



Plan before (grey) and after (red)



AWARDS

5th Studio wins top retrofit prize

Judges of the 3R Awards chose the 'thoughtful' £3.4 million overhaul of a 1967 Brutalist accommodation block for the University of Cambridge, from schemes that prolong the life of buildings and reduce energy use

5th Studio has landed the top prize at last week's 3R Awards (Refurb, Rethink, Retrofit) for its Wolfson Flats retrofit project in Cambridge. The £3.4 million overhaul of a 1967 brick and concrete courtyard at the University of Cambridge's Churchill College scooped both the large housing

scheme category and the coveted Best Lower Carbon Building Project – effectively the awards' 'best of the best' accolade. The Cambridge and London-based practice remodelled 20 flats and 20 maisonettes in the three-storey structure providing a 10 per cent increase in usable floor area. External concrete

staircases were also replaced and insulation and solar thermal panels installed. Completed last summer, the postgraduate accommodation block has already reduced annual carbon emissions by 60 tonnes, with the maisonettes consuming 40 per cent less electricity and flats running on 15 per cent less power.

Tom Holbrook, director of 5th Studio, said: 'There is a magnificent legacy from the building boom of the 1960s that is just coming to the end of its natural life and needs rethinking. In an age of scarce resources, retrofitting is going to be one of the most important areas of reducing energy use in buildings.'

He added: 'There's something incredibly stimulating and creative in editing a building from another period.' Project director, Oliver Smith said: 'The thoroughgoing translation of the building's image, together with improvements to its space standards, fabric and >>

3R WINNERS IN FULL

**Housing (large) and Best Lower Carbon Building Project**

5th Studio (pictured above), Wolfson Flats, University of Cambridge

VALUE: £3.4 million

COST PER M²: £1,515

■ 40.5 kg/CO₂/m²/yr

Housing (small)

Penoyre & Prasad (pictured below), Retrofit for Living, London Docklands

VALUE: £72,570

COST PER M²: £733

■ 16.6 kg/CO₂/m²/yr (predicted)

Public Sector Building

ber:architects, Mayville Community Centre, Islington

VALUE: £1.6 million

COST PER M²: N/A

■ 6.2 kg/CO₂/m²/yr

Best Service Provider

Buttress Fuller Alsop Williams, Great Western Warehouse, Manchester

VALUE: £6.2 million

COST PER M²: £834

■ N/A

Offices

Allford Hall Monaghan Morris,



Angel Building, Islington

VALUE: £72 million

COST PER M²: £2,002

■ 19.19 kg/CO₂/m²/yr

Listed Buildings/Structures

Ian Ritchie Architects, North House, Westminster

VALUE: N/A

COST PER M²: N/A

■ 63.1 kg/CO₂/m²/yr

Public Sector – Education Building

Cottrell & Vermeulen Architecture, Westborough Primary School zero-carbon refurbishment, Westcliff-on-Sea

VALUE: £1.35 million

COST PER M²: £1,089

■ 18 kg/CO₂/m²/yr

Public Sector – Higher Education Building

Shepherd Epstein Hunter, Percy Gee Building, University of Leicester

VALUE: £12.6 million

COST PER M²: £1,400

■ 52 kg/CO₂/m²/yr

Retail and Leisure

Make, The Montpellier Chapter Hotel, Cheltenham

VALUE: N/A

COST PER M²: N/A

■ 54.4 kg/CO₂/m²/yr

Cultural Buildings

Bennetts Associates, Royal Shakespeare and Swan Theatres transformation, Stratford-upon-Avon

VALUE: £57 million

COST PER M²: £5,000

■ 138 kg/CO₂/m²/yr

■ CARBON EMISSIONS

performance, were realised through developing and testing a prototype.'

The practice was selected from the category winners by a judging panel that included government chief construction advisor Paul Morrell, former RIBA president Ruth Reed, AJ sustainability editor Hattie

BENNETTS ASSOCIATES



BUTTRESS FULLER ALSOP WILLIAMS



Hartman and Simon Sturgis of Sturgis Associates.

AJ editorial director Paul Finch described 5th Studio's project as a 'thoughtful piece of work where necessary retrofit was combined with additional space and amenity to provide long-term asset improvement.'

The prize for small housing

went to Penoyre & Prasad, for its £82,220 Retrofit for Living project, which overhauled a 1990s three-bedroom house in London's Docklands, as one of 87 projects backed by the government's Technology Strategy Board. Elsewhere, Bennetts Associates' Stirling Prize-shortlisted Royal Shakespeare and Swan Theatres

COTTRELL & VERMEULEN ARCHITECTURE



SHEPHERD EPSTEIN HUNTER



transformation in Stratford-upon-Avon won top prize in the cultural building category. Ber:architects' £1.5 million Mayville Community Centre in London topped the public sector building category, and is expected to become the UK's first non-domestic retrofit to be Passivhaus certified.

The higher education prize went to Shepherd Epstein Hunter for its £17 million revamp of the University of Leicester's Percy Gee student union building, while Cottrell & Vermeulen's £18 million Westborough Primary School zero-carbon refurbishment in Westcliff-on-Sea won the

PENROYRE & PRASAD



JUDGE'S VIEW

This year's 3R Award-winners are proof that a creative approach to reusing existing buildings can simultaneously extend a building's life, improve its appearance and save energy. Transformational design, which updates a building for 21st-century living, is as important as energy efficiency. Without exception, the 3R Awards' winning projects improve upon the design of the buildings as originally designed.

5th Studio's sensitive reworking of Churchill College's Wolfson Flats at the University of Cambridge uses a palette of external render and timber – unremarkable materials that are trademarks of sustainable refurbishment – to enhance both the visual appearance and environmental performance of student housing originally built nearly 50 years ago.

But the refurbishment process cannot stop when the keys are handed over to a client. Building performance monitoring is an essential tool to accurately assess the success of these projects.

The comparison of baseline energy data prior to refurbishment to performance after retrofitting ensures that the aspirations of a project have been met and provides compelling proof of the extent of savings that can be achieved on future projects.

The 3R Awards are to be commended for highlighting this often unsung aspect of architectural practice.

Hattie Hartman,
AJ sustainability editor

education building category.

The 3R Awards are supported by the AJ, *Construction News* and *New Civil Engineer*, and celebrate work that 'prolongs the active life of buildings and infrastructure, helping the lower energy and lower carbon agenda'.
Merlin Fulcher