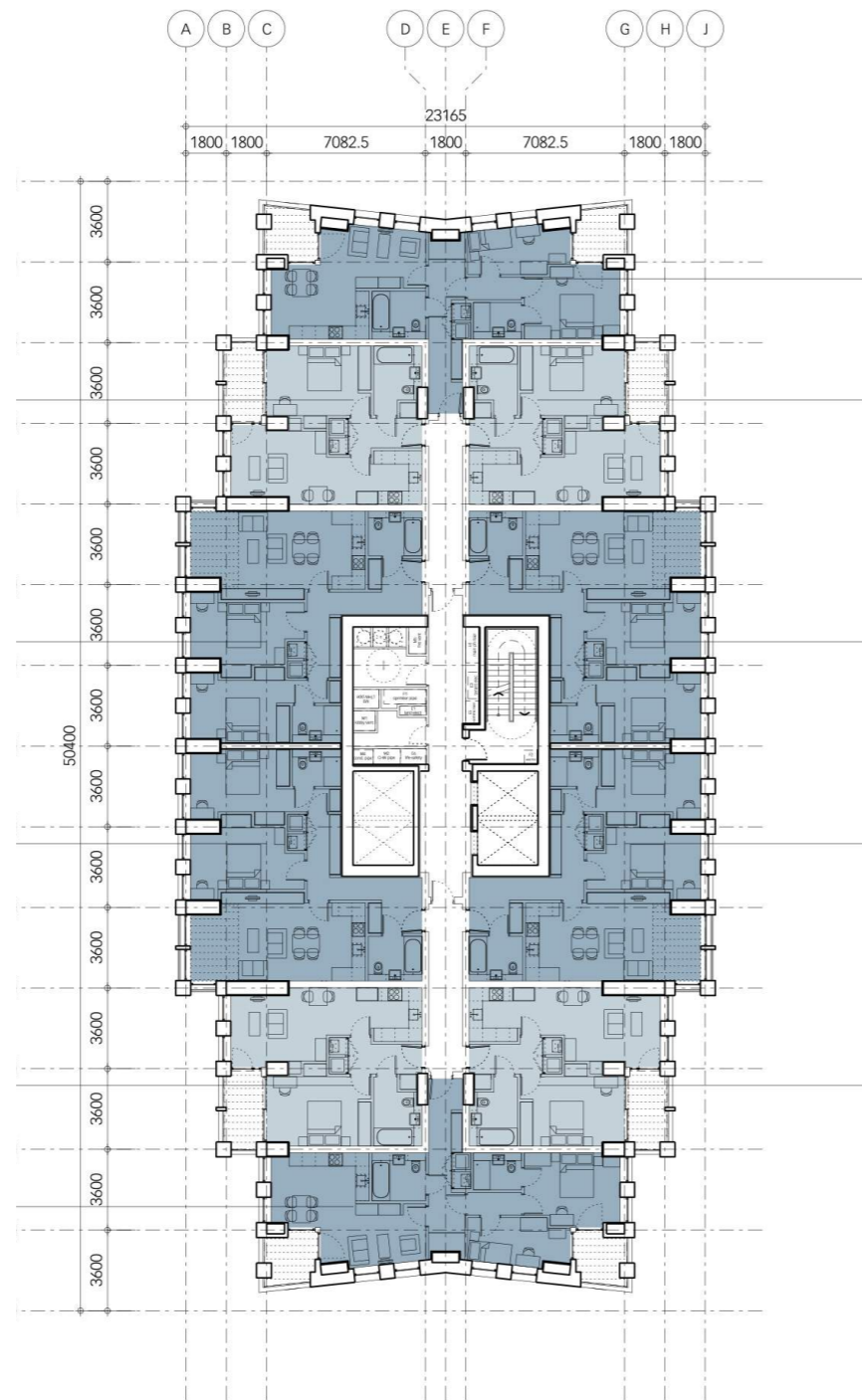


02 tower typical plan - consented scheme grid of 3600mm

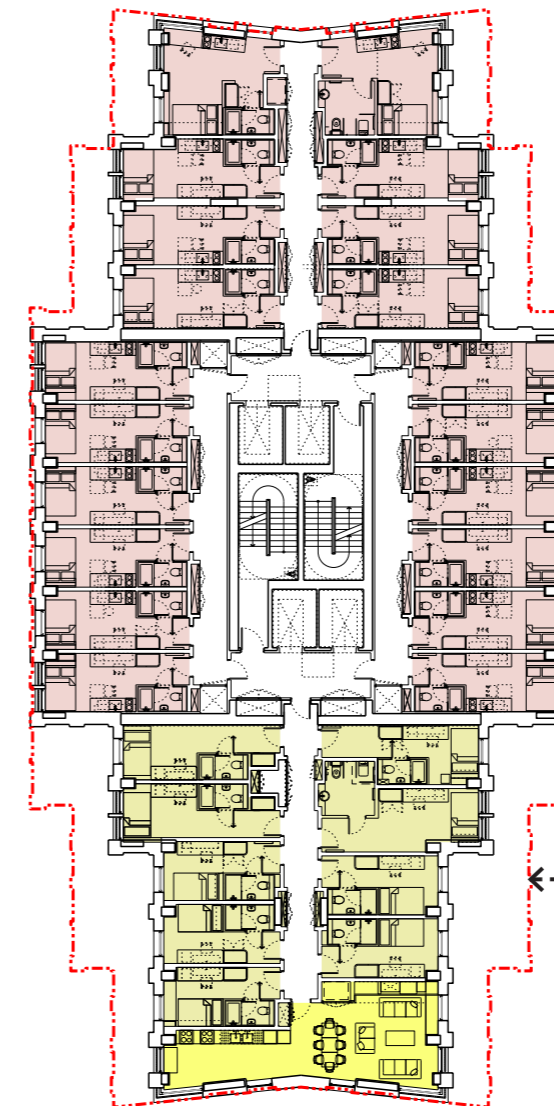


04 tower typical plan - proposed scheme grid of 2850mm

facade articulation - 2018 consented vs. proposed scheme



01 5th floor plan - 2018 consented scheme

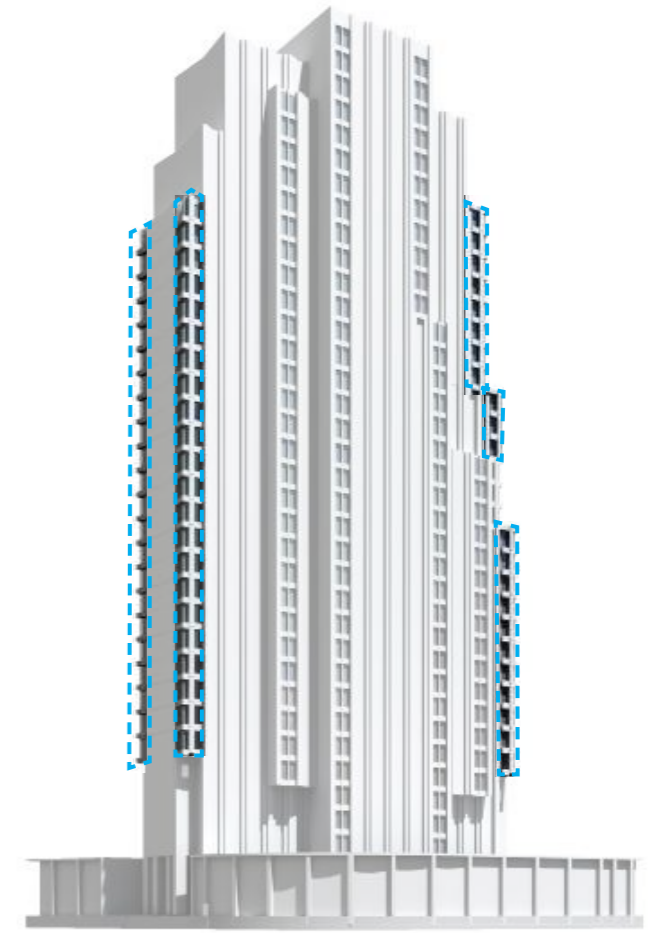
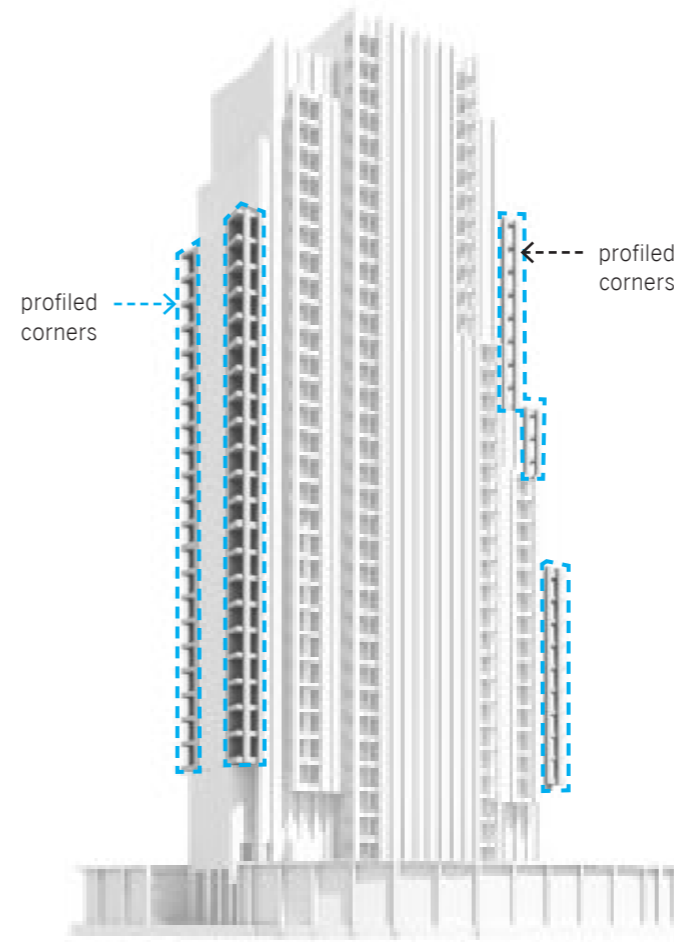
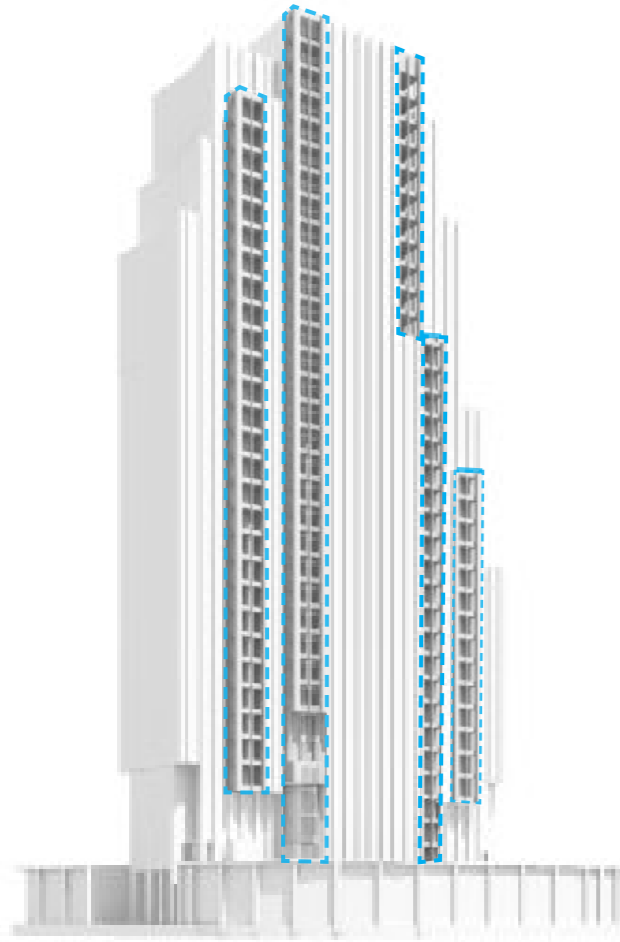


the proposed scheme has a slimmer building footprint to suit the change in internal configuration requirements, but retains the form of the consented scheme

02 5th floor plan - proposed scheme

facade articulation - 2018 consented vs. proposed scheme

articulate corners with dual aspect balconies and internal amenity



03 consented scheme (west)
articulation of balconies

04 proposed scheme (west)
balconies internalised

05 consented scheme (west)
articulation of building profile

06 proposed scheme (west)
articulation of building profile

Balconies are located where the facade folds to provide outside space with dual aspect. This serves to further articulate the corners of the building on the east and west faces of the tower.

Balconies are internalised as they are not required in the proposed student scheme. However, the windows are recessed to provide as much depth to the facade as possible and to retain the overall appearance of the consented scheme.

Corner balconies on the north and south façades provide a profiled edge to the building

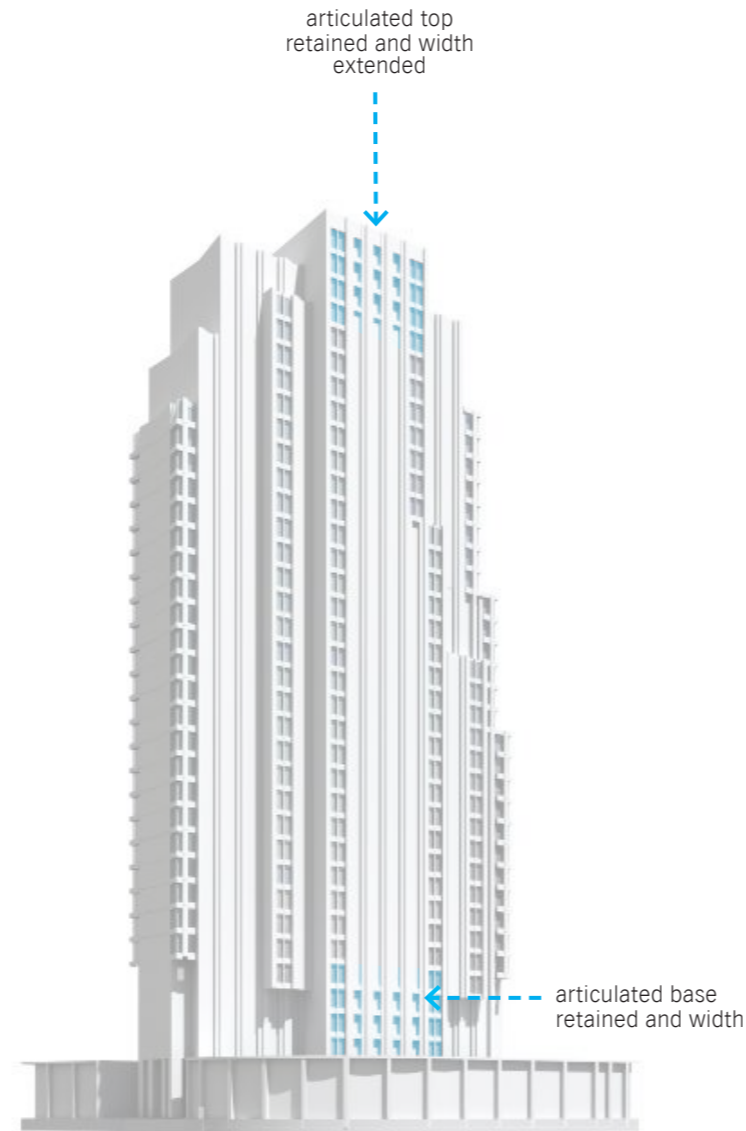
Corner balconies are internalised but their depth and symmetry are maintained through the use of deep recessed corner glazing

facade articulation - 2018 consented vs. proposed scheme



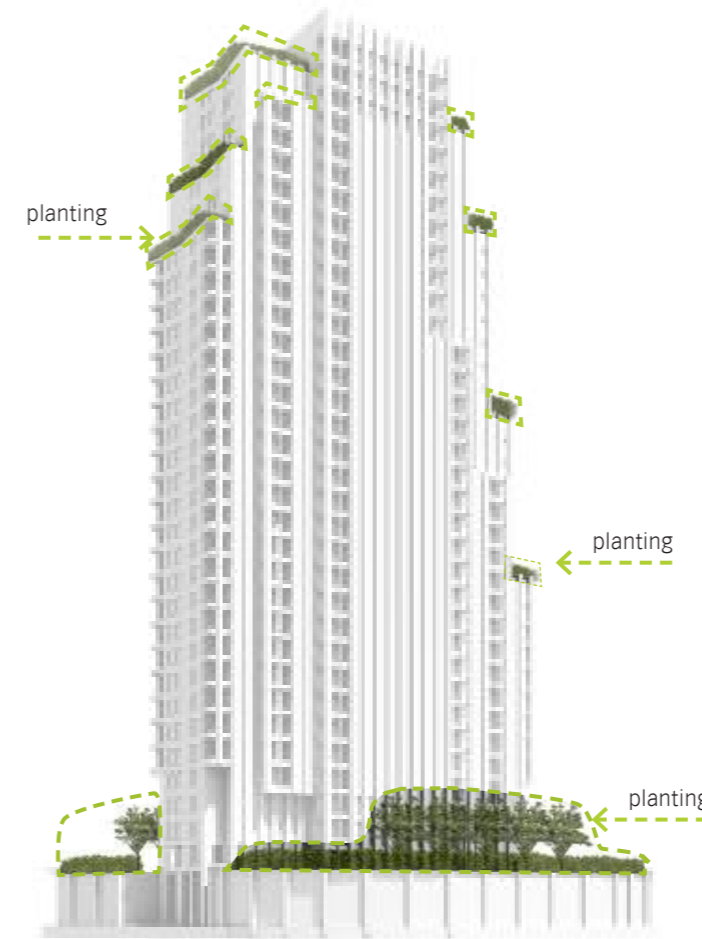
07 consented scheme (west)
termination of the tower

The glazing depth is increased at the top and base of the central portion of the tower to provide a more textured facade to bring a sense of conclusion to the building



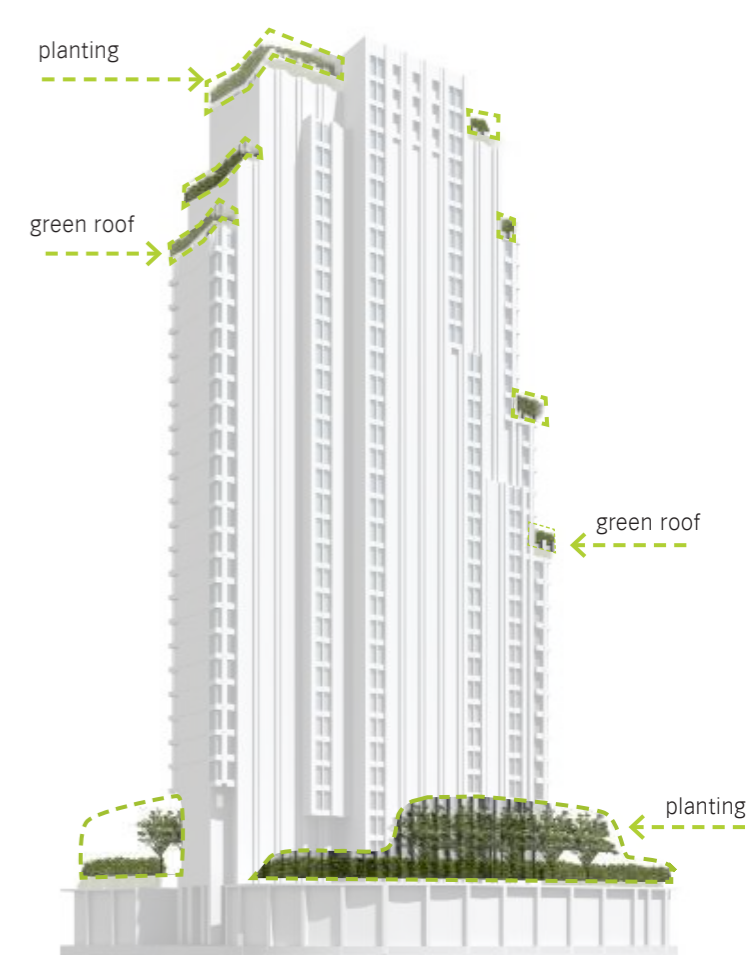
08 proposed scheme (west)
termination of the tower

The articulation to the top and base of the tower is maintained and expanded to encompass additional window bays at the top of the building and over an additional storey height at the towers base



09 consented scheme (west)
N/S facade fenestration + roof gardens

Vertical fenestration is added to the north and south façades. Greening of the roof gardens emphasises the steps in the massing and provides amenity spaces for residents.

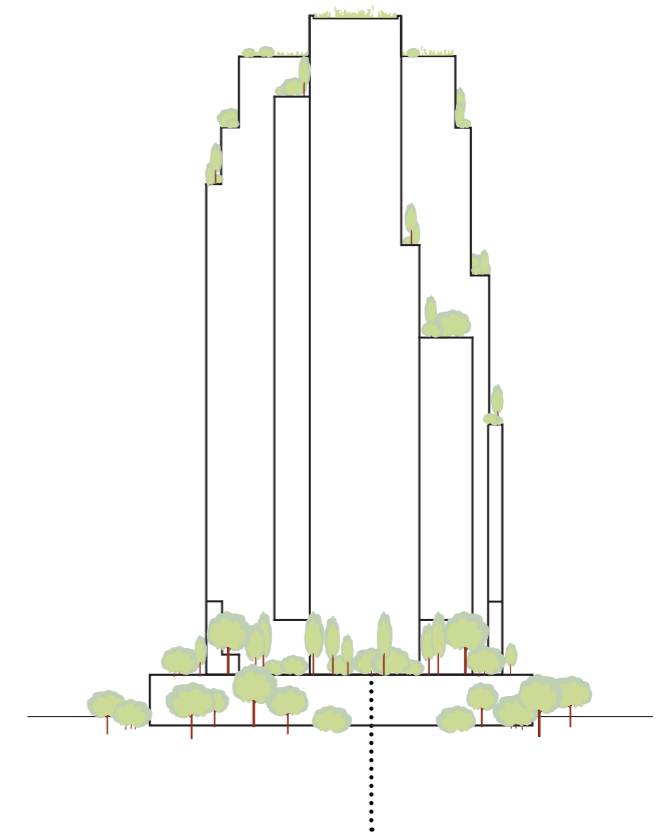
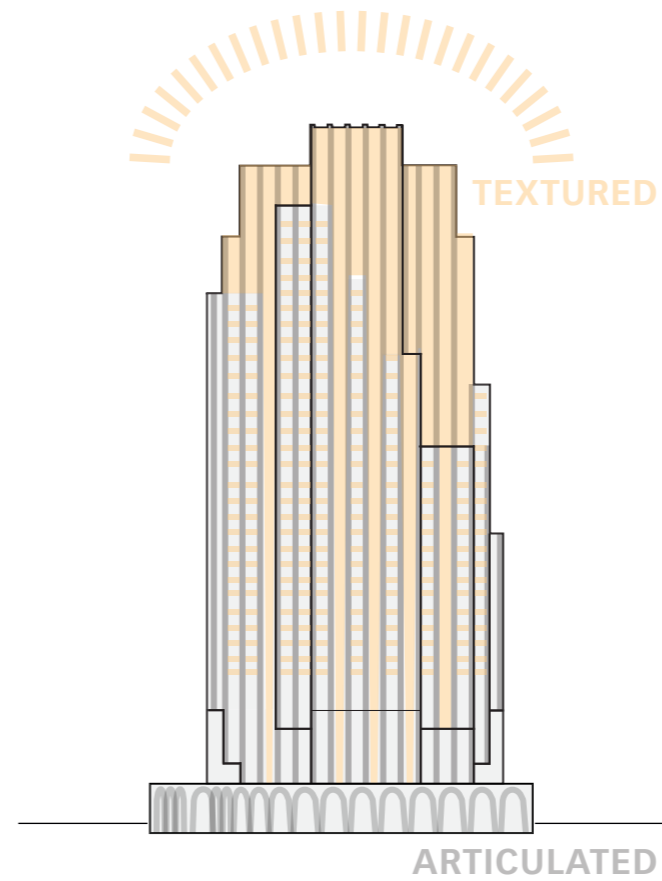
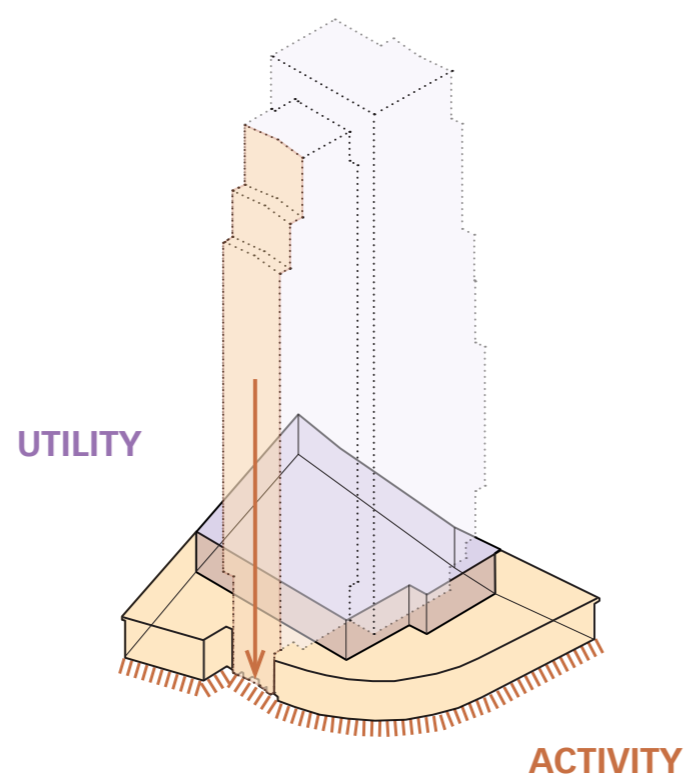
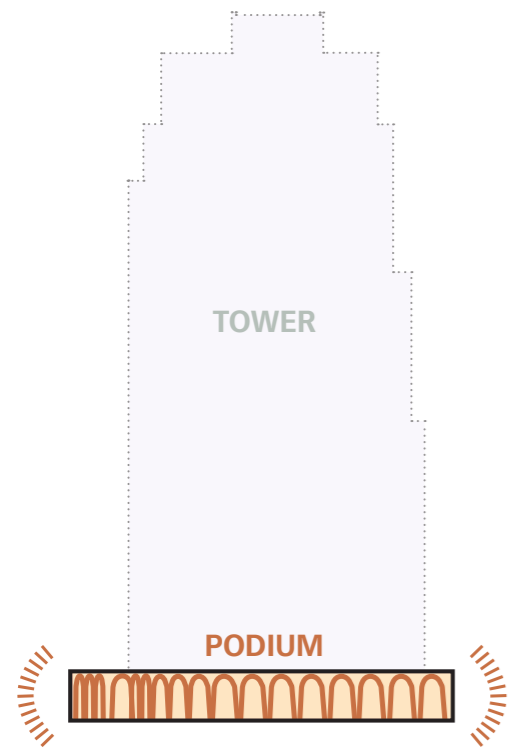


10 proposed scheme (west)
N/S facade fenestration + roof gardens

The vertical fenestration to the towers is maintained as per the consented scheme.
The level 34 roof terrace and level 1 podium terrace provide external amenity space accessible to all students

façade articulation - key principles of proposed scheme

The following diagrams set out the opportunities considered as part of the further facade development undertaken in parallel to pre-application discussions with Royal Borough of Greenwich during November and December 2022.



01 podium

Opportunity to animate the podium and to draw on the character of the Design District (not built at the time of the previous planning application)

02 grounding the tower

Emphasise the grounding of the tower on the north and south elevations

Podium to respond to the active and utilitarian nature of the surrounding site

03 the material character

Introduce an alternate material to distinguish the vertical piers from the recessed panels

Provide a material transition across the height of the building

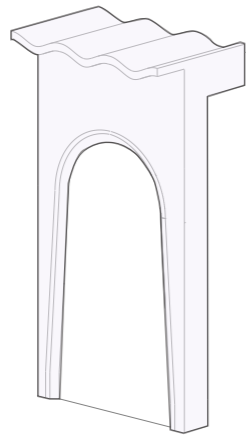
03 greening

Plant the podium extensively with evergreen greens to provide visual amenity to the square as well as providing a beautiful environment for students at terrace level, which in parallel provides a buffer to the noise and activity within Peninsula Square

The greenery at podium level is extended onto intermediate and upper floor roof terraces; this contributes to the overall appearance of the building and reinforces the buildings importance and visibility at the gateway to the masterplan

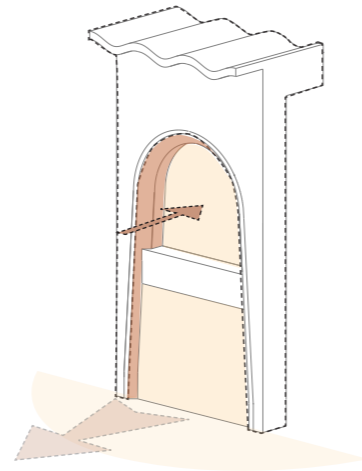
façade articulation - podium key principles

The opposite diagrams set out the podium arches design principles in relation to the immediate context and the overall building.



01 respond to immediate context

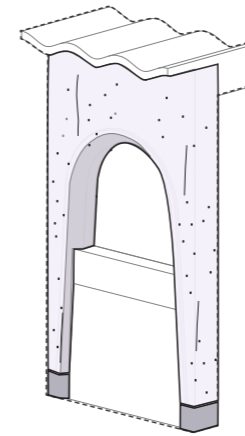
Arches are introduced to respond to the existing context (eg. Design District, Ravensbourne University, The O2) to provide generous active frontages onto Peninsula Square



02 presence in Peninsula square

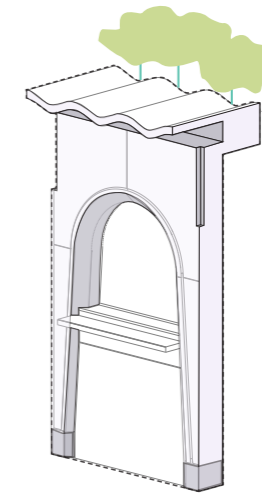
The glazing to the arches is pushed out at ground floor to maximise the glazed area and presence onto the Square

The glazing at mezzanine level is set back to reveal the depth of the arches



03 materiality

The podium base is precast concrete with a smooth finish



04 articulation and greening

Joints are added to the precast cladding to provide scale and a further level of detail and articulation to the facade

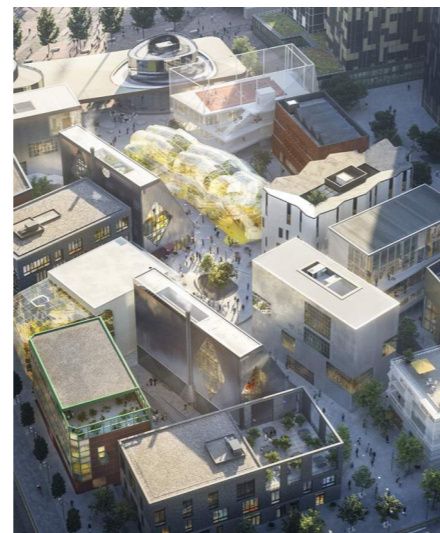
Canopies are added above the ground floor glazing to provide further prominence and articulation



design district
01 HNNA



gateway pavillion
02 Marks Barfield Architects (2014)



design district
03 Design District aerial view



The O2 Arena
04 RHSP



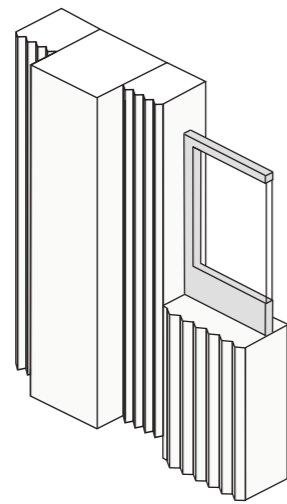
design district canteen
05 Selgas+Cano



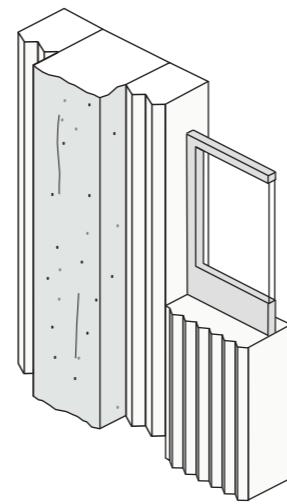
Ravensbourne College and offices
06 David Kohn Architects

façade articulation - tower materiality transition

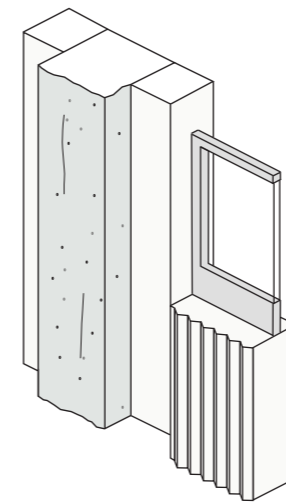
The opposite diagrams illustrates the key steps of the tower facade articulation, with a visible transition from an articulated base to a textured top



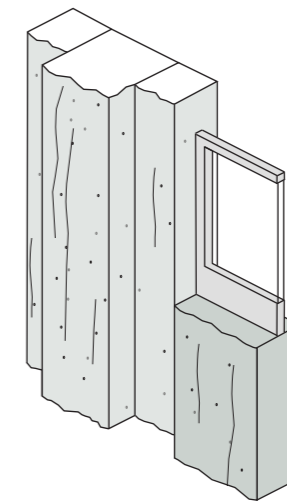
01 base articulated



02 middle articulated/textured



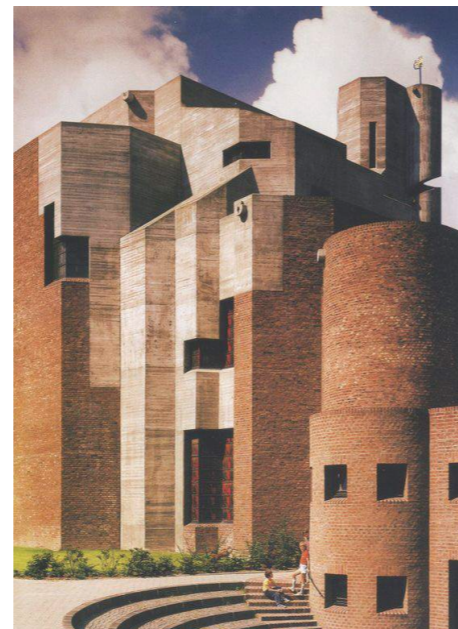
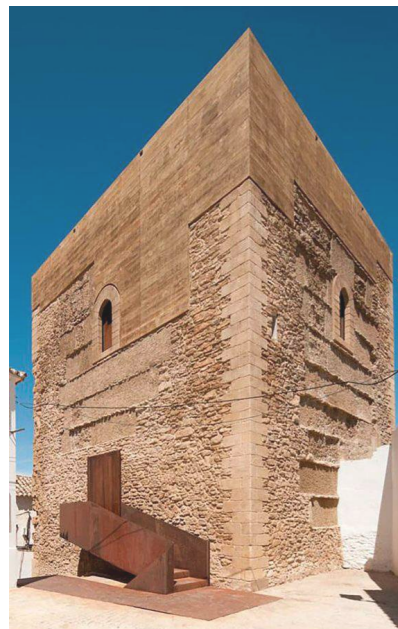
03 middle textured/articulated



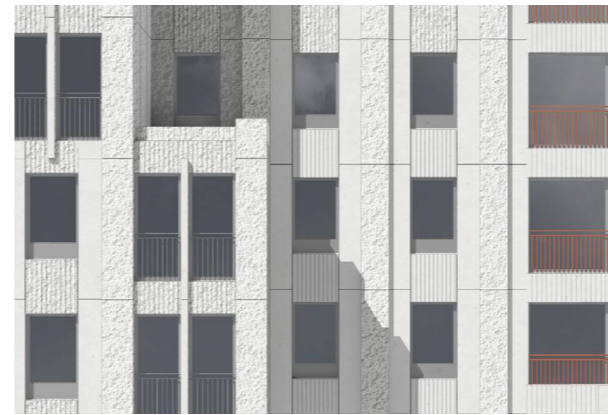
04 top textured

05 precedent images of various building types and epoques

- the facades illustrate the transition from a heavily textured base to a contrasting top or vice-versa



By introducing textured precast concrete to the facade, as well as sawtooth profiling articulation, additional interest can be given to the tower providing greater contrast between both vertical, horizontal and recessed elements of the facade.



base of the tower

01 the piers have a smooth precast concrete finish whilst the recessed side piers are heavily articulated

middle low levels

02 a textured concrete finish is introduced to the piers, whilst the recessed side piers transition from a heavy to a less articulated profile

middle tower section

03 the finish to the piers and recessed side piers is maintained then steadily increases in texture; the heavy profiling/articulation to the window spandrel panels remains

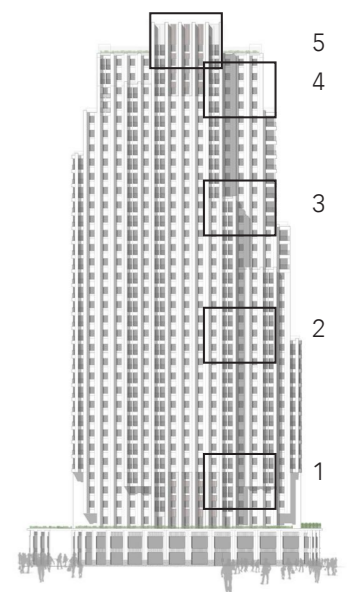
middle top levels

04 both the piers and side piers become increasingly textured all the way through to the top of the tower; the finish to the facades has now fully transitioned from heavily articulated (profiled) to textured

top of the tower

05 coloured metal spandrel panels and fins are introduced

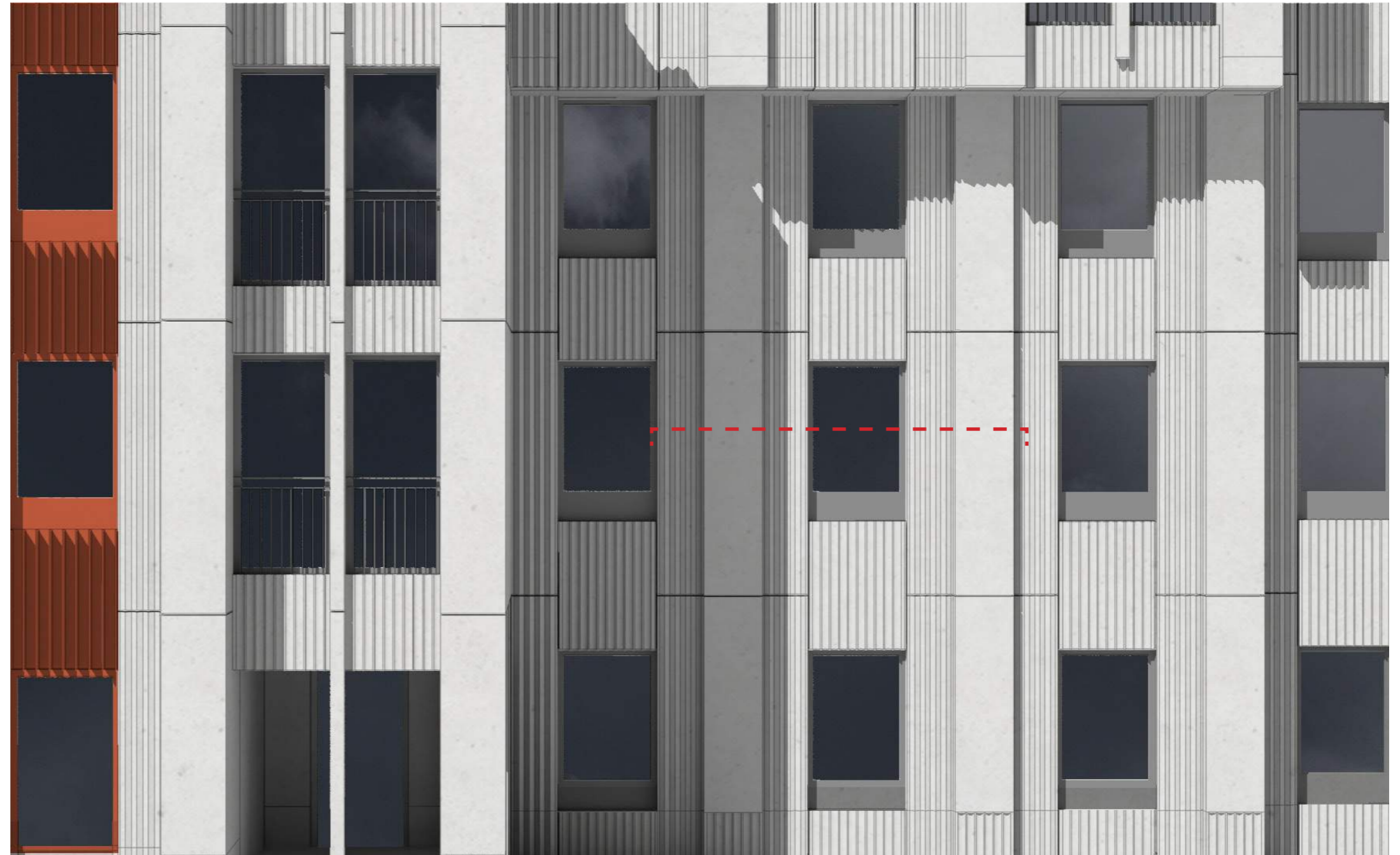
MATERIAL TRANSITION IN PRECAST CONCRETE
BASE (HEAVILY ARTICULATED) TO TOP (TEXTURED)



bay study 01 - base of tower

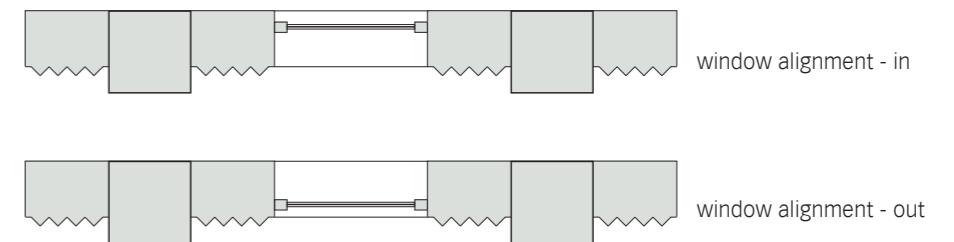
The bay study opposite illustrates the facade at the base of the tower. At this level, the podium terrace and associated external amenity provision, can be directly accessed from the central building core..

The facade is constructed of precast concrete panels. The piers have a smooth finish whilst the side panels (either side of the windows) and spandrel panels (located vertically between the windows) are heavily articulated utilising deep sawtooth profiling. The windows are brought forward in plan (within the structural opening) to make the building appear more solid.



01 facade study 01

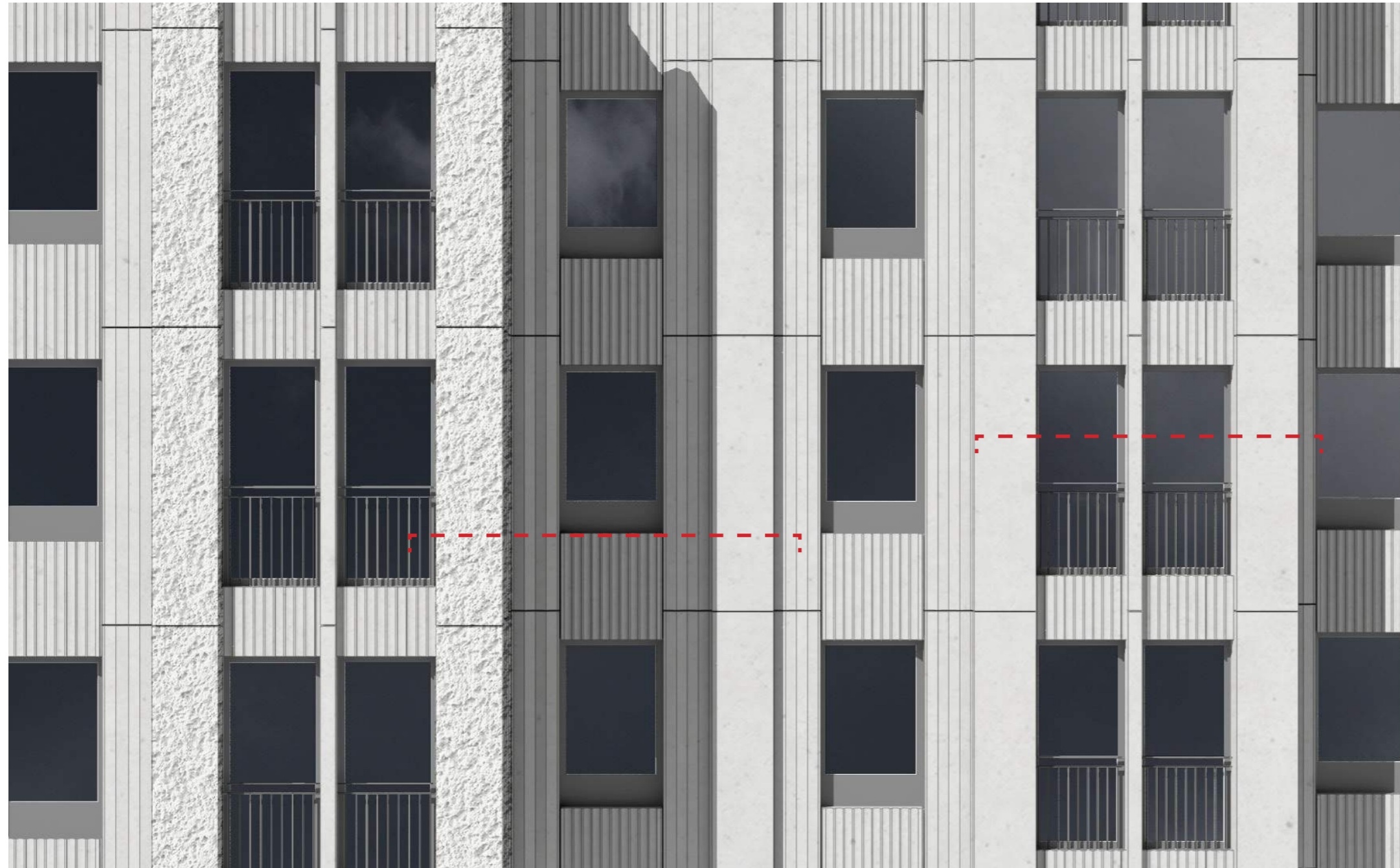
Stone profile plan - - -



key elevation:



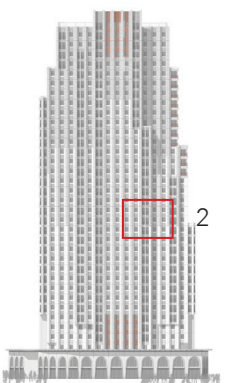
bay study 02 - low middle section



The bay study opposite illustrates the facade at the lower middle section of the tower.

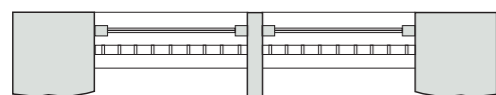
The piers transition from a smooth to an increasingly textured finish; the texture becomes more apparent (rougher) the further up the building. The deep sawtooth profiling to the side panels (either side of the piers) and to the spandrel panels becomes less less articulated through this central area. Windows are increasingly set back within the window openings to provide further depth to the façade and add 'cragginess' to the upper part of the façade

key elevation:

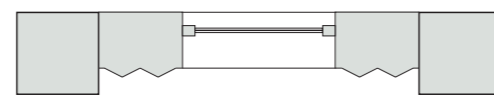


02 facade study 02

Double window plan - - -



Single window plan - - -

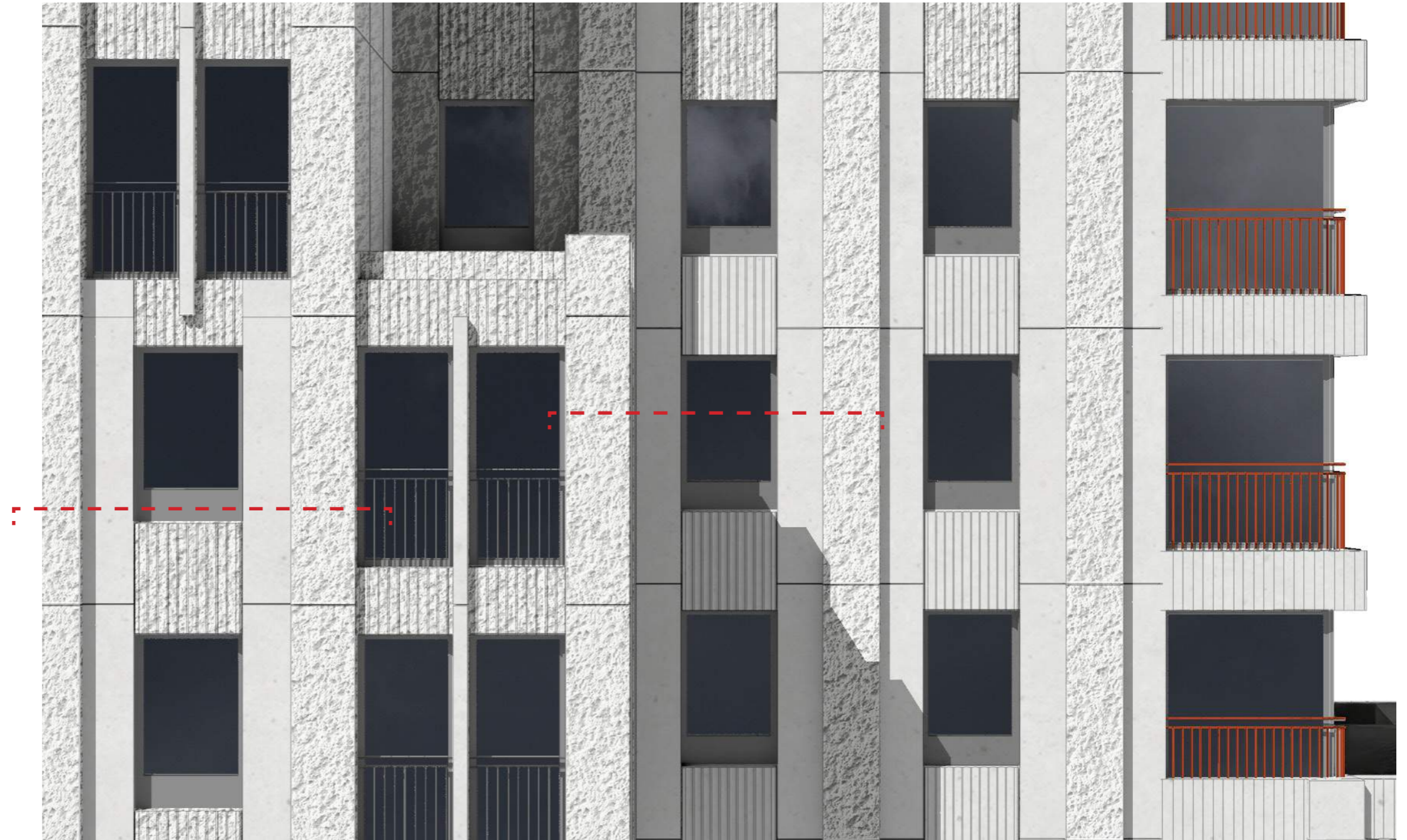


bay study 03 - middle section

The bay study opposite illustrates the facade further up the building, at the upper middle section of the tower.

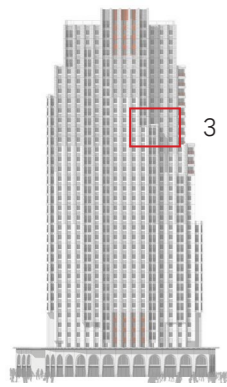
The piers becoming very textured and 'craggy' whilst the side panels transition from slightly profiled (articulated) to smooth. The spandrel panels remain profiled, but this starts to 'bleed out' further up the building.

The windows are increasingly recessed within their structural openings, increasing depth and 'craggy' appearance.

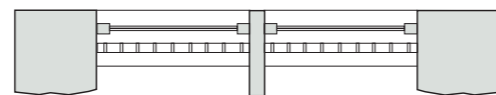


01 facade study 03

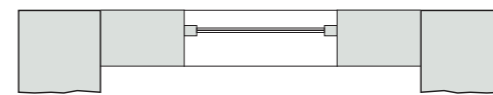
key elevation:



double window plan



single window plan

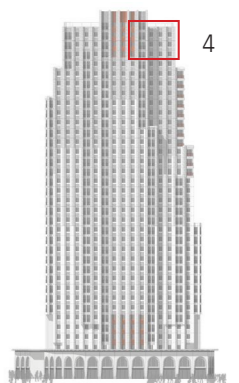


bay study 04 - high middle section

The bay study opposite illustrates a high section of the tower. The piers become significantly more textured and the side panels, spandrels and parapets likewise transition from slightly textured to heavily textured.

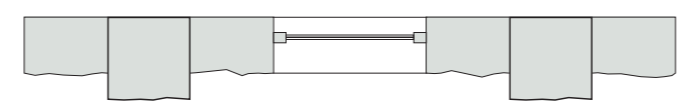


key elevation:



02 facade study 04

stone profile plan

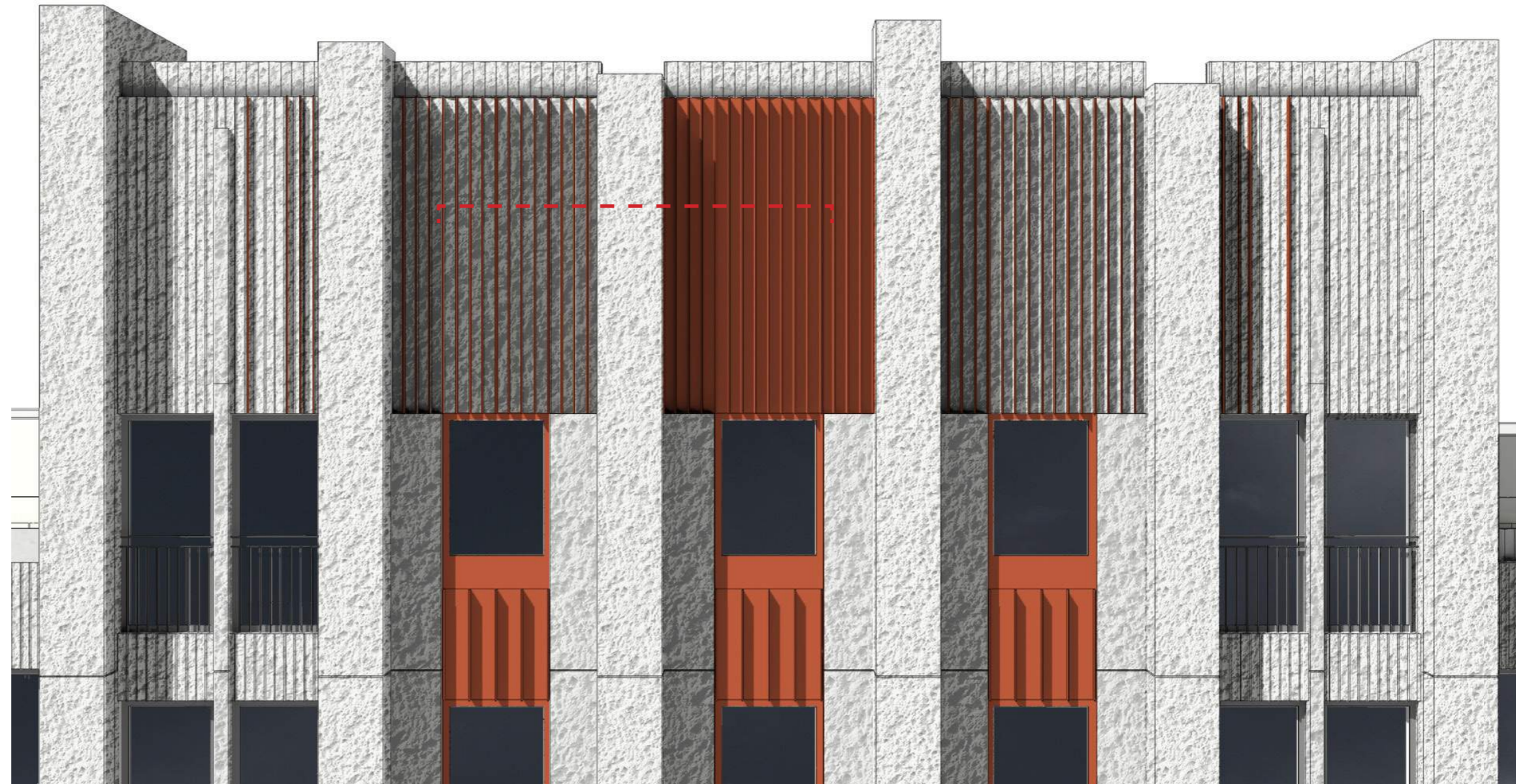


bay study 05 - top of the tower

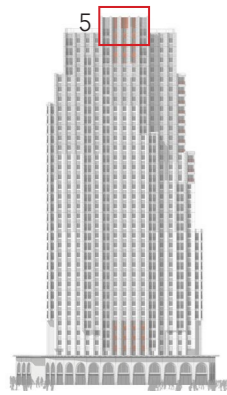
The bay study opposite illustrates the top central section of the building. The facade details can be seen from the external terraces at level 34 and from the interior amenity spaces in the same level.

The top of the building is heavily textured, which is to be visible/perceptible in longer views towards the building.

Colour is introduced to the top central area of the flank façades by way of spandrel panels and vertically orientated projecting metal fins within the precast units; these bleed our left and right.

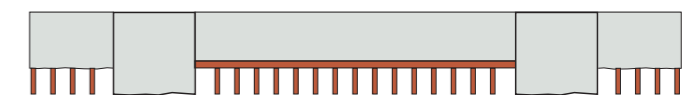


key elevation:



01 facade study 05

corten profile plan

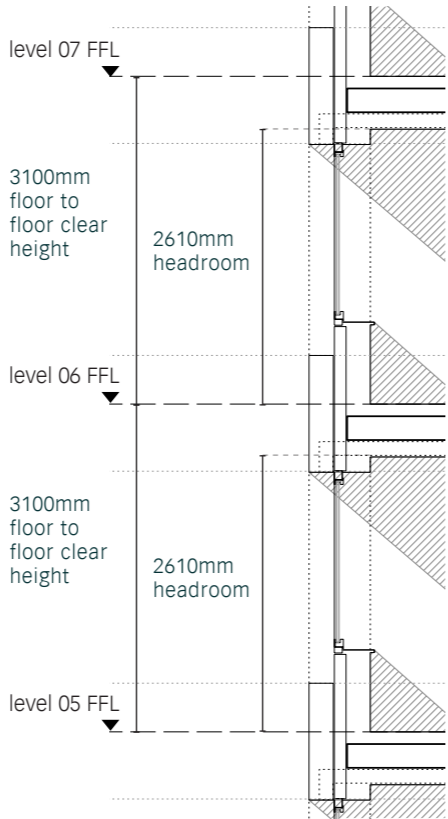


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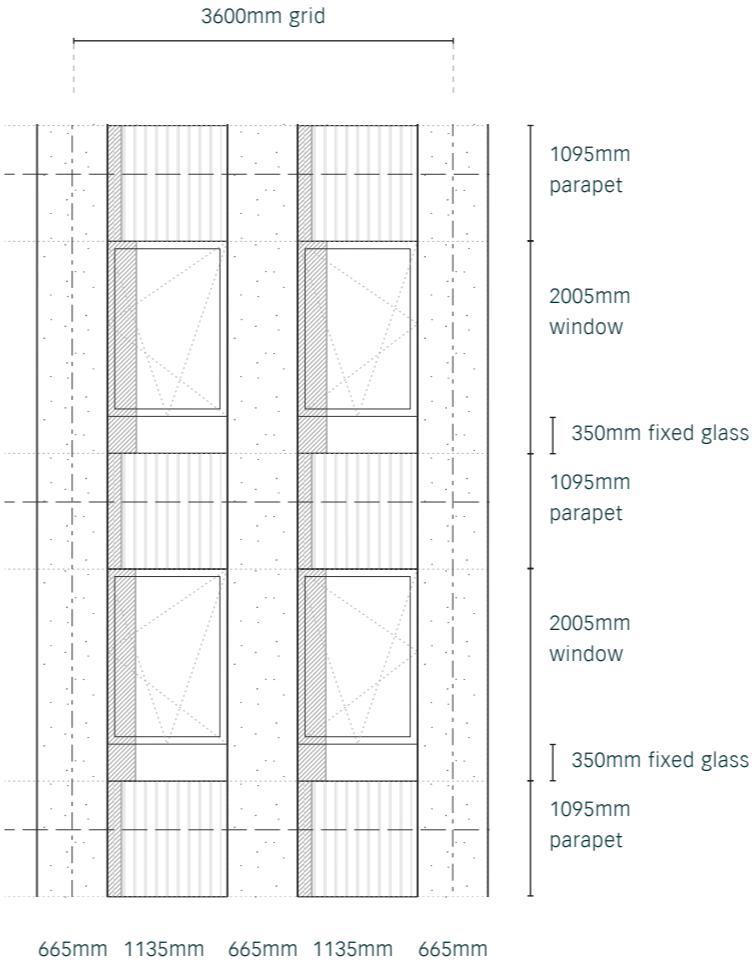
typical bay - 2018 consented scheme (comparison study)

typical floor (levels 05-12)

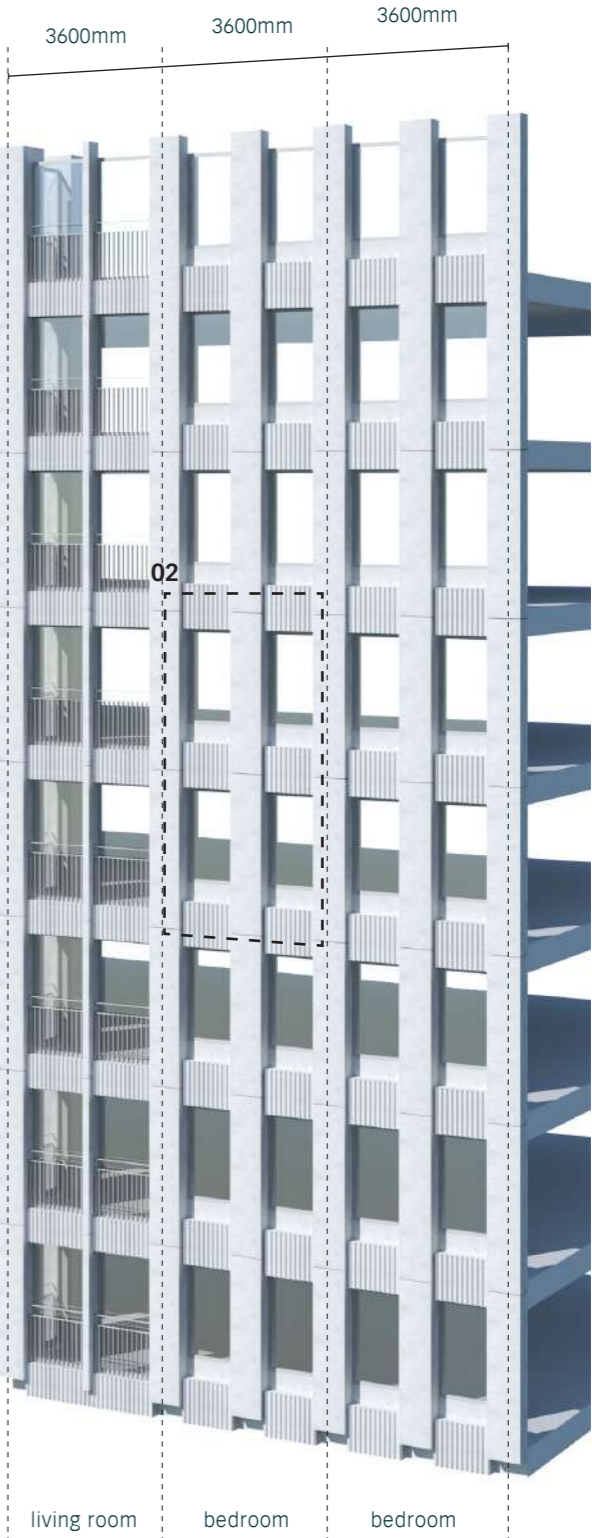
- 1. 3600mm structural grid
- 2. clear window opening size: 1135x1655mm (1.88 sqm)
- 3. 2no. windows per room



01 window detail section

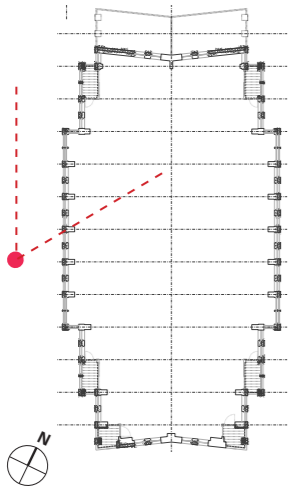


02 window detail elevation and floor plan

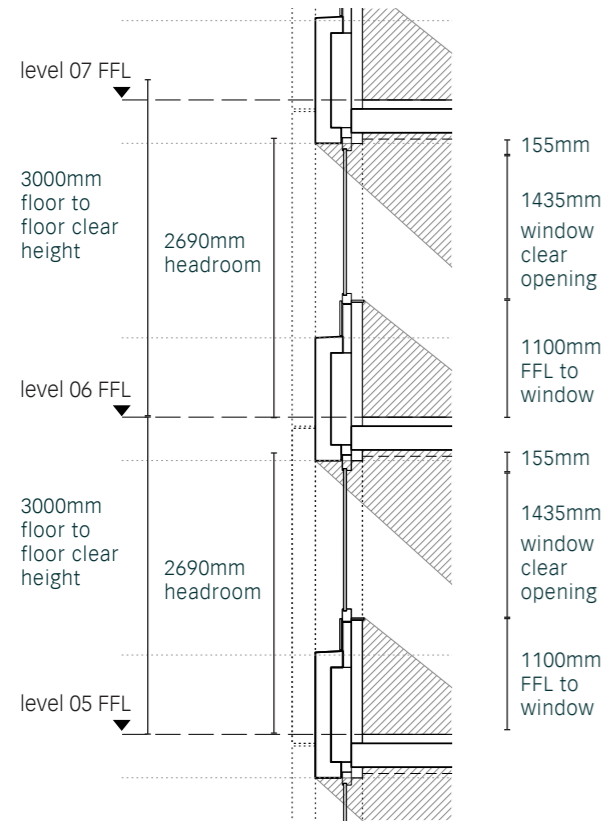


03 levels 05-12 visual

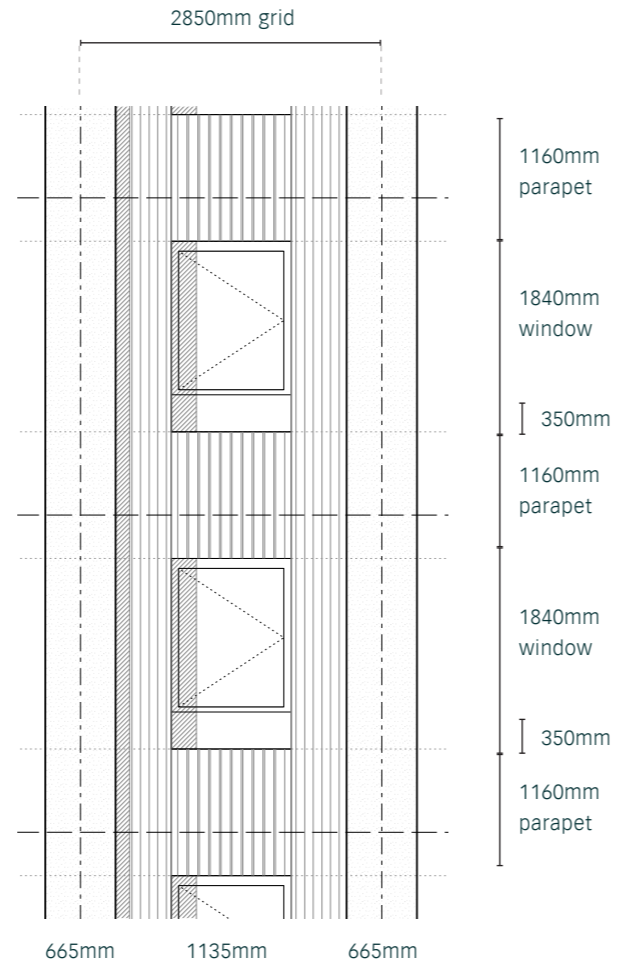
key plan:



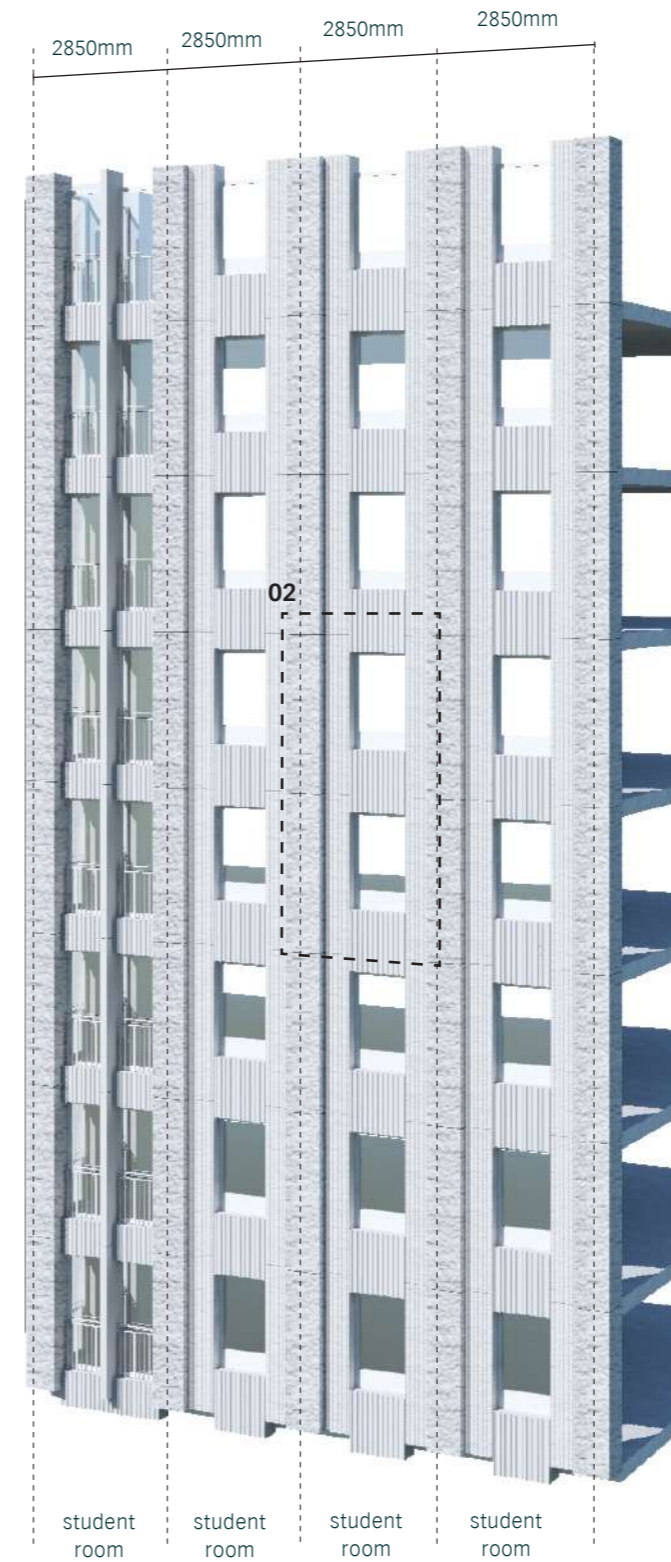
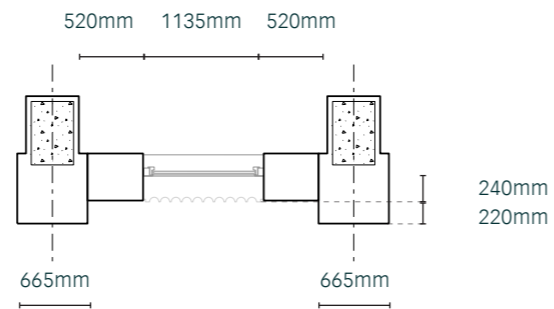
typical bay - proposed scheme



01 window detail section



02 window detail elevation and floor plan

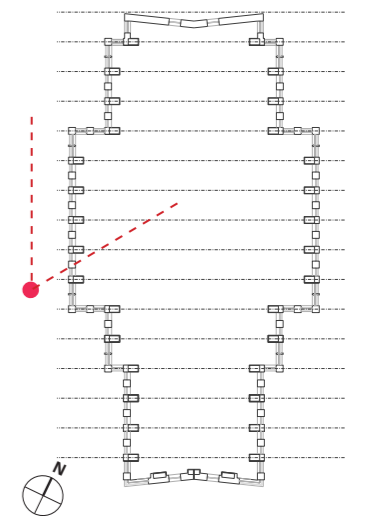


03 levels 05-12 visual

typical floor (levels 05-12)

1. 2850mm structural grid
2. clear window opening size: 1135x1435mm (1.63 sqm)
3. 1no. windows per studio

key plan:

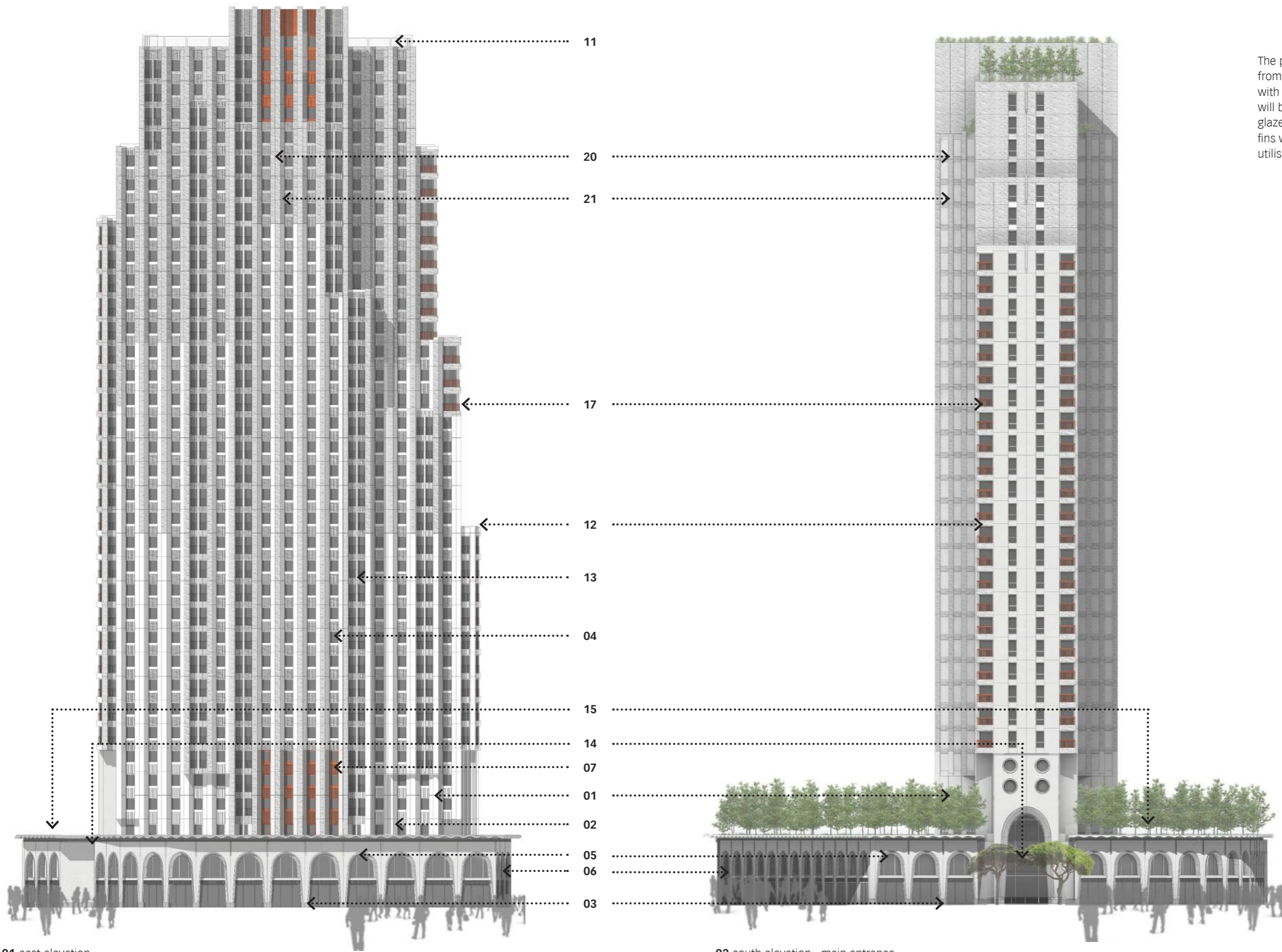


ground floor main entrance



01 entrance view (south elevation) - proposed scheme

building elevations



01 east elevation

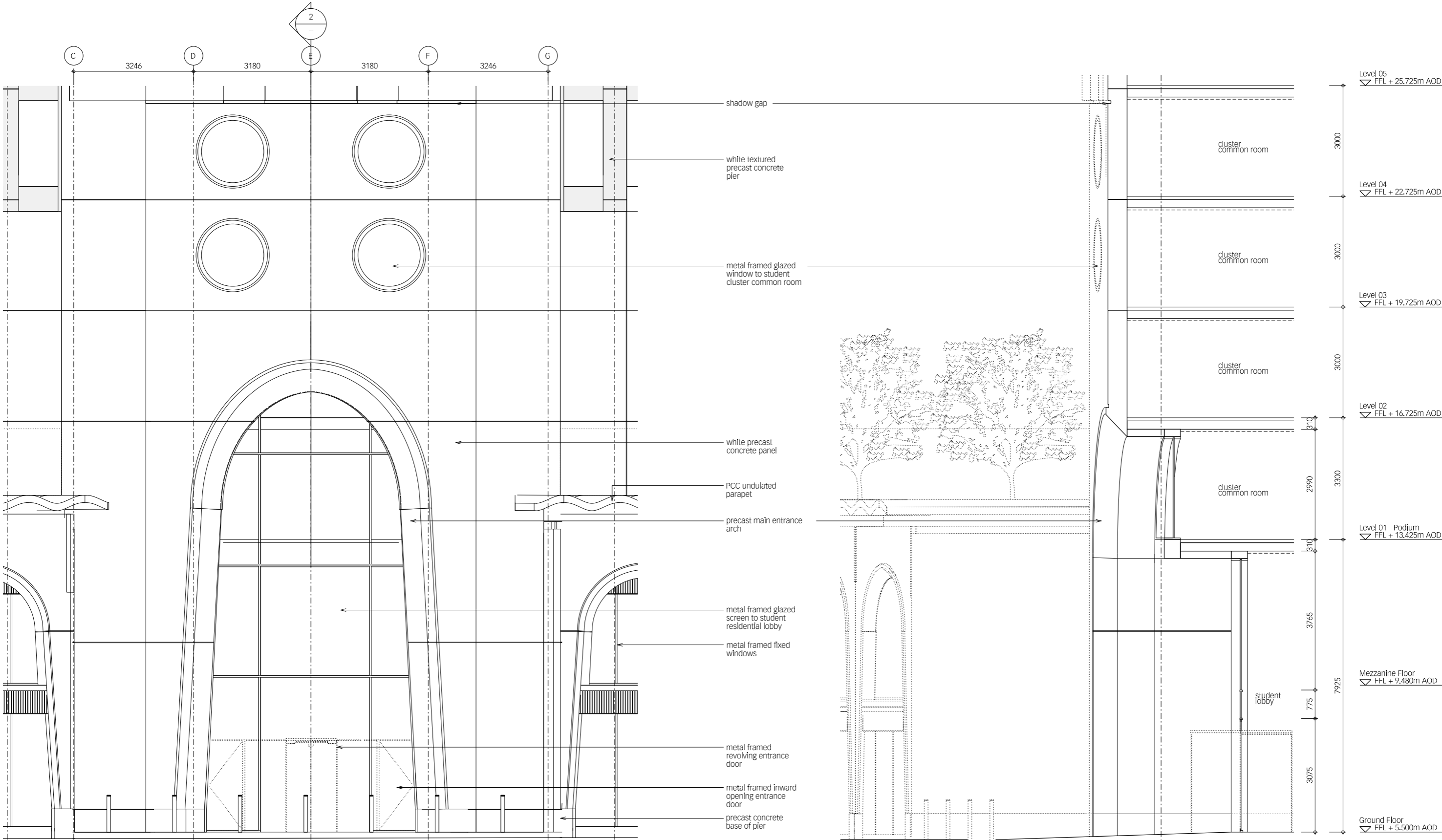
02 south elevation - main entrance

The proposed tower façades will primarily be constructed from precast concrete panels, the podium will also be clad with precast concrete with a stone plinth base. The windows will be metal framed and either full height glazed or partially glazed with spandrel panels to the lower section. Metal fins will be used at podium level where glazing cannot be utilised.

Key elevation:

1. white precast concrete piers
2. white precast concrete panels
3. stone plinth
4. metal framed fixed glazed bay windows
5. metal framed glazed doors within bay windows
6. metal framed louvres within bay window frame detail
7. metal louvres
8. fixed metal framed glazed window
9. openable metal framed glazed window
10. recessed metal framed glazed doors
11. glass balustrade
12. white fluted precast concrete spandrel
13. white precast concrete fin
14. residential entrance
15. communal podium level garden
16. metal framed glazed window
17. 1300mm metal fin balustrade
18. profiled metal fins fixed to precast concrete spandrel panel
19. facade extends to form plant screen
20. textured precast concrete pier
21. textured precast concrete panel
22. v-shaped precast concrete panel
23. dense v-shaped precast concrete panel

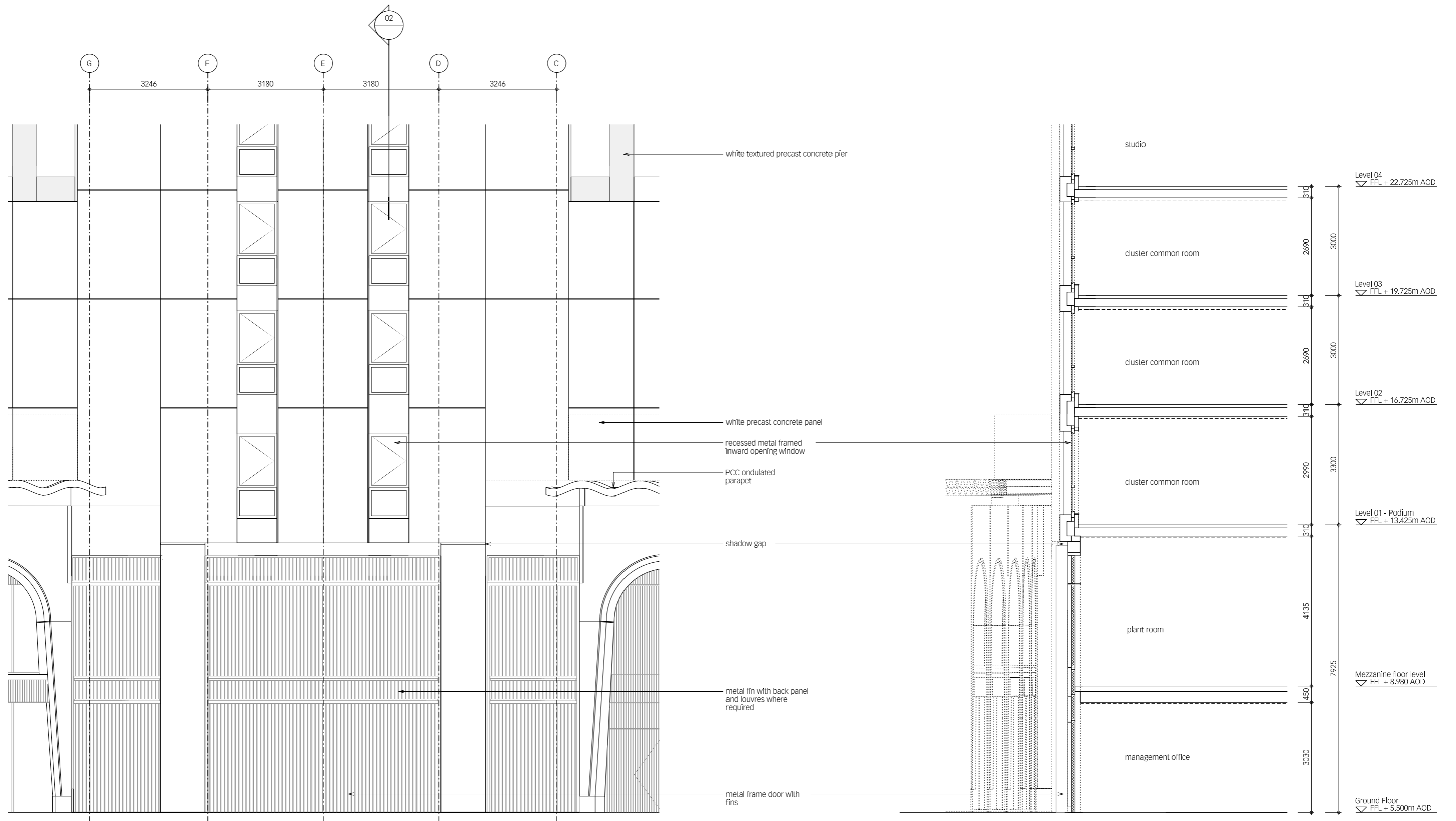
bay study - main entrance



01 ground floor main entrance elevation

02 ground floor main entrance section

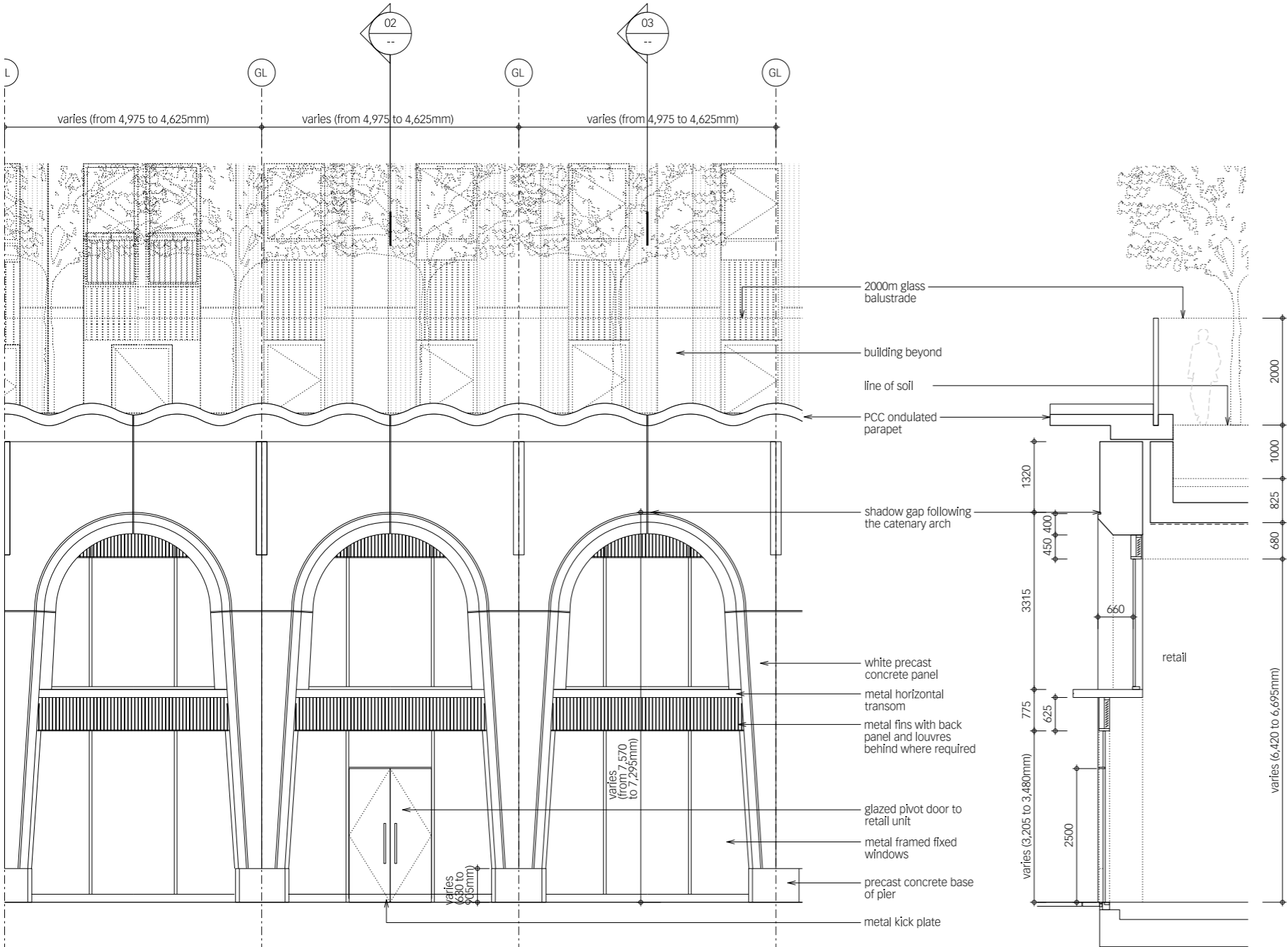
1/A3



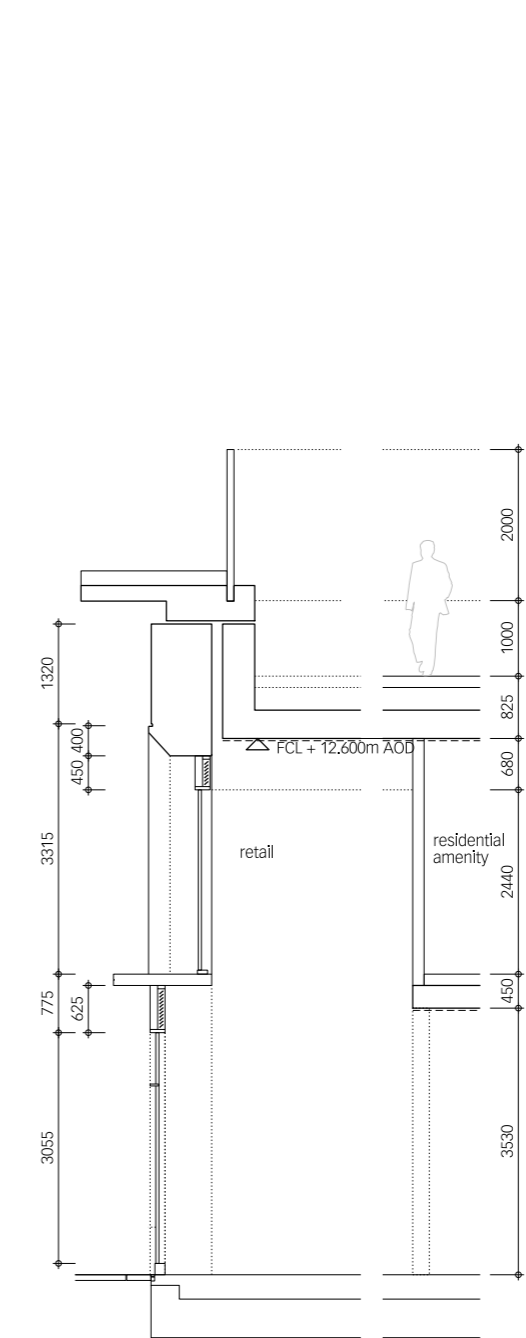
03 ground floor back entrance elevation

04 ground floor back entrance section

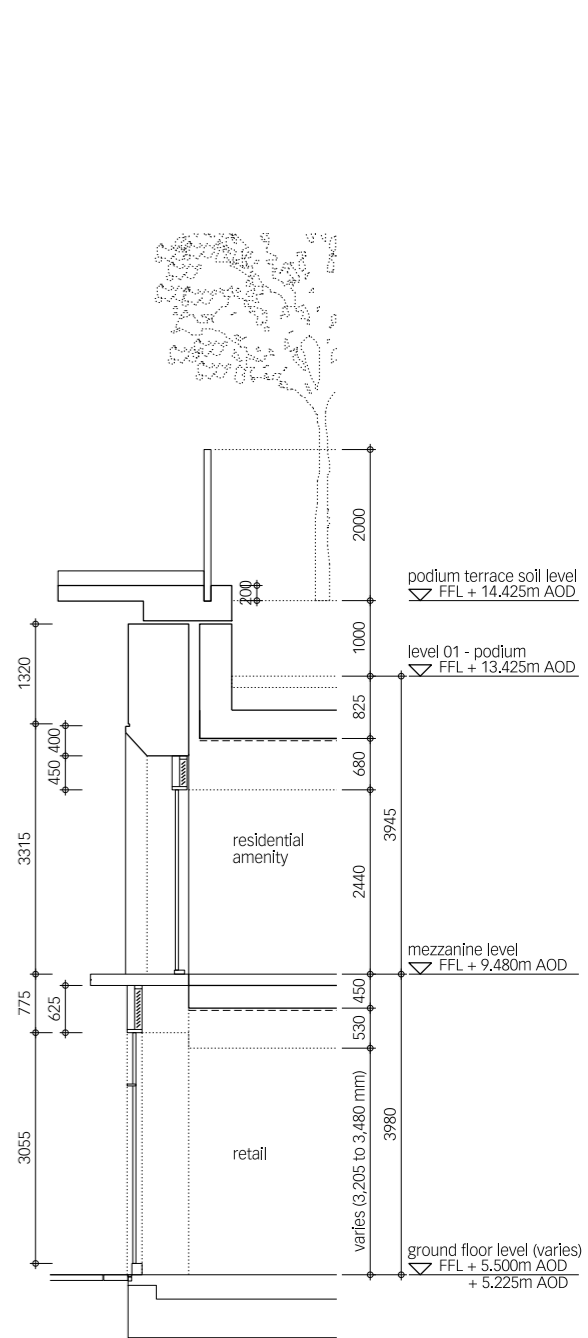
bay study - podium



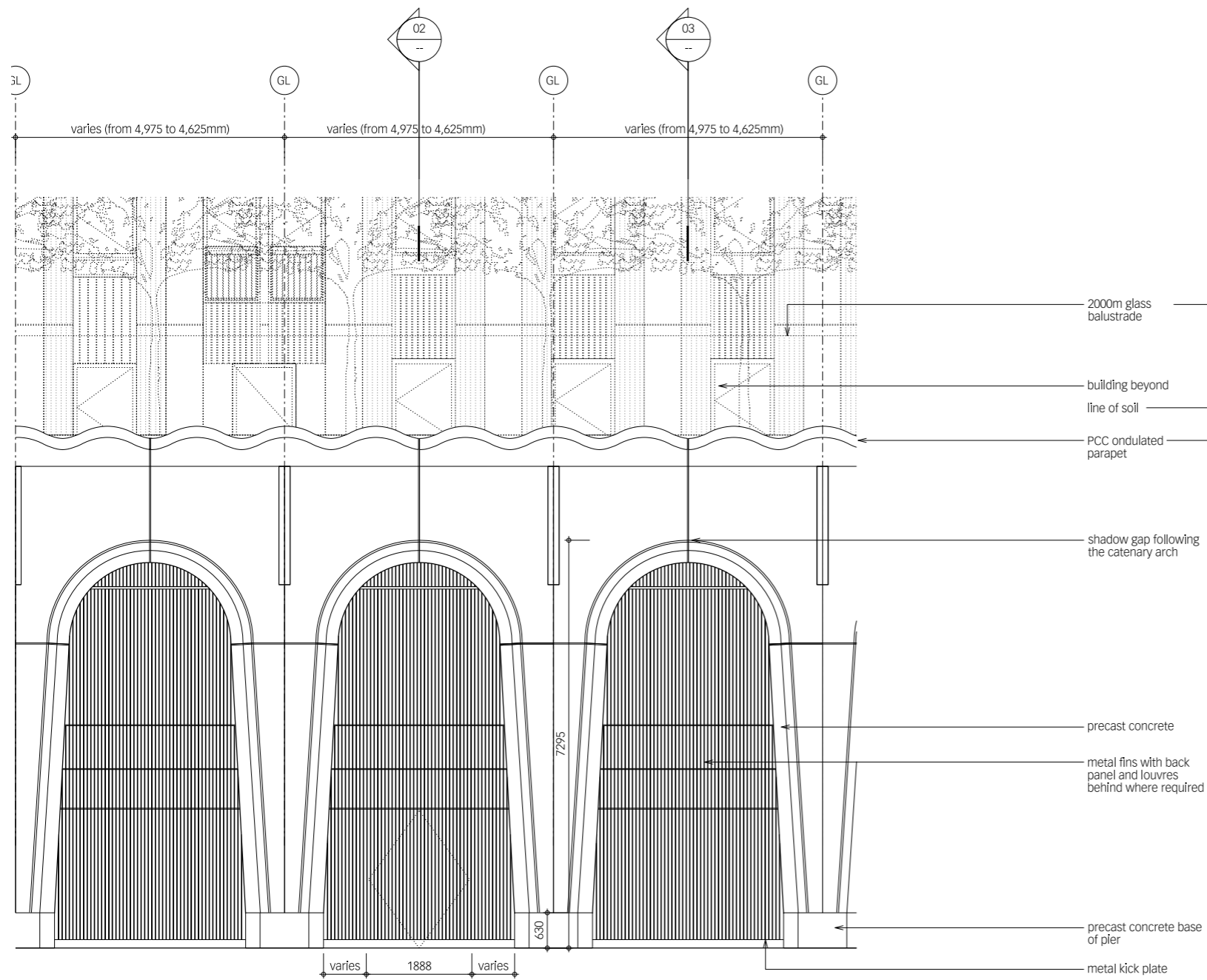
01 retail elevation



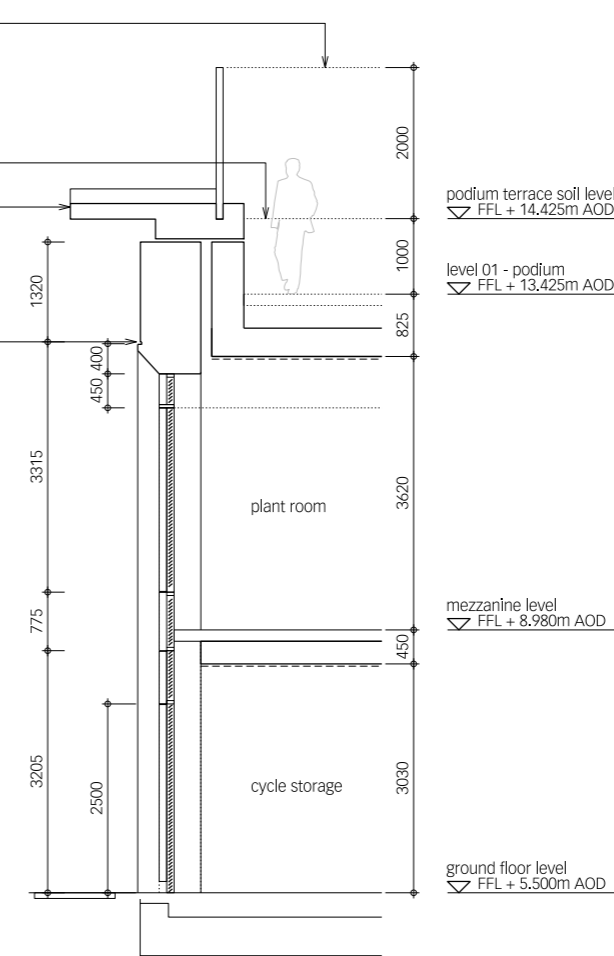
02 retail entrance section



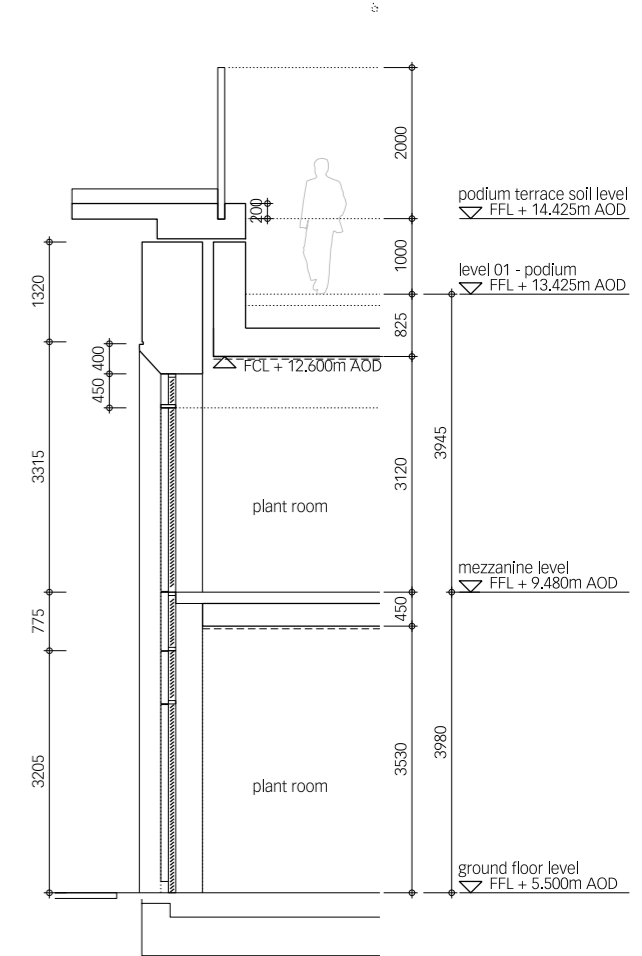
04 retail window section - north and west facades



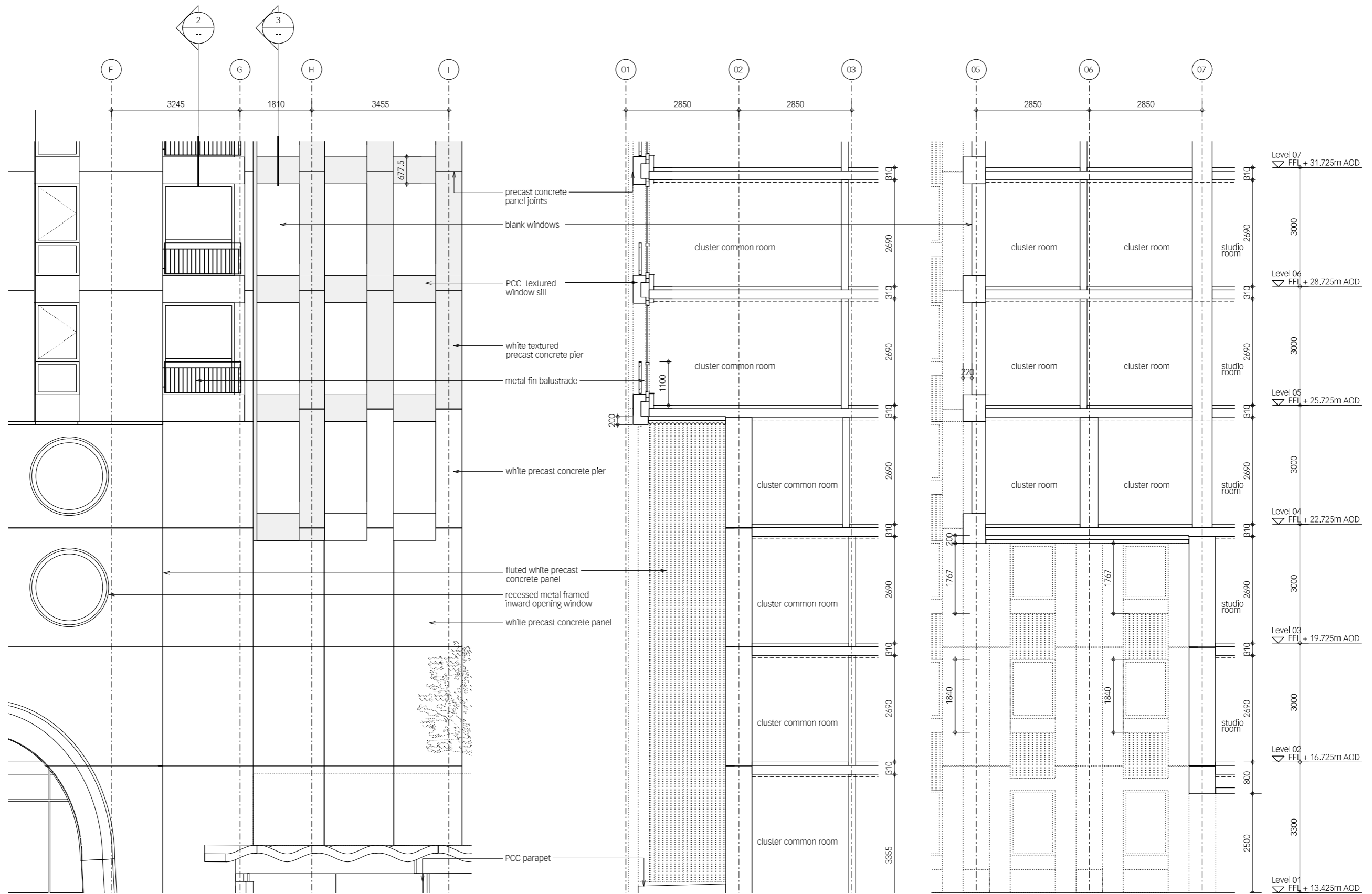
01 plant room / cycle storage elevation



02 louvred entrance section



03 louvred window section

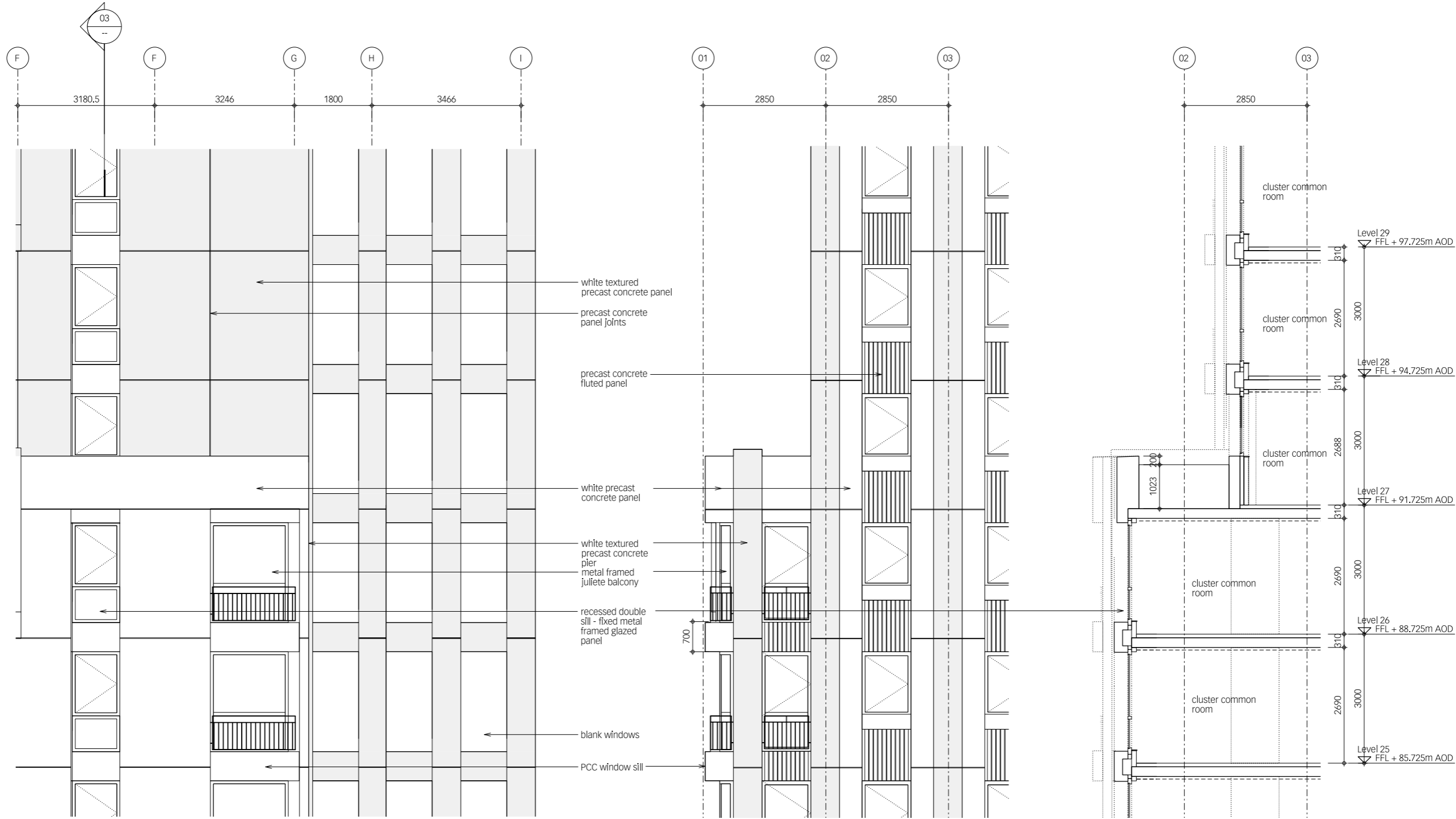


01 south facade - base of tower elevation

02 section

03 section

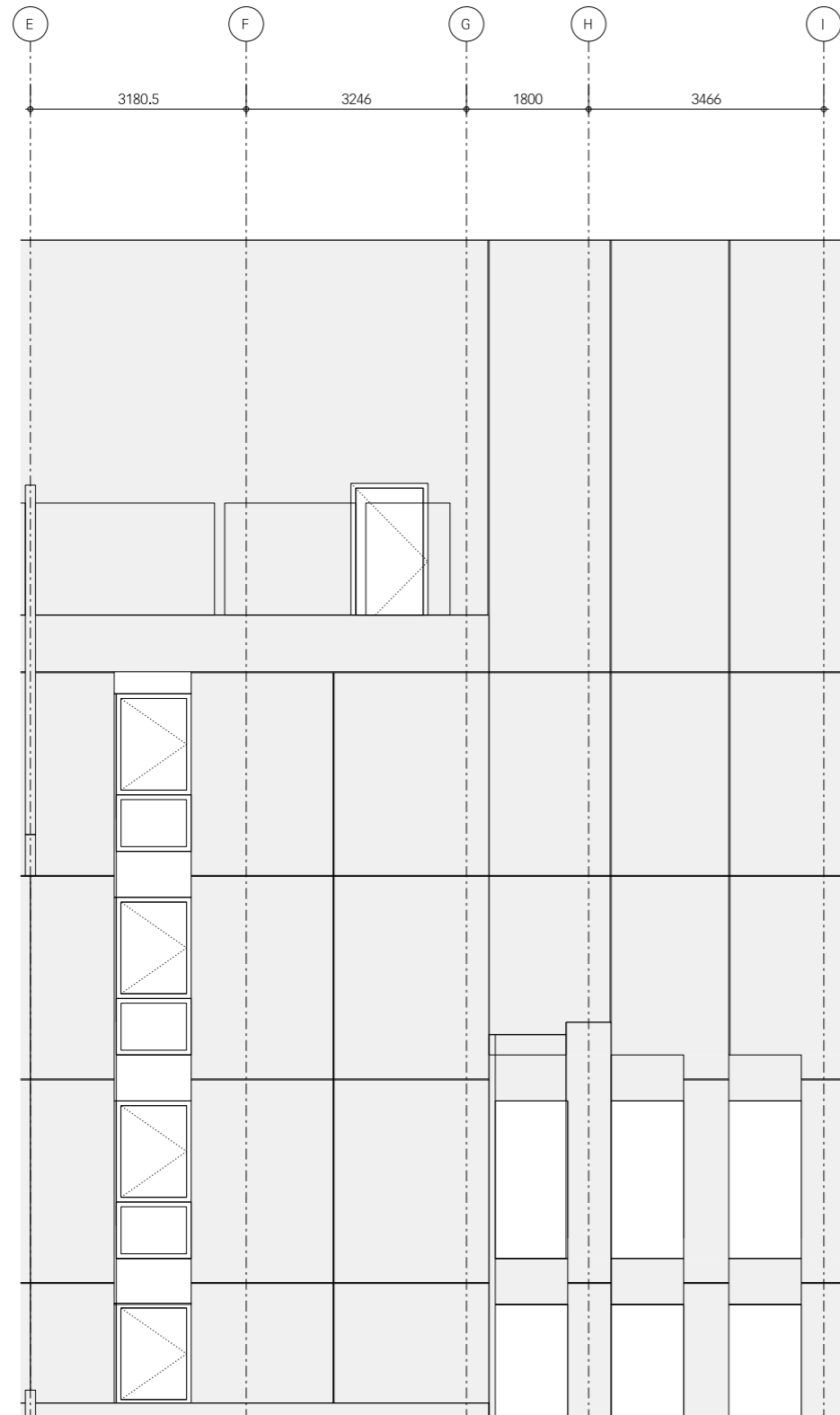
bay study - south / east elevation



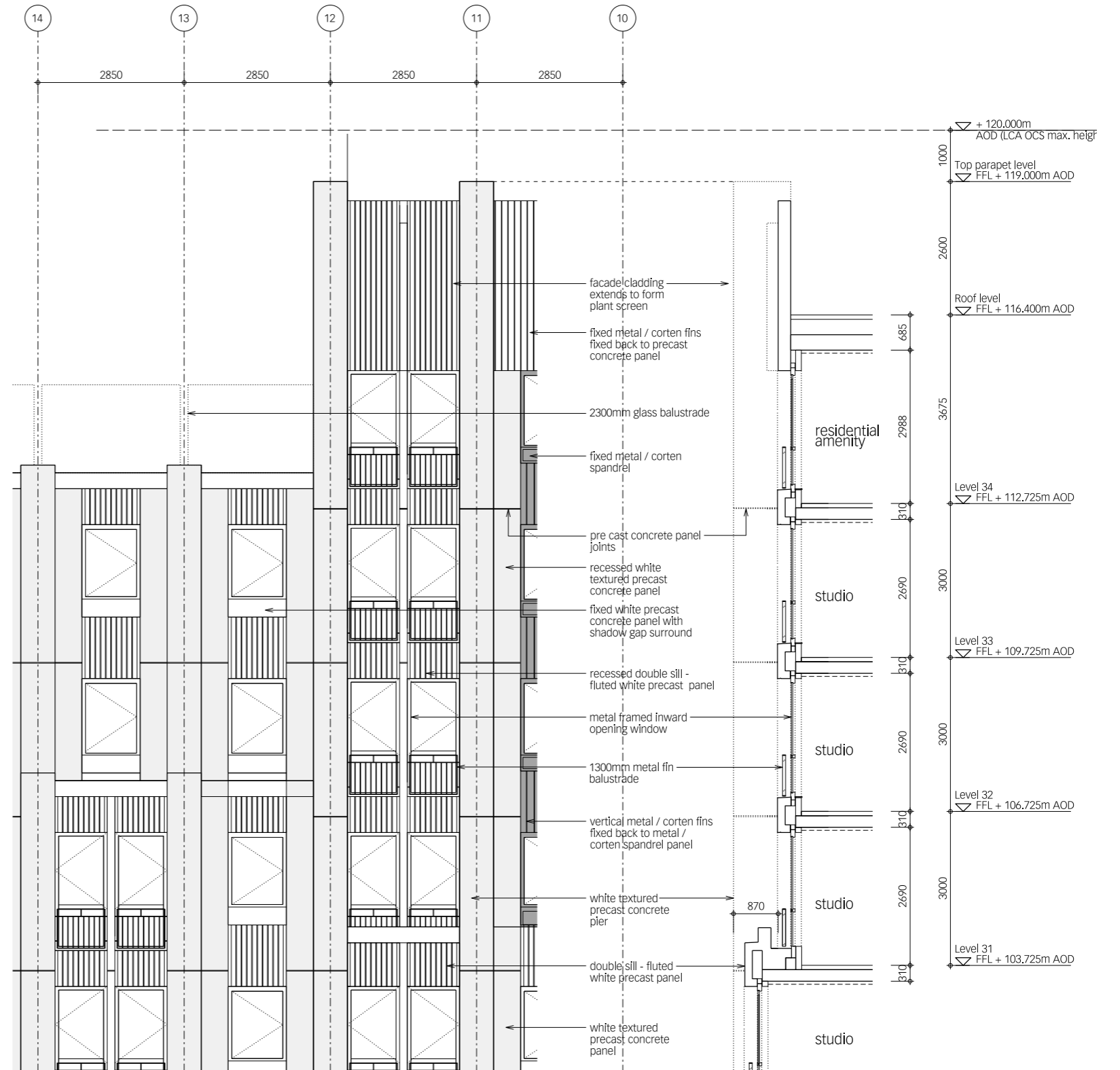
01 south facade - middle levels elevation

02 east facade - middle levels elevation

03 section



01 south facade - top of the tower elevation



02 east facade - top of the tower elevation

03 section

comparative visuals - consented scheme (comparison)



01 view looking south - consented scheme



02 view looking south - proposed scheme

comparative visuals - consented scheme (comparison)



01 view looking north - consented scheme



02 view looking north - proposed scheme

comparative visuals - consented scheme (comparison)



01 view looking east from across the Thames - consented scheme



02 view looking east from across the Thames - proposed scheme

05

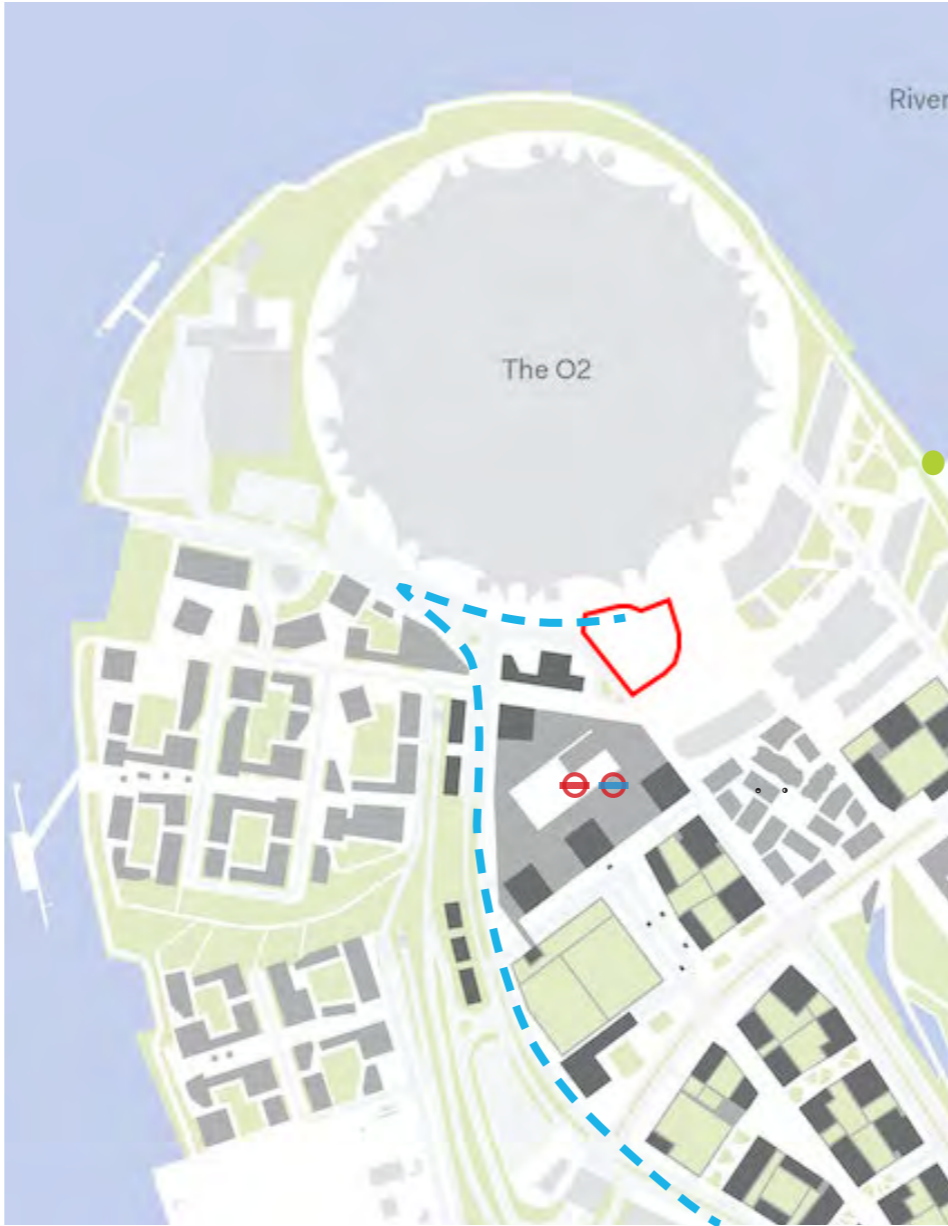
technical design

- servicing strategy within context of masterplan
- access arrangements
- student residential cycle parking
- retail cycle parking
- cycle stands
- car parking
- deliveries and servicing
- waste energy
- students moving in and out strategy
- fire strategy

servicing strategy within context of masterplan



01 vehicular access



02 services access



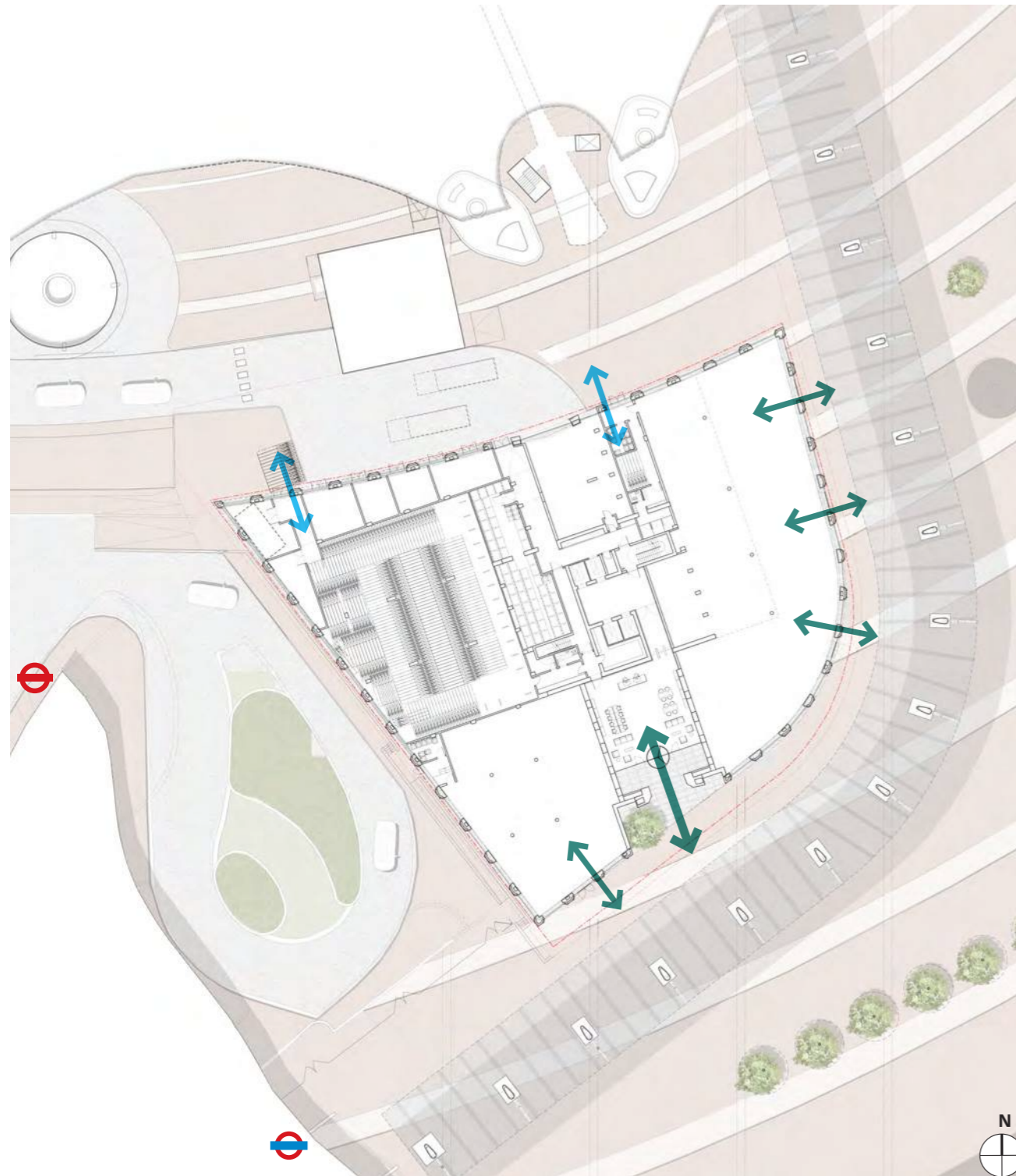
03 cycle routes



- key:**
- plot boundary / N0201 plot
 - taxi drop off
 - car drop off
 - The O2 service road
 - - - vehicular access
 - North Greenwich bus and tube station



- key:**
- plot boundary / N0201 plot
 - - - vehicular services access
 - North Greenwich bus and tube station

- key:**
- plot boundary / N0201 plot
 - main cycle routes
 - North Greenwich bus and tube station



01 pedestrian and cycle access at ground floor level

key:

-  pedestrian access
-  cycle access
-  site boundary

The proposed site access for pedestrians to the residential element will be on the southern boundary via Peninsula Square. The two retail units will have active frontages onto Peninsula Square with their own access points. Cycle access to the student cycle store on the ground level will be taken from the north via the taxi rank.

Access to the retail cycle store will be taken from the north via Peninsula Square. It is important to note that no cycling is allowed on Peninsula Square, so bikes will be wheeled from the nearest access point. Access to the servicing area will be taken from The O2's servicing road via security Gate 3.

student residential cycle parking

For the student accommodation element, the London Plan requires 0.75 cycle spaces per unit and one visitor space per 40 units. For the 820 student units this results in:

- $820 * 0.75 = 615$ spaces for students
- $820/40 = 21$ short stay for visitors

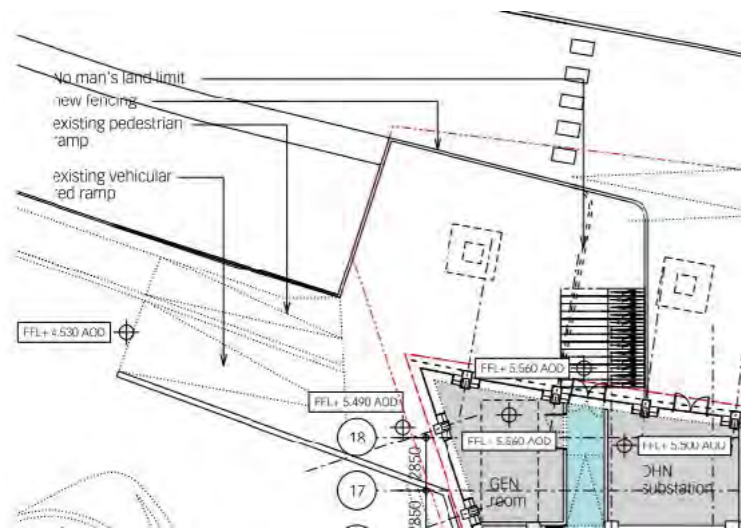
The full provision of 615 long stay cycle spaces is located in a covered, lit, and secure location at ground level, accessed from the land to the north of the building, which in turn is accessed from the 'red ramp' to the north of the taxi rank. Due to the level difference, there is no direct access to the cycle store from the taxi rank.

Access to the student visitor and long stay cycle parking is via the land to the north of the development rather than from the western side. This route provides a clear wide unobstructed route to the cycle store door, allowing cyclists to ride right up to the building. This is the only location where cyclists would not have to push their bikes up to the building. The revised access avoids the narrow elements and reduces conflict between users.

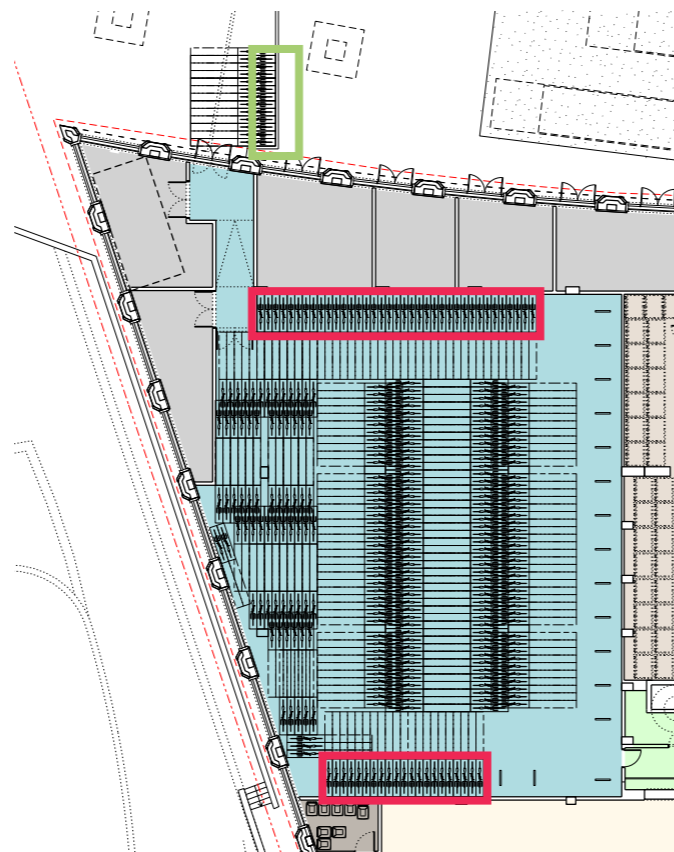
The doors to the cycle stores will be able to open in both directions. Normally they will open inwards, but will be able to open outwards in the event of a fire.

In accordance with London Plan standards, a total of 615 cycle spaces will be provided of which 5% (31 spaces) will be accessible for larger/non-standard bikes, based on widely spaced Sheffield stands (1.8m spacing) with at least a further five percent (31 spaces) being provided as Sheffield stands underneath double racks (boxed in red below). The remainder of the spaces are standard double racks with 2.5m aisles as requested by TfL.

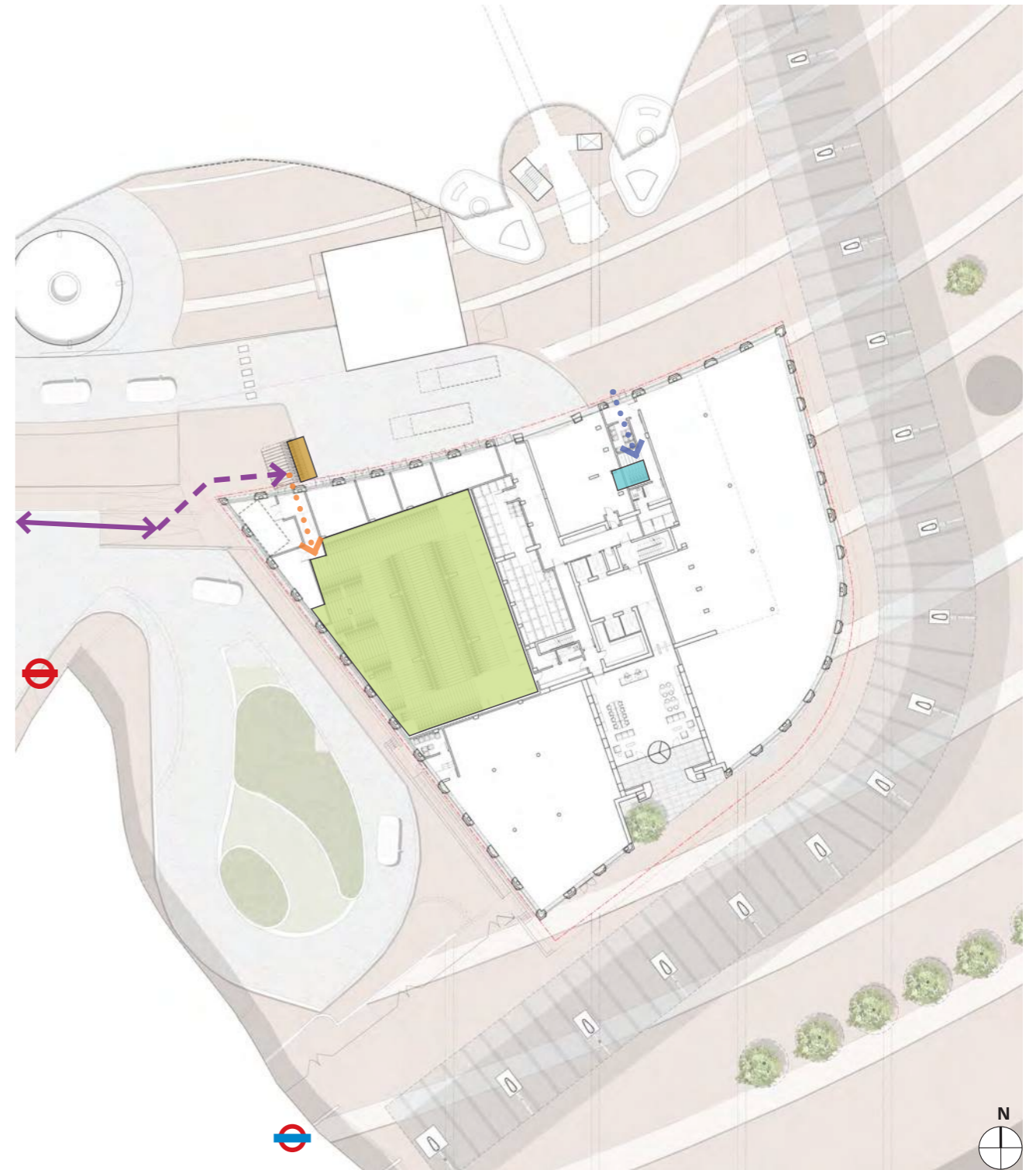
Visitor parking for 21 bikes is located outside of the cycle entrance to the north of the site (boxed in green). This allows the visitors to cycle up to the building before locking their bike and being met / escorted into the building by the student they are visiting.



01 ramp access to student cycle store



02 visitor and DDA cycle storage locations



03 cycle storage and access strategy on ground floor level

key:

- primary bicycle approach by road
- bicycle approach along shared surface
- student cycle storage access
- retail cycle storage access
- student long stay cycle storage
- student short stay cycle storage
- retail cycle storage
- site boundary

As the current use is not yet known we would assume the most robust requirement of 1 per 175sqm. The table below shows the expected requirements for the possible retail units.

This results in a need for eight cycle parking spaces. There are twelve cycle parking stands for staff included within the development. These take the form of a double stacker with 2.5m wide aisle.

Staff cycle parking is also accessed from the north but to the east of the hoarding, requiring cyclists to walk their bikes across Peninsula Square.

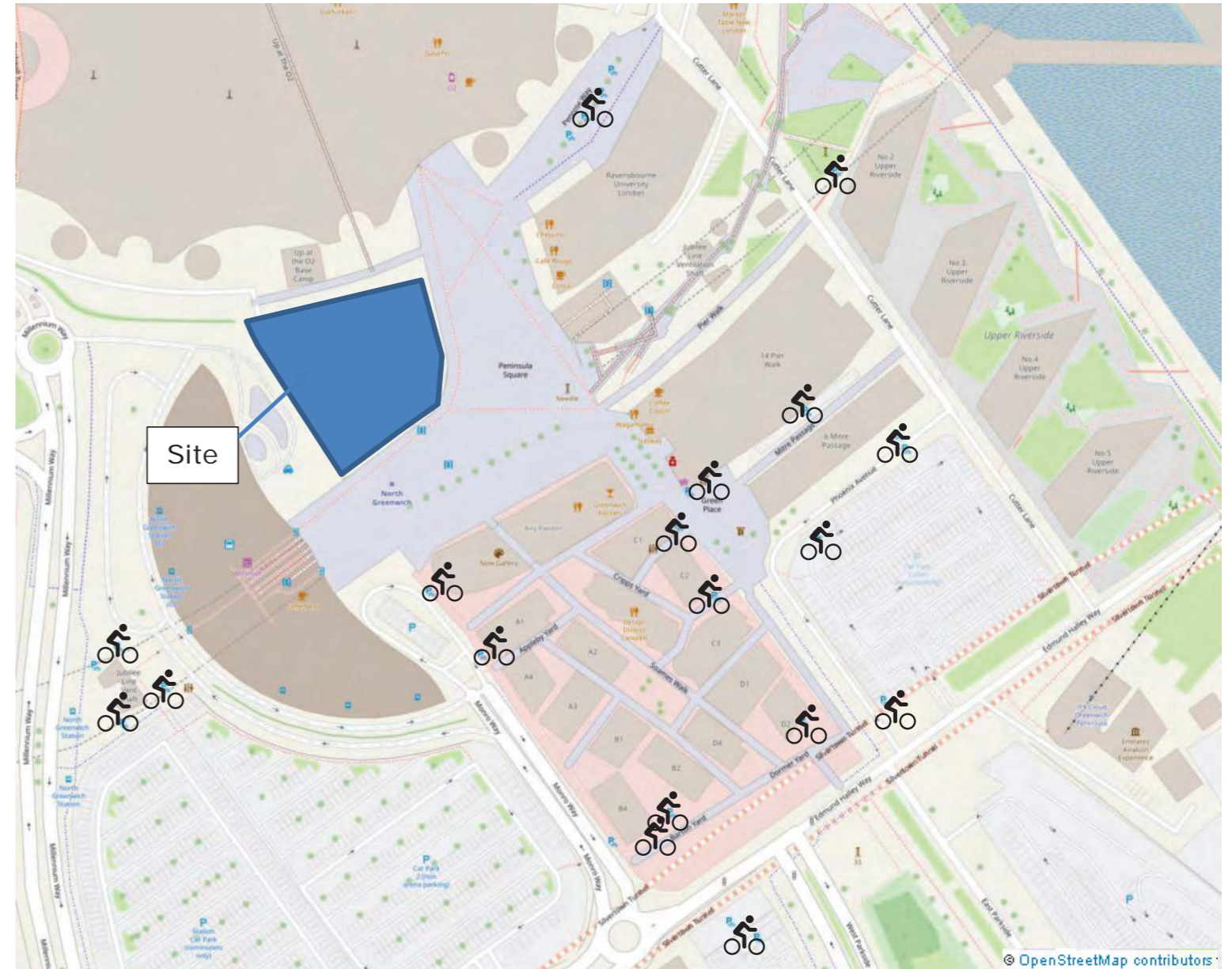
Short stay cycle parking spaces for the retail uses are not proposed to be provided adjacent to the scheme as this would have a detrimental impact on Peninsula Square, as the main pedestrian route between the public transport interchanges and The O2 which could increase the potential for conflict with pedestrians. This is the same principle that has been agreed for all the previous planning applications associated with The O2, and in particular, the previously consented residential scheme with ground floor retail on this plot granted approval in 2018.

Approximately 80 cycle spaces are provided at North Greenwich Interchange opposite the bus stops to encourage the use of cycles and additional cycle parking is expected to be provided at the station in the future. A further 100 cycle spaces are located in The O2 car parks. These stands are available for use by all visitors to The O2 and the surrounding facilities.

Additionally, cycle parking is available adjacent to Ravensbourne University on Penrose Way, Mitre Passage, Phoenix Avenue, Green Place, Cripps Yard, Barton Yard and Monro Way. The total provision at these locations is at least 350 spaces. The locations of all the available public cycle parking within the vicinity of the site is shown opposite.

Subject to a further review, TfL appeared amiable to the proposal not to require cyclists visiting the retail element to have to push their bikes across the square and to utilise the stands on the periphery of the square instead.

Land use		Cycle parking	
		Long-stay	Short-stay
A1 / E(a)	Food retail	from a threshold of 100 sqm: 1 space per 175 sqm	from a threshold of 100 sqm: first 750 sqm: 1 space per 20 sqm Thereafter: 1 space per 150 sqm
	Non-food retail	from a threshold of 100 sqm: first 1000 sqm: 1 space per 250 sqm thereafter: 1 space per 1000 sqm	from a threshold of 100 sqm: first 1000 sqm: 1 space per 60 sqm. Thereafter: 1 space per 500 sqm
A2-5 / E(b), E(c), Sui generis	Financial / professional services; Cafes and restaurants; Drinking establishments; Take-away	from a threshold of 100 sqm: 1 space per 175 sqm	from a threshold of 100 sqm: 1 space per 20 sqm



01 locations of public cycle parking

cycle stands

The cycle storage has been carefully designed to ensure it is inclusive and easily accessible for residents of all ages and abilities, both for long and short stays.

As can be seen in the adjacent images, the Josta two tier stand can accommodate a wide range of cycle types, including children's bikes, bikes equipped with rear child seats, folding bikes, bikes with rear panniers and further types. Large non-standard cycles will be stored on the Sheffield stand.



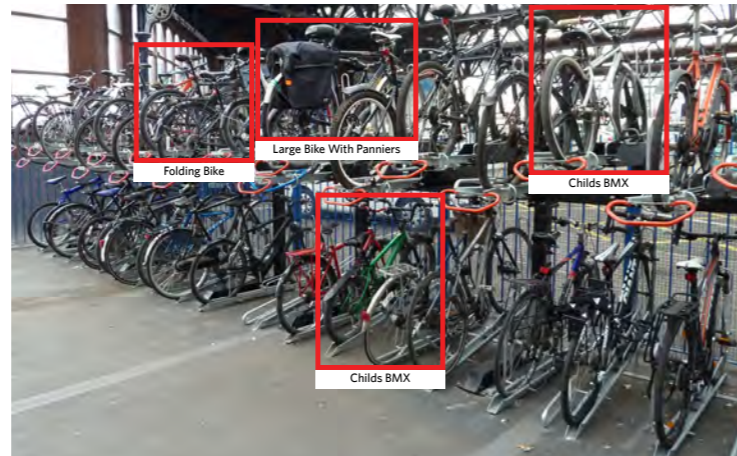
01. Various bikes in Josta 2-Tier



03. Child's bike



04. Child's bike



05. Various bikes in Josta 2-Tier



06. Child's bike



07. Adult bike with rear child seat



08. Folding bike in top position



09. Cargo cycle accommodated by Sheffield stand



10. Larger cycle accommodated by Sheffield stand

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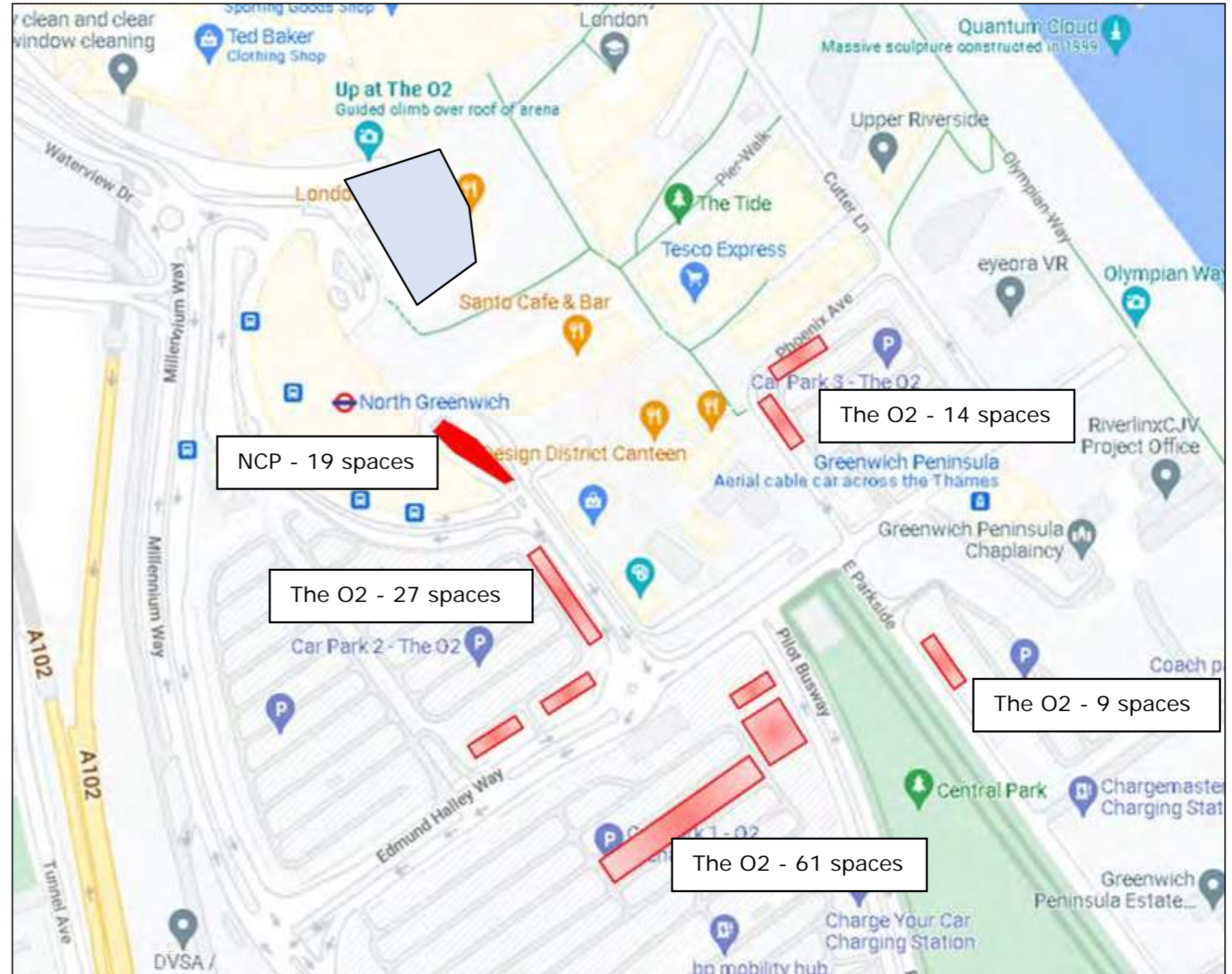
car parking

The proposed development does not seek to provide specific disabled persons parking.

There are a total of 19 blue badge spaces located adjacent to North Greenwich station (80m), operated by NCP. These are free for use by blue-badge holders.

There are a total of 111 spaces located within the four O2 car parks, however these are not free to use for blue-badge holders and should be pre-booked with The O2.

The proposed development is well located to benefit from access to public transport and local amenities via step free access for disabled persons. In addition, it also makes provision for cycle parking facilities for disabled persons. On this basis and considering the constrained nature of the site, it is reasonable for the development not to provide any disabled parking on site.



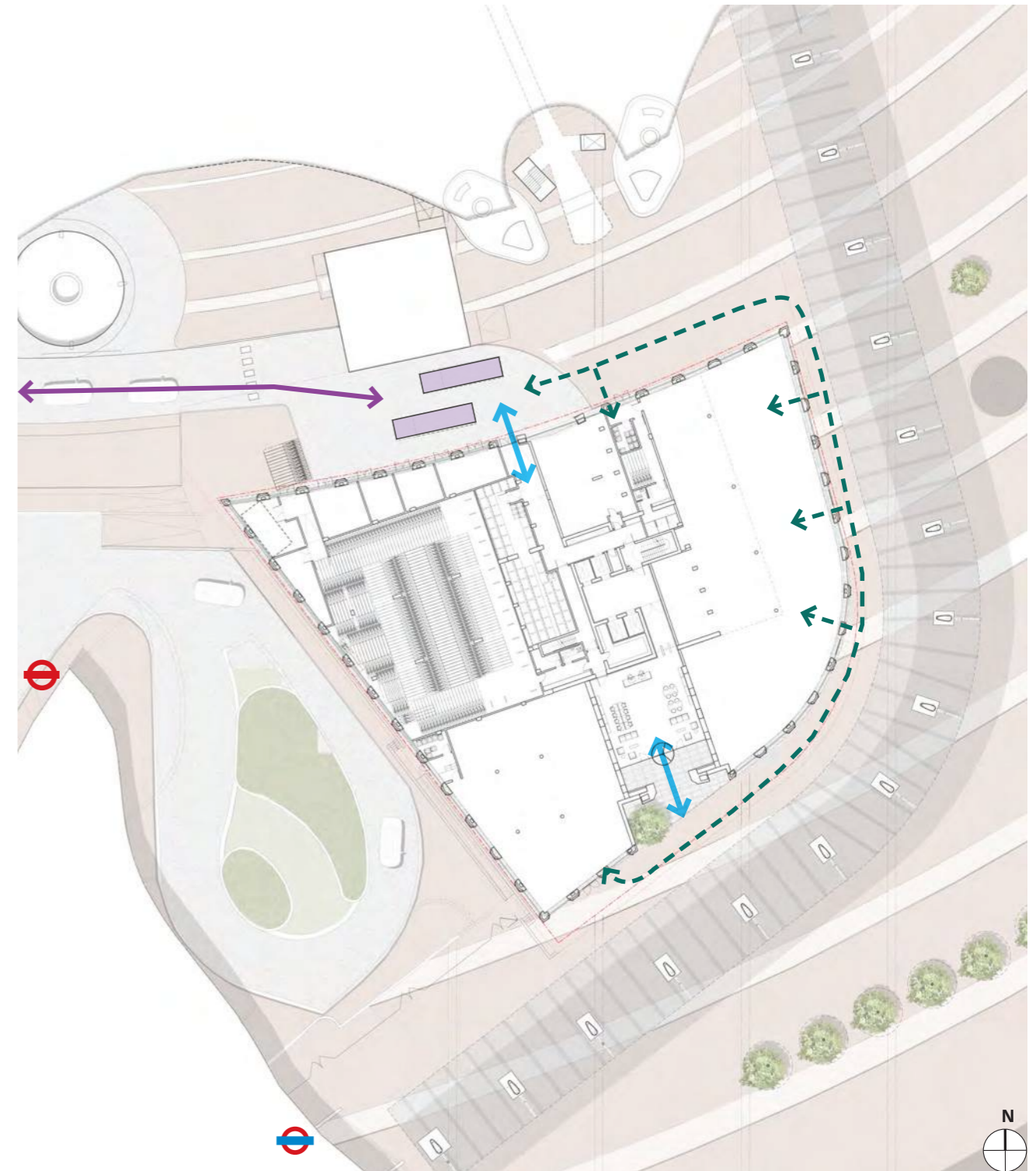
01 locations of publicly accessible blue badge parking bays

Service vehicles will access the site from The O2 service road, having passed through the relevant security checks. Once within the secure area they can reverse up to the rear of the building adjacent to the service corridor.

The service area can accommodate up to three transit van sized vehicles, or two 8m rigid lorries simultaneously and can be used to service both the residential properties and the commercial units.

Larger vehicles will need to park in an echelon fashion to ensure that access is always maintained, with a clear 2m access area to the rear of the vehicles. The servicing has been assessed with swept path analysis to ensure it is reasonable and practical.

Student deliveries will be either via the service entrance or, in the case of small deliveries, via the main entrance. Retail deliveries will take place via the secure back of house area, before being transported through the hoarding and into the front of the retail units.



01 service vehicle delivery route

key:

- service vehicle delivery route
- student deliveries
- managed unloading bay
- - - → retail deliveries
- - - site boundary

waste strategy

student

A waste management system will be put in place whereby the students will only place their waste in the bins closest to the doors. The bins will then be managed and rotated by the site management to ensure that there are always empty bins available.

The bin store can effectively be split into two halves. The southern section (on the left in the plan below, boxed in red) where the full / empty bins are stored is managed by the site management, and the northern section adjacent to the bin store doors (boxed in blue), which are the bins that the students will place their waste in.

The Site Management will rotate full bins with empty bins to ensure residents have sufficient capacity without needing to move containers. The students will only be expected to access the bins in the area adjacent to the doors and will not be required to enter the other area of the bin store where the full bins will be located. The current arrangement will allow the students to access nine Eurobins and three smaller food waste bins, so there is adequate easily accessible bins for the students under this managed arrangement.

retail

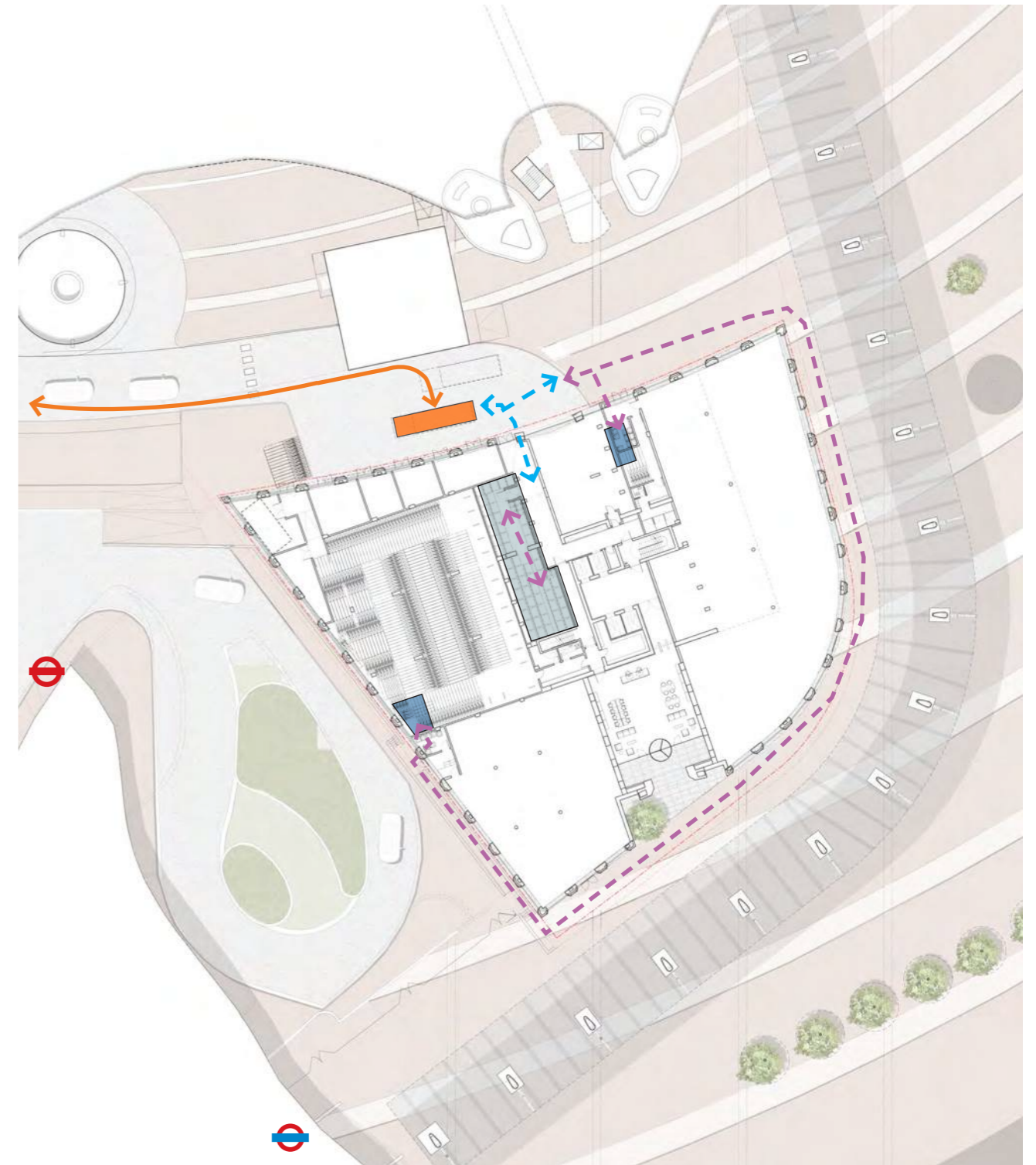
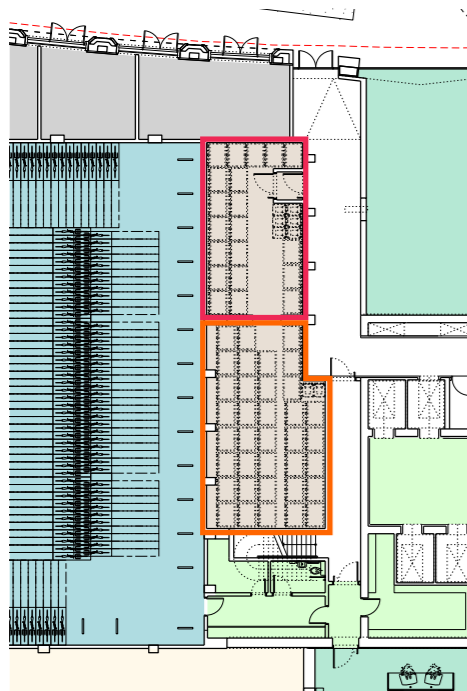
The expected level of bins required for the retail waste is indicated below, although this may vary depending on the end user, and may increase if different units require their own independent bins.

The RBG calc for Retail requires – 2 x 1100 refuse and 2 x 1100L recycling per 1,000m2 floor space = 4 x 1100 refuse, 4 x 1100 recycling so only 1 different. It is expected that the bins may be collected more often in order to reduce the quantum of waste moved prior to collection.

Separate refuse stores are provided on the ground floor for the retail waste. Waste from the smaller retail unit will be transported from the temporary bin store adjacent to the unit to the rear bin collection area where waste will be collected from within the back of house area. There is sufficient space for the vehicle to manoeuvre close to the student bin store doors.

It is intended that student residential waste collections will be undertaken by RBG (as advised by RBG waste officers) and retail/commercial waste will be collected by a private waste contractor.

8 Day Storage					
General (EuroBins)	Recyclable (Litres)	Further Split of Recyclable Waste			
		Paper/Card	MDR	Organic	Glass
1100	1100	1100	1100	500	240
3	6	5	1	2	0



01 waste strategy

key:

- vehicular service access
- refuse collection vehicle
- retail refuse storage
- student refuse storage
- management handling
- waste operative handling
- site boundary

This section sets out the proposed moving in and out strategy and the measures which will be implemented.

pre-arrival

A Resident Handbook will be issued to all students prior to moving in and it will communicate the details of how the site will be operated and managed as well as travel advice. It will notify students that the site is car-free, and they will be prohibited from bringing their own cars with them by condition of their tenancy. A copy of the handbook will also be available online.

The procedure for moving in will also be issued so that this can take place efficiently. Any queries can be discussed with the site management team at this stage to minimise any potential issues on moving day.

All students will be asked to register and sign in on the Resident Portal prior to moving into the building. They will be required to provide information on their arrival date and expected mode of arrival.

It is recognised that in some cases, students will use the private car or use a taxi to bring their belongings to the site. If this is the case, then they will need to pre-book a timeslot at this stage and be notified that there will be a time limit for unloading their belongings.

There are various public car parks that can be used if required, and residents will be given details of local car parks in the travel advice provided.

on the day

Peak activity is typically in September when students arrive, with the weekends generally being the most popular days.

Students arriving by public transport will be encouraged to travel outside of the weekday peak periods to reduce journey time delays and the impact on the local public transport network. They can check in at any time on that day, between 8am and 8pm. Checking in outside of this time period can be made by prior arrangement.

For students arriving by car or taxi, unloading can take place from the service area to the north of the building accessed through Gate 3. These servicing slots will be booked in advance. The area backing onto the building can accommodate up to nine vehicles at a time, with all being independently accessible. This equates to 27 vehicles an hour.

There will be no unloading from the taxi rank adjacent to the development.

The following measures will be implemented to minimise the impact of vehicles unloading:

- additional support staff to be provided to aid unloading of vehicles.
- trolleys are provided to aid with the easy of moving luggage
- a temporary secure storage area to be provided on ground level to enable cars to
- unload and move the vehicle.
- temporary signage and additional staff are in place to indicate where to go

A member of staff will check students' pre-booked timeslot confirmations. It is recognised that under some circumstances, students may arrive later or earlier than their allocated timeslot. To minimise disruption, timeslots will be assigned to allow for some spare loading time capacity (e.g. 15% overhead of space). If a vehicle is early, site management reserves the right to instruct vehicles to nearby car parks and return during their allocated timeslots. If a vehicle is late and there is no space available, they will be instructed to return at an agreed later timeslot.

Loading times can typically be expected to be no longer than 20 -30 minutes for each vehicle with assistance of staff and the provision of a ground floor storage area. Therefore, it is proposed that timeslots will be 20 minutes each which should minimise the impact of these vehicles on the surrounding highway network. This will be reviewed on an annual basis.

Should parents wish to stay for longer, they will be advised to use the public car parks.

moving out

The moving out period will be less intensive as it will be spread across a few months. The arrangements will be the same, with students notifying the site management of their last day and booking a timeslot if they will be leaving by car.

If leaving on the final date of the lease agreement students will be required to vacate their

rooms by 10am, storage facilities will be provided for students who will be leaving the premises by car after this time.

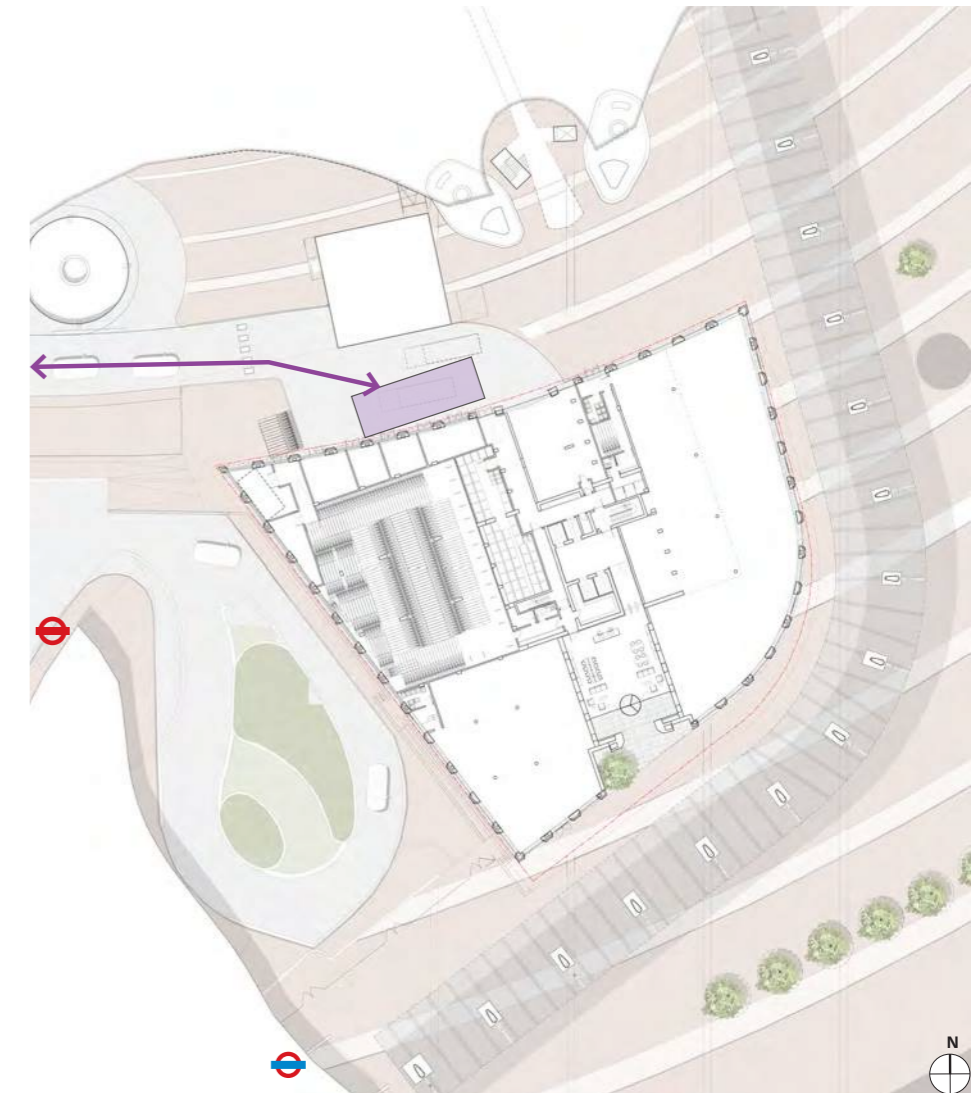
review

The moving in and moving out strategy will be reviewed annually by the site management with RB Greenwich, the Metropolitan Police and TfL Streets Management to ensure up-to date validity with local situation, experience on-site and current best practice and nonconflict with local events, roadworks, and construction.

The moving in / moving out strategy is still being refined and will be tailored to the number of students expected on a given day. However agreement has been sought for the service area to the north to be used to accommodate students arriving with cars, and depending on the number of students either the Management Suite or a small gazebo adjacent to the cars can be used to temporarily store the students belongings.

Based on at least 7 parking bays being available, up to 14 students an hour can be accommodated. Assuming a 12 hour period for arrivals during the moving in / moving out period this equates to over 150 students a day

It should be noted that the units are fully furnished, and as such only personal belongings are expected to be required.



01 moving in and out strategy

key:

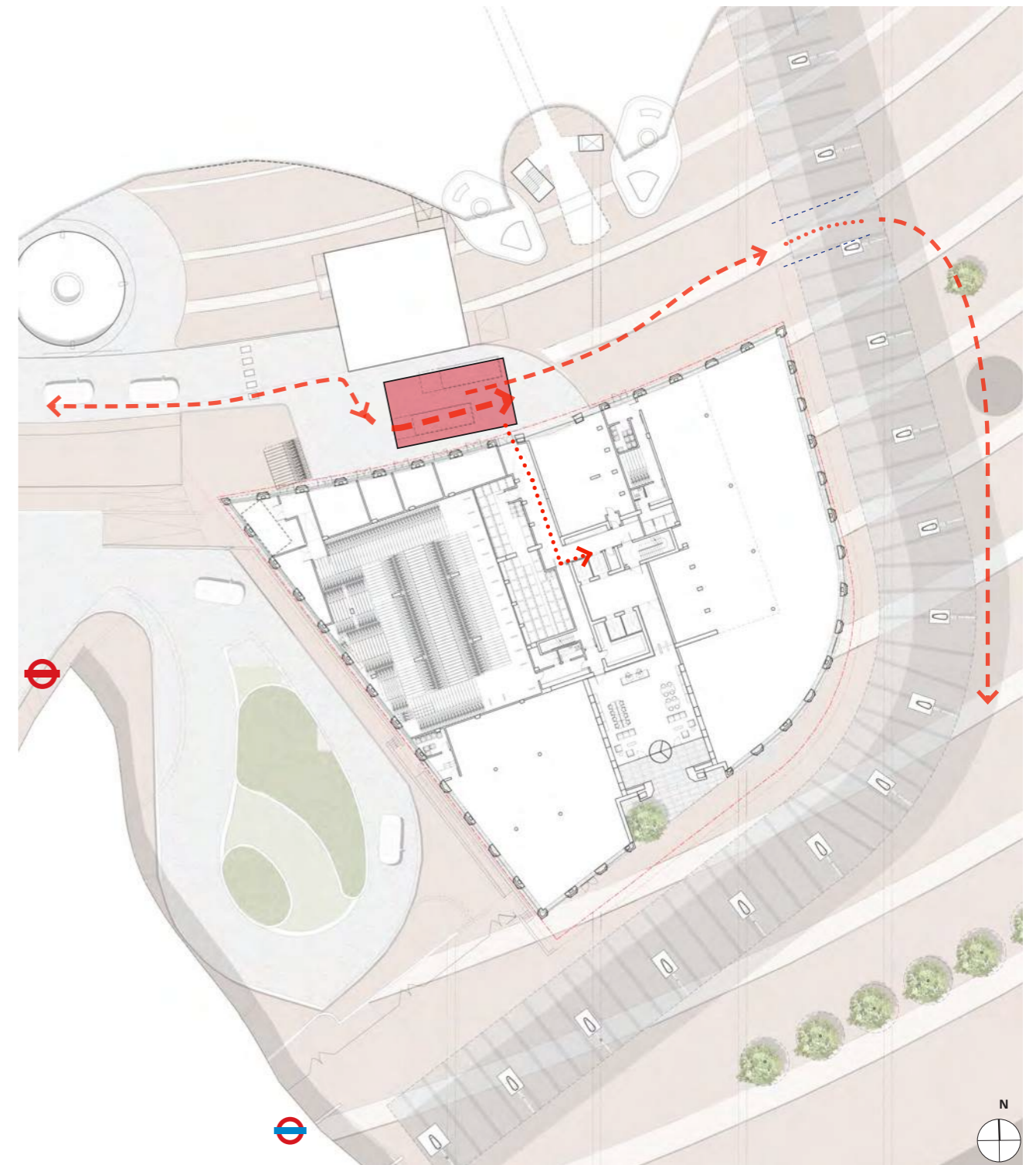
- approach by road
- ▭ managed temporary parking
- - - site boundary

fire strategy summary

The following fire strategy summary has been prepared by Design Fire Consultants and is extracted from their report (ref: Design Note – DN 002.0) dated 17.08.22 which can be found in appendix AP06.

The key aspects of the fire strategy are outlined below:

- The residential student apartments will adopt a phased evacuation strategy, whereby only the occupants within the compartment/zone of fire origin are required to evacuate, although for operational simplicity it is intended that the storey of fire origin will evacuate. Occupants within the remainder of the building can remain in place if they feel safe to do so or can evacuate should they choose to.
- The phased evacuation strategy will extend to the ancillary and commercial areas, which will each form separate compartments/evacuation zones. Where uses involve more than one storey, the evacuation zone would involve all storeys in the zone of fire origin. Occupants within the remainder of the building can remain in place.
- At least two appropriate escape routes are to be provided to all aboveground storeys that are accessible for all occupants. The design achieves this through the provision of two escape stairs, each with a suitable width for escape or fire-fighting, and two evacuation lifts. The core layout has been carefully planned to provide entry to each stair and lift at opposite sides of the central core, with multiple access points and refuge areas available on each of the storeys served. Similar careful planning has been undertaken at Ground Floor to provide multiple exit discharge routes to the rear and front of the building. This approach ensures enhanced robustness within the escape route design.
- Smoke ventilation will be provided to each lobby that provides access to the stairs and lifts serving the residential storeys, with the aim of ensuring an appropriate means of escape can be safely and effectively used at all material times, particularly during fire-fighting operations.
- Internal fire-fighting access will be facilitated by additional lift access specific for fire-fighting operations, as well as dedicated wet rising mains for the provision of fire-fighting water to all storeys.
- Existing hydrants are provided within close proximity of entry points to the rear of the building, where access will be available for fire service vehicles.
- The building will be provided with an automatic sprinkler system throughout. As a minimum this will include a commercial standard system to the lower levels where a residential system may not be appropriate.
- The building will be provided with automatic fire detection and alarm systems throughout. The systems will allow flexibility regarding the initiation and extent of evacuation, and an ability to evacuate the entire building will be available.
- All loadbearing elements of structure will achieve not less than 2 hours fire resistance.
- Secondary power is to be provided to all fire life safety systems from a combination of a generator and localised battery backup.
- All materials forming part of the external wall will be of limited combustibility, achieving Class A2- s1,d0 or Class A1, to either meet or exceed the most recent regulations for such a building.

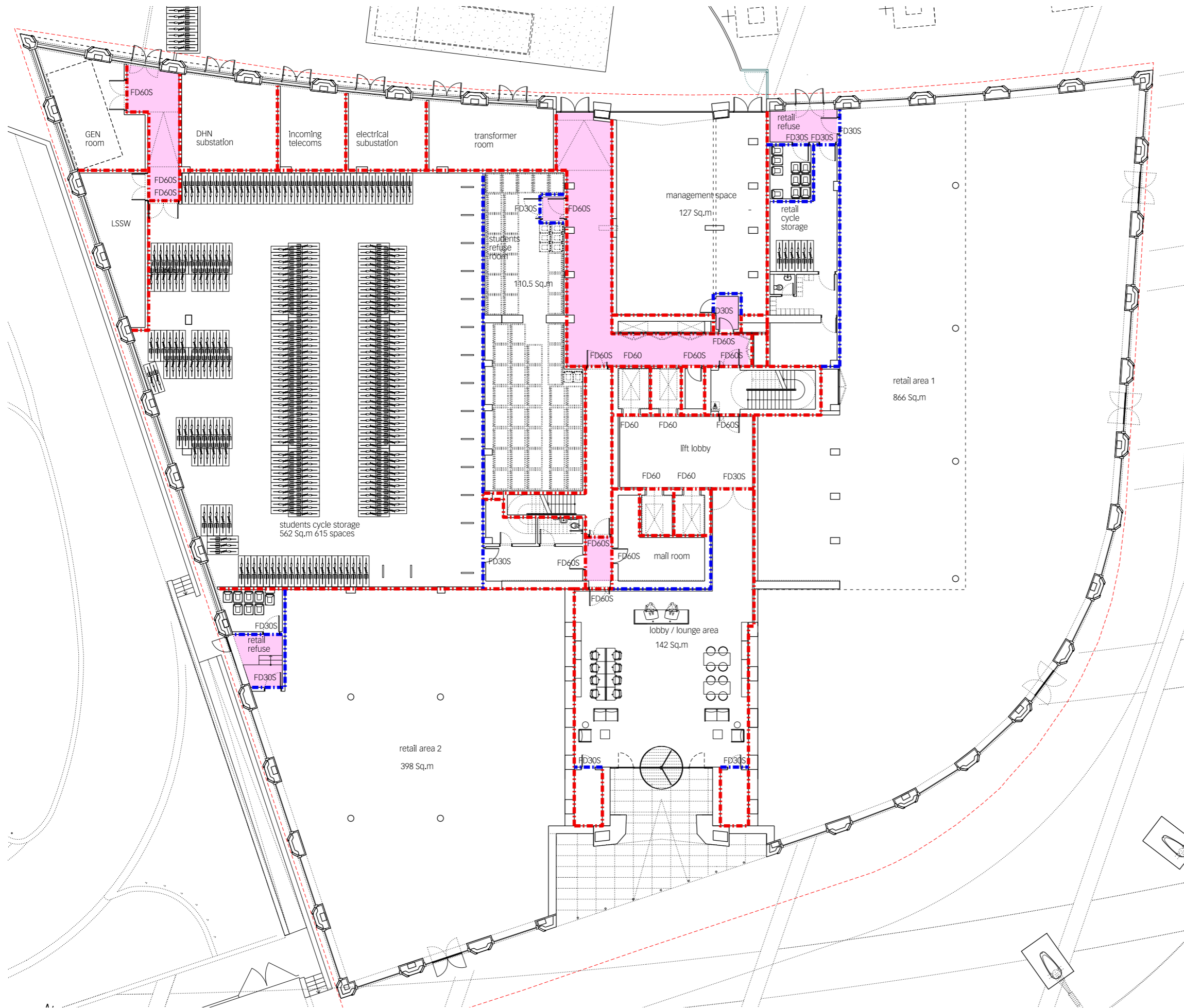


01 Fire tender

- The Fire fighting truck accesses the site via The O2 service road and security gate. Access to the tower core is via the escape corridor to the north.
- A secondary mean of access to the podium is via Peninsula Square

key:

- loading bay
- fire brigade vehicular access
- fire brigade access to building
- site boundary

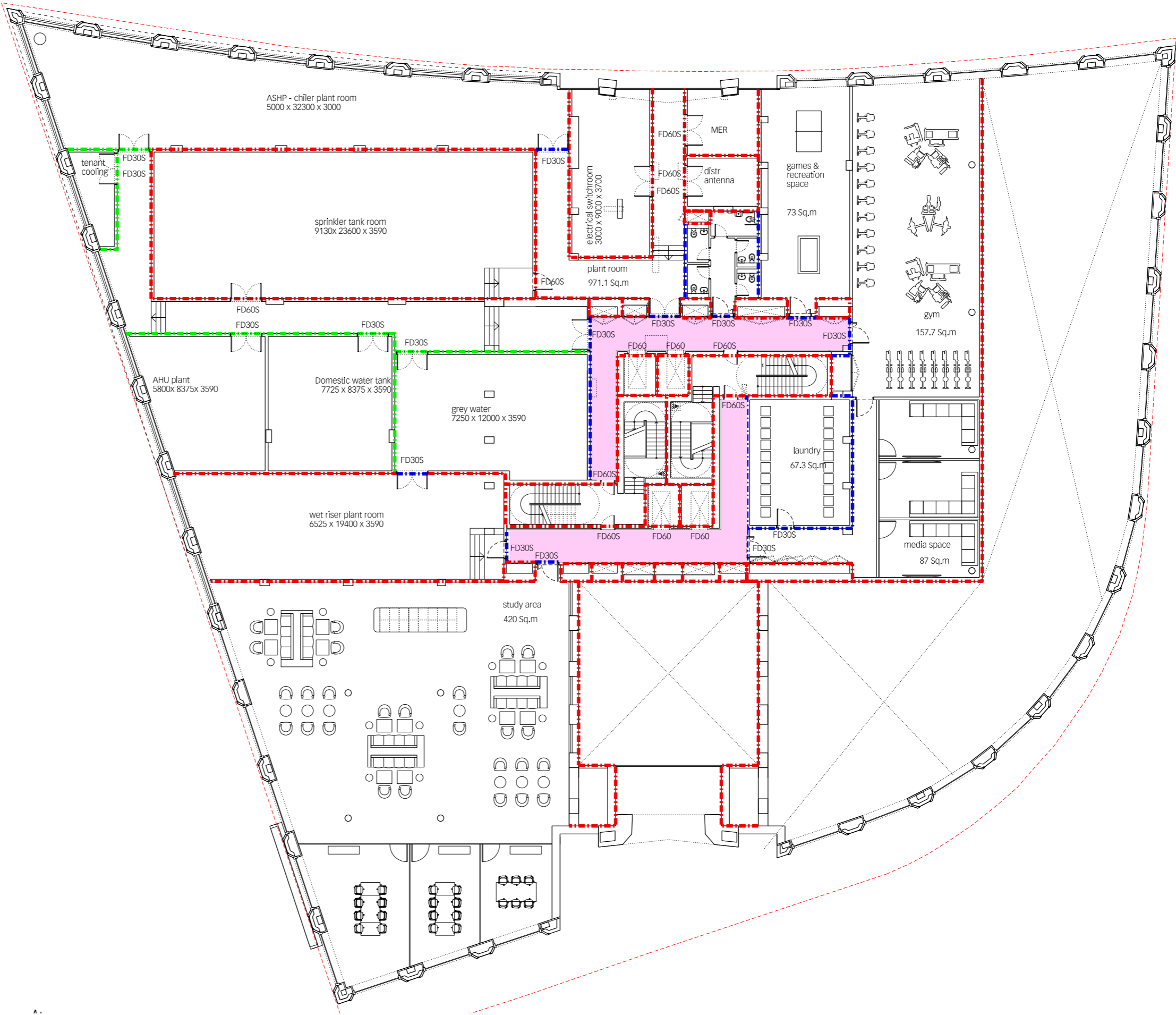


The following diagrams show the proposed fire strategy for the scheme. Two escape stairs are included within the tower core and the smoke protected lobbies are identified along with the performance requirements of fire resisting walls and doors.

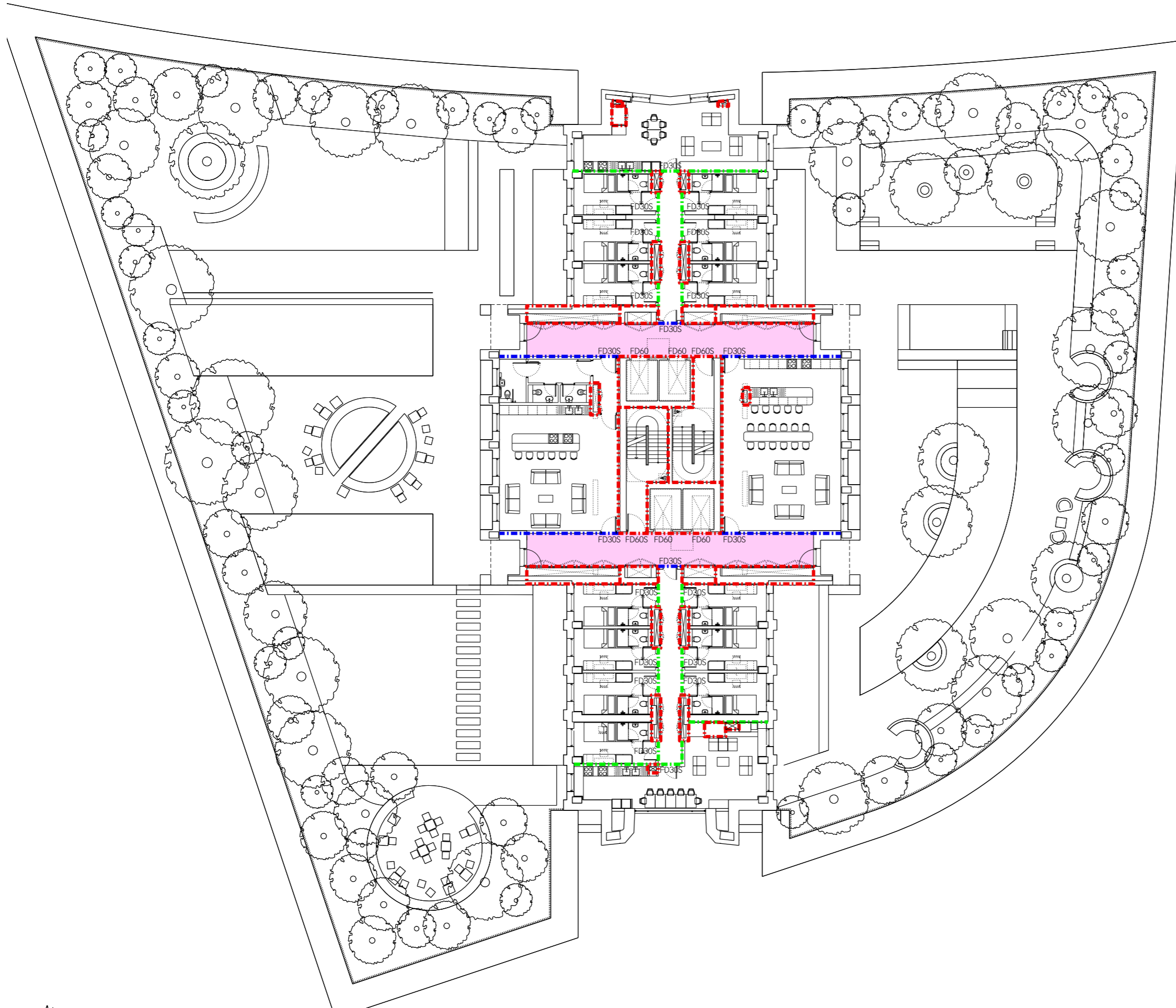
key:

- - - 120 min fire resisting construction
- - - 90 min fire resisting construction
- - - 60 min fire resisting construction
- - - 30 min fire resisting construction
- FD120 120 min Fire Resisting Doorsets
- FD120S 120 min Fire Resisting Doorsets with smoke control
- FD90 90 min Fire Resisting Doorsets
- FD90S 90 min Fire Resisting Doorsets with smoke control
- FD60 60 min Fire Resisting Doorsets
- FD60S 60 min Fire Resisting Doorsets with smoke control
- FD30 30 min Fire Resisting Doorsets
- FD30S 30 min Fire Resisting Doorsets with smoke control
- smoke vented lobby

mezzanine level



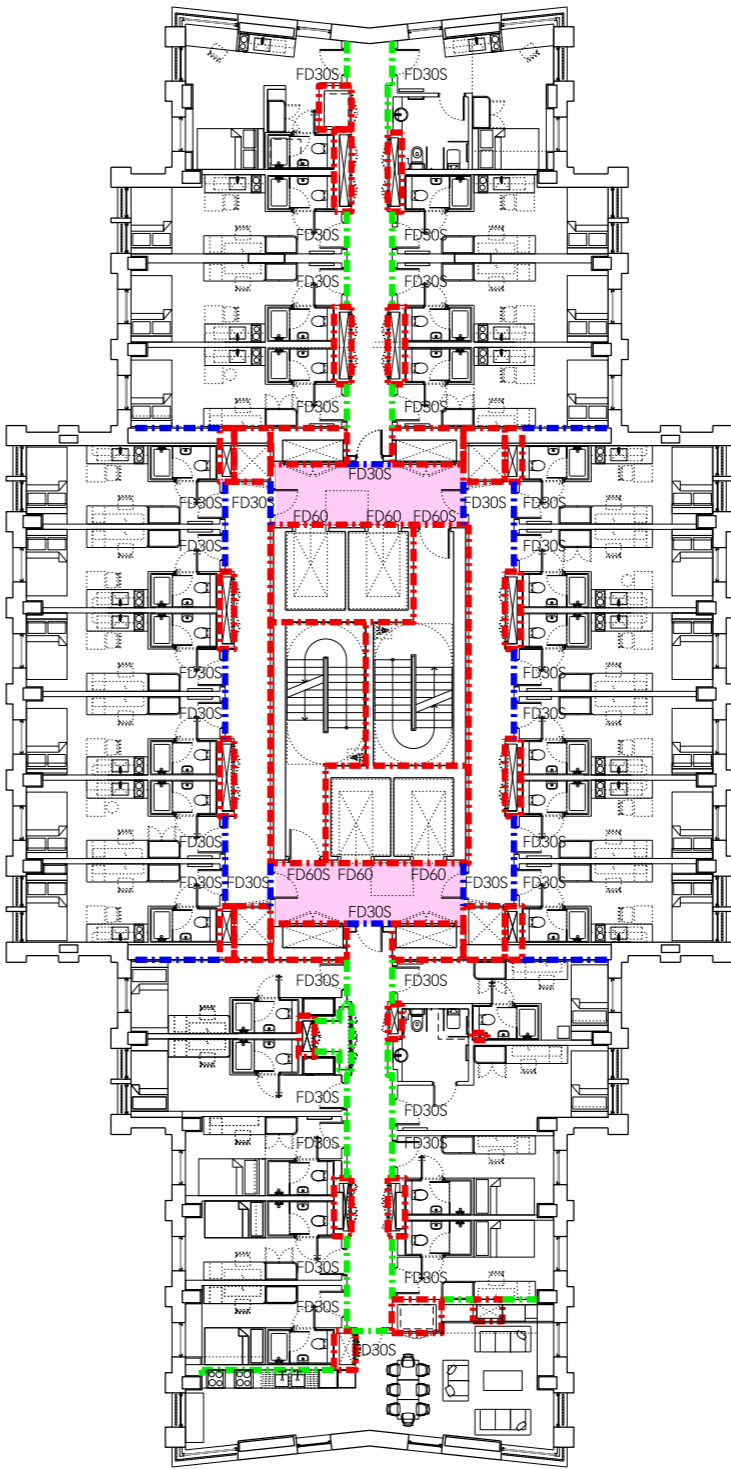
- key:**
- - - 120 min fire resisting construction
 - - - 90 min fire resisting construction
 - - - 60 min fire resisting construction
 - - - 30 min fire resisting construction
 - FD120 120 min Fire Resisting Doorsets
 - FD120S 120 min Fire Resisting Doorsets with smoke control
 - FD90 90 min Fire Resisting Doorsets
 - FD90S 90 min Fire Resisting Doorsets with smoke control
 - FD60 60 min Fire Resisting Doorsets
 - FD60S 60 min Fire Resisting Doorsets with smoke control
 - FD30 30 min Fire Resisting Doorsets
 - FD30S 30 min Fire Resisting Doorsets with smoke control
 - smoke vented lobby



key:

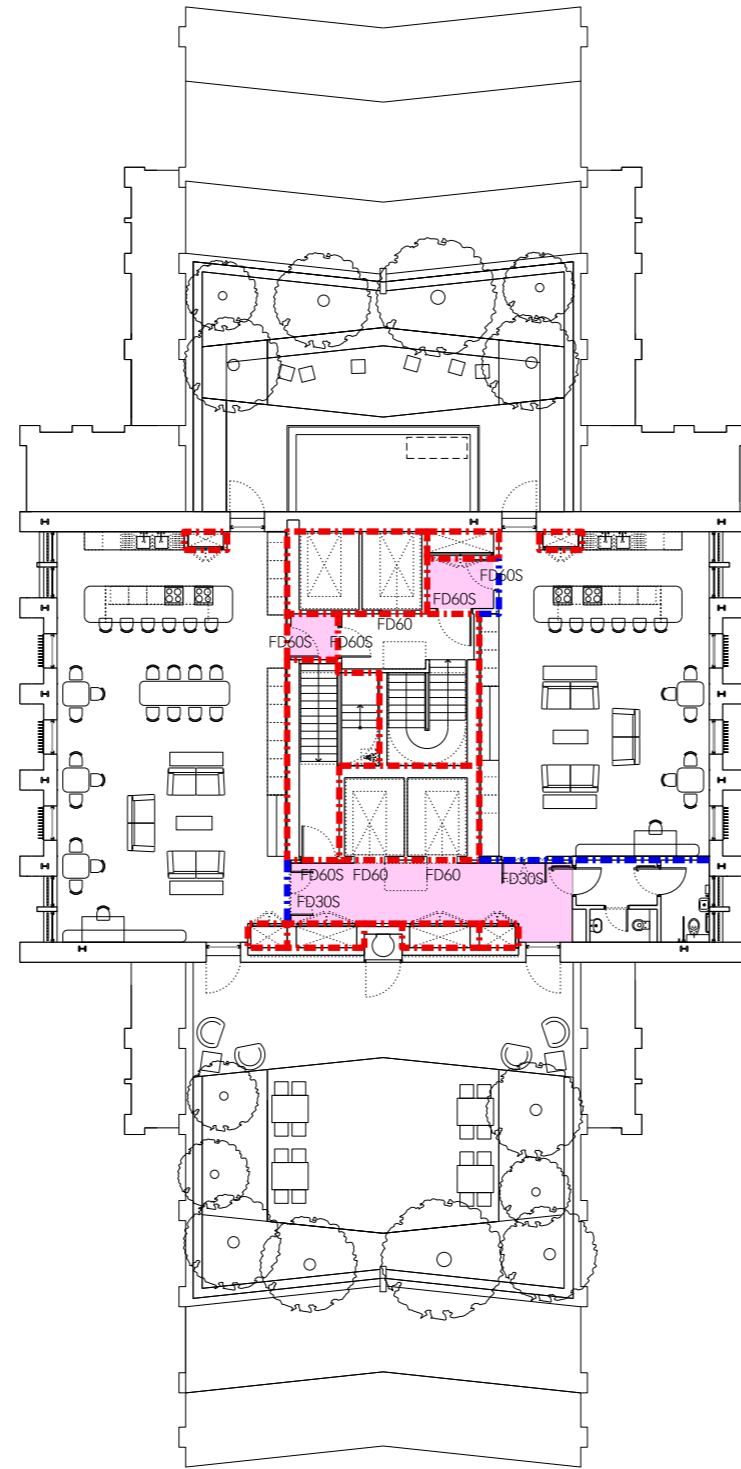
- - - 120 min fire resisting construction
- - - 90 min fire resisting construction
- - - 60 min fire resisting construction
- - - 30 min fire resisting construction
- FD120 120 min Fire Resisting Doorsets
- FD120S 120 min Fire Resisting Doorsets with smoke control
- FD90 90 min Fire Resisting Doorsets
- FD90S 90 min Fire Resisting Doorsets with smoke control
- FD60 60 min Fire Resisting Doorsets
- FD60S 60 min Fire Resisting Doorsets with smoke control
- FD30 30 min Fire Resisting Doorsets
- FD30S 30 min Fire Resisting Doorsets with smoke control
- smoke vented lobby

typical upper floor



key:

- - - 120 min fire resisting construction
- - - 90 min fire resisting construction
- - - 60 min fire resisting construction
- - - 30 min fire resisting construction
- FD120 120 min Fire Resisting Doorsets
- FD120S 120 min Fire Resisting Doorsets with smoke control
- FD90 90 min Fire Resisting Doorsets
- FD90S 90 min Fire Resisting Doorsets with smoke control
- FD60 60 min Fire Resisting Doorsets
- FD60S 60 min Fire Resisting Doorsets with smoke control
- FD30 30 min Fire Resisting Doorsets
- FD30S 30 min Fire Resisting Doorsets with smoke control
- smoke vented lobby



key:

- - - 120 min fire resisting construction
- - - 90 min fire resisting construction
- - - 60 min fire resisting construction
- - - 30 min fire resisting construction
- FD120 120 min Fire Resisting Doorsets
- FD120S 120 min Fire Resisting Doorsets with smoke control
- FD90 90 min Fire Resisting Doorsets
- FD90S 90 min Fire Resisting Doorsets with smoke control
- FD60 60 min Fire Resisting Doorsets
- FD60S 60 min Fire Resisting Doorsets with smoke control
- FD30 30 min Fire Resisting Doorsets
- FD30S 30 min Fire Resisting Doorsets with smoke control
- smoke vented lobby

06

student accommodation quality

- building configuration
- student amenity provision
- internal shared amenity
- student amenity spaces - PBSA comparative study
- standard studio
- standard cluster room
- cluster common room
- PBSA comparative room sizes study
- wheelchair student room layouts
- access statement
- energy and sustainability
- security and crime prevention
- facade access and maintenance

building configuration

The diagram opposite illustrates the overall building configuration. A two storey podium contains retail, student internal amenity and ancillary spaces associated with each use.

820 student rooms (35% studios and 65% cluster rooms) and cluster common rooms are located within the 34 storey tower.

1,300 sqm of internal student amenity - accessible to all students within the building - is concentrated around the podium (ground floor and mezzanine level) and tower roof (level 34).

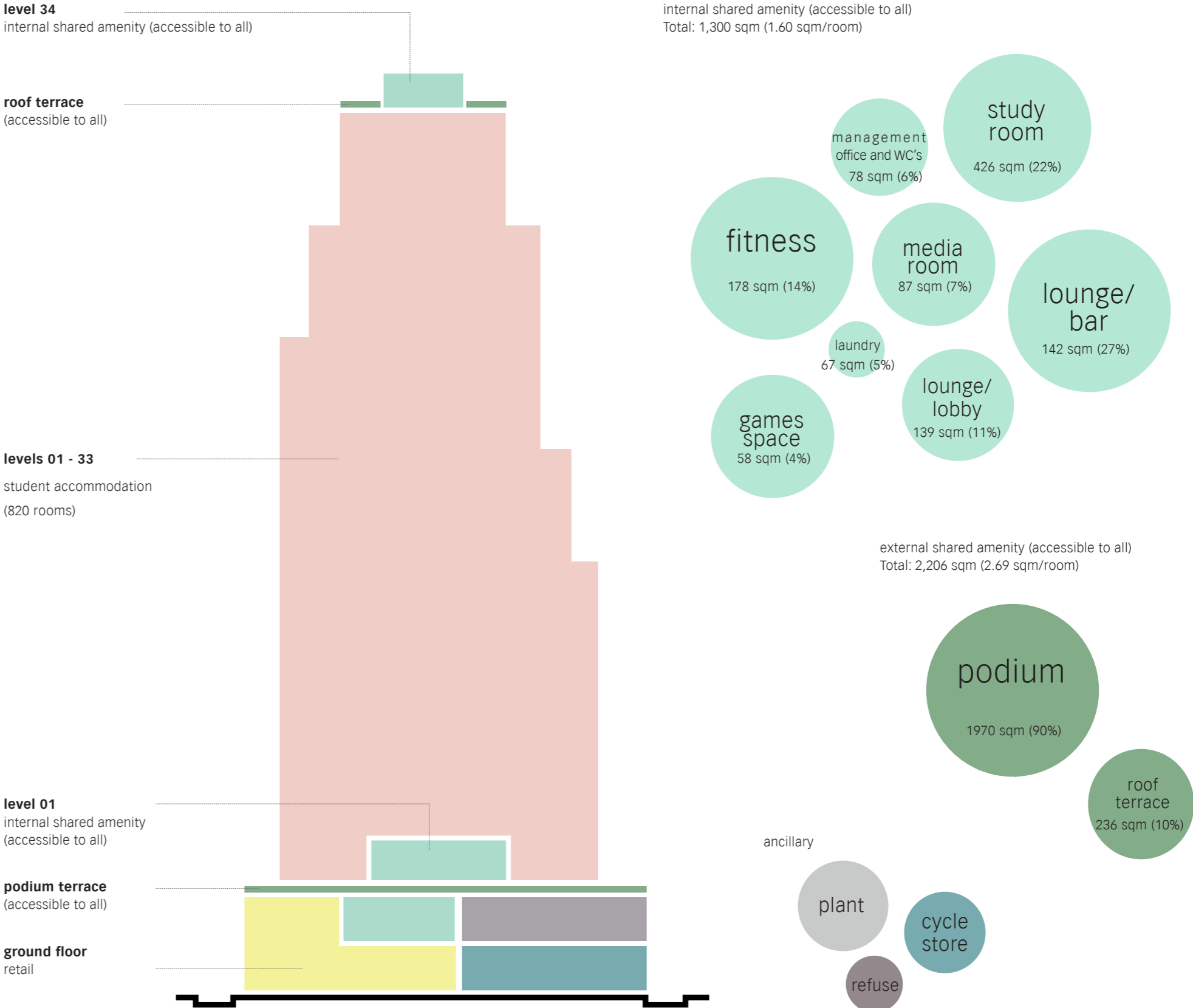
A scheme summary is provided below.

no. storeys	G, M +34
no. rooms	820
affordable % (units)	35%
cluster rooms (%)	35%
studios (%)	65%
accessible rooms (%)	5% at day one
cluster bedroom average size	15.6 sqm
studio average size	17.8 sqm
internal amenity provision	1,300 sqm
internal amenity per room	1.60 sqm
external amenity provision	2,206 sqm
external amenity per room	2.69 sqm

areas:

overall scheme GEA	31,543 sqm
overall scheme GIA	28,004 sqm
retail GIA	1,297 sqm

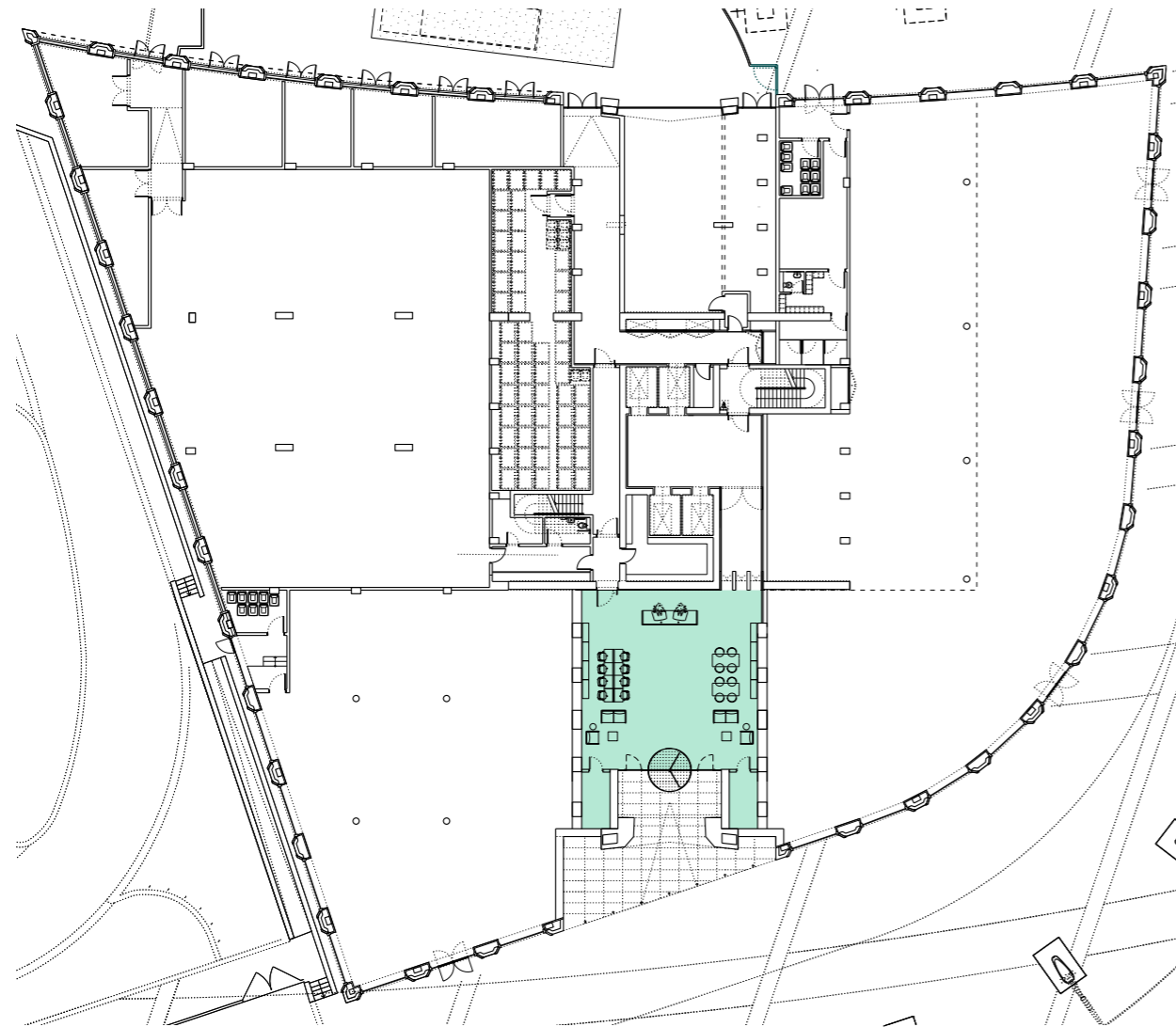
- key:**
- studios and cluster rooms
 - internal shared amenity
 - external shared
 - retail
 - refuse
 - plant



student amenity provision

The scheme is a PBSA building of exemplar quality that has multiple and generous amenity spaces for the students. The plans below illustrate the overall student amenity provision.

Peninsula square scheme will provide 1,300 sqm of shared internal student amenity and 2,206 sqm of external shared student amenity.

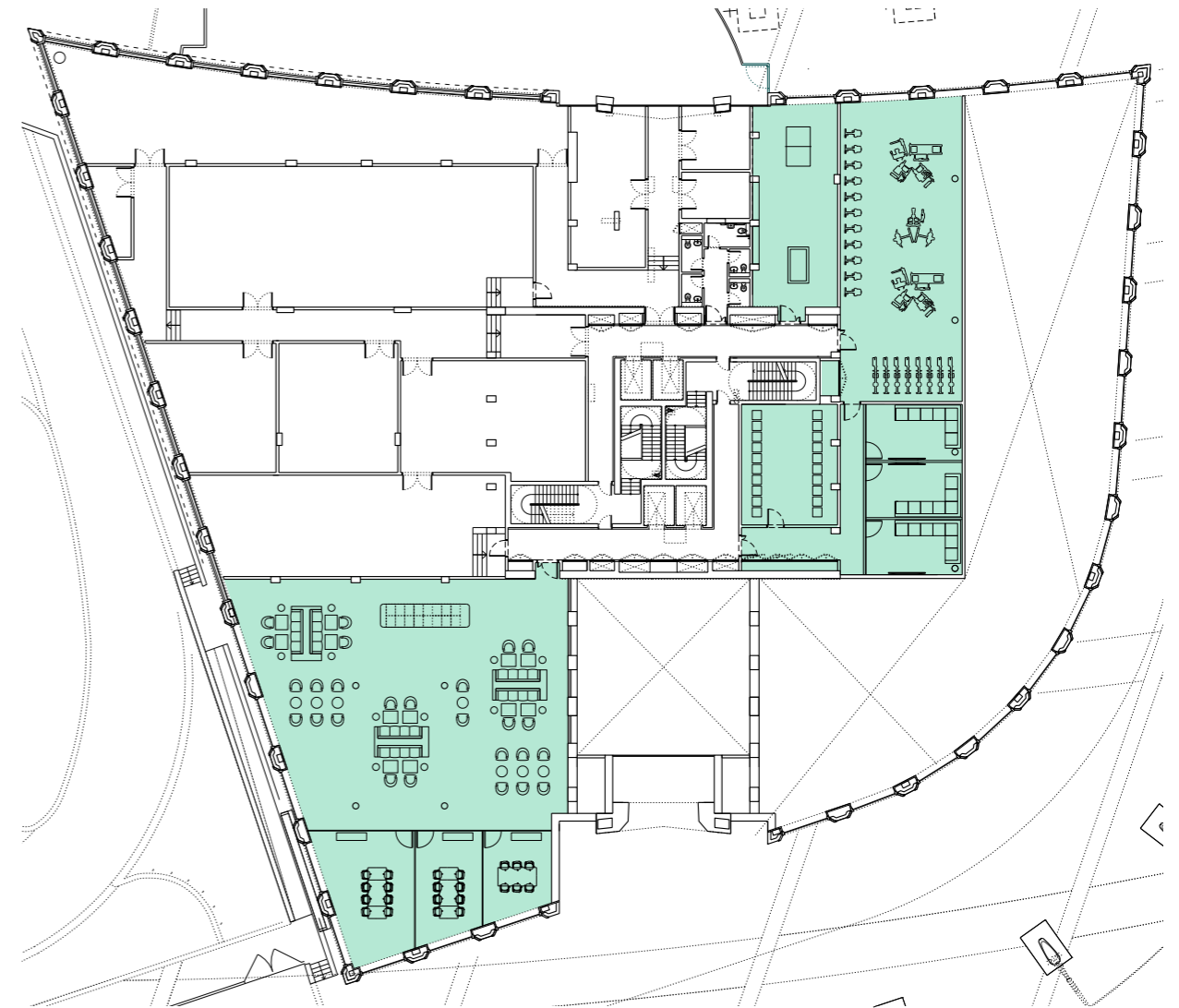


01 proposed ground floor amenity

internal amenity	139 sqm
external amenity	0 sqm

student amenity uses provided:

- entrance lobby/lounge area, mail and parcel room, management space



02 proposed mezzanine level amenity

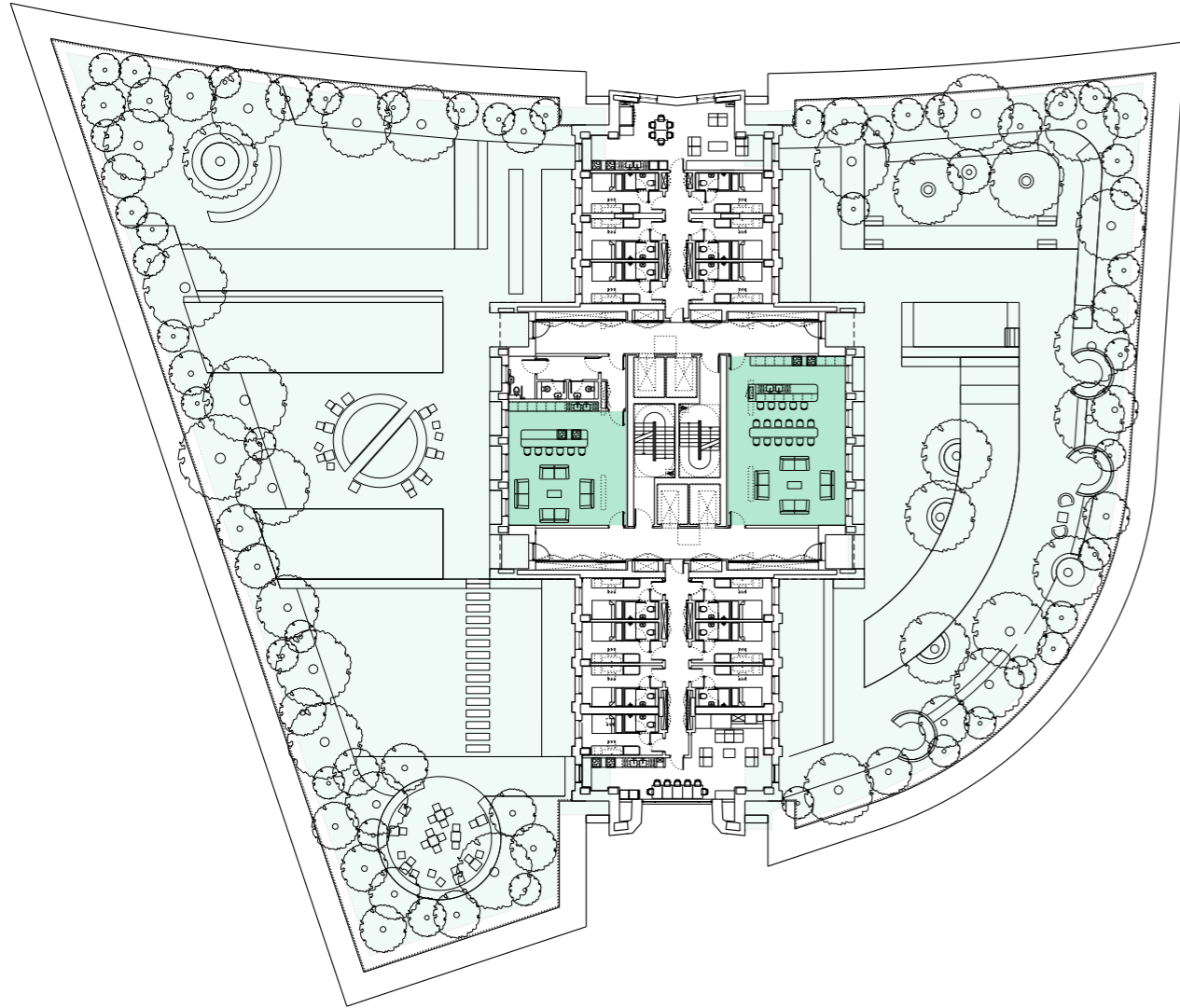
internal amenity	816 sqm
external amenity	0 sqm

student amenity uses provided:

- at mezzanine level, flexible high quality amenity spaces are to be provided which may include flexible lounge / study / dining area, media rooms, games area and gym
- WC's (area excluded)

student amenity provision

The amenity provision is split across the building, primarily at mezzanine, level 01 (podium level) and level 34, together, this c 3,500 sqm of amenity space represents a substantial offer to the student residents and the proposal will have one of the largest amenity space offerings for a PBSA building in London

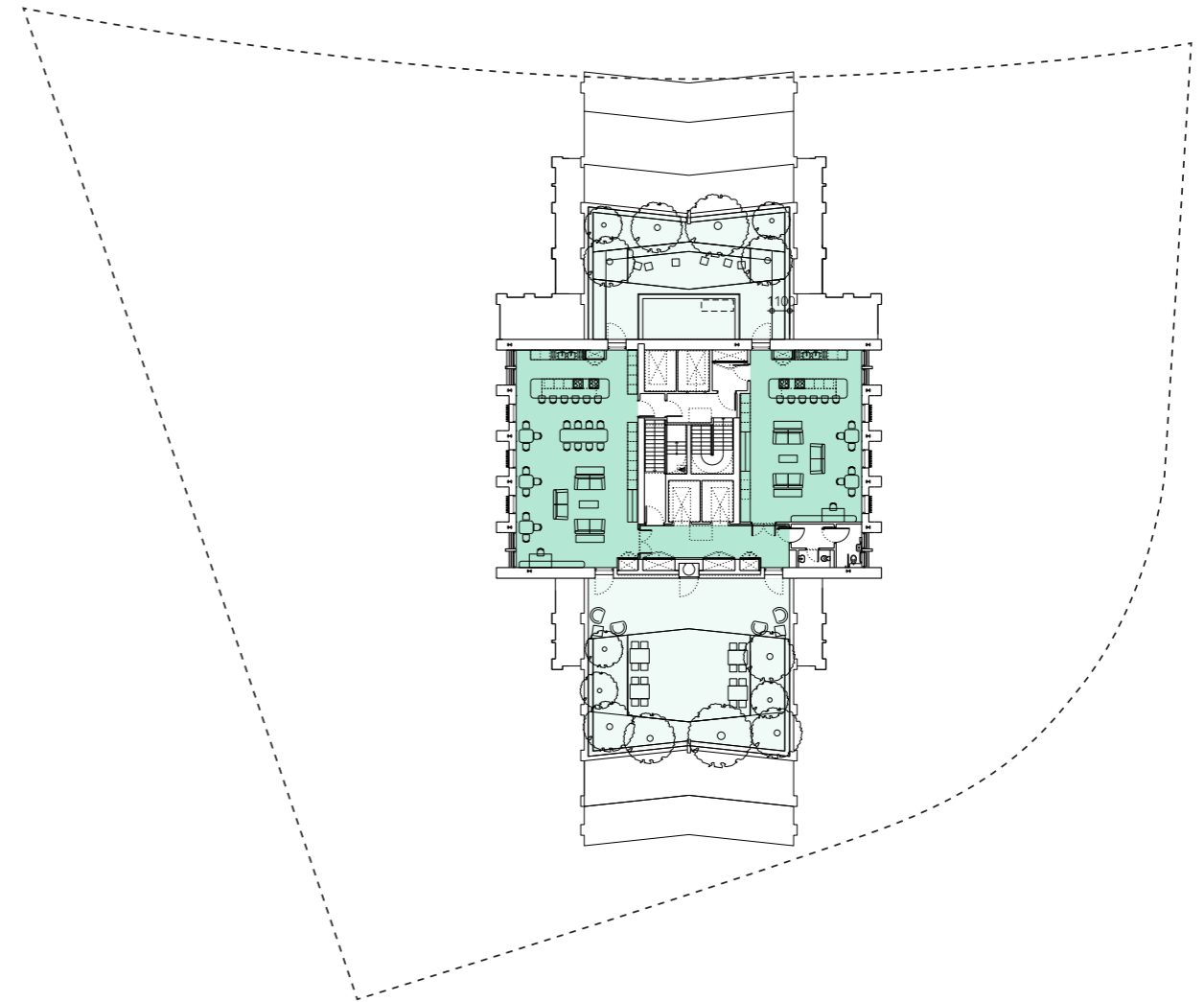


01 proposed first floor amenity

internal amenity	142 sqm
external amenity	1,970 sqm

student amenity uses provided:

- podium terrace incl. heated study / social pods, flexible lounge / study area / entertainment spaces
- WC's (area excluded)



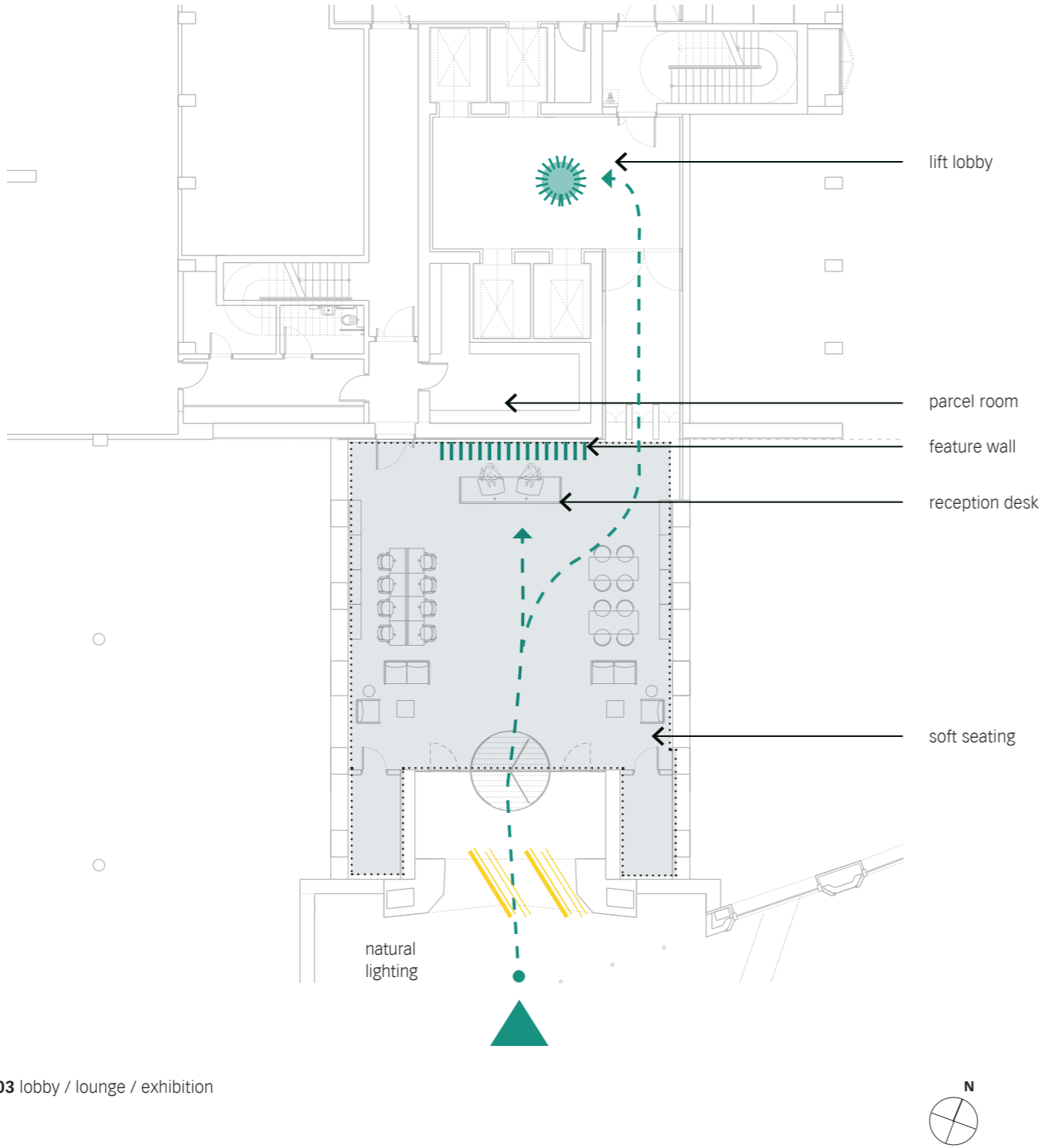
02 proposed top floor amenity

internal amenity	203 sqm
external amenity	236 sqm

student amenity uses provided:

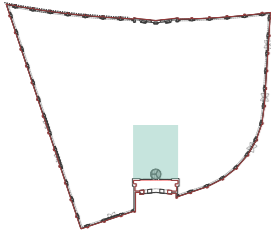
- flexible lounge / study area / entertainment spaces, external terraces
- WC's (area excluded)

internal shared amenity - ground floor level



03 lobby / lounge / exhibition

key plan:



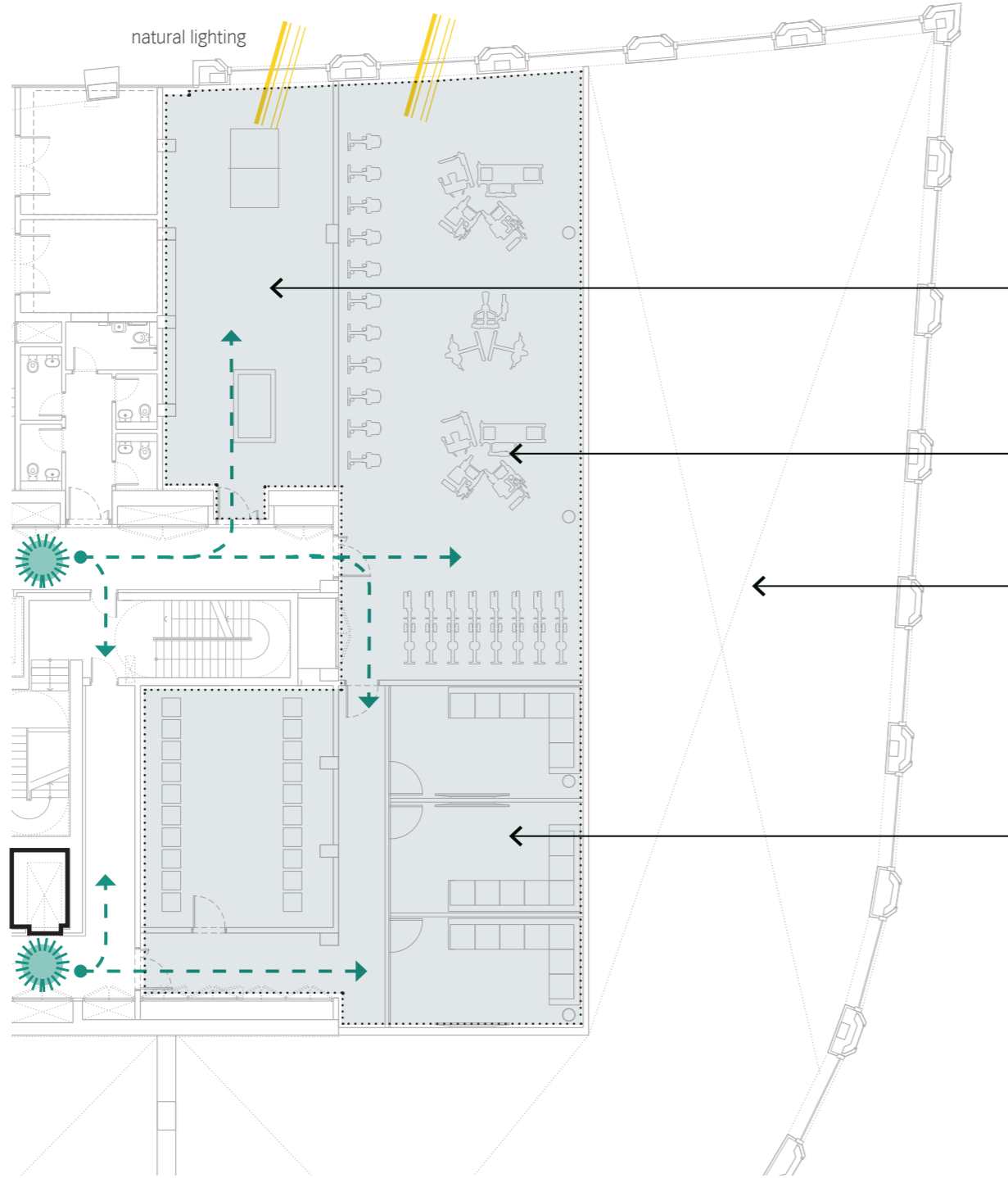
soft seating



exhibition space



internal shared amenity - mezzanine level



games and recreation

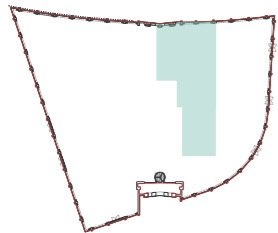
gym/fitness

ground floor retail space (double height)

media rooms

01 flexible fitness and gym / games space / office management

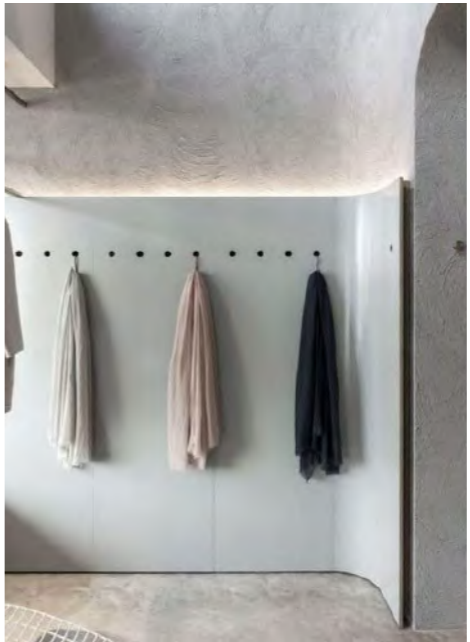
key plan:



media room

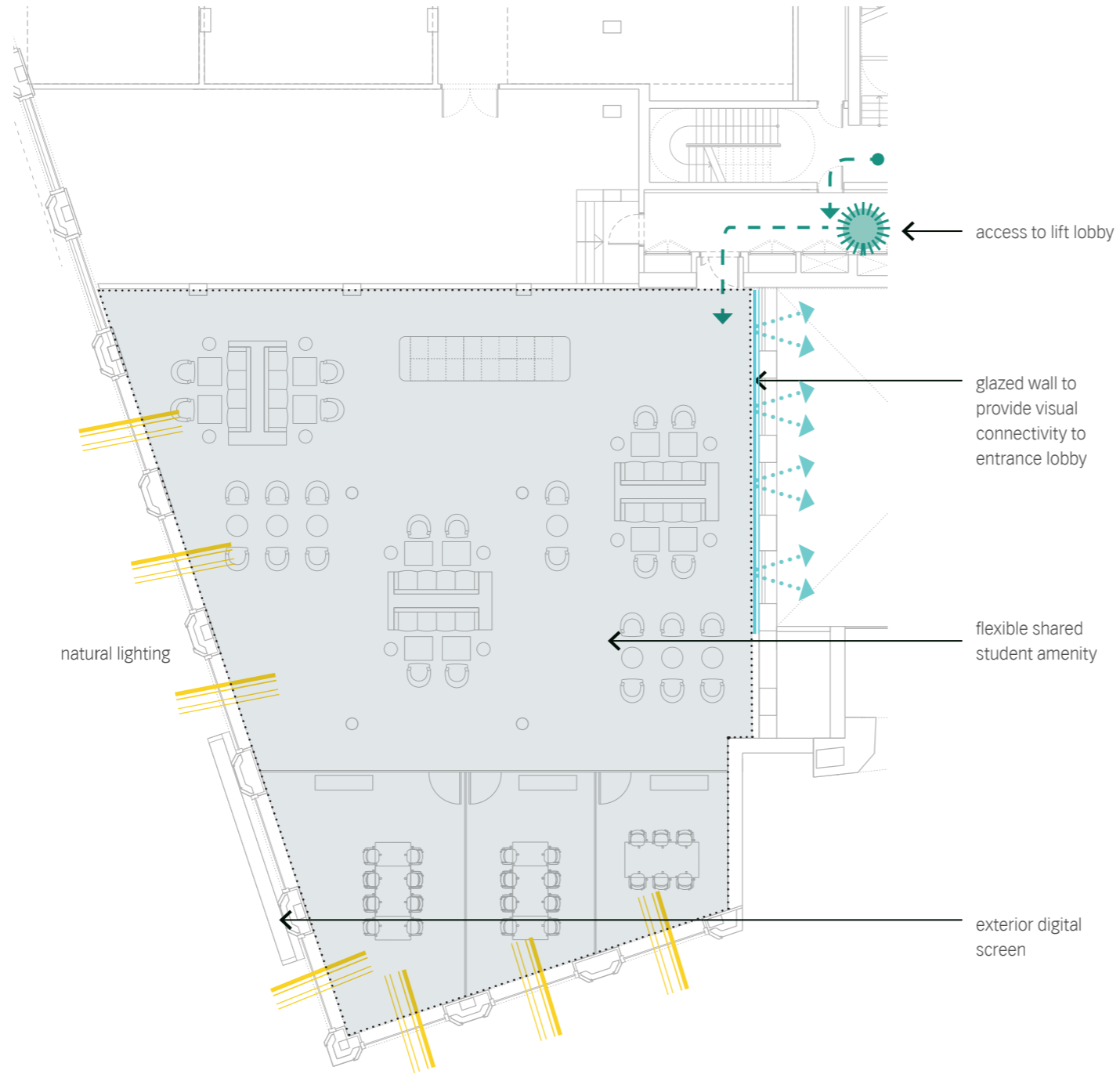


games space



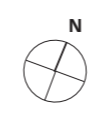
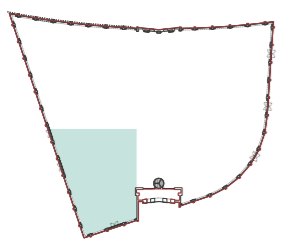
fitness, gym and wellbeing areas

internal shared amenity - mezzanine level



02 flexible study / lounge / dining

key plan:



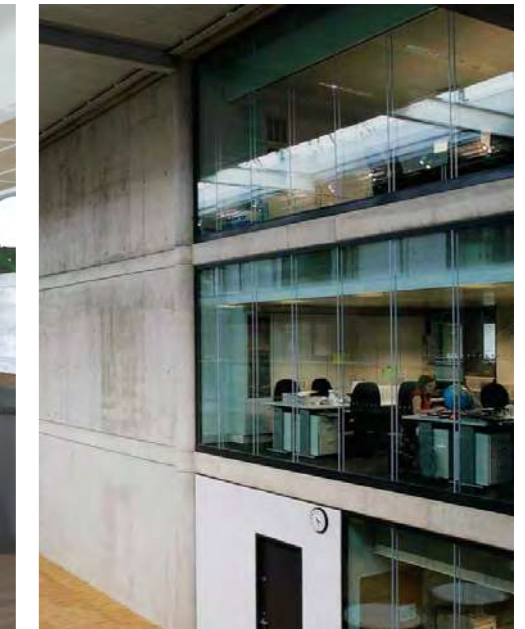
soundproof screens



flexible dining / lounge / study space



hot desk area



glazed wall

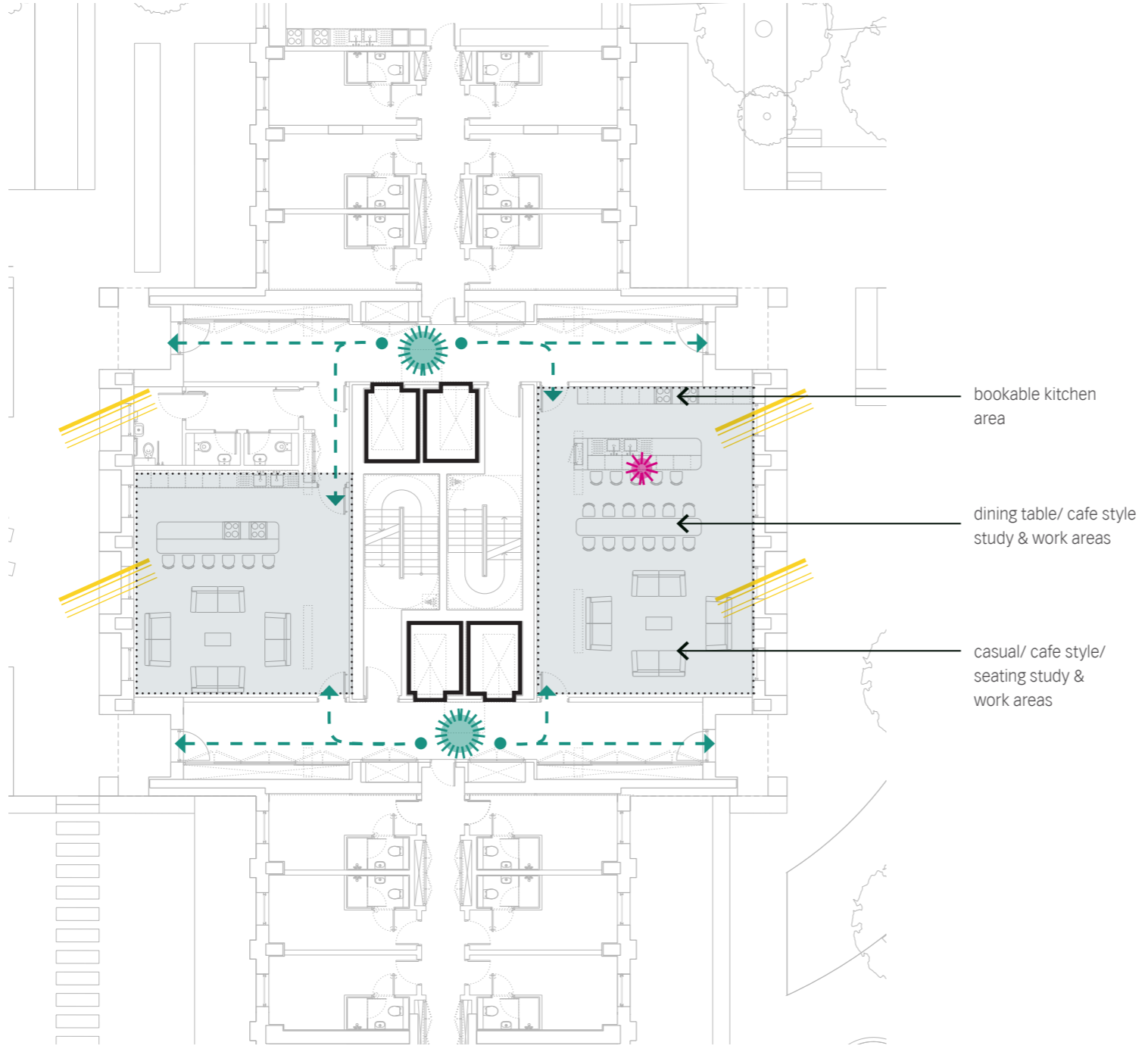


media and gaming rooms

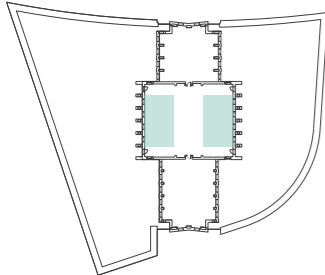


workshop rooms

internal shared amenity - level 01 dining/lounge area




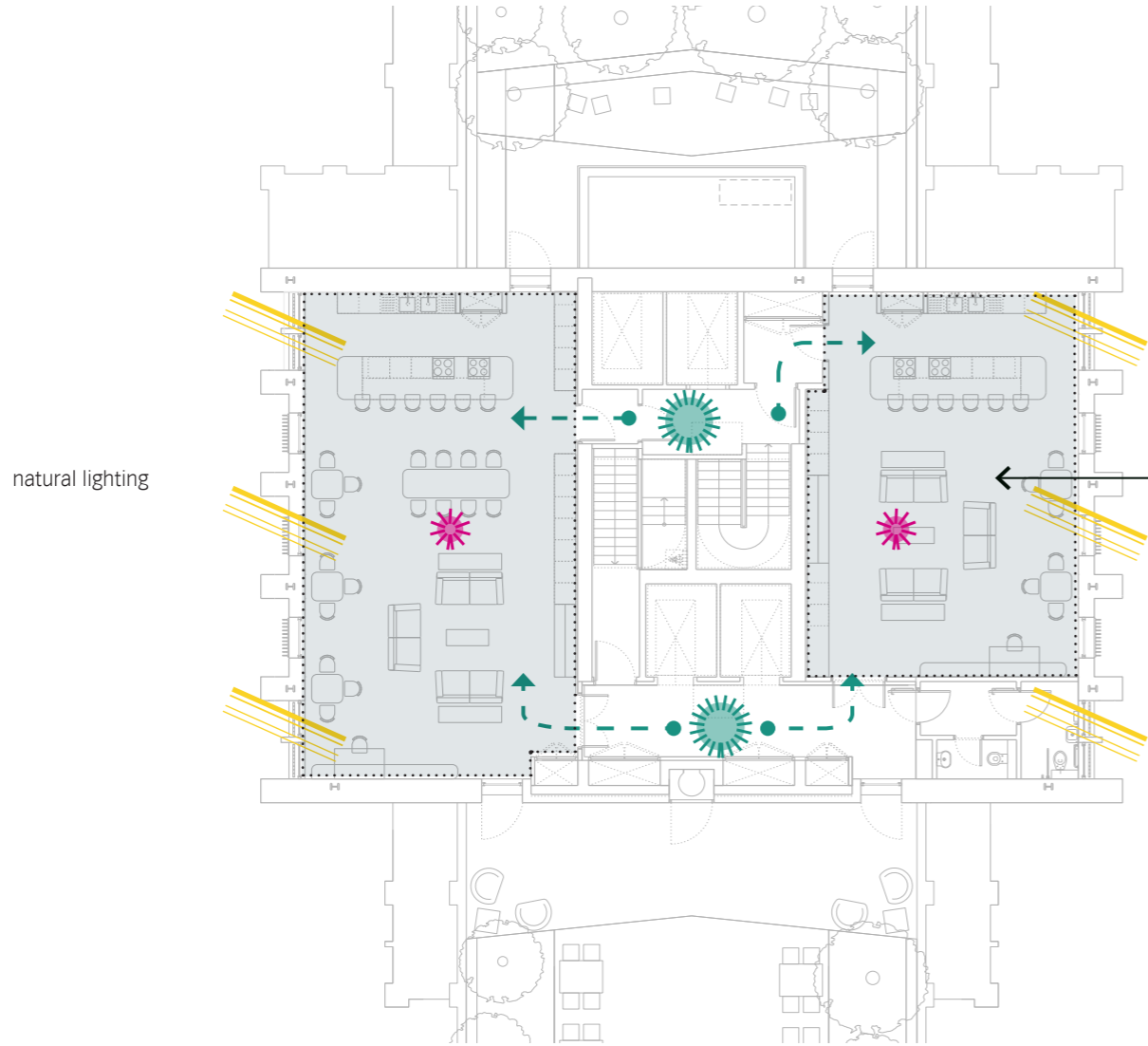
key plan:



01 flexible study / kitchen / lounge / dining

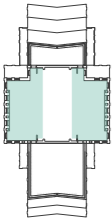


 bookable space



internal shared amenity at level 34 would include flexible lounge spaces for students to relax in and to enjoy a city skyline, the spaces may be bookable or rentable if required.

key plan:



02 flexible dining / lounge / bar / games / study areas

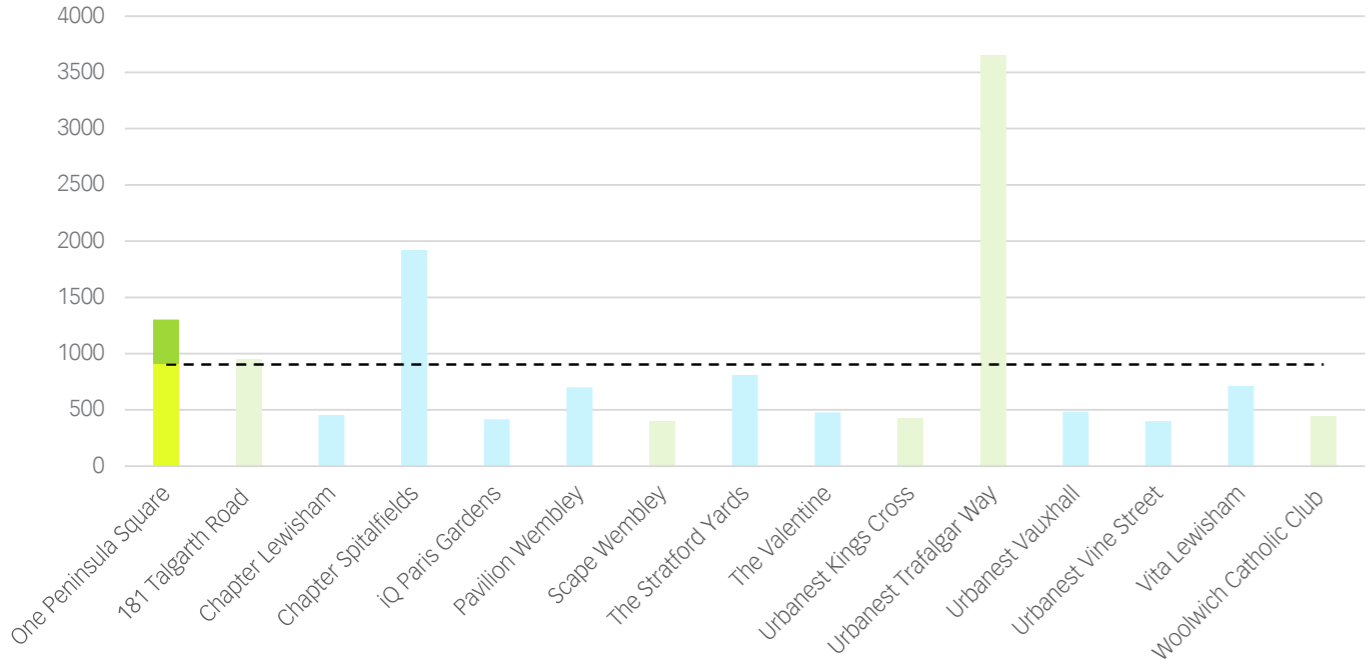
 bookable space



student internal amenity provision - PBSA comparative study

The Peninsula Square proposal provides circa 1,300 sqm of internal amenity space and 2,206 sqm of external amenity space, and will therefore be one of the best performing PBSA schemes in all of London (with respect to quantum of shared amenity provided) and the highest performing within Royal Borough of Greenwich.

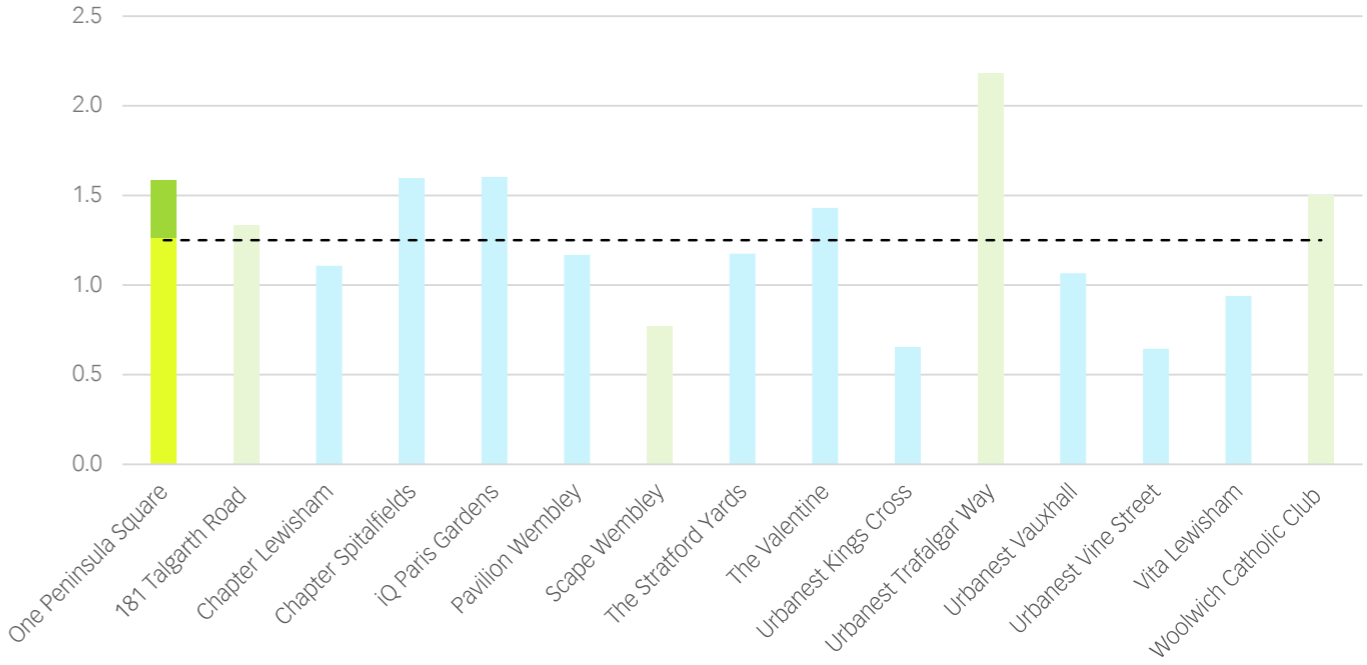
The charts on the following pages break down the provision of internal and external amenity spaces and their relation to other PBSA schemes in London. Peninsula Square provides 1,300 sqm of student internal amenity space which is 1.60 sqm per student bedroom (based on 820 rooms).



01 communal internal amenity (sqm)

Note:
The Peninsula Square scheme presented to RGB on 20.10.22 provided 1,197 sqm of student amenity space; 103 sqm less than the current proposal

- key:**
- Peninsula Square
 - built
 - permission granted
 - PBSA schemes average



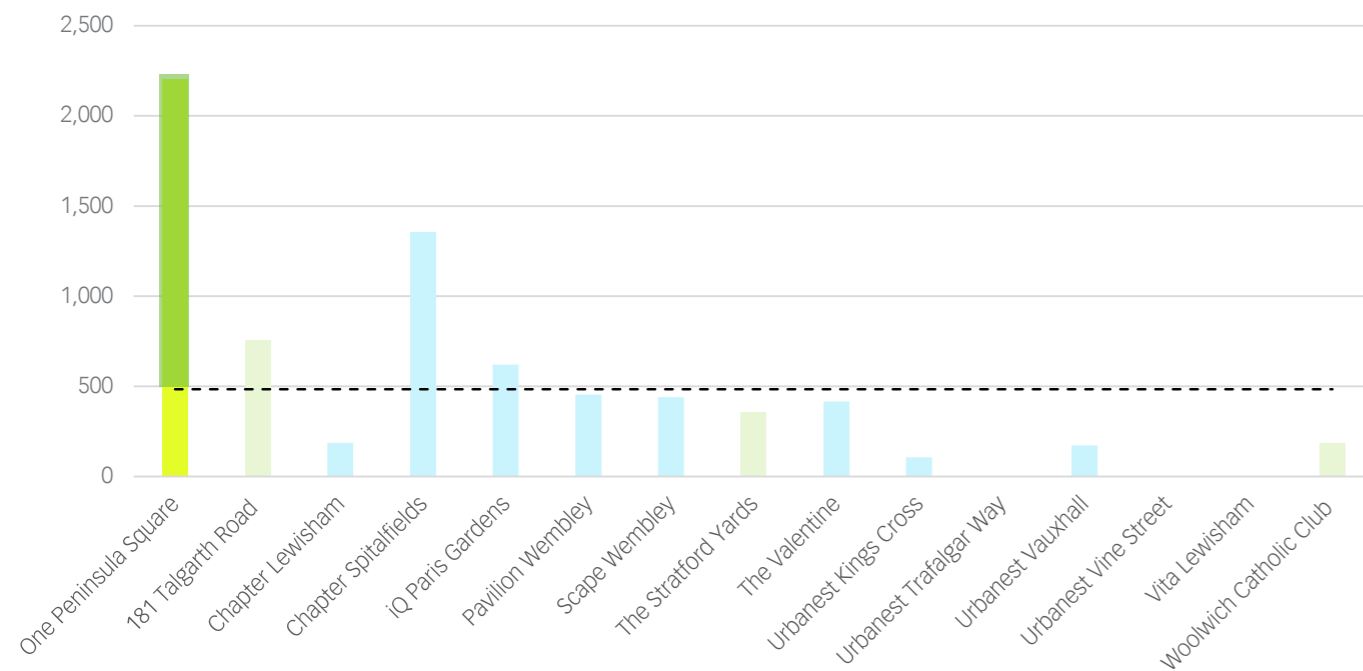
02 average communal internal amenity per room (sqm)

Notes:
The Peninsula Square scheme presented to RGB on 20.10.22 provided 1.5 sqm per student room, 0.1 sqm less per room than the current proposal

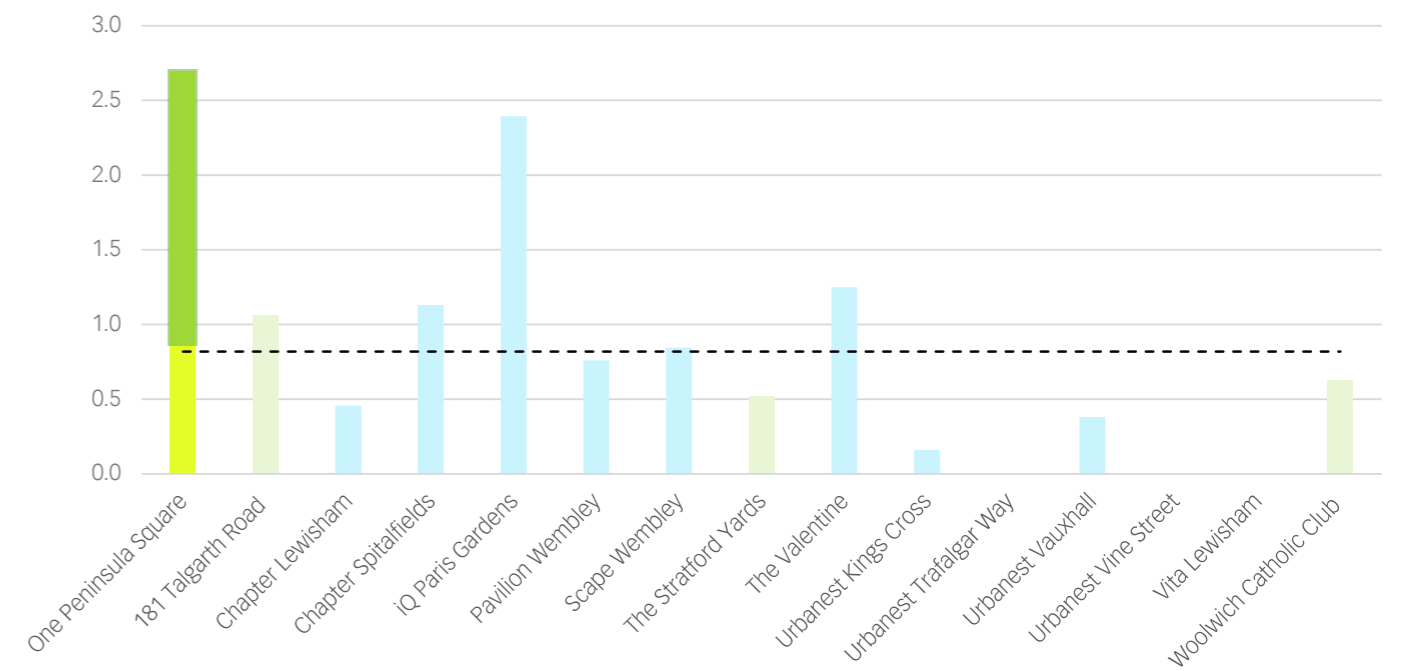
The Woolwich Catholic Club provides 1.5 sqm per student room; this confirms that Peninsula Square will provide the most generous amenity PBSA new build scheme in the Borough

student external amenity provision - PBSA comparative study

The Peninsula Square proposal provides 2,206 sqm of student external amenity space which is 2.69 sqm per student bedroom (based on 820 rooms)



03 communal external amenity (sqm)



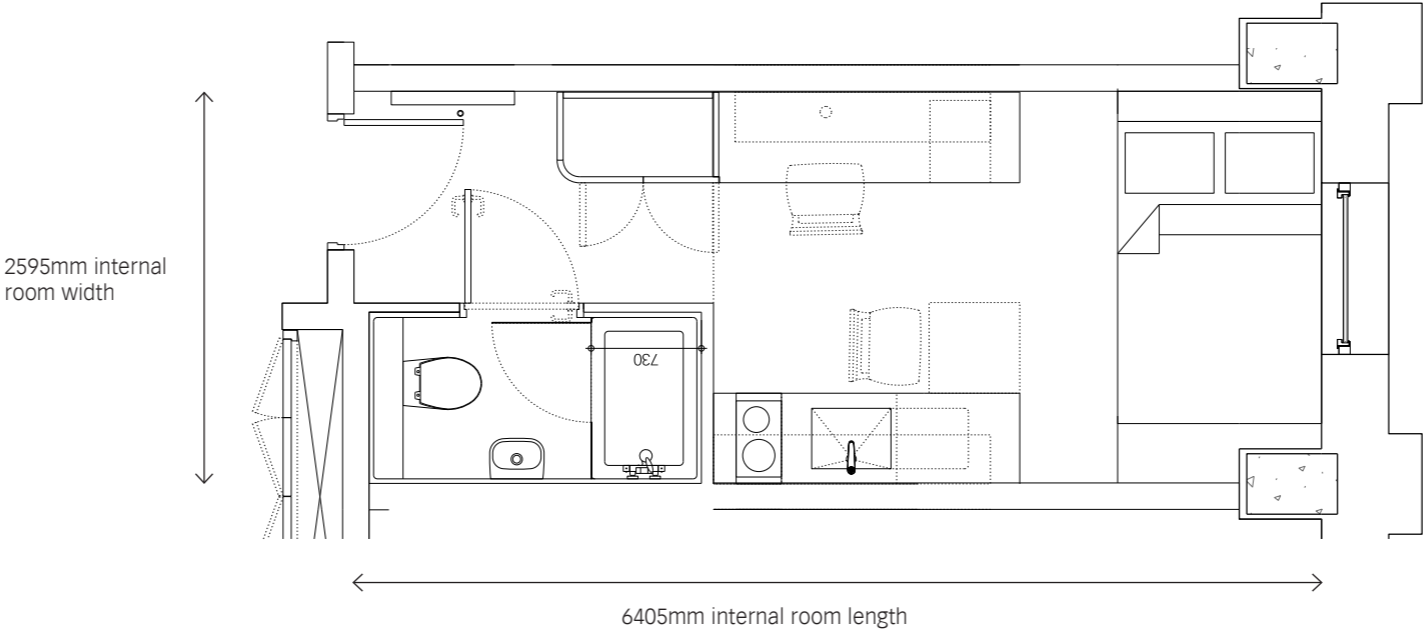
04 communal average external amenity per room (sqm)

- key:**
- Peninsula Square
 - built
 - permission granted
 - PBSA schemes average

standard studio (15.6 to 29.5 sqm)

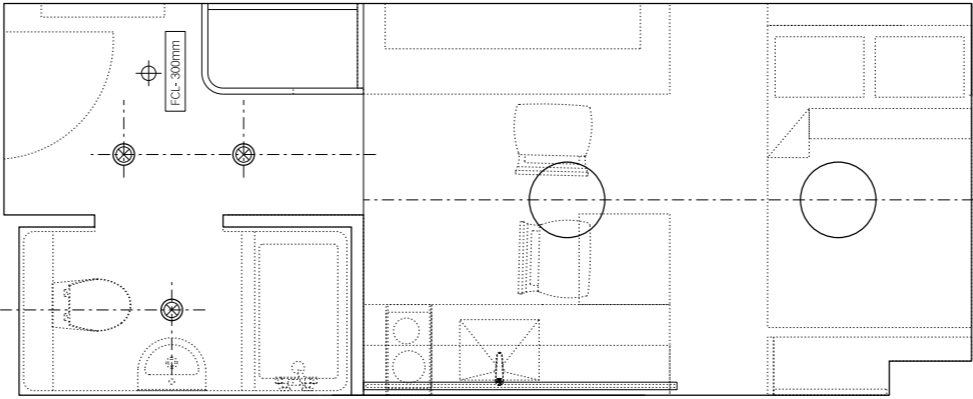
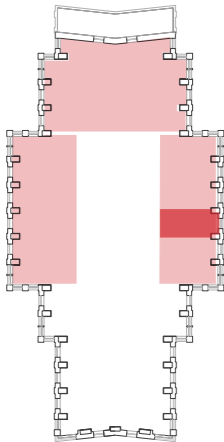
The standard studio room ranges from 15.6 sqm to 29.5 sqm. Across the scheme, the average studio size is 17.8 sqm.

The following pages illustrate the emerging layout for the most common standard studio room.



01 studio room plan (17 sqm)

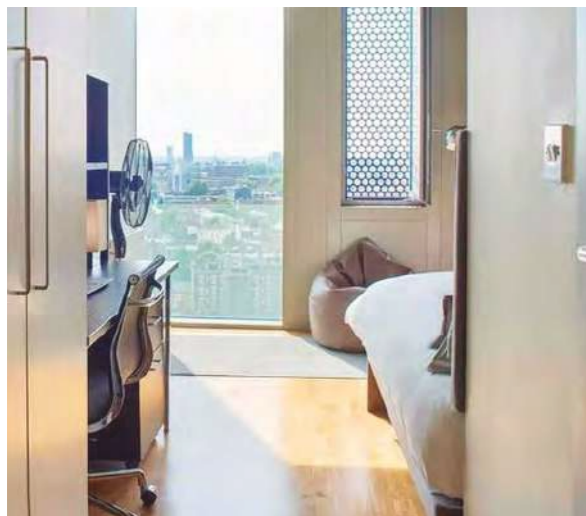
key plan:



02 studio room RCP



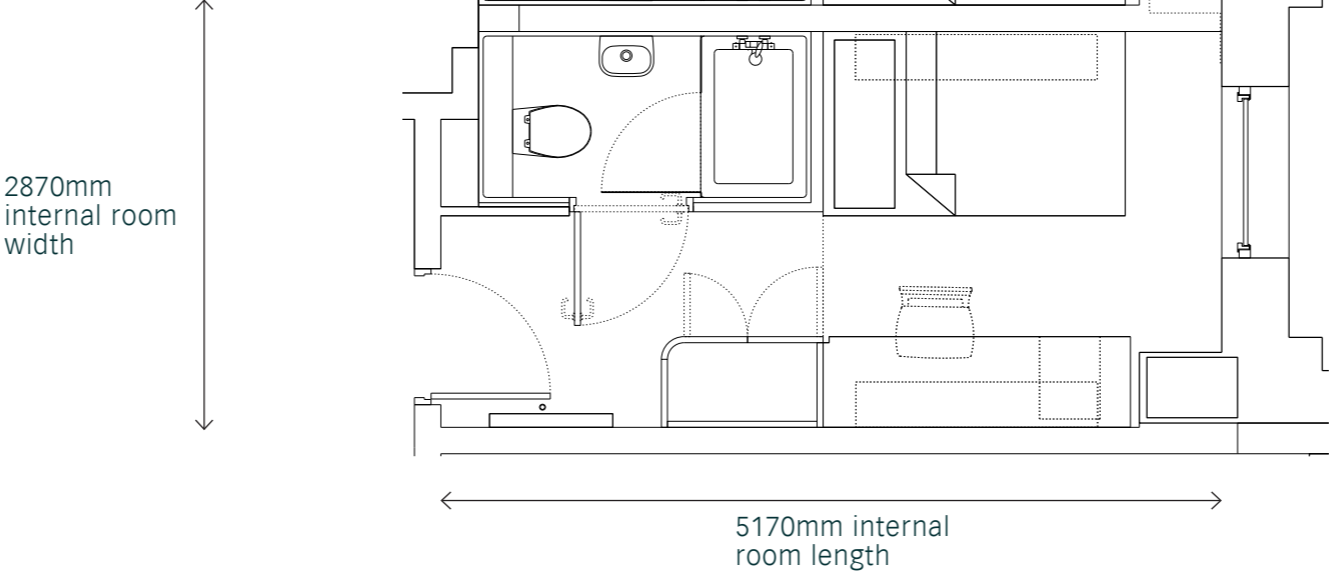
03 studio room aerial view



standard cluster room (12.7-16.3 sqm)

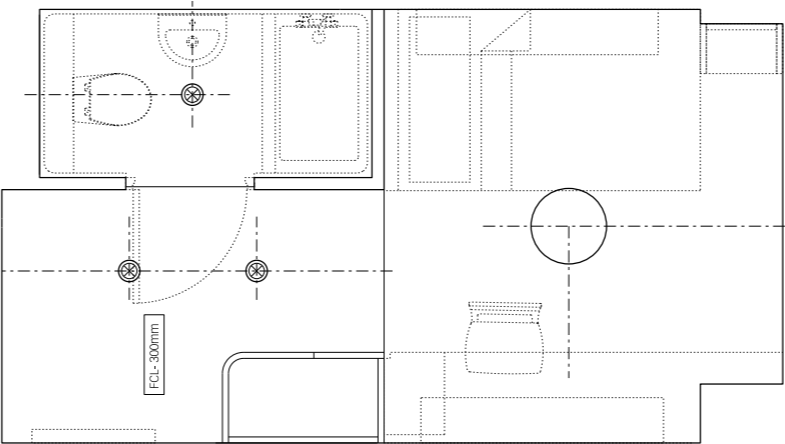
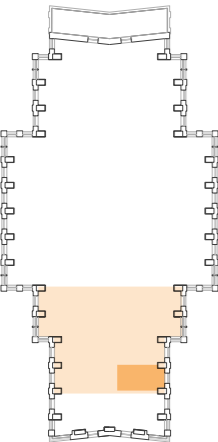
The cluster rooms range in size from 12.7 sqm to 16.3 sqm across the scheme, providing an average size of 14.9 sqm.

The following pages illustrate the emerging layout for the most common cluster room which is 14 sqm.



01 cluster room plan (14 sqm)

key plan:



02 cluster room RCP

standard cluster room (12.7-16.3 sqm)



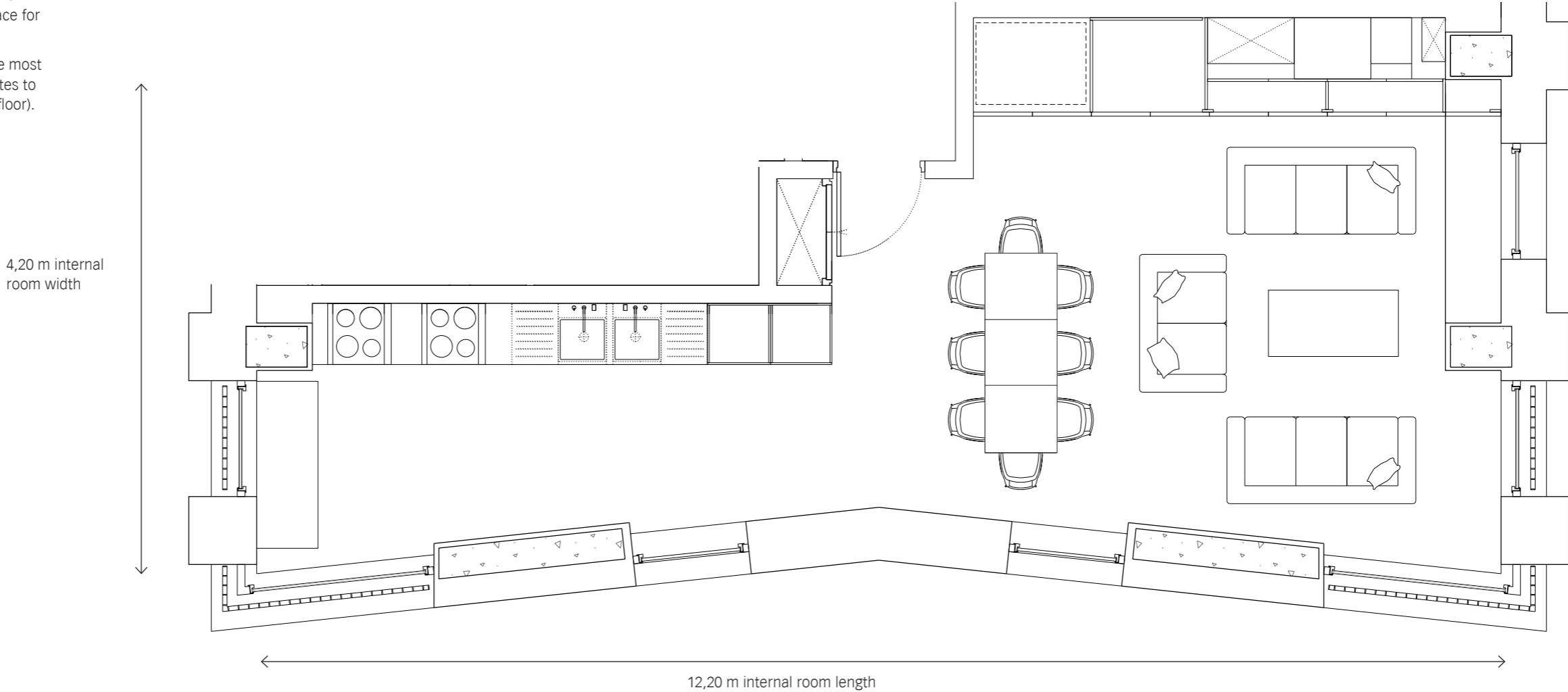
03 cluster room aerial view



cluster common room (43 sqm / 4.7 sqm per room)

The cluster common rooms range from 40 sqm to 47 sqm across the scheme, providing an average size of 41.2 sqm which is 5.15 sqm per cluster room. Following analysis of other PBSA schemes across London, the amount provided is above average and will give residents a large amount of flexible, high quality space for cooking, studying and relaxing.

The following pages illustrate the emerging layout for the most common cluster room which is 43 sqm in size, this equates to 4.7sqm per cluster room (based on 9 cluster rooms per floor).



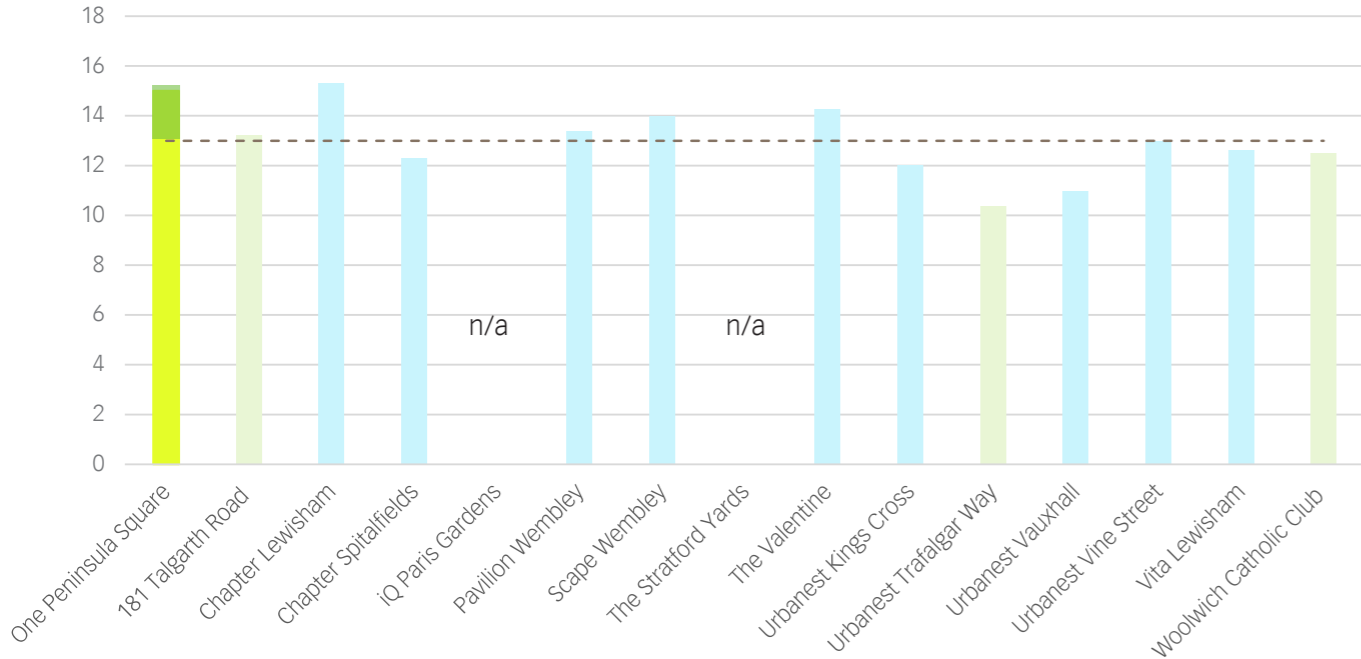
01 cluster common room plan (40 sqm)

cluster common room (43 sqm / 4.7 sqm per room)

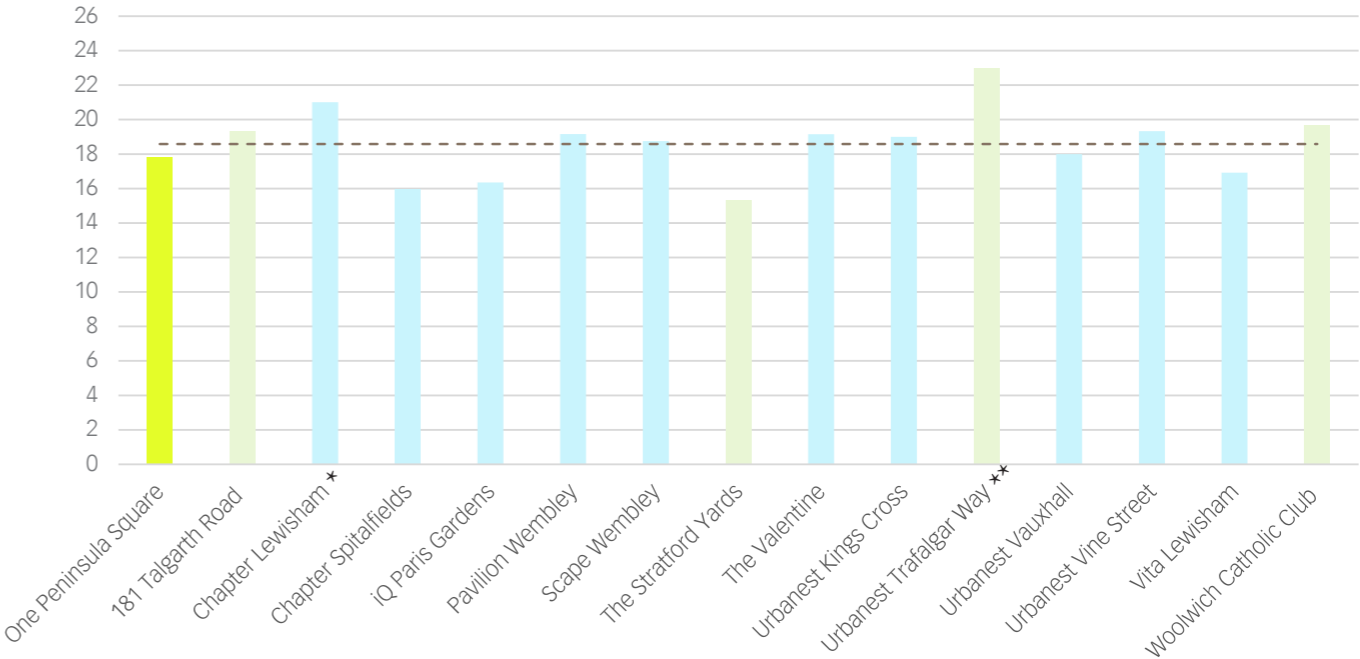


PBSA comparative room sizes study

The latest Peninsula Square proposals provide an average cluster room size of 15.0 sqm and an average studio size of 17.8 sqm.



01 average cluster bedroom size (sqm)



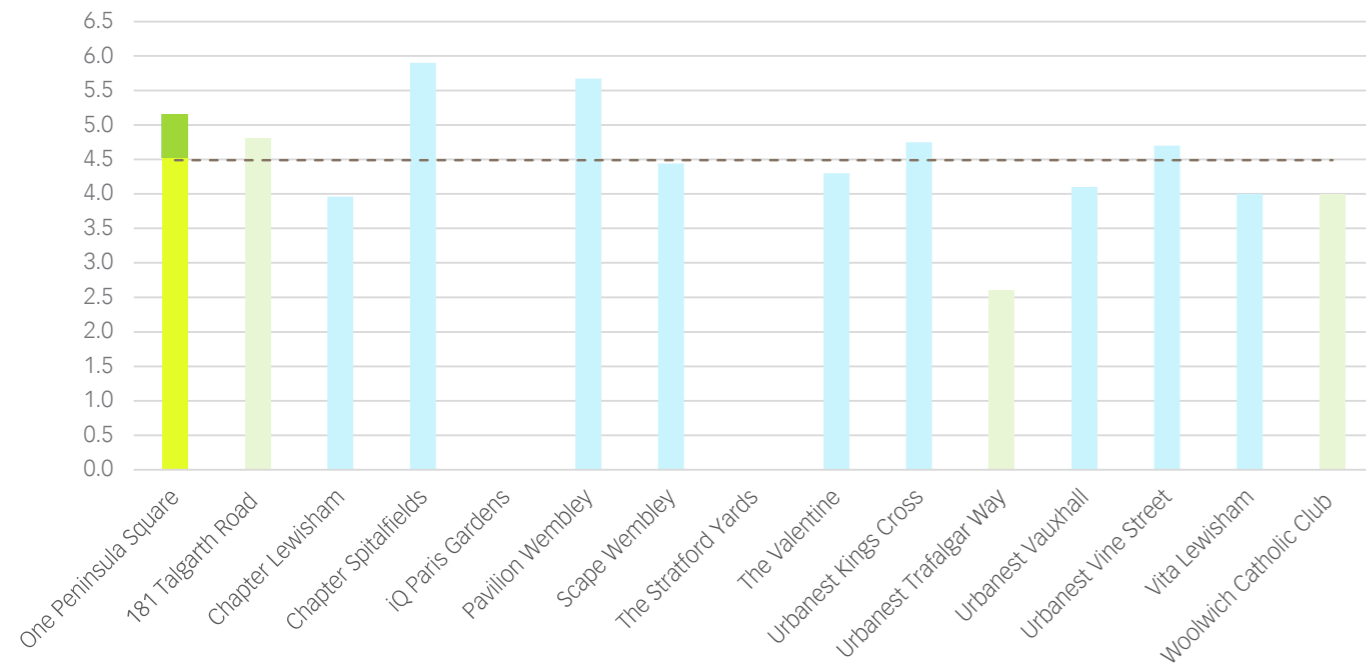
02 average studio room size (sqm)

* 19% of total rooms in scheme are studios, remainder are cluster rooms, high proportion of studios are DDA
 ** 6% of total rooms in scheme are studios, remainder are cluster rooms, includes studios and twodios

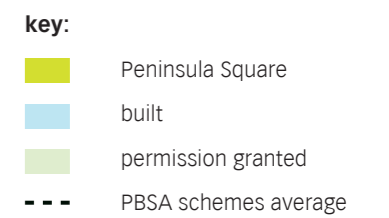
- key:**
- Peninsula Square
 - built
 - permission granted
 - - - PBSA schemes average

PBSA comparative room sizes study

The scheme provides a cluster common room area of 5.15 sqm per student cluster room.



03 cluster common room per bedroom (sqm)

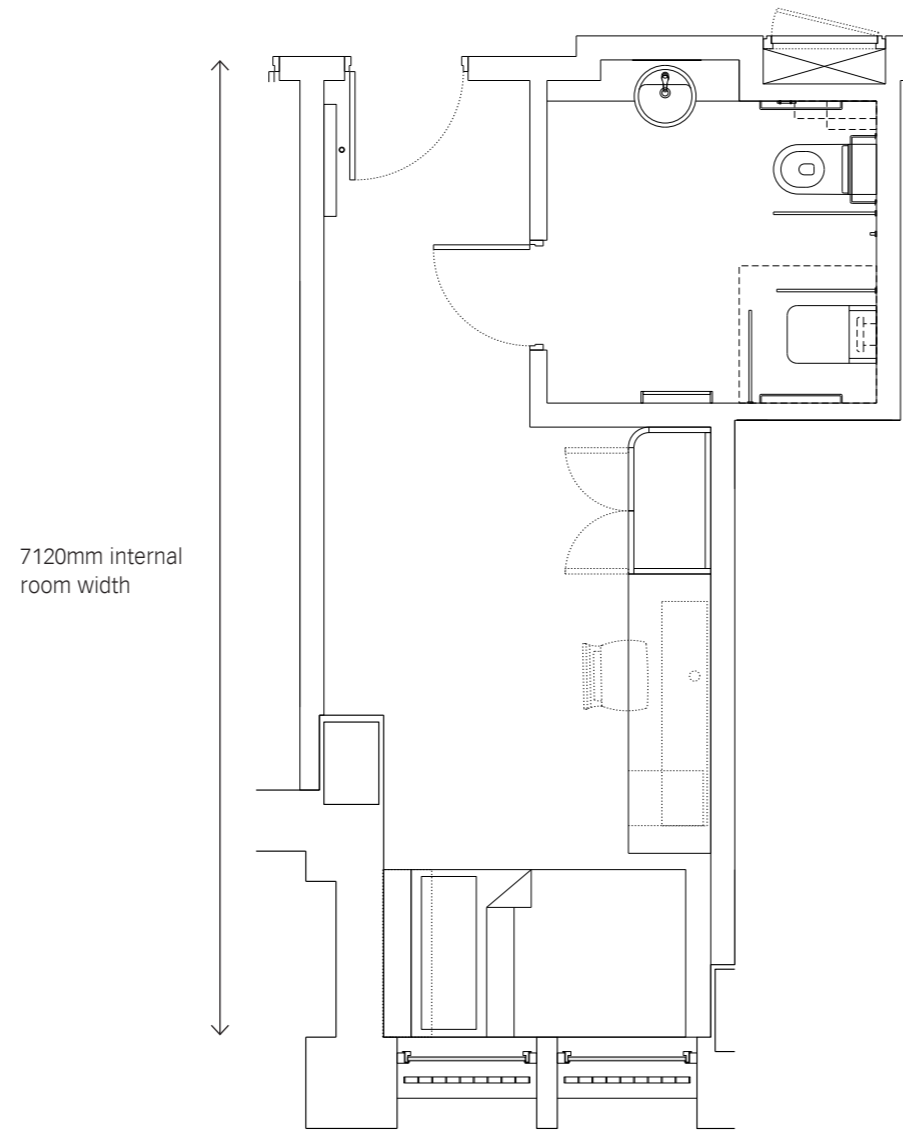


wheelchair student room layouts

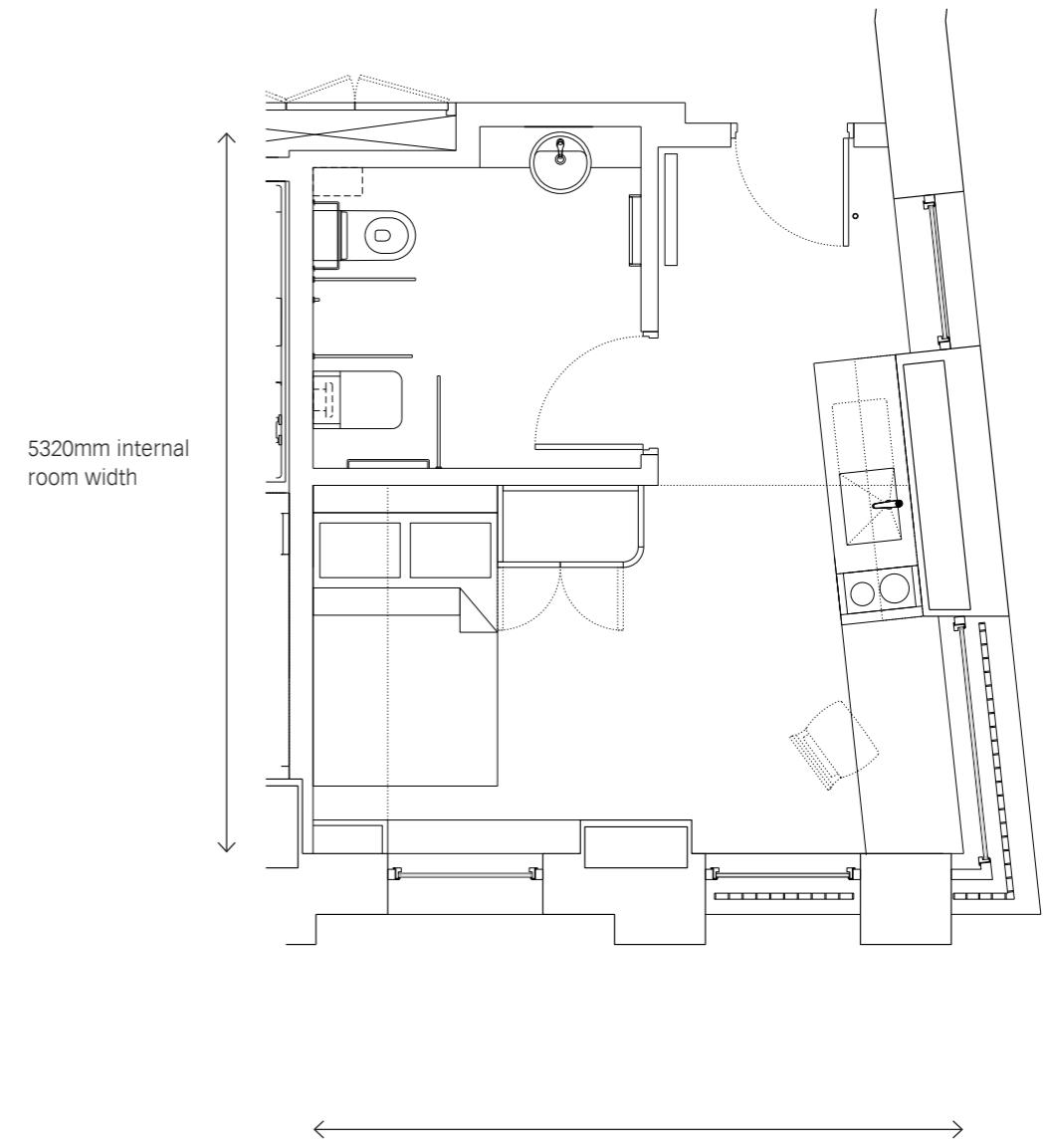
The total student residential provision includes 10% of rooms to be compliant as fully accessible or easily adaptable to Wheelchair Housing standards. Wheelchair accessible units will be designed on the basis of Approved Document M4(3) which supports Part M of the Building Regulations, 2015, and guidance set out in the Habinteg "Wheelchair Housing Design Guide 2006".

Due to the proximity of the site to North Greenwich transport hub and the restricted back of house area on the site, no accessible parking spaces are to be provided however free to use accessible spaces are located within close proximity to the site

The adjacent layout indicates a typical room plan for a wheelchair accessible room.

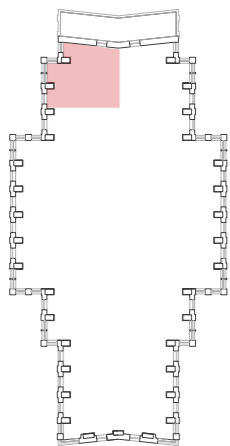


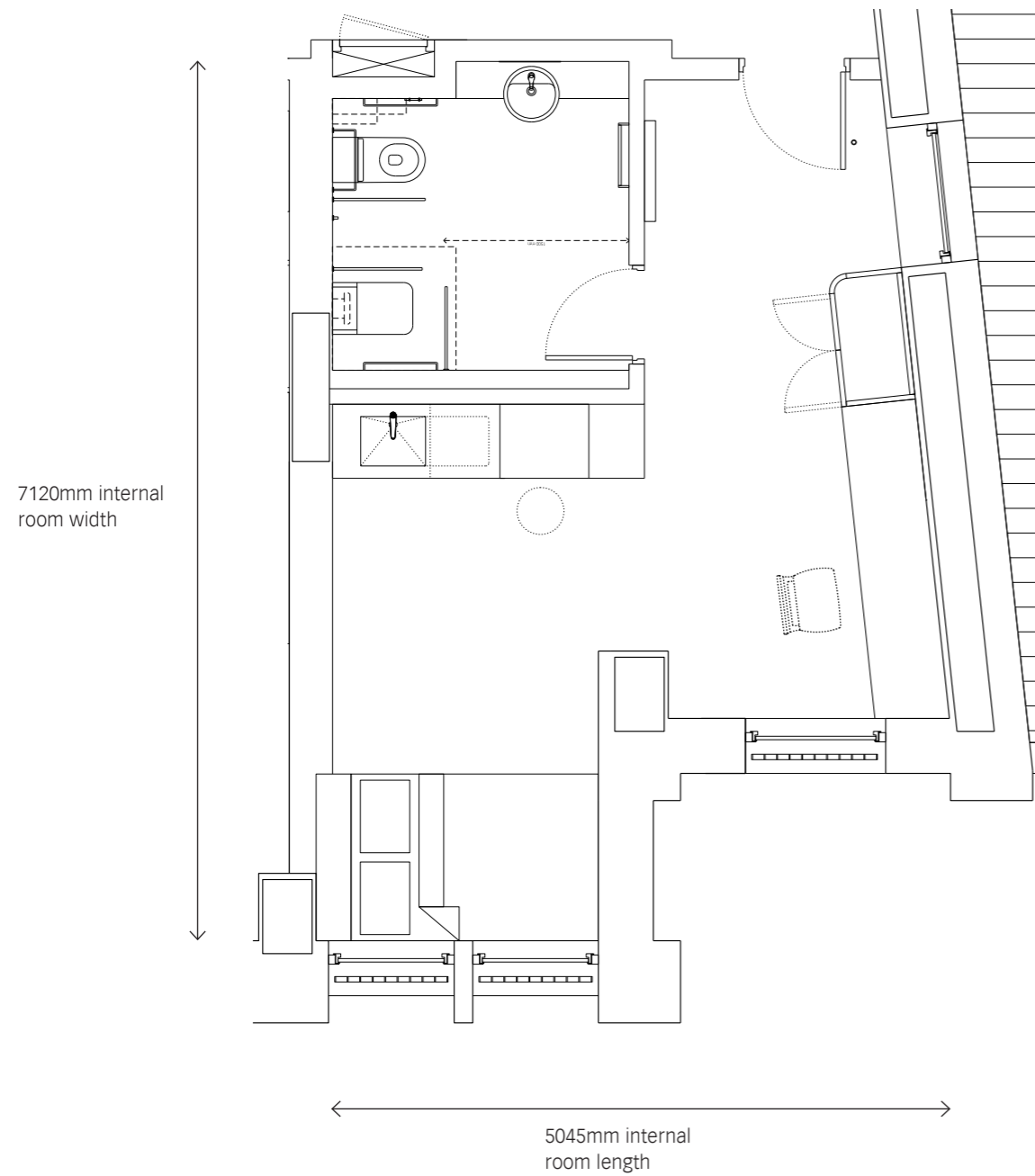
01 DDA cluster room plan - type 1 (21.5 sqm)



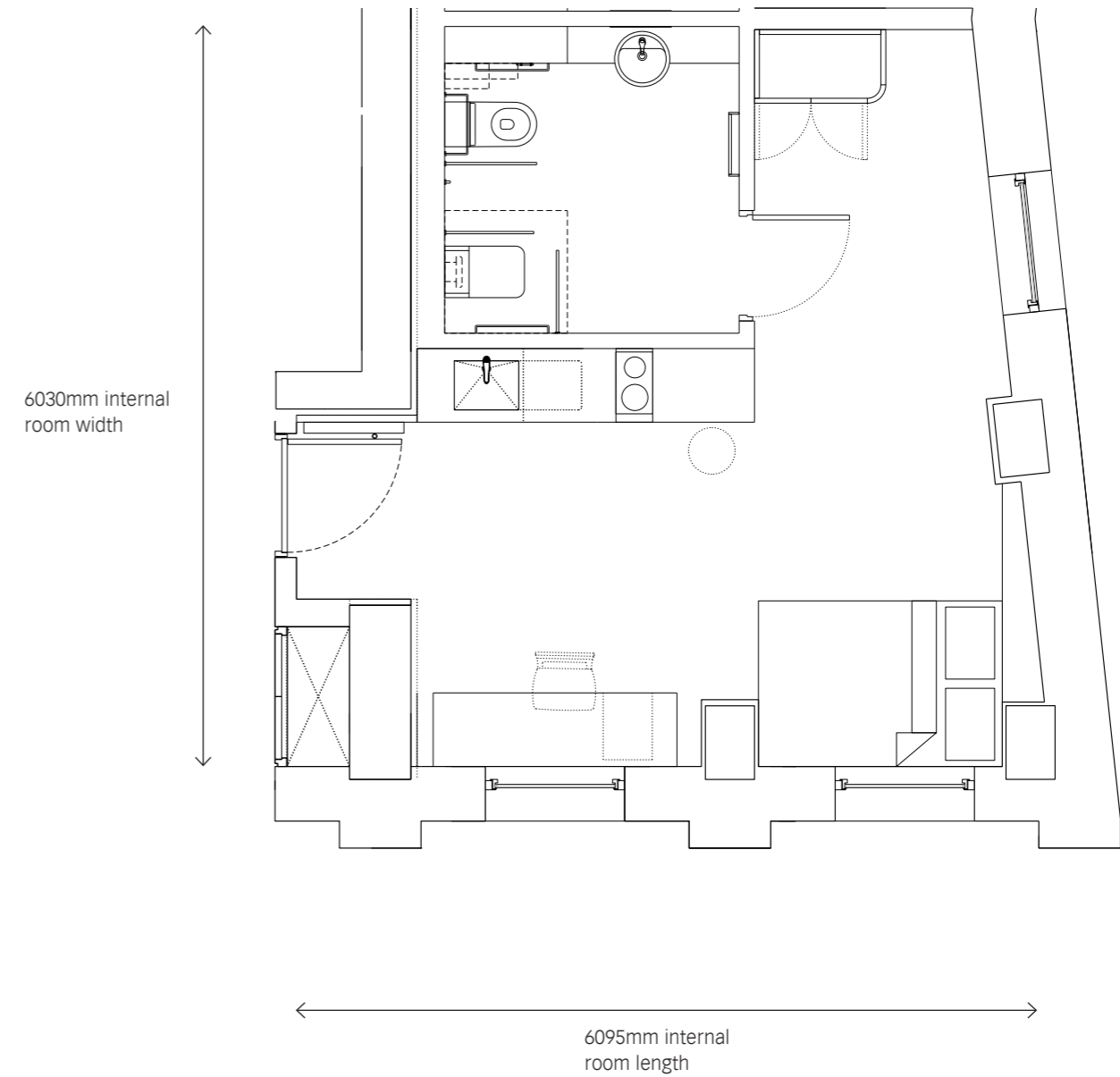
02 DDA studio room plan - type 2 (23.9 sqm)

key plan:





03 DDA studio room plan - type 3 (28.9 sqm)



04 DDA studio room plan - type 4 (30.2 sqm)

access statement

introduction

The design of the proposed scheme follows the principle that places should be created that address the needs of all in society and are accessible, usable and easy to understand. The proposed scheme aims to:

- provide services, opportunities and facilities that can be accessed by everyone,
- place people at the heart of the proposed scheme and the design process,
- allow people to use the proposed scheme safely and with confidence,
- respond to human diversity and difference,
- provide spaces that are comfortable and legible,
- allow all workers, residents and members of the public access to the site and services equally without barriers or separation, regardless of gender, age and ability,
- consider the needs of a wide range of disabled people including those with sensory cognitive impairments as well as those with mobility impairments, including wheelchair users.

This access statement is a 'live' document and as such will evolve throughout the design process. It will form the agenda for an on-going dialogue between all stakeholders including the planning authority. The project will be reviewed at key stages in the design process to ensure that all accessibility considerations are addressed.

This section describes the approach taken to integrate the requirements of Wheelchair Housing and wider inclusive design issues into the design of the proposed scheme. This is in line with the London Plan (2021), Policy 3.8 Housing Choices.

guidance and standards

In addition, the following guidance and standards have been followed in developing the proposed scheme:

- Mayor of London's Wheelchair Accessible Housing, - Best Practice Guidance, 2007
- Approved Document M4 which supports Part M of the Building Regulations, 2015,

proposed scheme overview

The proposed scheme is fully described in previous sections of this document. In brief the scheme comprises of 15,217 sqm / 163,794 sq ft NIA residential accommodation and consists of 820 student rooms.

access and transport

The site has a PTAL rating of 6a, which is defined by Transport for London as 'excellent'. North Greenwich tube station sits directly adjacent to the site and is served by the Jubilee line. To the west of the tube station, is the bus station which is within approximately 90m walking distance of the site. It provides good local connectivity to the site by bus. The bus routes operating from this hub provide connectivity east, west, north and south both locally and further afield. These are routes 129 running west to Greenwich, Cutty sark, 472 running east to Thamesmead, 161 running south to Chislehurst, 108 running north to Stratford and south to Lewisham, 188 running to Russell Square, and 132, 422 and 486 running southeast to Bexley Heath.

The closest cycle route to the site is a Thames path route which provides a high-quality, traffic-free walking and cycling route for the majority of the length of the Thames throughout Royal Greenwich. It runs east west along the southern bank of the River Thames taking it along the edge of Greenwich Peninsula. Temporary diversions currently take the cycle path off the river banks along the western edge of the Peninsula bringing it closer to the site. Connections along Pier Walk and Tunnel Avenue connect Peninsula Square and the site to the Thames path route and there fore Greenwich from which the Royal Borough of Greenwich has a series of London Cycle Network routes connecting to different areas of the Borough, including: Greenwich to Woolwich, Falconwood, Plumstead and Eltham.

building entrances and common circulation

The proposed development has a single communal residential entrance serving all floors within the tower block.

The communal entrance lobby will have access via an external forecourt which has a ramped surface of 1:35. The lift lobby is accessed via the communal entrance lobby. The lobbies will be designed to Part M standards including door arrangement and ironmongery.

All student residential rooms have level access via level accessed lift lobbies. 2 staircases within the core arrangement provides vertical access throughout the building. Staircases are designed in accordance with both Part K and Part M approved documentation.

Level access is provided from the communal areas within the tower to the level 01 landscaped communal amenity space. Access to landscaped areas will be designed to Part M standards.

Retail entrances will be designed to provide level access at the next stages of the design, when the division of retail units is known. This will be achieved by stepping the slab where necessary to conform to the changes in ground level across the site perimeter.

communal areas

The reception areas provide level access to the lift lobby and the reception desk and associated facilities provided will be designed to be wheelchair accessible.

The residents communal areas at level 01 and 34 will also be designed to be wheelchair accessible. Accessible wc's and changing areas will also be provided.

The communal landscaped courtyard and level 34 terrace will be designed to Part M standards.

All non-residential accommodation is designed to meet Part M of the Building Regulations.

internal circulation

All internal door widths are to have a minimum clear opening of 785mm exceeding the minimum requirements stated within the Part M approved documents.

parking

The site access for vehicles is along The O2 perimeter service road via security gate 3. The development does not propose to provide any parking however existing accessible spaces are located nearby.

Storage for 615 bicycles (student residential) will be provided within secure areas at ground floor level, of these, 5% will be Sheffield stands and an additional 5% will be DDA accessible Sheffield stands. The remaining spaces will be in the form of a 'dual-stacked' storage system. Additional spaces are provided for retail use and student visitor spaces will be provided within the external public realm.

wheelchair accessible housing

10% of rooms will be designed to meet Part M (3) being wheelchair adapted or easily adaptable for wheelchair users. 90% of units are designed to be compliant with Part M (2)

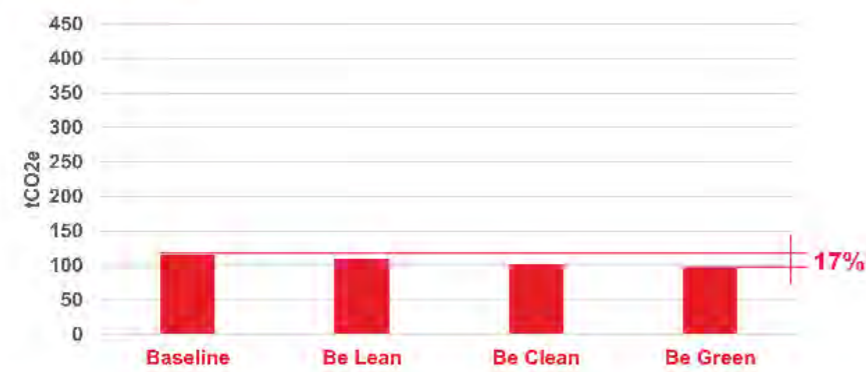
access for servicing

A summary of servicing access provision is documented within the Transport Statement under separate cover.

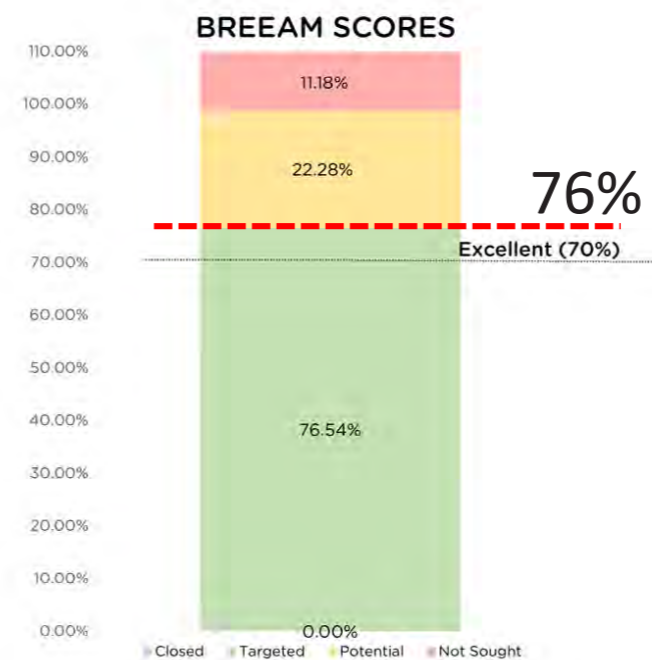
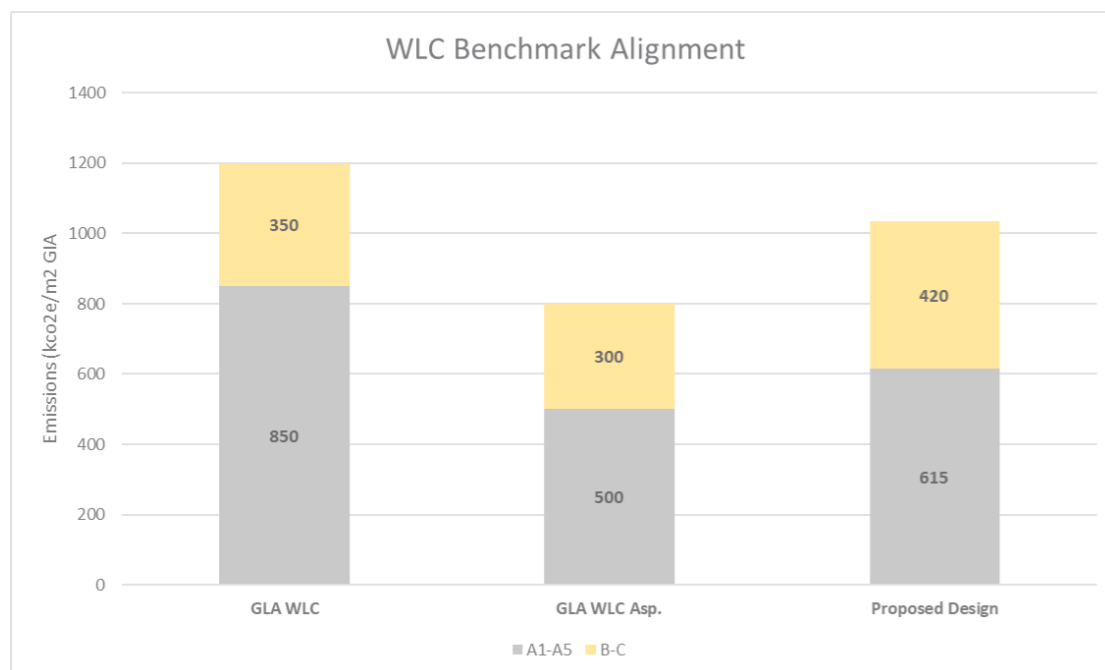
conclusion

This statement addresses all accessibility matters appropriate at the current level of design resolution. As the design develops through the respective RIBA stages this statement will be updated and expanded upon to ensure that all aspects of inclusive design are integrated fundamentally into the design and that the principles stated in the introduction are carried through to completion.

Part L 2021/SAP 10.2



Part L 2013/SAP 10



The proposal has been developed to provide high standards of environmental performance and sustainability, reinforced with the following targets:

Part L (Building Regulations 2021)

Proposal will achieve 55% better than the Building Regulations Part L 2013 and a 17% reduction under Part L 2021.

Whole life-carbon assessment

The main carbon reduction features are the following:

- panelised precast façade.
- leaner Structural design.
- use of cement replacement or cement free products.
- high percentage recycled aluminium.
- low carbon plasterboard.
- circular economy

Circular Economy workshop has been undertaken, CE design principles have been embedded in the design and CE & Waste targets will be achieved.

Environmental certification

- Retail units which are a small element of the scheme (2,074 sqm) will be targeted to achieve BREEAM Excellent rating under the BREEAM New Construction 2014 scheme and comply with London Plan 2015 and the London Borough of Greenwich policies for energy and sustainability.
- The scheme achieves BREEAM Excellent (76%) for both student accommodation and retail uses

Water efficiency

- residential target achieving: 105 liters/person/day
- 40% improvement over BRE's baseline

Urban Greening Factor (UGF)

An UGF target of 0.4 will be achieved on site thanks to the large areas of greenery and numerous trees proposed on the podium.

Cycle storage

The development provides a dedicated secure cycle storage. Further measures being considered to increase accessibility and reduce the level of car usage include:

- Information on car share scheme will be displayed in the reception.
- The development is well connected to good public transport links and has a PTAL rating of 6a.

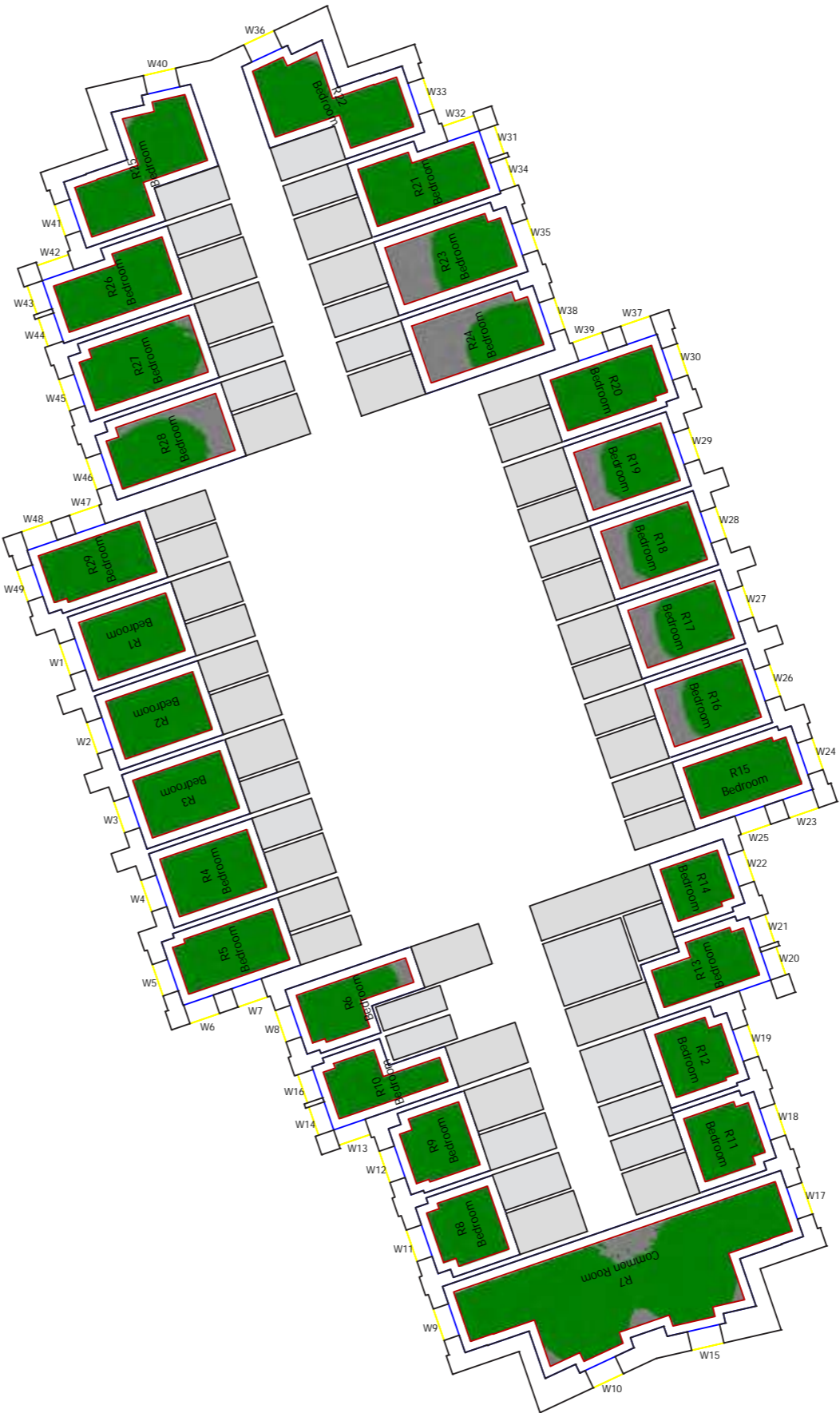
energy and sustainability - internal daylight analysis

The quality and adequacy of daylight within the proposed student study bedrooms has been assessed against the new internal daylight standards introduced in the new edition of the BRE Guidelines released in June 2022, to ensure that the future occupants of those rooms will enjoy a reasonable level of internal daylight amenity.

The new guidelines supersede British Standard Code of Practice, BS8206 Part 2 with British Standard BS EN 17037 and replace the use of Average Daylight Factors (ADF) with the use of Spatial Daylight Autonomy (sDA).

The main difference between the two is that whereas ADF took an average level of daylight throughout the room, sDA now requires the measurement and plotting of true Daylight Factors on a horizontal Working Plane set at worktop level and therefore is a measure of internal Daylight Distribution requiring at least 50% of a bedroom capable of receiving more than 100 Lux and a living room achieving more than 150 Lux.

The results of the sDA analysis has shown that all of the future Study Bedrooms in the proposed development will achieve more than 100 Lux across more than 50% of the Working Plane thereby demonstrating that all of those study bedrooms will deliver adequate natural lighting amenity to the future occupants.



SDA % of Hours > req. lux

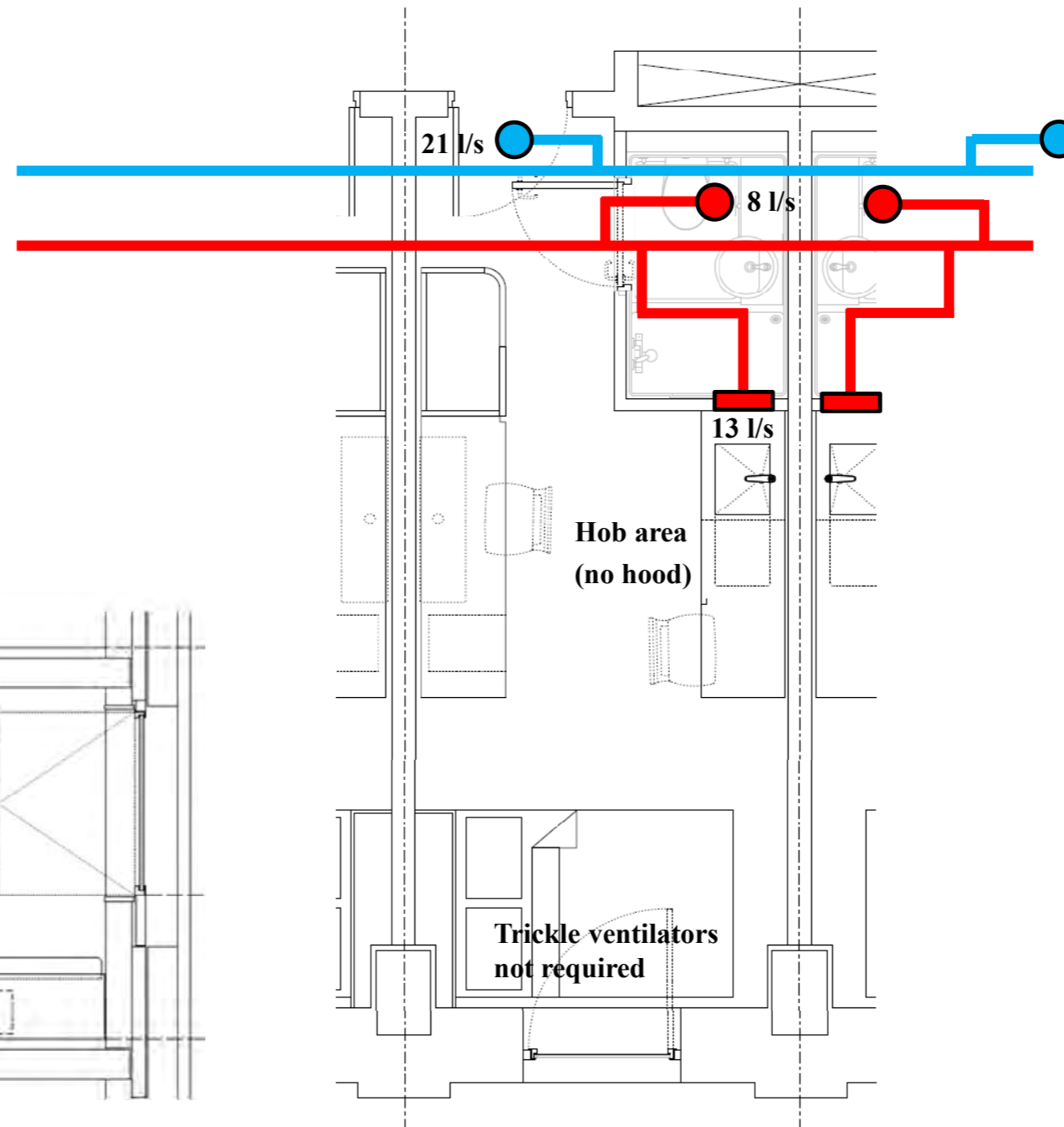
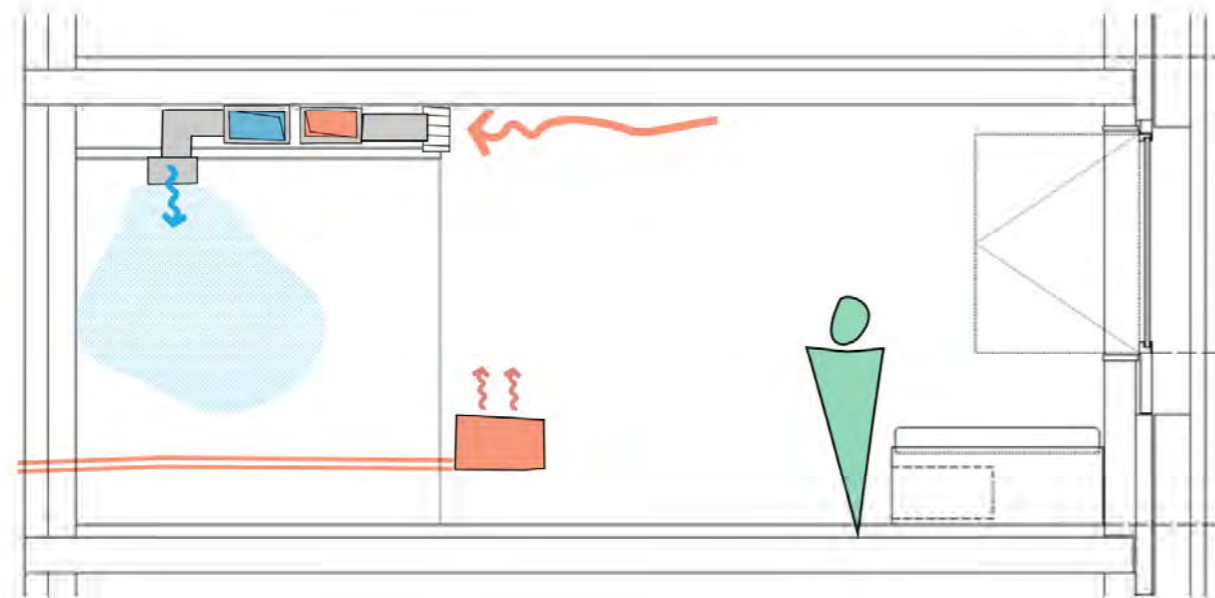


01 level 02 - internal daylight analysis



Be Lean – Heating and Ventilation

- Ventilation is through on floor units with heat recovery.
- This allows reduced energy consumption by lowering fan power, and enabling floors to be 'turned off' when not occupied.
- Supply air with cooling (to approx 18oC) to mitigate overheating
- No need for trickle ventilation, which improves the thermal performance of the fabric and reduces heating demand.
- Water based heating system distributed to radiators within rooms.
- Low temperature distribution to allow future flexibility for alternative low carbon heat sources, or changes to temperature of the heat network



02 typical student room heating and ventilation strategy (studio room illustrated)

security and crime prevention

active and passive measures

It is the aim of the development to provide an environment within and around the building that is safe and secure for users, visitors and the general public. To this end, the following measures will be taken:

- Passive surveillance to street perimeter, with active uses and predominantly glazed façades overlooking the publicly accessible Peninsula Square, thereby discouraging anti-social behaviour
- Active CCTV surveillance to street perimeter, service bay and building entrances
- Well-lit entrances and building frontages
- Secure bicycle storage, accessible from the street
- Back of house and plant areas are secured and accessed by trackable electronic fob

Secure by Design

The design has been developed in accordance with the Secure by Design Guidance. A consultation meeting was held with a Secured by Design officer on 14.12.22. The proposals were well received and the layouts were deemed to be secure. The key points raised are listed below:

Site risk areas:

- The O2 (predominately internally) has suffered an increase in crime as a hotspot for sexual assault and other crimes since the completion of nearby residential blocks
- However, the theft of bikes and parcels are considered the greatest crime risk for the scheme

Overall security on the building:

- A good management strategy for the development will be required
- Proposals will be required to meet SBD homes 2019 and SBD commercial 2015 Guidelines
- CCTV should be provided both internally and externally at ground floor, particularly in high-risk areas

Ground floor main entrance:

- All doors at ground level will be security test rated
- The revolving door to the primary residential entrance cannot be security rated and therefore will require access control. A strategy will be considered in the following stages as to when these may be locked/allowed to open freely
- The pass doors either side of the revolving door are more likely to be targeted and they will be accredited secure doors
- The secure line of the entrance lobby is acceptable provided the stair and back of house doors are security test rated
- Lifts to the student rooms are to have access control unless secured via access control doors from the main entrance lobby to avoid uncontrolled access to the upper floors

North-west entrance and cycle store:

- New fencing (potentially visually permeable) will be provided to create a secure area to the north of the building for cyclists and service vehicles approaching from the north-west of the site. The drivers behind providing cycle access to the north-west of the site, this was deemed acceptable however should be kept as wide and uncluttered as possible
- The cycle store entrance on the north of the site and the surrounding space will be well lit and utilise CCTV
- At the next stages of the design, cycle storage will be subdivided into enclosures of 50-100 cycles spaces within the larger cycle store area. Divisions will include tested and accredited secure doors

Internal security of student residential accommodation:

- The typical student residential floorplate is well organised and deemed safe.
- Each individual cluster entrance door will be fitted with access control
- All student room doors and cluster entrance/compartments doors are to be security test rated PAS 24 doors and meet part Q requirements

In addition to the points raised below, the following notes were subsequently received via email from the meeting on 10.01.23:

- Curtain walling at ground floor level/up to a minimum of approx. 3M to achieve a minimum of RC3 (resistance class 3) and to have glazing that achieves a minimum of BS EN 356:2000 P3A
- Mail boxes to be covered by CCTV and are SBD compliant by having the attributes outlined by Door and Hardware Federation standard Technical Standard 009 (TS 009)
- Accessible windows to be a minimum of PAS 24:2020. Typically this would include any window accessible from ground floor or podium level
- If unlawful free internal movement has been restricted via an access control system acting on dedicated external doorsets and any additional doorsets providing access to individual floors/landings, then an electronic release must be incorporated within the system to allow the fire service free access to all of the communal areas of the building. The electronic release system must be weatherproof, easily identifiable and located close to the entrance that Fire and Rescue Teams would use in the event of an emergency. It has been agreed between the police and fire and rescue services that the most practical means of achieving this aim is to install a switch within an Access Control Box (ACB). The key system for the ACB should be of a restricted type acceptable to the local fire and rescue service. An ACB must be secure for obvious reasons and therefore shall be tested and certificated. Currently London Fire Brigade carries a Gerda key to access Gerda ACB's for this purpose.
- Access control requirements: Audio and visual colour access control with a calendar month storage of all activations available to police within 24 hours notice and integrated to utilise both fire and security systems. No trades buttons.

Proposals will also be reviewed by the Counter Terrorist Office at the next stage of design. Measures should include hostile vehicle mitigation and anti-blast mitigation at ground floor frontage, including windows and doors to be security rated and utilise laminated glass.

The facade access and maintenance strategy is currently under development and will be reviewed at each design stage. The client has appointed REEF associates to develop this strategy and ensure that it is both safe and practical.

The current strategy is for the façades to be cleaned and maintained via rope access. Access and rope access anchor points will be required on all terraces. The rope access anchor points will require ongoing testing and inspection.

Rope access does not cover glass replacement, the proposal will ensure that all glass replacement is achievable via internal lift access.

07

landscape

- ground floor
- podium garden and rooftop terraces
- opportunities and constraints
- landscape design strategy
- external shared amenity - podium
- illustrated landscape plan - podium and upper levels
- ecology
- planting strategy
- wind mitigation
- external lighting strategy

ground floor

The landscaping proposals described in this section of the document are illustrative only. They set out the brief and the principles for the design, however the detailed landscaping strategy will be secured as a planning condition.

The site is currently bounded by The O2 to the north, a private delivery area to the north west, the taxi rank to the west and the main pedestrian area of Peninsula Square to the south and east.

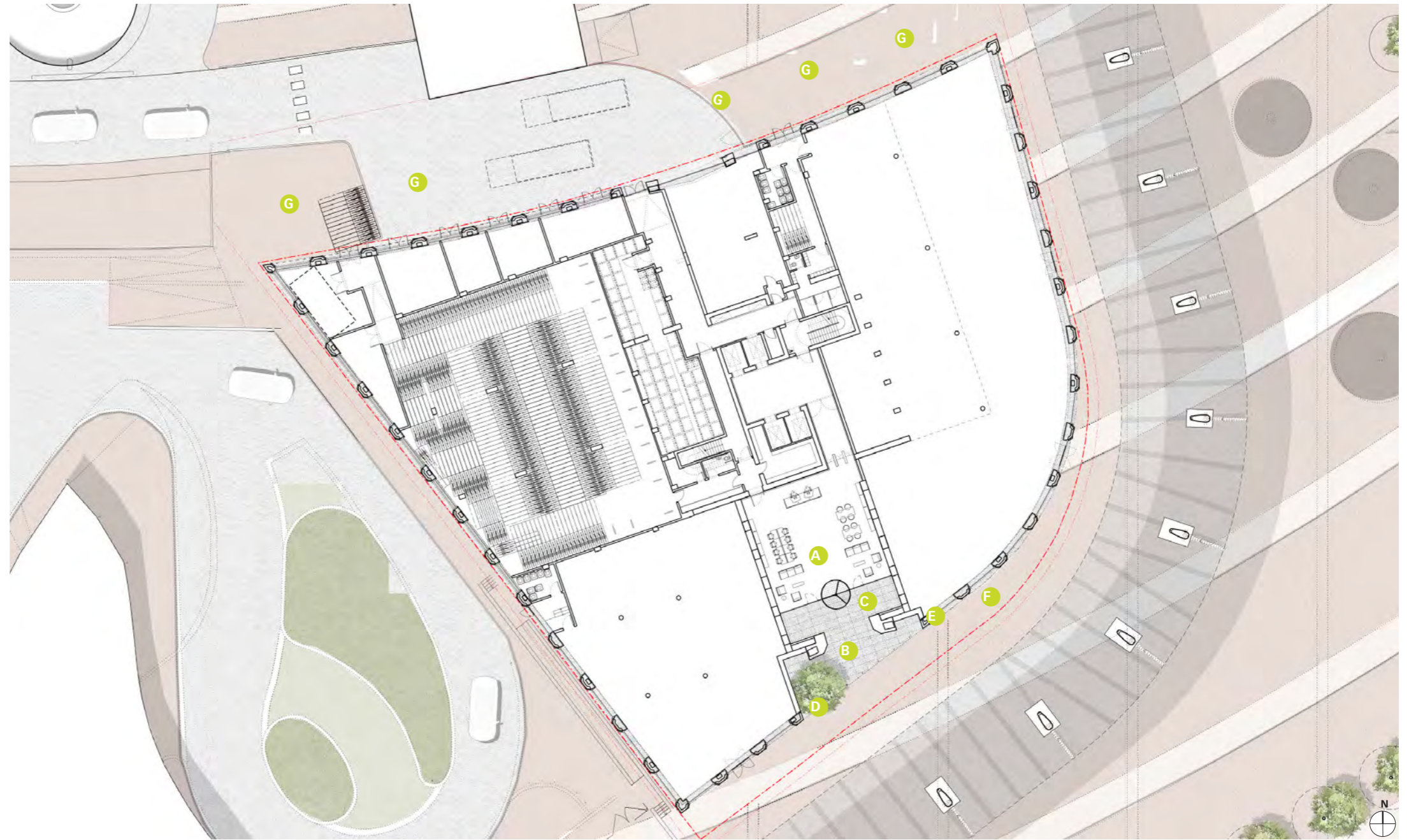
The residential entrance is located to the south of the site where the podium block cuts back to allow the tower to ground itself. The base of the tower forms the residential entrance. Set back from the site line the entrance is accessed via a semi private forecourt off Peninsula Square. The space is defined by a change in paving and a row of bollards providing a clear threshold whilst not creating a barrier.

The entrance will be expressed with stone paving, of a colour and layout deliberately contrasting with the paving used in the rest of the square. The material chosen for this external threshold may be continued inside the lobby to reinforce the transition from the public square into the private residential lobby. A 'feature' tree provides colour and animation to the forecourt. The tree species will be determined in the detailed design of the landscape and must consider its environment.

A stone paving zone (E) of 1300mm follows the base of the podium and picks up the stone plinth in the podium facade. Where the frontage to the retail space sets back from the site line (along Peninsula Square) the existing paving pattern on the square will be extended using with materials and a layout to match the current design of the square (F) (grey granite banding over a red granite background).

The existing line of Plane trees to the north of the site provides a good buffer between the site and The O2. Three of the four existing trees (G) can likely be retained but the western most tree would block vehicular access to the car park and loading bay and is therefore scheduled for removal. Two new specimen Plane trees (H) are proposed to the west of the car park entrance, to continue the existing line.

At the southwestern boundary of the site, the currently abrupt level transition with the edge of the taxi rank (concrete wall and ramp butting against the current hoarding) will be rationalised and simplified through the removing of the requirement of access the site along this edge.



01 ground floor illustrative landscape proposals

- A** residential tower lobby
 - B** residential tower lobby
 - C** tower forecourt
 - D** colonnade at base of tower
 - E** feature tree
 - F** stone paving to match stone plinth on podium facade
 - G** paving to match existing paving of Peninsula Square
- existing / new location of Plane trees (existing trees to be retained if possible)



podium garden and rooftop terraces



The overall landscape design is led by the desire to create a lush, green environment, with abundant shrubs and trees providing contrast with the vibrant urban context.

To achieve this a perimeter belt of trees and shrubs are envisaged. These will serve multiple purposes as they filter wind and noise, capture polluting particles, provide habitats for invertebrates, create shade during a hot summer and provide a visual amenity that will be seen from afar.

A total of 2271m² of outdoor space has been provided for the students' use. This includes 2053m² at the podium level, and 217m² at the rooftop level. In addition 211m² of inaccessible setbacks at various levels will be planted to form a visual amenity for the residents and passers-by alike.

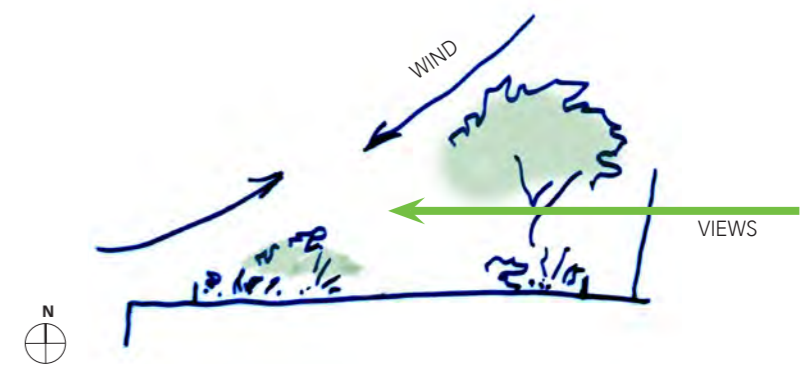
In addition to a green shelter belt, a 2m high glass balustrade will screen the perimeter of the podium and the terraces. To impede the wind further, pergolas and a microforest have been positioned where they may be of maximum benefit.

The student' outdoor facilities have been designed with year-round use in mind. The pergolas will have facilities for heating during the winter months with removable side walls and a solid roof where it may be possible to locate photovoltaic panels to offset the energy usage.

The roof terrace at level 34 is proposed as a flexible, mixed use space with loose furniture and a surrounding strip of planting. This will include smaller, multi-stem trees and shrubs in order not to exceed the built height limit as set out by the Civil Aviation Authority.

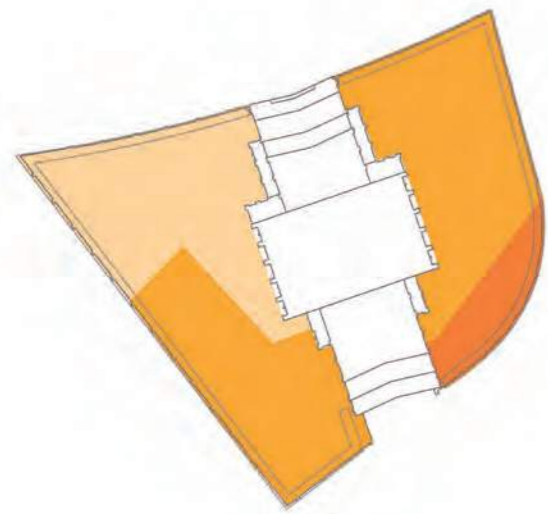
The large podium area has been divided into activity zones, with quieter activities such as study or gardening kept separated from the noisier activities such as games and the main social area.

Since the residents are all expected to be over 18 years old, play provision has been excluded from the proposals.



01 level 1 floor plan (podium terrace) illustrative landscape proposals

opportunities and constraints



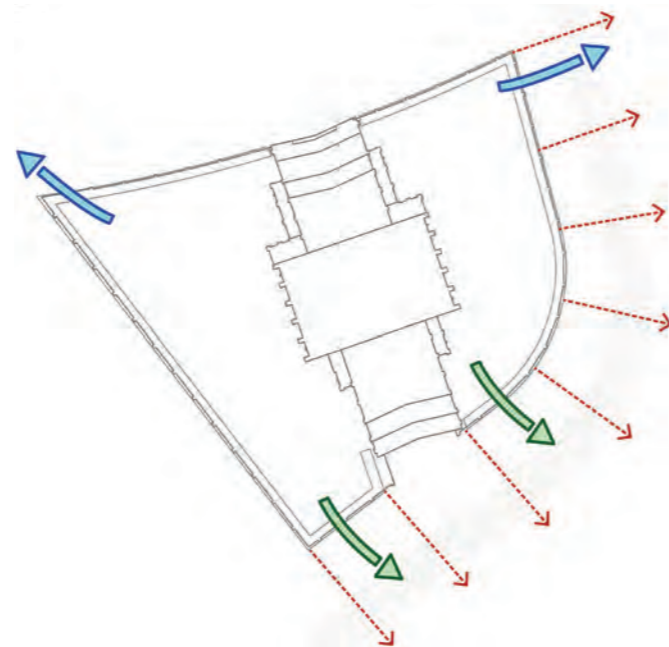
- 8 hours or more
- 4 to 8 hours
- 2 to 4 hours

01 sunlight

The podium is fortunate to receive direct sunlight throughout the day, with all areas receiving the minimum of two hours per day, and the south facing areas receiving considerably more.

All planting will take sunlight availability into account

The diagram below is an indicative summary of direct sunlight hours taken at the equinox on 31st March

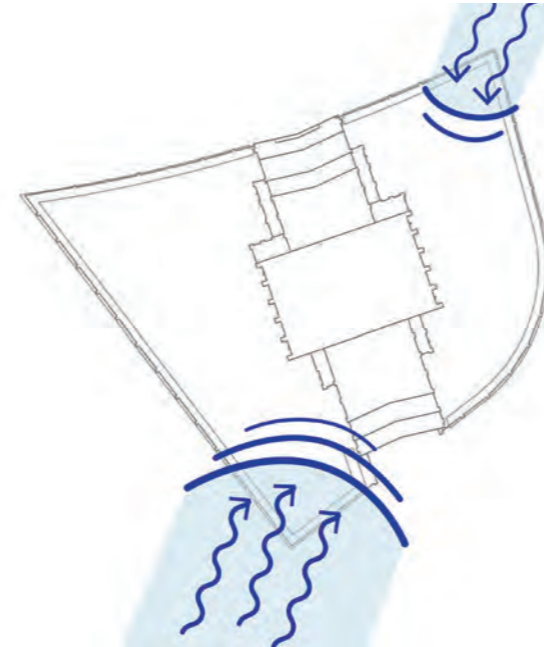


- views to the River Thames
- views to Central Park
- views to the Peninsula

02 views

There will be exceptional views from the development with the River Thames visible from the north-west and north-east, Peninsula Square visible from the south and east, and the Central Park visible from the south.

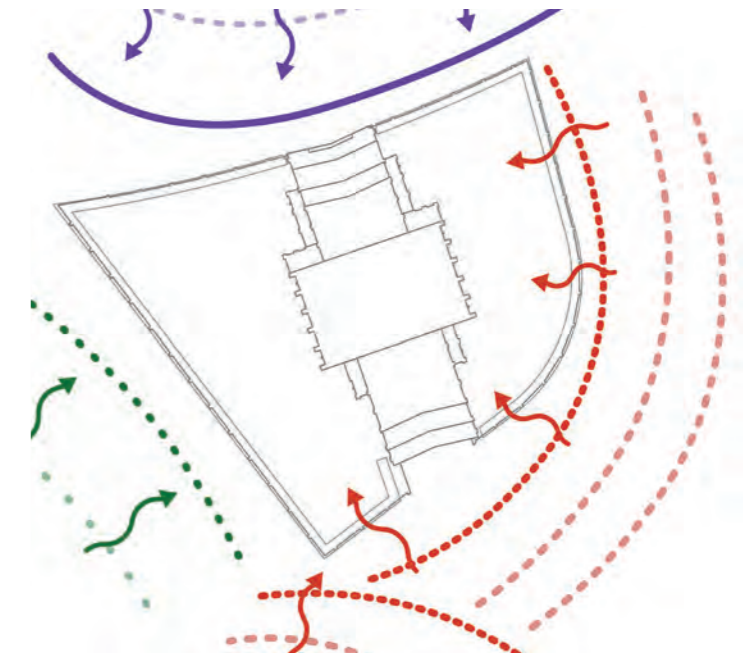
The proposed screen around the podium will be transparent to ensure these views are maintained and planting will be designed to provide views through the greenery whilst maintaining the cover for wind mitigation.



03 wind

The podium and the terraces will be subject to the prevailing winds from the west in the warmer months and the east during the colder part of the year. The podium and upper terraces have been designed to create a more sheltered environment through the use of structures such as screens, pergolas and the careful positioning of large shrubs and trees.

The aim is to create spaces with individual micro climates by filtering and lifting the wind as much as possible.



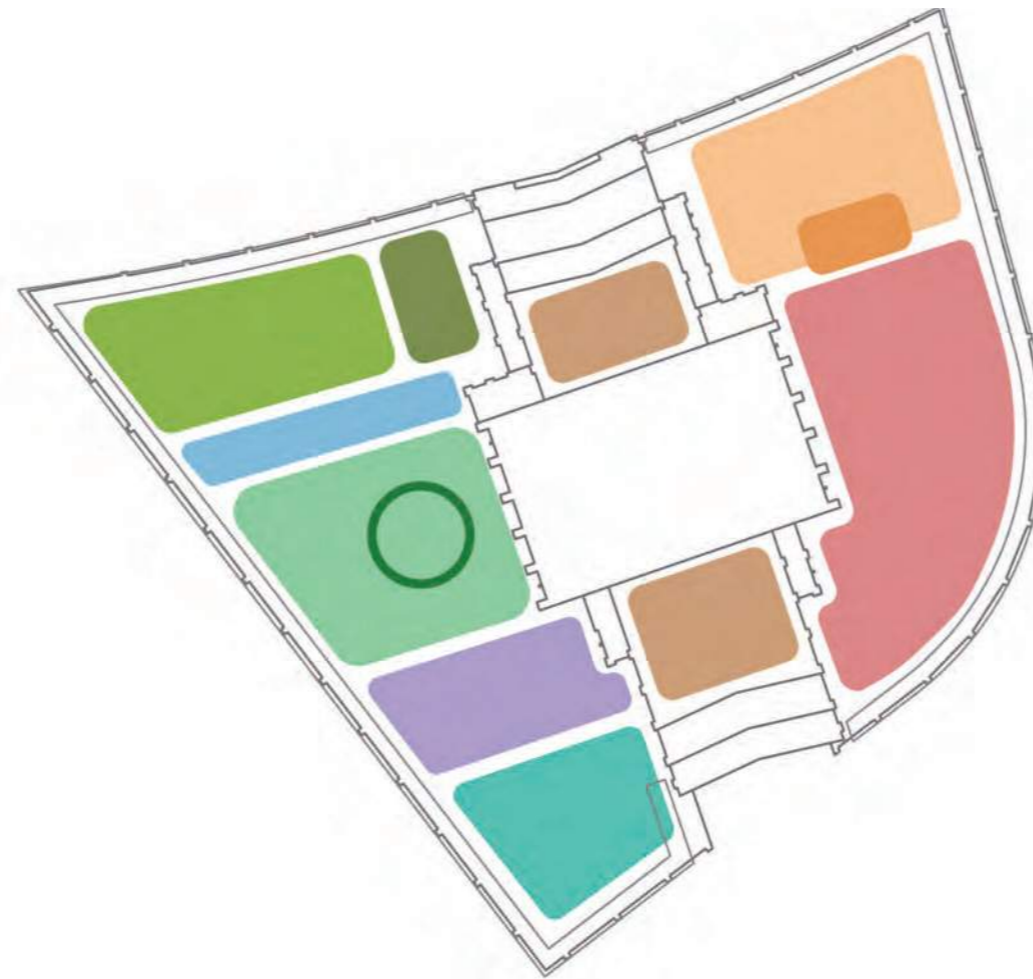
- bus station traffic
- Underground station and general public
- occasional noise from the O2

04 noise

The site faces onto Peninsula Square between the O2 and the Greenwich Underground and bus stations. As such it is expected that the podium will experience noise from the entertainment venue, the public walking to and from it, as well as the general visitors to the Square.

To take advantage of the quietest aspects to the north and west, facilities for study, gardening and relaxation have been placed to the west side of the podium. The south and east will likely experience the most noise and this is where an event space, games facilities and general social spaces have been located.

The tall balustrades at the perimeter of the podium will screen some noise from the outside and will be further helped by the generous perimeter planting of perennials, shrubs and trees. An emphasis will be placed on species which move in the wind to reduce the perception of noise levels.



There are two distinct parts to the podium, one to either side of the tower. Both can be accessed from the communal areas at the podium level. Our proposals take advantage of this natural division to separate the quiet and noisy activities, with the quieter activities taking place to the west and the noisier to the east, where more outside activity is expected.

Each area has been further divided into activity zones with facilities provided accordingly.



roof terrace

The top terraces will be mixed use spaces, with loose furniture to enable both social activity and quiet relaxation.

The spaces will be surrounded by carefully positioned mixed planting to maintain views.



event space and the stage

This will be a flexible area with a stage and a raised platform with both sloped and stepped access to serve either as auditorium seating or a space to sit and relax.

It will be surrounded by planting with particular attention given to the area between the platform and the nearby residents' rooms to ensure that noise levels are reduced as much as possible and privacy is protected.

A stage with a wall at its back can house a cinema screen.



main social area

This zone includes a large pergola, fixed benches and space for comfortable, loose furniture as well as games equipment such as table football or giant Jenga.

A generous strip of planting will separate the social area from the residents rooms and windows, with carefully positioned planting to maintain privacy.

At the back of the stage wall, and under the proposed pergola, there is an opportunity to include a bar, a servery, or a communal food preparation area. This is also the proposed location for a drinking water point.



grow gardens

Planters for growing herbs and vegetables are proposed, with accessible paths and raised beds to make gardening easier for disabled users.

wildlife garden

A raised area of wildflower meadow will host a small orchard with dwarf fruit trees.

This corner also affords the best views to the Thames and fixed seating can be provided here to create a secluded corner for relaxation.



outdoor exercise

This area sits at the back of a large pergola and faces the wildflower meadow. A variety of exercise equipment is envisioned, with the change in level created by the wildflower meadow used to create more informal opportunities for exercise.



main dining and study area

Easily accessible from the indoor communal areas, this zone features two covered pergolas with a microforest at its centre and space for tables and chairs of all sizes.

The micro forest will be designed to mimic a natural forest, with a path through its centre to enable users to watch the development and progress of the planting.



lawn area

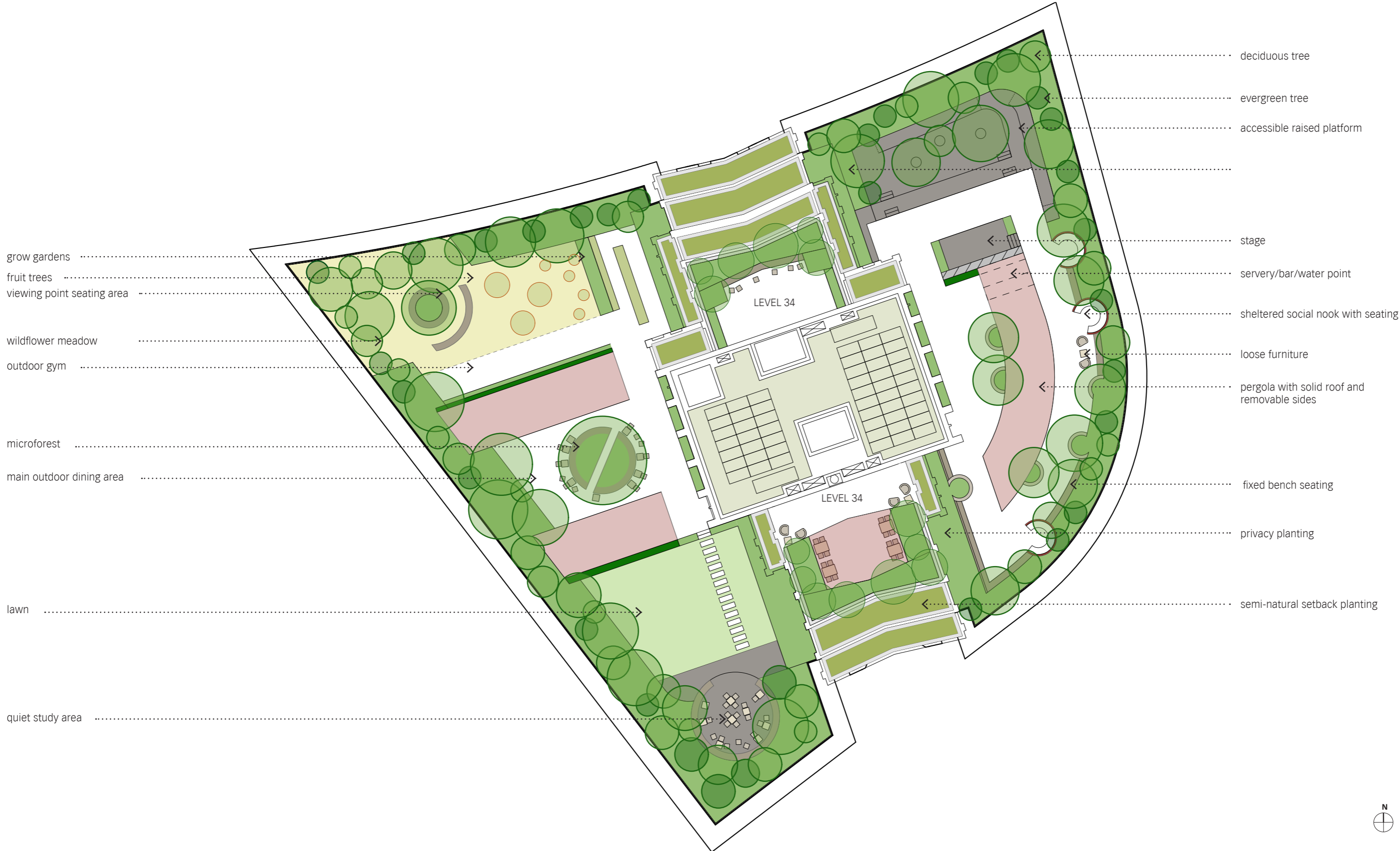
A simple lawn area is provided as a clear flexible space to relax, practice Yoga or just sunbathe.



quiet corner

A quiet area for study or relaxing is proposed, surrounded by trees and shrubs and accessible via a path running through the lawn area.

landscape plan - podium and upper levels





clockwise from top left:

- outdoor servery
- podium garden with trees in spring
- day beds
- table football
- parametric table tennis
- giant Jenga
- subsoccer table

top left: podium social area

bottom left: outdoor cinema

right: raised decking platform with trees

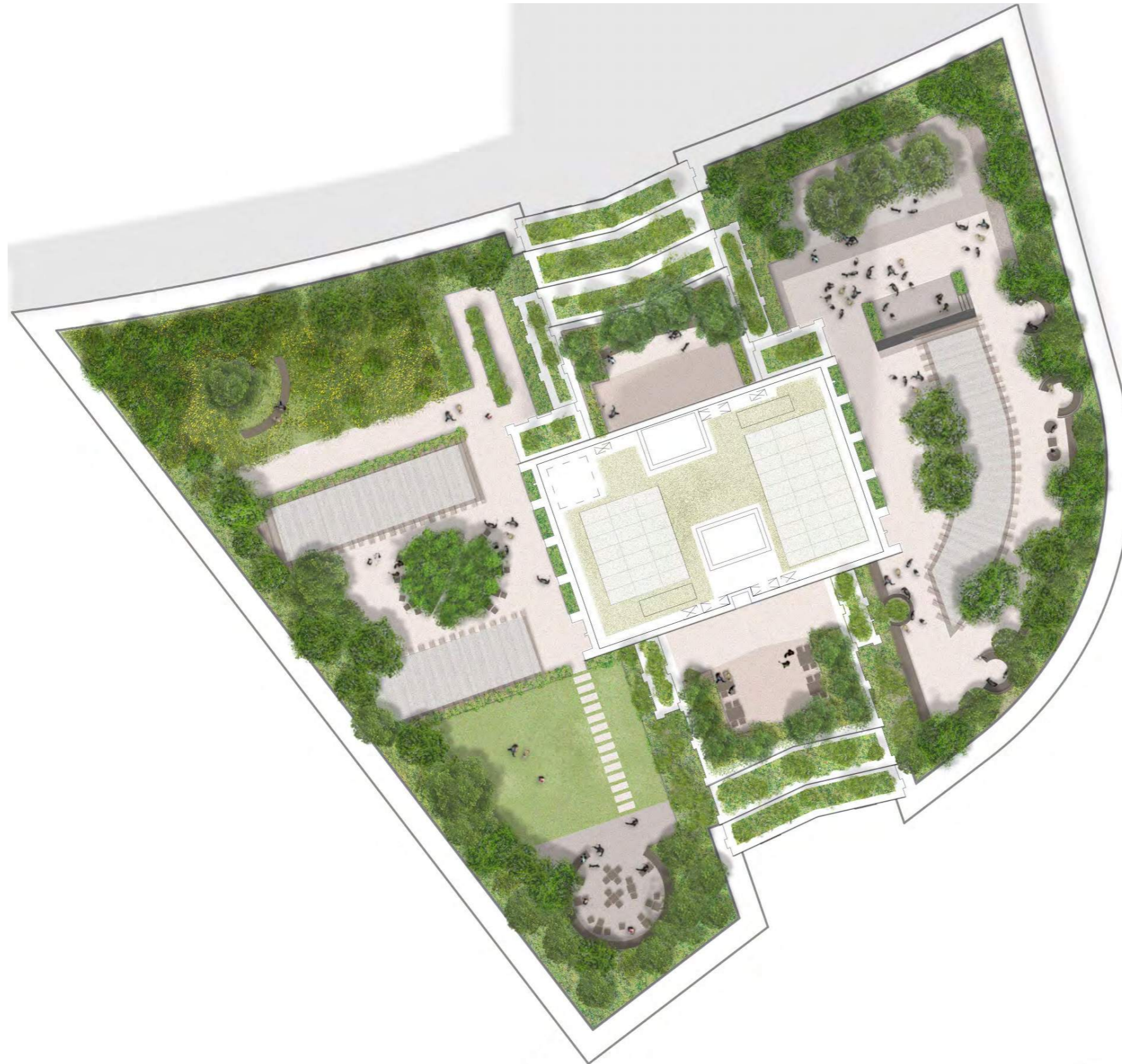
external shared amenity - podium



top row:
 left: quiet social/dining area
 middle top: loose furniture
 middle bottom: lawn croquet
 right : dining area

bottom row:
 left: studying outdoors under pergola structures
 right : main social area nooks

illustrated landscape plan - podium and upper levels



An open space of 1990m² is provided for the residents of the development at first floor level. The garden provides a visual amenity to all flats and an external landscaped amenity for play and recreational uses. The intention is that the garden as a whole offers informal play whilst the 'play gardens' to the north offer an opportunity for a more formal play space.

The garden is accessible from first floor level via a spacious lobby directly off the core. A decked area (H) provides both covered seating (under the tower colonnade) and seating open to the elements adjacent to the lobby. A communal south facing room (D) is located off the lobby with direct access to a south facing terrace (E) and the sun terraces (A). Three flats are located at first floor level with views and access to the garden via private terraces, which act as a buffer between the flats and the communal gardens.

The garden design follows the linear geometry of the façades based on a 3600mm building grid. The use of mixing hard and soft surfaces provides flexible multi use spaces within this geometry.

A dense evergreen hedge follows the perimeter of the courtyard to create a sense of edge and enclosure. Within the hedged perimeter is a pathway (F) for strolling from which views over Peninsula Square and the local context are experienced. The paths terminate at a viewing pavilion (G) located at the north west and north east corners of the podium. From which views of the River Thames and Canary Wharf are experienced. Openings through the hedge provide access between the perimeter path and the central garden spaces.

The central gardens are divided into three 'zones' / 'garden rooms' running north south. The sun terrace (A), the mixed use garden (B), and the play/viewing gardens (C). Each have a different character but are designed to be flexible and inclusive spaces. The sun terraces, located to the south, are where the garden receives the most sunlight. The play/viewing gardens are located to receive sunlight either in the morning or evening, and benefit from good views as an amenity for the seating provided for parents/carers. The mixed use gardens are planted with hedges / trees providing a series of smaller flexible / informal spaces for sitting, exercising or other amenity uses. The planting provides texture which serves to disperse downdrafts that may occur off the face of the tower.

The design and planting of the courtyard will be specified in the detailed design of the landscape and is to be informed by the environmental studies, in particular the overshadowing studies.



external shared amenity - podium



01 wellbeing, games and recreation



02 inspirational hub



03 seating areas



04 outdoor auditorium

external shared amenity - podium

The images below illustrate how the podium level terrace will be designed to maximise year round use, including enclosing of pergolas and use of heaters to provide a comfortable environment to study and socialise within.



01 view of proposed level 01 terrace during winter



02 view of proposed level 01 terrace during summer

ecology

general

The Environmental Report prepared by Waterman Infrastructure & Environment Limited, summarises the site as having “negligible potential for any protected or notable species and habitats.” The aim of the landscape proposals is to not only create pockets of new habitats to remedy this, but also to provide another link in the network of green spaces to be found nearby which form green corridors through the heavily urban areas of London.

In line with the Greenwich Biodiversity Action Plan, the roof terraces will be designed to encourage invertebrates to colonise and hence provide further foraging opportunities for species such as black redstarts and house sparrows as well as commuting opportunities for bats.

habitats

Whilst it is difficult to establish meaningful habitats in such an urban location, it is proposed that the planting strategy is as diverse as possible to help create a network of wildlife friendly spaces throughout London.

An area of wildflowers will be included on the podium, and the inaccessible setback terraces at upper levels will have intensive, semi-natural planting including native shrubs and perennials. In addition, a small area of orchard is planned with dwarf rootstock fruit trees of local and legacy varieties of apple and pear.

ecological features

Ecological enhancement features will be included on the setback terraces in accordance with the ecologist’s recommendations. These can include such items as insect hotels, water trays, sand and log piles as well as bird and bat boxes.

plant species

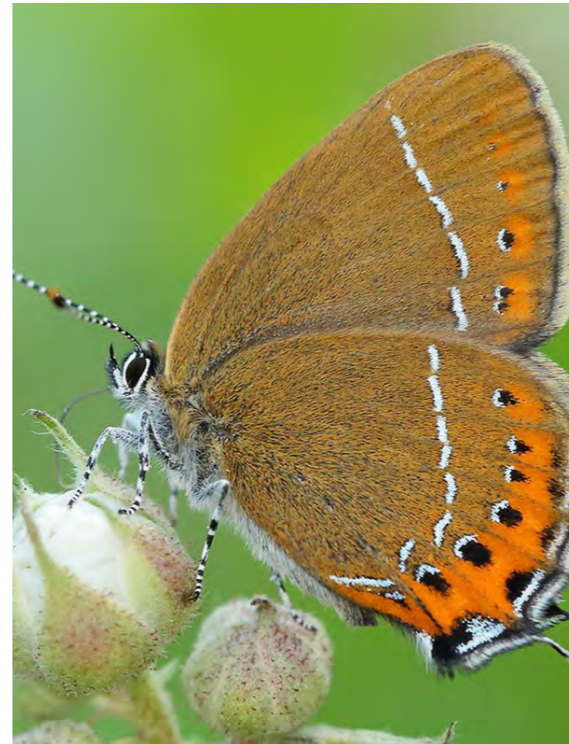
Plant species will emphasise native and wildlife friendly species, with berrying shrubs and food sources for insects. Majority of the species will be either wildlife beneficial, or native, or both.

Wildflower area will feature a diverse range of perennials as recommended by the ecologist.

Invasive species will not be used

tree canopy cover

There are currently just two trees on site. Our proposals aim to introduce numerous new trees which will increase the tree canopy cover by well in excess of the 10% target increase outlined by the London Plan.



wind

Altitude and wind will play an important role in species selection, with a considerable number of shrubs and trees used to filter and slow wind in order to improve conditions for all users. All species selected will need to be able to cope with summer wind from the west and cold drying winds from the north-east.

noise

While it is not possible to avoid the sounds of the surrounding area, the natural movement of certain plants, such as grasses will be used to reduce the perception of noise and provide more secluded areas on the podium and the roof terrace.

aspect

Aspect and micro climates will be considered with species chosen according to their ability to withstand conditions such as shade or full sun and exposure to cold winter winds.

A variety of species will be chosen to maintain year-round interest and structure with a mix of evergreen and deciduous planting.

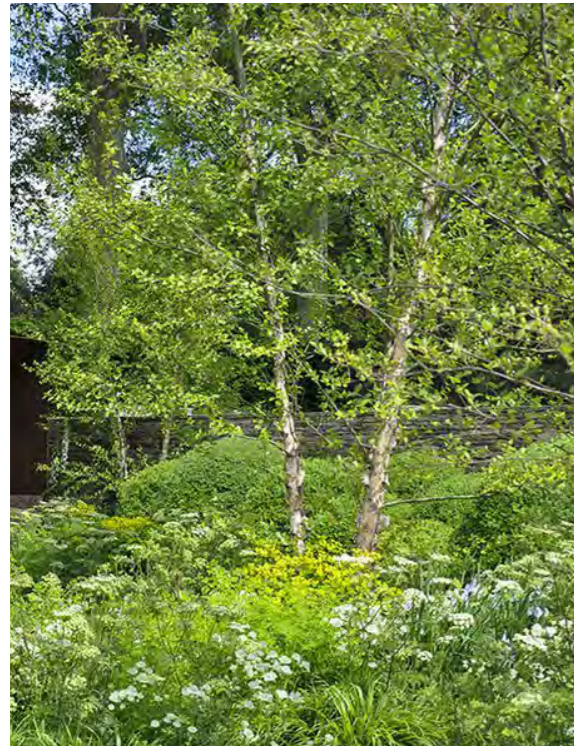
wildlife

Wildlife beneficial species will be prioritised throughout. These will include plants to provide food and habitat for invertebrates which, in turn, will provide a food source for the birds. The roof setback areas in particular will be planted as low-management, semi-natural habitats, and will include a mix of shrubs and perennials, as well as the recommended ecological features. These setbacks will not be accessible to the residents.

Urban Greening Factor (UGF)

An UGF target of 0.4 will be achieved on site thanks to the large areas of greenery and numerous trees proposed on the podium.

Please see drawing 22228-BBUK-XX-XX-DR-L-03000 for the details of the calculation



planting

trees

The proposals aim to create an oasis of greenery in the midst of a very urban location. To achieve this, a great many trees are proposed, with a mix of approximately 30% evergreen and 70% deciduous species.

The three main evergreen species being considered are shown opposite.

The aim will be to specify native and wildlife beneficial trees, however this will be tempered by the need for responsible sourcing and building resilience into the scheme, for both climate change and to guard against pests and diseases.

The trees will play a vital role in wind mitigation, filtering the prevailing winds and creating areas of microclimate on the podium and the rooftop terraces.

All species will be chosen for their ability to withstand the expected winds as well as their preferred aspect and conditions.

To aid successful establishment long continuous tree trenches are proposed so that the available soil volume may be fully utilised.

Trees are also proposed for the level 34 terraces. These will be smaller, multistem species to ensure that the airport flight path restrictions above the 119m datum are not breached.

A small area of microforest is proposed for the podium. This will be densely planted with a variety of young trees and a full understory of shrubs and perennials to approximate a full woodland habitat.



Quercus ilex



Pinus sylvestris 'Watereri'

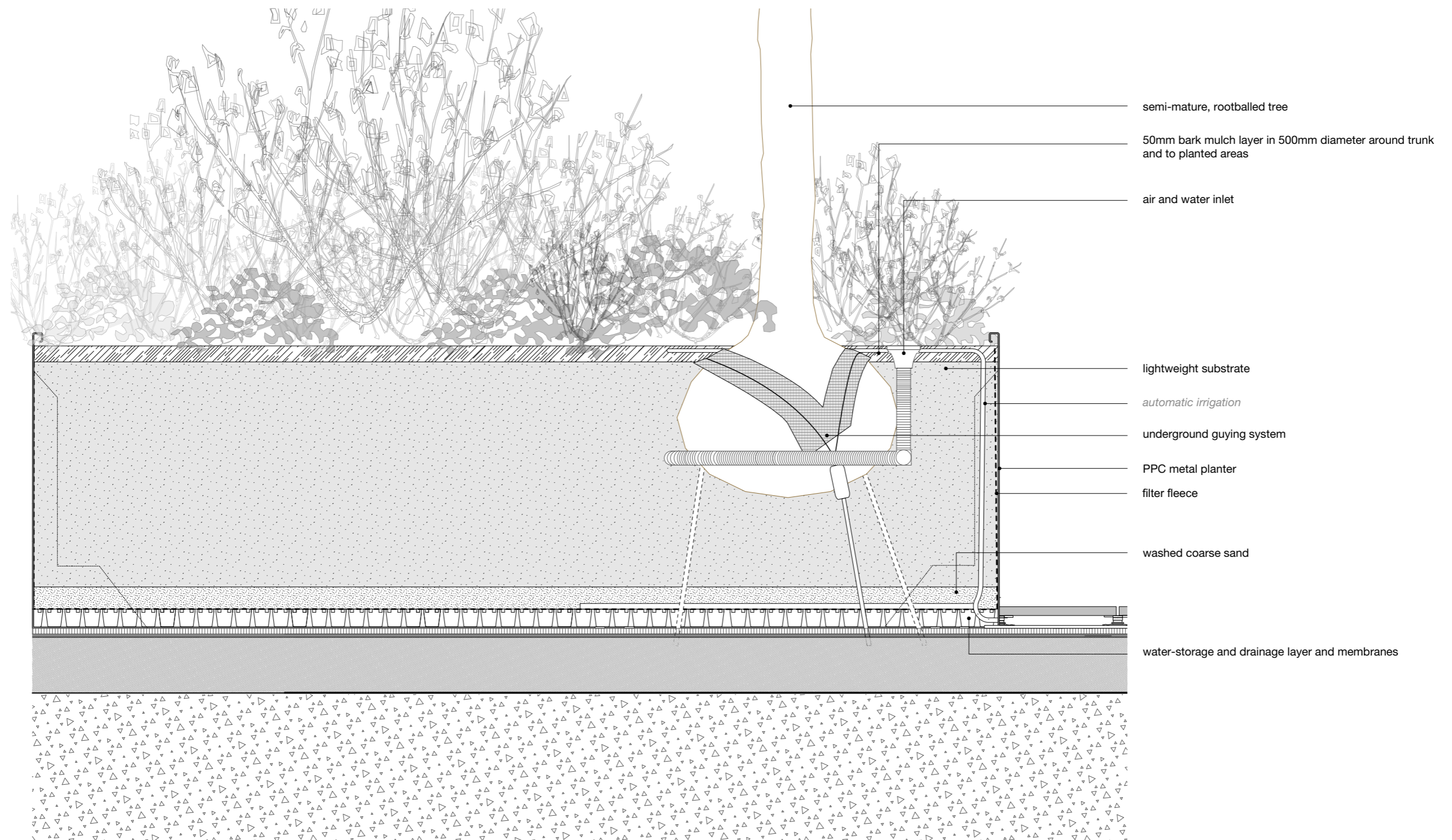


Arbutus unedo



microforest example in Mantua, Italy

typical tree planting detail



planting

shrubs and perennials

Shrubs of varying species and sizes will be used as part of the wind mitigation strategy, both to filter the wind and to help shelter the establishing trees.

As with the trees a variety of species will be used, both deciduous and evergreen, with an emphasis on year-round structure to help maintain amenity spaces that can be used throughout the colder months as well as during the summer.

Evergreen species will be used to provide structure throughout, with deciduous and flowering plants added for year round interest.

A selection of species being considered is on the right.



top row, perennials for shade:

- *Cyrtomium fortunei*
- *Anemone 'Snow Angel'*
- *Liriope muscari*
- *Crocus vernus*



second row, perennials for sun:

- *Persicaria amplexicaulis*
- *Geum 'Mai Tai'*
- *Erigeron kravinskianus 'Lavender Lady'*
- *Calamintha nepeta*

third row, grasses:

- *Briza media*
- *Luzula nivalis*
- *Deschampsia caespitosa*
- *Molinia 'Moorhexe'*



bottom row, shrubs:

- *Cistus monspeliensis*
- *Cytisus praecox*
- *Sarcococca confusa*
- *Skimmia japonica*



Pyracantha coccinea



Lonicera periclymenum

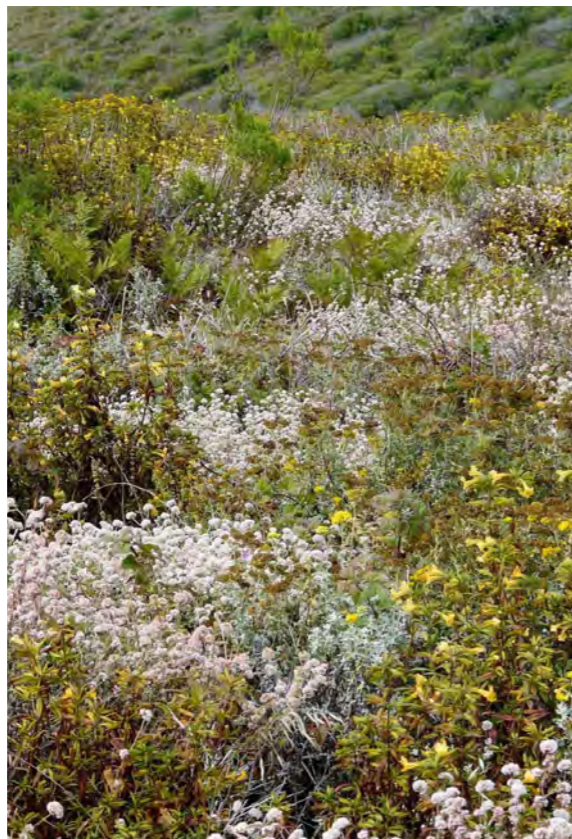


Clematis arandii

vertical greening

As part of the wind mitigation strategy there will be pergola structures on the terraces, giving an opportunity for vertical greening. Whilst the 'roof' area will be given over to PV panels, the vertical sides will be used for training climbing plants.

As with other types of planting, native and wildlife beneficial species will be prioritised.



Ligustrum japonicum

semi natural rooftops

Semi natural planting will consist a mix of 100% wildlife beneficial and/or native perennials and shrubs, designed for minimum maintenance in order to let the habitat develop for the benefit of birds and insects.

This type of planting is proposed for all inaccessible setback terraces, where majority of the ecological enhancement features will be located.

wind mitigation

The design of the building has been carefully developed to ensure that wind conditions both within and around the site are not adversely affected. Initial wind tunnel testing has shown conditions around the proposed development improve considerably as the 2019 Greenwich masterplan is built out. As such, the impact of the proposed development on its surrounds, and requirement for mitigation, will vary significantly depending on the rate at which surrounds are constructed. Typical mitigation suggestions have been made by RWDI following these tests. The exact extent and efficacy of these measures will be confirmed prior to commencement on site, through further wind tunnel testing which will more accurately reflect the surrounding buildings.

For further detail of the wind condition review, analysis and conclusions, refer the Wind and microclimate report by RWDI which accompanies this application.

wind mitigation measures

The following conclusions were made following initial wind-tunnel testing:

existing context - temporary mitigation

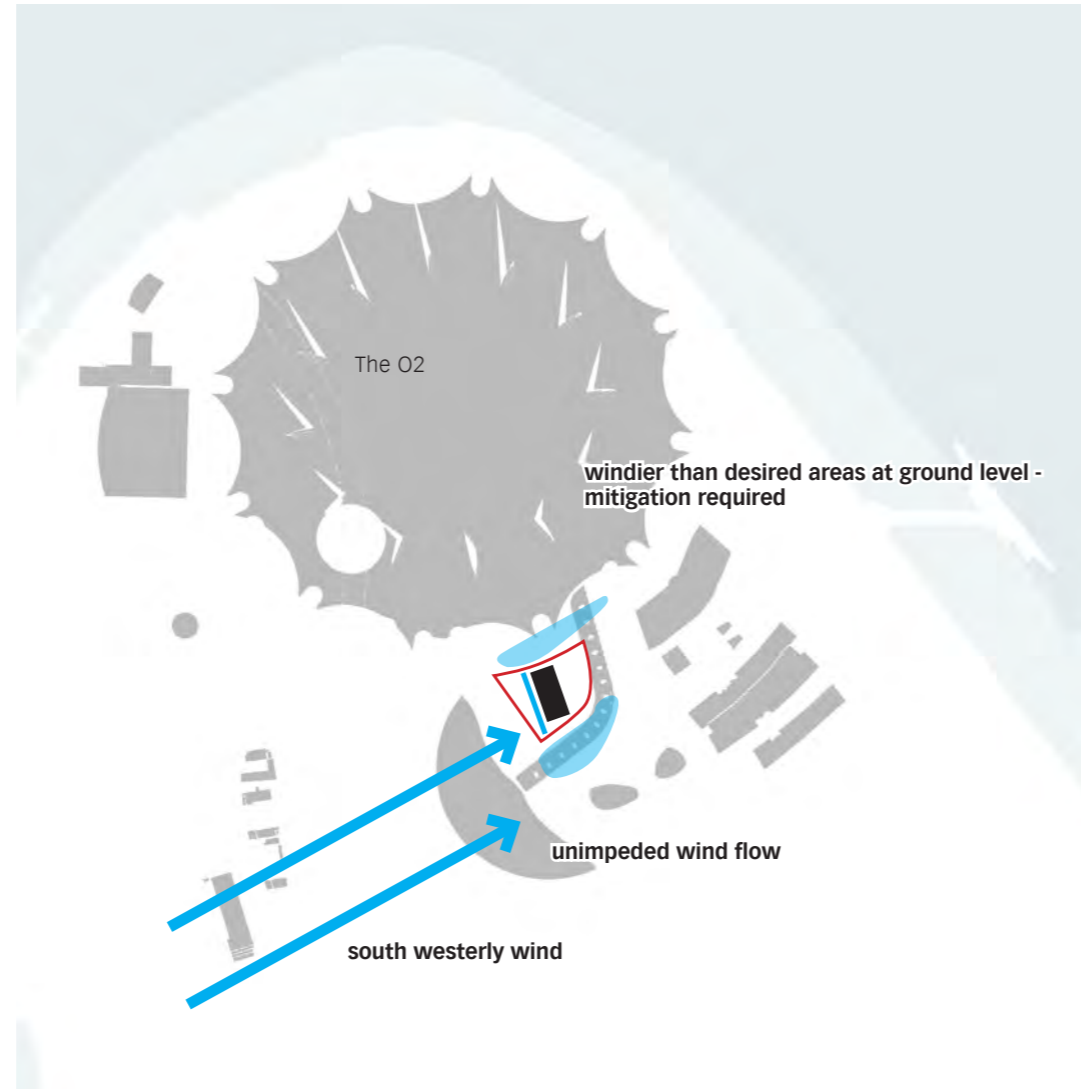
With in the existing surrounds, the building is expected to experience conditions which require mitigation. As these conditions are expected to improve considerably as the surrounds are built out at this stage the scheme has incorporated the following mitigation measures:

- courtyard landscaping
- 2m glass screens around roof terraces
- recessed residential entrance

Any further measures will be agreed with RBG prior to implementation. A wind-tunnel reassessment will be carried out prior to the commencement of construction, which will quantify conditions with the latest surrounding buildings. Appropriate mitigation measures will then be developed.

2019 context - no mitigation measures required

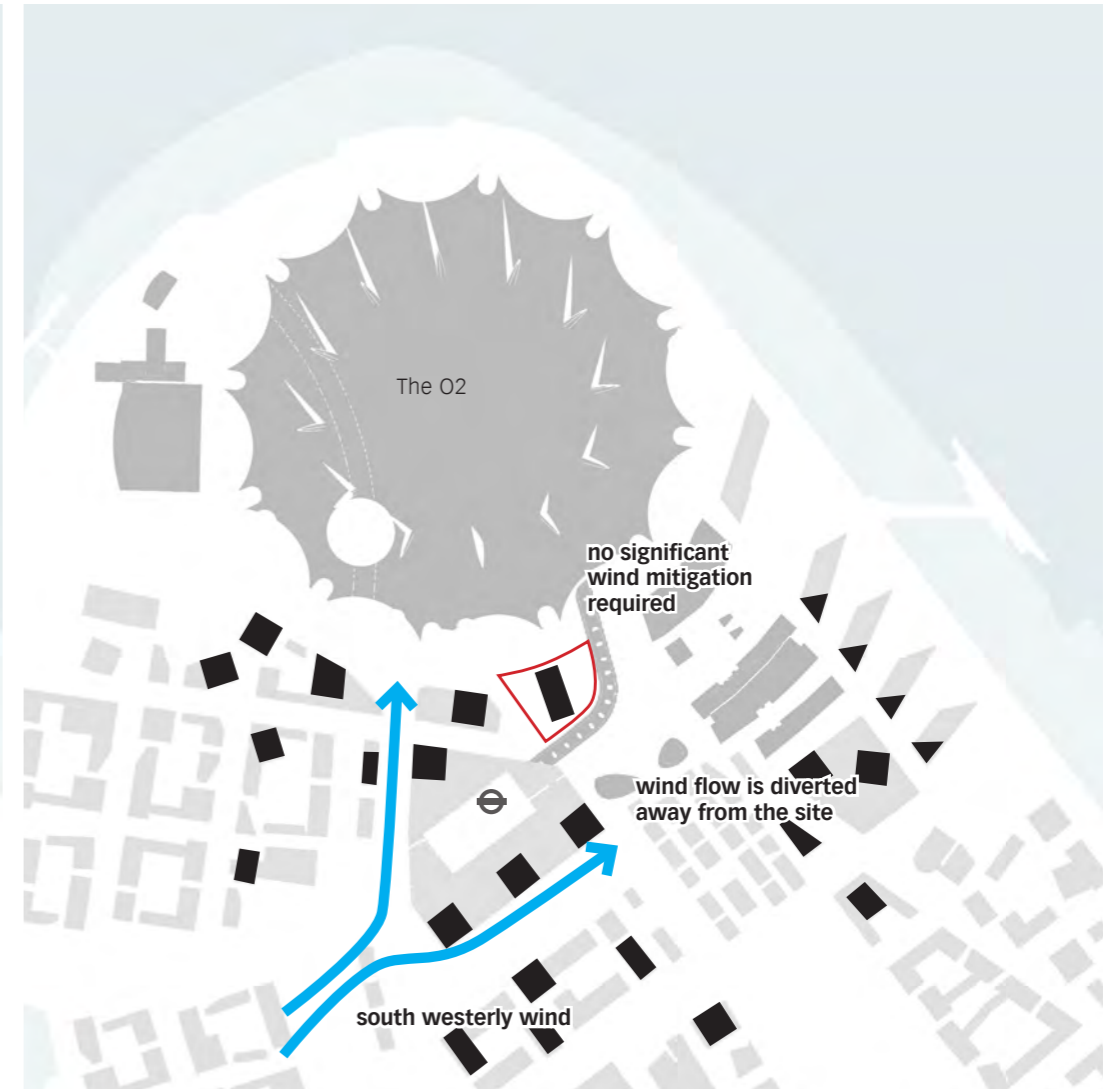
On completion of the Masterplan, conditions are expected to be very calm, with no significant mitigation measures required.



existing context conditions

01a plan to show: Proposals + impact on wind microclimate

- Conditions around the proposed development are expected to evolve considerably as the surrounding master plan is built.
- The open nature of the existing surroundings provides little shelter from the prevailing south westerly winds.



2019 consented context conditions

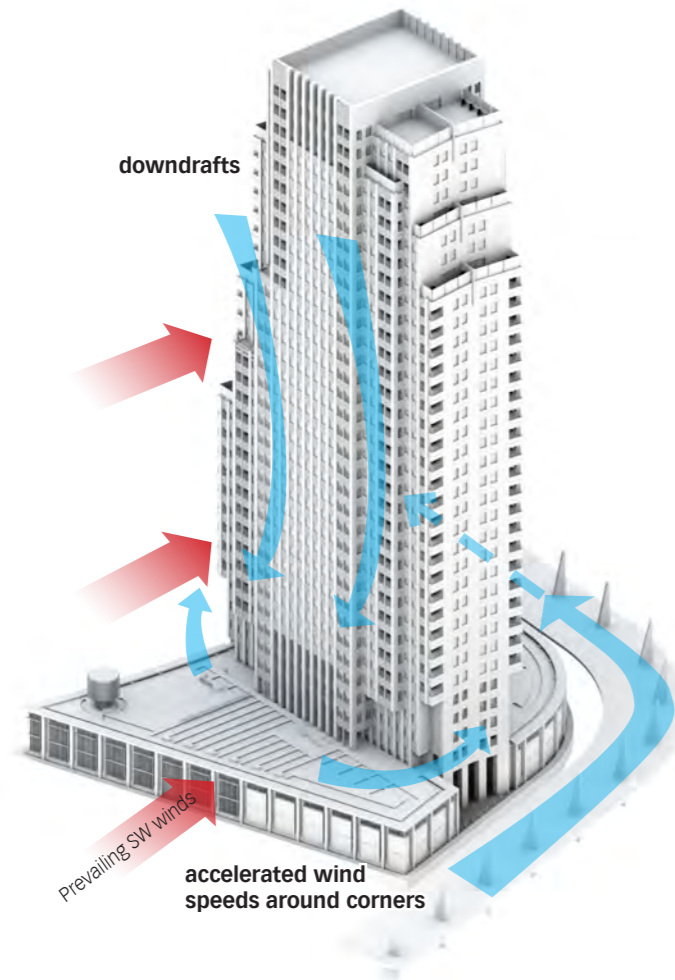
01b plan to show: Proposals + impact on wind microclimate (2019 illustrative scheme)

On completion of the Masterplan, conditions are expected to be very calm, with no significant mitigation measures required.



key:

- prevailing wind
- airflow on impact with massing



existing conditions

02a axonometric to show: Proposals + impact on wind microclimate

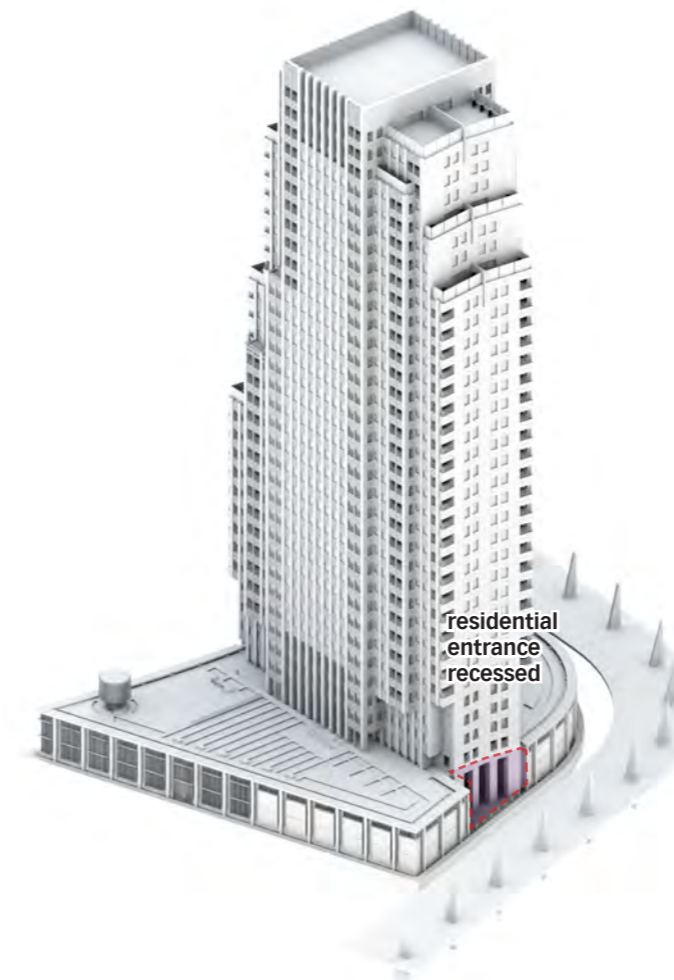
- The open nature of the surroundings provide little shelter from the prevailing south westerly winds. These winds are down-drafted by the tower facade towards ground level. At ground level, these winds accelerate around the building corners. They will have an impact on the building entrances.



mitigation proposed

03 axonometric to show: Mitigation proposed (existing context): courtyard landscaping and screening

- The podium courtyard may experience some of the wind down-drafted by the tower facade. A landscaping scheme will help reduce the impact of these winds to negligible levels.
- 2m screening to the roof garden and terraces provides mitigation to the roof areas.



04 axonometric to show: Mitigation proposed (existing context): recessed residential entrance

- Recessing of the tower entrance will mitigate adverse down drafts.



future context - no significant mitigation required

05 axonometric to show: Proposals + impact on wind microclimate (2019 illustrative scheme)

- Wind tunnel tests show that if the 2019 illustrative scheme is built out no significant wind mitigation is required on the proposed scheme.

external lighting strategy

Concept lighting strategy

The lighting design will embody the following key attributes:

Suitable lighting to entrances and building perimeter to ensure the base of the building is safe and accessible

Maximum efficiency / low energy fittings.

Sensor automation to turn external lighting off during daylight hours. Integration of existing local lighting with proposed public realm.

Ensuring lighting design is suitably integrated with local Highways and cycle routes

Bollard lights to communal courtyard at first floor level to allow visual guidance, usability and provide a level of safety.

Up lighting to trees in the residential entrance forecourt to create a visual amenity.

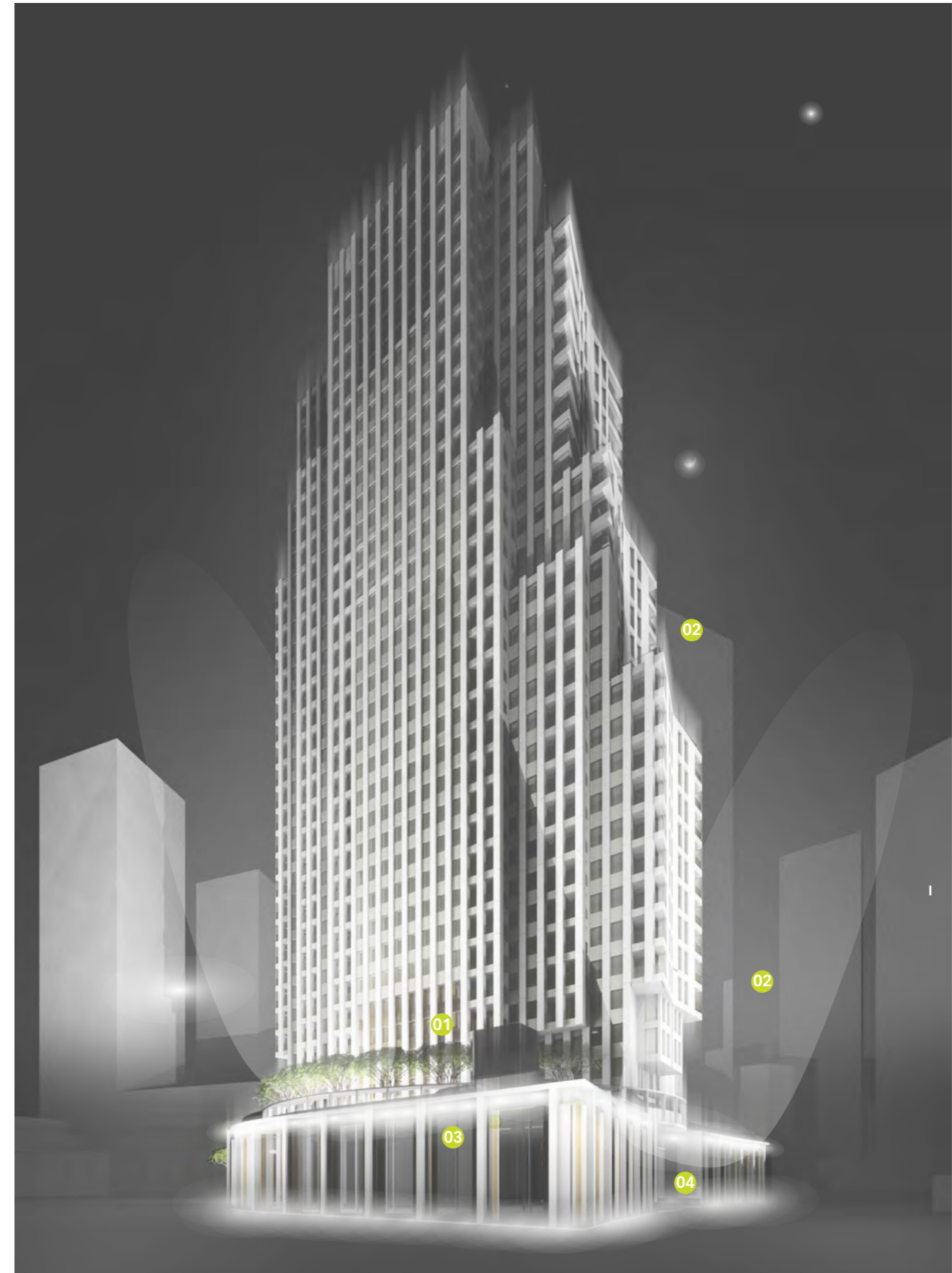
Integration of subtle feature up lighting to roof levels to create a landmark and emphasis the steps in the building.

All lighting to avoid visual impact to residents.

Detailed lighting proposals have not been developed at this stage and will be developed with specialist consultant advice as part of ongoing technical coordination post planning. This development will be in conjunction with local authority consultation/conditions discharge.

Key elements of the lighting strategy:

- 01 Up lighting is envisaged to precast concrete piers form courtyard level in the central portion of the tower where communal spaces are location. This is conceived as a light wash of light avoiding visual impact to residents.
- 02 Up lighting is envisaged to emphasis each step in the north south elevations of the tower. This is conceived as a light wash of light avoiding visual impact to residents.
- 03 Two down lights are mounted symmetrically on each retail window within the soffit of the cladding framing at the top of the ground floor to cast light down the side of the precast concrete piers and out from the facade creating a 'pool' of light on the ground at the base of the building.
- 04 Down lights are mounted within the soffit of the cladding to the residential and service entrances washing the entrance façades with light.
- 05 Bollard lights illumination residential forecourts
- 06 Up lights mounted in to ground floor public realm to direct a subtle glow to the underside of the trees
- 07 aviation light to tip of building - position to be confirmed



01 Lighting diagram visual

summary and benefits of the scheme



summary

Peninsula Square offers an exceptional opportunity for students to live in a vibrant and well-connected part of London. We are looking to deliver the following:

- 820 high-quality new student homes
- at least 35% of rooms provided at low cost, affordable rates
- an economic boost of at least £6.8m to the Borough through increased spending
- a new gateway building as you exit out of North Greenwich underground and bus interchange
- a more lively, vibrant place, with new places to shop, eat and drink
- generous high quality internal and external amenity space

benefits of the scheme

It offers an exceptional opportunity for students to live in PBSA:

- Only 27% of Greenwich's full-time students live in PBSA. This is a very high student to bed ratio of 3.9 (i.e. 2,880 beds for 11,140 students)
- More than 21,000 students attend Greenwich Universities, but only 11,140 students live in the Borough
- 49% of students live in private rented residential accommodation, where there is supply and affordability issues
- Both the University of Greenwich and Ravensbourne University have plans to grow
- Greenwich only provides 3% of London's operational PBSA stock
- Next door to Ravensbourne University (with 2,500 students)
- Short bus journey to University of Greenwich
- The scheme would free up family homes
- London ranked no.1 as the 'best student city' by the QS World Student Rankings

The construction phase benefits:

- c. 749 direct construction employment (over 2 years)
- c. 374 indirect and induced employment (over 2 years)
- c. £103m direct and indirect GVA (over 2 years)

The occupation benefits:

- c. 69 jobs of direct employment
- c. 22 jobs of indirect employment
- c. £6.8m resident expenditure (per annum)
- c. £3.1m workplace salaries (per annum)

The benefits of students for RBG:

- boost spending locally
- release existing homes across the Borough for local families
- attracting new businesses and enterprises to the area
- provide positive contributions to local communities beyond studying, through volunteering and other social initiatives

A1

appendix: townscape views

view key plan

Townscape view locations have been agreed with the Royal Borough of Greenwich. The visuals on the following pages have been produced by Cityscape Digital. The proposed scheme has been analysed in context of the existing context and the illustrative massing for the 2019 consented Knight Dragon masterplan. For further information refer to the full townscape analysis submitted as part of this application.



View 01 - Silvertown flyover



View 02 - East India Dock Basin



View 03 - Manchester Road Lift Bridge



View 04 - Royal Navy College



View 05 - General Wolfe Monument



View 06 - Blackwall Tunnel Entrance Building



View 07 - Pilot Inn Forecourt



View 08 - Blackwall Tunnel Approach Road



View 09 - Thames Panorama from the Thames Barrier



View 10 - St Mary's Churchyard



View 11 - John Harrison Way



view 01 - Silvertown flyover



View 01 - existing context



View 01 - Silver Town flyover - with 2019 Greenwich Peninsula masterplan (Allies & Morrison)



Verified views - key plan

view 02 - East India Dock Basin



View 02 - East India Dock Basin - with 2019 Greenwich Peninsula masterplan (Allies & Morrison)



View 02 - existing context



Verified views - key plan

view 03 - Manchester Road lift bridge



View 03 - existing context



View 03 - Manchester Road Lift Bridge - with 2019 Greenwich Peninsula masterplan (Allies & Morrison)



Verified views - key plan

view 04 - Royal Navy College



View 04 - Royal Navy College - with 2019 Greenwich Peninsula masterplan (Allies & Morrison)



View 04 - existing context



Verified views - key plan

view 05 - General Wolfe Monument



View 05 - existing context



View 05 - General Wolfe Monument - with 2019 Greenwich Peninsula masterplan (Allies & Morrison)



Verified views - key plan

view 06 - Blackwall Tunnel entrance building



View 06 - Blackwall Tunnel Entrance Building - with 2019 Greenwich Peninsula masterplan (Allies & Morrison)



View 06 - existing context



Verified views - key plan

view 07 - Pilot Inn forecourt



View 07 - existing context



View 07 - Pilot Inn Forecourt - with 2019 Greenwich Peninsula masterplan (Allies & Morrison)



Verified views - key plan

view 08 - Blackwall Tunnel Approach Road



View 08 - Blackwall Tunnel Approach Road - with 2019 Greenwich Peninsula masterplan (Allies & Morrison)



View 08 - existing context



Verified views - key plan

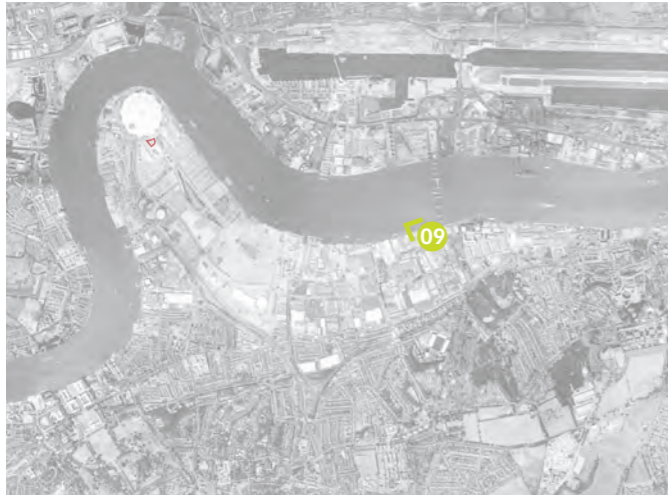
view 09 - Thames Panorama from the Thames Barrier



View 09 - existing context



View 09 - Thames Panorama from the Thames Barrier - with 2019 Greenwich Peninsula masterplan (Allies & Morrison)



Verified views - key plan



View 10 - St Mary's Churchyard - with 2019 Greenwich Peninsula masterplan (Allies & Morrison)



View 10 - existing context



Verified views - key plan

view 11 - John Harrison Way



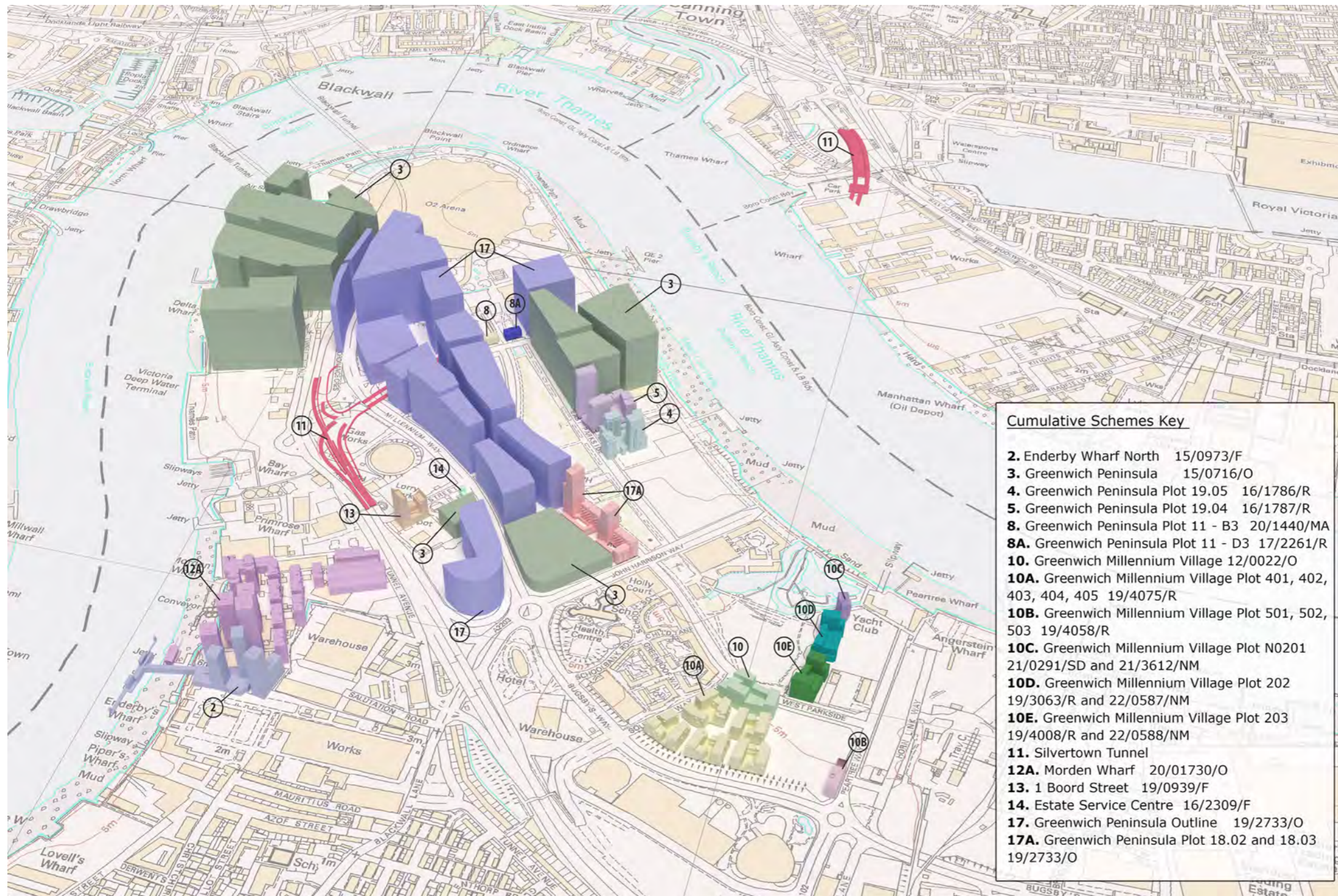
View 11 - existing context



View 11 - John Harrison Way - with 2019 Greenwich Peninsula masterplan (Allies & Morrison)



Verified views - key plan



consented scheme key

