

CASE STUDY: 90 LONG ACRE, LONDON

Sustainable Roofing for Landmark London Redevelopment



www.macgroupuk.com





ABOUT MAC

Five decades of roofing and envelope expertise.

With over 50 years' experience, MAC Roofing & Cladding is one of the UK's leading specialists in roofing, cladding and external envelope solutions. As a family-owned business with national reach, MAC combines long-standing values with the technical expertise and resources required to deliver major construction projects across a wide range of sectors.

From complex refurbishment and redevelopment schemes to major new build projects, MAC works collaboratively with clients, architects, contractors and manufacturers from the earliest stages to develop high-performance solutions tailored

to each building. This early involvement helps optimise system selection, buildability, programme efficiency and long-term performance, while identifying and resolving potential challenges before works begin on site.

With extensive experience in sustainable roofing, energy-efficient building envelopes and technically demanding installations, MAC combines specialist knowledge, experienced project teams and rigorous quality management to successfully deliver some of the UK's most challenging and high-profile projects.

PROJECT BREAKDOWN



Located in the heart of Covent Garden, 90 Long Acre underwent an extensive transformation to create 240,000 sq ft of premium workspace and 20,000 sq ft of amenity and retail space. On this high profile commercial scheme, MAC delivered a complex £5.8 million roofing package incorporating multiple waterproofing systems, blue and biodiverse roofs, hard landscaping and bespoke detailing across approximately 7,000m².



Client:
Lendlease



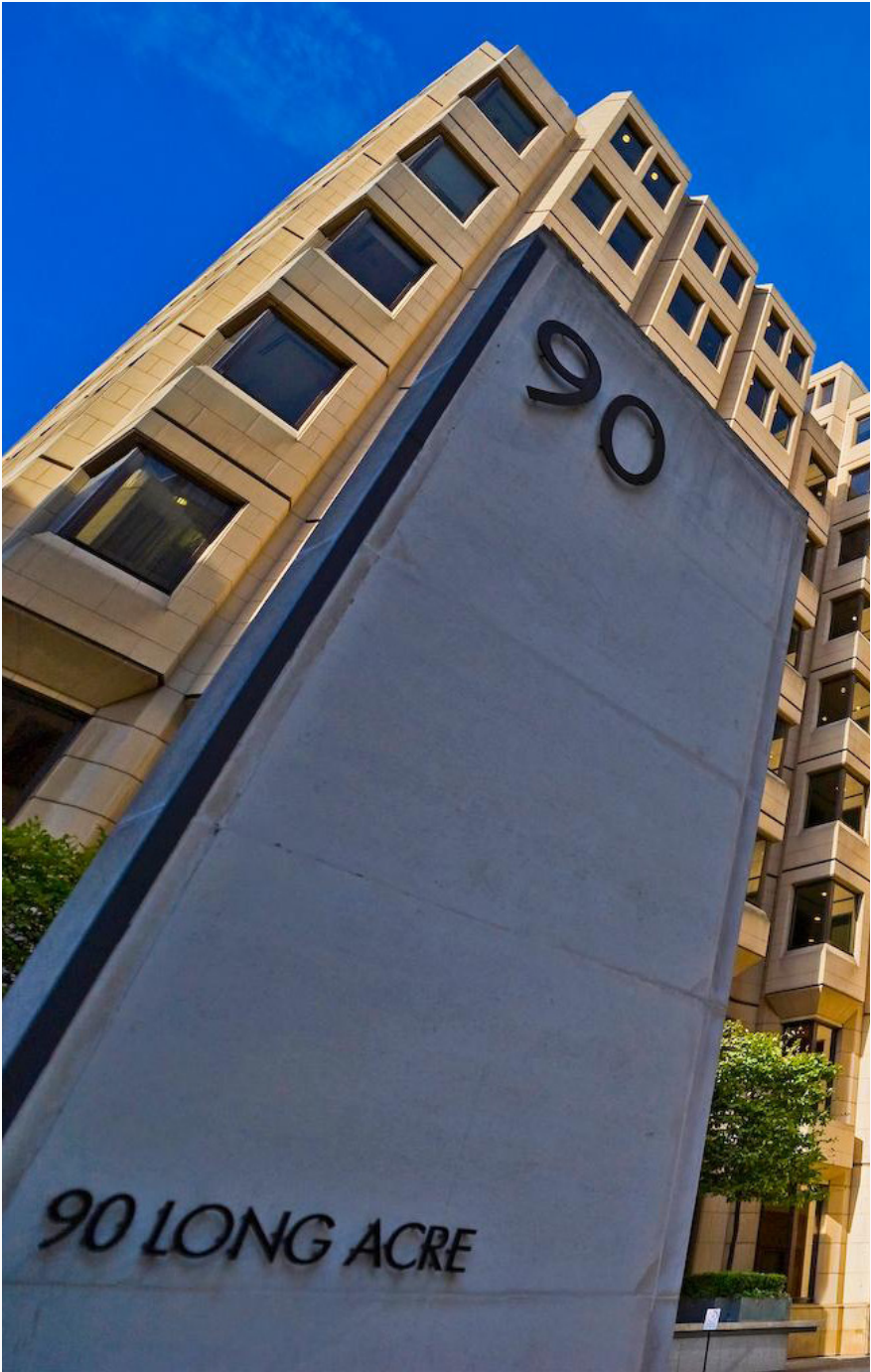
Contract Value:
£5.8 million



Location:
Covent Garden,
London



Sector:
Commercial



PROJECT OVERVIEW



Originally constructed in 1981 as First Chicago House, 90 Long Acre – now known as The Acre – has been extensively repositioned to create one of Covent Garden’s largest office developments.

More than 80% of the original structure was retained through a ‘cut and carve’ approach, helping to halve embodied carbon compared with

a complete new build. MAC’s extensive expertise and range of systems played an important role in the development’s ambitious environmental strategy, maximising the potential of the roof areas through a combination of high-performance waterproofing, blue roof technology, biodiverse living roofs and high-quality amenity spaces.



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Transforming a complex combination of retained and new structure required **meticulous design coordination** and a roofing strategy tailored to the demands of each individual area.

THE SOLUTION



MAC developed a multi-system roofing strategy tailored to the individual requirements of the different roof areas. The package incorporated BMI Icopal’s Parabit Solo hot melt and Sealoflex Ultima liquid waterproofing, BMI Rootbar systems, ACO blue roof technology, Sky Garden living roofs, Marshalls paving and specialist leadwork.

At Level 9, MAC worked closely with ACO to develop a blue roof attenuation solution capable of temporarily storing rainwater at roof level before releasing it into the drainage network at a controlled

rate. The separate attenuation system reduced prolonged hydrostatic pressure on the primary waterproofing while supporting the project’s wider sustainable drainage objectives.

Green and biodiverse roof areas were incorporated throughout the scheme, alongside landscaped terraces and amenity spaces, transforming previously functional roof areas into valuable environmental and recreational assets.

THE CHALLENGE

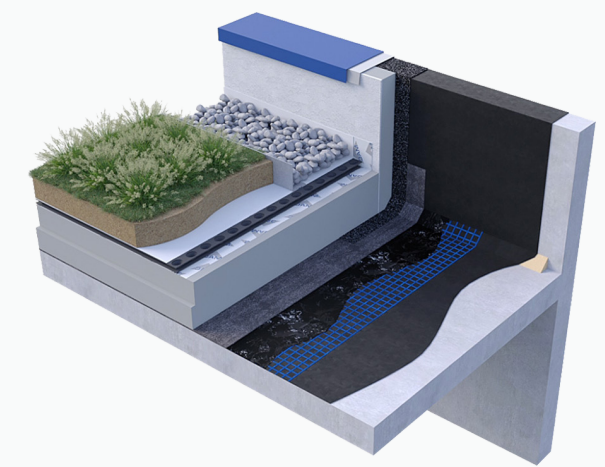
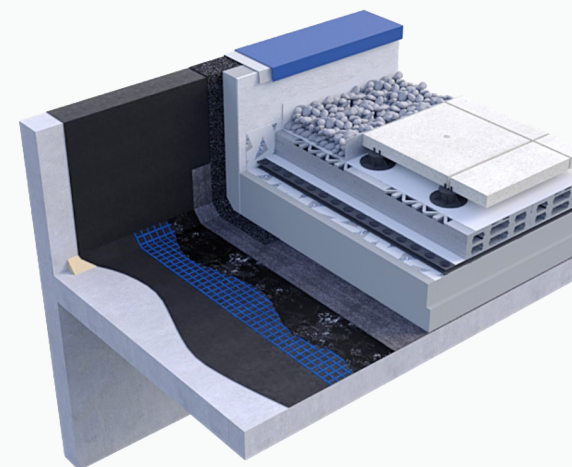


Combining major refurbishment with new construction created significant technical challenges. Existing roof levels, threshold heights and structural loading constraints all had to be accommodated while achieving demanding thermal, drainage and environmental performance requirements.

The incorporation of blue and living roofs added further complexity, requiring careful consideration

of system weights, insulation, buoyancy, drainage falls and sufficient substrate depths to support long-term planting.

Logistics presented another major challenge. Situated on a busy one-way street in the heart of Covent Garden, site space was extremely limited and delivery windows had to be carefully coordinated with other trades to minimise congestion and disruption to the surrounding public realm.



PROJECT DELIVERY



Successful delivery required extensive pre-construction planning and close collaboration between MAC, the client, design team, manufacturers and other specialist trades.

Design and installation workshops were used to review system build-ups, interfaces, sequencing and practical site considerations, with BIM 360 providing project and installation teams with access to approved technical information on site.

Particular attention was given to more than 100 penetrations across the higher-level blue roof areas. Each required complex pitch-pocket waterproofing and individually tailored insulation, attenuation components and paving. MAC created a full-size sample installation with the manufacturer's technical team, allowing the client and architect to review and approve the proposed sequencing and workmanship before installation progressed.



HEALTH, SAFETY & QUALITY



Health, safety and quality remained central throughout the project. MAC's HSEQ Team worked closely with the wider project team, supported by daily Safe2Start & Safe2Finish briefings, focused toolbox talks and regular inspections against project KPIs.

Quality assurance was equally rigorous, with installed works inspected on a two-week cycle

alongside additional checks by MAC's in-house Technical Services Manager. Flat roofing areas were electronically tested, while project documentation and QA records were captured digitally through Field View.

This structured approach ensured complex waterproofing details and multiple roof systems were installed in accordance with approved designs and manufacturers' requirements.

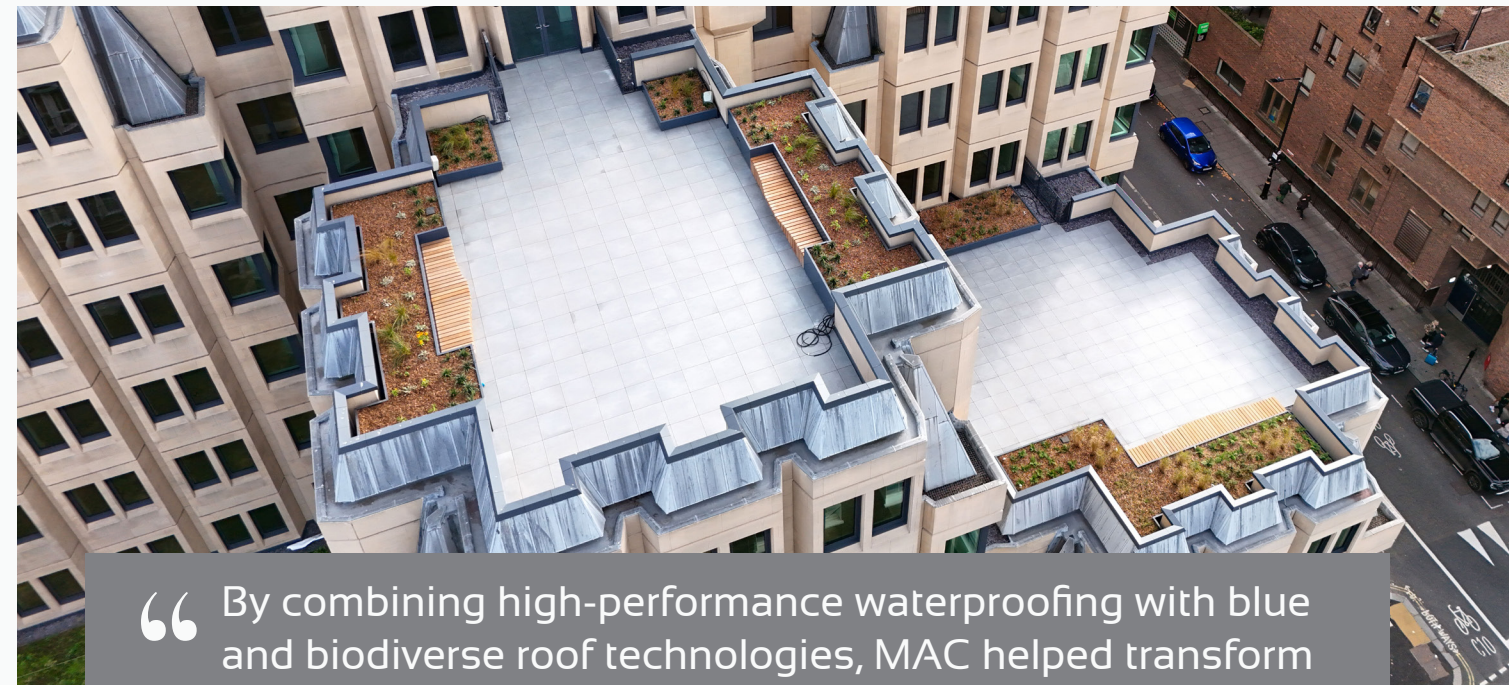
SUSTAINABILITY



Sustainable construction was fundamental to the redevelopment this project, with more than 80% of the existing structure retained and the completed building targeting BREEAM Outstanding and other leading environmental and wellness standards.

MAC contributed through responsible material selection, waste and carbon monitoring, and the

extensive use of blue and biodiverse roof systems. Special London wildflower mixes were also incorporated to encourage indigenous pollinators, while the blue roof manages surface water at roof level, reducing pressure on London's drainage infrastructure and helping minimise flood risk.



“By combining high-performance waterproofing with blue and biodiverse roof technologies, MAC helped transform the roofscape into an integral part of the building's sustainability strategy.”

THE OUTCOME



MAC successfully delivered a technically complex £5.8 million roofing package that makes a significant contribution to the environmental performance and architectural quality of this landmark Covent Garden redevelopment.

Through detailed design development and close collaboration with specialist manufacturers and the wider project team, MAC successfully integrated multiple waterproofing, blue roof, living roof and amenity systems across a challenging combination of retained and new structure.

The completed roofscape provides far more than weather protection, supporting biodiversity, sustainable rainwater management and high-quality outdoor amenity spaces while contributing to the project's ambitious sustainability objectives.

90 Long Acre perfectly demonstrates MAC's ability to combine specialist waterproofing expertise with innovative sustainable roofing technologies on complex, high-profile city-centre developments.



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