ONE LIME ST.

THE CITY'S NUMBER ONE

CONTENTS

SUMMARY

Exposed concrete ceiling system
LED integrated lighting
3m floor to ceiling height
Underfloor vav air conditioning
Newly installed ionisation system
Raised floors 350mm (overall)
12 x 20 person glazed exterior lifts (multiple lift bank locations)
3 x vip (firefighting) lifts
1 x goods lift (7,000kg)
Dual power feeds
2 x 1850kva standby generators
EPC rating is being re-assessed

STRUCTURAL

1

SUB STRUCTURE

The general basement construction consists of 350mm deep slabs spanning onto reinforced concrete primary beams which run East to West across the building. The beams are supported on the main building columns which reduce the spans and keep the floor depth to a minimum.

Floor loadings

Lower Basement	10 kN/m2
Upper Basement	7 kN/m2 including an allowance for partitions of 2 kN/m2
Lower Ground	7 kN/m2 including an allowance for partitions of 2 kN/m2

SUPERSTRUCTURE

The floor structure consists of a 1.8m grid of 550mm x 300mm beams. Precast concrete stub columns support a 100mm reinforced concrete slab. Acoustic absorber panels are fixed underneath. The zone between the beam grid and the reinforced slab is used for the distribution of services.

Floor loadings
Floors have been designed for the following imposed loads:

Room/Gallery Levels	4 kN/m2 including an allowance for partitions of 1 kN/m2
Main Roofs	4 kN/m2
Satellite Roofs	0.75 kN/m2
Toilets	2 kN/m2
Lobbies	4 kN/m2
Stairs	3 kN/m2
Plantrooms	7.5 kN/m2

MECHANICAL

9

AIR CONDITIONING

The building has three chillers which provide the required duty of chilled water. The units are located at Lower Basement level.

The air conditioning system to the office floors (Galleries 6-10) utilise an under-floor supply principle with extract or return air removed at ceiling level. This displacement air distribution system provides that the heat and space pollutants are removed from the occupied zone as the air travels from low to high level within the office spaces. The air supplied at low level is of constant temperature and air flow is introduced into the space via swirl air diffusers integrated into the raised access floor system.

This air is then drawn into the fan assisted terminals (FATs) located within the raised floor void, which in turn distribute the air into the space. These boxes perform a mixing function and induce a portion of room air back into the floor void (via unducted floor grilles) to ensure that the supply air temperature is suitably elevated. The supply air temperature from the air handling units is scheduled against ambient and therefore varies over the year to suit seasonal conditions.

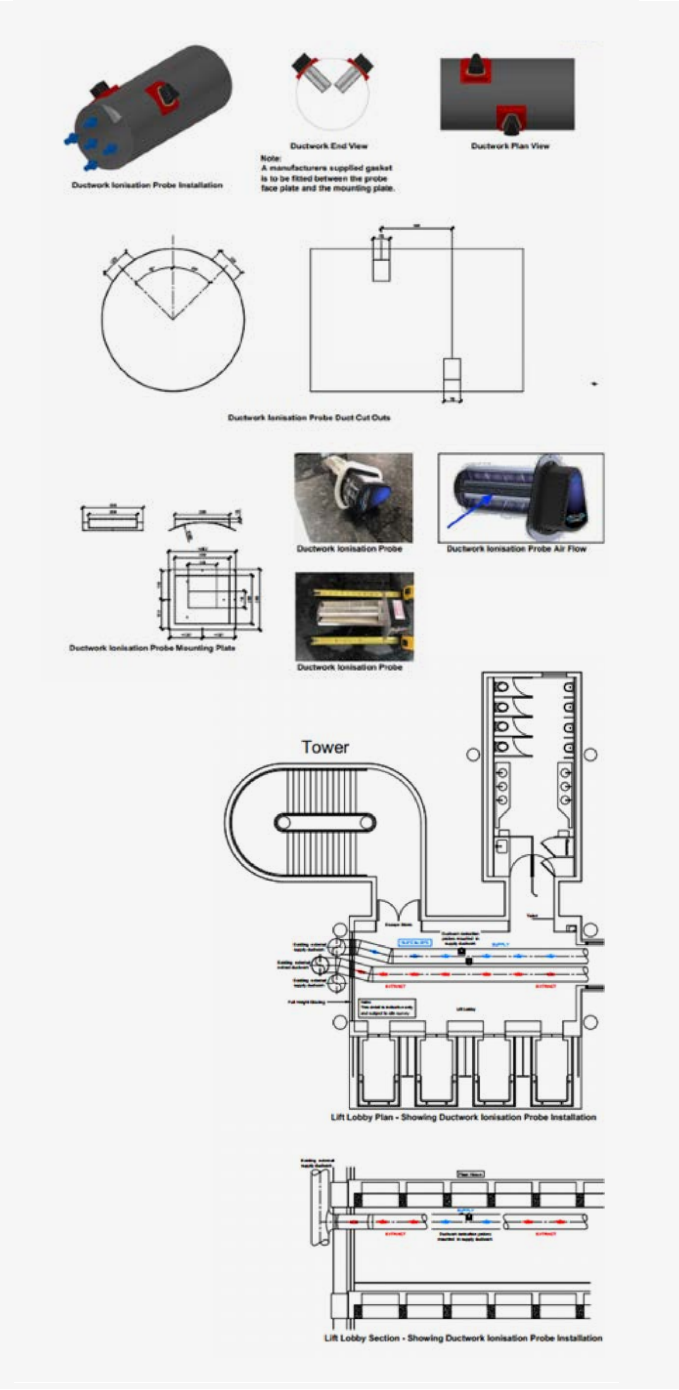
The return air from the floors is removed via ducted extract from circulator attenuated inlet inserts located within the large light fittings within the 1.8m x 1.8m planning/building structural module. This is then ducted back to the façade where this air is passed between a glazing void (triple glazed) to absorb solar gain/offset heat loss, and from there back to the air handling units in each Tower plantroom (via large external ductwork) where it is either partially recirculated and or exhausted to atmosphere.

Reverse cycle heat pumps located around the perimeter of each Gallery level provide heating and cooling to the space, to offset heat loss in winter and solar heat gains in summer months. Heat pump hydraulic water circuit mild steel pipework to which each heat pump is connected. Each heat pump has a valve arrangement for isolation, regulation and draining with flexible connections which allow installation tolerances, vibration isolation and thermal expansion.

The underfloor fresh air supply is distributed into the space via fan air terminals which draw air from the floor void and distribute this into the space via ducted floor swirl air grilles.

The quantity of air circulated by the fan air terminals exceeds that of the conditioned fresh air supply and open return air grilles are provided in the raised floor which enables the elevation of the conditioned air temperature to afford comfort air delivery levels into the occupied space.

Extract / return air ductwork. From Gallery Levels 5 to 11, the air is removed from above the lighting coffers via circular ductwork runs, linking with the perimeter in each 1.8m bay. This then connects to the top of each window module where the air is distributed between the glazing to assist with reducing heat loss and heat gains throughout the seasons. The air then passes from the glazing module in to insulated ductwork within the raised floor void before connecting to the external ductwork transferring the exhaust air back to the main plants.



MECHANICAL

REME HALO PURIFIER

One Lime Street have installed the REME Halo Purifier across all floors. The system is installed in the ventilation ductwork and uses LED light to ionise the air, removing bacteria to kill viruses. The system also provides other health benefits by 'cleaning' the air we breathe.

REME utilises a high intensity UV light targeted on a hydrated quad-metallic catalyst surface, combined with bi-polar ionisation. This target surface is covered with a proprietary quad-metallic and hydrophilic coating.

The UV light from the cell inside the unit reacts with the catalyst and moisture to produce an advanced oxidation plasma consisting of hydro-peroxides, super oxide ions and hydroxide ions that is distributed onto the passing airstream and into the indoor space, ultimately reaching into every cubic cm of the entire indoor space, breaking down and destroying organic pollutants in the air and on surfaces immediately on contact as it goes.

A natural cleaning agent, these oxidizers will revert back to oxygen and hydrogen once they've come in contact with and eliminated the microbial/virus/pollutant.

The concentrations of hydrogen peroxides produced by the units are at safe levels. The levels are between 0.02 and 0.04ppm. Natural outdoor levels are between 0.01 and 0.03ppm and these levels drop very quickly to zero when outdoor air ingresses into untreated indoor environments due to typical organic loading that causes them to break down.

The current EH40/2005 UK Workplace Exposure Limits are LTEL (long term exposure limit) (8 hr TWA — time weighted average) 1 ppm / 1.4 mg/m3 — STEL (short term exposure limit) (15 min) 2ppm / 2.8 mg/m3.

The following quote is taken from an independent laboratory evaluation report which was performed in a confined test cubicle and which states:

"Hydrogen peroxide levels ranged from 0.02 - 0.5ppm. These levels pose no risks to consumers and are well below OSHA standards."

FRESH AIR PROVISION

This schedule shows the occupancy limitations on a zone by zone basis, per gallery based upon the design assumption of 1 person per 10m/2.

	Area m2	Plant Volume m2/s	Fresh Air l/s/m2	Area m2	Fresh Air l/s	Fresh Air l/s/m2	Occupancy @10 l/s/person	Area m2	Fresh Air l/s	Fresh Air l/s/m2	Occupancy @10 l/s/person	Area m2	Fresh Air l/s	Fresh Air l/s/m2	Occupancy @10 l/s/person	Area m2	Fresh Air l/s/m2	Fresh Air l/s/m2	Occupancy @10 l/s/person
Office Floors																			
Gallery 10	1412	2.76	1.407	555	778	1.401	77.8	518	734	1.418	51.8	N/A	N/A	N/A	N/A	339	475	1.402	47.5
Gallery 9	2009	3.96	1.419	555	778	1.401	77.8	761	1080	1.419	76.1	175	259	1.481	25.9	518	734	1.418	73.4
Gallery 8	2009	3.96	1.419	555	778	1.401	77.8	761	1080	1.419	76.1	175	259	1.481	25.9	518	734	1.418	73.4
Gallery 7	2009	3.96	1.419	555	778	1.401	77.8	761	1080	1.419	76.1	175	259	1.481	25.9	518	734	1.418	73.4
Gallery 6	2632	5.16	1.412	555	778	1.401	77.8	761	1080	1.419	76.1	555	778	1.401	77.8	761	1080	1.419	108.0

ELECTRICAL

Power to the building is supplied by two 11KV UKPN incoming service supplies located in the lower basement UKPN substation. These incoming feeds supply the main HV switchboard via independent main incomer vacuum circuit breakers. The switchboard is configured with 5 outgoing transformer feeder vacuum circuit breakers. Transformers T1/A1, T1/A2 & T1B served via Service supply 1 and T2 & T3 served via Service supply 2. The HV switchboard has the facility to bus couple to feed all outgoing transformer supplies via a single UKPN service. There is a resilient control system to monitor all HV and LV switch boards and automatically reconfigure the LV switchboards to standby generator supply in the event of a mains failure scenario. In addition, two 1850KVA standby diesel generators are provided for both life safety and tenant business continuity. The generators are sized to support the full building load and with fuel storage enough to enable the generators to operate for 48 hours prior to refuelling requirements.

Lighting on the galleries is provided by high level LED DALI controlled fittings integrated to the in-house BMS system. The system is fully adaptable to match any floor plate configuration.

HIGH LEVEL LOAD ASSESSMENT

The lighting load provision per floor is as follows:

Level	Area (m2)	W/m2	Load	Diversified load
Room	2587	15	38.8	100%
Gallery 10	2009	15	21.2	100%
Gallery 9	2009	15	30.1	100%
Gallery 8	2009	15	30.1	100%
Gallery 7	2009	15	30.1	100%
Gallery 6	2632	15	39.5	100%

Total NIA lighting (Room to Gallery 12)	421.1
Approx load per 1/3 building (L1/L2/L3 substations)	140.6

ELECTRICAL

This chart demonstrates a high-level theoretical review of the capabilities available through the essential rising busbar and on floor distribution providing a W/m2 value.

Level	Tower 1 MCCB	Tower 3 MCCB	Tower 5 MCCB	Total capacity	Minus lighting load	W/m2
Room	125kW/200A TP&N	125kW/200A TP&N	125kW/200A TP&N	375kW/600A	(-38.8) 336kW/538A	135W/m2
Gallery 10	125kW/200A TP&N	N/A	125kW/200A TP&N	250kW/400A	(-21.2) 229kW/367A	162W/m2
Gallery 9	125kW/200A TP&N	140kW/225A TP&N	125kW/200A TP&N	375kW/600A	(-30) 345kW/553A	171W/m2
Gallery 8	125kW/200A TP&N	125kW/200A TP&N	125kW/200A TP&N	375kW/600A	(-30) 345kW/553A	171W/m2
Gallery 7	125kW/200A TP&N	125kW/200A TP&N	125kW/200A TP&N	375kW/600A	(-30) 345kW/553A	171W/m2
Gallery 6	125kW/200A TP&N	125kW/200A TP&N	125kW/200A TP&N	375kW/600A	(-39.5) 335kW/537A	127W/m2

VERTICAL TRANSPORT

PASSENGER LIFTS

Three groups of 20-person lifts located in satellite towers 1, 3 & 5 provide vertical transportation for occupants in the building. Each group comprises 4 external glass wall climber lift cars. Each lift car is equipped with temperature control air conditioning to combat the extremes of the external temperatures.

Tower 1*	Ground Floor – Gallery 12
Tower 3*	Upper Basement – Gallery 9
Tower 5	Upper Basement – Gallery 12

*Tower 1 and 3 have accessibility access at Lower Ground level

FIREMAN LIFTS

Three 8-person passenger lifts located in satellite towers 2, 4 & 6 are designated as fireman lifts.

Tower 2	Lower Basement – Gallery 12
Tower 4	Upper Basement – Gallery 6

GOODS LIFT

A 7 tonne (7,000kg) goods lift is located in satellite tower 2 and serves all levels including street level where there is a designated set down area for goods. The doors are power operated with a clear width of 1800 mm and height of 2060mm.

VEHICLE LIFTS

The main service entry into the building is via Leadenhall Place by means of vehicular lifts into a lower basement service/loading bay. Two lifts are available, one with a maximum capacity of 24 tonnes with a platform size of 6000mm x 9500mm the other of 10 tonnes capacity with a platform size of 3500mm x 6500.

CATEGORY A SPECIFICATION

FLOORS

Galleries level 6-10 have raised floors installed with integrated Flakt Group LECU grilles.

Floors are fully carpeted.

Blinds already installed throughout.

PUBLIC HEALTH

The mix of sanitary accommodation varies for each level as seen below, a typical toilet capsule contains:

MALE

4 WC's
5 Urinals
6 Hand Wash Basins

FEMALE

4 WC's
1 Gender Neutral WC
6 Hand Wash Basins

Floor	Tower 1	Tower 3	Tower 5
12	1		1
11	2		1
10	1		2
9	1	1	2
8	2	1	1
7	1	2	1
6	1	1	2
5	2	1	1
4	1	2	1
3	1	1	1
2	1	1	1
1	2	1	1
LG		1	
UB		3	

FIRE SAFETY + PROTECTION

FIRE ALARM

A category L3 fire alarm system is installed to provide smoke detection coverage to all levels. The fire strategy adopts a single evac principle in the event of an activation.

MEANS OF ESCAPE

There are 6 protected means of escape staircases 1.8 m wide within the six satellite towers, serving all levels of the building. Basement levels are served by five escape stairs rising to street level.

All protected fire escape stairs are located on the outside of the building, discharge at pavement level and are so positioned to enable occupants at any level a duplicate means of escape.

AUTOMATIC SPRINKLER SYSTEM

The building is fully protected by an automatic sprinkler system.

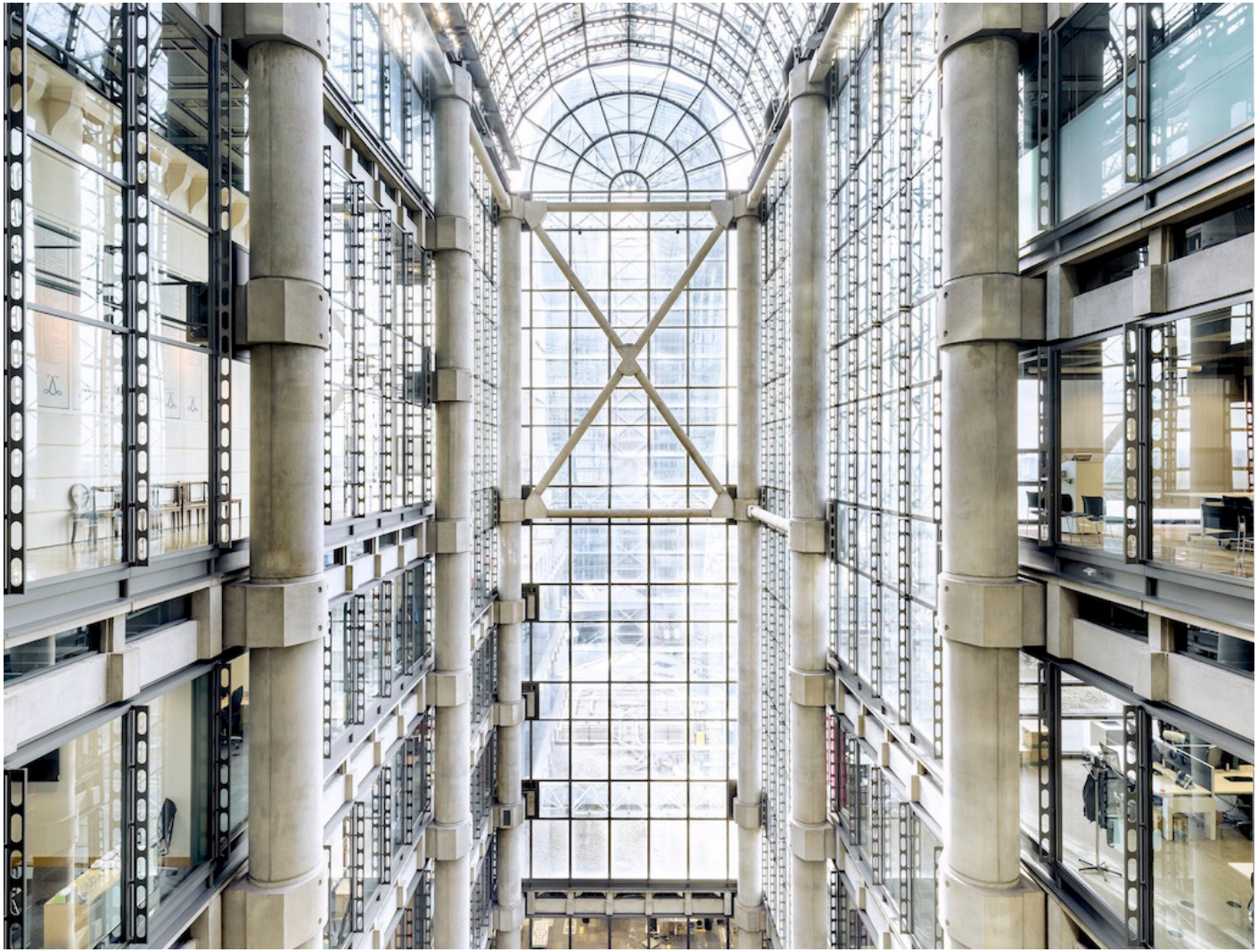
WET RISER SYSTEM

The building is installed with a wet riser system with landing valves on all levels.

PUBLIC ADDRESS SYSTEM

The building is installed with a PA system for the distribution of security announcements throughout the demise.

IT INFRASTRUCTURE



We provide a guest WI-FI service within the One Lime Street building, but this should not be relied upon as the primary means of internet access for a business. Potential tenants can provide their own provisions for network connectivity using the internal cabling structure that the One Lime Street IT team will provide access to.

www.onelimestreet.london

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