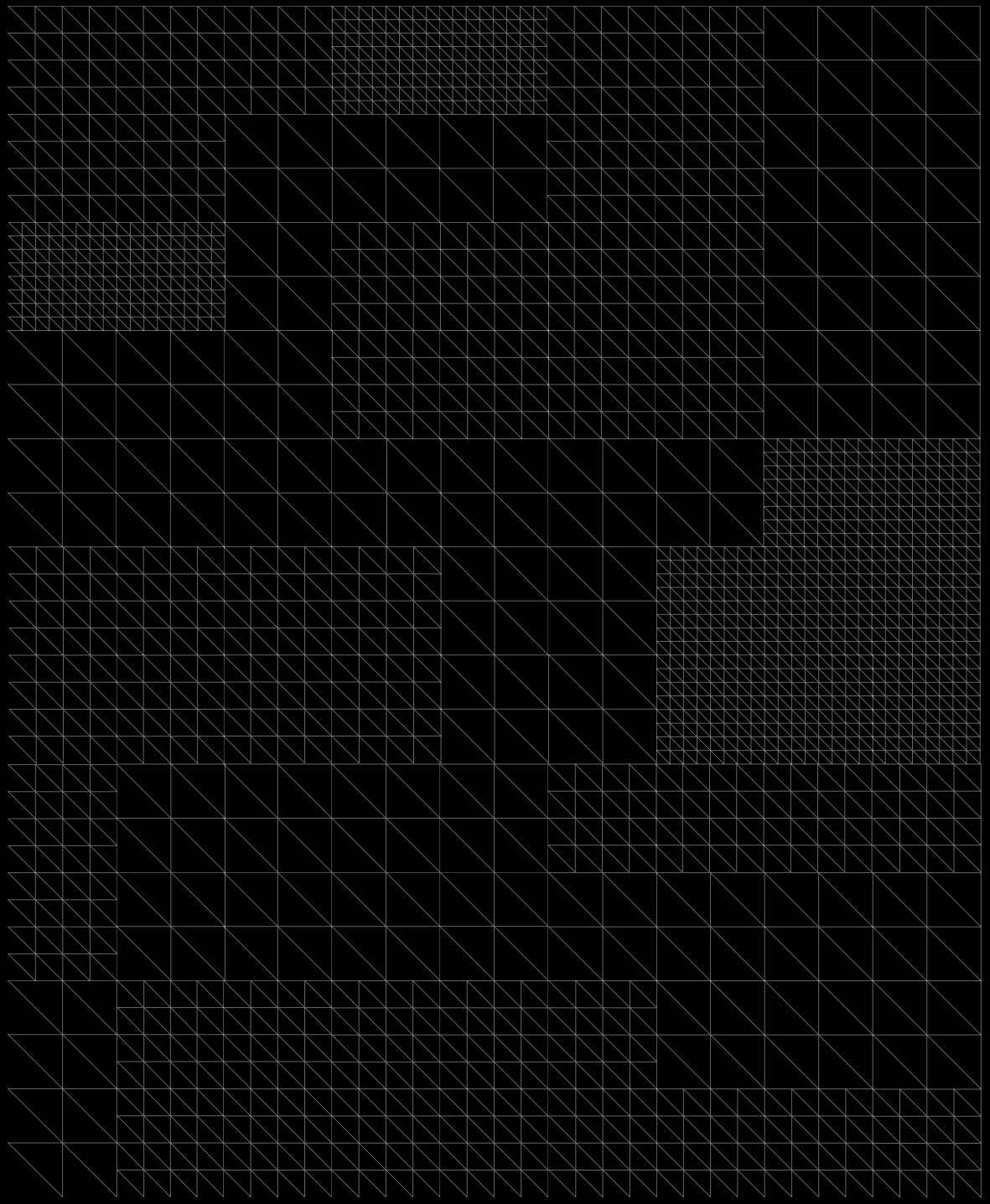
N 51° 31' 51.5522"
W 0° 5' 34.2118"

Wenlock Works
Shepherdess Walk
London N1

Contemporary craft, modernist design and
cutting edge technology in the Old Street District



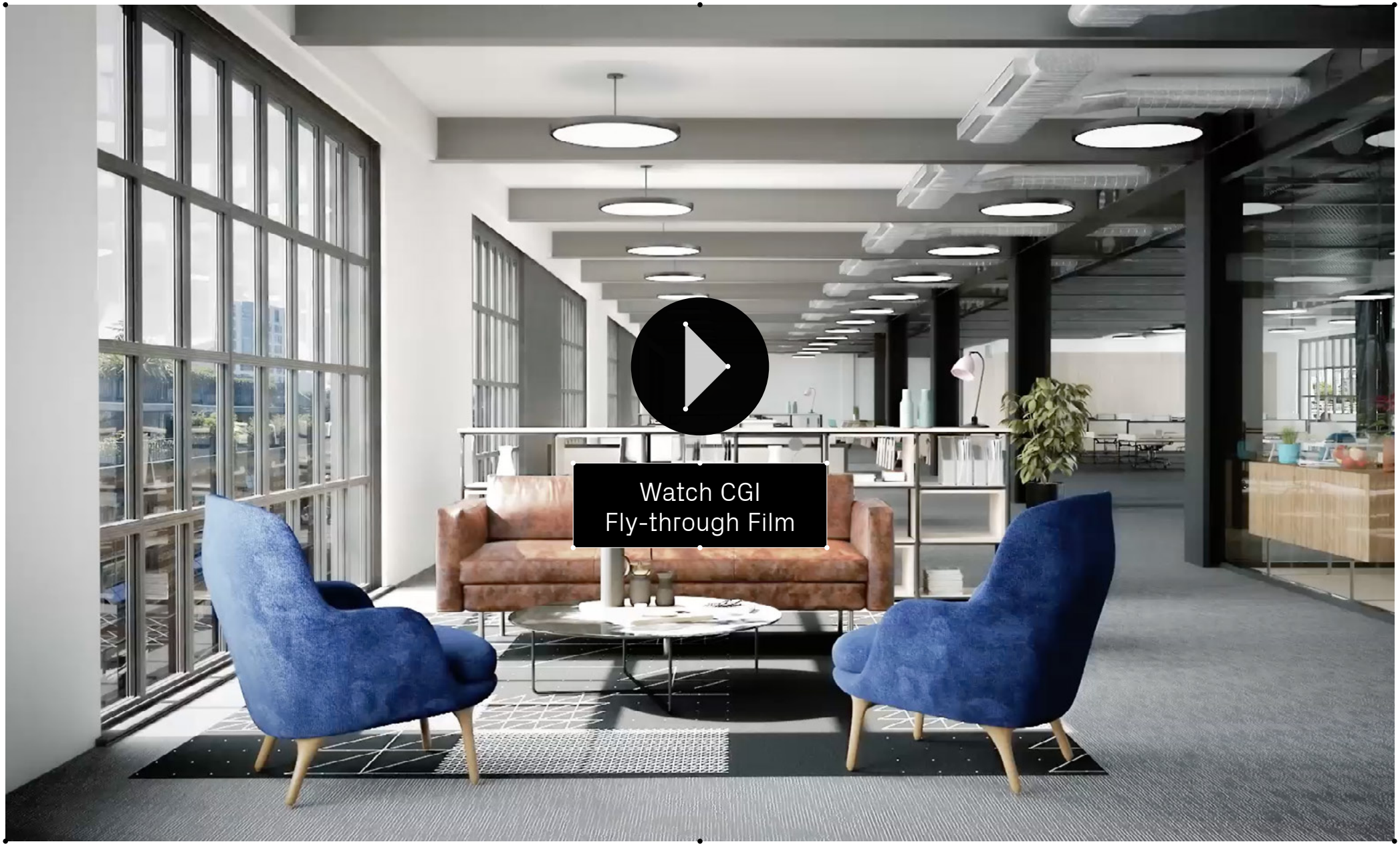
A Workspace for the Future

Welcome to East London's new workshop for idea creation.
A place where the contemporary craft of technology meets Shoreditch's great tradition of makers and ground-breakers.

Up to 130,000 Ft^2 of inspiring office space available for rent.

Ready from Q3 2019

BELOW: FRONT ELEVATION


Watch CGI
Fly-through Film

BELOW: RECEPTION
LEFT: FRONT ELEVATION

Craft. Design. Technology.

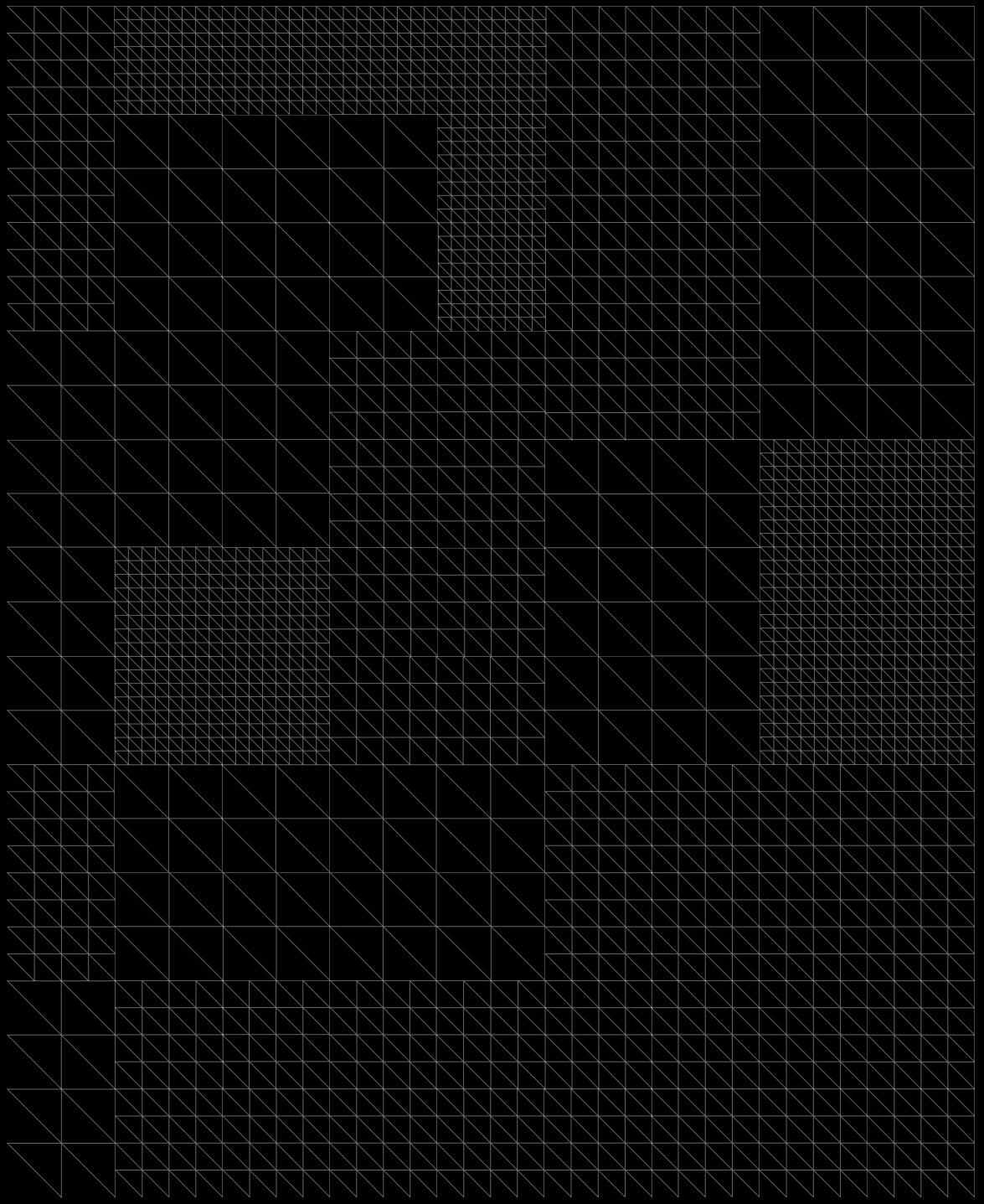
Wenlock Works cleverly reinterprets the warehouses of Old Street's industrial heyday to inspire new ways of thinking and working for its community of visionaries today.

Throughout the building, high quality, timeless materials have been used in interesting and innovative ways. Dark, coal-fired brick reminiscent of Victorian warehousing cloaks the façade's lower floors, while the vast factory-style steel windows flood the high-ceilinged spaces with abundant natural light.

Much more than contemporary office space, Wenlock Works is a home for the new generation of innovators shaping the global cultural and digital landscape.

LOCATION

1



Round & About

Old Street has fast become the epicentre of London's vibrant tech scene. Here, clustered in the streets around the now iconic Silicon Roundabout, can be found a diverse community of established digital leaders and innovative start-ups.

With them they've brought a social and cultural scene unlike anything else in the City, plus a very special quality that's impossible to manufacture – the area's palpable energy and 'anything's possible' attitude.

It's this vital ingredient that continues to make this neighbourhood such a desirable and inspiring place to be and do business, and is an environment you simply won't find anywhere but Old Street.

BELOW: OLD STREET

BELOW: OLD STREET ROUNDABOUT PROPOSED CGI'S

Round & About

Old Street roundabout is soon to be transformed into a pedestrian square under new plans unveiled, with building anticipated to commence towards the middle of 2018 (subject to change).

The roundabout itself at London's technology epicentre could cease to exist - with one side being paved over to make a large 'peninsula' designed to make the junction safer for pedestrians and cyclists.

The radical design would see the north-western side of the roundabout paved over to create a new public space. Old Street station would have a new entrance way installed in a central location where the island is at present.

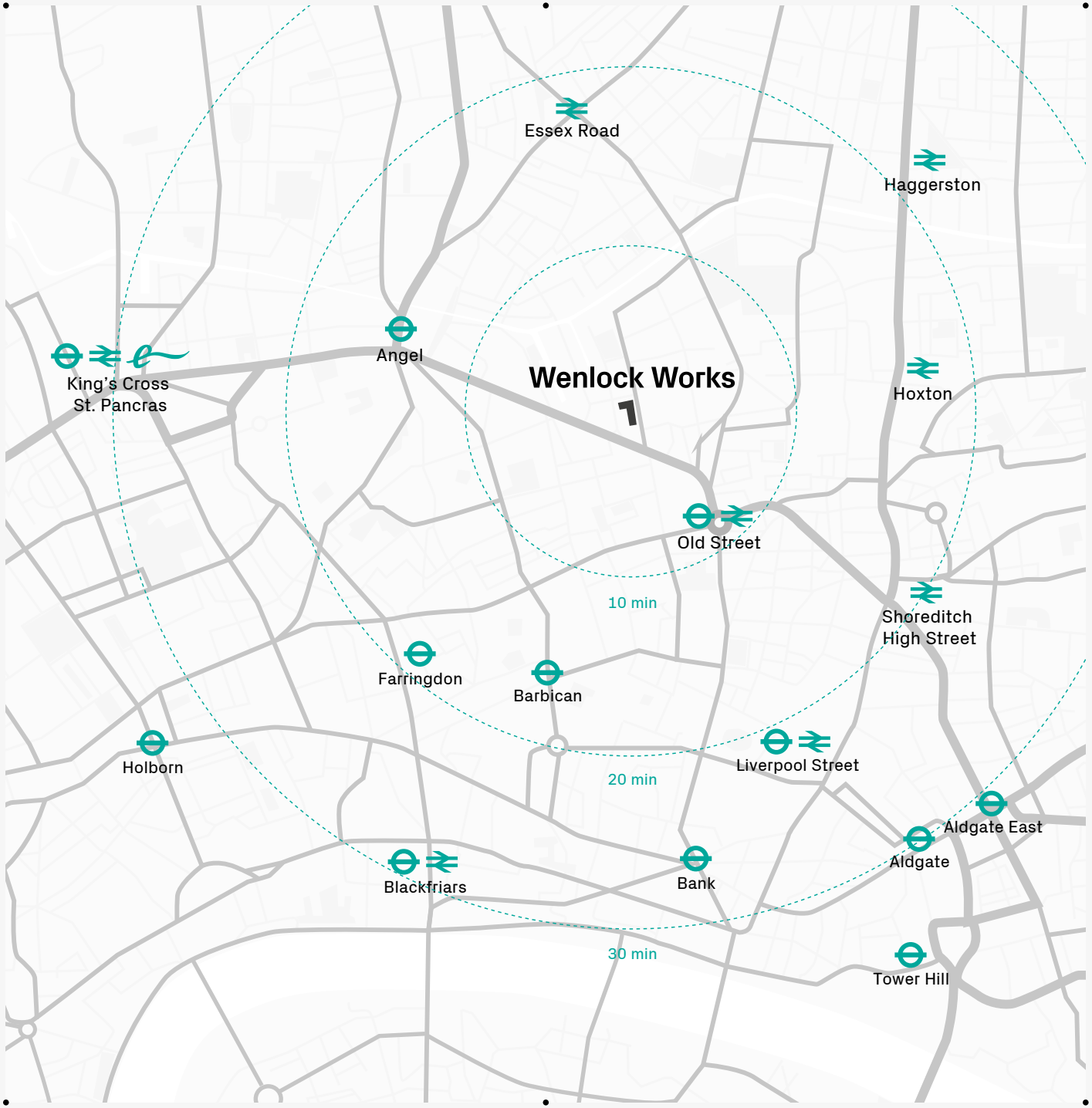
Other planned improvements include segregated cycle lanes and cycle-friendly traffic signals. Five new pedestrian crossings would be added and unnecessary street furniture would be removed, according to the plans.

The main feature would be a central pedestrianised walkway lined with trees and benches.

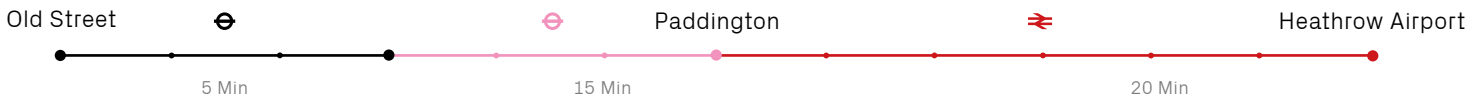
Connected to London

Wenlock Works is located in Central London's Zone 1, less than a 10-minute walk from Old Street Tube Station and with easy access to the City and West End. From here navigating the capital and travelling farther afield are simple with fast connections to all London's airports, and a mere two Tube stops to the Eurostar service at St. Pancras International.

What's more, with Crossrail services scheduled to begin at Liverpool Street Station (just a short walk or direct bus from Wenlock Works) at the end of 2018, venturing both east and west will be even faster and more efficient.



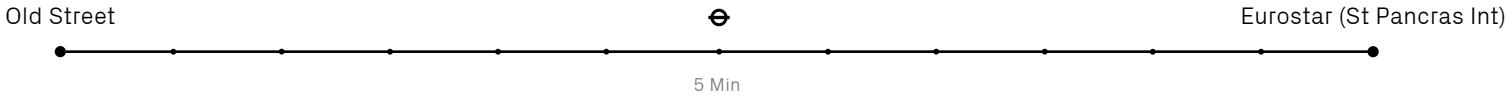
Heathrow Airport
40 mins



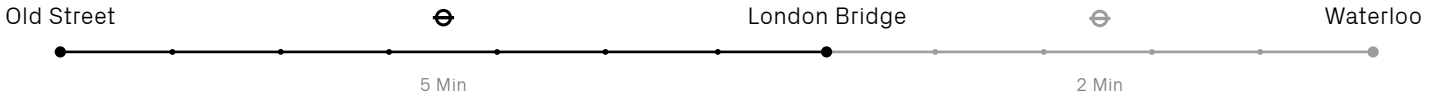
Gatwick Airport
35 mins

London City Airport
23 mins

Eurostar (St Pancras Int)
5 mins



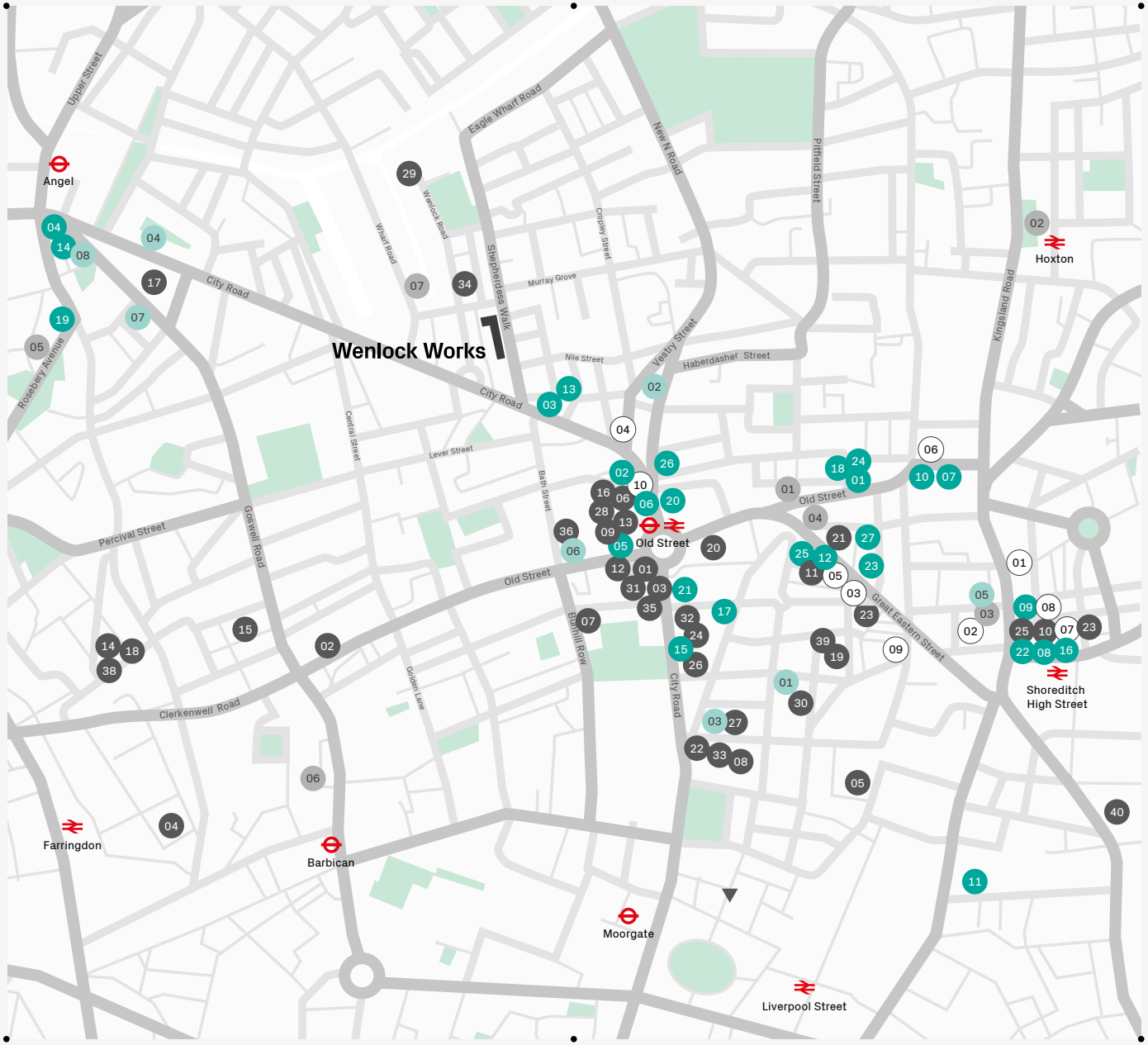
Waterloo
7 mins



King’s Cross
5 mins

Euston
7 mins

Source: Transport for London - tfl.gov.uk



OCCUPIERS

01 Adobe
02 AHMM Architects
03 AKT II
04 AKQA
05 Allegis Group
06 Audible UK
07 BGL Group
08 Bloomberg
09 Box.com
10 Buckley Gray Yeoman
11 Capco
12 CapitalOne
13 CBS Interactive
14 Deloitte Digital
15 Drakes
16 FARFETCH
17 GoCardless
18 Hill + Knowlton
19 I-D
20 Inmarsat
21 L.K. Bennett
22 Mendeley
23 Mixcloud
24 Morningstar
25 Mother
26 Mullen Lowe Group
27 Opentable
28 Pivotal
29 Propercorn
30 R/GA
31 RunPath
32 Sage
33 Silicon Valley Bank
34 Spacelab
35 Spark44
36 Stripe
37 TransferWise
38 Unilever
39 Vice
40 Wieden + Kennedy

HOTELS

01 Ace Hotel
02 CitizenM
03 Hoxton Hotel
04 M by Montcalm Shoreditch
05 Nobu Hotel
06 Old Street Courthouse Hotel
07 Shoreditch House
08 The Boundary
09 The Curtain
10 The Z Hotel

EAT & DRINK

01 Busaba
02 BEERS London
03 Bodean's BBQ Old Street
04 Bombay Burrito
05 Bone Daddies
06 Ceviche
07 The Clove Club
08 Dirty Burger
09 Dishoom
10 Homeslice
11 Honest Burger
12 Hoxton Grill
13 Jamie Oliver's Fifteen
14 Jamie's Italian - Angel
15 Lantana Cafe
16 Lyle's
17 McQueen
18 Meat Mission
19 Niche - Gluten Free Dining
20 Nightjar
21 Ozone Coffee Roasters
22 Pizza East
23 Red's True Barbecue
24 The Breakfast Club
25 The Princess of Shoreditch
26 The Three Crowns
27 Tramshed

THINGS TO DO

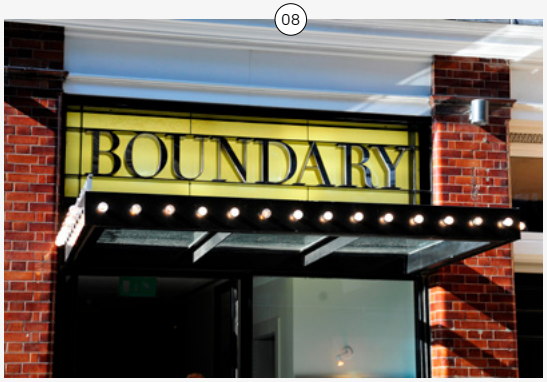
01 Bounce Table Tennis Bar
02 Geffrye Museum
03 Protein Gallery
04 Red Gallery
05 Sadlers Wells
06 The Unseen Gallery
07 Victoria Miro Gallery

WELLNESS

01 Boom Cycle
02 Fierce Grace Hot Yoga
03 Fight City Gym
04 Fitness First
05 Frame
06 Gymbox Old Street
07 The Gym Angel
08 Virgin Active Islington Angel

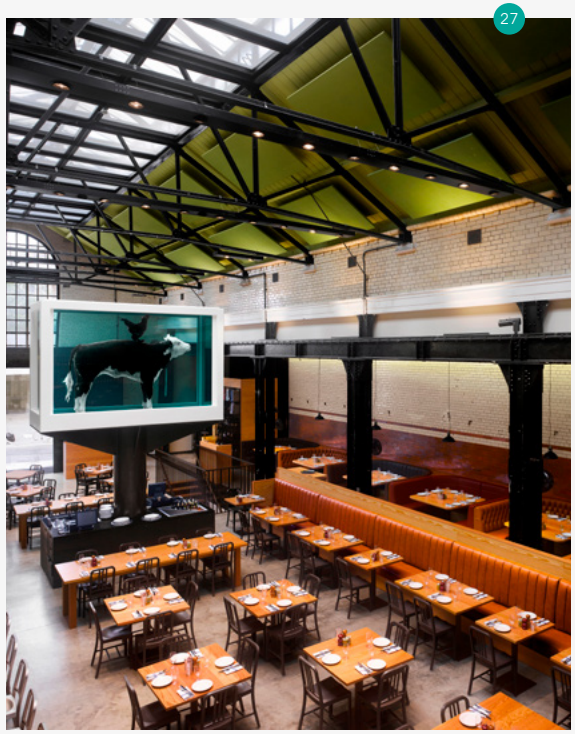
THE NIGHTJAR, OLD STREET

PIZZA EAST, SHOREDITCH HIGH STREET

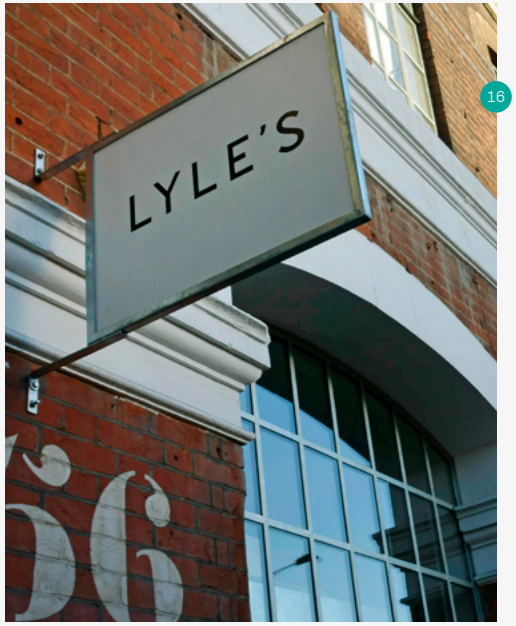


THE BOUNDARY HOTEL, REDCHURCH STREET

HOXTON SQUARE



TRAMSHED, RIVINGTON STREET



LYLE'S, SHOREDITCH HIGH STREET

WENLOCK BASIN

THE CLOVE CLUB, OLD STREET

BONE DADDIES, OLD STREET

ACE HOTEL, SHOREDITCH HIGH STREET

Evolution

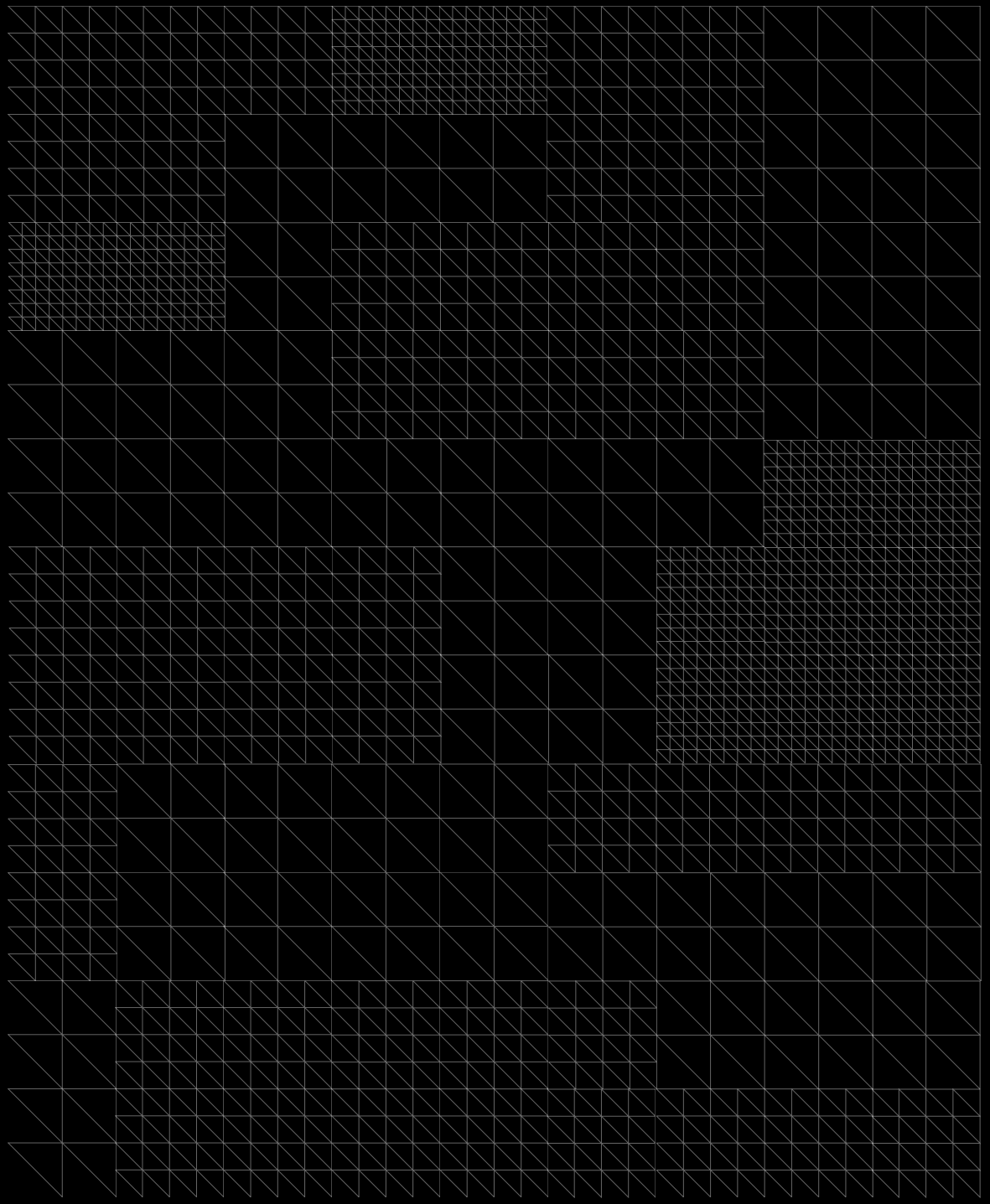
Old Street's position as a hub for doing business can be traced back centuries. The surrounding Wenlock district of East London, has been home to entrepreneurs from fields as diverse as beer brewing and furniture factories.

Its residents have come from walks of life as varied as landed gentry to those who found refuge in St. Luke's workhouse, which once stood on this very site.

Today, the community's output looks a little different. Where once the area's craftspeople were known for creating fine objects with their hands, transporting their wares across London and the Empire via a network of canals and wharves, Old Street's modern-day innovators are changing the world through ideas, exporting innovation around the globe digitally.

THE SPACE

2



Floor	Use	Ft² Approx	M² Approx		Ft² Approx	M² Approx
6TH	B1	13,918	1,293			
5TH	B1	13,918	1,293			
4TH	B1	16,480	1,531			
3RD	B1	19,558	1,817			
2ND	B1	20,355	1,891			
1ST	B1	20,473	1,902			
Ground (Unit 1)	A1/B1	2,293	213			
Ground (Unit 2)	A1/B1	4,811	447	**Unit 2 Total**	10,290	956
Lower Ground (Unit 2)	A1/B1	5,479	509			
Ground (Unit 3)	B1	7,470	694	**Unit 3 Total**	10,958	1,018
Lower Ground (Unit 3)	B1	3,488	324			
Reception Lobby	B1	2,637	245			
Total		**130,880**	**12,159**			

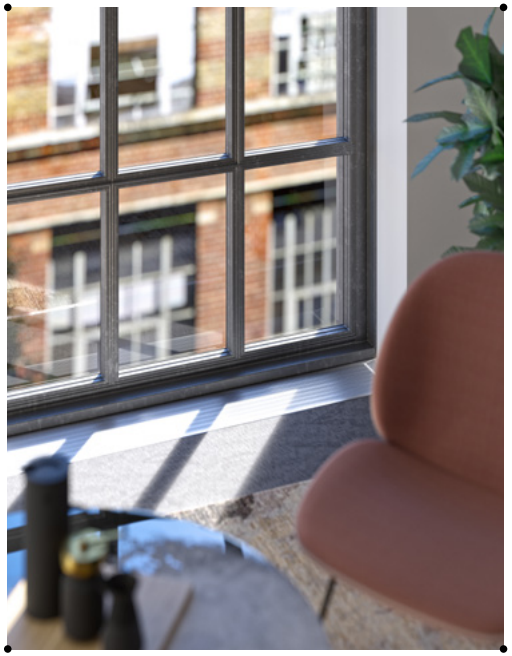
These proposed areas have been provided by Gleeds, which are to be used for guidance purposes only and will be verified upon the practical completion of building works.
Ground and Lower Ground of Unit 2 to be let together. Ground and Lower Ground of Unit 3 to be let together.

Summary

- Comprehensive refurbishment under the design direction of Buckley Gray Yeoman Architects
- Re-clad Petersen brick exterior
- New factory style window configuration
- Stylish contemporary entrance lobby boasting 4.4m ceiling height
- In excess of 3m ceiling height on the majority of office floors
- Superb natural daylight throughout the building
- Exposed air conditioning fan coils within perforated metal raft
- Fully accessible raised flooring
- Concrete revealed ceilings
- Terrace space on 3rd floor
- 134 cycle spaces
- 144 lockers
- 88 WCs
- 13 showers
- 4 passenger lifts

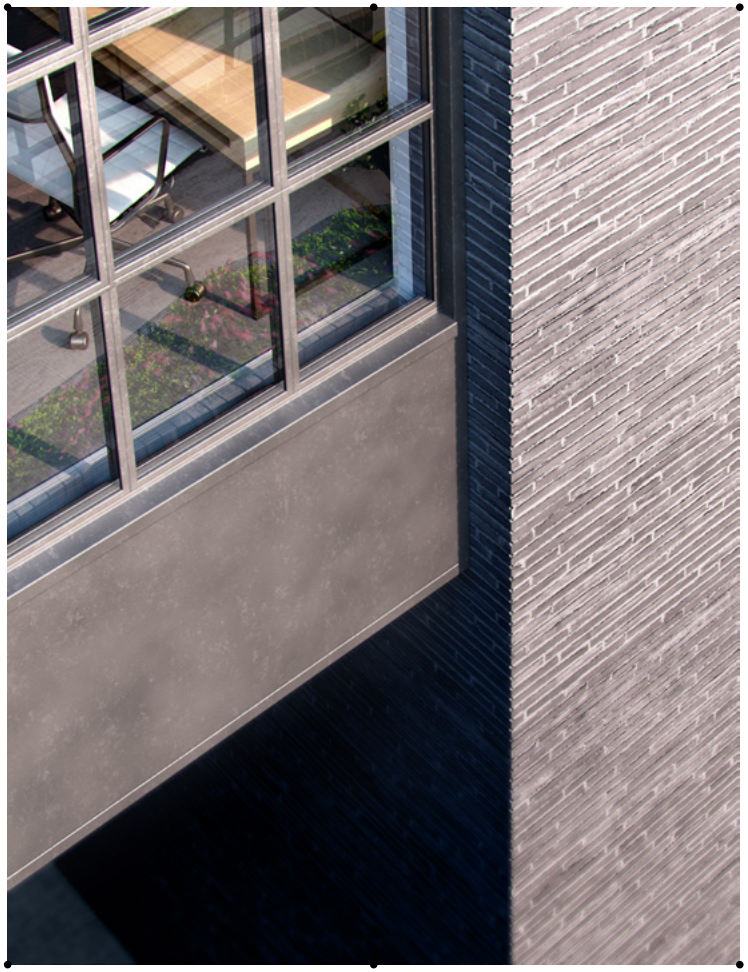
TOP: EXTERIOR DETAIL
BOTTOM: RECEPTION LOBBY BRICKWORK

TOP: STAIRWELL DETAIL
BOTTOM: INTERIOR WINDOW



CGI's to be used for guidance purposes only. May be subject to change.

Wenlock Works cleverly reinterprets the warehouses of Old Street's industrial heyday.



CGI's to be used for guidance purposes only. May be subject to change.

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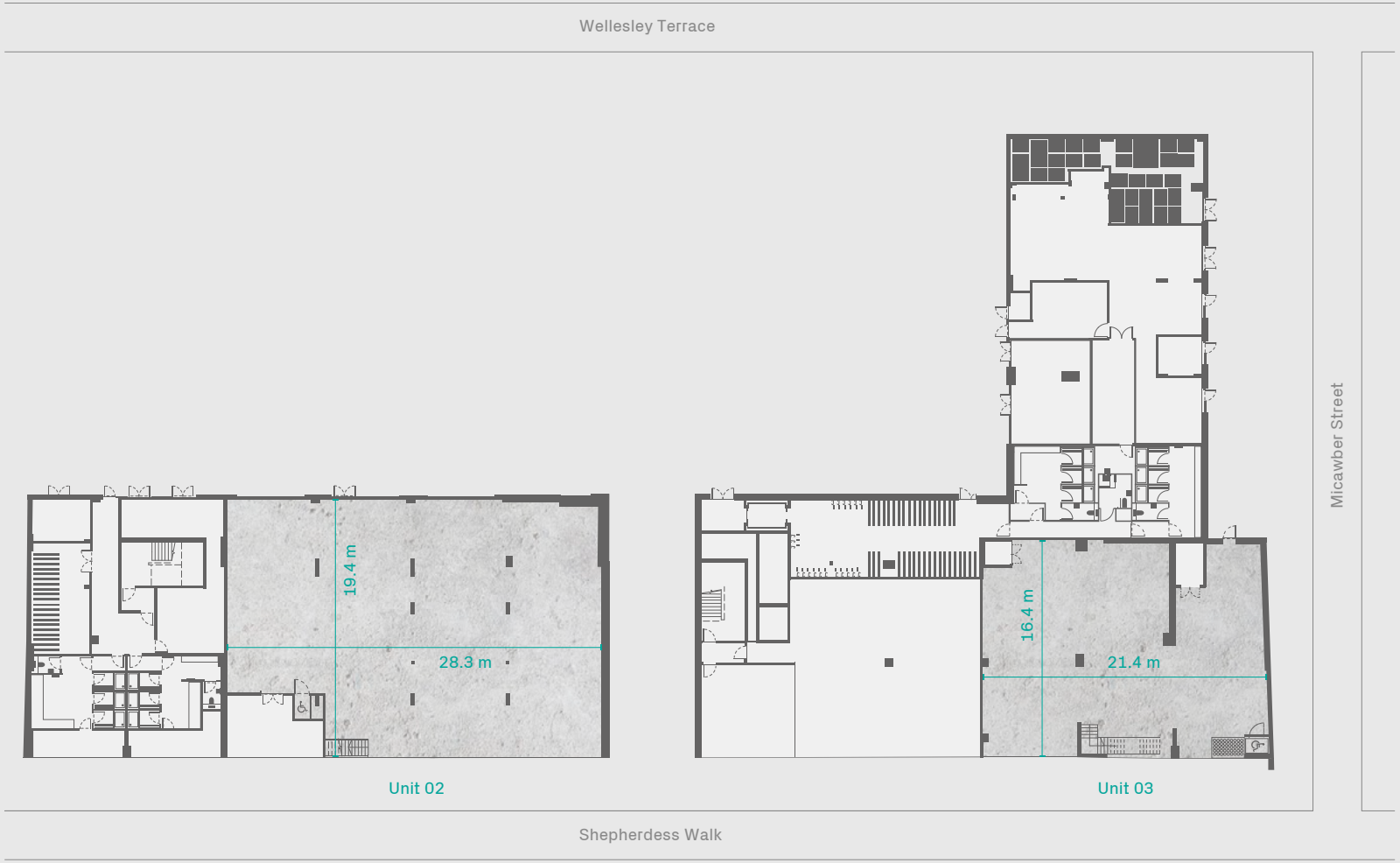
General arrangement

Lower Ground Floor	8,967 ft²	833 m²
Unit 2	5,479 ft2	509 m²
Unit 3	3,488 ft²	324 m²



Floor plan not to scale, for illustrative purposes only. May be subject to change.

Space Plan

Lower Ground Floor	8,967 ft²	833 m²
Unit 2	5,479 ft2	509 m²
Unit 3	3,488 ft²	324 m²

Wellesley Terrace

x 34 desks
x 1 large meeting table (14 person)
x 1 informal meeting table (10 person)

Unit 02

Unit 03

Micawber Street

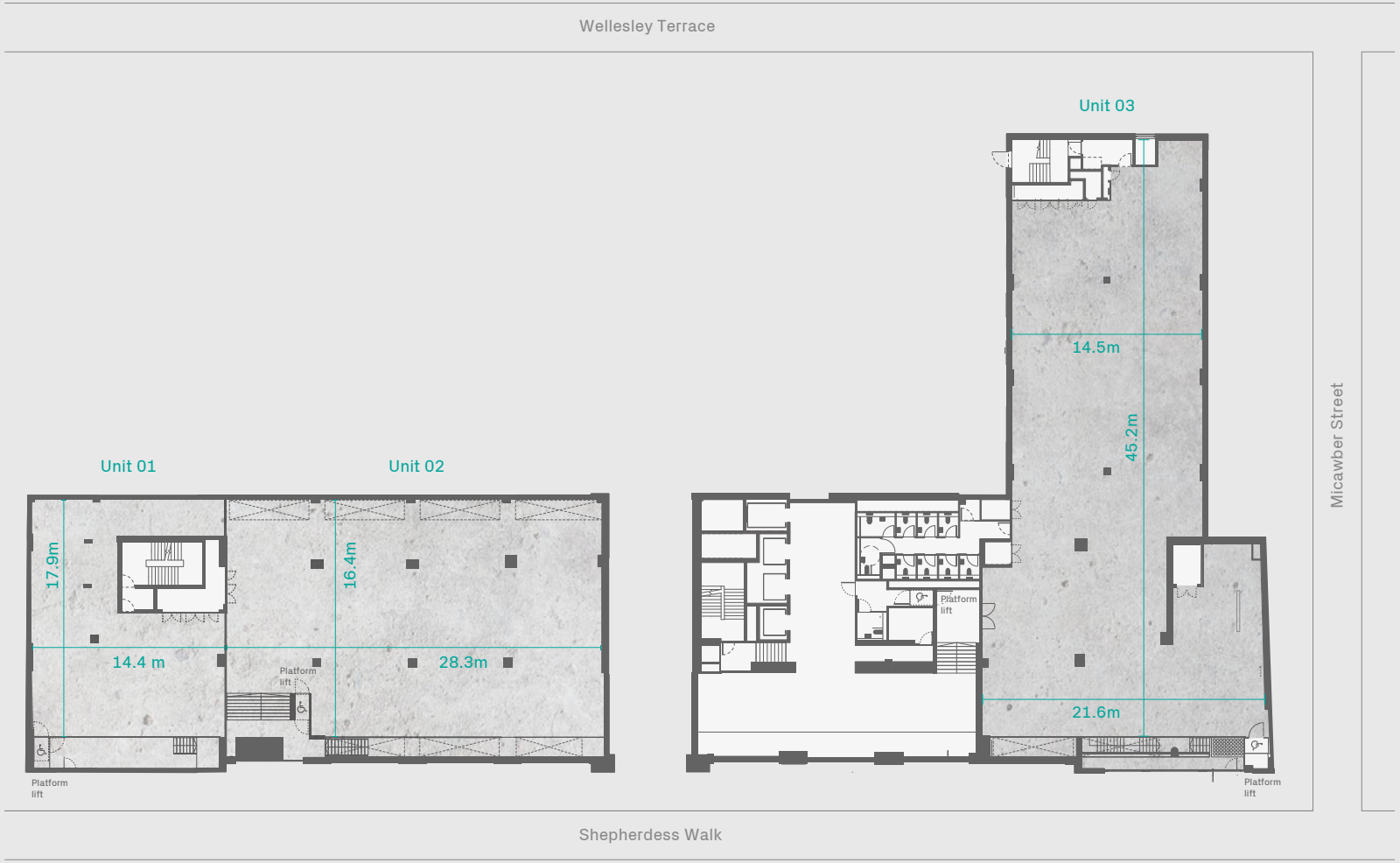
Shepherdess Walk

Floor plan not to scale, for illustrative purposes only. May be subject to change.

N

General arrangement

Ground Floor	14,574 ft²	1,354 m²
Unit 1	2,293 ft²	213 m²
Unit 2	4,811 ft²	447 m²
Unit 3	7,470 ft²	694 m²



Floor plan not to scale, for illustrative purposes only. May be subject to change.

N

Space Plan
Option 01

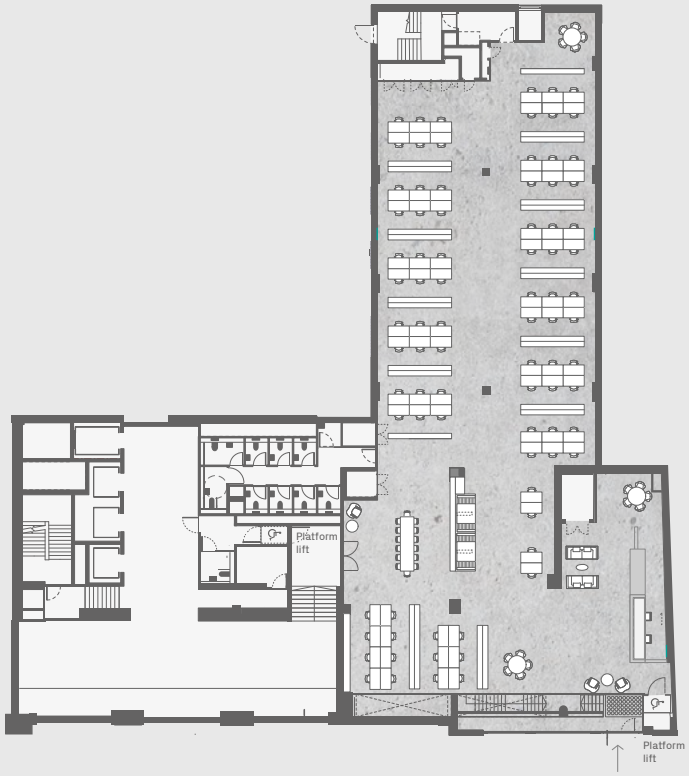
Ground Floor	14,574 ft²	1,354 m²
Unit 1	2,293 ft²	213 m²
Unit 2	4,811 ft²	447 m²
Unit 3	7,470 ft²	694 m²

Wellesley Terrace

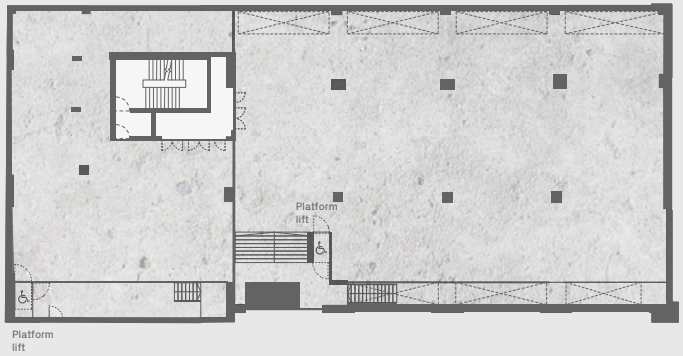
x 84 desks
x 2 receptionists
x 2 booths (4 person)

x 3 meeting tables (5 person)
x 1 meeting table (14 person)

Unit 03



Unit 01 Unit 02



Micawber Street

Shepherdess Walk

Shepherdess Walk Entrance

Floor plan not to scale, for illustrative purposes only. May be subject to change.

N

Space Plan
Option 02

Ground Floor	14,574 ft²	1,354 m²
Unit 1	2,293 ft²	213 m²
Unit 2	4,811 ft²	447 m²
Unit 3	7,470 ft²	694 m²

Wellesley Terrace

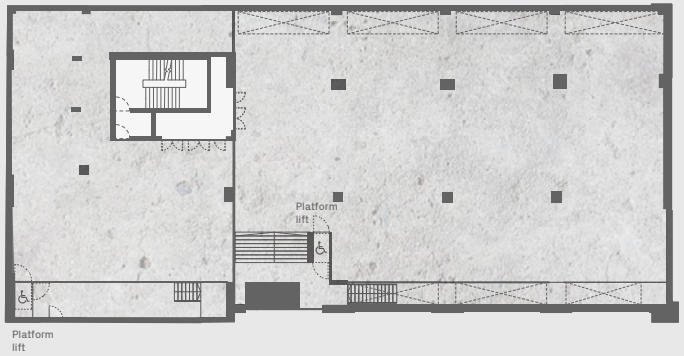
x 84 desks
x 2 receptionists
x 2 booths (4 person)

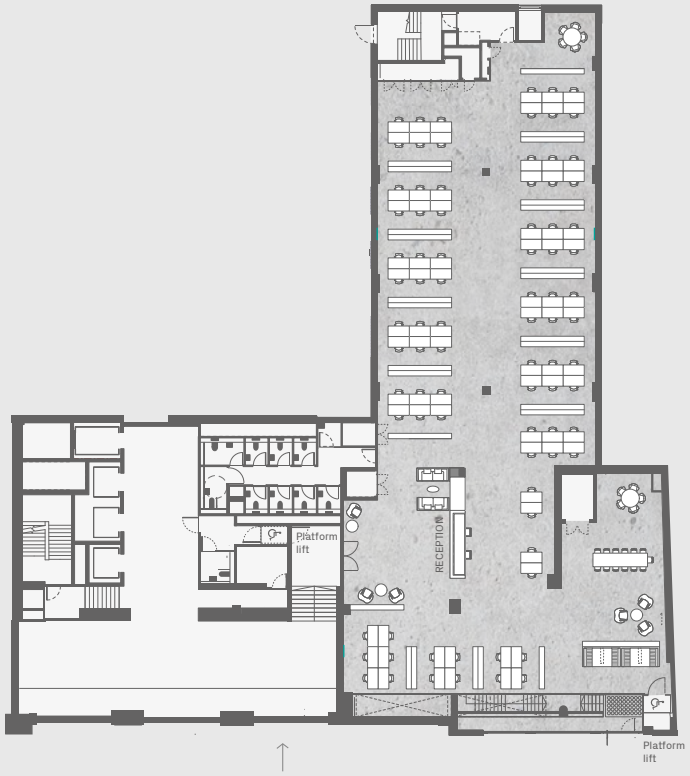
x 2 meeting tables (5 person)
x 1 meeting table (14 person)

Unit 03

Unit 01

Unit 02





Micawber Street

Shepherdess Walk

Entrance via Main Reception

Floor plan not to scale, for illustrative purposes only. May be subject to change.

N

General arrangement

First Floor 20,473 ft² 1,902 m²

Floor plan not to scale, for illustrative purposes only. May be subject to change.

N

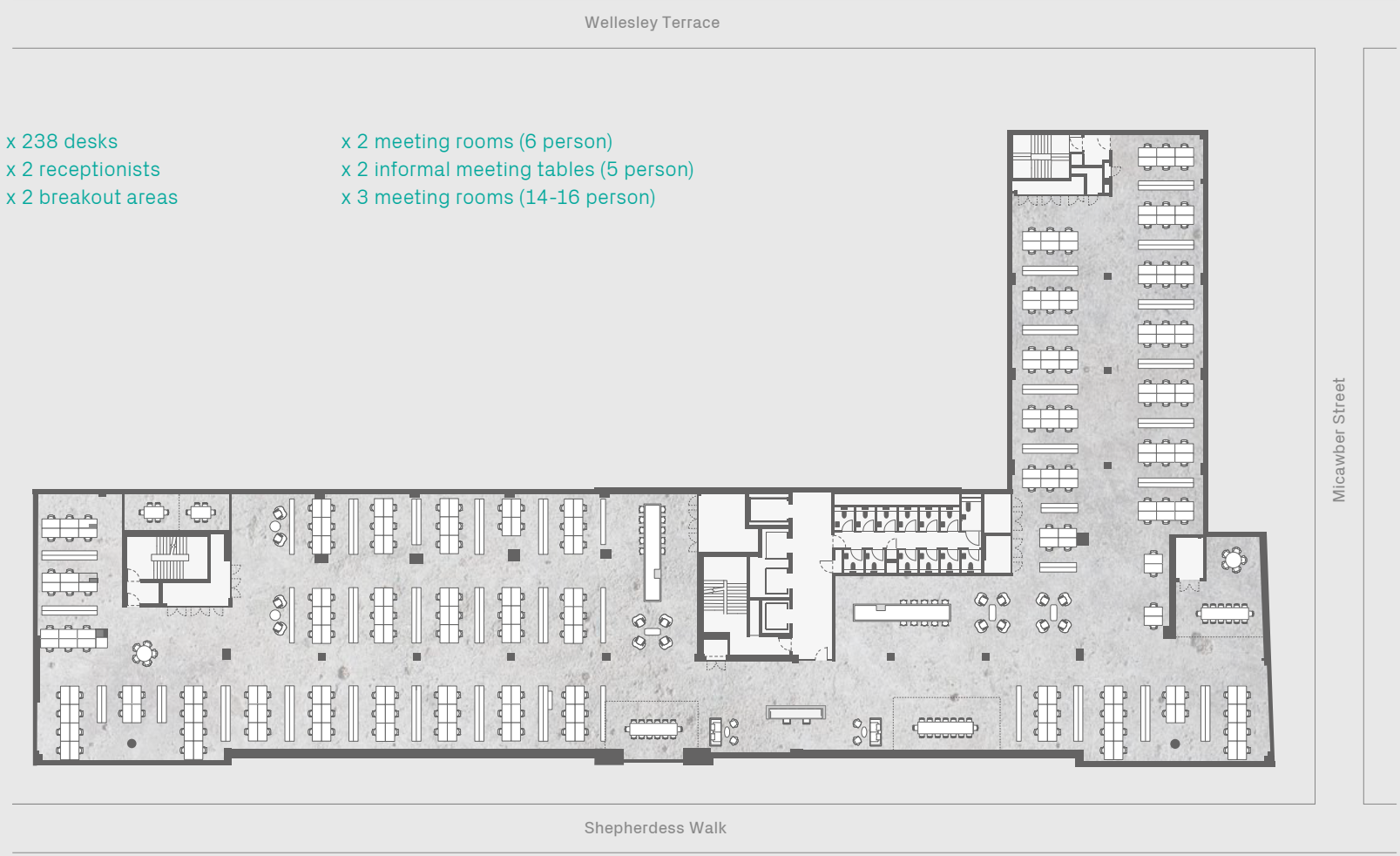
Floor plan not to scale, for illustrative purposes only. May be subject to change.

Space Plan

Second Floor 20,355 ft² 1,891 m²

x 238 desks
x 2 receptionists
x 2 breakout areas

x 2 meeting rooms (6 person)
x 2 informal meeting tables (5 person)
x 3 meeting rooms (14-16 person)



Floor plan not to scale, for illustrative purposes only. May be subject to change.

N

General arrangement

Third Floor 19,558 ft² 1,817 m²

Floor plan not to scale, for illustrative purposes only. May be subject to change.

N

Space Plan

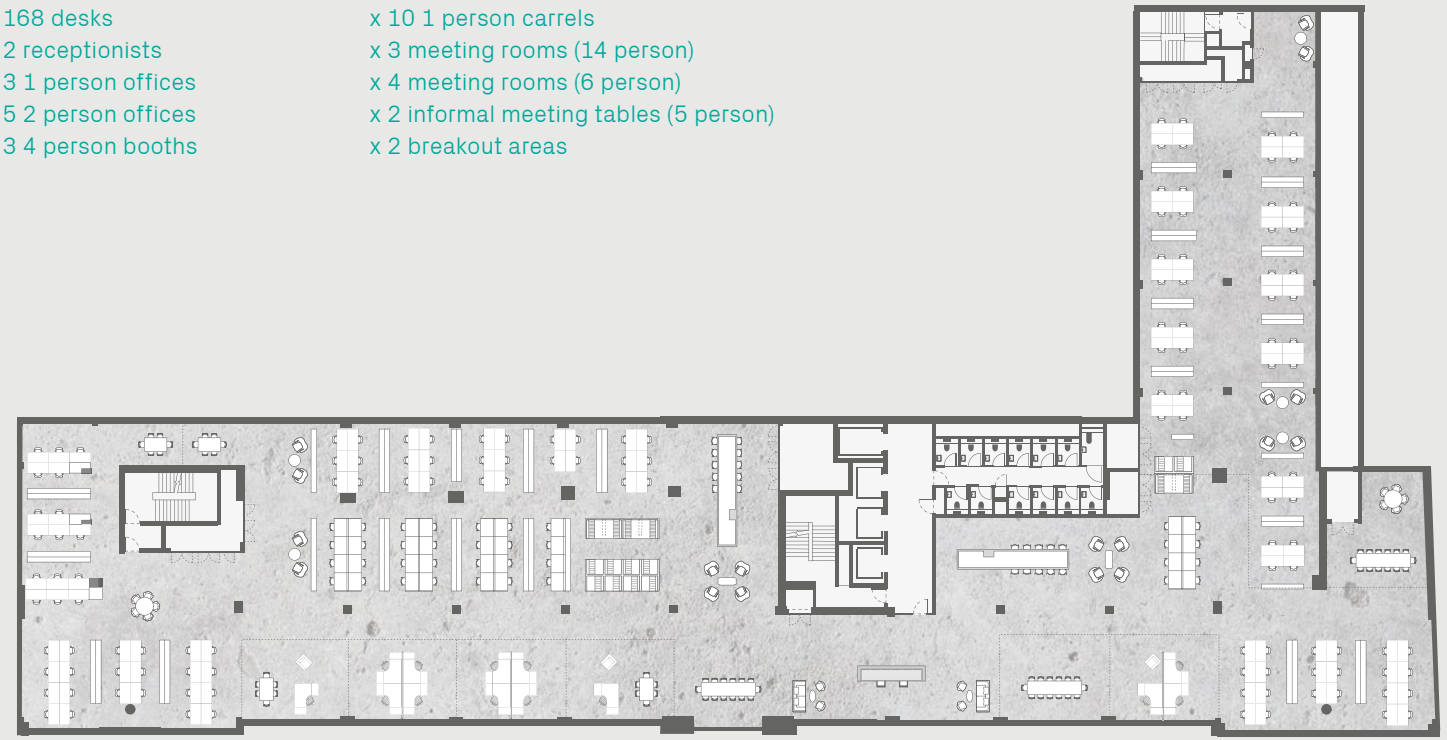
Third Floor

19,558 ft² 1,817 m²

Wellesley Terrace

x 168 desks
x 2 receptionists
x 3 1 person offices
x 5 2 person offices
x 3 4 person booths

x 10 1 person carrels
x 3 meeting rooms (14 person)
x 4 meeting rooms (6 person)
x 2 informal meeting tables (5 person)
x 2 breakout areas



Micawber Street

Shepherdess Walk

Floor plan not to scale, for illustrative purposes only. May be subject to change.

N

General arrangement

Fourth Floor 16,480 ft² 1,531 m²

Floor plan not to scale, for illustrative purposes only. May be subject to change.

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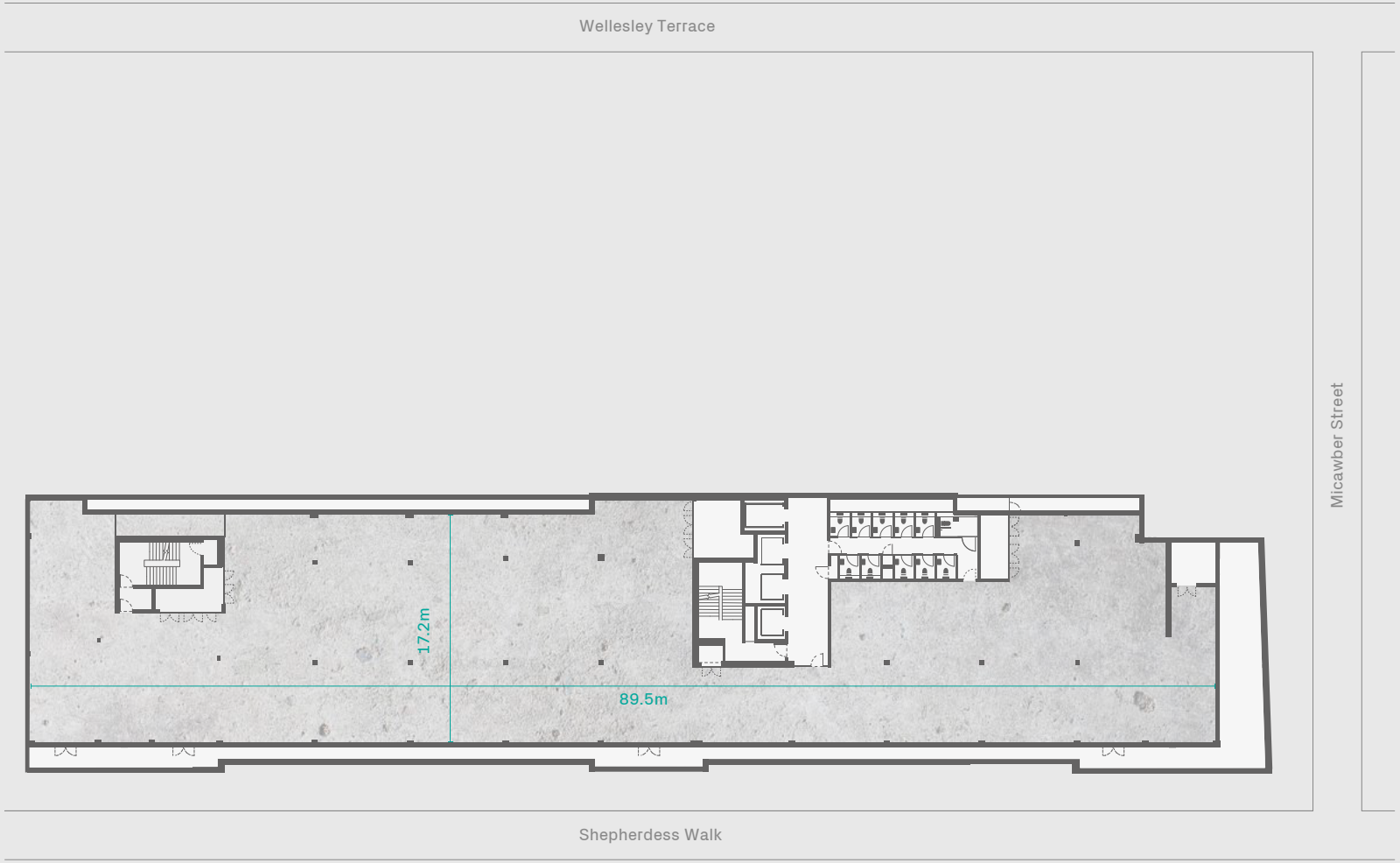


Floor plan not to scale, for illustrative purposes only. May be subject to change.

N

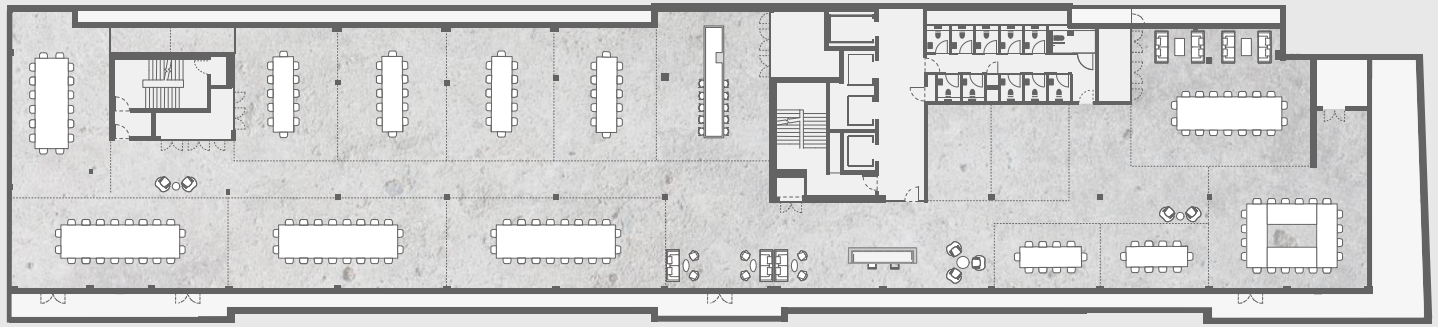
Space Plan

Fifth Floor 13,918 ft² 1,293 m²

Wellesley Terrace

x 4 meeting rooms (20 person)
x 1 meeting rooms (18 person)
x 1 meeting rooms (16 person)

x 4 meeting rooms (12 person)
x 2 meeting rooms (10 person)



Micawber Street

Shepherdess Walk

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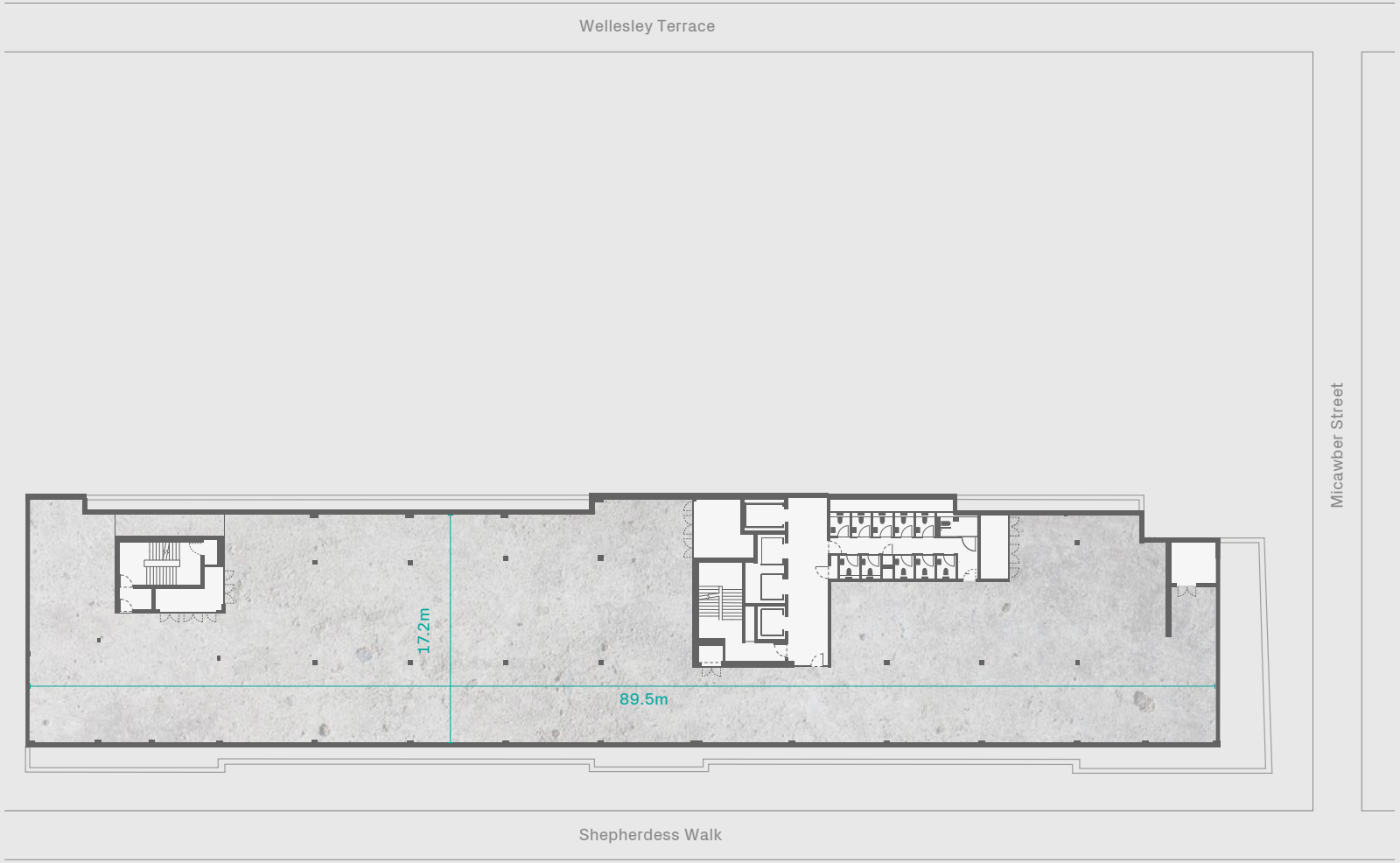

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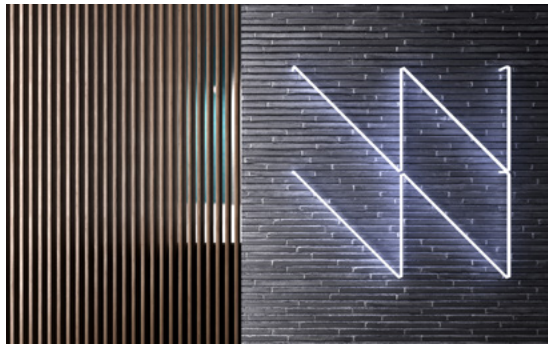

BELOW: BREAKOUT AREA
LEFT: RECEPTION AREA

Throughout the building, high quality, timeless materials have been used in interesting and innovative ways.

CGI's to be used for guidance purposes only. May be subject to change.

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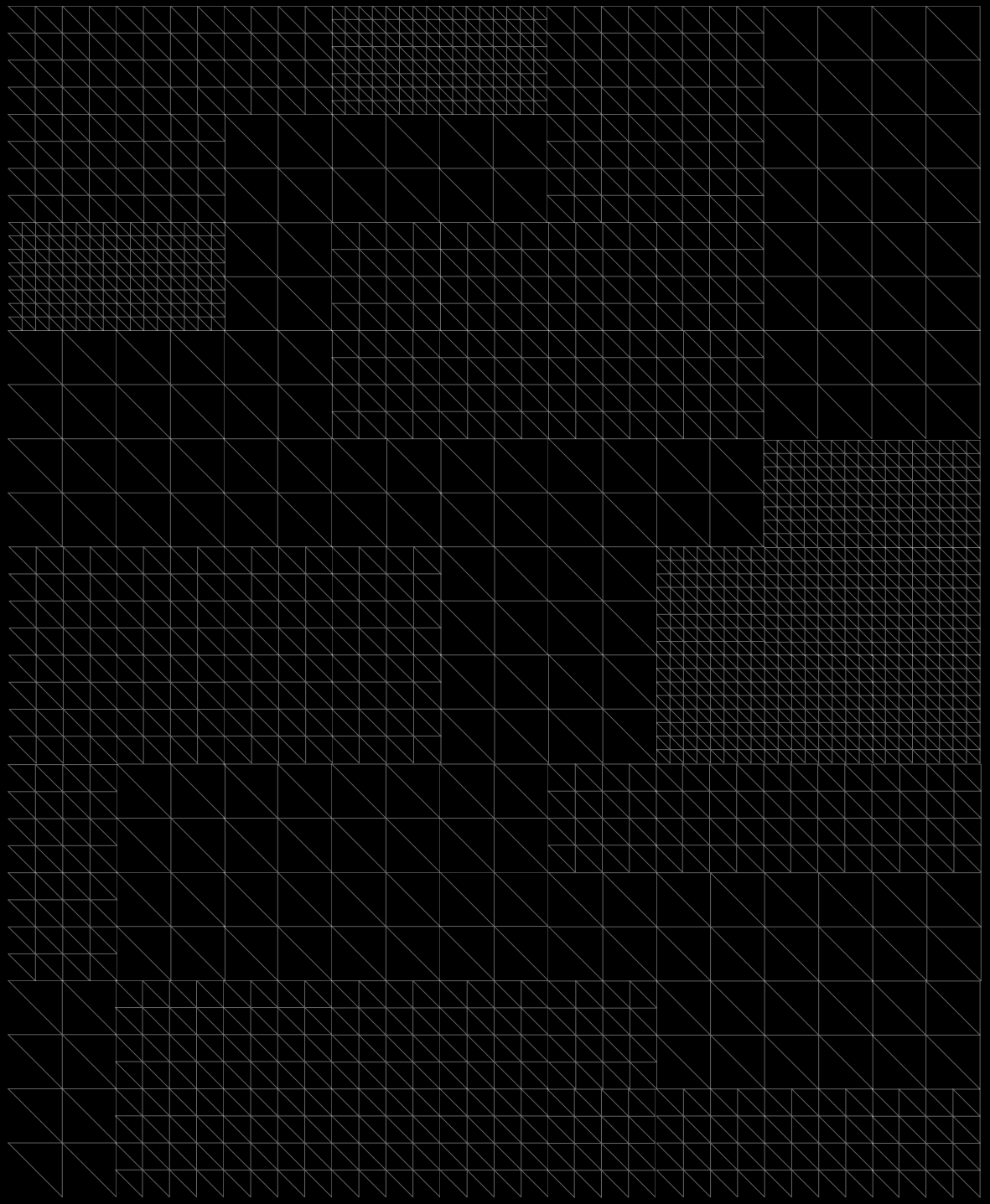
TECHNICAL SPECIFICATION

3



1.0 GENERAL BUILDING DESCRIPTION

1.1 A major refurbishment and extension of the existing 1980s buildings, comprising of 1A (St Matthews) and 1C (St Marks) Shepherdess Walk.

1.2 The existing RC flat slab construction retained up to 5th floor with new steel frame above of 2 storeys. 8 storey rear extension formed in steelwork. The rear wing RC flat slab construction retained to 2nd floor with new 2 storey steel frame above.

1.3 Some new beams are designed to act compositely with the concrete deck by utilizing shear studs, including the new 6th floor and roof levels, and other shallow beams generally. Other beams are designed non-compositely with shelf angles to support the concrete deck.

1.4 Foundations comprise new piles with pile caps, installed adjacent to existing piled foundations of original RC frame being retained.

1.5 New dark high quality roman brickwork to the Shepherdess Walk elevation over ground and first floors. Retained brickwork, painted white, to the second and third floors with new brickwork to fourth floor to match. Zinc rainscreen cladding to the fifth and sixth floor extension. New glazed brickwork to the rear core.

1.6 Retained brickwork painted white to the rear wing, lower ground to 2nd floor slab, with new brickwork painted white to match at second and third floors.

1.7 New aluminium framed factory style windows throughout.

1.8 New main entrance reception with lowered slab providing level access from Shepherdess Walk.

1.9 Central core re-configured to provide 4no. new passenger lifts serving office floors at 1st to 6th floors.

1.10 Cat. A fit-out to office floor-plates at 1st to 6th floors (refer to table 1).

1.11 Exposed RC soffits and columns where structure retained. Intumescently painted exposed steel beams and columns to 5th and 6th floor extension.

1.12 New central ventilation system with fresh air provided by central supply via a raised access floor and extracted to heat recovery plant via risers within the cores.

1.13 New on-floor 2 and 4 pipe fan coil units for comfort cooling and heating. All units located within a central zone above a suspended expanded steel raft. Galvanised oval ductwork projects from the raft to circulate air to the perimeter zones.

1.14 New suspended office lighting controlled by means of a lighting control system.

1.15 Built-up reinforced bitumen membrane warm deck roof coverings to all roofs.

1.16 New accessible terrace to third floor wing with composite timber decking and glazed balustrade.

1.17 Extensive green roof to 4th floor wing and 5th floor set-back with UK native species wildflower blanket.

1.18 1no. Cat. A office over ground and lower-ground floors, accessed direct from Shepherdess walk or via the main reception.

1.19 2no. flexible shell & core units accessed from Shepherdess Walk. A smaller unit at ground floor only and a larger unit over ground and lower-ground floors.

1.20 2no. secure cycle stores at lower-ground floor; with 40 cycle spaces within the core 1 cycle store and 94 cycle spaces within the core 2 cycle store.

1.21 Changing facilities associated with cycle stores; comprising of 6 showers (3m/3f) adjacent to core 1 and 7 showers (3m/3f + 1 accessible) to core 2.

1.22 New hard and soft landscaping to rear courtyard, including feature lighting.

1.23 New bespoke steel entrance gates for vehicular and pedestrian access with automatic opening and access control.

1.24 Building Manager's office behind reception desk with facilities management kitchenette at lower-ground floor.

1.25 Bin store located at lower-ground floor of wing with platform lift providing a route to the pick-up point adjacent to the Wellesley terrace access gates. A second store is located at the base of core 1. 50% of the refuse capacity to be allocated to recycling storage.

2.0 DESIGN CRITERIA

2.1 Occupancy figures

Comfort Cooling and Ventilation:
1 person/8m2 net internal area

Lift provision:
1 person/8m2 net internal area (with 80% utilisation)

WC accommodation:
1 person/8m2 net internal area

Means of escape:
1 person/6m2 net internal area (1 person/7m2 at fourth floor)

2.2 Design life

The design life of the building shall be as BS ISO 15686: Part 1, Table 1, 60 years and with BS 7543 category 2 maintenance level.

- New structure 60 years
- Cladding + Perimeter walls 30 years
- Roofing 30 years
- Internal walls:
- Blockwork 30 years
- Plasterboard 15 years
- Mechanical & Electrical Services (CIBSE Guide App. A4.A1)
- Major plant 20-25 years
- Terminal Units 15 years
- Ceilings, floors, and floor coverings 15 years
- Finishes 15 years
- Lifts 15-20yrs for major components
- Painted steelwork 15 years to first maintenance

2.3 Structural grid

The structural grid is typically 7.2m between columns.

2.4 Slab thickness

The existing reinforced concrete flat slab is approximately 350mm thick. The proposed lightweight concrete slabs on profiled metal decking are 130mm deep overall.

2.5 Floor Loading

Imposed Loading Allowances
- Office areas 3.0 + 1.0kN/m2 partitions
- Common areas 4.0 kN/m2
- General basement plant areas 7.5 KN/m2
- Roof plant areas 7.5 kN/m2
- Roof Access Loads 0.75kk/m2

Super Imposed Dead Loading Allowances
- Office areas 0.85kN/m2 partitions
- Common areas 2.45 kN/m2
- Roof areas 2.1kN.m2

2.6 Floor to Ceiling Heights

The following floor-to-ceiling heights are based on the current co-ordinated preconstruction design. Final heights will be confirmed following structural and mechanical installation on-site but should achieve a minimum of:

Floor	Floor to soffit height (mm)	Floor to underside of metal raft (mm)
Level 06	3,175	2,775
Level 05	3,175	2,775
Level 04	2,965	2,635
Level 03	3,035	2,635
Level 02	3,035	2,635
Level 01	3,035	2,635
Ground	3,035	2,635
Lower Ground	2,975	2,400

3.0 INTERNAL FINISHES

3.1 Cat A. Office Finishes

Location	Finishes
Floor	Raised metal access floor (250mm clear void)
Perimeter walls	Plasterboard lined
Core walls	Solid timber cladding / perforated metal panels at high level (ppc finish)
Windows	Aluminium framed slimline window system with add-on bars and integral spacers within double glazed units (curtain walling to Shepherdess Walk elevation – street level)
Columns	Existing – exposed concrete New steel columns plasterboard lined at LG to 4th floor/ exposed and intumescently painted at 5th and 6th floors
Ceilings/ soffits	Existing – exposed concrete/ new – painted plasterboard soffit Exposed steel downstand beams at 5th and 6th floors Expanded steel suspended ceiling screening soffit mounted FCUs with branched ductwork to perimeter zones
Lighting	Min. 870 mm dia. black circular LED pendant fixed back to linear soffit mounted trunking (max. 60mm x 60mm) with black metal rod continuous linear LED fitting recessed within expanded steel raft

3.2 Entrance Lobby Finishes

Floor	Gallery standard polished concrete floor
Walls	High quality roman brickwork
Reception walls	Solid timber cladding
Lift Lobby walls	Glazed ceramic tiles (65mm x 200mm format)
Entrance surrounds	Aged steel cladding, black lacquered finish metal panels
Ceilings/ soffits	Exposed concrete / painted plasterboard

3.3 Stair Finishes

Floors (landings)	Gallery standard polished concrete floor
Existing stair	Existing concrete finish – repaired and made good as required
New feature stair	Precast concrete stair – fair faced visual concrete
Concrete stair nosings	Black steel discs and strips cut / cast into feature concrete
Walls (feature stair)	Turquoise – cracked glaze ceramic tiles
New secondary stairs	Steel - black metal chequer plate with contrasting nosings
Walls (secondary Stairs)	Painted plasterboard
Handrails & balusters	Black metal tubular handrail & flat bar baluster with stainless steel fixings
Ceilings/ Soffits	Exposed concrete/ painted plasterboard
Feature signage	Bespoke back-lit signage

3.4 Lift Lobby Finishes

Floors	Gallery standard polished concrete floor
Lift lobby walls	Glazed ceramic tiles (65mm x 200mm format) / solid timber cladding with perforated metal panels at high level (ppc finish)
Lift reveals	Full depth metal reveals – brushed stainless steel finish
Lift call buttons	Brushed s/s finish recessed into cutouts in surround metal panels

Ceilings/ soffits	Suspended plasterboard ceiling with recessed LED linear lighting
Glazed Screen	Factory style to match window system with recessed fire curtain behind

3.5 Lift Finishes

Floors	Gallery standard polished concrete micro-screed to match lobby floors
Walls	Bespoke solid timber cladding panels + white metal ppc surrounds to feature mirror
Lift call buttons	Brushed s/s finish recessed into cutouts in full height surround s/s panel
Feature mirror	Full height mirror with black metal frame
Ceilings/Soffits	Black ppc ceiling panel with concealed lighting
Handrail	Bespoke brushed s/s handrail
Lift doors	Brushed s/s finish
Feature light	Caged wall sconce – nickel finish

3.6 Finishes to WCs, changing rooms & showers

Floors	Porcelain concrete effect floor tiles (600 x 1200mm format)
Doors	Full height solid core doors with black timber veneer finish
Walls (tiling)	White ceramic tiling (150 x 150mm x 6mm format) – fully vitrified – high quality glazed gloss finish.
Wall trims	Black recessed dry lining trims (60mm x 12mm recess)
Feature mirrors (superloos)	Half-height mirror to rear wall / black framed circular mirrors above basins
Basin	Bespoke concrete basins
Fittings	Matt black finish to taps/ waste/ traps/ loo roll holder/ toilet brush holder/ bins/ shower fittings etc.
WC	Wall mounted white ceramic wc
Ceilings/ Soffits	Painted plasterboard soffit with flush white metal access panels and recessed LED downlights.
Feature lights	Caged wall sconce – nickel finish
Changing room furniture	Bespoke timber furniture – black timber veneer finish to match doors
Changing room mirrors	Bespoke black metal framed full height mirror with frame extending to form legs
Lockers	2 tier white metal locker system

4.0 BUILDING SERVICES DESIGN CRITERIA

4.1 Electrical Services

4.1.1 Power Supplies

The building maximum demand has been based on the following allowances: Lighting - 10W/ m2 (including task lighting and Cat. B allowance)
Small Power - 25W/ m2
Mechanical Services 60W/m2
Lifts – 10W/m2
Additional capacity will be provided for the life safety systems by a 150kVA generator.

4.1.2 Lighting Installation

The lighting to the office and general areas shall be designed in line with CIBSE recommendations as follows:
General Office - 300-500 lux
Staircases - 150 lux
Entrance/Reception - 200 lux generally, 300 lux over the desk
Circulation - 100 lux
Toilets - 150 lux
Plantrooms - 150 – 200 lux
Car Park - 75 lux
The lighting will be controlled by means of a DALI lighting control system in order to comply with the requirements of Approved Document L2 of the Building Regulations.

Emergency lighting will comply with BS 5266.

4.1.3 Life Safety Standby Generation

Standby generation to support life safety systems shall be provided. Due to the low volumes of fuel required by a generator serving life-safety systems only, there is no bulk fuel tank at or fuel line to the roof meaning manual fuel vessels will need to be carried to the roof in the goods lift in order to refuel the generator.

It is not proposed to include standby power supplies for tenant use.

4.2 Mechanical Services

4.2.1 External Design Criteria

Winter	-4°C dry bulb	-4°C wet bulb
Summer	30°C dry bulb	21°C wet bulb
Heat Rejection Plant Selection	35°C dry bulb	22°C wet bulb

4.2.2 Internal Design Criteria

Office Areas	22 °C maximum ±2°C (Summer) 20 °C minimum ±2°C (Winter) Note that these figures exclude a 2 degree control band.

Cooling and Heating to the office floor plates shall be provided by ceiling/soffit mounted fan coil units (FCU's). The fan coil units will utilise the buildings chilled and LTHW water generation plants to provide either cooling or heating as required. The FCU's shall be arranged to fit within the architectural mesh raft located down the central spine of the building and shall be coordinated with the additional services, structural components and mesh removal strategy for access. The fan coil units will consist of a run flat pumped condensate system back to a tundish located in each core, this is due to the spatial constraints of the raft and large spans of the building.

Toilets	18 °C minimum

The central WC 'block' located in core 2 will be served by a roof mounted supply and extract AHU with plate heat exchanger heat recovery located on the roof. Supply and extract from WC's will be via shadow gaps with plenums and separation of ceiling voids to avoid short circuiting of air flows. Supply air will enter the toilet

'lobby' via a supply air plenum at ceiling level and be drawn into the cubicles via undercut doors.

Reception 18-24°C*

*The temperature in the reception will be subject to the frequency of the use of the entrance doors. Local heating will be provided to the reception desk in order to maintain a minimum of 18°C during periods when the doors are not in frequent use.

The reception space will be heated and cooled using VRF fan coil units located in the plant room below. Conditioned air will be supplied at high level via shadow gaps. Vitiated air will be returned to the fan coil units via a similar shadow gap at low level. Supplementary heating via LTHW trench heaters fed from the plant room below will be installed to the front of the reception area to mitigate heat losses through infiltration and transmission through glazing.

Entrance Area 18 °C average

The area is provided with heating but will not achieve design temperatures in periods when doors are in frequent use.

Circulation areas 18°C minimum

Plant rooms 5°C minimum (frost protection only)

4.2.3 Internal Load Assumption (office areas)

Occupancy
80W (sensible) 60W (latent) per person

Equipment
5W/m2 to office areas. 15W/m2 included in the base build air conditioning system plus a future tenant (Cat. B allowance) of 10W/m2 at the chilled water risers.

Lighting
15W/m2 (including task lighting and Cat. B allowance)

4.2.4 Ventilation

Office Areas
12 litres per second per person minimum outside air rate plus an additional 10% for future meeting rooms.

Toilets/Locker Rooms
10 air changes per hour extract

Plantrooms
To suit plant requirements

4.3 Public Health Services

Above ground sanitation
BS EN 12056 Part 2 discharge unit method based on a frequency factor of 0.5 for offices and 0.7 for retail / restaurant units.

Rainwater Systems
BS EN 12056 Part 3 – Category 2 level of protection to building. Storm return period 1.5 x life span of building. Rainfall intensities of 200mm per hour are generally applicable.

Below ground rainwater
Attenuation tanks designed to reduce peak flow rates to 50% of the pre-refurbishment situation.

Attenuation Incoming cold water mains
Sized to replenish volume of cold water storage tanks within a 2 hour period with maximum velocity of flow of 1.5m/sec. Peak flow rates to include point demand attributable areas Served directly from incoming mains.

Portable Water Storage
Based on half a days Storage. 20 litres/ person based on 1 person per $10m^2$

Non Portable Water Storage
Small volume for wash down and ancillary items.

Hot and cold water pipework distribution
BS EN 806 and IOP loading units method
Maximum velocity of flow restricted to 1.5m/sec within plant rooms and risers, 1.0m/s within ceiling voids.

Minimum Pressure of Water Services
2.0 Bar to draw off point.

Hot Water Generation
Centralised Plate heat exchangers and buffer vessels. Size based on peak hourly demand of the number of fittings and usage.
Hot water generation stored at 60°C, hot water service flow 55°C incorporating a secondary return.

Natural Gas Systems
Approximate gas pressure available at meter is 21mbar. Maximum pressure loss through system between meter and point of use 1mbar.

4.4 Noise Criteria (Building Services Installation)

Office Areas NR 38

Toilets NR 45

External Plant and equipment will be selected such that the background noise level meets the planning conditions.

4.5 Vertical Transportation

Passenger lifts will be provided to meet the BCO recommendations in terms of people moved within a 5 minute period and the occupant waiting time as follows:

- Less than 25 seconds 'up peak' average waiting time. Note that this approximately equates to a departure interval of less than 30 seconds.
- Less than 90 seconds 'up peak' average time to destination for all floors served.
- Handing capacity of greater than 12% of design population in a 5 minute period.
- Based on an occupancy of on 1:10m2 NIA which reflects a workplace density of 1:8m2 with 80% utilisation.
- Lift speed 2.0m/s
- Disabled Platform Lifts: Car size = 900 mm wide x 1250 mm deep Internal shaft size = 1100 mm wide x 1400 mm deep (Note that these may change according to different vendors) Pit depth = 60mm (subject to chosen vendor) Speed = 0.15 m/s
- Refuse Lift: Car size = 1800 mm wide x 2700 mm deep Internal shaft size = 2400 mm wide x 3200 mm deep (Note that these may change according to different vendors) Pit depth = between 70 and 130 mm (subject to chosen vendor) Speed = 0.2 m/s
- 2-way intercom will be provided to each car via permanent telephone communications system

4.6 Fire Protection Services

4.6.1 Automatic Fire Detection and Alarm

Automatic fire detection and alarm systems including high level smoke and heat detection plus in void aspiration systems will be provided in accordance with BS 5839 Part 1 to a category as defined by the Fire Strategy for the development (to be advised).

4.6.2 Fire Fighting Mains

A dry rising fire main is located off the fire fighting stair to core2; in accordance with BS 9990 and in compliance with the agreed Fire Strategy for the development. The Inlet breeching is located within the central ramp adjacent to the main entrance reception at the base of core 2. Landing valves will be provided within fire fighting lobbies at all floors served by the fire fighting shafts except ground.

4.6.3 Disabled Refuge Emergency Voice Communication and Fireman's Telephone System

A disabled intercom / fireman's telephone system shall provide:

- Two-way intercommunication between the panel and each intercom
- Communication between the panel and all intercoms individually or simultaneously
- Discretionary acceptance of calls from intercoms by the panel operator
- Audible call signals at each intercom and audible and visible call signals at the panel
- Class A outstations to be provided to Core 2 (Fire Fighting Shaft) with Class B outstations in all other refuges.

4.7 Sustainability / Energy Benchmarking

- The building shall achieve a BREEAM rating of 'Excellent' under the 2014 Refurbishment and Fit-out Scheme.
- The building has been modelled against Building Regulations Part L2A 2010 for planning purposes.
- The Building has an EPC 'B' Rating
- Recycling facilities: two refuse stores have been provided totalling 750 sqft. 30,970 litres of storage capacity are required of which 50% should be for recycling.

4.8 Building Management and Controls

The building will have a fully automated, open protocol, BMS system including energy metering of all landlord and tenant services.

4.9 Building Security

The building will have a new electronic access control and security management system including door intercoms, closed circuit television (CCTV) and intruder alarm.

4.10 Utilities

Electrical: New 800A service to the new tenant's office switchboard and new 1600A service to the new landlord switchboard from the existing UKPN room (previously completed under separate contract) to the LV switch room at lower ground level.

Gas: A new utility gas supply to serve the boilers and CHP unit will be run from Wellesley Terrace within a trench to enter the plant area on the south facade of the St Marks wing, terminating at a new U160 gas meter.

Telecommunications: Provision for resilient supplies is included. These supplies shall be routed from Shepherdess Walk at the southern end of the site and from Wellesley Terrace on the North West of the site

Water Services: A new 54mm incoming cold water main/s will be provided from the Statutory Authority water infrastructure on Shepherdess Walk.

Drainage and Plumbing: The building waste water and drainage installation is divided into two systems; foul and surface water. Discharge will be via existing utility connections.

4.11 Future Kitchen Extract

Space provision for a kitchen extract duct of approximately 500mm x 600mm has been included in core 1.

4.12 Future Kitchen Extract

Two areas of 24 and 12m2 have been allocated within the roof level plant enclosure. Detailed plans available on request

4.13 Tenant Riser Provision

Riser allocation has been made for tenant pipework between occupied areas and allocated plant space (see overleaf for locations and areas). Detailed plans available on request

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QS: Gleeds

Development Manager: Stanhope
Contractor: McAlpine
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