

Sarah Wigglesworth
*Bespoke, sustainable,
playful design at
Sandal Magna primary
school in Wakefield*

07.10.10

The Critics
*John Pawson at the
Design Museum*

Rooftop development

How David Kohn Architects tacked a rooftop pavilion onto Magdalen House in south London



£4.95 THE ARCHITECTS JOURNAL WWW.ARCHITECTSJOURNAL.CO.UK

4 0 >
9 777003 846134

THE ARCHITECTS' JOURNAL
GREATER LONDON HOUSE
HAMPSTEAD ROAD
LONDON NW1 7EJ

COVER PHOTOGRAPH: WILL PRICE

HOW TO SUBSCRIBE TO THE AJ

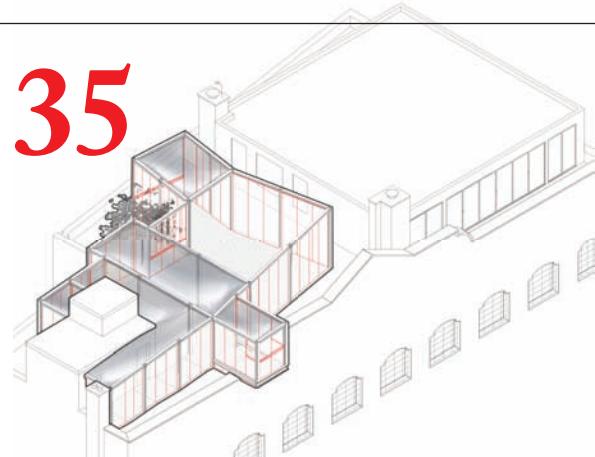
Visit subscription.co.uk/aj/akus
or call 0844 848 8859 & quote
priority code 'AKUS'

22



Contents

35



43



News

- 07 Zaha Hadid speaks to the AJ as she picks up the Stirling Prize for the first time
- 10 Hadid follows Stirling victory with designs for landmark Beijing office
- 12 Starchitect Ole Scheeren on leaving OMA and setting up in London
- 14 Foster ousts Nouvel on City of London job
- 16 Astragal ferrets out the gossip at the Stirling Prize dinner

This week

07.10.10

- 18 Leader & Letters Zaha Hadid's Stirling Prize win promotes the commodification of architecture, says Christine Murray
 - 22 Building study Sarah Wigglesworth Architects' Sandal Magna Community Primary School in Wakefield
 - 35 Technical & Practice How David Kohn Architects tacked a rooftop pavilion onto Magdalen House in south London
 - 43 The Critics The inner workings of John Pawson's architecture are exposed in the Design Museum's latest exhibition
Plus
 - 49 Top jobs FOA; Place Careers
- AJ **Stirling Prize 2010** Photographs, interviews and gossip from the biggest night in British architecture
www.architectsjournal.co.uk/stirling

Technical & Practice



Rooftop development

David Kohn Architects' Skyroom demonstrates what an imaginative and resourceful project team can achieve on London's skyline

By *Felix Mara*

ALL IMAGES BY WILL PRICE

Key points

Structure

Existing roof couldn't take additional load

Planning

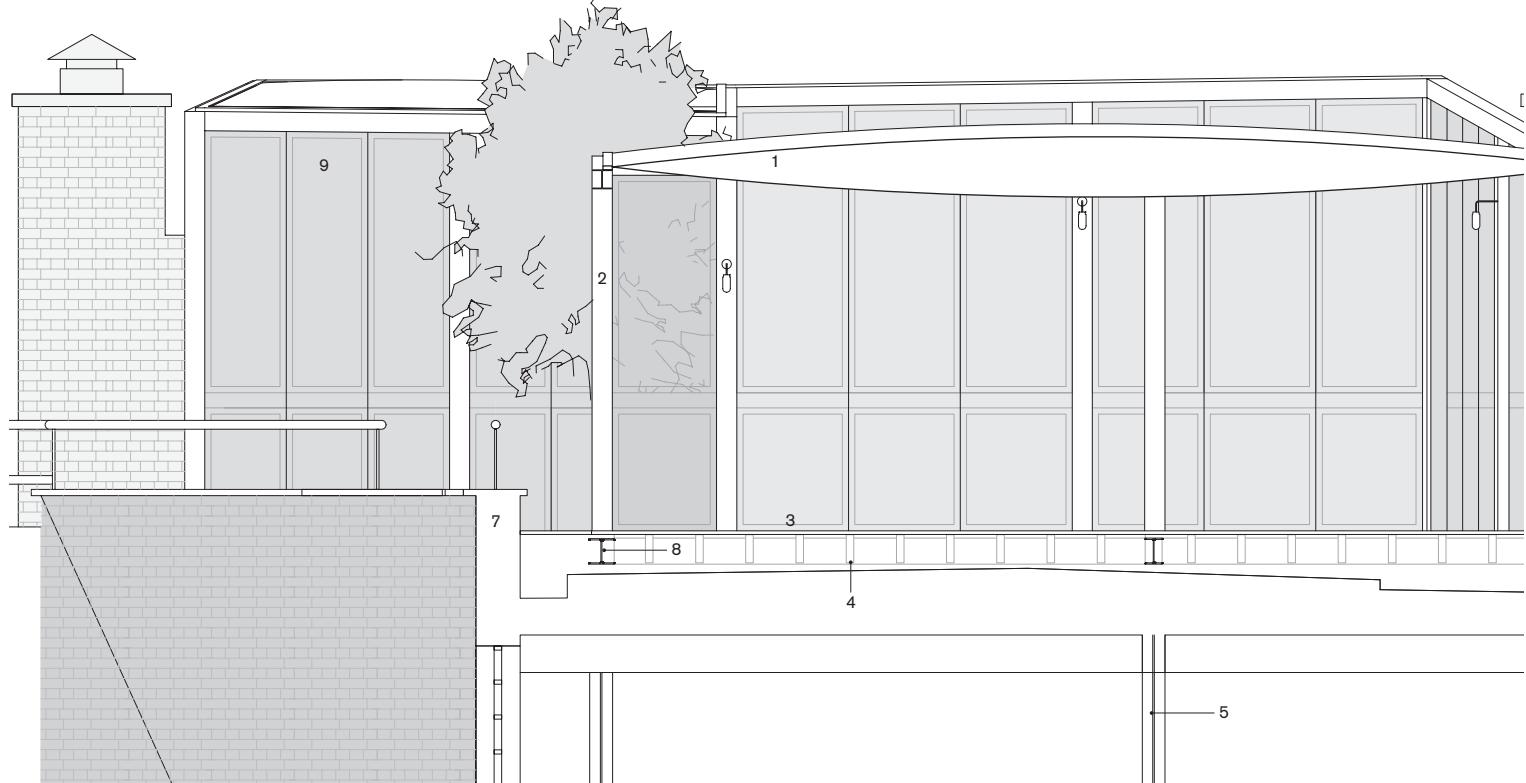
Located in a conservation area

Programme

Constructed in less than eight weeks

The key to the success of David Kohn Architects' Skyroom, a new rooftop pavilion and venue for the Architecture Foundation near London Bridge, was the solution of an equation with four variables. First, the project was to be built on top of Magdalen House, an existing building with a roof deck which could not carry any additional load. Second, the construction period was only eight weeks. Third, the budget was limited – the construction cost was only £150,000. The fourth, >>

Section AA



and most demanding variable was quality: Skyroom had to achieve distinction within the given constraints, and satisfy the aspirations of the architect and the requirements of the planners responsible for the north Southwark conservation area. Here we look at the four variables in this equation from the point of view of the structural engineer, the general contractor and the architect.

The Skyroom was initiated by Sarah Ichioka, director of the Architecture Foundation, which has its headquarters in Magdalen House. Its landlord, Lake Estates, 'agreed to develop its rooftop as a venue for public lectures, social gatherings or quiet contemplation,' says Ichioka. It was also an opportunity for the Architecture Foundation to pursue its policy of encouraging talented new practices to build experimental work and promoting cultural exchange between British

and international practices.

For planning permission, Lake Estates chairman Roger Zogolovitch explains that, by applying to build the pavilion as a temporary structure, the project team was able to avoid the default contextual approach that often results in pastiche. Some of London's most interesting contemporary developments, for example the Serpentine Pavilions, have been granted planning permission as temporary buildings. In the case of the Eiffel Tower and the London Eye, temporary structures have endured.

Nevertheless, Southwark Council remained vigilant of building in this conservation area, and required high-quality finishes that would age well. It also wanted to limit the pavilion's impact on Magdalen House, so the Skyroom's typical perimeter walls are set back from the existing parapet. This reduced scaffolding

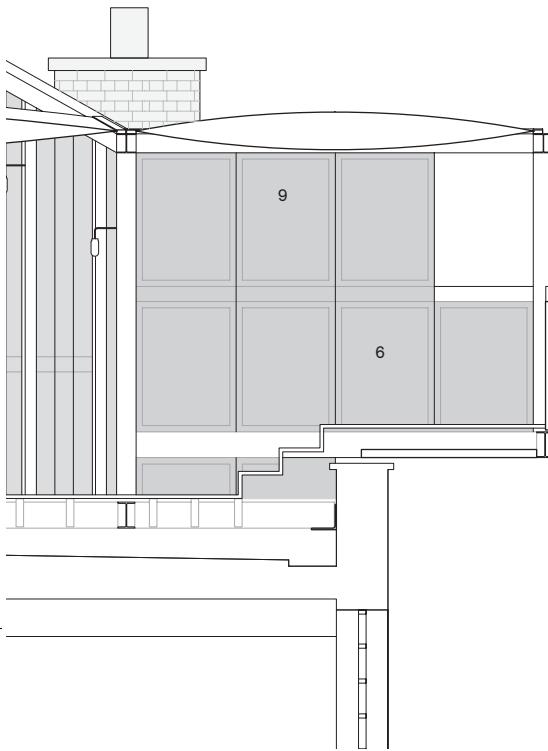
costs on a project with an exacting budget. 'We funded the development with the benefit of support from manufacturers,' says Zogolovitch. Manufacturers who market their products to design-orientated practices were approached. Izé supplied the light fittings at cost, the Expanded Metal Company the mesh cladding, Architen Landrell the ETFE roofing, and the inflatable roof came from Inflate.

Listening to the wild and rhythmical music of the klezmer band that performed at one of Skyroom's opening parties, I imagined the frantic activity during the pavilion's construction as we stood on the balcony lurching over the red brick parapet of Magdalen House. The music must have expressed the elation and relief that the project team felt after it hit its target for quality, programme and cost. ■

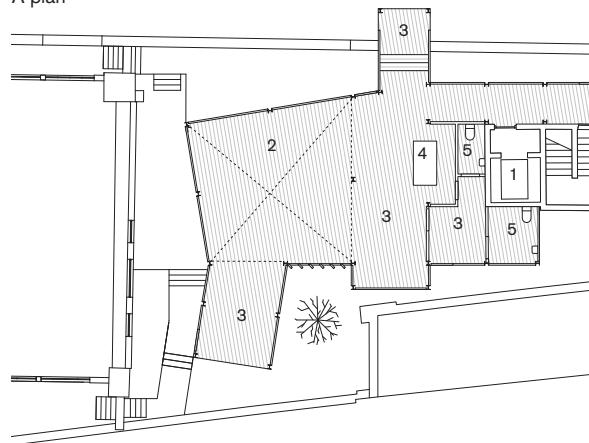
Previous page

View towards BFLS' Strata building. Materials used include larch deck, ETFE roof, mesh screens and 152 x 152mm columns and beam sections

Far right Aerial view looking south



A plan



0 4m N

The structural engineer's story: building on an existing roof

Although the Skyroom, as built, was designed as a permanent structure with a life of 60 years, we initially looked at temporary options, including aluminium-framed canopy stages. These may have been viable for a structure at ground-floor level, but the wind loading on the roof of Magdalen House was too high and it was too difficult to hold the structure down. The need for counterweights also precluded a prefabricated structure of this type, so we designed an independent deck with bolted connections, using the principle of a moment sway frame, that wouldn't overturn or uplift.

Off-site, structural members were prepared for assembly, but they had to be craned in as individual components. Although the connections had to be very precise and the required quality of finishes presented us with challenges, the structural analysis and detailing wasn't especially difficult. But the project did rely very heavily on team effort and the fact that we'd worked with the steelwork supplier, Multisteel Construction, before was an asset.
Andrew Ilsley, project director, Form Structural Design



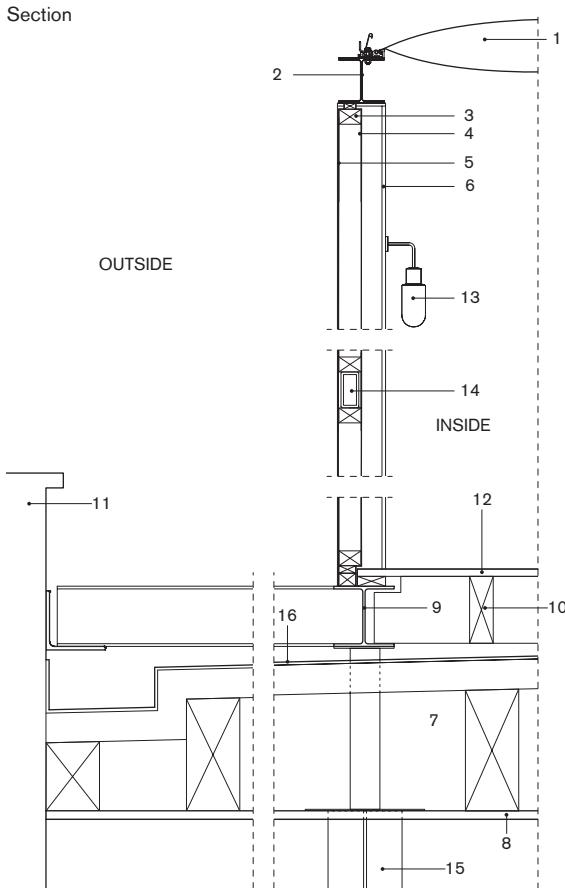
The contractor's story: working to a tight programme

Having previously shelved the project, Lake Estates gave it the go-ahead with only eight weeks to go until the London Design Festival. In fact, the construction period was further truncated because we had to wait until the weekend to get access to the site and there was torrential rain for a week. We often worked 14-hour days.

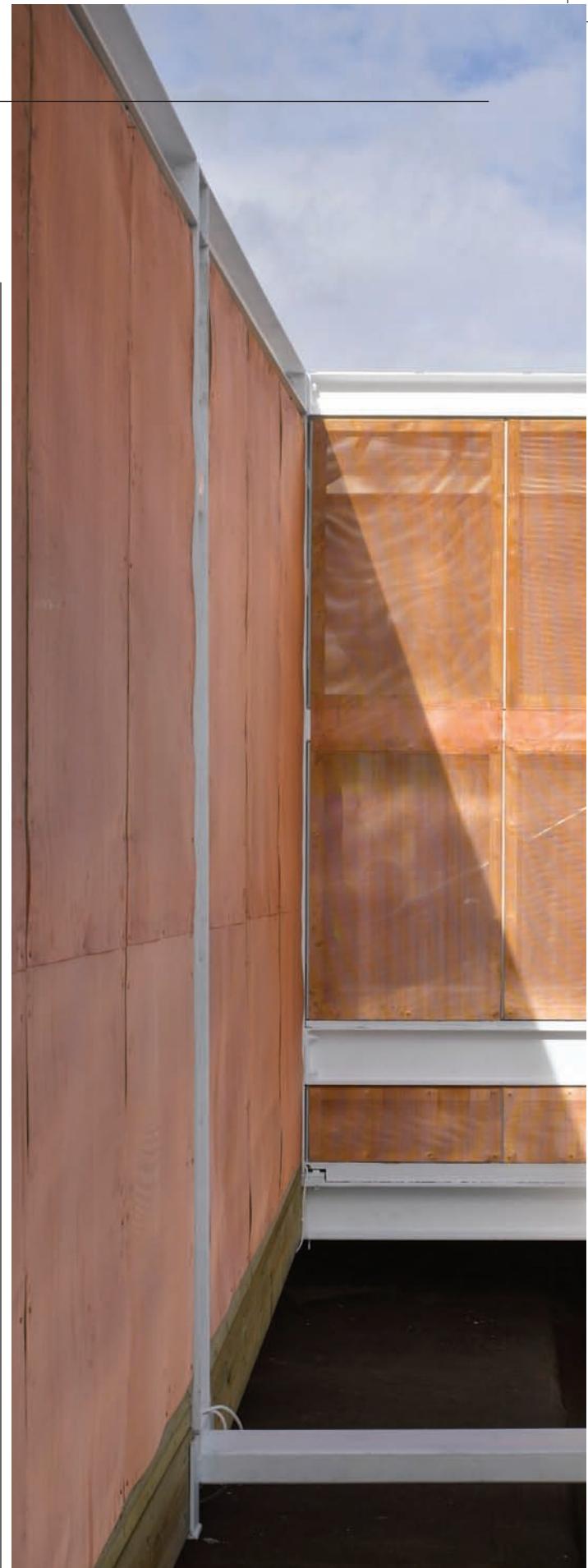
The roof of the existing building couldn't carry any additional load and its structure had cast-iron beams and columns, with a central spine. The steel-framed deck of the Skyroom comprised 203 x 203 x 46mm UC beams, with C24 timber joists. It was fixed to the cast-iron columns through the existing roof and also bolted to the existing walls. We also installed a Kemperol membrane and larch decking. Although the frame above the deck was lighter, with 152 x 152mm columns and beams with RHS rails, the overall weight of the steel may have been as much as 25 tonnes. Because of time constraints, our working methods were somewhat ad hoc, but we had to work to erection tolerances of $\pm 5\text{ mm}$ to accommodate the mesh panels, which were fabricated off-site.

Mark Abrahams, director, REM Projects

Section



Right View looking west from parapet overlooking Tooley Street, showing mesh screens with moiré effect







The architect's story: making a virtue of necessity

Structure and materials were chosen for their lightness and transparency. The white steel structure is like a drawing in space, marking the rooftop's territory and framing views. We minimised the number of section sizes for visual effect, working with readily available materials. The stainless steel and copper mesh panels create moiré patterns that lightly obscure their surroundings and the ETFE cushions continue the enclosure's fabric-like qualities.

We broke the design into packages, so the Skyroom feels assembled and lightweight. It develops our interest in contradictory effects: the way proportion, scale and structure suggest a relationship to the ground, while materials and expression suggest an opposing lightness and the sense of being tethered to the earth rather than standing upon it.

The Skyroom celebrates rooftops – under-used urban resources, particularly in London, which the mayor has promoted since publishing the report *Living Roof Case Studies* in 2005. Stepping out of the lift, visitors enter a courtyard, which frames views of the Shard. Four adjacent niche spaces provide intimate settings and a louvred screen frames a black tupelo tree.

David Kohn, director, David Kohn Architects

Credits

Start on site August 2010

Contract duration June-September 2010

Gross internal floor area 140m²

Form of contract JCT minor works

Total cost £150,000

Cost per m² £937

Client Lake Estates

Architect David Kohn Architects

Commission consultant Architecture Foundation

Structural engineer Form Structural Design

Lighting consultant David Kohn Architects

Project manager David Kohn Architects

Landscape architect Jonathan Cook

Landscape Architects

Main contractor REM Projects

Annual CO₂ emissions Not supplied