



# WAUGH THISTLETON ARCHITECTS

## BLACK AND WHITE

### 21ST CENTURY TIMBER

**LOCATION:** 74 Rivington Street,  
London,  
EC2A 3AY

**SIZE:** 4,480 sqm  
commercial

**CLIENT:** The Office Group

**COST:** £17 million

**STATUS:** On site,  
completion 2022

**APPOINTMENT:** RIBA 2-6

**CONTRACT:** D&B contract  
with PCSA

**CONTRACTOR:** Mid Group

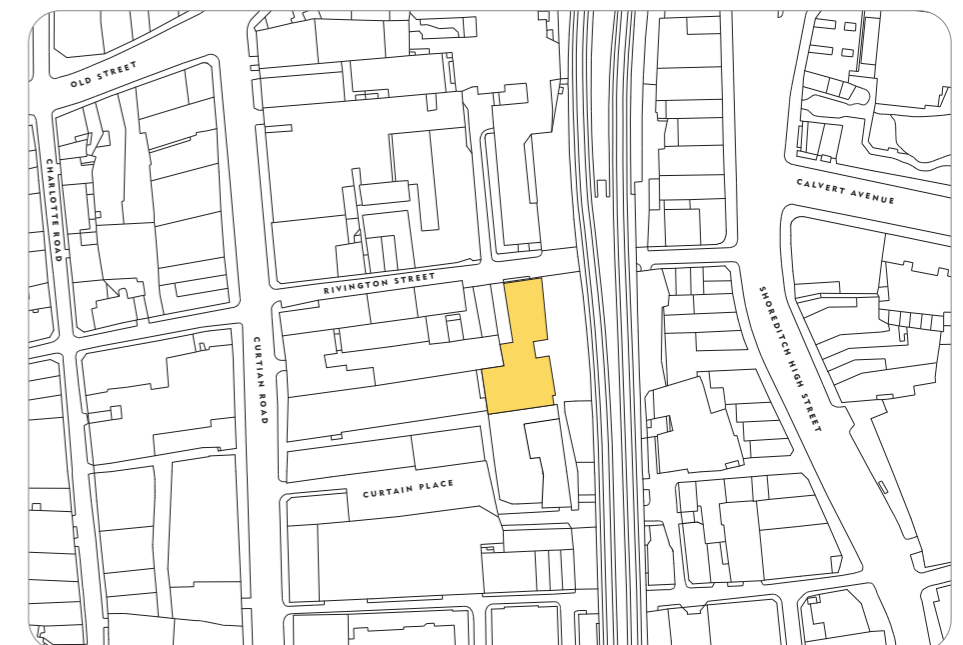
**TEAM:** Eckersley  
O'Callaghan  
(structural and  
façade engineer);  
EEP (services  
engineer);  
Gardiner & Theobald  
(cost consultant)

The simplicity of this fully engineered timber office building belies its groundbreaking innovation. Setting a powerful sustainable agenda with only 410 kgCO<sub>2e</sub>/m<sup>2</sup> embodied carbon, material use has been optimised. Each component is designed to be as efficient as possible, resulting in an honest design without excess.

Designed to offer flexible, shared workspace to companies this modest yet significant building with a powerful sustainable agenda will be the tallest engineered timber office building in London when it is completed in summer 2022.

A hybrid structure comprising a beech LVL frame with CLT slabs and core has been designed to create vast open workspaces. With no structural internal partition walls and the MEP carefully co-ordinated to minimise visual intrusion, the layout can be easily adapted as future demands change.

The state of the art timber structure is framed by the glazed curtain wall, with solar shading provided by a second skin of vertical timber louvres. A parametric model simulating the movement and impact of sun against the façade determines the layout and form of the louvres, demonstrating how timber, combined with cutting edge digital analysis of environmental performance, can result in a truly 21st century building.





**THE DESIGN**



**BIO-BASED MATERIALS**

The cross laminated timber (CLT) and laminated veneer lumber (LVL) superstructure sequesters 227 kg of CO<sub>2</sub> equivalent per m<sup>2</sup>



**WELLBEING**

Courtyards and terraces offer a connection to nature and provide space for informal working, relaxation, and socialisation



**CLIMATIC APPROACH**

A parametrically designed timber curtain wall reduces solar gain, maximises internal light levels, and enhances natural ventilation



**BIOPHILIA**

The timber structure is exposed bringing the natural world into the workspaces, increasing productivity, and positively impacting on well-being



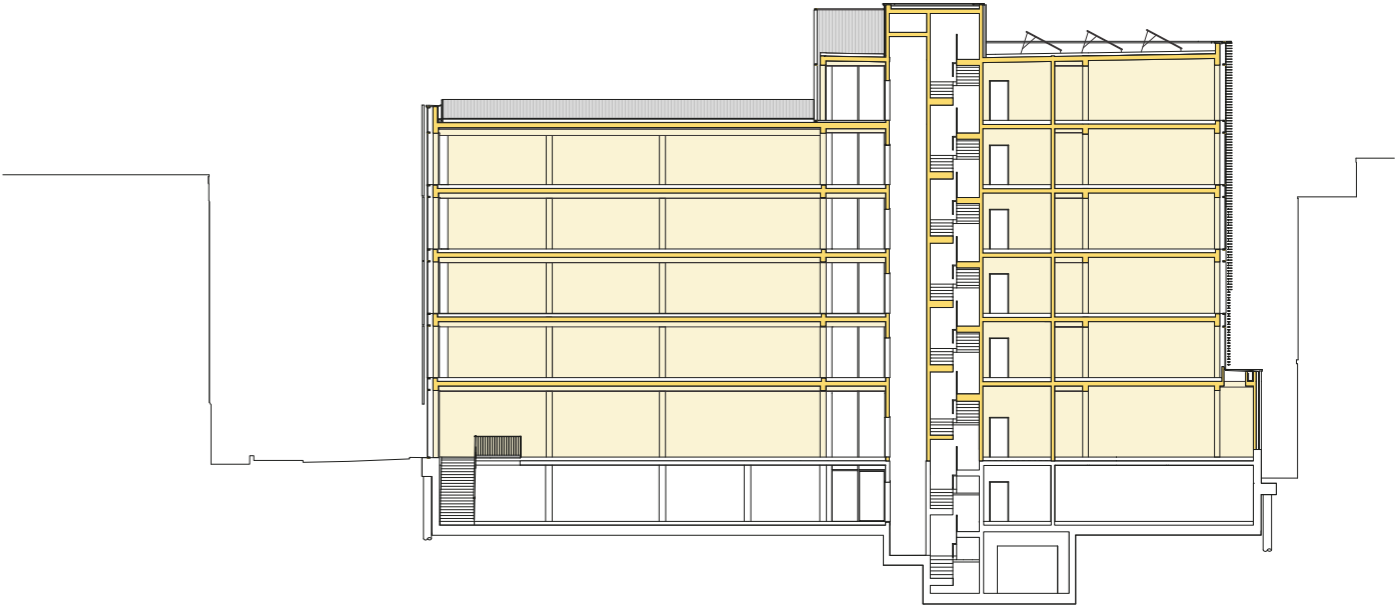
**SUSTAINABILITY**

Using engineered timber rather than concrete reduced the embodied carbon by 37%


















**MMC**

Off-site prefabrication reduces build programme, construction noise, and provides more accurate tolerances





**THE BUILDING IN FIGURES**

 <p><b>NO. STOREYS</b> 5 storeys + basement to north 6 storeys + basement to south</p>	 <p><b>FLOOR TO FLOOR</b> 3.4 m typical 4.2 m ground floor</p>	 <p><b>BREEAM RATING</b> Excellent</p>
 <p><b>BUILDING HEIGHT</b> 17.8 m</p>	 <p><b>EFFICIENCY</b> 79.5% overall, 87.5% typical floor</p>	 <p><b>EMBODIED CARBON</b> 410 kgCO<sub>2e</sub>/m<sup>2</sup> (A1-A5) excl. sequestration</p>
 <p><b>GEA</b> 4,906 sqm / 52,808 sqft</p>	 <p><b>OCCUPANCY</b> 1:6</p>	 <p><b>VOLUME OF TIMBER</b> 1,330 m<sup>3</sup></p>
 <p><b>GIA</b> 4,480 sqm / 48,222 sqft</p>	 <p><b>COST</b> £3,465 / sqm or £322 / sqft based on GEA</p>	 <p><b>TIME TO GROW TREES</b> 137 minutes</p>
 <p><b>NIA</b> 3,652 sqm / 38,341 sqft</p>	 <p><b>BUILD PROGRAMME</b> Timber superstructure 14 weeks, 17% of build</p>	 <p><b>SEQUESTERED CARBON IN TIMBER</b> 1,015 tCO<sub>2e</sub></p>

