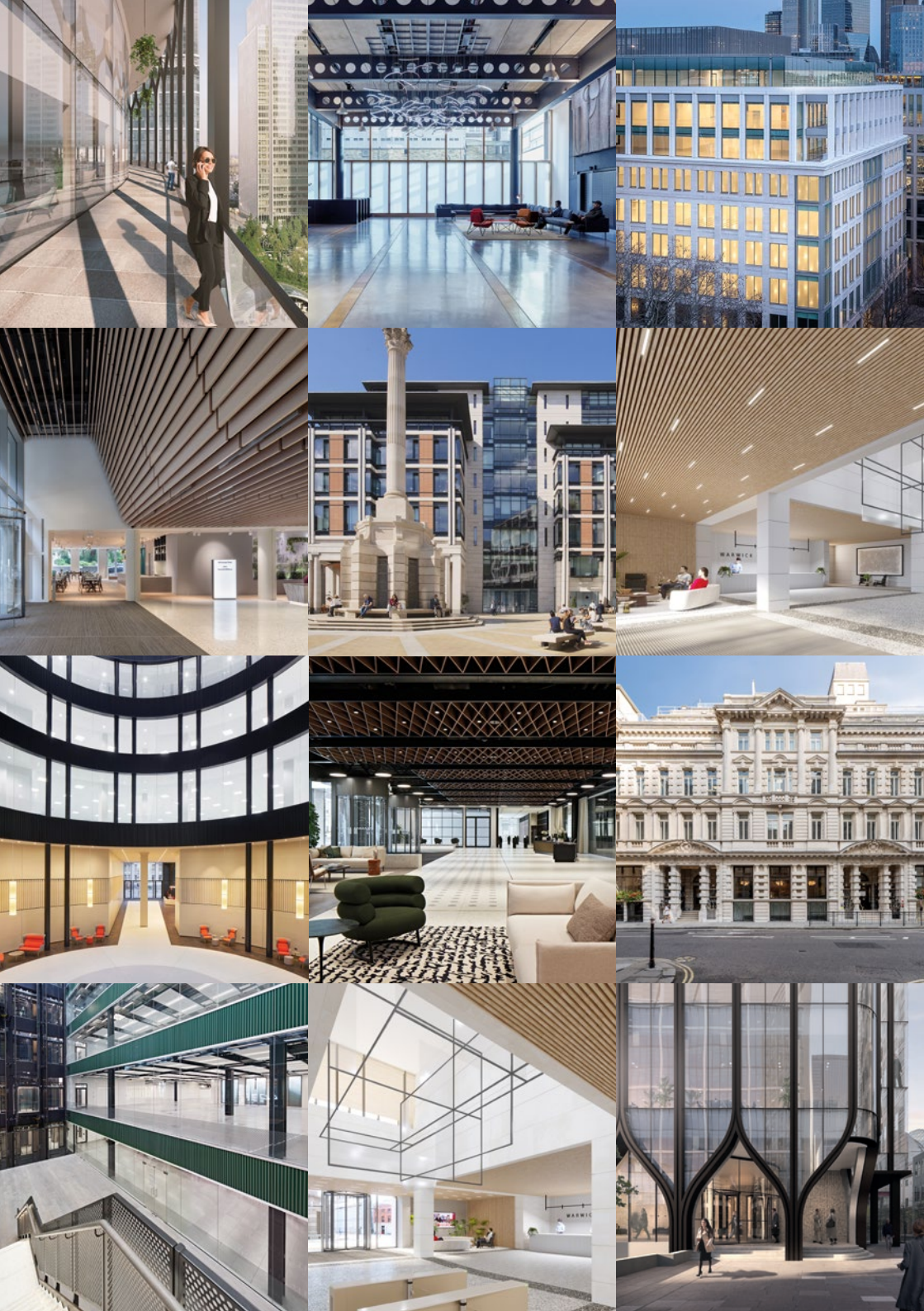




Transformative design

Unlocking the potential
of existing assets



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Introduction

As our industry gears-up to delivering a Net Zero built environment, the re-use of existing buildings, and the materials they contain, will play a vital role in securing a greener future for the UK.

04 With two-thirds of a building's carbon footprint resulting from its initial design, procurement and, construction, our engineering experts are focused on extending the lifespan of existing buildings to maximise return on investment and minimise embodied carbon.

Our approach

Our designs are helping to re-invent the UK's existing building stock to deliver exceptional, user-focused buildings. We harness innovative techniques to release usable floor space through sensitive design interventions, harnessing cutting-edge technology to assess superstructure capacities and analyse floor layouts to maximise their potential and deliver incredible buildings.

Our team of structural experts is helping unlock the potential of buildings across a wide range of sectors, spanning everything from commercial offices to heritage buildings, and from education facilities to residential premises.

We embed circular economy principles in all our solutions, designing for future re-use to ensure material lifespans continue far beyond their initial use. In many cases, we revisit projects multiple times across their lives, giving us the opportunity to use our detailed knowledge of a base build to bring a new lease of life to existing assets, slashing embodied carbon and maximising asset values.

We embed circular economy principles in all our solutions, designing for future re-use to ensure material lifespans continue far beyond their initial use.



Our Expert Team

Led by Richard Whitehead, our Structures experts have a deep understanding of retrofit schemes, using targeted engineering solutions to deliver exceptional outcomes for buildings across every sector.

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07



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YY London

Location: Canary Wharf, London
Client: Oaktree Capital & Quadrant Estates
Architect: Buckley Gray Yeoman

Previously home to Reuters, this landmark building in the heart of London's Canary Wharf was completely reimagined through an extensive deep retrofit scheme. The low carbon design delivered 100,000 sq ft of office accommodation across three additional storeys, with the existing floors rationalised and re-calibrated to deliver an exceptional building.

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BREEAM®

BREEAM Outstanding

NIA Increase
9,733 sqm

Retained Materials

95%
Steelwork retained

100%
Foundations re-used

84%
Slab retained

Pictures Courtesy of
Buckley Gray Yeoman



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Retaining the existing structure saves

10,260 tonnes CO₂



Equivalent to 7,600
flights to Sydney



51,300 trees planted
to offset



798 million cups of
tea from a kettle

1-5 London Wall

Location: City of London

Client: Angelo Gordon and Endurance Land

Architect: Carmody Groarke

This major sustainability-focused refurbishment transformed and extended the existing multi-tenanted Grade II-listed building, creating over 20,000 sqm of open-plan workspace through key structural interventions. At ground level, 2,753 sqm of retail space was added, incorporating three restaurants and various co-working facilities.

Major alterations include the recladding of two elevations and the reconfiguration of the ground floor reception areas. Elsewhere, existing office spaces were refurbished to CAT A, and key structural additions enabled the addition of two new floors, a new roof top plant area and a double-mansard roof extension, providing an eighth floor with external terraces.

A philosophy of balancing maximum flexibility with embodied carbon was adopted throughout the design process, helping to ensure the longevity of the interventions. This included strengthening rather than replacing the existing structural columns, minimising the weight of the new façade and utilising a lightweight structural steel solution for the extension.

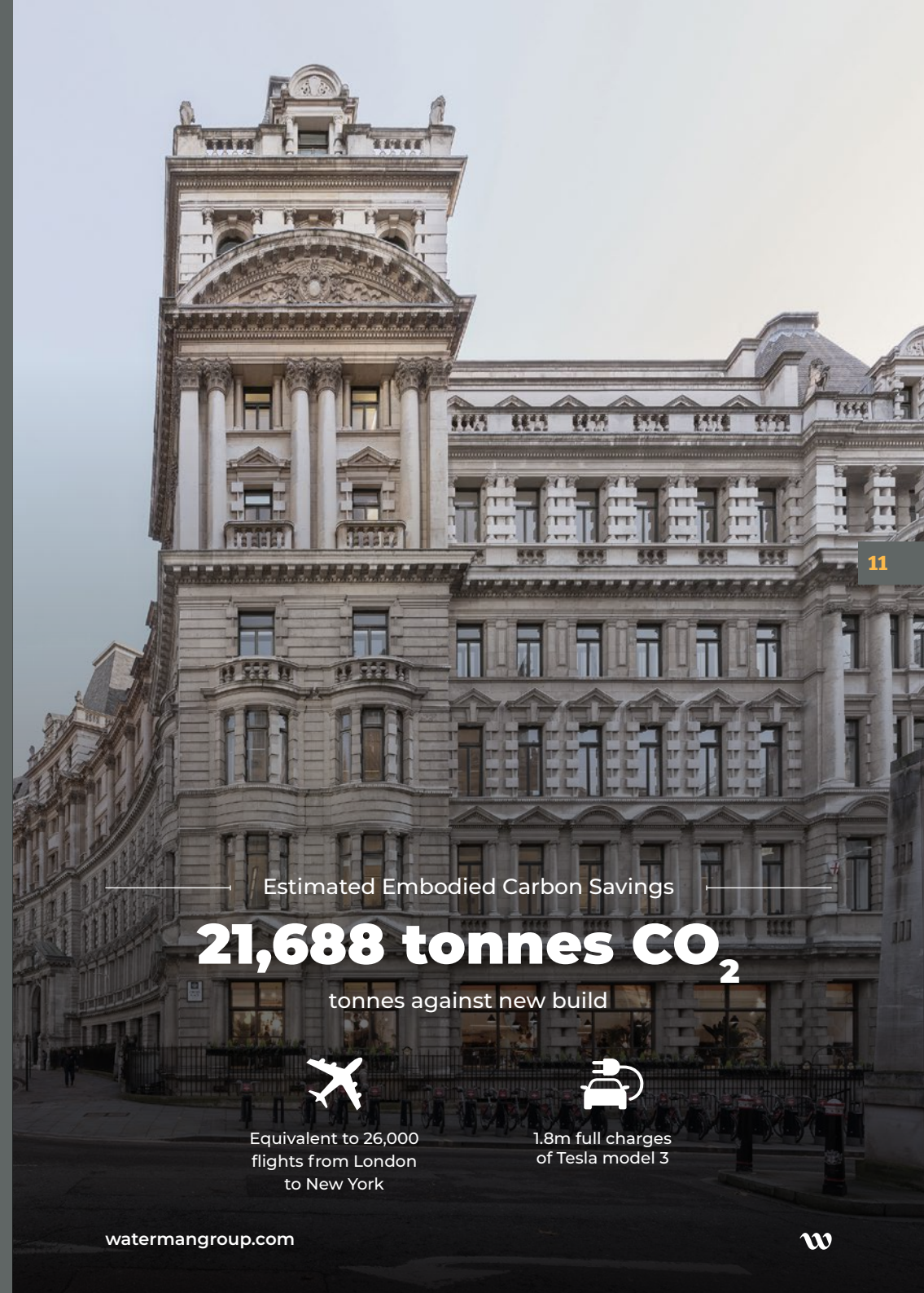
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BREEAM[®]

BREEAM Excellent

13,000 sq ft
of new net area created

Additional floors created in
CLT hybrid structure



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Estimated Embodied Carbon Savings

21,688 tonnes CO₂

tonnes against new build



Equivalent to 26,000
flights from London
to New York



1.8m full charges
of Tesla model 3

Warwick Court

Location: Paternoster Square, London
Client: Stanhope
Architect: Fletcher Priest Architects

This major refurbishment transformed the dated existing commercial building on Paternoster Square. Offering 180,000 sq ft of prime office space across eight storeys, this comprehensive remodelling unlocked amenity space and rationalised floor plates to deliver a flexible, adaptable and SMART tech-enabled facility fit for many years to come.

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BREEAM®

BREEAM Excellent

NIA Increase

420 sqm approx.
additional slab area

Retained Materials

99%
Steelwork retained

100%
Foundations re-used

99%
Slab retained

Embodied Carbon Savings

20,789 tonnes CO₂

tonnes against new build

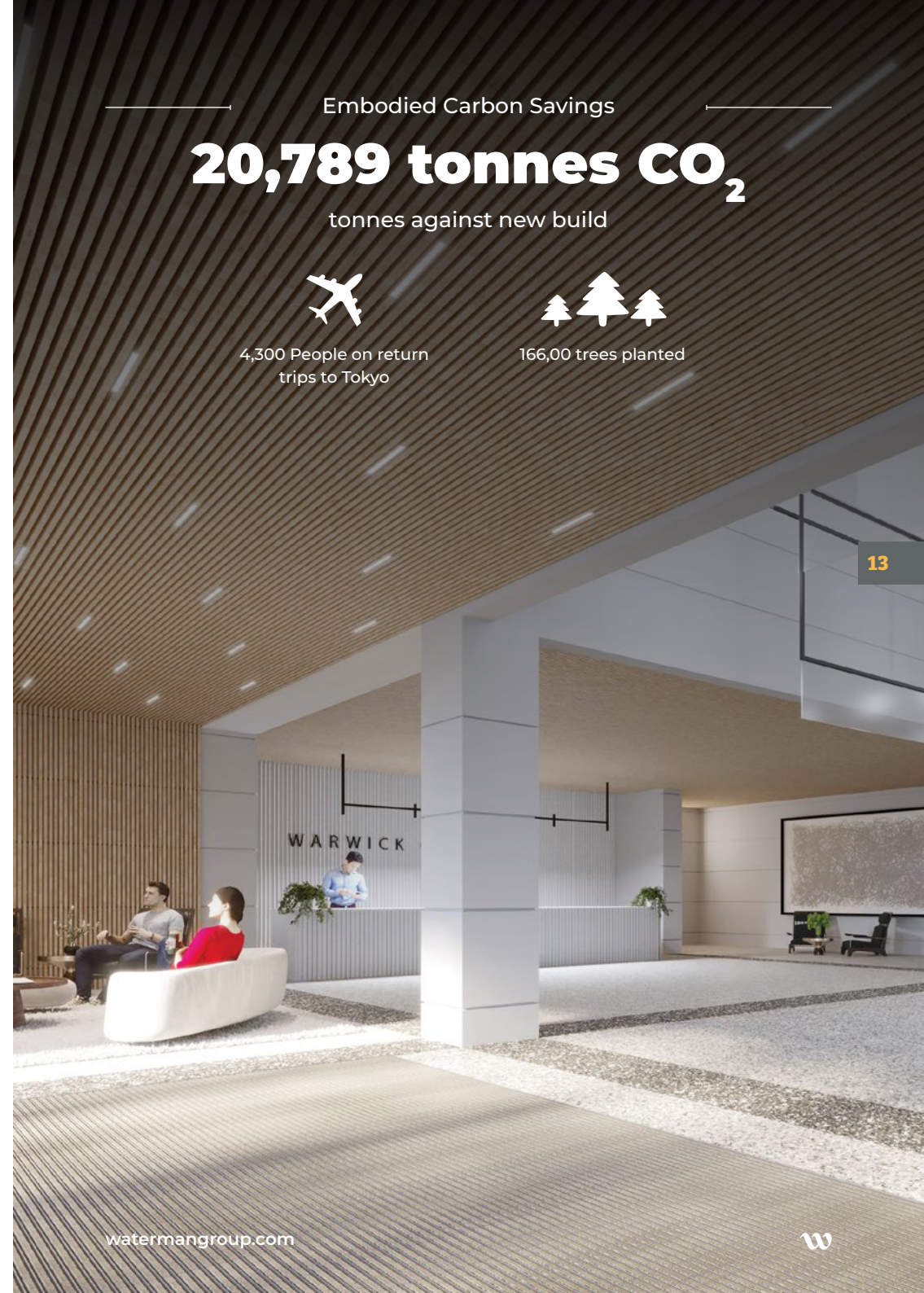


4,300 People on return
trips to Tokyo



166,00 trees planted

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Gresham St. Pauls

Location: City of London
Client: Stanhope
Architect: WilkinsonEyre

This low carbon, deep retrofit of a 1990s office building delivered 165,000 sq ft of Grade-A office and retail space. Set across ten floors and a basement level, the scheme focused on the getting the most from the existing structure, using targeted interventions to deliver additional floors and create exceptional open, flexible office space.

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BREEAM[®]

BREEAM Excellent

NIA Increase
1,092 sqm

Retained Materials

92%
Steelwork retained

100%
Foundations re-used

88%
Slab retained

6,660 tonnes CO₂e

savings versus new build (equivalent to the annual carbon footprint of over 1,200 people in the UK)

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Image Courtesy of Dirk Lindner

The Northcliffe

Location: City of London

Client: Confidential

Architect: John Roberston Architects

Formerly the Daily Mail's HQ, this exceptional 1920s building has been completely reinvigorated following a deep sustainability-focused retrofit. Set behind the retained Grade II-listed façade, the existing building has been completely remodelled, with two new upper floors boosting the Grade-A workspace up to 200,000 sq ft. The existing 1990s steel frame was retained and strengthened, while additions were made to maximise floorplate potential and facilitate the new floors and a reimagined entrance atrium space.

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BREEAM®

BREEAM Outstanding

NIA Increase

An increase to the building's net lettable space of 1,150 sqm with the extension of two new levels, as well as the addition of 9,000 sq ft worth of green space.

Retained Materials

98%

Steelwork retained

100%

Foundations re-used

99%

Slab retained

326 kgCO₂eq/m²

Embodied/whole-life carbon

100%

of operational building waste diverted from landfill

All non-hazardous waste has been recycled and zero to landfill



The Bower

Location: Old Street, London

Client: Helical Plc

Architect: Allford Hall Monaghan Morris Architects

This mixed-use landmark development offers 320,000 sq ft of prime office space across three unique buildings, along with a range of vibrant retail and restaurant space. Taking an innovative design approach, this exceptional scheme showcases the original buildings' heritage whilst also delivering significant embodied carbon savings. The buildings were totally remodelled and extended, harnessing the existing building fabric and using sensitive engineering to unlock frame capacity and boost available space.

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The Tower's existing 14 storeys were previously home to a British Telecoms telephone exchange. By removing the original 1960s cladding and screeded floors, three additional floors were included at roof level alongside staggered side extensions to create dramatic double-height 'living room' spaces for the tenants.

The Warehouse was completely refurbished and stripped back to expose the existing structure, increasing its overall floorplan to 122,000 sq ft across 11 storeys with the addition of both side and rooftop extensions. Private roof terraces were inserted on the fourth, eighth and ninth floors to complement the dynamic working spaces.

The new three-storey office building, The Studio, was constructed from exposed reinforced concrete flat slabs and separated from its towering neighbours by a ramped pedestrian walkway that portrays Old Street's urban history with a dramatic 'art wall'.

BREEAM[®]

BREEAM Excellent

Picture Courtesy of
Timothy Soar



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Embodied Carbon Savings

6,931 tonnes CO₂

Paper Garden – Canada Water

Location: London

Client: British Land

Architect: Jan Kattein Architects

Nestled at the heart of the major Canada Water regeneration scheme, this unique community building is London's largest circular economy structure at 300 sqm. With the structure featuring 60% recycled materials, the design utilised components harvested from other buildings with the design team collaborating throughout the process to source materials and tailor the design to suit.

Our structures design helped to deliver a range of community spaces including multi-functional teaching rooms, a kitchen and outdoor growing area, along with offices and toilets.

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BREEAM®

BREEAM Outstanding

Frame made from

60%

recycled materials

Designed for disassembly

Flexible layout for future reuse



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100 New Bridge Street

Location: Old Street, London
Client: Helical Plc
Architect: Gensler

This exceptional development transformed the existing 90s structure to deliver 194,000 sq ft of premium office space in the City of London. Aiming to extend the life of this significant asset even further, our structural design prioritised maximising usable space whilst boosting future reuse potential, achieving an 85% average floor plate efficiency.

Our specialists also unlocked capacity from the existing frame, making key design interventions to add two new floors and a range of outdoor amenity spaces. With a focus on material reuse throughout the design, we incorporated 30 tonnes of repurposed steel, whilst 30 tonnes were salvaged from the existing building for use elsewhere, resulting in a 78 tonne CO₂e saving.

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BREEAM[®]

BREEAM Outstanding

85%
average floor
plate efficiency

NABERS 5.5 Star Rating

78 tonne CO₂e saving from
steel reuse/salvage





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Picture Courtesy of
Gensler

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