

2021

# SUSTAINABLE DESIGN SERVICES



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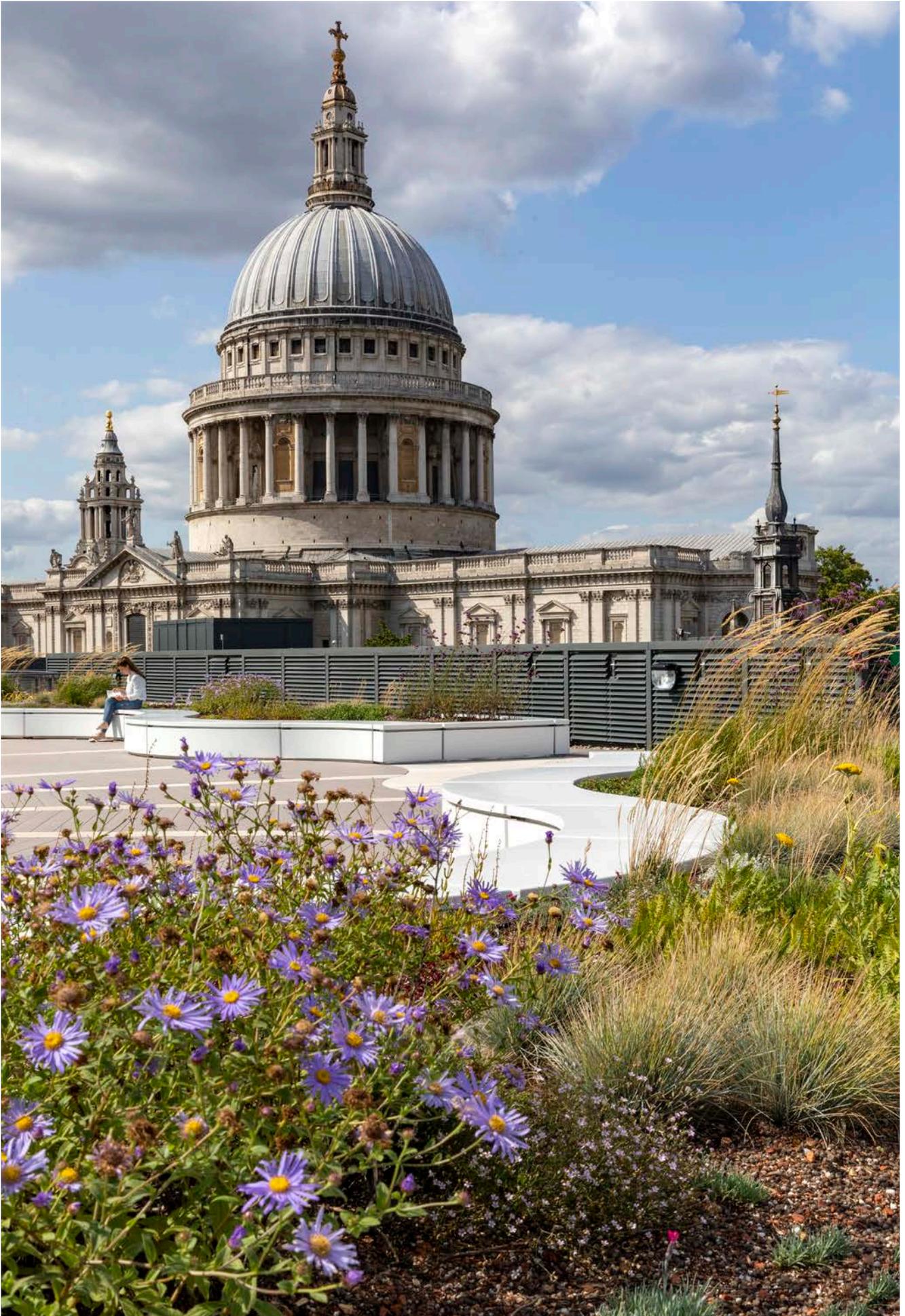
John Robertson Architects

**JRA**



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## 1.0 Introduction

John Robertson Architects (JRA) has developed a wide range of specialist sustainable design services which:

- Minimise the negative environmental impact of projects and assist our clients in their aspirations to respond to the climate emergency.
- Maximise the financial savings which can follow from efficient and sustainable design and construction.
- Assist our clients to understand and address the increasingly demanding environmental and well-being requirements of tenants and occupiers.
- Provide effective marketing collateral and opportunities for positive PR.
- Ensure that projects effectively address Planning Authority requirements from the earliest stages.
- Inform the efficiency of future projects and provide useful benchmark and cost data.

We typically provide these services on the projects which JRA designs, but we also offer stand-alone services for clients and other architects and consultants who can benefit from our extensive specialist knowledge in this area.

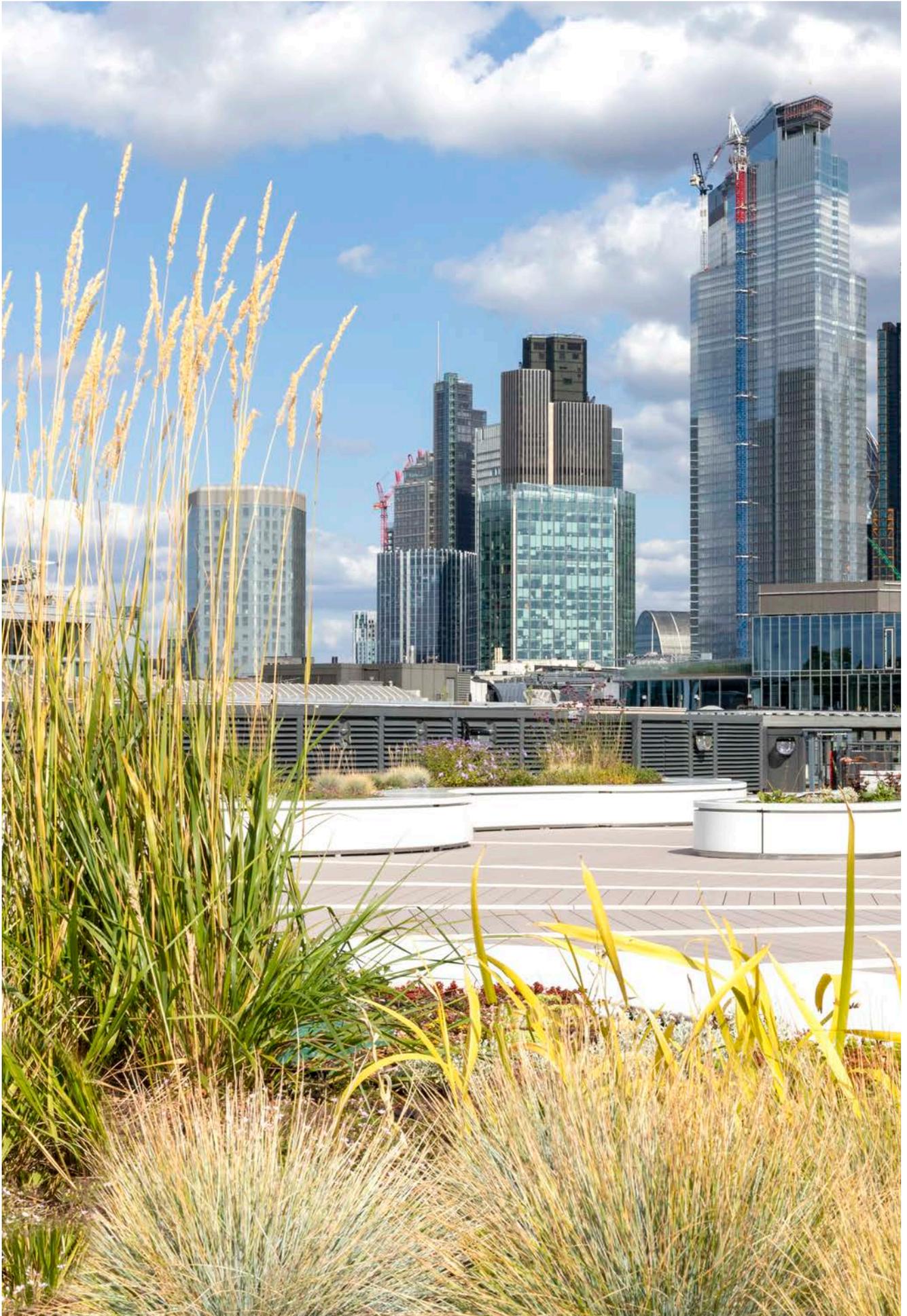
For more information about our sustainability services, please contact:  
Director, Festus Moffat - [festus.moffat@jra.co.uk](mailto:festus.moffat@jra.co.uk)

[www.jra.co.uk](http://www.jra.co.uk)

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John Robertson Architects

**JRA**



## 2.0 About

JRA is an award-winning, AJ100 architecture and sustainable design studio based at Bankside in London. Since its formation in 1993, JRA has designed and delivered a wide range of high-quality buildings with an approach which places sustainability at the heart of everything we do. JRA specialises in carrying out and delivering complicated projects in central London locations and conservation areas. With a workload spread between masterplanning, offices, residential, mixed-use, historic buildings, and interior architecture, JRA understands how to meet the varying priorities for each sector we work in.

Our buildings provide a considered response to the current issues of climate change and global warming and the modern tenant's environmental aspirations and expectations. JRA's commitment to sustainable architecture is reflected in the practice being named the **BREEAM Awards 'Professional Champion'** in 2019 and having been shortlisted for the last two years for the AJ100 'Sustainability Practice of the Year'.

Our approach is underpinned by the increasing need for environmental action and the practice's commitment to the RIBA's 2030 Climate Challenge. We aim for our projects to:

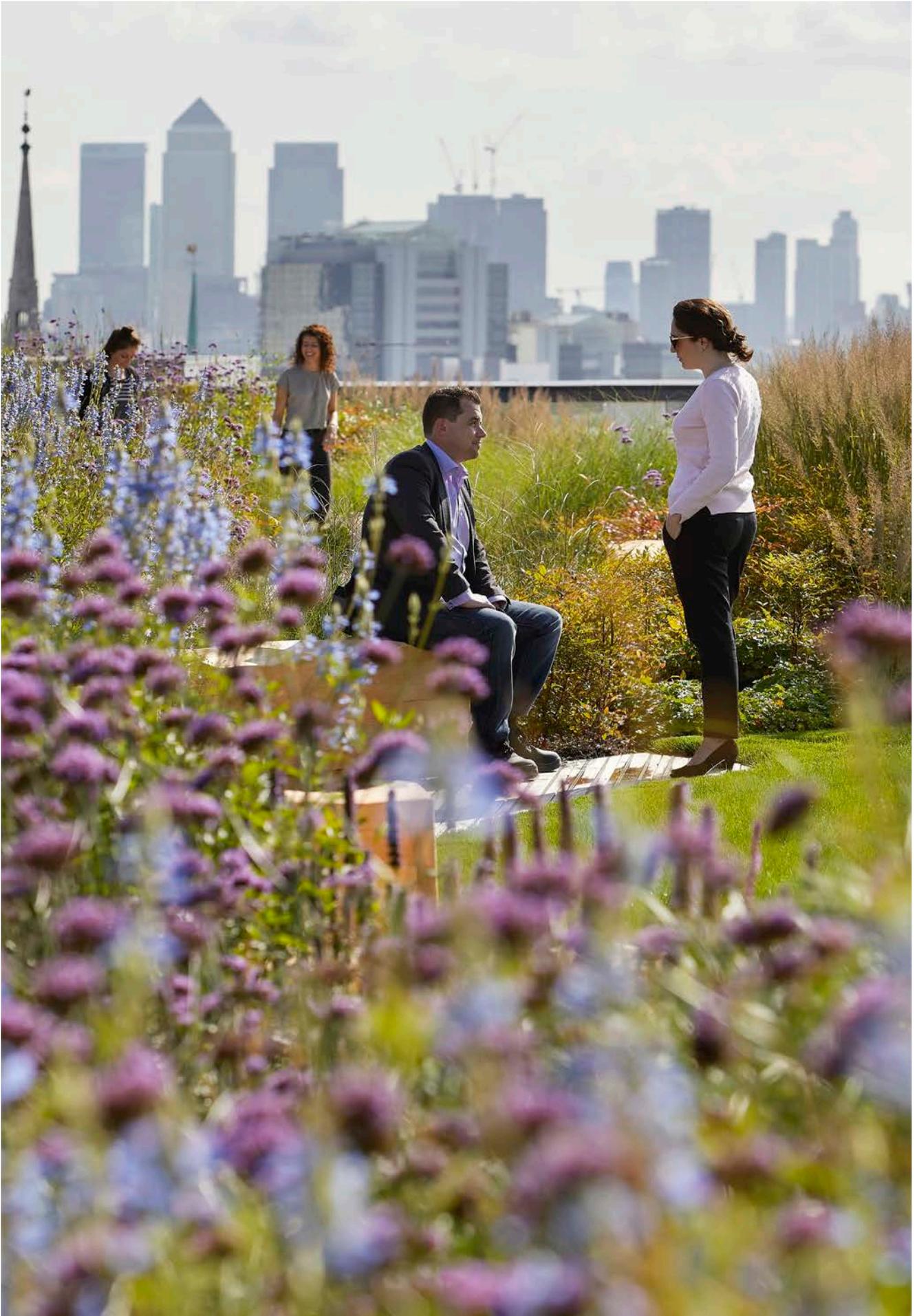
- create healthy environments for individuals and businesses.
- open up opportunities for making positive contributions to the circular economy through smart material choices.
- have the potential to be carbon positive.
- mitigate climate change impacts, wherever possible.

JRA strives to push the boundaries of sustainable design, recognising it as efficient both in terms of the use of materials, and in being cost effective, benefiting our clients and the planet.

We encourage our clients to pursue their own sustainability goals, often through **BREEAM** certification, and we have been championing this accreditation system across the practice's projects for over ten years.

JRA is also experienced in the application of other accreditation systems including **LEED** and **SKA** and most recently the **WELL** standard (for which we have in-house accredited professionals). The practice has achieved a 'WELL Platinum' rating for our refurbishment of 51 Moorgate in central London.

JRA recognises that we are in the midst of a climate crisis and we are signatories to the 'Architects Declare' network of architectural practices and the RIBA's 2030 Climate Challenge, both of which are committed to addressing the climate and biodiversity emergency. Recognising the urgent need for action, we provide - alongside our architectural services - a specialist service in whole life carbon and whole life performance assessments for buildings. We have developed a range of Life Cycle Services to offer to both clients and other practices looking to understand the carbon impacts of their designs. These services include: **Whole Life Carbon Assessments**; **Life Cycle Assessments**; and **Life Cycle Costings** of projects, and we believe JRA is at the vanguard of this approach.



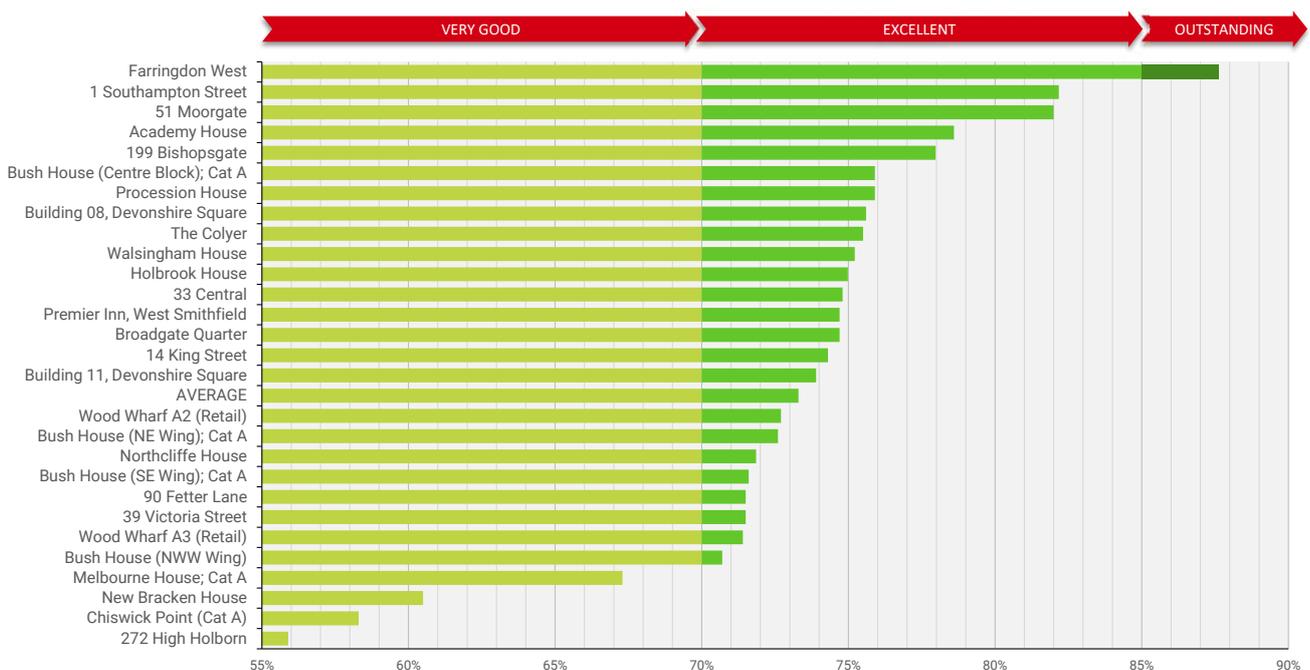
## 3.0 BREEAM

At JRA we believe that good design is sustainable design. Our strategy is firmly based on pragmatic and holistic thinking and BREEAM is central to communicating our success in terms of our approach to sustainable design principles. BREEAM ensures that we design and deliver robust and adaptable solutions that stand the test of time. As a practice, we have consistently encouraged our clients to pursue BREEAM certification, championing it across our projects for over ten years.

JRA is aware that carbon equals cost and wellbeing is all-important to the success of building occupiers. As such, we advocate the use of BREEAM to not only help improve our environment but to add value to our clients' assets.

Our portfolio includes twenty-one completed BREEAM 'Excellent' certified projects, and an 'Outstanding' project, with two more on target to achieve 'Excellent'.

JRA's BREEAM Certified Projects:



**'The judges were especially impressed by the strength of the commitment by JRA to place BREEAM and the underlying sustainable design principles at the heart of their approach to sustainable design across their work and to push the boundaries in their projects and the services that they offer to clients.'** - BRE Judges' comments  
- BREEAM 'Professional Champions' Award, 2019

# Wells Fargo Headquarters

## London EC4

'By increasing the natural light available to occupiers, apart from their wellbeing, we're also increasing their productivity' HB Reavis

33 King William Street is an exemplary project which achieved a BREEAM 'Excellent' rating upon completion. The 29,000m<sup>2</sup> new-build office development is situated in the City of London and was created for developer HB Reavis, to provide the London headquarters of United States bank Wells Fargo.

Here JRA met and exceeded BREEAM requirements in a number of areas. Key initiatives included maximising reuse by salvaging 160 existing piles and the reinforced concrete slab of the previous building on the site. JRA's construction used a steel frame and pre-assembled glass cladding panels to enhance efficiency and in-use daylight provision. Wellbeing and sustainability were also central. JRA created a roof garden covering a third of an acre featuring high performance photovoltaics, FSC timber furniture and biodiverse planting. In addition, the cycling provision on site exceeds certification requirements with 240 spaces and accompanying shower and locker facilities.

### Project Information

#### CLIENT

HB Reavis for Wells Fargo

#### SIZE

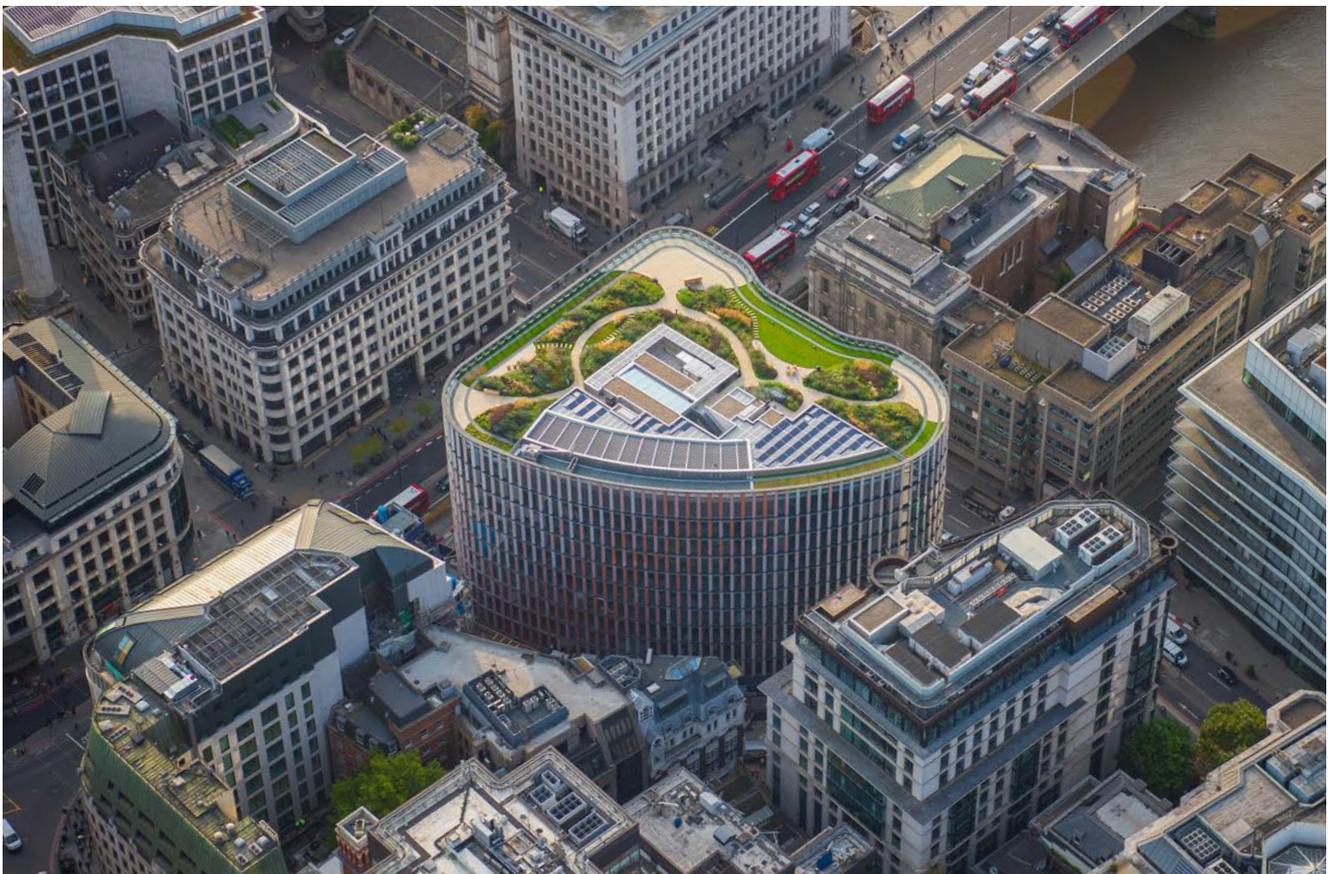
29,000 sqm

#### COMPLETION

2017

#### CONTRACT VALUE

£80m





# The Pepper Store

## London EC2

The Pepper Store, Devonshire Square, is another recent project where JRA has achieved an excellent outcome. The building is a grade II listed former East End Trading Company warehouse, providing five floors of office space accommodation and a spacious entrance lobby and reception.

Key initiatives at The Pepper Store included an improved MEP plant, upgrade to the roof insulation and replacement of the double-glazed windows which have a low embodied environmental impact. The airtightness of the building has been improved, resulting in a predicted 27.7% annual reduction in CO<sup>2</sup> emissions/m<sup>2</sup> over the existing building. JRA specified sustainably sourced materials and furnishings, as well as sanitary ware that significantly reduces water consumption. As part of an estate-wide initiative, JRA included a substantial new cycle provision of 576 cycle racks, 576 lockers and 23 showers.

### Project Information

#### CLIENT

Blackstone

#### SIZE

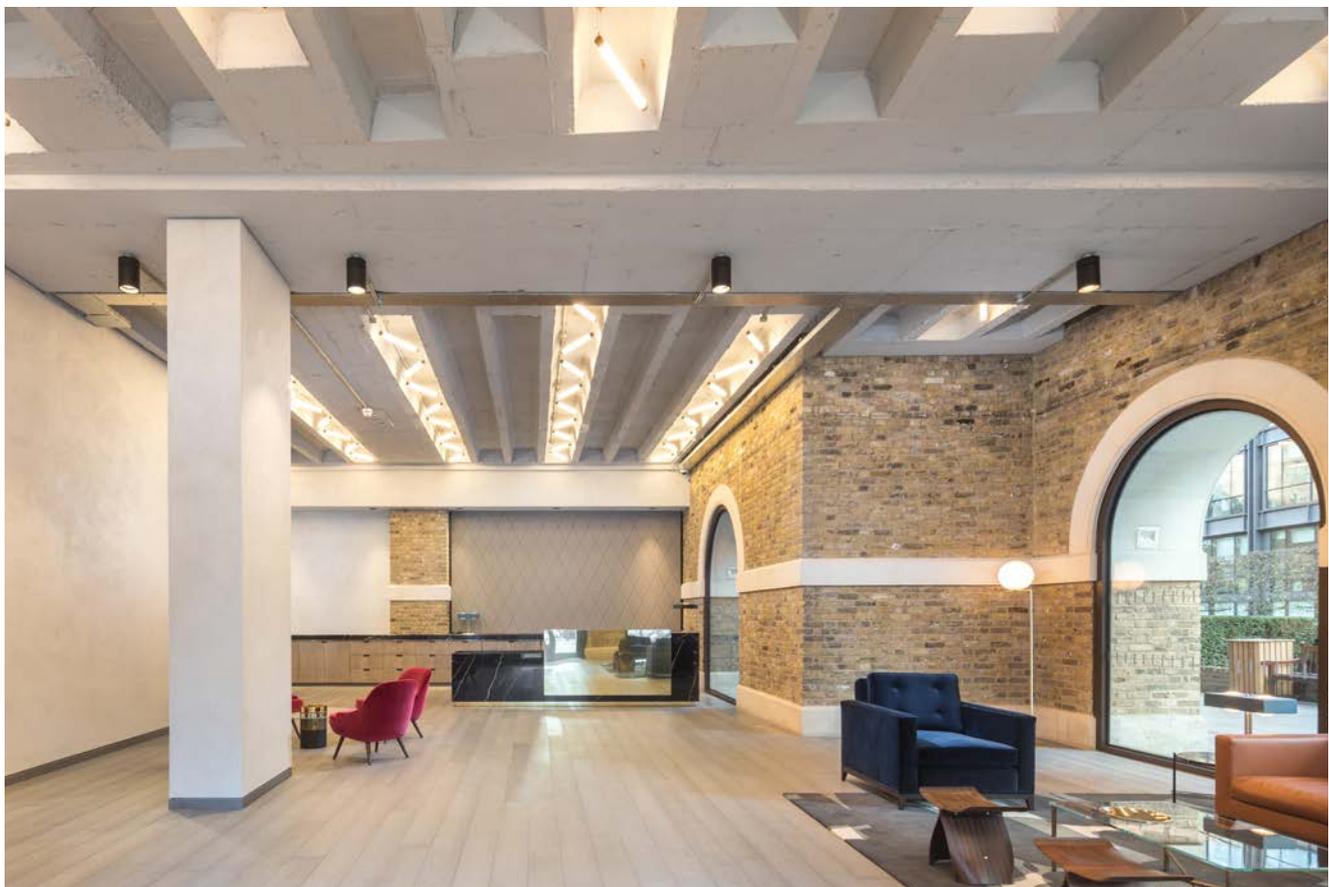
58,000 sqm (full site scheme)

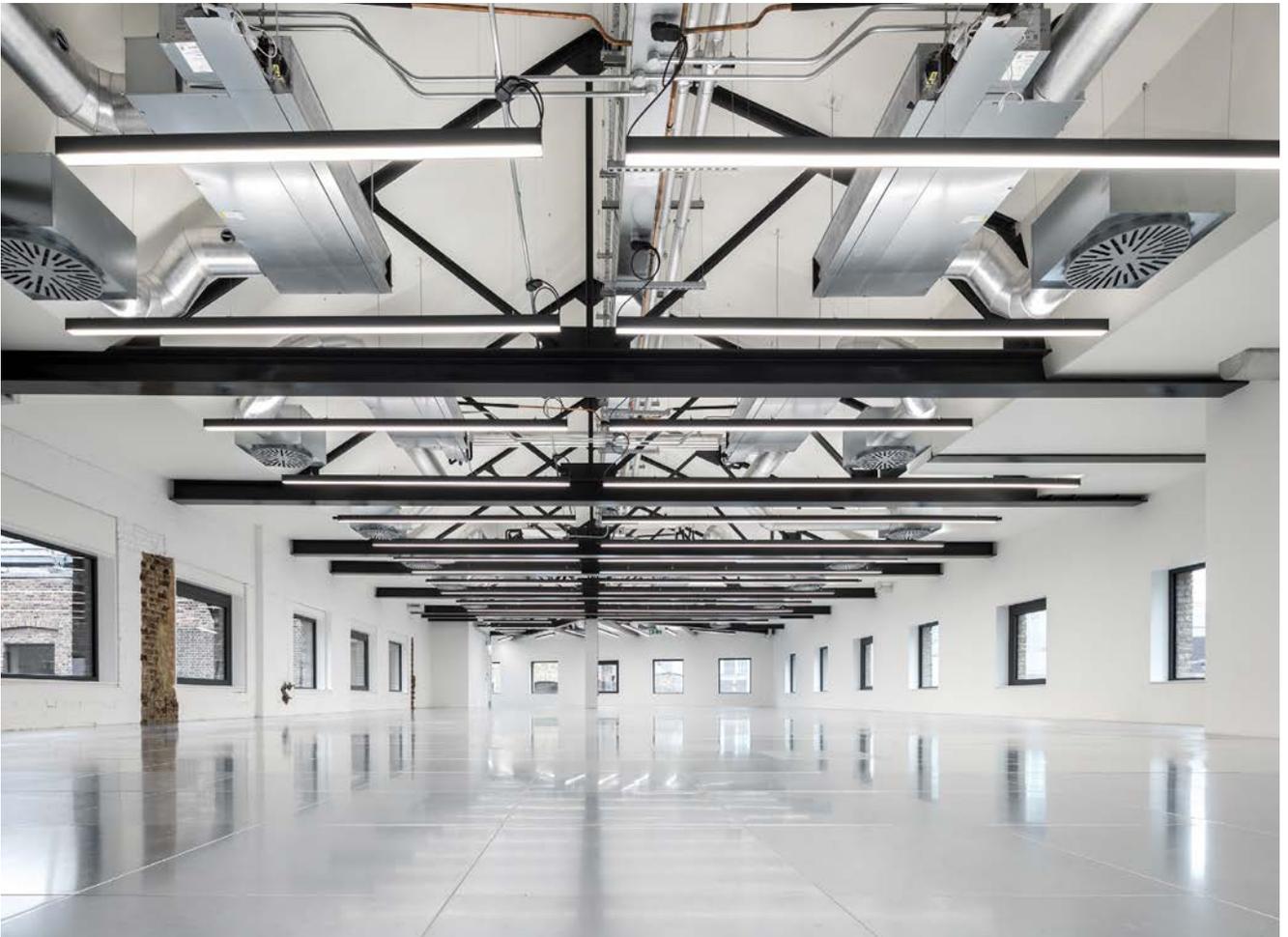
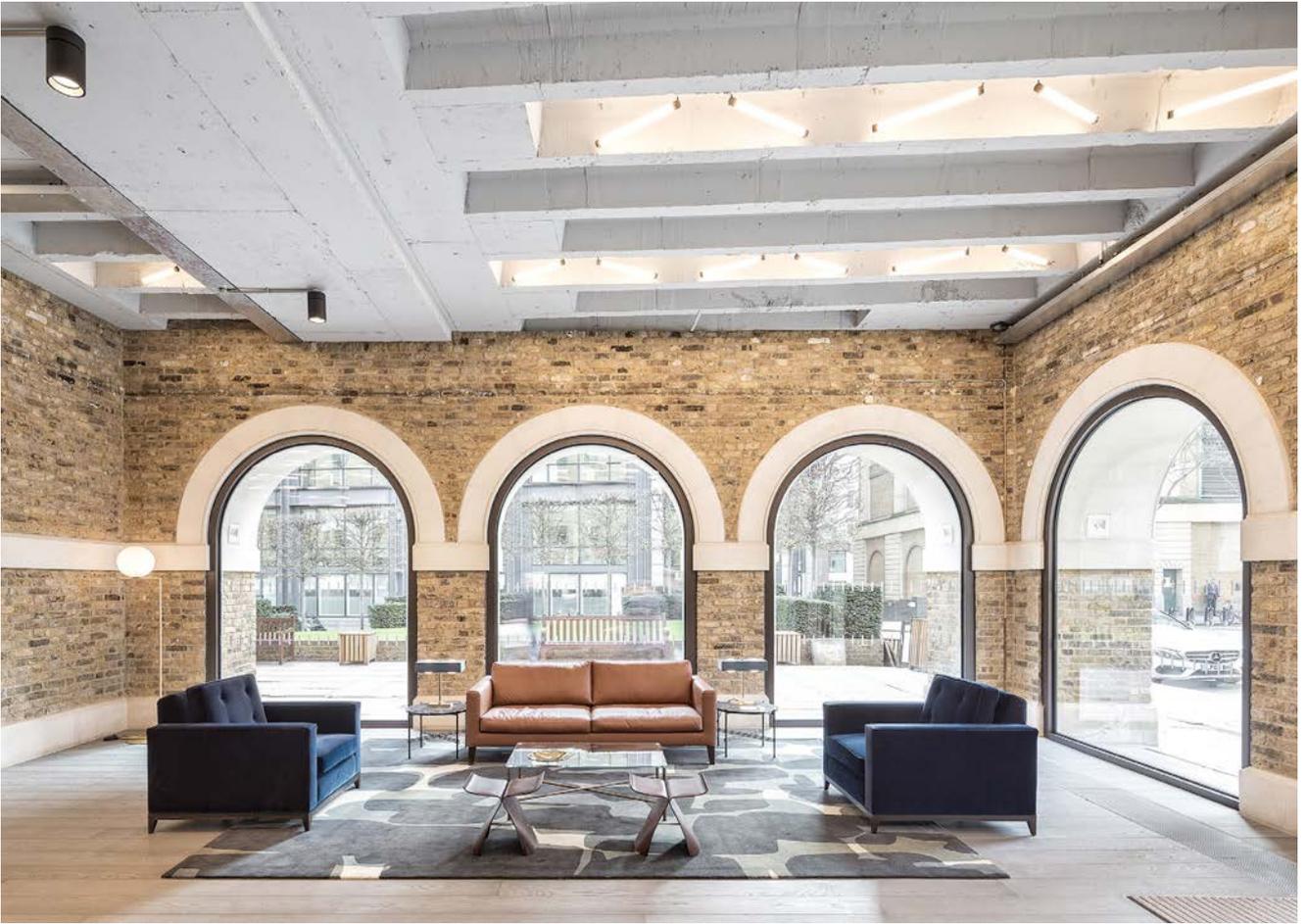
#### COMPLETION

2018

#### CONTRACT VALUE

Confidential







## 4.0 WELL

An organisation's greatest asset is its staff. The health and wellbeing of employees is set to become of even greater importance in a post-Covid-19 environment, with tenants looking towards landlords to facilitate wellness initiatives with increased levels of natural, fresh air. 'Touchless' environments, 'smart' security barriers, doors, lifts, taps and toilets.

The 'Well Standard', developed in America by the International Well Building Institute, is an effective tool for this. It reviews a building's performance in 10 key areas: Air, Water, Nourishment, Light, Movement, Thermal Comfort, Sound, Materials, Mind and Community. Each area is comprised of features with distinct health and wellbeing intents.

JRA has an in-house accredited professional who can undertake these reviews from an early stage, influencing the design and ensuring that the key principles of wellbeing are incorporated into the project.

# 51 Moorgate

## London EC2

51 Moorgate in the City of London is an office building that originally dates back to the 1980s. The building includes a total of 4,180 square meters of office space across eight levels.

The project uses air source heat pumps to provide heating, cooling and domestic hot water. With no fossil fuels being burned on site, the building does not compromise the local air quality. Not using conventional gas-fired heating systems contributes considerably to reducing the building's operational carbon production.

The carpet is made up from 81% recycled material. A glue-free installation system that has virtually no VOCs and doesn't leave glue patches was used to install the carpet on the raised access floors. When looking at the carbon associated with a building fit-out, raised access floors make a massive contribution. This system minimises the amount of floor that needs replacing and tenants' dilapidations won't include removing the sticky glue from normal carpet adhesive.

Indoor air quality was a major concern for Skanska. Filtration of fresh air has been enhanced to reduce the levels of pollutants and particles being drawn into the building from external sources. Pollutants were monitored against the WELL Building Standard before and after Skanska took possession. The use of a zero VOC paint contributes to the air quality and two large green walls adjacent to the reception help scrub the air as well as providing the health benefits that contact with nature brings.

Other contributing features include the provision of more than 44 spaces for cycles, 38 lockers and six showers for users of the building.

Existing furniture was reused where possible and the extra items from existing offices were donated to schools in need instead of landfill.

The brief also placed an emphasis on the concept of 'wellbeing', and JRA's approach was led by the WELL standard to incorporate measures that improve user experience and health. The building aspires to be one of the first in the UK to achieve Platinum certification of the WELL Building Standard, alongside BREEAM 'Excellent'. The design incorporates living walls, break-out spaces, dining areas, cycle facilities and kitchenettes on each floor, as well as a dedicated technology-free wellbeing room.

### Project Information

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#### CLIENT

Skanska

#### SIZE

4,300 sqm

#### COMPLETION

2019

#### CONTRACT VALUE

Confidential





## 5.0 Life Cycle Assessments

JRA recognises that to achieve the Zero Carbon targets that are being set for the industry it is vital to manage the environmental impacts of a building's construction and operation to mitigate its direct and indirect effects on the environment. We use Life Cycle Assessments (LCAs) to clearly identify optimum strategies for reducing a project's environmental impact and, in particular, to measure a building's whole life carbon.

We use a methodology that is recognised and adopted industry-wide, analysing a number of environmental indicators of a building over its entire life (approximately 60 years), as well as that of a material, product, or assembly. One of the most important indicators is GWP (Global Warming Potential) which is measured in kg of CO<sub>2</sub>e (carbon or carbon 'equivalent').

LCAs encourage clients to think mindfully about sustainability and advise on how it can be integrated into the design from the outset of a project. The result can provide immense value for both clients and the planet by identifying:

- Opportunities for recycling and reuse
- Inefficient material delivery and construction processes
- Materials and products with potentially limited lifespan and high maintenance costs
- Ways to reduce running costs including heating, cooling, lighting and water consumption
- Opportunities for positive PR around the project

The results generated from the LCA can be used to award credits within whole building assessment schemes like BREEAM as well as addressing the emerging regulatory requirements to achieve net zero-carbon buildings and the circular economy.

LCAs can contribute value to our clients' assets and help the environment, while providing a framework to allow clients to consider the energy spent across the entire life of their building and its environmental impacts as well as comparable benchmarks between different buildings.

At JRA we have long believed that the most sustainable building is the one that already exists and our track record in creatively refurbishing and re-positioning existing buildings is second to none. What has been established through life cycle assessments of these projects is that our refurbished buildings are already meeting the RIBA 2030 targets for embodied carbon.

# Bureau

## London EC4

Bureau is an eight-floor commercial refurbishment and repositioning project. To enhance the environmental potential of the scheme and provide the client – Evans Randall – with all the information they required to make informed decisions around carbon, we identified a number of areas where short- and long-term carbon savings could be achieved.

This was supported by the sustainability of our wider design, which included a thermally-efficient fabric and full-height glazing to optimise daylighting while limiting solar gain; heating and cooling installed from a highly-efficient VRF refrigerant based system; supply and extract ventilation with an efficient heat recovery element; and the control and monitoring for heating, cooling, and lighting through a highly-efficient building management system.

### Project Information

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#### CLIENT

Evans Randall

#### SIZE

6,925 sqm

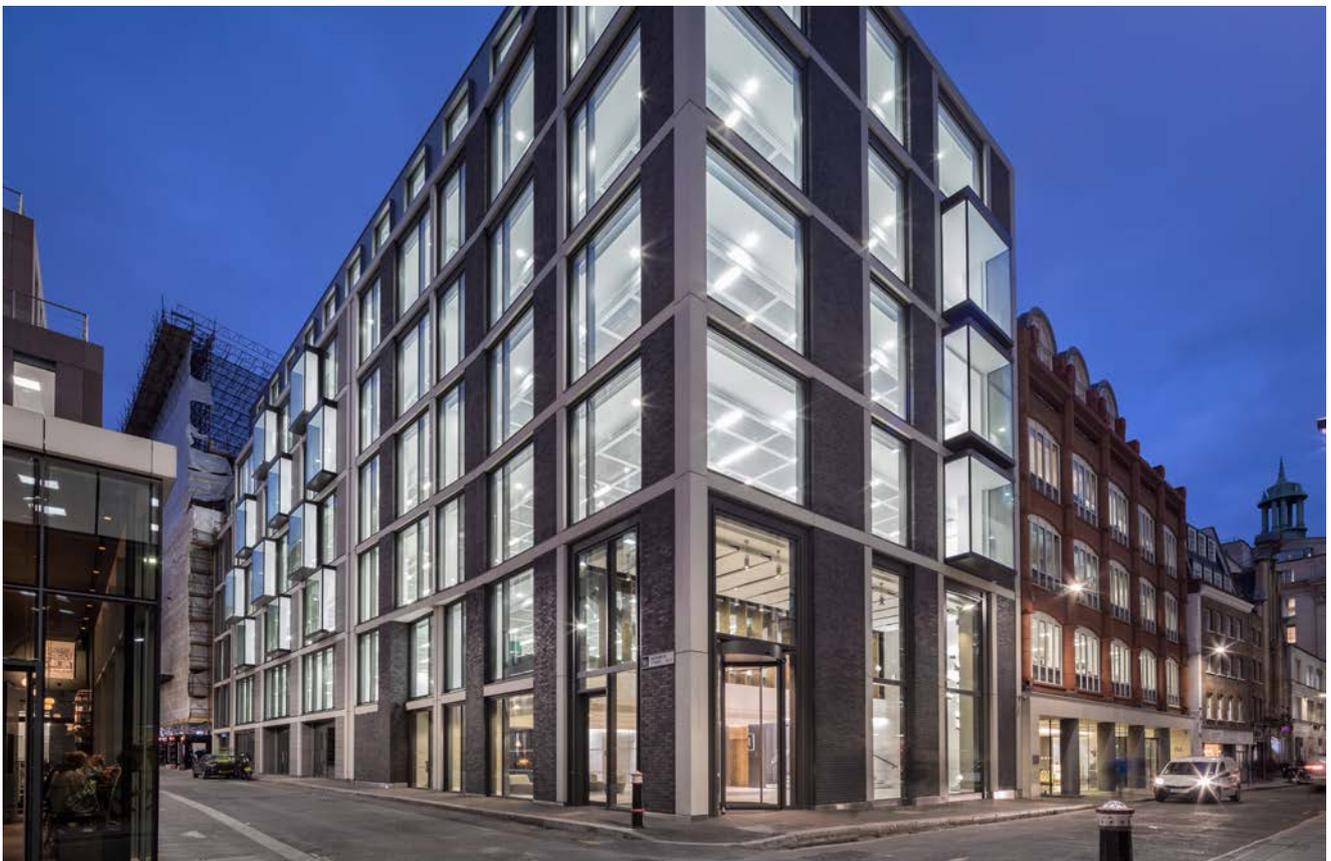
#### COMPLETION

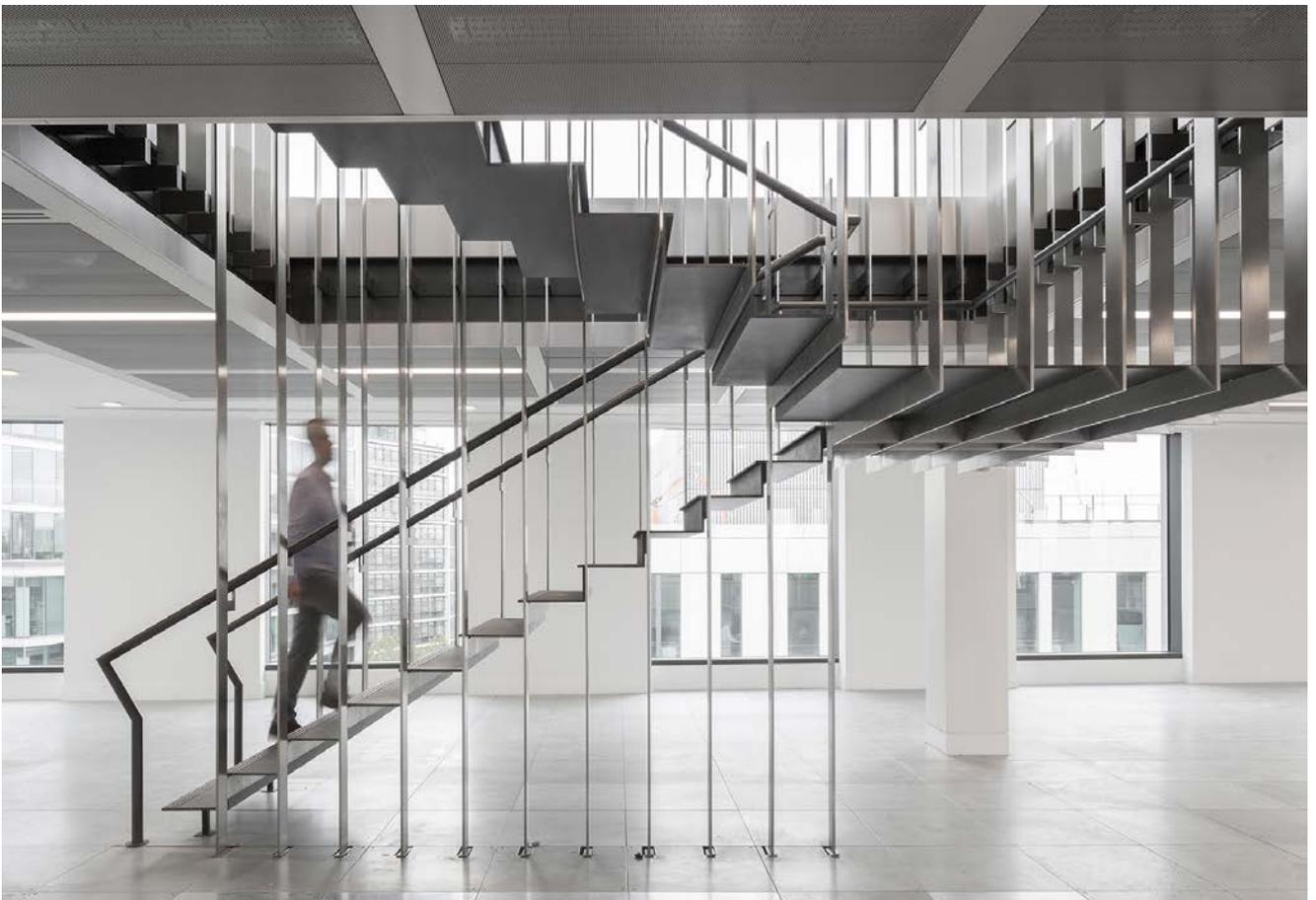
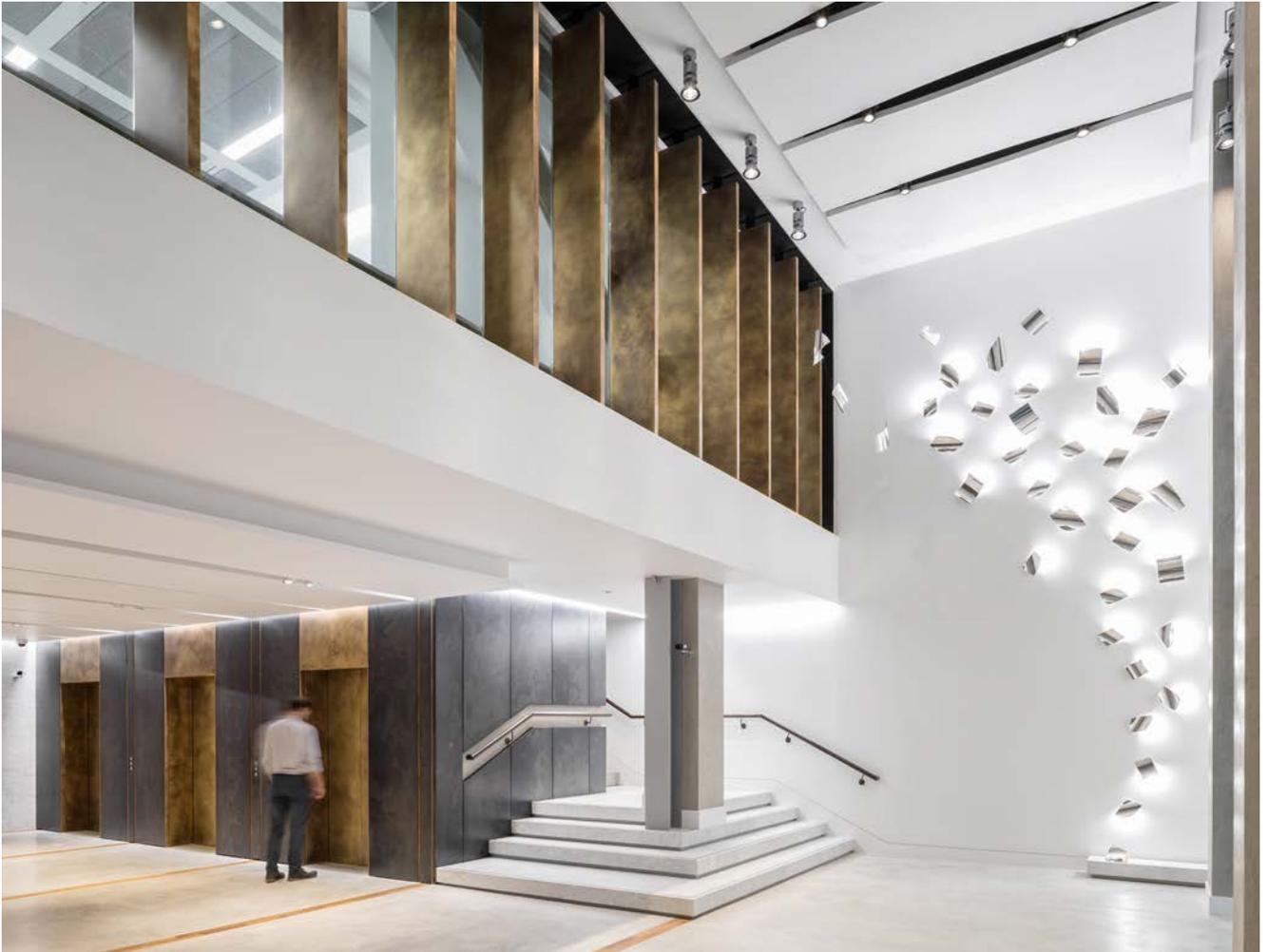
2018

#### CONTRACT VALUE

£22m

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## 6.0 Life Cycle Costing

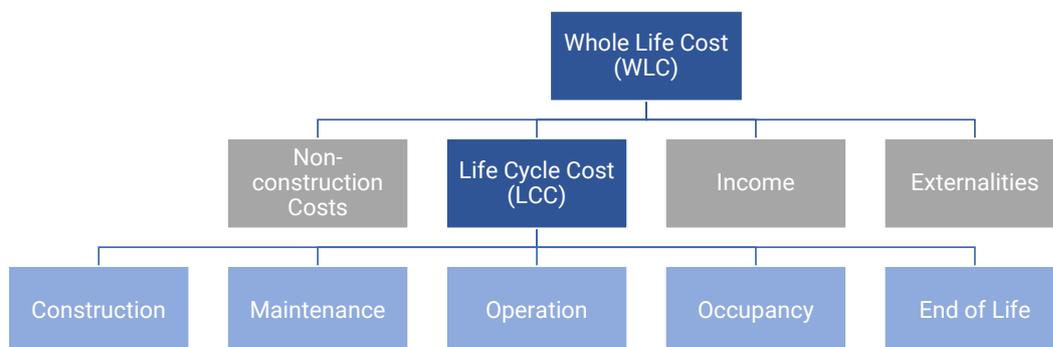
To reconcile the carbon costs identified by our LCAs with the capital and ongoing costs that clients are responsible for across the life-cycle of a project, JRA offer Life Cycle Costing (LCC). One of the first practices to offer this service, LCC is an economic evaluation method that takes account of all relevant costs over a defined time period, including adjustments for the time value of money (i.e. net present value, internal rate of return or payback period, if required). Crucially, BREEAM recognises LCC, with additional credits available to be obtained under BREEAM NC (New Construction) 2018 if practices use an LCC to inform their LCAs.

The two most common ways in which LCC is used in the UK construction industry are:

1. generating a cash flow prediction over a given period of time
2. undertaking an option appraisal study, in order to evaluate various solutions to a given problem

The scope of an LCC is shown in Figure 1, where all major cost items over the life of the project are considered (excluding non-construction costs, income and externalities).

LCC is recognised as the most appropriate method of determining the total costs of ownership and assessing project alternatives. It enables improvements to be identified, compared, and prioritised, empowering clients to make better, more informed decisions on what delivers the best value for both carbon and cost.



LCC allows us to develop informed choices between alternative design options to demonstrate optimum value to the client. The analysis consists of estimating the design specifications and understanding how different design options can influence both the capital cost and overall life cycle costs.

# Academy House

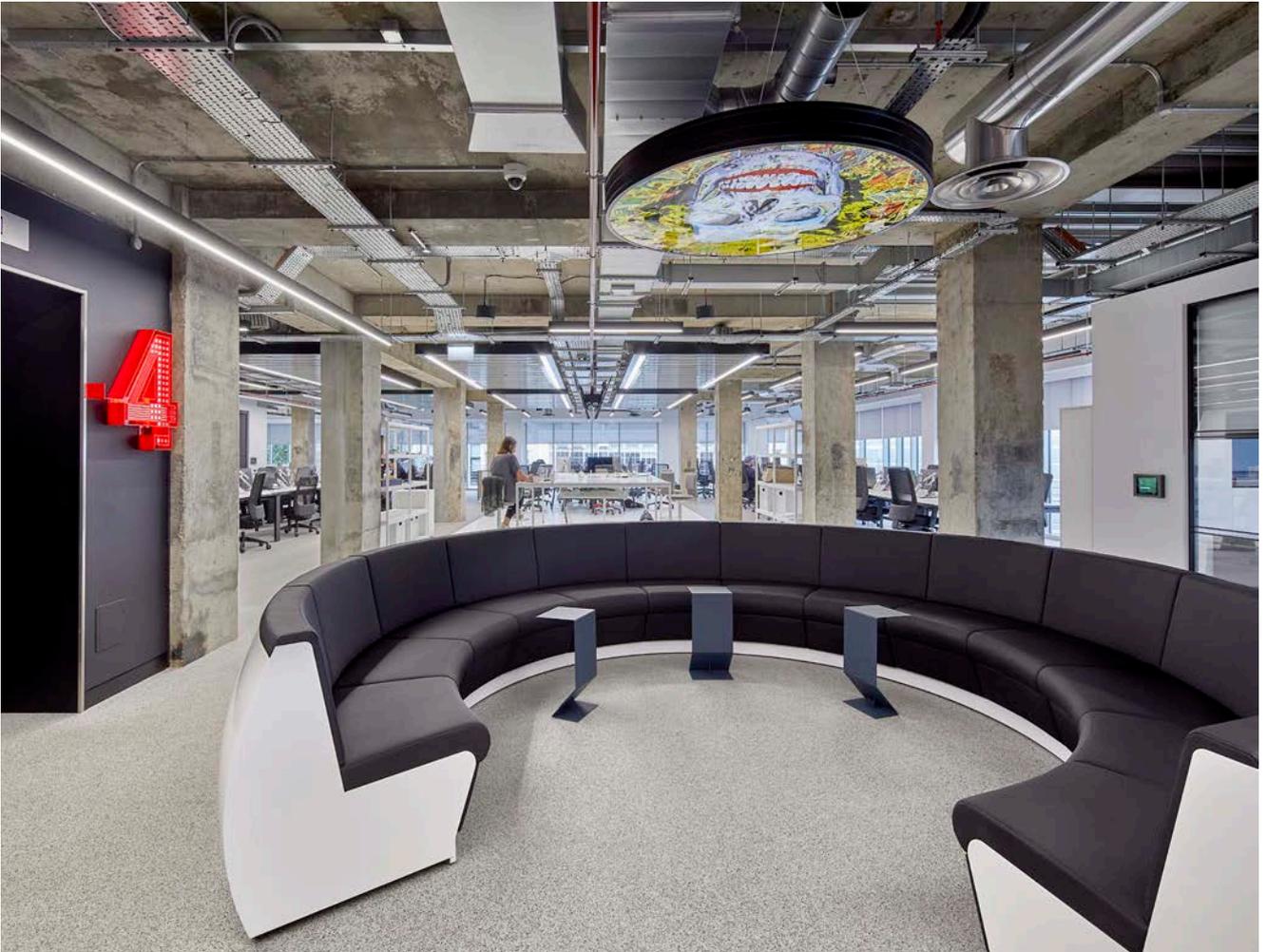
## London W1

The influence of Life Cycle Costing can be seen at our Academy House project, an eight-storey office and retail development situated on London's Oxford Street. JRA achieved a BREEAM rating of 'Excellent' on the scheme, with key initiatives including the reuse of the existing foundations and structural frame, as well as a locally sourced and long-lasting terracotta clay for the cladding. The raft ceiling design used 70% fewer materials than conventional approaches and by leaving concrete soffits unfinished, carbon has been saved. Occupants will also benefit from the improved air quality through the reduction of VOCs. All lighting is delivered via low energy LEDs and waste has been reduced wherever possible through recycling and consumption flow measures. All elements of lighting and heating can be controlled through a sophisticated building management system and extensive metering to facilitate future usage monitoring and targeting.

### Project Information

CLIENT	Morgan Capital Partners
SIZE	5,000 sqm
COMPLETION	2018
CONTRACT VALUE	£16.3m





## 7.0 People

### **Festus Moffat**

Director

BSc (Hons) DipArch ARB RIBA

Festus joined John Robertson Architects in 1996 and became a Director in 2007. He has continuously played a leading role in the direction, development and output of the practice; helping JRA become one of the most respected and trusted architecture studios in the hugely competitive Central London market.

Festus is an expert in sustainability and has an in-depth knowledge of the BREEAM benchmarking system. He represents JRA as a member of the UK Green Building Council. Festus' understanding of envelope design and energy use within buildings has enabled JRA to deliver market-leading sustainability performance in both new- build and challenging retrofit projects.

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## 8.0 JRA Client List

Aldar Properties  
Almacantar  
Amcorp Properties Berhad  
Astrea Asset Management  
Aviva Investors  
BankMed  
Bellhouse Joseph  
Berkeley Square Holdings  
BlackRock  
Blackstone  
Bloomberg LP  
BNP Paribas  
British Land  
Cambridge Education Group  
Canary Wharf Group  
Cardinal Lysander  
Chelsfield plc  
City of London Corporation  
CORE  
Crossrail  
Crosstree Real Estate Partners  
DC Thomson & Co Ltd  
Derwent London  
Deutsche Bank Asset  
Management  
Drivers Jonas Deloitte  
DWS Group GMBH  
Evans Randall  
First Base  
Fladgate LLP  
Generation Estates  
GMV Ltd  
Greycoat plc  
Grocers' Company  
Grosvenor  
Guardian Assurance plc  
Harcourt House Dev. Ltd.  
Hatfield Philips  
HB Reavis  
Helix  
Henderson Global Investors  
Hines  
Hotel Properties Ltd  
ICG Longbow  
INTO  
ISG  
JLL  
Kajima  
Kato Kagaku & Co.Ltd  
KHI Holdings Group  
King's College London  
Laing O'Rourke  
Land Securities plc  
Legal & General  
Legalease  
Linklaters  
MedProperties  
Mindspace  
Morgan Capital Partners  
MPG St Katherine 2 LP  
Multiplex  
Munkenbeck + Marshall  
Native Land  
NHS Property Services  
Nordkranen A/S  
Obayashi Corporation  
Ocubis  
Prudential PLC  
RREEF  
SAIPEM  
Shiva Hotels  
Skanska  
Sports Direct  
St James Group Ltd.  
Standard Life Investments  
Structure Tone  
Tameric Investments  
Taylor Woodrow Capital Developments  
Telereal Trillium  
The Blackstone Group  
The Carlyle Group  
The Church Commissioners  
The Church of England Pensions Board  
The Itochu Corporation  
The Mercers' Company  
The Worshipful Company of Carpenters  
TIAA Henderson Real Estate  
University College London  
University of East Anglia  
Wainbridge  
WeWork  
Whitbread  
WSP  
YUM! Brands  
Zebulon

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