

**ALLFORD  
HALL  
MONAGHAN  
MORRIS**

**THE POST BUILDING**

# **The Post Building**

**Information  
Pack**

**THE  
POST  
BUILDING**

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# THE POST BUILDING

The Post Building transforms a Royal Mail sorting office on New Oxford Street in central London, bringing back into use a prominent site which has been derelict for over 20 years and reconnecting the building to the city with a new mix of office, retail, residential and community uses.

The lower half of the existing, generously scaled frame is retained, and a new core and a series of intermediate mezzanine levels inserted into the centre of its plan. Deep beams – the result of the large structural spans dictated by the building's former use – are left exposed, lending a distinct industrial character to the new use as office floors.

In total, the mixed-use development accommodates eight floors of office uses and seven floors of residential (including 100% of the required affordable housing provision on site) above a variety of public uses including shops, cafés, galleries, and a GP surgery for the local community.

Sector:	Office, Residential
Location:	London, England
Address:	100 Museum Street, London, WC1A 1PB
Client:	Brockton Capital and Oxford Properties
Construction cost:	c. £144m
Start:	2015
Completion:	May 2019
Contract type:	Design and Build

## PROJECT TEAM

Client:	Brockton Capital and Oxford Properties
Architect:	Allford Hall Monaghan Morris
Project Managers:	Gardiner & Theobald
CDM Coordinator:	Gardiner & Theobald
Structural/Civil Engineer:	Arup
Cost Consultant:	Arcadis
MEP/Lift Engineer:	Arup
Planning Consultant:	Gerald Eve LLP
Fire Engineer:	Arup
Landscape Architect:	Gillespies LLP/ BBUK
Transport Consultant:	Arup
Daylighting Consultant:	Brooke Vincent & Partners
Acoustic Consultant:	Arup
Environmental Consultant:	Arup
Access Consultant:	Arup
Main Contractor:	Laing O'Rourke

## AREAS

Gross internal	44,000 sqm
Net internal	29,520 sqm

## ALLFORD HALL MONAGHAN MORRIS TEAM MEMBERS

Will Lee	Adrian Lau
Matthew Murphy	Alison Bounds
Francesco Belfiore	Marion Clayfield
Stefan Rust	Chikako Kim Kanamoto
Javier Cardos	David Murphy
Maria Perez Sarasibar	Joseph Davis
David Kahn	Gosia Malus
Juan Morillas	Amritpal Matharu
Ling Leng	Paul Jenkins
Harry Casey	
Joshua Broomer	
Victoria Casal	
Wolfgang Frese	
Laura McDonnell	
Michelle Price	
Angel Ruiz-Peinado Sanchez	



## PROJECT DESCRIPTION

### **The Sorting Office and The Post Building**

The Post Building is an office led mixed use building in central London that reconfigures and extends the existing structural frame of the WC1 Royal Mail Sorting and Delivery Office. Through retention and adaptation of the existing structure a central London city block has been brought back to life providing space for 3000 new jobs over 11 floors of Grade A office space and 21 new affordable homes, above a new active retail ground floor.

The development also makes a significant contribution to the public realm with pavement and junction improvements to all elevations, the reactivation of the 18th century Dunn's Passage, and a publicly accessible roof terrace.

The client's brief was to provide a unique office building that could bridge the gap between traditional West End rental markets and an emerging East London employment market. The imaginative reuse of the existing volumes and insertion of new structures and architectural components result in a unique interplay between old and new. Positioned in the middle of the 'knowledge quarter' the building establishes a connection between the traditional and emerging London markets.

Alongside the commercial ambition for the site, the project provides 21 affordable homes (100% of the required affordable housing) within the same city block, complemented by a new active retail ground floor and publicly accessible roof terrace. This diversity of use stitches the building into the existing communities and context that surround the site.

### **Retained volumes, new uses**

The lower half of the existing, generously scaled structural frame has been retained and reimaged as large double height volume office floorplates. A new circulation core and mezzanine levels have been inserted into the centre of the existing deep plan. The building's top half has been replaced and remodelled to create a focal corner at the intersection of five key London roads. The new floorplates in the upper half of the building relate to those within the original structure below, while the top floor provides a double height penthouse office reflecting the volume of the former mail sorting spaces at lower levels.

### **Retained structure, new details**

Deep internal steel and concrete beams – the result of the large structural spans from the building's former use – are left exposed, lending an industrial character to the new office floors. The new structure is delicately spliced into the existing frame which demonstrates the flexibility of London's building stock through a careful adaptation to new uses.

The 3.5 x 4.5m openings within the new facade express the scale of the double height spaces inside, framing views of the complex play between structure and services on the retained soffits. The expressive junction and connection between the self-finished steel components of the cladding system give a richness of detail echoing the mail sorting infrastructure that used to occupy the building and can still be found in the dormant Mail Rail station below.

The residential facade applies a more domestic scale and finish to the language of frame and infill established by the office facades. Roach Bed Portland stone is used to infill the bays and establish a dialogue between the metal clad architecture of the office and the materials of the neighbouring conservation areas.

### **Efficient Design**

One of the key principles driving the design of The Post Building has been the re-use of the existing structural frame and foundations wherever possible. A new lightweight exposed steel core cutting through existing floors has allowed the existing raft foundation to be retained, re-using approximately 4600m<sup>3</sup> of concrete, the equivalent to around 1600 tonnes of CO<sub>2</sub>.

The building services solution is supported by an intelligent facade design that provides solid and glass proportions optimised to the elevation orientation to control solar load. This is achieved with solid panels rather than fritted glass or louvred panels to provide an efficient method of controlling solar load while delivering a high level of thermal performance within the building fabric. In addition, openable windows are incorporated throughout the development to allow adaptation to more passive ventilation measures as air quality in central London improves.

The office development achieves a BREEAM rating of Excellent and LEED Gold Standard while the residential component meets the requirements of the Code for Sustainable Homes Level 4. The roof accommodates over 300m<sup>2</sup> of photovoltaic cells alongside a series of new private and public terraces which improves health and wellbeing while adding to the biodiversity of the area.

## SITE HISTORY

Historic maps show the changing quality of the site's immediate context as London grew from a small riverside settlement into a sprawling metropolis. Open pastures gave way to successive generations of denser housing stock which were eventually cleared with the completion of New Oxford Street, connecting the axis of Oxford Street with Holborn.



Historic maps show how the site's context evolved: from fields to dense residential areas.



In 1897, The Western Central District Office (WCDO) was completed. It occupied The Post Building site. It was – and still is – connected to a hidden infrastructure of underground tunnels and depots across the city.



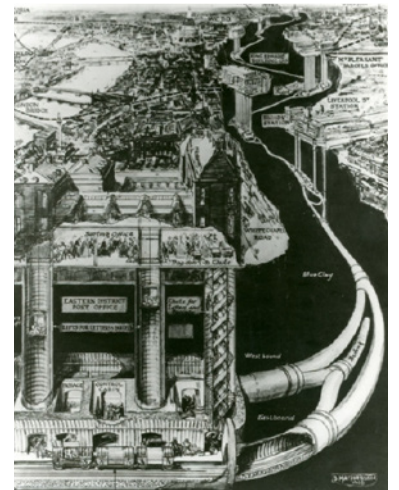
Expansion of the Western Central District Office - 1916

Slum clearance and completion of New Oxford St - 1847.

The site now sits at the confluence of three E-W streets meeting and overlapping. This lends importance to the focal corner of the site on Museum and New Oxford Streets.

Construction of the Mail Rail tunnel network began in 1917. During the first world war, the tunnels were used to store and protect art treasures from the National Portrait Gallery and Tate Gallery.

This 1926 illustration shows the route of the Underground Mail Railway in London from the Eastern District Post Office to Paddington Station. The West Central District Office, which occupied the site of The Post Building, appears just to the right of St Paul's dome.



The Post Office prided itself on innovative systems for sorting and despatching mail. The Western Central District Office (WCDO), which occupied The Post Building site, was – and still is – connected to a hidden infrastructure of underground tunnels and depots across the city.



Opening of the railway - 1927



Redesign of the Western Central District Sorting Office - 1969



1990s: Closure of the Sorting Office - Early 1990s.

Closure of Mail Rail - 2003

1970s map, published by the Post Office, showing the Mail Rail system from Paddington Station through to the Eastern District Office.



The Post Building opens - 2019

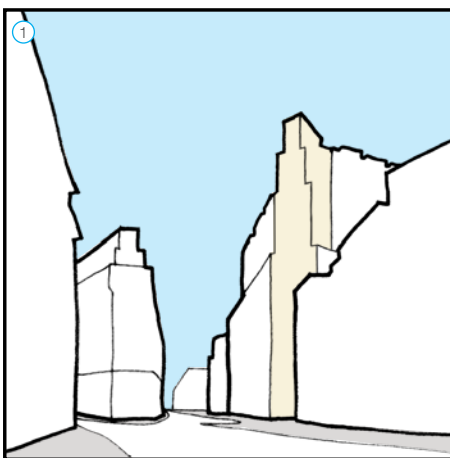


## URBANISM AND VOLUME

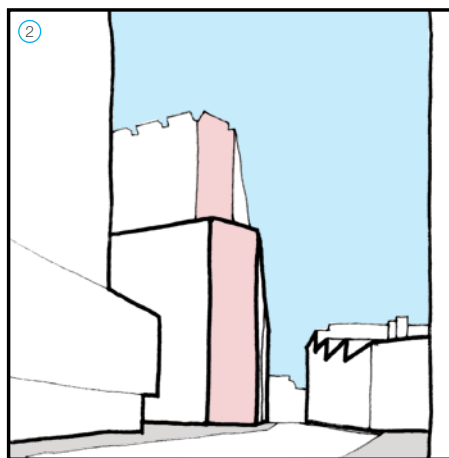
The site sits at the junction of High Holborn, New Oxford Street, Bloomsbury Way, Museum Street and Drury Lane. The design focused on creating a bold and dynamic building that would play a civic role by repairing the damaged streetscape of the area and providing a vibrant mix of new uses. Central to achieving this objective was the engagement with the local community, including the local authority, in order to meet their aspirations while minimising any disruptions through the construction process.

The activated ground floor brings back into life a city block that has, since the buildings closure in the early 90's, divided north/south and east/west connections through a range of active uses and public realm improvements. In addition, the public roof-top terrace provides unbroken views across the London skyline while creating a new and unique local amenity for the area.

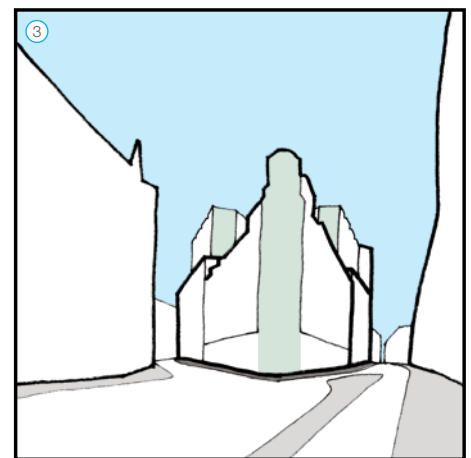
The building form has been developed to provide a refined and elegant take on the traditional London focal corner and act as a civic wayfinder on a key urban junction. The site has historically represented a blind spot in the connection between north/south and east/west in this part of the city. The focal corner was seen as an important urban tool to ensure the building provides a legacy in terms of its townscape contribution and as a connection across London. By incorporating high quality and refined architectural detailing, bold and deliberate townscape gestures and a wide range of public and private uses, the building has created a vibrant new city block with a positive impact on London's urban fabric.



Focal Corner: Junction of 5 roads



Secondary Corner: High Holborn



Framing Commonwealth House

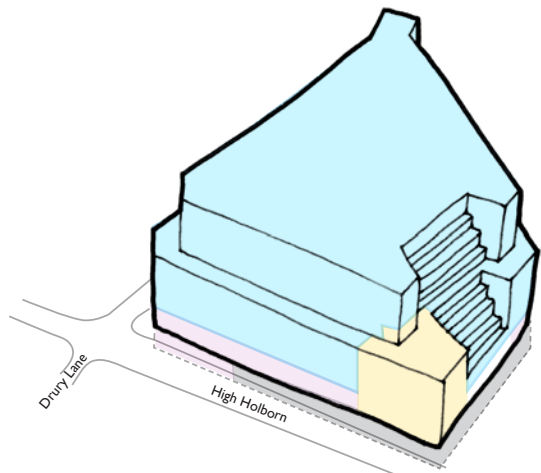
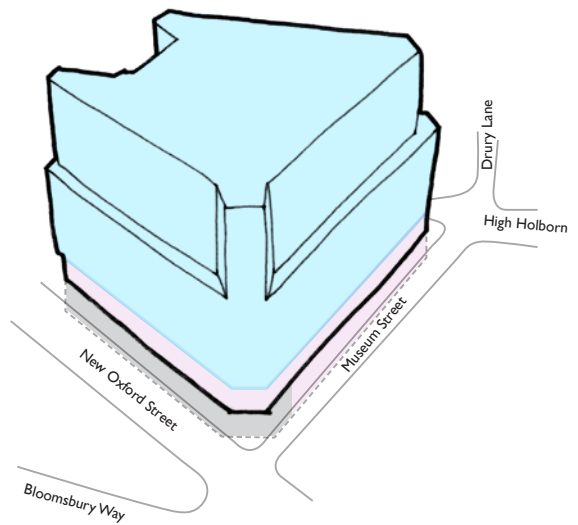


The existing basement of the building, benefitting from a generous height, is used for retail, plant space, cycle storage as well as an office tenant dedicated gym. The ground floor is activated with retail, office lobby and entrance to the public roof terrace.

The office floors set back at upper floor level and terrace down to the east providing both amenity space and maximising daylight down to the re-opened Dunn's Passage.

The 21 affordable homes occupy the south-eastern corner of the site which enabled to create dual aspect units over High Holborn and Dunn's Passage.

Each elevation of The Post Building differs according to its function and orientation. The south facing elevation folds to pick up the slight curve and less formal street pattern of High Holborn. The West elevation opens up to the main entrance lobby with a concaved facade line widening the street and providing additional breathing room to the public realm. The north elevation is more formal following the alignment of New Oxford Street with the focal corner.



- **Office**  
The provision of B1 office space on the first to eighth floors, utilising the existing large volumes on the lower floors.
- **Public uses (shop, cafes, galleries and restaurants)**  
The provision of A1/ A3 public uses space on the ground and basement floors, providing a large level of flexible active public uses frontage activating the surrounding streets.
- **Housing**  
The provision of up to 21 residential units (a mix of one, two and three bedroom units) on the south east corner providing south facing units and some dual aspect units. This fulfils 100% of the affordable housing requirement for this development.
- **Plant/ Service**  
All plant equipment that does not require a high level of ventilation is located in the basement.



The Carson Pirie Scott & Co. department store, Chicago, 1899, designed by Louis Sullivan and Daniel Burnham, has deep reveals across the facade that give a sense of solidity despite the large windows.



The Economist Buildings, London, 1964, by Alison and Peter Smithson also contribute to the city setting. Here, the window openings are made into a feature through their scale and solidity.



Donald Judd's studios at 101 Spring Street in New York - a cast-iron building designed by Nicholas Whyte in 1870. Judd wrote in 1989 that the facade of the building "is the most shallow perhaps of any in the area and so is the furthest forerunner of the curtain wall".

## FACADE

The large openings of the new facade - the equivalent to two storeys of a conventional office building - are used to express the volume of the existing warehouse that sits within the new high-performance building envelope. The junctions and connections between the fabricated, self-finished components of the cladding system create a richness of detail that references the factory language of the existing mail infrastructure that can still be found in the dormant Mail Rail station below. To temper the visual and environmental impact of the large openings, high quality darkened stainless steel solid panels are set within the same expressed components that form the window openings to provide a refined language of frame and infill across all facades.

The facade is set out with 4.5m wide panels framing the projecting glazed windows. Solid framed stainless steel panels sit in between these and vary in length depending on orientation to mitigate solar gains by controlling the glazing percentage of each elevation. Smaller top hung opening windows increase occupant's comfort and respond to future-proofing ventilation requirements.

The new residential facade applies a domestic scale and finish to the language of frame and infill that is established by the office architecture. Roach bed Portland stone is used to infill opening and establish a dialogue between the found architecture of the office and the existing materials of the conservation areas that bound the site. In addition, winter gardens are incorporated in each residential home to provide amenity for the flats and mitigate the surrounding environmental conditions that exist along High Holborn.

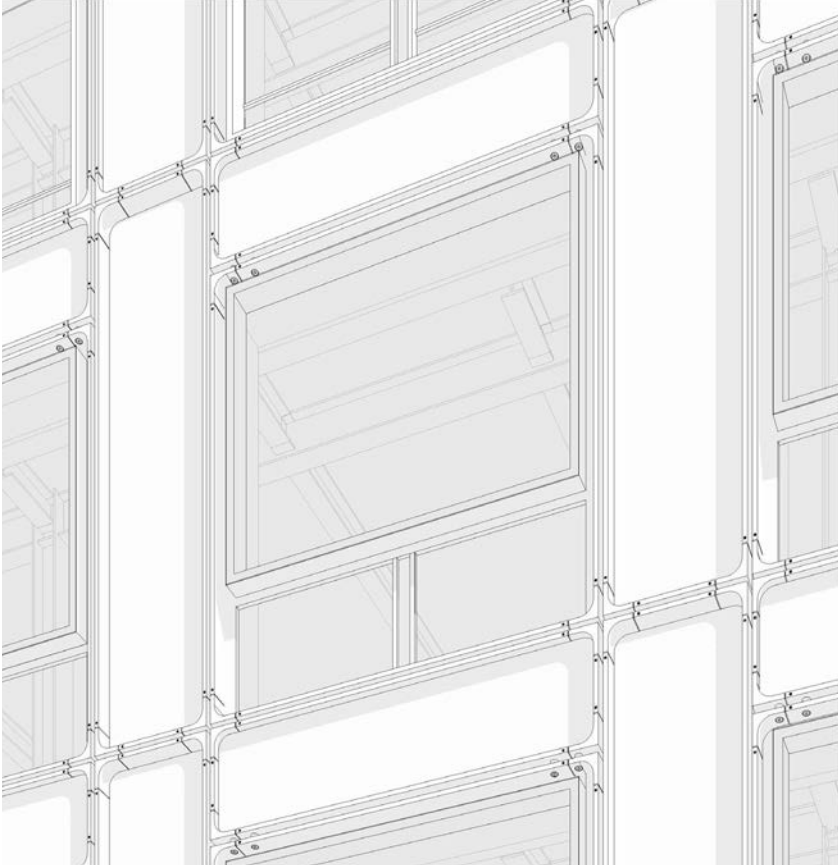


Sample board with the machined junction of the cladding frame

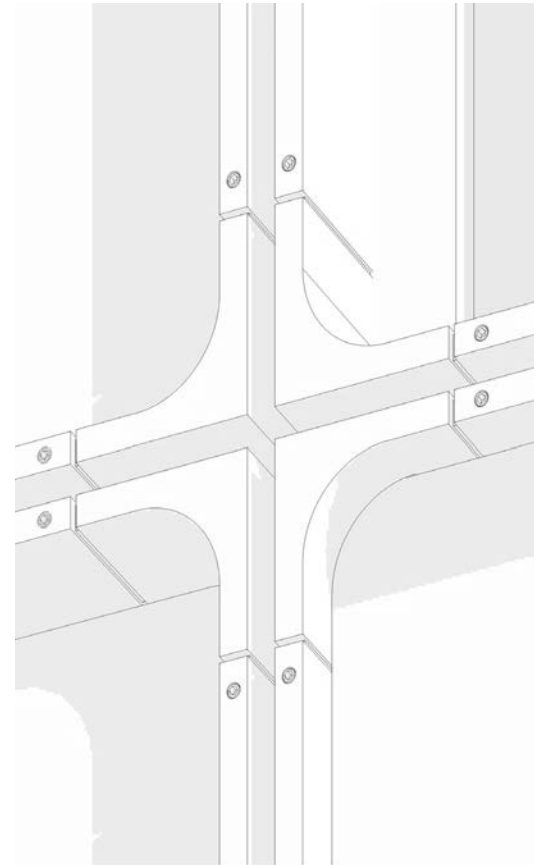


Office cladding visual mock-up

# FACADE



Line drawings showing games of scale across the facade developed to demonstrate the value of good detailing to the client and exploring the play between depth and reveal.



Proposed tray detail



Bay study: west elevation



Bay study: south elevation

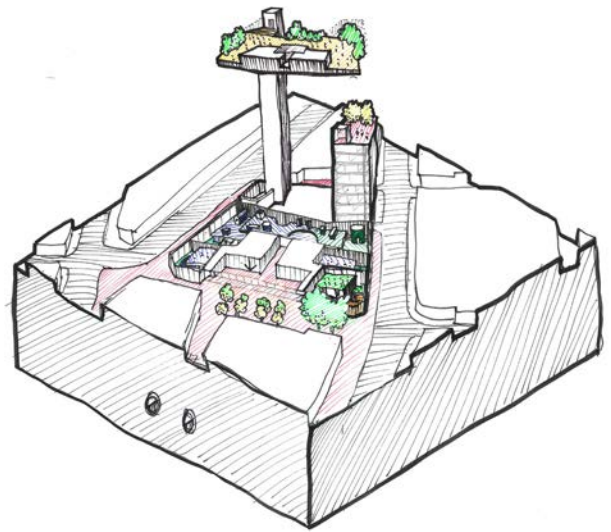
## LANDSCAPE

The rooftop terrace delivers a stepped landscape that responds to the various geometries of the roof profile and provides new vistas across the city in all directions.

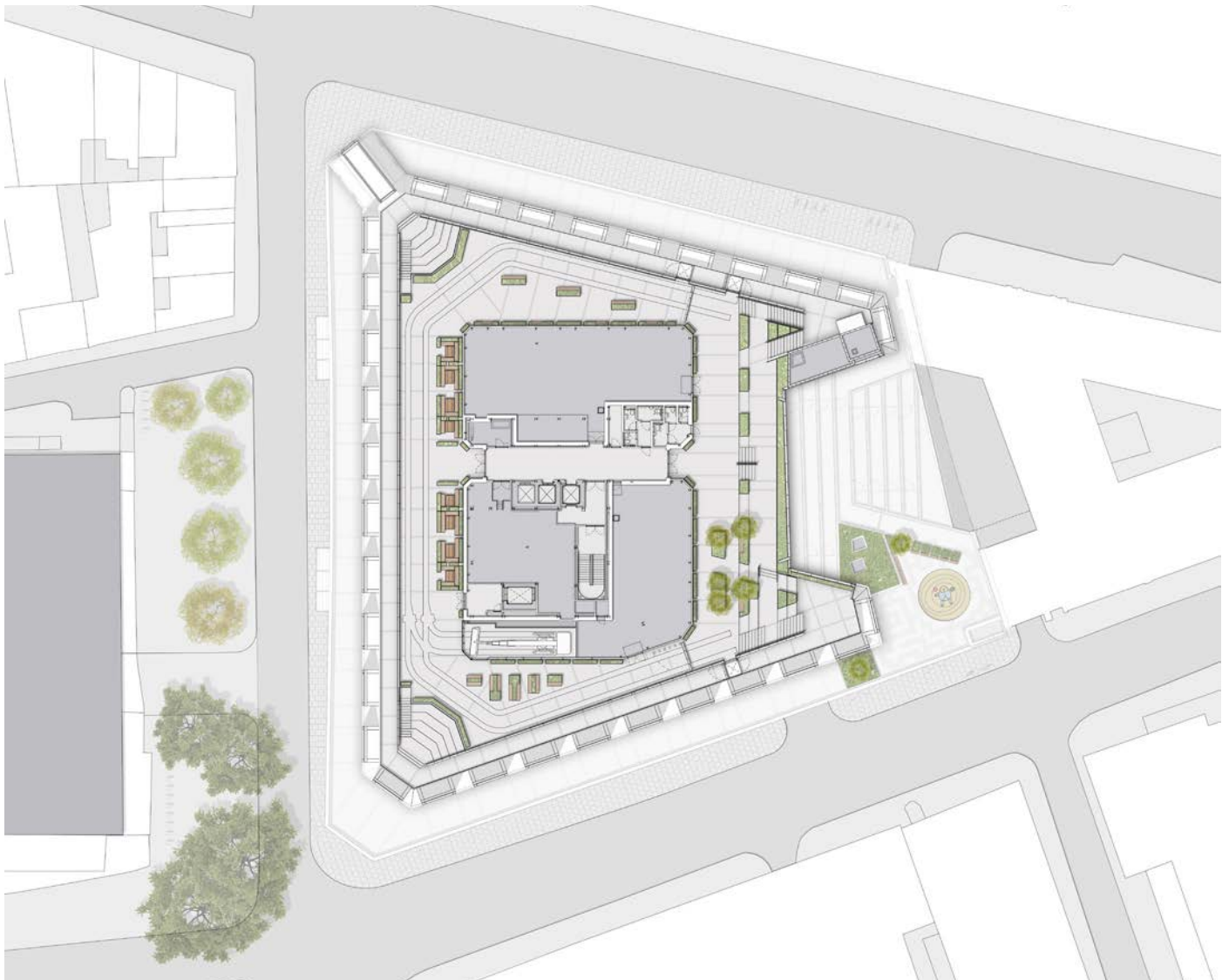
The terrace areas have been conceived as a series of outdoor rooms that can host a wide range of functions for different user groups, including outdoor meeting rooms, an edible herbs garden, and bespoke tree planters with integrated seating.

Bird and bat boxes have also been installed to improve biodiversity within the local area.

The eastern section of the roof is publicly accessible via a dedicated lift and entrance lobby. The remainder of the roof terrace is split between tenants' dedicated areas and shared amenities for all office users. A large outdoor space is also provided at the 7<sup>th</sup> floor and each office level benefits from a terrace facing Dunn's Passage to the east.



Sketch showing public roof terrace and other public benefits of the scheme



Roof terrace plan

## LANDSCAPE



Roof terrace visualisation



Outdoor meeting rooms

## RESIDENTIAL

The 21 apartments are positioned on the south elevation and to bring in light, have a dual aspect looking onto both the street and Dunn's Passage. Each has a winter garden providing an external amenity space that can be turned into open balconies thanks to folding and sliding glazed screens. Additionally, there is a shared landscaped roof terrace with a children's play area that can be used by all residents.

The units are a mix of one, two and three bed apartments, including two wheelchair accessible apartments. The mix of units is expressed on the facade though the position of spandrels which varies according to each apartment type.



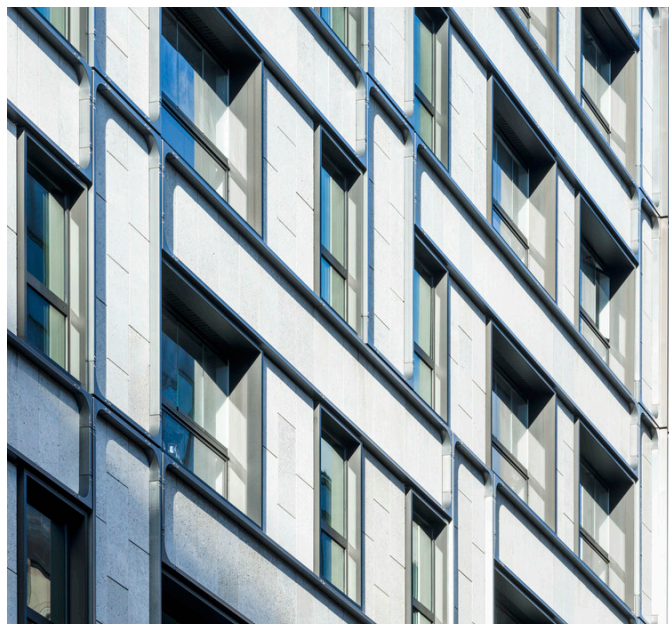
Plan of a typical two-bedroom apartment, with the winter garden leading off the main living space.



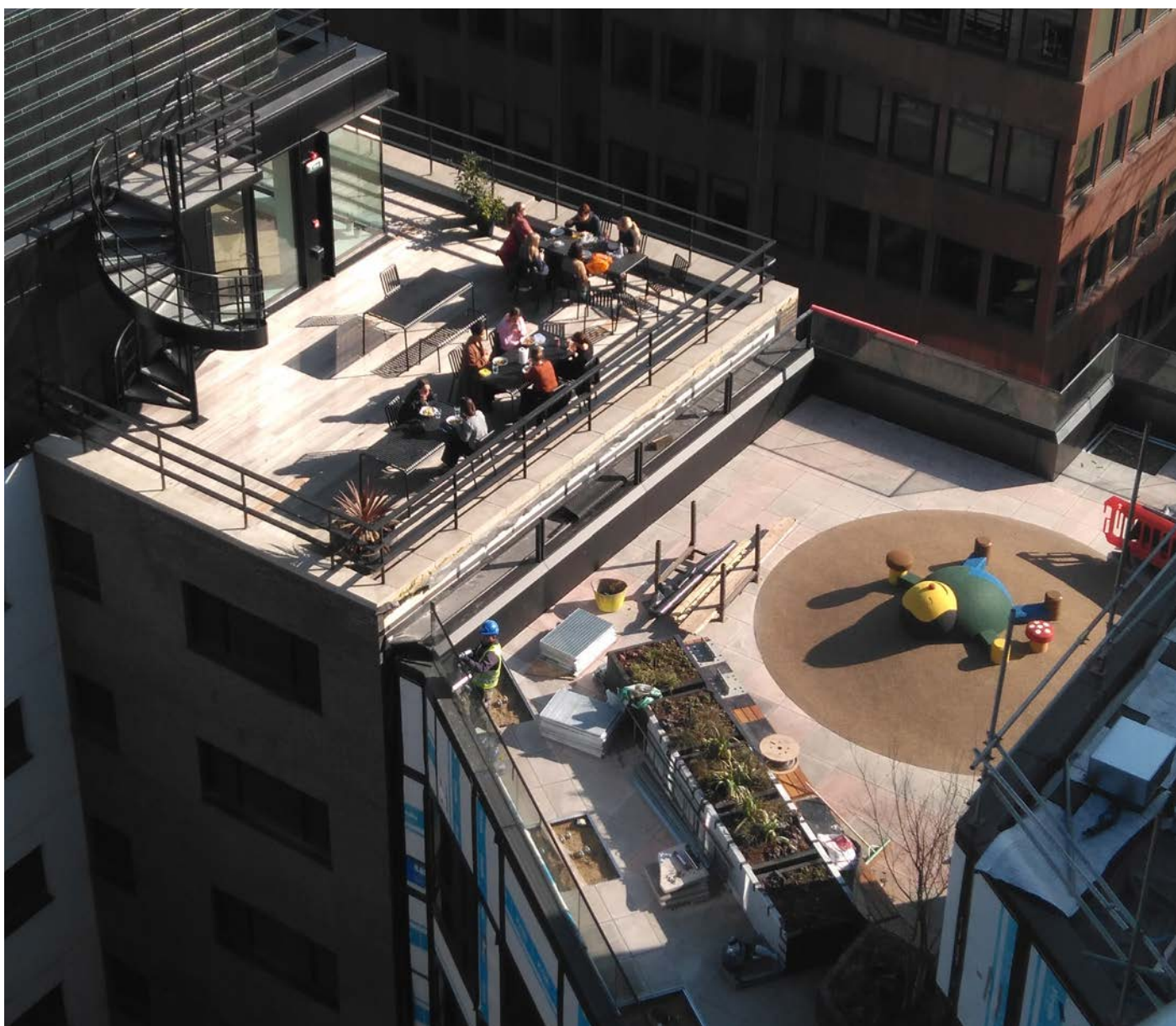
Residential entrance on High Holborn



Residential cladding mock-up



Residential cladding facing High Holborn



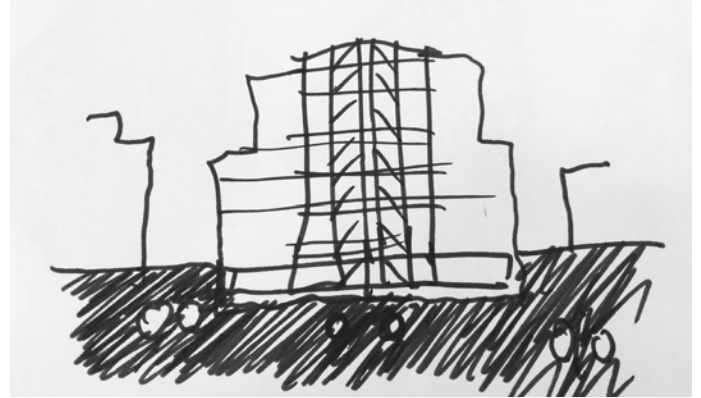
Residential roof garden with children's play area (under construction)

## STRUCTURE AND SERVICES

The old Mail Rail tunnels below the site limited the possibility for new piling, so the building's existing raft foundation was kept along with as much of the existing column grid as possible.

The existing structure is made of both concrete and steel and the junctions with the existing frame are left exposed to establish connections between old and new.

The bracing of the new lightweight steel core is visible on each floor as it rises up the building with the solid elements of the core siting within the frame.



Sketch illustrating the structural concept of raft and core



Steel columns photographed during construction: junction between old and new.



Screeding the new floors



## STRUCTURE AND SERVICES

A hybrid HVAC strategy was implemented to provide fresh air from below through an enhanced raised access floor zone, and cooling from above through exposed fan-coil units. By splitting the provision above and below the slab it was possible to insert additional mezzanine floors in the centre of the existing deep floor plates. This was critical to protect the commercial viability of the scheme while avoiding the demolition of the existing structure.

Exposed services on the retained floors were meticulously coordinated to pass through holes cut in the existing beams and tie into the new elements of structure.

The new floors, which have a slightly lower floor to ceiling height, contain suspended acoustic panels below the services whereas the retained double height floors mount the acoustic panels above the services leaving them fully exposed.



New floor with acoustic panels suspended below services



Retained floor with mezzanine and acoustic panels mounted above services

# INTERIORS

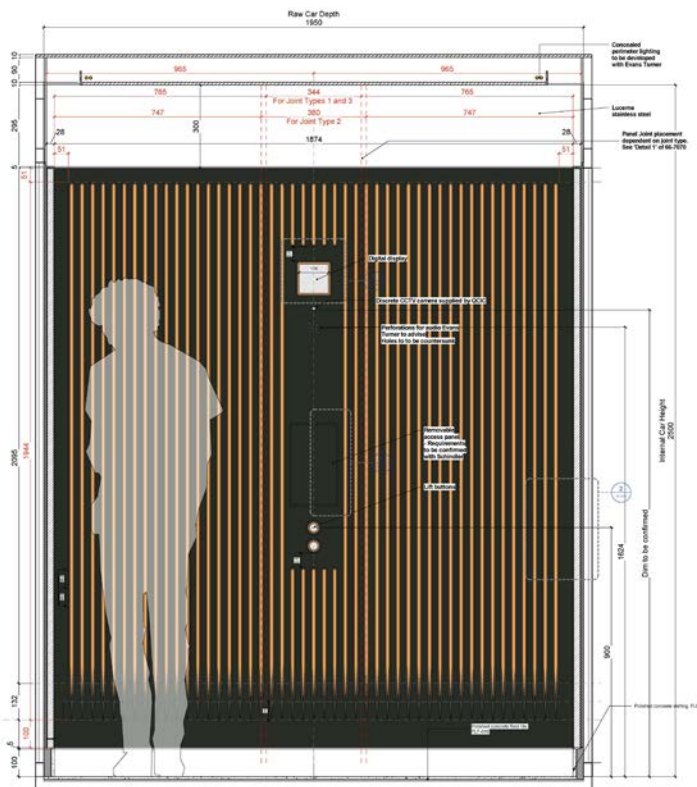
For the lift shafts, ticking stripes pattern is reinterpreted as a vertically reeded glass case sitting in a stainless steel frame, inserted between the exposed structural steel columns.

Lighting within the lift shaft creates silhouettes of the passing lift cars expressing vertical movement throughout the building.

Inside the lift car, Richlite - a composite made from resin and recycled paper - is cut to reveal its inner layers lines.



Drawing visualising the reeded glass box giving way to a timber-lined lift car



Working drawing showing the interior of the lift car



Richlite sample



Passenger lift lobby

## INTERIORS

In contrast with the external industrial wrapping, the interior of the building is detailed with increasing refinement and texture like a doll's house or a box of curiosities.

The washrooms take inspiration from West End hotel lobbies, cloakrooms and fumoirs. For example, the fumoir at Claridges with its etched, art deco mirrors and Lalique glass has been a haunt for discerning drinkers and smokers since 1929.

Back painted, reeded glass wall linings continue the theme of the lift shafts and cars, whilst radiused corners to the mirrors and bespoke concrete sinks echo the external cladding. Furthermore, a lower, more intimate environment is created with suspended lighting, mirrors, and wall linings.



A 1743 doll's house from the Frans Hals



The fumoir at Claridges



Bespoke sink and mirror vanity unit



Wall linings and lighting

## INTERIORS

A bespoke artwork was commissioned by AHMM to dress the frame of the core in the main reception and create a textile screen that would reference the original space. The textile needed to work on multiple scales, with details and texture when looked close-up but bold enough to be viewed from a distance.

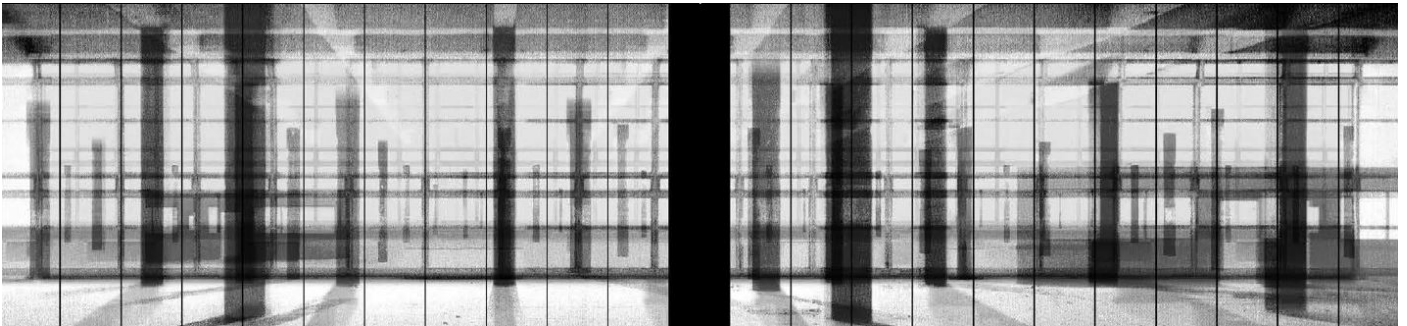
Occupying a landscape-oriented frame behind the reception desk, the subject, composition, and scale of the artwork are the result of a long creative process.

The artwork drew inspiration from the original oxblood red structural elements, while areas of blue and green represent light and the newly added structure. The colour palette had to be reduced to twenty colours to simplify the design, but even within this limited range of shades, thousands of intensities and textures were possible.

The result is an abstract representation of a skeletal forest made of structural steel which was revealed as work on the building began. The final piece measures 22.9 by 5.7 metres and is set to merge with the expressed structure and elevation of the core to create a harmonious whole.



Swatches and yarn wrappings



Structural steel skeletal forest



CGI of textile in situ

## INTERIORS

Working with textile artist Ismini Saminidou, colour swatches of rust, paint and steel - taken from the construction photographs of the building - were referenced and numerous wrappings made to explore the shading and contrast between these colours.

The Hunt in the Forest by Paolo Uccello (1470), a masterpiece of Renaissance perspective art, influenced the design of the textile artwork. It is a spalliera painting, designed to be set within the architecture of an aristocratic room and viewed at shoulder height. The composition is arranged to give a sense of depth as the hunting party disappears towards a central vanishing point hidden within the dense forest of trees. The painting draws in the viewer's gaze from a distance and, when looked close-up, reveals great details in each figure represented.

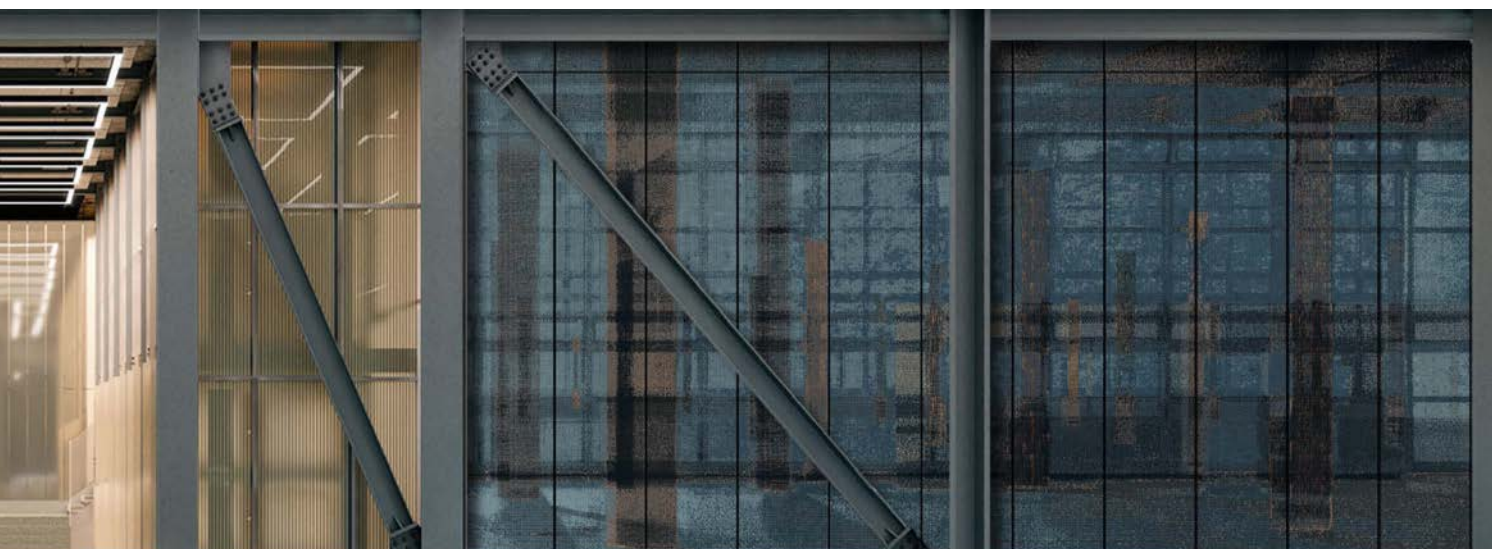
The textile was woven at TextielLab in Tilburg, Netherlands, on jacquard loom using 19th century techniques with the old punch cards replaced by computer files.



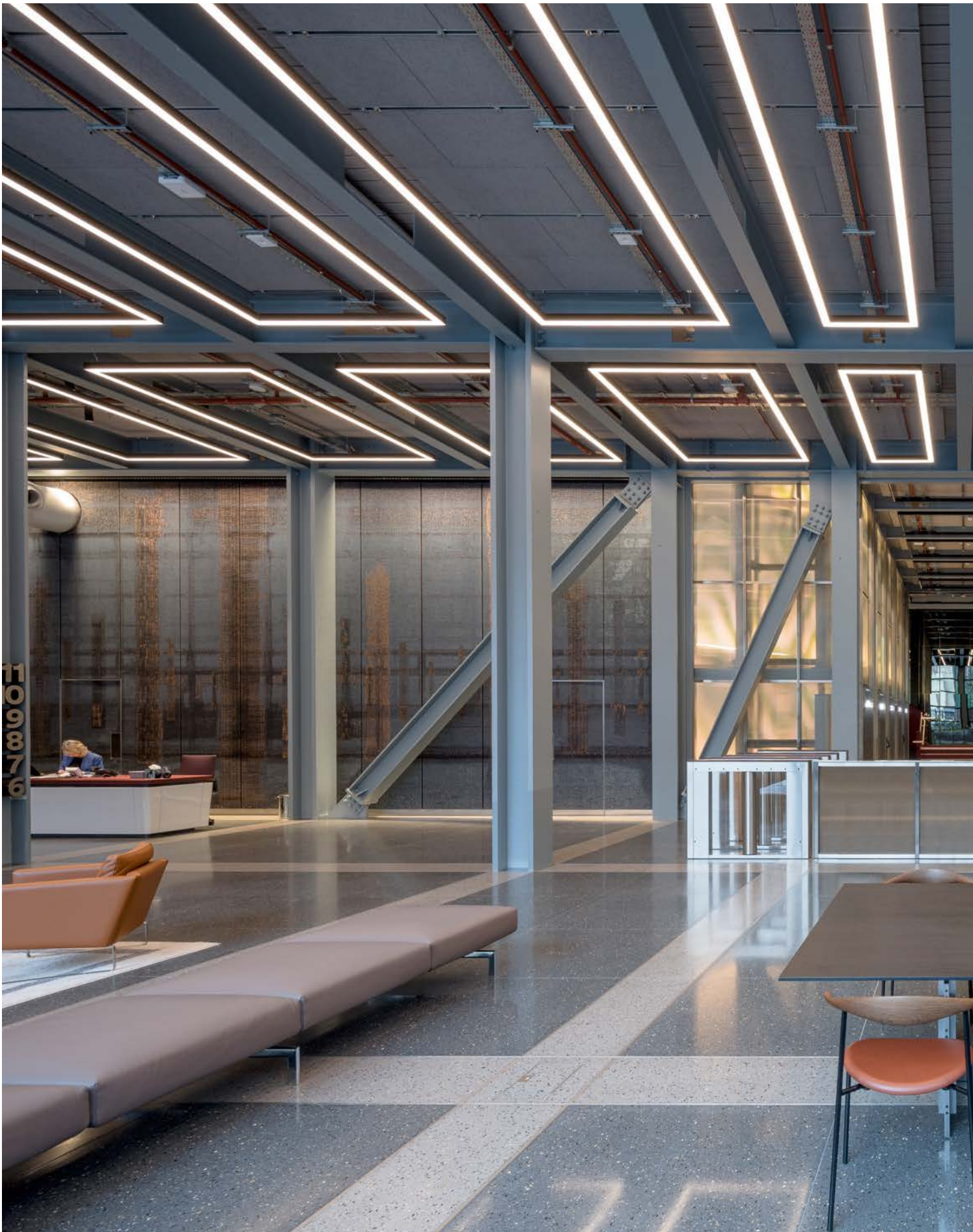
AHMM and Ismini Saminidou developing prototypes at TextielLab



The Hunt in the Forest, Paolo Uccello (1470)



CGI of textile in situ



The Post Building reception



## SUSTAINABILITY

Sustainability has been a key consideration from the initial brief and informed the design as well as the construction strategy. The primary sustainability aim has been the re-use of the existing structural frame and foundations wherever possible, retaining a significant percentage of the structural frame on the lower floors while re-using the existing 4600m<sup>3</sup> of concrete in the existing raft foundation which is equivalent to c.1600 tonnes of CO<sub>2</sub>. The office development achieves a BREEAM rating of excellent and LEED Gold Standard while the residential building meets the requirements of Code for Sustainable Homes Level 4. Winter gardens provide outdoor amenity for the flats and mitigate the surrounding environmental conditions.

Openable windows are also incorporated throughout the development to allow adaptation to more passive ventilation measures as the air quality in central London becomes cleaner through the electrification of our transport networks. New private and public terraces across the building improve health and wellbeing while improving the biodiversity of the area.

The mix of effective passive design features has reduced the energy demand for building services and is supplemented by active features including a comprehensive and accessible Building Management System (BMS), intelligently controlled LED lighting, high-efficiency chillers and a significant area of high-performance photovoltaic panels which have been oriented to maximise the efficiency of each unit.

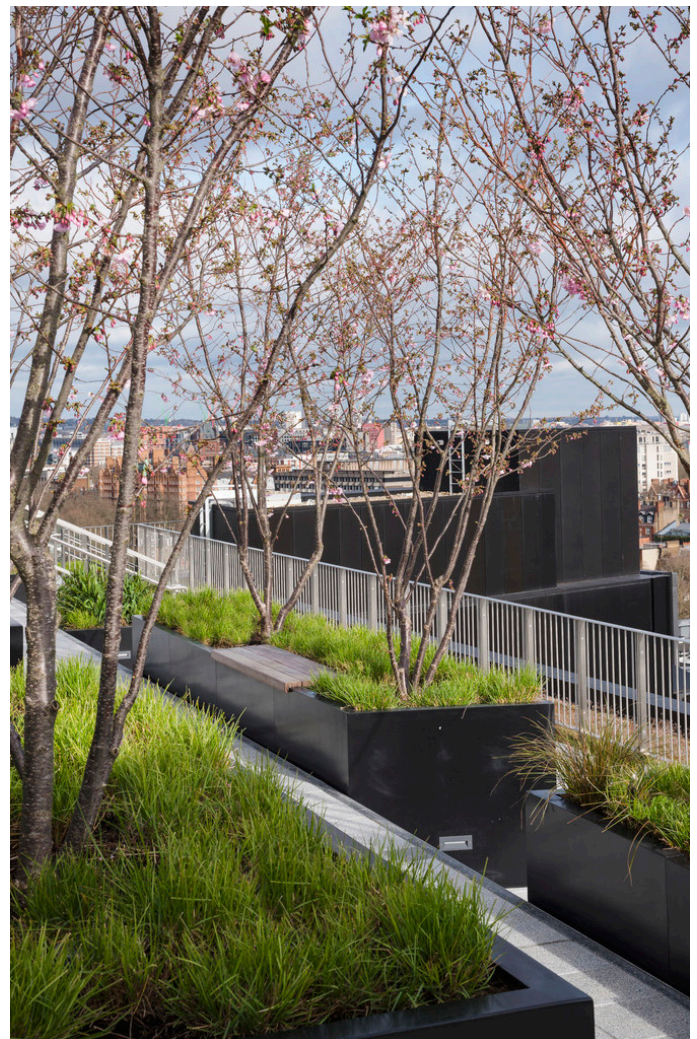
Additional sustainability highlights include:

- All timber is FSC, PEFC or FSC Controlled,
- Ventilation rates in line with BCO recommendations,
- An improvement over the carbon emissions target of 17.6%,
- A comprehensive Building Management System,
- 300sqm of photovoltaic panels,
- An extensive metering strategy to optimise energy consumption and move towards net zero carbon in operation,
- Beyond best practice cycle storage and facilities (design targets are equivalent to those set by the New London Plan, though the brief was developed in 2012, and NLP is yet to be formally released,)
- Sanitaryware specified to reduce water consumption and use of a greywater system linked to residential units,
- Low NOx boilers,
- Significant areas of blue roof attenuation to minimise water run-off,
- Roof terraces promoting biodiversity through a range of plant species alongside bird and bat boxes.

The following key sustainability targets were established to help guide and track the design as it developed:

- Minimise embodied energy through re-use of the existing structural frame and raft foundation.
- Delivery of BREEAM 'Excellent' Office.
- Delivery to LEED 'Gold' Office.
- Delivery of BREEAM 'Very Good' Retail.
- Evidence of compliance with Code for Sustainable Homes 'Level 4' requirements.
- Use the BREEAM framework to integrate and drive sustainable design.
- Take a holistic view of sustainability – consider sustainable design as a whole and not each part in isolation.
- Deliver optimum comfort for building users.

The Post Building has been awarded its final certifications and has achieved all the targets set.



Roof terrace planting



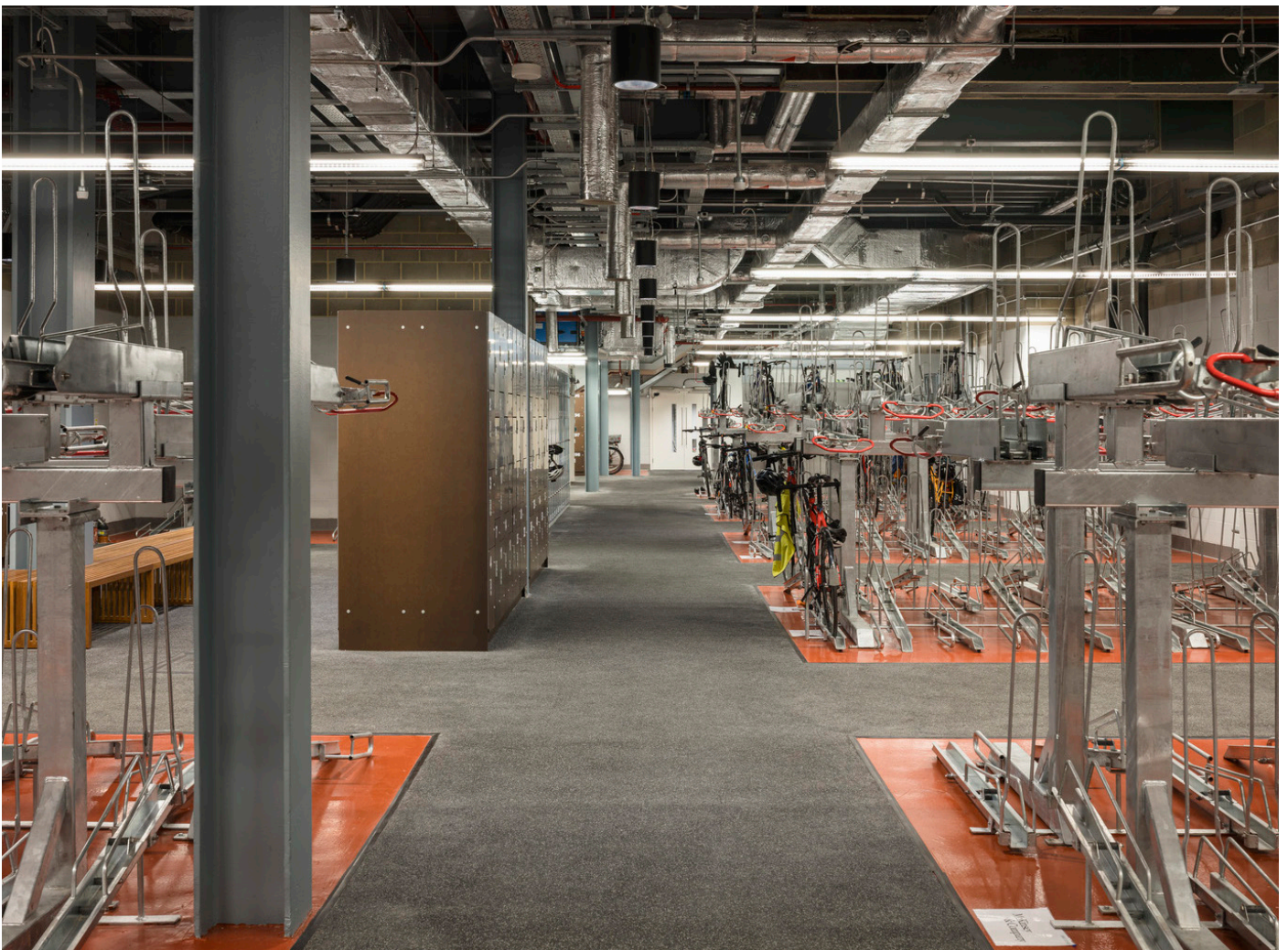
## CYCLES

The cycle store was designed with Rapha as cycle consultant who provided input on different user group journeys from street to desk. The cycle entrance door adjacent to the main lobby entrance leads to a front of house space occupying the existing tall basement with concierge, cycle maintenance facilities, showers and locker rooms. The space is curated with a series of artworks documenting the former building's use and subsequent reinvention.

The result is a space that goes beyond best practice targets and is aligned with those set by the New London Plan.



Changing facilities



Cycle store

## SALVAGE STRATEGY

The existing structure provided an exceptional space and contained a diverse series of bespoke large pieces of equipment, many of which were unique to this building typology.

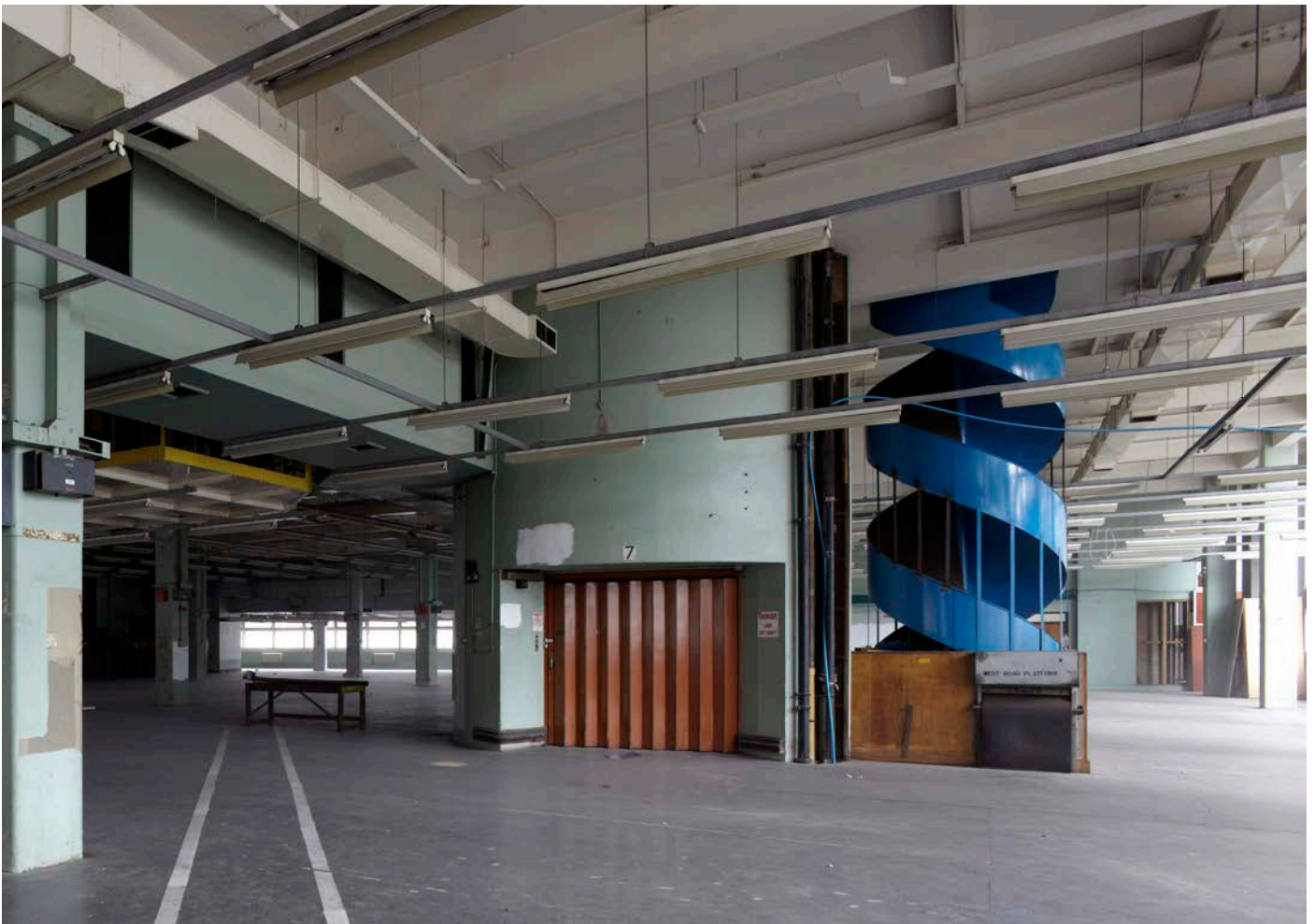
Some of these elements were left behind on the redundant sorting floors. A methodology for selecting the items to be salvaged and potentially reused was identified, and a detailed salvage plan was prepared to oversee the demolition process in order to ensure that all significant items were retained.

These included the blue helical gravity chute and equipment for letter processing, along with a conveyor and a control panel showing the progress of mail batches through the building.

The mail sorting chute was restored and installed in the public roof terrace lobby; the sorting machinery control panels were installed in the cycle store lobby; and historical photos, specific to the building, have been re-printed and displayed in common areas of the residential and office buildings.



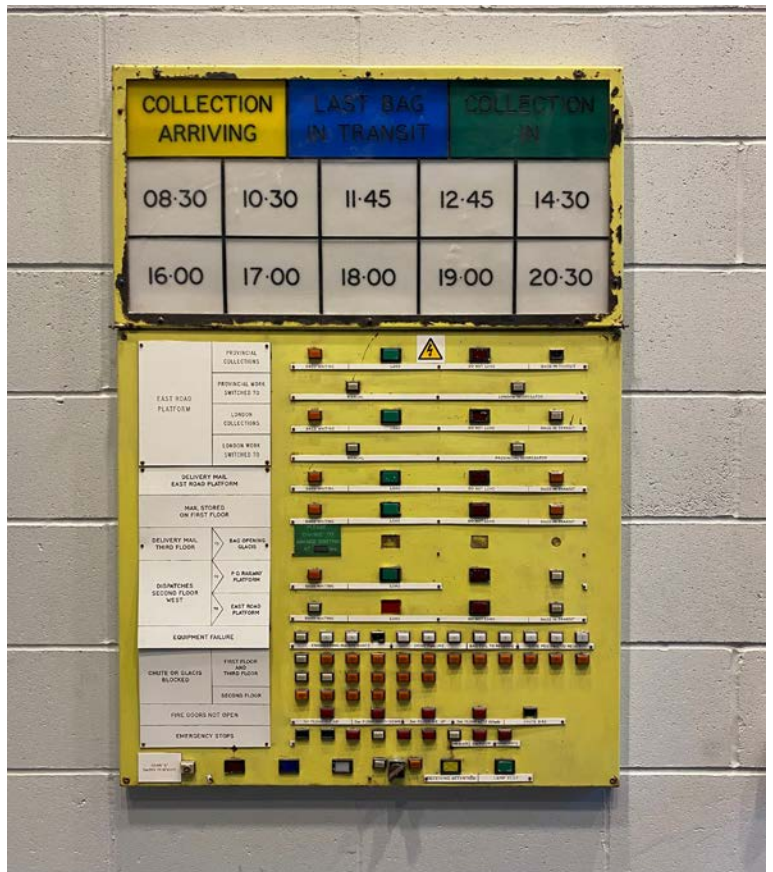
Public roof terrace lobby



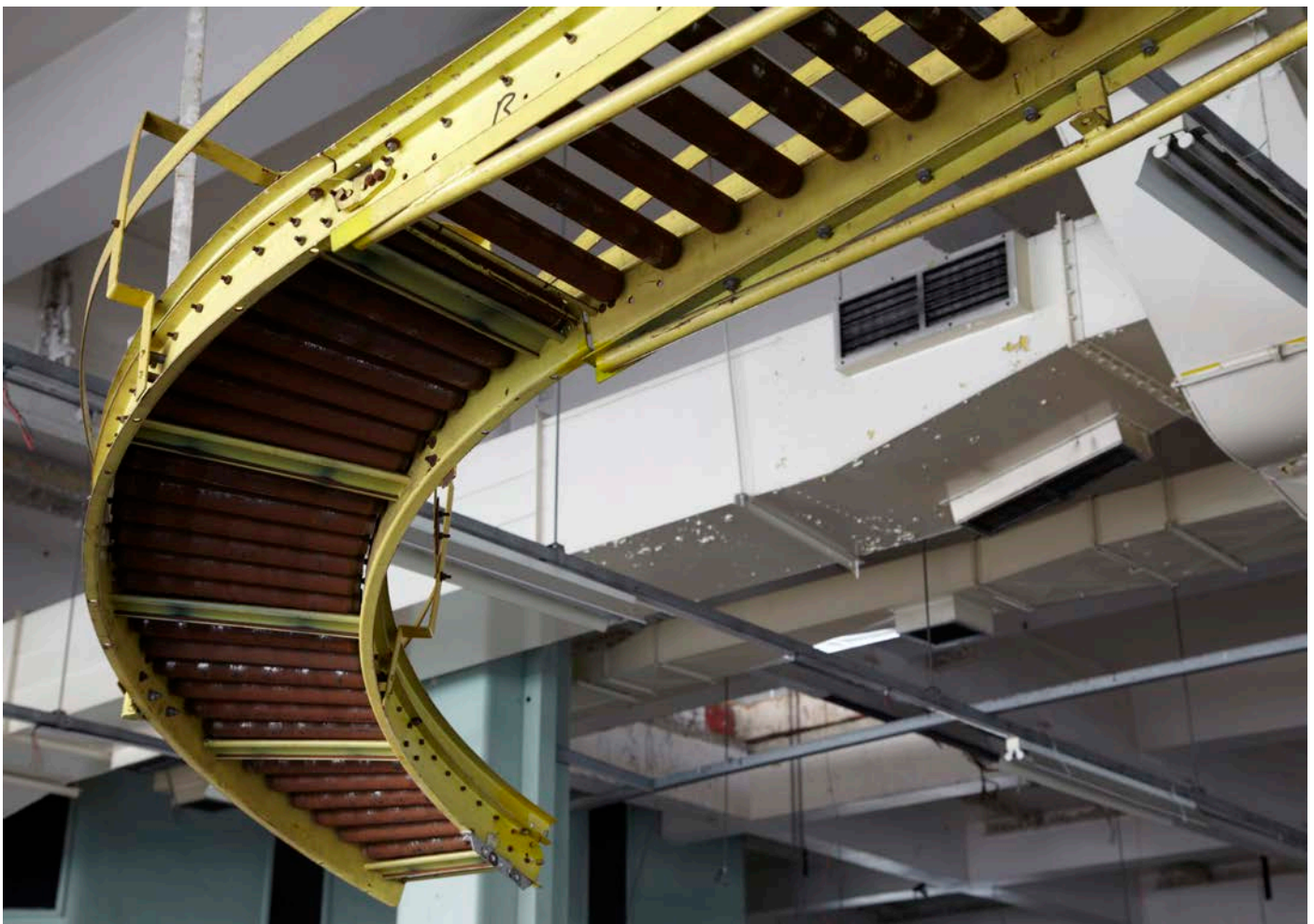
The blue helical gravity chute as found



Conveyor catches



Sorting machinery control panel



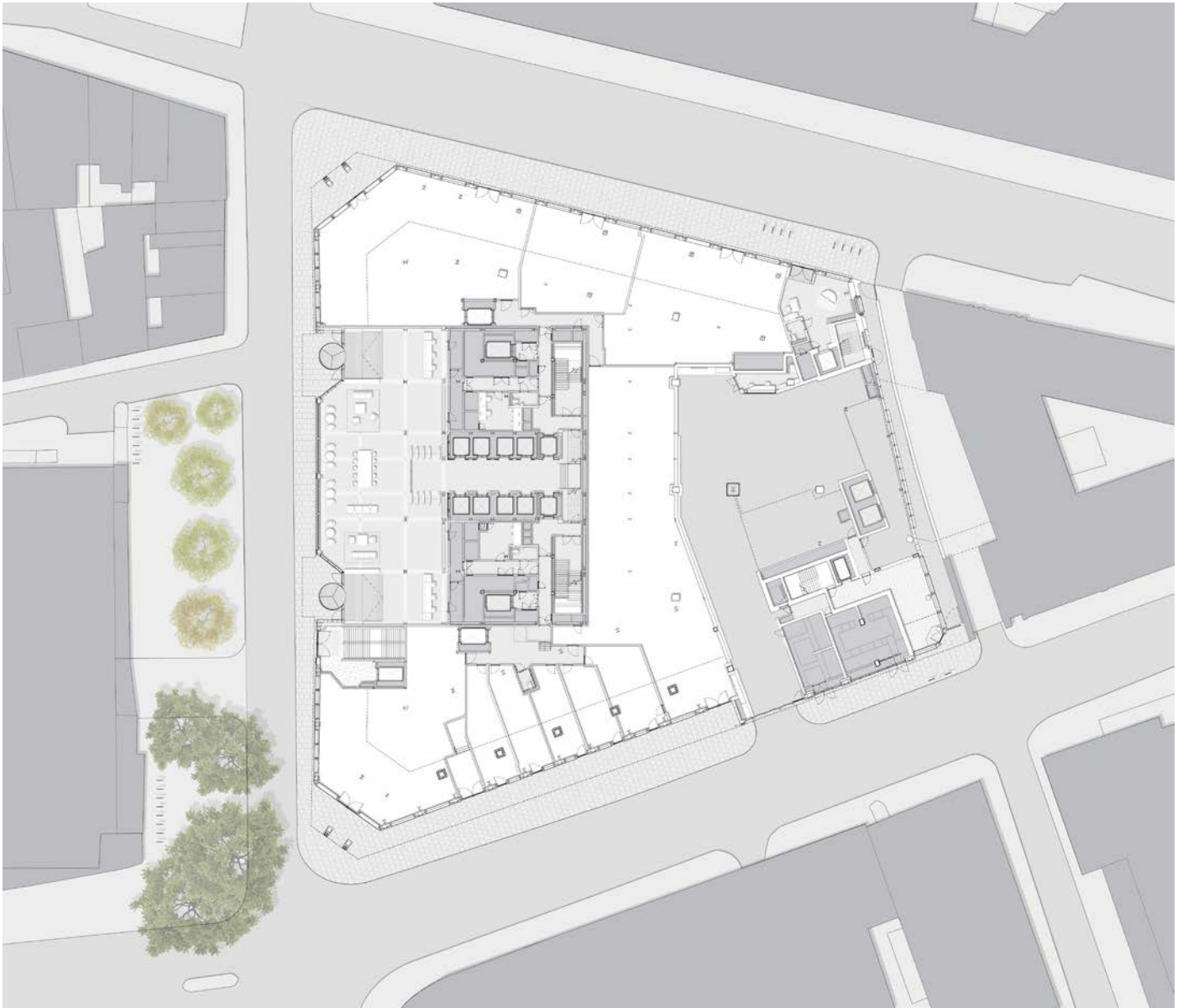
Sorting office conveyor

## SITE PLAN



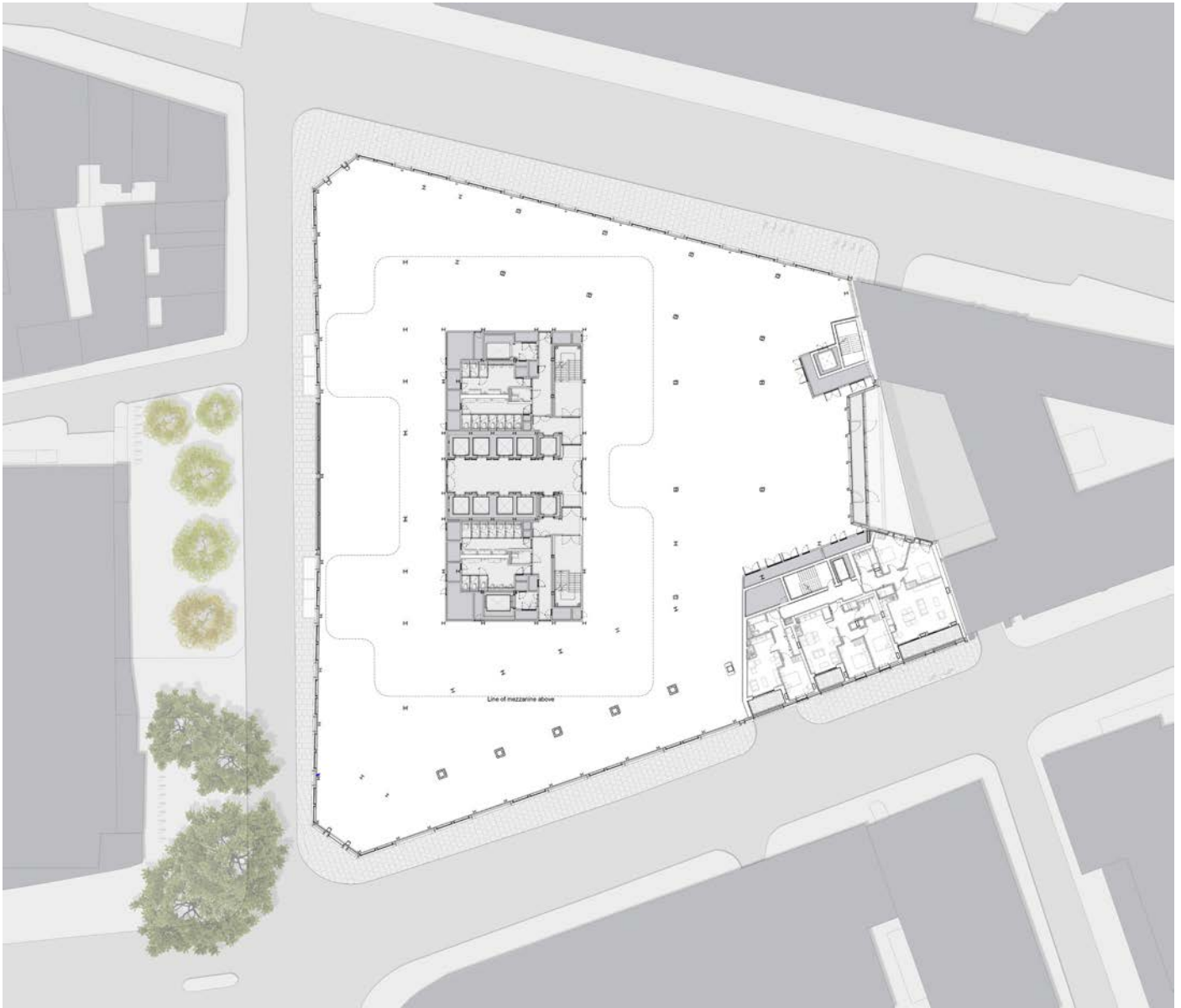
Site plan

## FLOOR PLANS



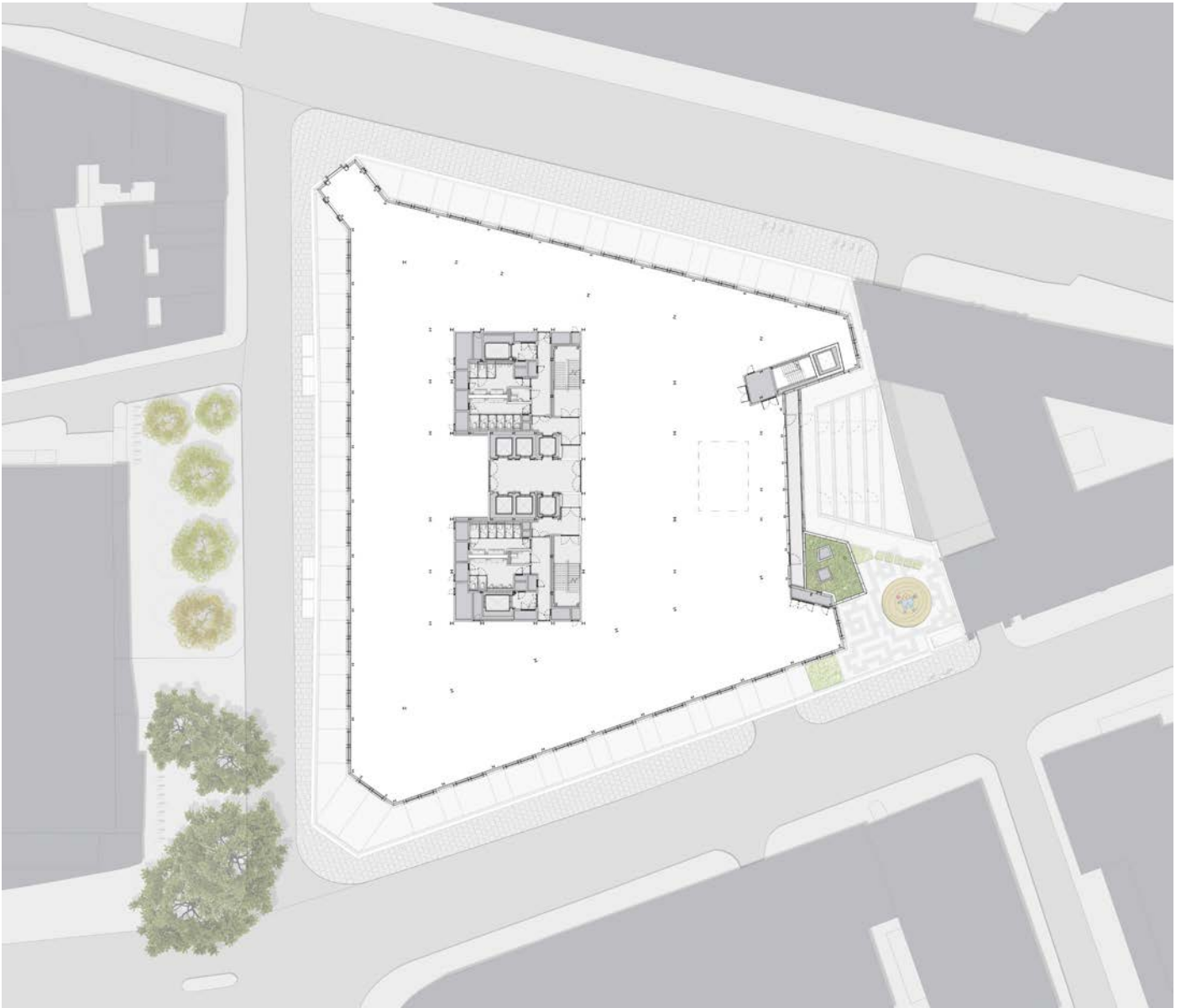
Ground floor plan

## FLOOR PLANS



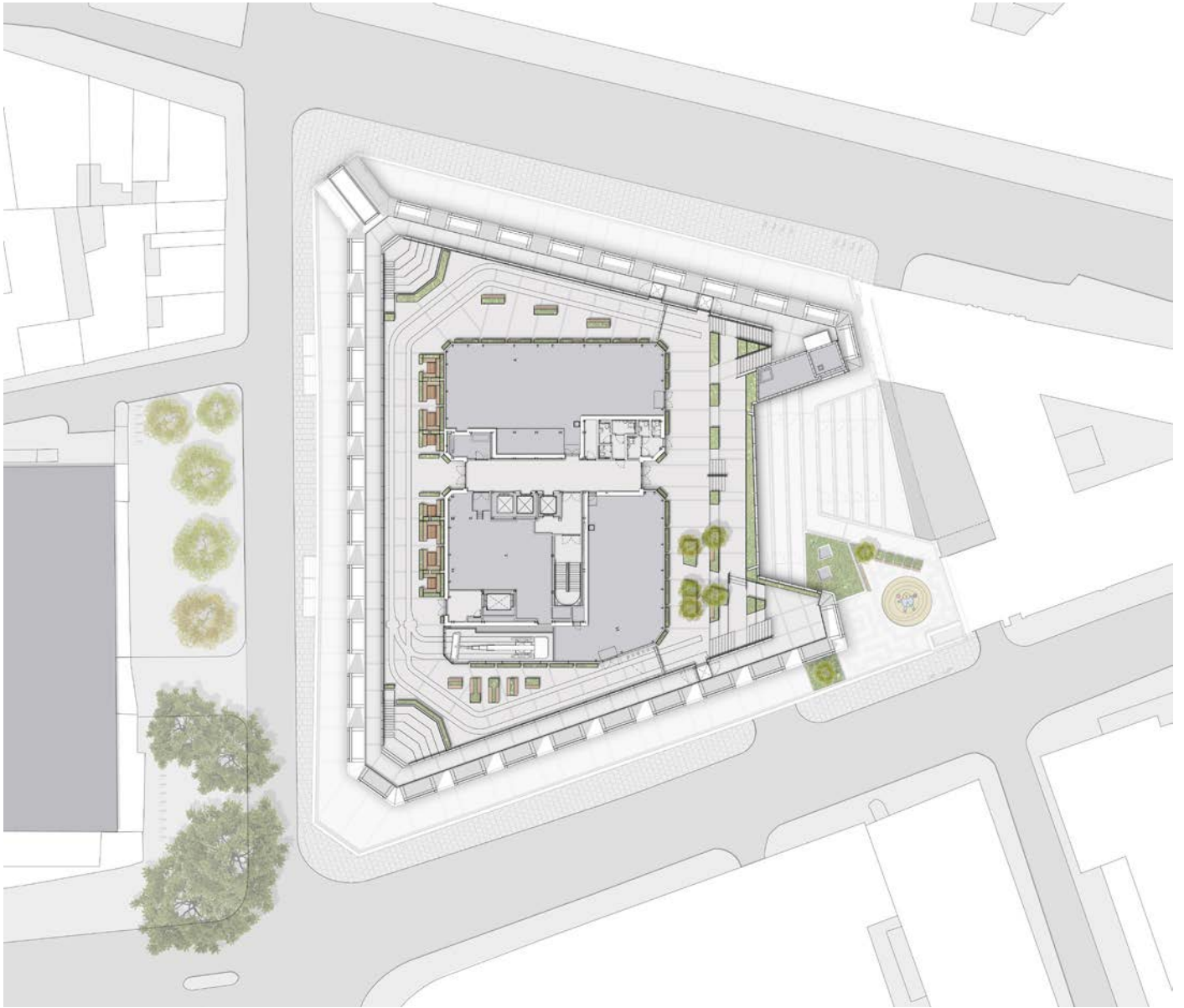
Typical lower floor plan

## FLOOR PLANS



Typical upper floor plan

## FLOOR PLANS



Roof plan

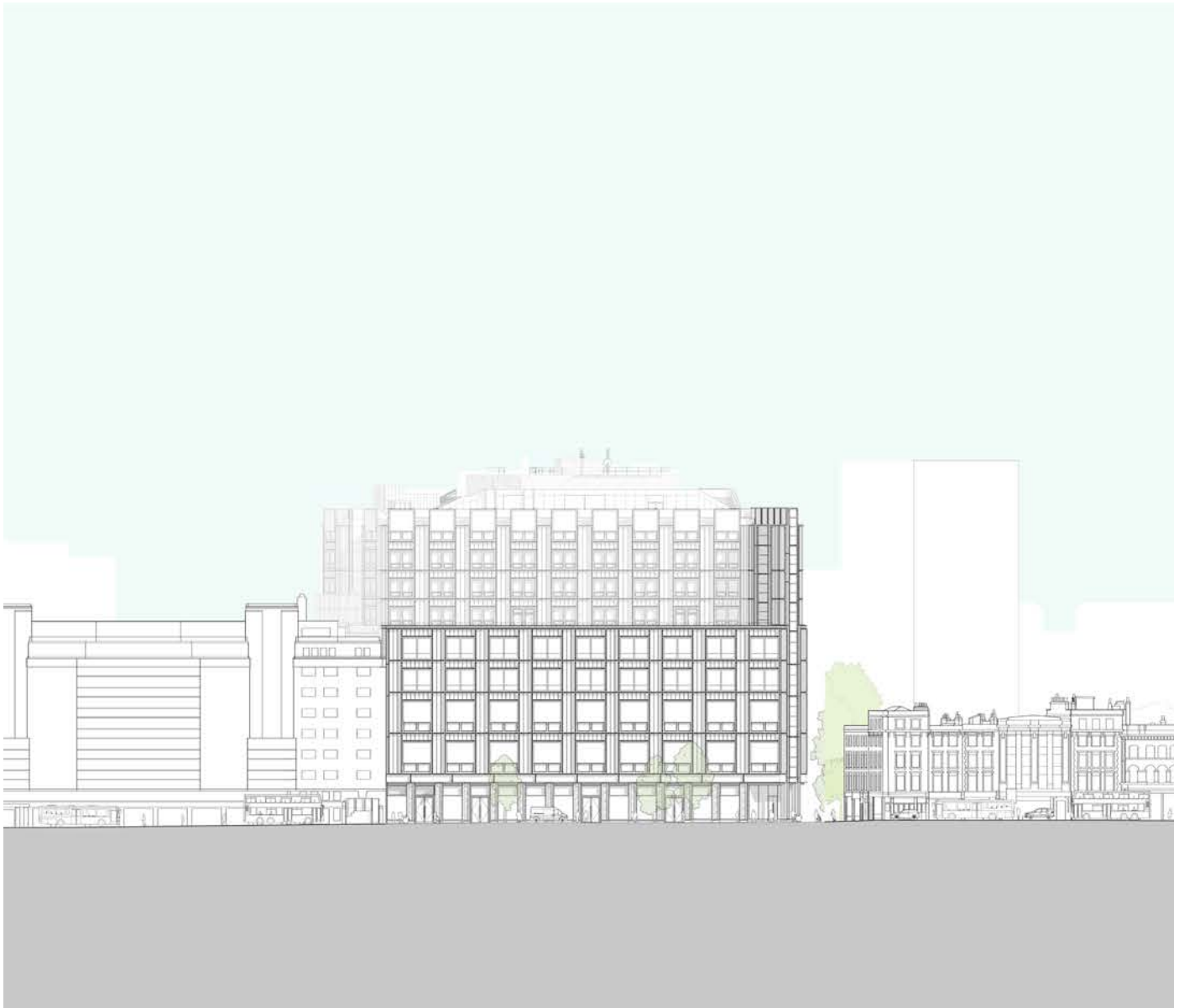


## FLOOR PLANS



Basement plan

## ELEVATIONS



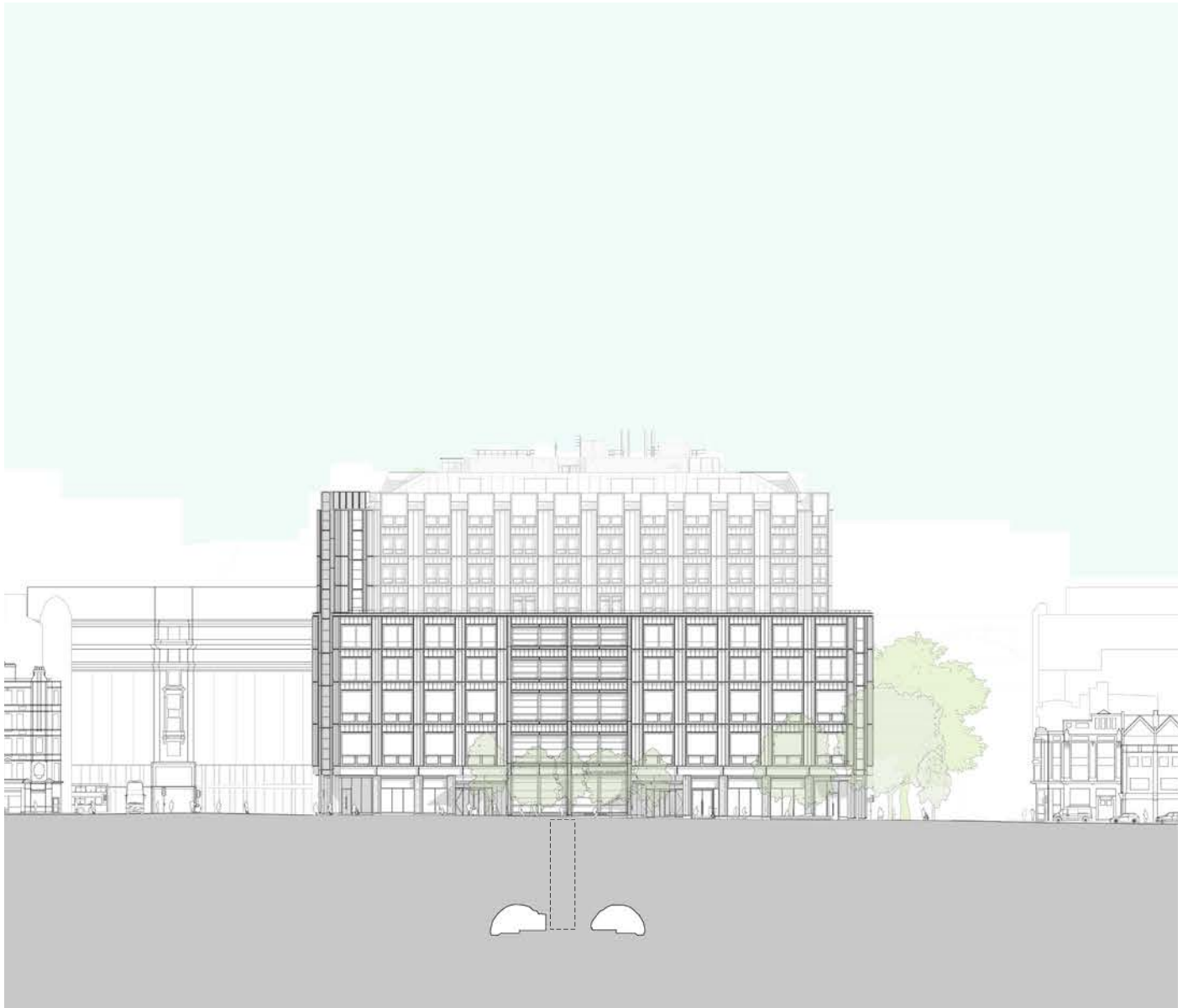
North elevation

## ELEVATIONS



South elevation

# ELEVATIONS



West elevation



# PHOTOGRAPHY











