

**The Stirling Prize: What put the  
six buildings on the shortlist**  
**Salary survey delivers a bonus**  
**Distinction rebellion: Muiyiwa Oki**

**The RIBA Journal**  
September 2023  
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## 1 Buildings



### STIRLING PRIZE SHORTLIST 07

Introducing our reviews of the six weighty schemes

### COMMUNITY 08

Adam Khan's Central Somers Town Community Facilities and Housing is bold and transformative

### GALLERY 14

Technical expertise underpins Witherford Watson Mann's elegant rearrangement of the Courtauld Institute

### HOUSING 24

Sergison Bates has designed an oasis behind busy streets in Lavender Hill Courtyard

### HOUSING 32

Apparata's A House for Artists lays out its philosophy for living

### UNIVERSITY 42

The central stair is the lynchpin at Warwick's new Faculty of Arts by Feilden Clegg Bradley Studios

### OLDER LIVING 50

Mæ Architects' John Morden Centre for seniors is part of an ambitious community plan

## 2 Intelligence



### PRACTICE 65

Bushra Mohamed of Msoma on the resilience you need to go it alone

### EMPLOYMENT AND EARNINGS 66

Average earnings shoot up in a return to their pre-pandemic trajectory as workforce contracts

### FOUNDATIONS 71

Tread lightly: greener building design starts at the bottom

### On the cover

Clockwise from top: Lavender Hill Courtyard photographed by David Grandorge; John Morden Centre photographed by Jim Stephenson; Courtauld Institute photographed by Philip Vile; Central Somers Town Community Facilities and Housing, photographed by Lewis Khan; A House for Artists photographed by Apparata. Centre: Warwick University Faculty of Art photographed by Hufton & Crow

### ENVIRONMENT 74

Biodiversity Net Gain regulations are on the way

### SUSTAINABILITY 77

How low-carbon bricks can cut construction's environmental footprint

### SAFETY 40

How to reduce fall fatalities

## 3 Culture



### PHOTOGRAPH 85

Trevor Clark's images of the 70s package holiday boom showed sun and fun

### LEADER 87

Bath stadium design debate reopens wider controversies

### OPINION 88

Could today's adapt and refit ethos see high-tech return, asks Will Wiles

### PROFILE 90

New RIBA president Muyiwa Oki promises a critical stance on the institute and profession

### REVIEW 95

The Royal Academy's Herzog & de Meuron show explores the process and thinking of building

### OBITUARY 99

Michael Hopkins, high-tech pioneer and Royal Gold Medallist

### PUBLIC SPACE 103

After the car: Ideas for the space left over when traffic is banned

### PARTING SHOT 114

Newcastle Civic Centre by George Kenyon: grade II listed, but once labelled a 'flamboyant folly'

'Tales speak of thieves using the cottage as a hideout'; 'Those tiles are key pieces of the puzzle of the town' Postcards from the profession – where do your peers holiday? [ribaj.com/postcards](https://ribaj.com/postcards)



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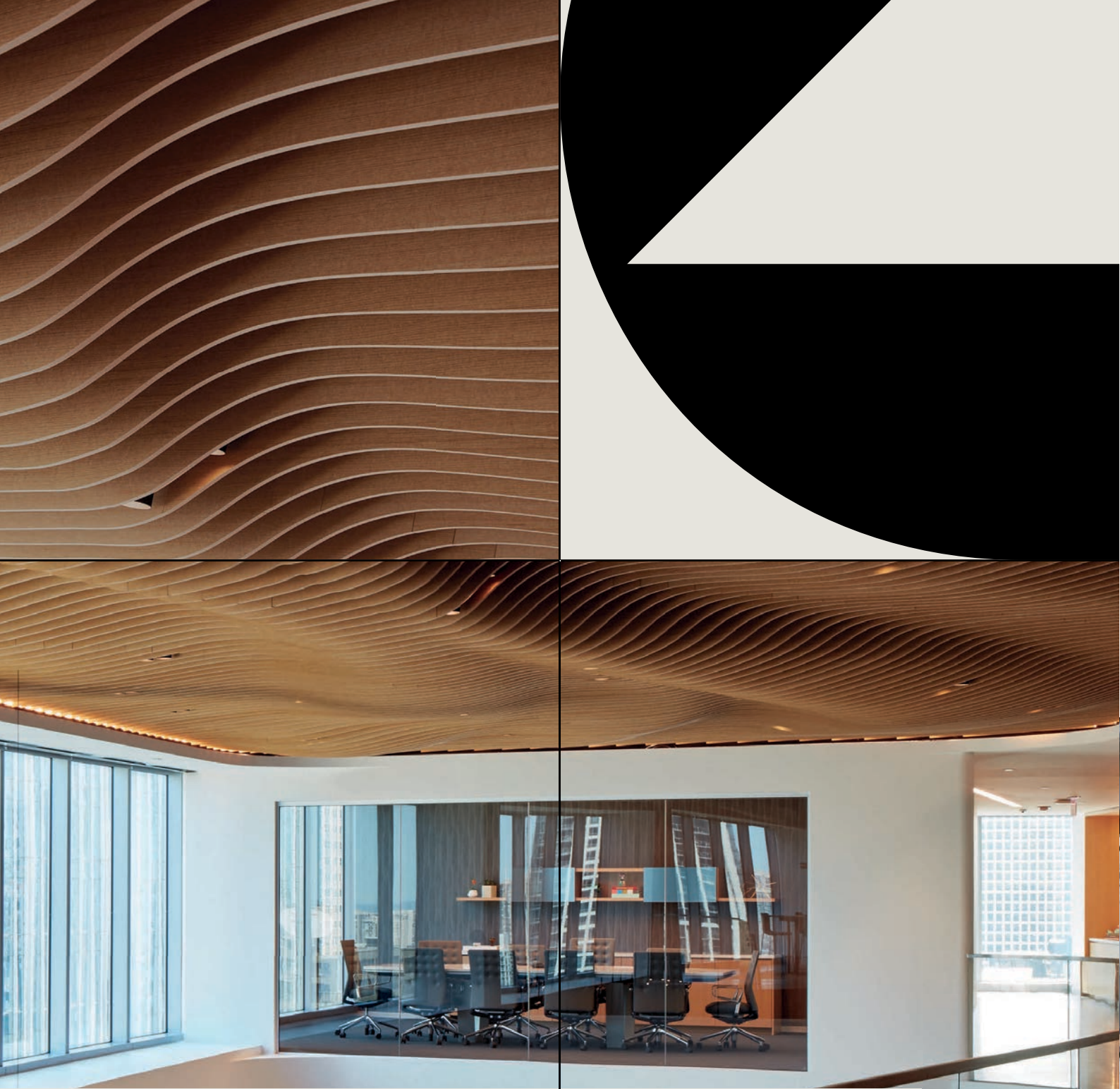
The Forge, Upton Park, uses an innovative Blue40 Roof System that restricts and delays runoff from the site, equating to 60% of the equivalent green field flow rate.

ARCHITECT | RM\_A

Photo: Ben Luxmore







Race to the finish  
— Stirling shortlist reviews  
08

Building better  
— MacEwen Award opens  
58

07

# 1: Buildings

**2023 RIBA STIRLING PRIZE SHORTLIST**  
**Read the full story:**  
[ribaj.com/riba-awards](https://ribaj.com/riba-awards)

The RIBA Stirling Prize shortlist has been revealed. Six buildings, each special in its own way, and three creating new homes, have made it to this stage. We review each one in detail on the following pages.

A House for Artists, designed by young practice Apparata, rethinks adaptable, sociable living in Barking. Sergison Bates Architects' Lavender Hill Courtyard in Clapham gives a different complexion to build to rent with its delicious courtyards and thoughtful plan on its backland site. As Camden redevelops Central Somers Town, Adam Khan Architects has built a mix of social housing and community facilities, inside a robust brick shell with swooping inverted arches. Mæ brings a new level of joy to older living with its colonnades around an old cypress and lofty daylight volumes alive with

the buzz of sociability at its John Morden Centre in Blackheath. The Courtauld Institute of Art, in the grand buildings of Somerset House in central London, has been subtly opened up and connected by Witherford Watson Mann. And Feilden Clegg Bradley Studios has brought together the Faculty of Art at the University of Warwick, giving it a collaborative tool in its new central staircase.

The shortlist collectively shows architects focusing on the plan, piecing together a jigsaw of existing functions with awkward conditions and plots, and making sense of them. And there is a certain gentle weight in the way they exist in their place and their details, creating confidence in a robust place to live, play, meet and study, even as they settle into lively use. ● Eleanor Young

**Below** Faculty of Art at the University of Warwick by Feilden Clegg Bradley Studios.

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# Ten out of ten

Adam Khan's community and housing scheme in Somers Town, London, kicks off this review of the 2023 Stirling shortlist – a regenerative, transformative community intervention

Words: Isabelle Priest Photographs: David Grandorge



The main entrance to Plot 10, with its British Library red, and football pitch and adventure playground poking out above.

Section AA



- 1 Social enterprise unit
- 2 Courtyard garden for business space
- 3 Apartment tower
- 4 Plot 10 play space
- 5 Plot 10 adventure playground
- 6 Rooftop football pitch
- 7 Polygon Road park
- 8 Site of Hayhurst & Co's Edith Neville Primary School
- 9 Charlton Street

'Somers Town is an outdoor museum of social housing,' explains architect Adam Khan. 'The area hasn't gentrified. It's mixed, with lots of children. It suffers from overcrowding; not enough balconies and outdoor space for the many flats. People don't want to let their kids play on the street. In the 1920s, the area was a focus for Jeffrey Jellicoe – a missionary priest, reformer and a pub landlord – who set up here to pioneer social housing. He coined the phrase: "Housing is not enough. You need social infrastructure".'

Jellicoe's work expanded into all fields – including rooftop playgrounds for nursery schools and artwork for housing projects. This approach or motto has also been a driving force behind Khan's project Central Somers Town Community Facility

## IN NUMBERS

1733m<sup>2</sup>  
GIA

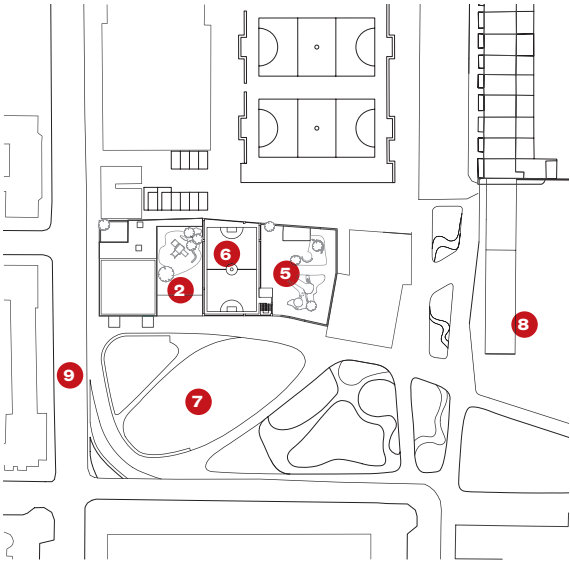
Confidential  
contract value

**Below** The external pink bricks are the economical choice, often found round the back of cinemas, but appear so well detailed here that you wouldn't know.

and Housing. It is the practice's second scheme in the area, which comprises the often-forgotten block of streets between St Pancras and Euston stations to the east and west, Euston Road to the south and Camden to the north. It's densely populated, yet can be eerily quiet at times for such an inner London location.

Khan's first project in Somers Town was the New Horizon Youth Centre, a dramatic copper roofed gem-like building that completed in 2012 and is attached to one of the original London County Council housing schemes, the Ossulston Estate along Chalton Street. Central Somers Town Community Facilities and Housing, however, is a bold and comprehensive set of standalone buildings. It includes a redesigned children's adventure play centre called Plot 10 that has been

Site plan





# Buildings Stirling Prize shortlist

various programmes. To its west is a small footprint six storey housing tower that helped fund the whole redevelopment. It has two apartments per floor, each triple aspect with one view to the front park, side and back, meeting the council's higher required levels of daylight. Balconies on the first three floors of apartments are recessed for privacy, whereas those on the upper two floors project generously into the tree canopy and are square, shaped like a room so that a table and chairs can be put out there.

At the ground floor, spilling into the void beside the tower, is the social enterprise space. This was originally designed for a nursery, but is occupied by Scene & Heard, a professional theatre company and dramatic arts charity for local children. Next to this is Plot 10's building – a formidable upgrade from the log cabin it previously inhabited on the site.

## SUSTAINABILITY DATA

- 112**  
predicted on-site renewable energy generation (kWh/yr)
- 6**  
predicted potable water use (Litre per person per day)
- 0**  
actual annual gas usage (kWh/m<sup>2</sup>/yr)
- 33**  
actual annual electricity usage (kWh/m<sup>2</sup>/yr)
- 421**  
whole building embodied / whole-life carbon (KgCO<sub>2</sub>eq/m<sup>2</sup>)
- RIBA Stage 7 assessment for housing only, RICS modules A1-A5**

**Right** 'The hydraulic windows meant that we could open the building on three sides and have air flowing through after lockdown. We had to do bubbles of 15 children. We stayed Covid-free period because of them,' explains Warren.

**Below** Plot 10's walled adventure playground. A lift to the football pitch makes slides accessible to wheelchair users. French doors from the main play space are usually open all day.

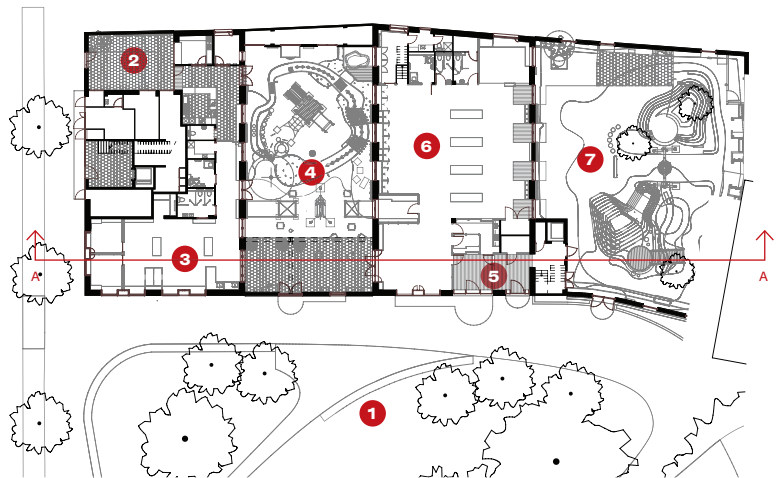
The celebratory public park frontage with its swooping parapet and arched shop windows that display the various work and play taking place inside.

running in since the 1970s, a social enterprise facility and 10 apartments for social rent. It is part of the London Borough of Camden's regeneration programme to revitalise and refocus the centre of the district to improve wellbeing, quality of life, inequalities, safety and housing provision. The masterplan was by DSDHA, delivered with four other practices including Adam Khan Architects.

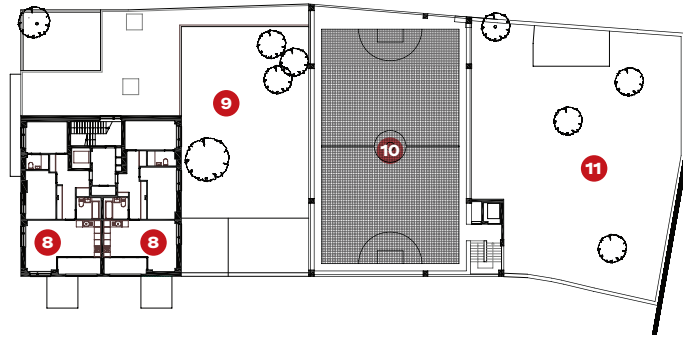
A guiding principle for the masterplan was to lose no open space. The community facility and housing sit on the side of the Plot 10 adventure playground, along the northern edge of a green public square, which it shares with Hayhurst and Co's Edith Neville Primary School (also a RIBA National Award winner) on the eastern side.

This elevation on the park displays the site's

Ground floor plan



First floor / roof plan



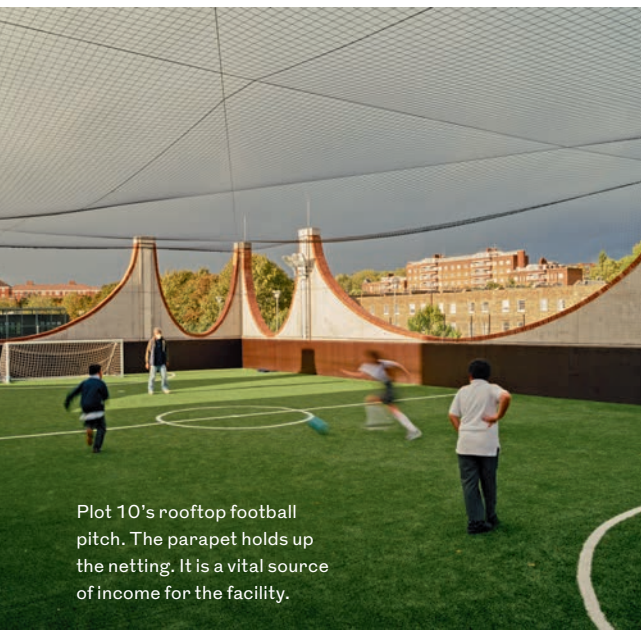
- 1** Polygon Road park
- 2** Housing communal entrance
- 3** Social enterprise unit
- 4** Outdoor space for enterprise unit
- 5** Plot 10 secure entrance
- 6** Plot 10 play space
- 7** Plot 10 adventure playground
- 8** Social rent apartment
- 9** Void over garden
- 10** Rooftop football pitch
- 11** Void over adventure playground

0 10m

It is part of a programme to improve wellbeing, quality of life, inequalities, safety and housing provision







Plot 10's rooftop football pitch. The parapet holds up the netting. It is a vital source of income for the facility.

IT'S NUTS – IN A GOOD WAY

'The building looks like a factory. It is built to withstand hard play. It helps empower children. Each day is nuts. Children come here to run around, do arts and crafts, play outside on the adventure playground, do sports, but there are also quiet corners. They get to play with things that they might not have at home – and they get space and time, with staff who are all qualified playworkers. I've been working here for 30 years. I first came as a parent of a six-year-old. I saw what the place could do for kids, and I started to help as a volunteer every day for three years. Many of the children who come here wouldn't mix or know each other outside of Plot 10. The place allows them to develop on an emotional and social level. The children – and adults – take the friends and relationships they make here with them through life. I've seen three generations now. It's a community within a community.'

Sally Warren, manager, Plot 10

Inside is a huge flexible concrete shell. The interior is palatial; tall ceilings giving a civic quality, even though the building is for little people, between the ages of four and 11 (up to 70 of them). A handful of separate rooms are made of robust Douglas fir partitions, which can easily be adapted over time.

On the roof of this is the football pitch, an essential part of the Plot 10 brief. The children wanted it, but it is also a vital source of income as it is let out to the community for parties and sports. Back at ground level, the playroom opens into Plot 10's new adventure playground with sandpits, bark-style flooring, and a huge climbing structure with slides that are accessible from the lift in the main building so that they are available to all. The idea is for children to explore independent and social play.

All along the frontage the building interacts with the area and street. Its red glazing frames recall the nearby British Library. Arched doorways and windows at ground level act like shop windows for display – showing outfits used by the theatre charity, or art and work made by the children



that attend Plot 10. These frontages are deep, with internal blinds for privacy, preventing solar gain and allowing wall depth for insulation. At the upper levels, the frontage is animated by its swooping parapet. Is it a sandcastle, is it an architectural bunting? It is open to interpretation, but whichever way it presents an upbeat and celebratory building, transformative and well-loved by Somers Town. ●

**Below left** An upper apartment kitchen with dining area and sliding doors to the generous balcony. Each apartment is for social rent.

**Below** The social enterprise space, currently occupied by Scene & Heard. Glass and Douglas fir partitions could easily be adapted in future.



Credits  
**Architect** Adam Khan Architects  
**Contractor** Neillcott Construction  
**Structural engineer** Price & Myers  
**Environmental / M&E engineer** Max Fordham  
**Landscape architects** Jonathan Cook Landscape Architects, LUC Landscape Architects  
**Sustainability and acoustic engineer** Max Fordham  
**Adventure playground engineer** Apes at Play  
**Graphic design** Objectif

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# Courtauld reconnects

**Buildings**  
Stirling Prize shortlist

I have long been bemused by the Courtauld Institute of Art, which seemed to dissuade visitors to its remarkable art collection with an off-putting dark entrance in the otherwise welcoming Somerset House on London's Strand. Now Witherford Watson Mann Architects' £26.5 million Stirling Prize shortlisted project has carved open and made sense of the blocks for the university, gallery and conservation work of this institution – all this in just the first phase of ongoing works.

The palatial neo-classical block with deep incised rustication obscures the fact that Sir William Chambers arranged this like a terrace to house nine organisations in the 1770s, each with their own separate territories. With some focused interventions WWM has eased the routes through, creating a gentle circulation route for visitors and works of art, turning fussy galleries into simpler, lighter spaces in the grade 1 listed building.

Witherford Watson Mann won the project through an open OJEU competition, fresh from its 2013 Stirling Prize win for Astley Castle, which had been a precision process of demolition, rebuilding and retention. With similar strategies Courtauld Connects readies the institution for the return of decanted art students to the site with its biggest move, opening up the vaults. This included



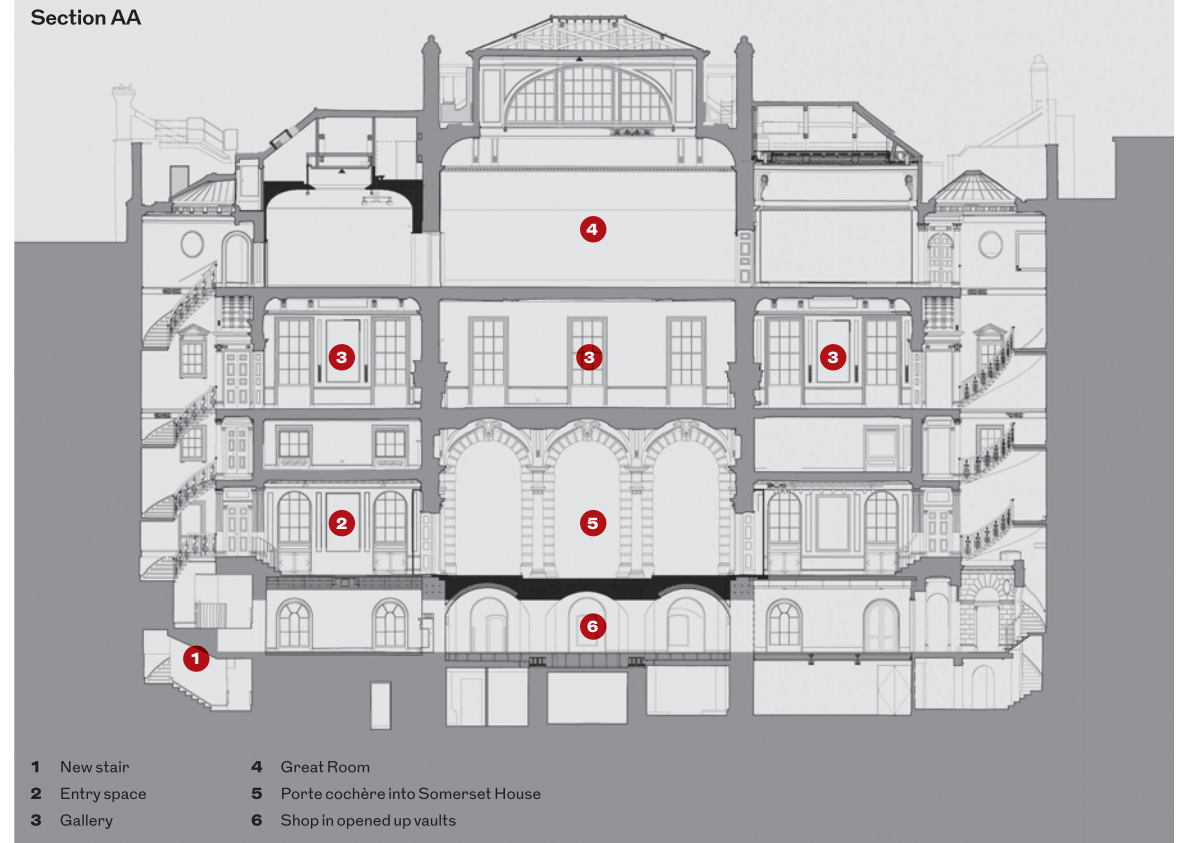
**Opposite** Basement barrel vaults converted to fan vaults connect to Somerset House visitors and students.

**Above** A seamless ramp replaces awkward steps at the side of the porte cochère.

Seemingly simple moves belie the complex technical puzzles that enabled Witherford Watson Mann to improve flow and delight at the London gallery

Words: Eleanor Young Photographs: Philip Vile

Section AA







excavation to create level floors with sufficient head height, cutting through the brick vaults. The sleek new concrete structure matches the brick vaults in solid grandeur and will ultimately link the gallery to the student areas, perhaps with a café that opens onto the sunken two-storey lightwells that bring a filtered light to this level – although for now it is an oversized gallery shop.

But for gallery visitors the most significant changes are to the entrance sequence and circulation. The steps up from Strand and the porte cochère have been seamlessly smoothed into a ramp, with the Swedish limestone re-used and the ramp edges given a depth with solid matching stone from



#### SUSTAINABILITY DATA

**0**  
predicted on-site renewable energy generation (kWh/yr)

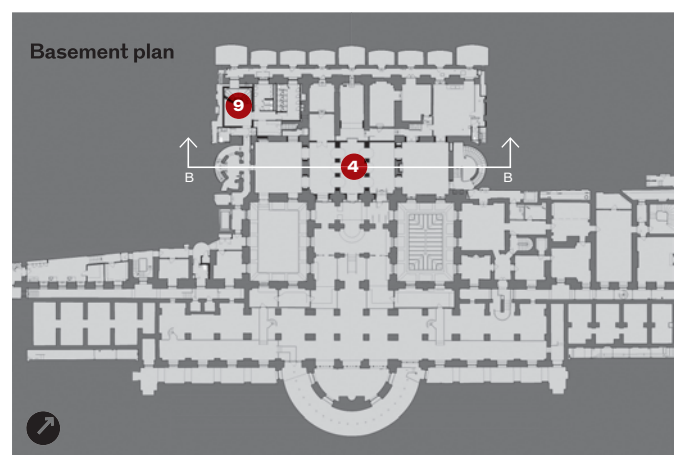
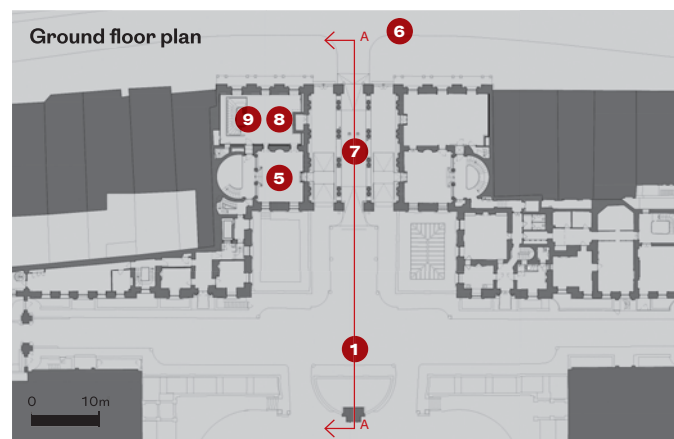
**10.68**  
predicted potable water use (Litre per person per day)

**137**  
actual annual gas usage (kWh/m<sup>2</sup>/yr)

**86**  
actual annual electricity usage (kWh/m<sup>2</sup>/yr)

**106**  
whole building embodied / whole-life carbon (KgCO<sub>2</sub>eq/m<sup>2</sup>)

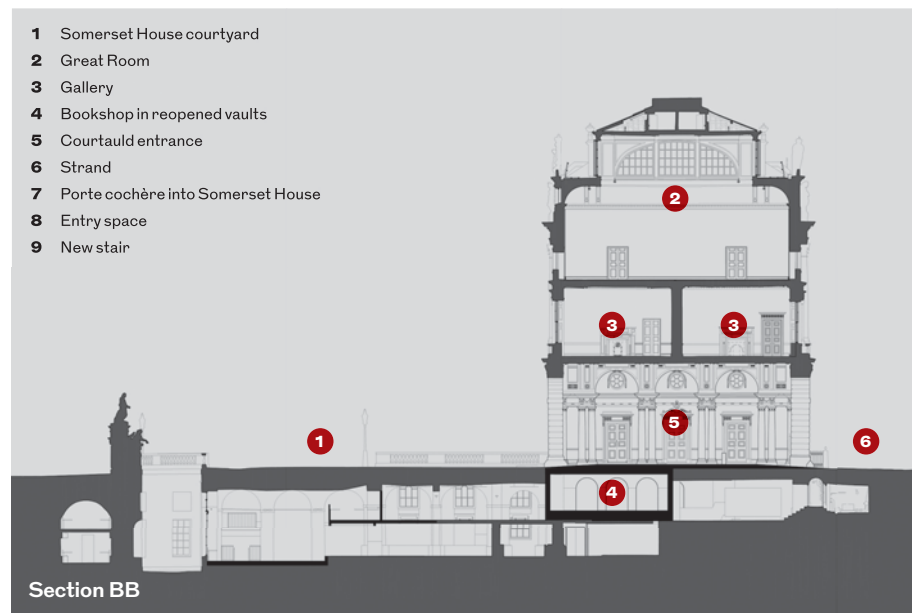
**RICS modules A1-A5, structure only**



**Top left** Great Room with simplified layout and ceiling.  
**Left** In the basement shop which will connect through to study spaces in phase two.

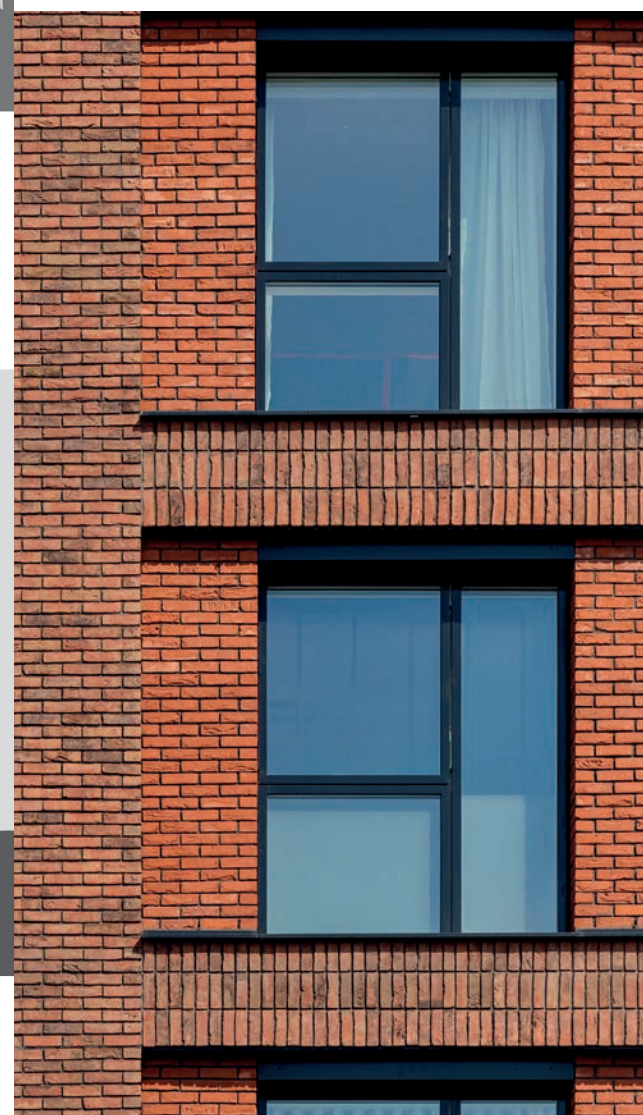
WWM's barely-there alterations make the world of difference

- 1 Somerset House courtyard
- 2 Great Room
- 3 Gallery
- 4 Bookshop in reopened vaults
- 5 Courtauld entrance
- 6 Strand
- 7 Porte cochère into Somerset House
- 8 Entry space
- 9 New stair



TAYLOR MAXWELL

# Gallions Place



**Part of the Gallions Quarter masterplan in the Royal Albert Docks, Gallions Place is an elegant and modern mixed-use development which provides the area with 241 new 1,2 & 3 bedroom homes and 1,721sqm of flexible non-residential floorspace.**

The joint venture between main contractors **Vistry Partnerships** and housing association **Notting Hill Genesis** is situated at the heart of London's newest riverside district, Royal Docks.

Designed by **PRP Architects**, the scheme is comprised of three apartment blocks, ranging from 5 to 11 storeys, completed using facing bricks. Taylor Maxwell worked with the architects and main contractors to supply the different bricks and the precast soffits and lintels used across the facades, in line with the design brief.

When designing the development, the architects understood the importance of the historic nature of the site and focused on using warehouse-style materials to mimic its waterfront industrial heritage.

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Photography by Alex Upton.





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Socials: @mbhplc



**Above** Art and architecture are in harmony again.

**Left** The new stone stair opens the basement to the public and, ultimately, students.

the original quarry. It is the first of WWM's barely-there alterations that make the world of difference.

But a more dramatic move was needed inside at ground level, where a gallery was removed to expand the entry space and a new, cantilevered York stone staircase inserted which descends to the lower ground floor of lockers and shop, giving extra capacity that the narrow 1770s staircase can't carry. Like all the moves in this building, there were trade-offs, new interventions off set by restorative moves elsewhere – in this case the storage room above becoming the Medieval Gallery.

As you ascend the main staircase (its railings returned to a vibrant, if unexpected, Prussian blue) you see into the galleries of the first floor. As with WWM's work at the Whitechapel Gallery, the galleries look just as they should be, but have been taken apart with partitions removed, fine gallery track lighting installed and wall panels subtly detailed to allow direct hanging despite the listed walls. The wooden floors had special attention from both the practice and some of the 36 trades that worked on site, not just the pennies as spacers between boards but also the way the widest boards are positioned at centre of the historic galleries, narrowing at the edges, as was often done in the 18th century. The galleries on the top floor have been transformed into a connected suite around the Great Room, once again a single volume bathed in natural light, echoed in the two new galleries for temporary exhibitions.

The intimate Prints and Drawings gallery, completed by WWM before the main project was in the offing, set the template for collaboration







Credits  
**Client** The Courtauld Institute of Art  
**Contractor** Sir Robert McAlpine  
**Structural engineer** Price & Myers Engineers  
**Environmental / M&E engineer** Max Fordham  
**Project management** Gardiner & Theobald  
**Construction manager** Sir Robert McAlpine  
**Special Projects**  
**Exhibition design** Nissen Richards Studio  
**Lighting design** ARUP  
**Lighting / Studio** ZNA  
**Access consultant** David Bonnett Associates  
**Historic building assessment** Alan Baxter  
**Planning consultant** The Planning Lab  
**Security consultant** Ian Johnson Associates  
**Fire consultant** BB7 Fire  
**Approved inspector** AIS Chartered Surveyors

with the curating team, creating spaces in which they could take risks with less formal hangs. The concentrated focus on the questions of how windows and doors could add to the gallery experience came out in the rest of the project, where daylight control and views are handled with removable panels, white blinds for serious light control and perfectly judged transparent black blinds just to take light levels down but maintain a relationship between inside and out. Chambers’ chamfered corner doorways were reworked with cabinetry creating entry portals – artist Peter Doig was apparently very taken with WWM’s own corner doorway between Temporary Exhibition galleries when he hung his show. One of WWM’s almost-invisible changes was negotiating the

**IN NUMBERS**  
**5310m<sup>2</sup>**  
gross internal area  
**£26.5m**  
project construction cost  
**£4,990**  
cost per m<sup>2</sup>



**Top left** Above Chambers’ chamfered doors with new surrounds.  
**Left** Doors have been reworked so they don’t impinge on gallery spaces.  
**Right** A newly created gallery.

**BARRELS AND FANS – DEALING WITH THE VAULTS**  
From competition stage WWM planned to connect through the three underground vaults below the entrance arches to Somerset House. This required turning the barrel vaults into fan vaults, removing the central one as it was so low. Structurally this meant supporting the vaults themselves, the live access road and the floors of galleries during the work. We had 40 detailed drawings of the temporary works and sequencing. We cut through the brick vaults and held them in place with steel angles. With side aisles as support walls, we had to prop it through two levels of basements. A supporting bridge for emergency access into Somerset House kept vehicles’ wheels within channels to ensure they didn’t scrape the stonework arches just above. You don’t realise the complexity of what you are doing until you draw it out in detail. This we did twice, once for a steel structure and then in concrete as the contractor advised there wasn’t enough space to get steel in. One day just before the first Covid lockdown, the self-compacting concrete was pumped in a single pour. Then we just had to release it all down again. David Derby, Price and Myers

removal of the pairs of double doors between each historic gallery that had interrupted the flow down, creating awkward eddies in visitors confronted by a projecting door; now each upgraded single pair of doors is held open in the reveals between rooms. This is a hugely technical project, but you wouldn’t know it from the bold structural moves and a grace and elegance that is concerned to give the weight and substance to detail that William Chambers’ design demands. It has gained the Courtauld an extra 50m<sup>2</sup>, but more importantly it has made what is there a pleasure to curate and a delight to be in and move around. The visitor numbers are some testament to that, going from an average of 206,000 a year to 320,000 in its first 12 months since reopening. ●



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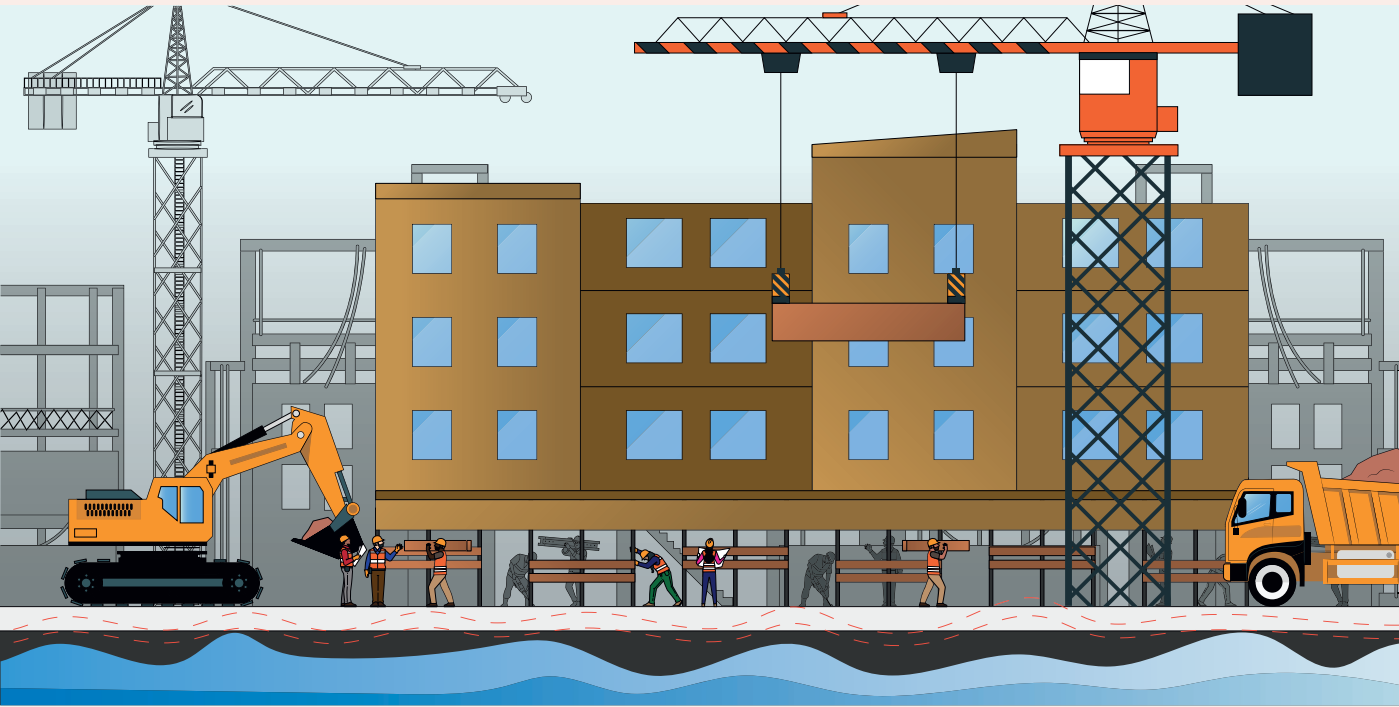
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# Eight future-proofing business strategies from Jonathan Brill

As changes in technology and global conditions accelerate, futurist Jonathan Brill offers eight future-proofing business strategies to help AEC firms thrive, writes Sarah Jones



The Industrial Revolution took 80 years. The Digital Revolution took 46 years. Today, the speed of artificial intelligence (AI) computing power doubles every three months. Take this unprecedented pace of technology, add financial shocks, supply-chain disruptions, natural disasters, cyber threats and a pandemic into the mix, and you have a perfect storm of business disruption.

What will it take for architecture, engineering and construction (AEC)

firms to adapt, survive and even thrive in the face of accelerating change and in unfamiliar territory? Success starts with digital maturity.

When surveyed for Autodesk's 2023 State of Design & Make global report, AEC leaders shared the most pressing drivers of change shaping their business decisions. Not surprisingly, digital transformation topped the list, with 79% of respondents stating that the future growth of their company will depend on digital tools.

**Above** Charting a course for success in uncertain times calls for the creation of a culture of innovation – and a rethinking of risk.

Fortunately for AEC firms, the 'architect way' of problem-solving – taking both the top-level view and zooming in on the details that support success – is an advantage when navigating volatile times.

But what if you reframed volatility as an opportunity for the prepared?

That's the perspective of Jonathan Brill, a futurist who advises start-ups, the Fortune 50 and the United States Secret Service on ways to understand and take advantage of an increasingly uncertain world.

In his book, *Rogue Waves: Future-Proof Your Business to Survive and Profit from Radical Change*, Brill

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describes how technological, social, and economic trends can be like 'rogue waves' that develop in the ocean when individually manageable waves of disruption collide, creating overwhelming walls of water that can sink even the largest ships in seconds.

Such rogue waves are hitting businesses harder, faster and more often – but with the right processes in place you can consistently turn these moments of radical change to your advantage.

**Approach new challenges like an architect**

'As technology reshapes industries, your architectural training is an untapped superpower,' says Brill. 'Your ability to zoom out and zoom in is desperately needed.'

While AI absorbs data, 'architects uniquely synthesize complexity and render insights into human-centric solutions', he explains. 'As machines take over discrete tasks, this contextual thinking becomes even more valuable.'

The key, Brill adds, is to find new applications for your core strengths, instead of trying to change architecture's essence. 'Use your systems thinking to derive insights and translate vision into reality, and extend your profession into new domains.'

He urges leaders to expand their architectural mindset beyond

**Above** 'Think like an architect': In a volatile world, approaching challenges like an architect – taking the 30,000ft view while also homing in on critical details – offers benefits far beyond building design.

traditional building design. 'Pilot services that apply your spatial and co-ordination skills in new markets,' he says. 'Create experiences blending physical and digital. Help organisations of all kinds adapt.'

The accelerating pace of change rewards those who grasp new connections and implications.

'You already have this superpower,' Brill continues. 'Augment it with technology, then offer it at scale as a coveted service. Architecture has a moment to expand its relevance by leveraging its native strengths.'



The future belongs to those who understand the whole system and then incrementally improve it.'

**Cultivate the ABCs: Awareness, Behavior, Culture**

Firms need to be thinking systematically – not just about what's there, but about what's missing too. In his book, *Rogue Waves*, Brill outlines his ABCs that will help firms thrive in uncertainty:

**Awareness.** Vigilantly scan the horizon for clues: emerging innovations, economic and societal shifts that could collide. Continually monitor your environment to reveal blind spots.

**Behaviors.** Act nimbly on early signals; invest in skills to spot changes early and quickly capitalize on them. Incorporate experimentation and management rigor into all processes. ●

**This is an excerpt from an article that originally appeared on Autodesk's Redshift, a site dedicated to inspiring design, construction, manufacturing and engineering leaders.**



Scan the QR code to read the full article



**Below** 'Flattening your organisation': Taking full advantage of rapidly evolving technologies means bringing junior employees into senior-level conversations.



# Suburban secret

Sergison Bates has inserted a compact but magical group of nine dwellings around verdant courtyards, tucked between garden walls in Clapham, London

Words: Chris Foges

**Bottom right** The building is set in a gated mews.

**Below** A small passage leads from the mews to the garden.

It's often said that great architecture needs constraints. Well, Sergison Bates certainly had them at the Stirling-shortlisted Lavender Hill Courtyard, a small housing scheme in south London, and they have provided the stimulus for a building of rare ingenuity and imagination. Replacing an old workshop on a small backland site, hemmed in by the garden walls of terraced houses on three sides, it has almost no outlook. Instead, the architect has structured the nine homes around an array of 'inner worlds' that are rich in spatial and material character, yet pervaded by an almost palpable sense of calm.

Accessed from a quiet street via a dead-end mews, the building occupies the entire plot, rising to three storeys at the front and two behind. At its heart is a compact courtyard garden, through which all residents pass en route to their homes. Shared space is important to foster a communal atmosphere in a densely planned building where people live cheek by jowl, says project director Stephen Bates, but so too are private outdoor spaces that make mingling a matter of choice. Three flats on one side of the garden are set behind a cloister and a loggia above, while six houses are arranged around deep internal voids, with patios on the ground floor overlooked by secluded terraces on the floor above.

For first-time visitors, the nature of the building emerges slowly. From the gated entrance to the mews, it has a curious ambiguity. Pale grey brick facades are ribbed with thick buttresses, like a traditional garden wall. Other details suggest the combination of pragmatism and ornament found in Victorian warehouses – an oblique allusion to the site's history. Bricks are turned on end and rotated through 45° to make a rough-textured cornice and soldier courses, revealing subtly different colours on either face. Windows framed by timber boarding shuffle about between brick piers, as though altered with changes of use over time.



SERGISONBATES



JOHANDEHN (2)



Quality of construction is evident in everything – testament to the commitment of architect and client

Such idiosyncrasies and the building’s apparent weight are a deliberate riposte to the thinness and factory-made regularity of much contemporary architecture. ‘There is beauty in walls that look like they were made by human beings, not machines,’ says Bates. ‘We always seek that perfect imperfection.’ The quality of construction is evident in everything touched by hand or eye – testament to the commitment both of the architect and its client Marston Properties, a local developer that builds to rent and has a long-term interest in how well buildings age.

A low doorway in the middle of the facade opens onto a dark, timber-lined passage. At the far end, in sunlight, is a splash of bright green. The floor slopes gently, impelling you forward, through the cloister and out into the garden. It’s a magic moment. Despite its diminutive proportions – just 6m by 12.5m – the space has a powerful effect, and bursts with life. Six multi-stemmed fruit trees make a little copse, whose canopy helps to veil views between windows on all sides, through which the private courts within can be glimpsed. A dense under-storey of planting fills the courtyard from edge to edge, and creeps over the edges of wheelchair-accessible



**Above** Trees and a loggia screen views between flats.



**Left** The entrance from the mews recalls Pickering Place in St James', London.

**Right** Grey brick is subtly distinct from the yellow stocks of surrounding houses.

**IN NUMBERS**

**795m<sup>2</sup>**  
gifa

**£2.94m**  
construction cost  
(tender price)

**0.1ha**  
site area

**65-109m<sup>2</sup>**  
unit sizes



JOHAN DEHLIN (3)

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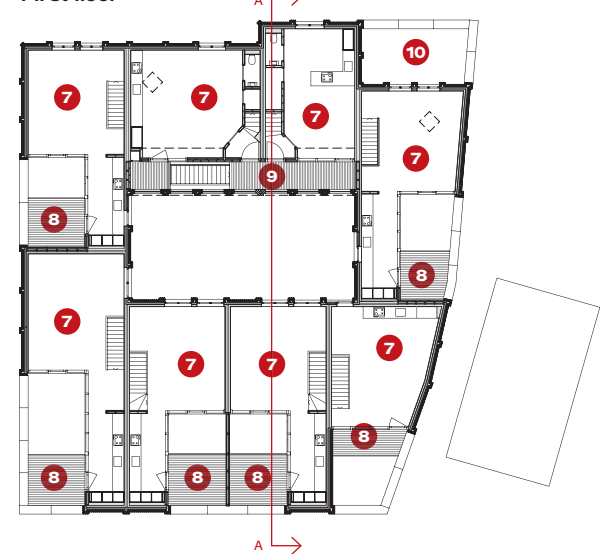
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## Buildings Stirling Prize shortlist

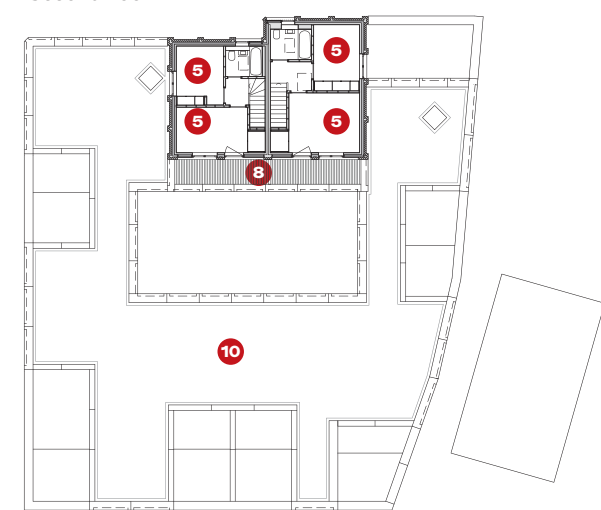
### Ground floor



### First floor

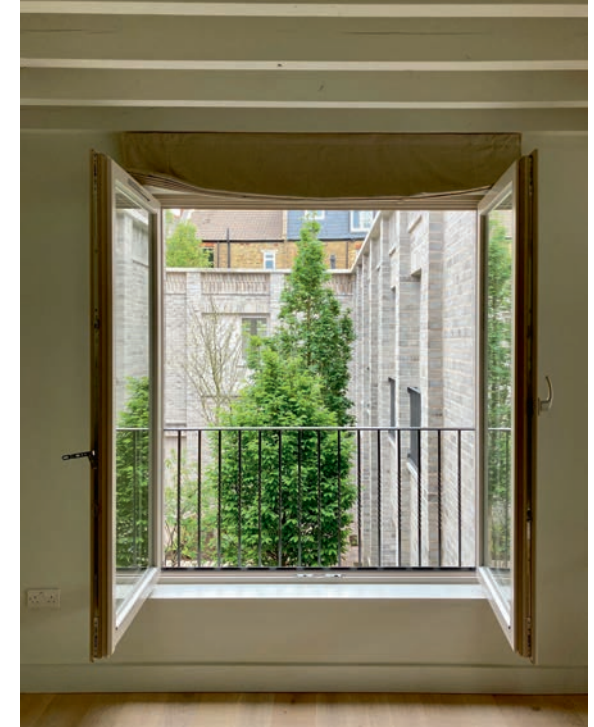


### Second floor



**Right** Rough-sawn  
beams are exposed.

**Below** Living rooms,  
private terraces and  
courtyards are all  
visually connected.



- 1 Mews
- 2 Entrance passage
- 3 Shared garden
- 4 Cloister
- 5 Bedroom
- 6 Private courtyard
- 7 Kitchen/living room
- 8 Terrace
- 9 Loggia
- 10 Green roof

clay brick paths so that they appear narrower, and less obviously 'designed'. The architect hoped that informality would encourage tenants to assume that they could tend the patch around their own front doors, which indeed they have.

Here the surrounding streets vanish entirely from sight and from earshot. Stillness is broken only by the murmur of residents' conversation and breezes in the leaves. It is reminiscent of the cloistered precincts of ancient colleges and almshouses and of the secret walled gardens that recur in literature, from the Roman de la Rose to HG Wells' *Door in the Wall* – enchanted places that signify pleasure and dreamlike escape from ordinary cares.

Sensation is also heightened by subtleties in the architecture, from the depth of thresholds to the round patinated brass doorknobs that are satisfyingly heavy in the hand, and set a little higher than might be expected. Just enough to be noticeable. 'The quiet transformation of "simple" things that are often taken for granted can dignify

#### Credits

**Architect** Sergison  
Bates Architects  
**Client** Marston  
Properties  
**Contractor** Uprise  
Construction  
**Cost consultant and  
project manager**  
Marick Real Estate  
**Structural engineer**  
Symmetrie  
**MEP and sustainability**  
Mendick Waring  
**Landscape designer**  
Miria Harris





Stillness is broken only by the murmur of residents' conversation and breezes in the leaves

the activities of everyday life', says Bates, 'and draw people's attention to their own presence in the world.'

Interiors are equally rich. No two rooms are exactly alike. Physical models were essential in establishing that each would work, along with indefatigable 'pacing' through every space in the architects' minds.

On the ground floor, terracotta tiles lend an almost rustic feel and establish continuity between bedrooms and the adjacent patios. Timber stairs rise to oak-boarded living areas on the first floor. Rough-sawn softwood roof joists are painted white but otherwise left exposed. Again, there's a resemblance to old warehouses – another ambiguity that Bates enjoys. 'We like buildings whose purpose isn't obvious,' he says. 'It grants a certain freedom in the way you feel it can be used.'

With long, layered views through open-plan spaces that wrap around glass-walled terraces, and out to big skies, rooftops and the garden, there's no sense that the constraints of the site have compromised residents' homes. As London seeks to densify by developing similar sites that abound across the city, the skilful handling of overlooking and proximity at Lavender Hill Courtyard will no doubt become a standard reference point. Its example should be heeded more widely still. ●

SUSTAINABILITY DATA

11

predicted on-site renewable energy generation (kWh/yr)

125

predicted potable water use (litres per person per day)

66.95

actual annual gas usage (kWh/m²/yr)

18.92

actual annual electricity usage (kWh/m²/yr)

357

whole building embodied/whole-life carbon (KgCO<sub>2</sub>eq/m²)

RIBA Stage 7 assessment, RICS modules A1-5, B1-5, C1-4 (excl external works)

Below Deep courtyards light ground-floor bedrooms.



Above The architect's hand extends to colourful privacy curtains.

**A JIGSAW WITH PLENTY OF SPACE**

Marston Properties, established in 1895, has built homes to rent since the 1930s. The knowledge that our financial return would be long-term made this project commercially viable.

Although the development is slightly smaller than the existing building, neighbours assumed it would be bigger and we had a battle to get planning consent.

Sergison Bates goes to great lengths to get detail right. We had some tussles over specification, but I've known Stephen for many years and trust him. I'm glad that we chose not to compromise on the Danish brick, for example.

We had to work from neighbours' gardens to build the boundary wall, imposing tight timeframes. The contractor, Uprise, was selected for its craftsmanship and experience on similar sites, as well as price.

The project is a real jigsaw puzzle, and while you might expect lots of dead-ends and big walls without windows, it's the opposite: openness and layered views throughout. Rents are at the top end locally, but residents have been amazed by what they get, especially the outside spaces. One told me they want to stay forever. Unfortunately, recent cost rises means that we are not currently looking for similar opportunities, but I'd love to come back to it.

Caroline Marston, chairman, Marston Properties

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# Housing reshape

Driven by a desire to create true neighbourliness, Apparata's A House for Artists flouts all the usual housing conventions with style and future promise

Words: Chris Foges

Spatial variety adds interest to a third floor flat.

## Buildings Stirling Prize shortlist

Since A House for Artists was completed almost two years ago, a stream of visitors has travelled to east London to examine its 12 light-filled flats and chiselled carapace of raw concrete. First journalists, then assorted planners and developers, and most recently, awards juries. The attention is personally gratifying for architects Nicholas Lobo Brennan and Astrid Smitham, of course, especially as this is the first major project by their practice, Apparata. But more welcome still is the validation it – and its place on this year's Stirling Prize shortlist – confers on a building conceived to challenge norms of British housing.

'We see endless repetition of the same basic diagram,' says Lobo Brennan. 'Our aim was to create a healthier, more neighbourly model that could be repeated. Commissioners of housing are risk-averse so it's important to demonstrate that an alternative is gathering legitimacy.'

### IN NUMBERS

**1553m<sup>2</sup>**  
gross internal floor area

**1139m<sup>2</sup>**  
net internal floor area

**£4.1m**  
contract value

**£2640**  
cost per m<sup>2</sup>

**59-86m<sup>2</sup>**  
unit sizes

**3m<sup>3</sup>/hr/m<sup>2</sup>**  
airtightness at 50Pa

The opportunity for this prototypical project came in 2016, with a design competition run by the local council, Barking & Dagenham, and arts charity Create. They proposed an apartment block for cash-strapped artists who would have rents set below market rate in exchange for some work that benefits local people through an on-site 'community hall'.

Many of the failings that Apparata diagnosed in contemporary housing stem from circulation. Double-loading flats on strip-lit corridors discourages neighbourly mixing, and precludes cross-ventilation. And in flats meeting minimum space standards, the area claimed by entrance halls results in cramped, inflexible floorplans.

A House for Artists does away with corridors and halls, which meant rethinking customary approaches to fire safety. Three dual-aspect flats on each floor have open-air escape routes along shared access decks at the front and back. The exposed



STÅLEERIKSEN (2)

Projection illustrating co-living option

ribaj.com

An adjacent yard doubles as shared amenity and workspace.



The RIBA Journal September 2023



in-situ cast concrete frame (with 50% GGBS) is incombustible, and gives the building reassuring solidity. It's also economical and the building scores surprisingly well overall for embodied carbon. A water-repellent coating prevents the staining that bedevilled 1960s buildings. Even on damp days the facades remain a pale, chalky grey.

Set among newish apartment blocks in Barking's William Street Quarter, Apparata's building stands out. The austerity of bare concrete is relieved by playful details. With square and circular cut-outs in the facades and a quirky triangular cleft in the roofline, it might have been modelled with a child's set of Froebel Blocks. Monumental but friendly. 'It's meant to read as a public building', says Smitham. That's helped by the prominence of the ground-floor community hall. Glass walls are intended to entice hesitant visitors. Concrete flooring runs inside to out, so the robust room seems almost an extension of the street.

At the rear, external stairs to the flats offer fresh air, views and pleasant spots to stop for a chat. Decks on the south side are 2.1m wide, giving space for plants and furniture while allowing ample room to pass. As hoped, residents treat them as an extension to their homes. There are laundry racks, bikes and shoes left by front doors. 'Deck access has a bad reputation', says Smitham, 'but having a big shared

**Below** Test events are being used to develop a programme for the hall.

**FEEL THE DIFFERENCE**  
I applied to live here six years ago, attracted by the opportunity to be part of a community of artists. I got to know neighbours quite quickly, which is partly down to the design. Unlike blocks where you rush to your flat without talking to anyone, circulation spaces here encourage hanging out or just saying hello. The relatively small scale of the building helps too.

It doesn't look like most housing. Friends and family who visit are shocked – in a good way. In general, the lower your income, the smaller your windows. To have massive shopfront windows in social housing should be celebrated. Because of the overhang they give a very nice quality of light. Everyone who comes in immediately feels at peace.

The flats seem bigger than they are because of the high ceilings and generosity of the living room. I like the way they all look slightly different because people are able to arrange furniture in different ways. I love the concrete, too; it gives character and I can hang plants from the ceiling, and easily remove them without ripping off plaster.

It's not utopia. For that, things would have to change in housing policy. Leases are renewed annually; we don't have the security of traditional council tenancies. But it is a beautiful building that should encourage more people to question how housing is provided in this country.

Resident (name withheld by request) at A House for Artists

AHFA occupies a long-vacant plot in Barking town centre.

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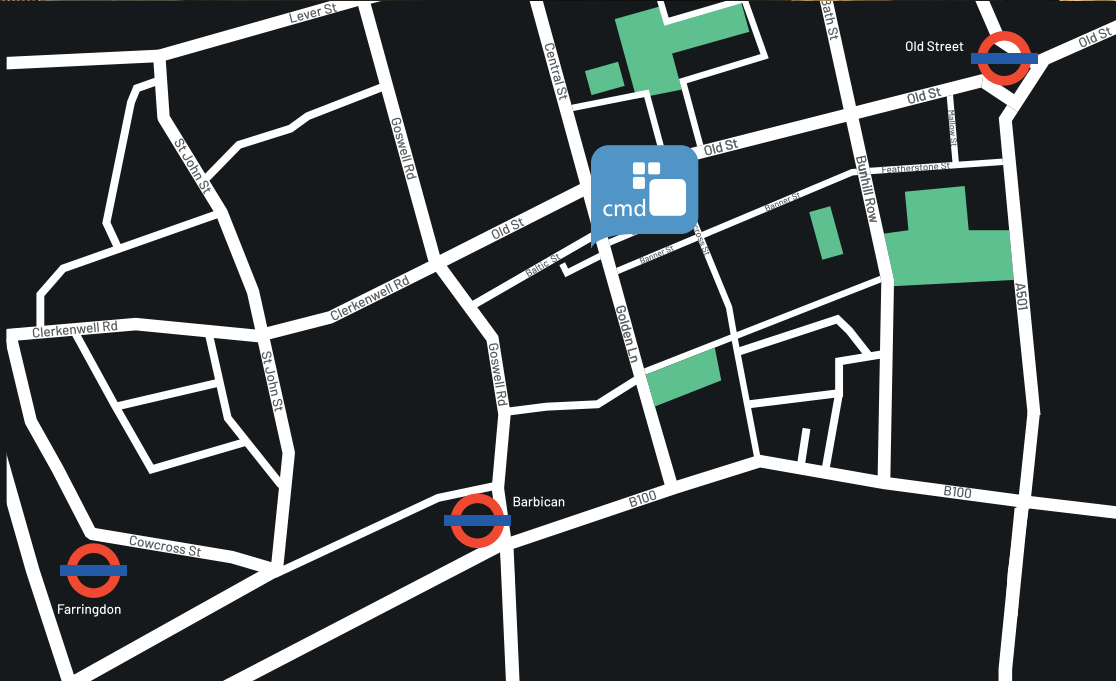
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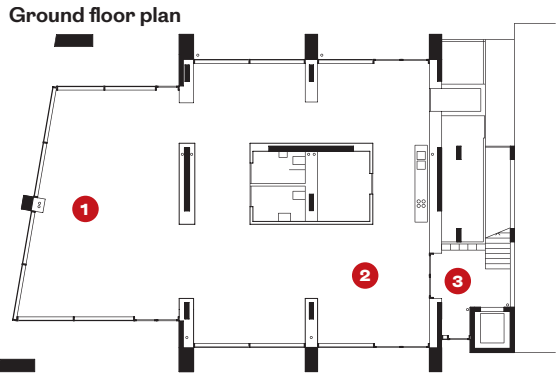
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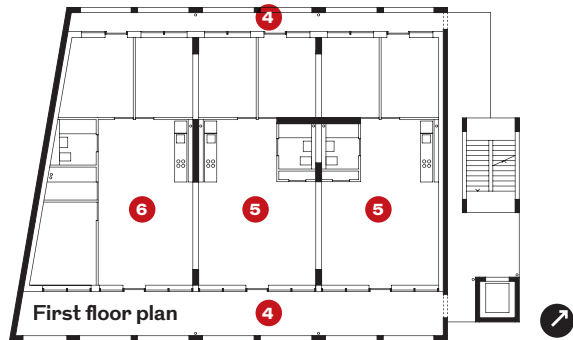
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## Buildings Stirling Prize shortlist



- 1 Public arts space
- 2 Residents' work space
- 3 Residential entrance
- 4 Access deck
- 5 Two-bed, four-person flat
- 6 Three-bed, five-person flat



### SUSTAINABILITY DATA

**4**  
Predicted on-site  
renewable energy  
generation (kWh/yr)

**105**  
Predicted potable  
water use (litres per  
person per day)

**0**  
Actual annual gas  
usage (kWh/m<sup>2</sup>/yr)

**81.9**  
Actual annual  
electricity usage  
(kWh/m<sup>2</sup>/yr)

**482.3**  
Whole building  
embodied / whole-life  
carbon (KgCO<sub>2</sub>eq/m<sup>2</sup>)

Stage 5 assessment,  
RICS modules A1 -  
A5, B1-B5, C1-C4

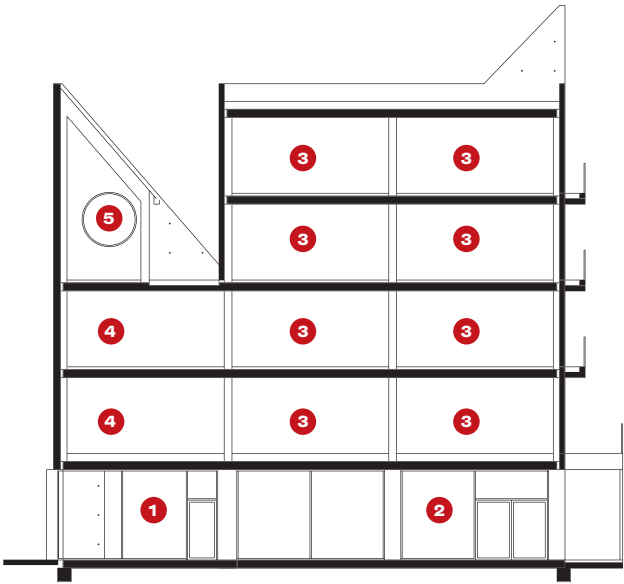


All shared space is  
multi-functional.





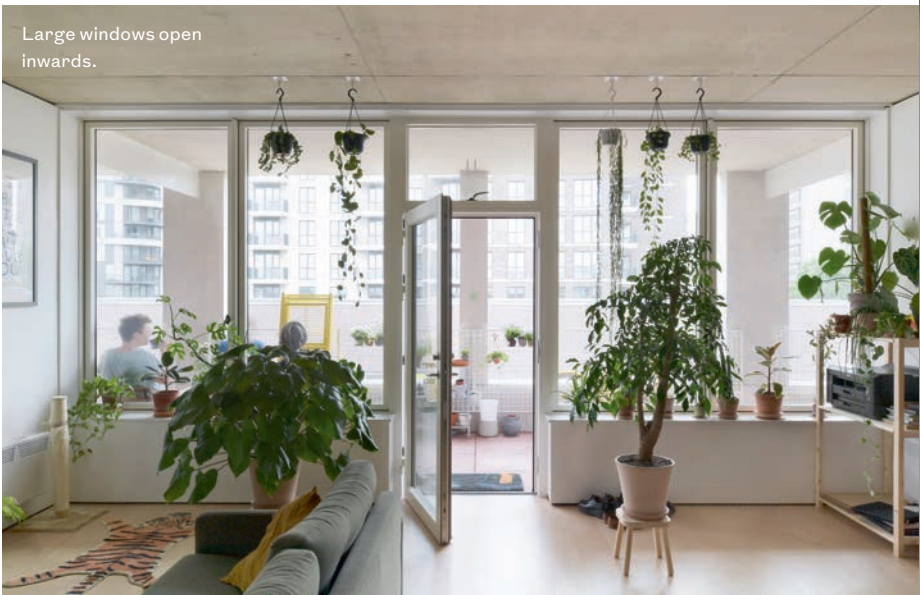
West-east section



balcony is lovely.’ It helps that space is shared by a kind of intentional community, but a few tweaks and the model could work anywhere, Apparata suggests.

The deep overhangs provide summer shading to the mostly glass walls, while low winter sun on both sides means the flats are bright year-round. The openness is striking. Despite some early concerns about lack of privacy, decks have little passing traffic so few residents have installed blinds. And while the no-frills construction gave interiors a rather stark look at completion, any doubts should be allayed by the comfortable homes the residents have made.

Inside, the absence of lobbies makes unusually spacious living rooms, which appear even larger as 2.8m-high concrete ceilings extend past the windows and over the balcony. Space gives freedom to live as you choose and to adapt to changes in circumstance. An extra room can be created – for



- 1 Public art space
- 2 Studio space
- 3 2b, 4p flat
- 4 3b, 5p flat
- 5 Non-standard 2b flat

Credits  
**Architect** Apparata  
**Client** London Borough of Barking & Dagenham; co-commissioned by Create London; delivered by Be First  
**Fire** Menzies Consultants  
**Contractor** J Murphy & Sons  
**Engineering** Expedition Engineering  
**M&E consultant** Max Fordham  
**QS** Artelia

boomerang kids, elderly parents or perhaps working – to one side of the entrance and still leave the same living area as a typical newbuild flat. ‘Everyone needs more from a home than somewhere to put a bed’, says Lobo Brennan.

Flexibility is integral to the design at every scale. On one floor, double doors in the party walls between flats could enable shared childcare or co-living, or accommodate a large family. ‘Conversion wouldn’t cost the council anything,’ says Smitham. And with largely column-free floorplates, the whole building could easily be converted to other uses.

Most alterations within flats could be DIY jobs. Mobile steel kitchens can be relocated. Stud partitions are free of sockets, and services are easily accessible below raised plywood floors. And in case it’s not apparent, Apparata has made a handbook. ‘Homes shouldn’t be a mystery’, says Smitham.

Some tenants have replaced supplied kitchens for more conventional fitted varieties. None has yet needed to add or subtract rooms. It will take some time for the architects’ thesis to be proved in full, but the building’s success is already clear. Residents talk of comfort, security and being uplifted by considered details, of a sense of generosity – not feeling ‘squeezed’ for the first time – and its positive effects on mental health and happiness.

There’s plenty more to indicate Apparata is onto something. The caretaker says A House for Artists is a ‘dream’ to maintain. In the last heatwave, interior temperatures stayed below 26° without cooling. ‘We’ve shown things can be better,’ says Lobo Brennan. ‘It’s not more difficult or expensive; it just needs a decision’. Backing the ideas of a talented young practice took courage on the part of the developers. Now others can copy with confidence. ●

DAVID GRANDORGE



Flats on one floor could support co-living.

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# Safety statistics prompt search for better fall protection

With fatal injuries from falls four times higher in construction, experts from HSE, AHMM and MSA Safety looked at the industry’s regulations and culture, identifying a need for robust protection to be integrated in building design



Historical image of a worker at height during the construction of one of New York's early steel skyscrapers.

The UK design and construction industry has been ‘deregulating, relaxing and gaming the fire safety and health and safety regulations’ for too long, says Paul Bussey, chair of a highly informative RIBA Journal webinar setting out the duties of architects regarding fall protection design. It’s now time, he adds, for a major culture change.

‘Principal designers have a significant role in ensuring robust fall protection in building design,’ he says, citing the recent introduction of the Building Safety Act (2022), which supplements HSE Guidance and the CDM Regulations (2015).

The need to design with safety in mind was underlined by some shocking safety statistics set out by the first speaker, Bernardine Cooney, head of the Regulatory Support Unit, Building Safety and Construction Division, at the Health and Safety Executive. A recent fatal

injury rate of 1.63 per 100,000 workers in construction is around four times the all-industry rate. Falls from height were by far the biggest cause, accounting for just over half the 40-45 fatalities per year. They also accounted for 19% of non-fatal injuries.

Much more remains to be done to nip ‘totally unacceptable’ risks of working at height in the bud, said Cooney, by evaluating these risks early in the design process, and tapping into the right resources.

‘You are probably already [doing that], but I’d urge you to hold onto the fact that your design can influence reduction in serious and fatal injuries,’ she said.

In her presentation, Cooney covered client and designer duties under the CDM regulations (‘a net that’s designed to capture risk’) and the more prescriptive Work at Height Regulations (2005), which require the avoidance of risk to ensure persons do not fall a distance that could cause personal injury.

‘Work at Height risks are so readily foreseeable that they should be in the forefront of our thoughts in all work activity,’ she said.

Under CDM 9, the designer’s role is to eliminate foreseeable risks, and where these can’t be eliminated, take steps to reduce or control the risk by design. They must also provide information to help others do this, facilitating those implementing their design. Taking steps to avoid risks during the design phase, reduces them during subsequent construction, maintenance and cleaning.

She advocated use of the well-known ‘Plan, Do, Check, Act’ health and safety approach to assess the strengths and weaknesses for Work at Height in the design as it evolves. Architects should question everything through this lens, from their choice of fragile surfaces, for example, to the use of temporary works, and implications of vehicle movements.

MSA safety specification manager Stuart Pierpoint spoke next, on the complexities of fall protection in buildings that require access – for example, to green roofs, brown roofs or PV arrays, or for window cleaning. Safe access for maintenance should again be



considered early in the design process, eliminating risk where possible in order to guard hazards and protect the workers.

He set out the two choices for personal fall protection – fall restraint and fall arrest. Restraint uses a full body harness and a lanyard anchored via a lifeline to the building or structure, and keeps the user from accessing fall hazards. Where encountering hazards can’t be eliminated, a fall arrest system, again involving a harness and lanyard, but with a rescue plan and training too, ensures that should a fall occur, the user is suspended in their harness. Pierpoint showed ridge and perimeter scenarios and discussed the BS EN 795 standard for anchor devices, in particular the Type C anchors used for horizontal lifelines.

Paul Bussey recommended guidance from Designers’ Initiative on Health and Safety (DIOHAS), including advice on what is deemed unforeseeable. Contractors should be expected to implement normal procedures competently – it’s not the remit of designers to tell them what to do. However, designers need to eliminate hazards so far as is reasonably practicable, reduce risks from those hazards which remain, and provide adequate information – ideally clear and visual – about any significant project-specific risks, such as fragile rooflights for example.

Bussey also shared best practice case studies, including fall restraint measures for accessing the rotating globe on the English National Opera House’s Coliseum building in London.

Viewer questions covered the need to adhere to safe working at height practices even on small domestic projects, use of Building Maintenance Units, and issues regarding rope and ladder access.

Summing up, Bussey referred to the need to make proportionate and practicable design decisions using project specific optioneering techniques, and the need to identify safe systems for working at height for both construction and maintenance. Industry-wide expertise should be consulted if required: ‘It’s a team process,’ he concluded. ‘It’s not something you just do on your own.’ ●

This webinar was produced in association with MSA Safety

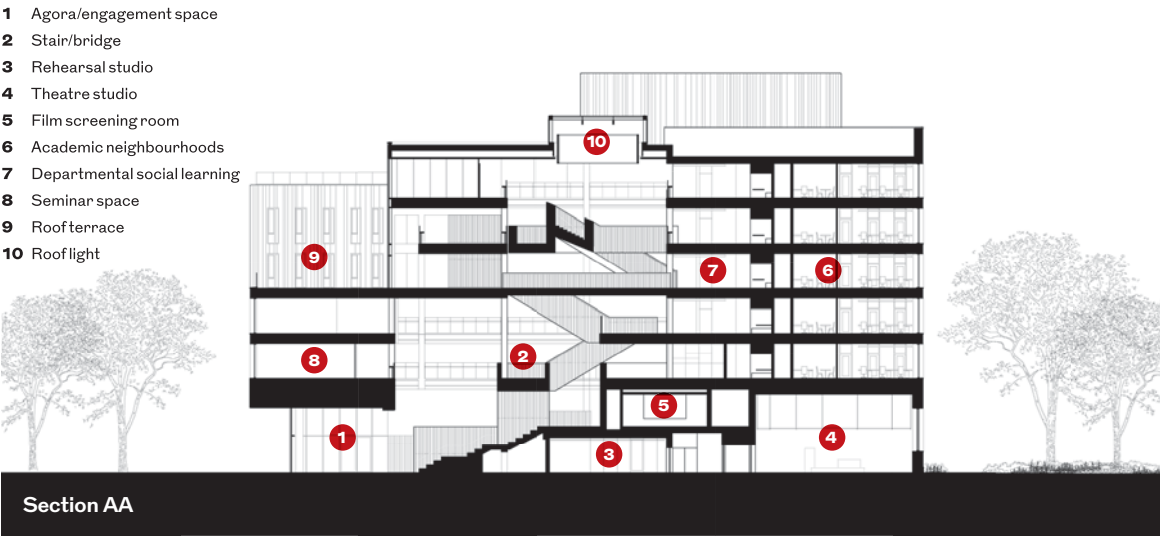
**Speakers**  
**Paul Bussey** (webinar chair), senior technical consultant, Allford Hall Monaghan Morris  
**Bernardine Cooney** head of Regulatory Support Unit, Building Safety and Construction Division (BSCD), Health and Safety Executive  
**Stuart Pierpoint** specification manager, MSA Safety



# Looking up

The central stair at Warwick University’s Faculty of Arts Building by FCBS brings together volumes, departments, people and ideas

Words: Pamela Buxton Photographs: Hufton and Crow



‘People do call it the FAB building. And we get called the FAB team, which we’ll take,’ smiles Feilden Clegg Bradley Studios (FCBS) partner Andy Theobald of the practice’s £43 million Stirling shortlisted Faculty of Arts Building at University of Warwick.

At eight storeys, the terracotta-clad new faculty is the tallest building at the university. Completed in 2021, the development chimes with the university’s densification strategy for its somewhat sprawling site, which has matured into a verdant landscape since it was established in 1965 a few miles outside Coventry.

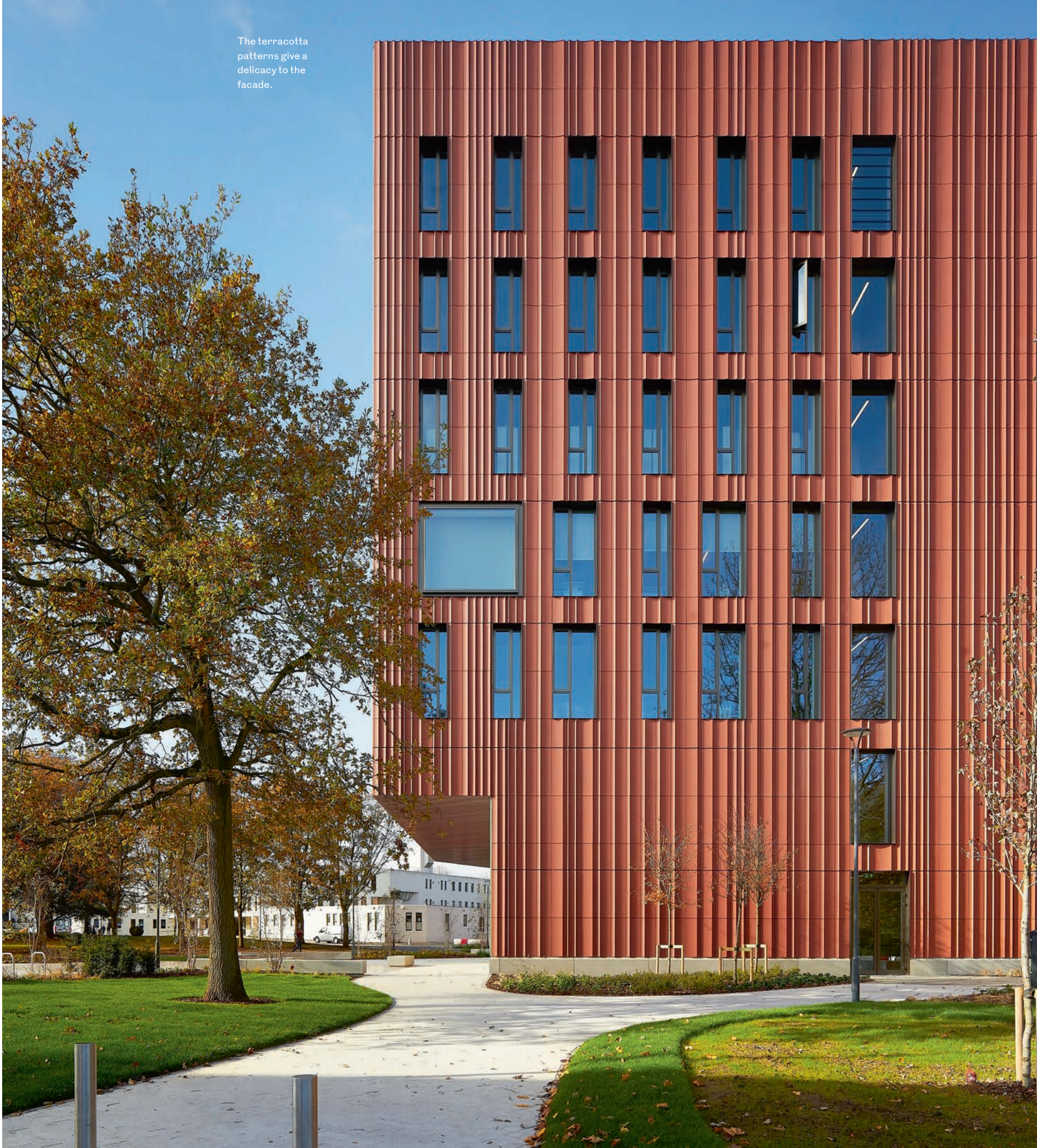
Built on the site of a car park, the 13,260m<sup>2</sup> (GIA) building takes inspiration from the trees that were planted to screen the structure it replaced. Not only has every effort been made to preserve these and showcase views to them, the idea of the tree was the driving concept for the building’s most memorable feature – a spectacular staircase designed to foster communal interaction. Rising dramatically through

the central atrium, the ‘trunk’ branches off at different levels to link all the departments and their myriad learning settings. At the base of this showstopper, the roots are conceived as splaying to form a wide stepped area, a particularly popular gathering space in the building.

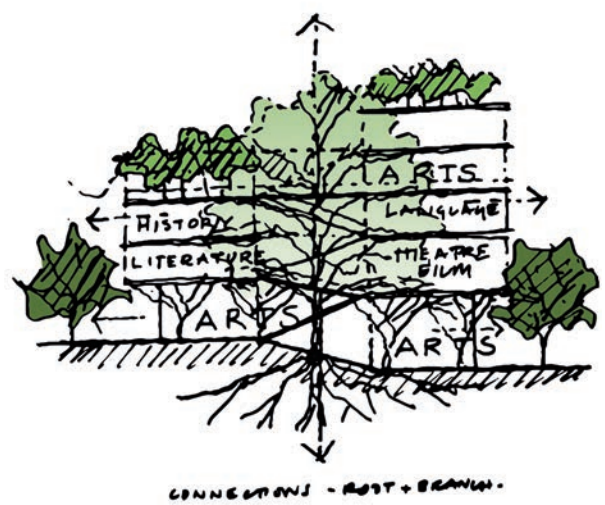
‘We want users to be constantly bumping into each other,’ says Theobald, it’s a place for interaction.. And while FCBS prefers the tree as the key analogy for the design concept, the timber-clad staircase is popularly known, as the Harry Potter staircase, which does suit it well.

FCBS won the project in a RIBA competition back in 2016. The brief was not only to unite the disparate faculty departments under the same roof for the first time, but to facilitate genuine collaboration and communication throughout – academic, student, university and general public. Another requirement was a to create a landmark building on what is a prime site close to the Senate and Arts Centre.

The terracotta patterns give a delicacy to the facade.



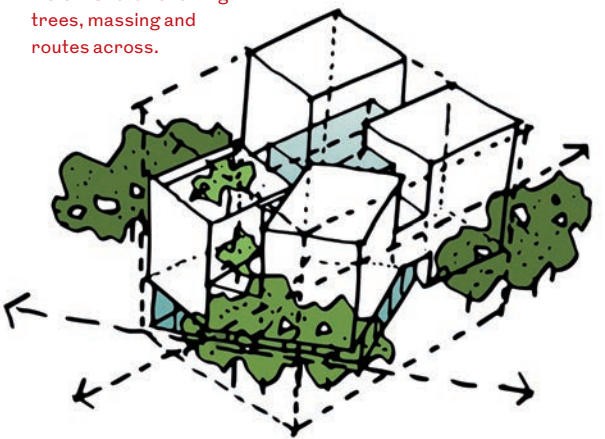




According to Theobald, the building was conceived as a cluster of four pavilions set at a 45° angle - around a central top-lit space and aforementioned staircase. Breaking down the mass in this way stops the 3260-person capacity building feeling anonymous, and increased the opportunity for perimeter windows. Meanwhile the sculptural staircase ensures the faculty is very much the antithesis of a big empty void atrium building, instead drawing students and staff up into the space and offering dynamic views between different departments. Along the way, it opens onto adjacent study, break-out and exhibition spaces, with departmental and teaching rooms beyond. It was expected that 60% of users would take the stairs – but in reality the figure is nearer 100% up to level 3.

Pavilions have 21m by 21m square floorplates. Each cluster of pavilion floorplates incorporates teaching and academic spaces, with standardised servicing and structure configuration to enable changing uses over time. Social learning spaces for each department are situated close to the academic workspace, which includes individual offices around a shared reading room-like academic studio. Larger teaching spaces are on the ground floor.

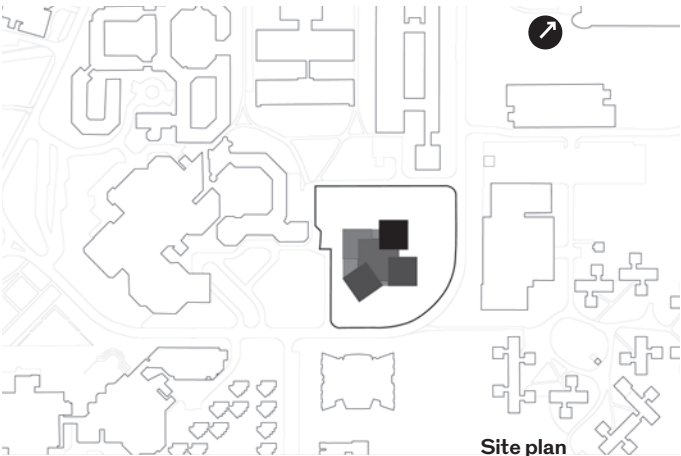
**Below** Sketch showing trees, massing and routes across.



**Above** At eight storeys this terracotta-clad building has started the densification of Warwick's campus.

**Above left** Tree as inspiration for how the criss-crossing staircase could bring branches of the faculty together.

**Below** The central stair offers drama, chance meetings and space for exhibitions and events.



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Buildings  
Stirling Prize shortlist

The generous communal and collaborative space has come at the expense of a reduction in space allocation for academics. This at times ‘difficult’ strategy has however resulted in enormous benefits for students and staff alike, according to Faculty of Arts chair Professor Rachel Moseley (see box). Externally the use of a distinctive terracotta cladding gives the building an instant presence on the campus, its bold ochre hue inspired by local buildings and soil colour – the architects hope it feels almost like a founding building. Initially intended to be glazed terracotta, this cladding changed to unglazed in the value engineering process, a move the architect now welcomes given the accompanying 35% saving on embodied carbon. The vertical grooves are intended to lend a handmade quality. Internally, this verticality is continued in the copious larch cladding, which gives the building an instant visual warmth and calm, concealing the vital acoustic insulation and softening the exposed concrete structure. The latter was created using 50% local cement replacement – saving 265 tonnes of embodied carbon – and provides thermal mass to

**Opposite** A ceramic mural by Matthew Raw animates this route past the building.

**Below** Larch cladding gives visual warmth and calm.



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SUSTAINABILITY  
DATA

**3.381**  
predicted on-site  
renewable energy  
generation (kWh/yr)

**13.3**  
predicted potable  
water use (litres per  
person per day)

**0**  
actual annual gas usage  
(kWh/m<sup>2</sup>/yr)

**53.468**  
actual annual electricity  
usage (kWh/m<sup>2</sup>/yr)

**1,319**  
whole building  
embodied / whole-life  
carbon (KgCO<sub>2</sub>eq/m<sup>2</sup>)

**RIBA Stage 5  
assessment, RICS  
modules A1-A5, B1-5,  
C1-4**

**SERENDIPITOUS CONVERSATION ON THE STAIRS**  
Moving into this building has been a massive culture change on a number of levels. It has given students a greater sense of community. Before, we were spread across three buildings and there was nowhere for students to work. Here, they can be together with their tutors and their peers. It's helped to build an intellectual community that feels more shared. Space allocation for academic staff has been reduced in the new building to enable more social learning space. It was really contentious during the planning stage and was a very difficult cultural shift, but has worked really well. The benefits are overwhelmingly positive but it's a big culture change. I love the way the staircase manifests the inter-disciplinarity of the building. I was very sceptical about the concept, but serendipitous conversations on the stairs genuinely do happen. I'm currently leading an inter-disciplinary research project which started from a conversation in the corridor outside the kitchen because we're on the same floor. The open-sided classrooms around the building have been thoroughly adopted as project working and social learning spaces. This is encouraging us to think about more innovative pedagogical approaches. Professor Rachel Moseley, Vice-provost and chair, Faculty of Arts



IN NUMBERS

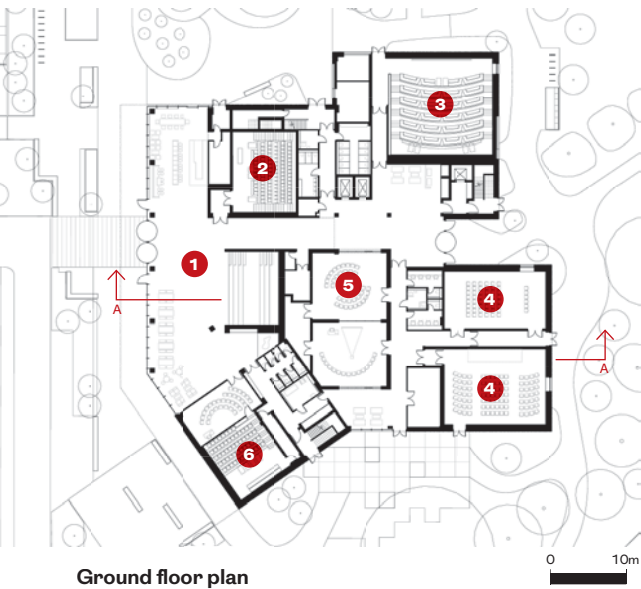
**13,260m<sup>2</sup>**  
GIA

**£43m**  
contract value

**£3,243**  
cost per m<sup>2</sup>

**Design &  
build**  
contract type





Ground floor plan



Second floor plan



Fifth floor plan



- 1 Agora/engagement space
- 2 Lecture theatre
- 3 Collaborative lecture theatre
- 4 Theatre studio
- 5 Rehearsal studio
- 6 Cinema
- 7 Central stair/bridge
- 8 Academic neighbourhood cluster
- 9 Semi-enclosed teaching
- 10 Seminar spaces
- 11 Faculty research hub
- 12 Departmental social learning
- 13 Roof terrace

assist in the mixed mode ventilation strategy.

The central atrium and staircase are key to the pervading spirit of openness and generosity. The building is open-access with a downstairs café, and a large reception incorporating the wide steps/seating mentioned earlier. A nice touch is the incorporation of display areas for different departments. There is also integral art – a poem by Raymond Antrobus on the atrium wall and outside, a colourful ceramic mural piece by Matthew Raw, and large picture windows frame views out over the campus and countryside.

Following the success of this building, the university is planning two further new faculty buildings with a similarly collaboration-driven approach.

At a time when funding for arts subjects is increasingly threatened, it's heartening to see such a substantial investment in this most impressive of facilities. ●

**Above** Spaces maintain a connection with existing trees.

**Below** The entrance space, an agora dedicated to engagement.

Credits  
**Lead architect** Feilden Clegg Bradley Studios  
**Architectural services for contractor** MCW  
**Contractor** Bowmer & Kirkland  
**Structural engineer** Arup  
**Engineer** Buro Happold  
**Landscape architect** Deborah Nagan, LUC  
**Facade engineer** Montresor Partnership  
**Services engineer** Derry Building Services  
**Theatre consultant** Charcoal Blue



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Aalto to John Morden  
Centre's architecture.

# Heart and home



Rounding off our review of the Stirling Prize shortlist, Mæ's welcoming John Morden Centre is both the heart of a home for seniors in need, and part of a more ambitious community plan

Words: Jan-Carlos Kucharek Photographs: Jim Stephenson

## Buildings Stirling Prize shortlist

What price a good later life? Chancellor Jeremy Hunt's £2bn 'boost' to social care funding in 2023-24 pales into insignificance when compared to the annual £7bn viewed as necessary in 2020 when Hunt was chair of the Health and Social Care Committee. With local councils calculating the 'Fair Cost' paid to social care providers, care homes – already struggling with staff employment and retention – are running with little or no profit margins. Half of those using their services, meanwhile, don't qualify for government funding and are forced to pay for their care, some having to sell their homes to do it. Morden College helps the elderly facing hardship; the new centre helps enrich

### IN NUMBERS

**911m<sup>2</sup>**  
gross internal area

**150 years**  
building design life

**Confidential**  
contract cost

**Design &  
build**  
contract type

that life and enables the college to start opening up its services to more people.

Charity AgeUK's latest report, State of Older People's Health and Care, released in July, exposes the scale of the challenge for older people in today's social care system. We are living an average 20 years longer than we did 75 years ago – an encouraging statistic that masks a picture of increasingly complex health needs. By 2030, there will be 2 million older people without children, meaning a greater dependence on a formal care system that is ill-prepared to receive them.

In this context, the existence of Morden College, set up by 17th century wealthy merchant John



The old tree might have worried trustees with its proximity, but it is the worthy focus for the new John Morden Centre.





Morden to offer a home to destitute, ‘decayed’ seamen – and, with its endowment, still serving an elderly community facing physical and financial issues – seems incredibly, to be answering a very modern need. Its beautiful, Wren-inspired quadrangle, with accommodation, chapel and old dining hall, might be lacking ensuite bathrooms, have non-accessible doors and the odd step, but even the 30 or so able-bodied residents of its cloistered courtyard know which side their bread’s buttered. Morden College is, after all, a community of 300 people, spread over two sites; all in financial need, who have proved themselves in an interview process to secure a place here. You get the feeling that no historical trip hazard is going to stop any resident from living their best life.

The John Morden Centre facilitates that life even more, acting as the new social heart of Morden College, born out of a dusty corner of the site previously occupied by old Nissen huts alongside its 1960s octagonal Merchant’s Hall social space. CEO David Rutherford-Jones, having seen the impact of the Maggie’s Cancer Centres on its community, sold an idea to the trustees. At its simplest, this was ‘a



The RIBA Journal September 2023

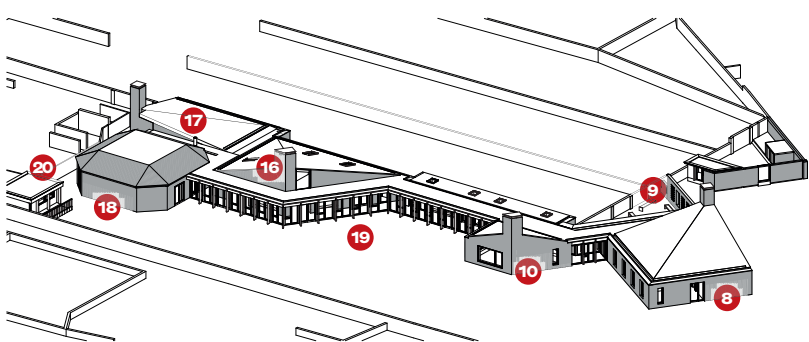
**Left** Forms pick up on the cloister and chimneys of Morden College’s quadrangle.

**Bottom left** The cloister corridor, with views to the garden, offers ample opportunity to sit and linger.

Ground floor plan

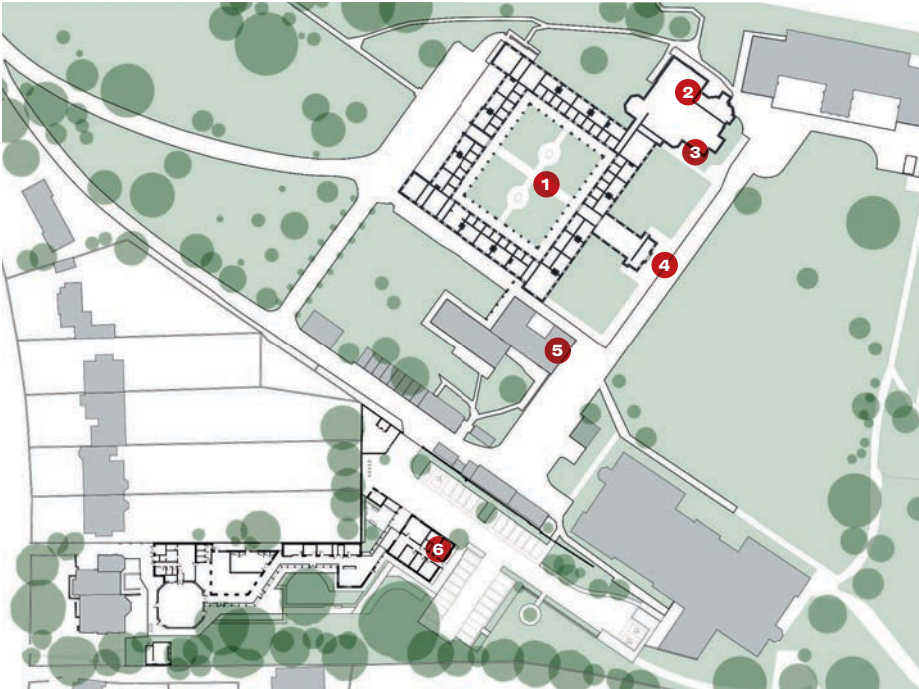


Axonometric



- |                       |                       |                                |
|-----------------------|-----------------------|--------------------------------|
| 1 Morden College quad | 8 GP consulting rooms | 15 Crafts workshop             |
| 2 Old Dining Hall     | 9 Courtyard garden    | 16 Restaurant                  |
| 3 Old Library         | 10 Reception/snug     | 17 Kitchen and servery         |
| 4 Chapel              | 11 Shop               | 18 Merchant’s hall             |
| 5 Social annex        | 12 Admin and IT       | 19 Terrace and garden          |
| 6 John Morden Centre  | 13 Offices            | 20 Pottery workshop            |
| 7 Entrance            | 14 Wellbeing suite    | 21 Planted entrance to parking |

Site plan



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Photo : Stéphane Rambaud

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# For terraces that make a statement

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Mæ and interior designer Nadine Judd created the warm and welcoming interiors. The café area has spaces that are both open and cossetting.

space that might contribute to how users might feel about their day, or their life... one that's beautiful and tactile, with good functionality – uplifting.'

Of the architects invited to put forward a proposal, Rutherford says 'Mæ were the only ones who got the brief from the outset.' With its timber-structured, brick-faced structure, the practice gave the college the facilities it needed – a health centre for residents, social spaces, refectory, art and crafts room, shop and hairdresser – and reinterpreted the formal language of the grade I listed college to do it. Not just the obvious things, like matching the reddish-brown warmth of the original brick, but also picking up on the language of chimneys to create the stack effect for its passive ventilation. Or its garden-facing glazed corridor that brings all the social spaces together as it winds its way around an old tree, with seating built into the wall along its length, so if it's a slow journey for someone, it's one done with time and dignity.

A Sandhurst man, Rutherford-Jones knows you lose battles to win wars. He concedes that keeping the old Merchants Hall was a bargaining chip in the two-year cost discussions with the trustees. He thinks Mæ could have pulled off something quite

## SUSTAINABILITY DATA

**5.75**  
predicted on-site renewable energy generation (kWh/yr)

**50**  
predicted potable water use (litres per person per day)

**80.6**  
actual annual gas usage (kWh/m²/yr)

**78.54**  
actual annual electricity usage (kWh/m²/yr)

**442**  
whole building embodied / whole-life carbon (KgCO<sub>2</sub>eq/m²)

**RIBA Stage 5 assessment, RICS modules A1-A5**

ribaj.com

## CLIENT VIEW

John Morden was a visionary who founded this charity in 1695 to ensure that old people were looked after well, and he's still challenging us to think in a granular way about what it means to live well in old age; the new centre is part of that idea.

When I came here a decade ago Morden College was a lovely place but it was inward-looking and felt as if it needed modernising; the new centre has done that for us. Alex Ely got the brief spot-on, creating a space that is contemporary in its feel but with all the beauty and tactility of the quadrangle that residents know so well. The health centre was the 'business' end of the brief but other spaces – the café, art room and hair salon – work better than I could have hoped. Residents love it and the place buzzes with activity. It's a victim of its own success, with pressure on the art room especially; so much so that I'm wondering how we might squeeze in another craft space in the future. I might need to get back to Alex about that.

David Rutherford-Jones, CEO, Morden College



The art room has proved incredibly popular with residents.





**Left** Admin offices and the adjoining health centre are light-filled and a pleasure for users.

**Right** The timber structure and oak joinery brings a particular tactility and warmth to interiors.

**Below** With its exterior terrace, everyone in the centre can sit outside if they want.

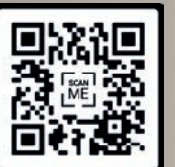
Credits  
**Client** Morden College  
**Architect** Mæ  
**Contractor** Clive Graham Associates  
**Structural engineer** Michael Hadi Associates  
**Environmental / M&E engineer** BOOM  
**Interior design** Scott-Masson Interior design  
**Quantity surveyor / cost consultant** Calford Seaden  
**Project management** Calford Seaden  
**Landscape architect** J&L Gibbons  
**Planning consultant** Stanway Little



Mæ gave the college the facilities it needed and reinterpreted the language of the college to do it



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## MacEwen 2024 opens

Our 2024 competition to celebrate architecture for the common good has launched. Do you know a project that would be a worthy winner?

Have you completed a project that has been particularly inclusive? Perhaps one that provides something extra for the community? Or one that is super sustainable and good for the planet? Any kind of project that tackles one of the pressing social, economic or environmental issues of our time? If you have, the MacEwen Award 2024 is open for entries! RIBA Journal is on the lookout for the latest projects which have gone above and beyond in architecture for the common good.

The RIBA MacEwen Award was launched in 2016 to discover and celebrate architecture with a greater purpose that perhaps took that bit more effort but that has reaped more varied rewards.

Each year the award has grown and developed. We've always been flexible as to what 'common good' can mean – entrants show us as the context of architecture changes. But at its core, the award is about architecture that is responsible and acts in the wider interest. In 2023, the winner was Scott Whitby Studio's Jubilee Pool, which saved a historic lido in Penzance. The practice was involved in raising awareness, funding and sparking community involvement, as well as designing a new café, community space, restoring the historic building and using geothermal energy to make it possible to swim in a section of the sea pool all year round.

However, entries could enliven a street, create a wonderful sense of place or tackle world issues – yet should do so with dignity and joy. The award brings together the biggest projects and the tiniest, well-known practices with up and coming, national schemes and local.

As with all the awards we run at RIBA, it is free to enter and aims to reach previously under-represented parts of the profession. ●

**DEADLINE: 2PM, WEDNESDAY 1 NOVEMBER 2023**  
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**[RIBA.J.COM/BUILDINGS/ENTER-NOW-MACEWEN-AWARD](https://www.riba.org.uk/buildings/enter-now-macewen-award)**

**Above** Wraxall Yard's accessible holiday homes with sustainable style by Clementine Blakemore Architects, commended in the 2023 award.

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# Quick to build, affordable office has the ‘wow’ factor

In need of a bigger space to work from, TMV architects harnessed its own design and build skills to create an office using corrugated metal and SterlingOSB Zero



**Above** SterlingOSB Zero forms the feature wall in TMV Architects’ office.

When TMV architects needed a new office the team set about designing and building one.

The fledgling practice had outgrown its annex accommodation above a garage in the home of one of its directors. ‘We wanted our own building; something to give us an identity and space to accommodate clients,’ says Thomas Mann, a director of the practice.

That was six years ago. The practice bought a plot of land in Cambridgeshire at auction. ‘It was a small site occupied by a disused BT repeater station building, which was all we could afford at the time but we thought we would be able to do something interesting with it,’ says Mann.

Now, that brick repeater station building has been replaced with TMV’s new office; a simple black, single-storey metal-clad contemporary building, complete with a pitched roof to accommodate a mezzanine floor. With the exception of two car parking spaces at the front, the new office almost fills the plot. Mann says: ‘When we planned it, we knew the office would be too big for the practice at that time, but we designed it with the future in mind’.

Budget was a major constraint when it came to building the practice’s new home, so TMV’s design is based on a superstructure of locally-manufactured structurally insulated panels (SIPs). The panels consist of a 140mm insulating foam core sandwiched between two SterlingOSB Zero sheathing boards. The result is a building system that is extremely strong and energy efficient with low embodied energy and, most importantly, it was a cost-effective solution. ‘We designed it with quite a big vaulted roof which, if built traditionally, would have required a lot of expensive steelwork. However, because vaulted roofs are relatively easy to construct using SIPs, all we needed was a couple of timber posts,’ explains Mann.

The simple SIPs walls rise from an insulated concrete raft foundation. Two large oak trees border the site, so TMV employed a foundation system developed by Advanced



Foundation Technology and commonly used in Sweden and Norway for sites adjacent to forested areas. ‘We cleared the site ourselves and then assembled the insulated expanded polystyrene base ready for it to be filled with concrete’

The deliberately uncomplicated design meant very few contractors were needed to assemble the building. This allowed the practice to project manage construction. With the foundation slab cast, a single contractor assembled the SIP-walls and pitched roof. Mann says: ‘Within a week, the shell was up and wrapped in a membrane so that the building was effectively watertight.’

Externally, the SIPs are clad in black corrugated metal sheets that lend the building a modern industrial aesthetic.

That aesthetic is continued internally with a full-height gable wall featuring exposed SterlingOSB Zero. The original intention was that the OSB would be the inner sheathing of the SIP panels which had been left exposed, partly to create a feature and partly to save the cost of having it plastered.

However, the hotchpotch of stencilled markings and reference codes sprayed on

the OSB by the SIP manufacturer made the wall ‘a bit unsightly’ says Mann. So rather than lose the impact the SterlingOSB Zero gave to the interior, TMV simply covered the SIPs with an additional layer of SterlingOSB Zero boards to give the space a more refined finish.

The SterlingOSB Zero feature wall’s textured, organic finish is given additional emphasis by the crisp white plaster used to finish the adjoining walls. Mann says visitors often walk into the office and say ‘wow’, simply because OSB is a material they are not used to seeing in this context.

When the office opened in 2018, TMV sublet its mezzanine floor. Since then, the practice has continued to grow so that now it occupies the whole office. The SterlingOSB Zero feature wall has also been given illuminated TMV branding.

Eleanor Stamp, senior architectural designer at the practice, says that although the office had to be a cost-effective build, its open-plan design and the natural feel that the OSB brings to the space makes it a nice place to work: ‘Everyone loves working here, we’ve gone from two to eight staff in five years and no one has left,’ she says. Proof (of sorts) of the benefits of OSB. ●



**Above** View from the mezzanine showing the use of wooden furniture to complement the OSB.

**Left** The SIPs exposed in the external lobby before being covered with white metal cladding.

**Below** SIPs enabled assembly of the office shell within a week.



For more information on how SterlingOSB Zero can help your project go to [uk.westfraser.com](http://uk.westfraser.com)



## Dragon Flat springs into a different world

Tsuruta Architects has conjured a taste of Japan from a 1950s former council flat in west London, using SterlingOSB Zero in unusual and intriguing ways

Dragon Flat is a minimalist take on the refurbishment of a two-level maisonette in a 1950s council block in London's upmarket Notting Hill. Designed by Tsuruta Architects, its Japanese-inspired interior is a response to the client's wish to turn its outworn post-war home into something more contemporary.

Constrained by the block's concrete structure and low 2.4m floor-to-ceiling heights, Tsuruta Architects' scheme has focused on opening up the apartment's lower floor to liberate it from its post-war configuration and create an open, light-filled space. 'The dual aspect of the flat was a gift, but was not apparent due to being subdivided by the stairwell, kitchen, dining and living room partitions,' explains Taro Tsuruta, the practice's founder.

Opening it up was not easy. Only through 'painstaking' structural surveys has it been possible to remove all non-load bearing walls from this level without affecting the existing structure.

Free of partitions, the space has been completely transformed with all utilities – kitchen, toilet and corner sofa – pushed to the floor's perimeter. Storage is provided by a full-height cabinet that runs window-to-window along the length of the party wall. This features an engraving of the River Thames across its grid of cupboards. 'The engraving will draw occupants' attention away from the low ceiling,' explains Tsuruta.

A floating timber stair leads to the upper floor. Built in the same central position as the flat's original enclosed stair, this elegantly crafted timber structure is both sculptural and practical, enabling light to filter through its perforated form.

Upstairs, the original room layout has been retained. In contrast to the open approach taken on the lower floor, Tsuruta Architects has created more intimate spaces, no more so than in the tatami bedroom. Here, the ceiling has been effectively lowered to a height of 2m by placing the room's tatami-



TARO TSURUTA

matted floor on a storage platform. 'You don't need it any bigger because you just sleep there; we've created a walk-in wardrobe in the room next door,' Tsuruta explains.

The tatami room's interior is enhanced by SterlingOSB Zero-panelled walls engraved with flower images, transforming what could have been a stark, minimalist space into an informal, private retreat. 'We focused on the surfaces in this constrained space,' Tsuruta explains.

Tsuruta says the choice of SterlingOSB

Zero boards as wallpaper 'pays homage to the flat's humble beginnings as economical post-war housing'. However, engraving and then meticulously edging each panel with a discrete brass strip has transformed this utilitarian material into a highly decorative, almost luxurious finish. 'We discovered that if you frame OSB with brass it becomes a very different material,' he says.

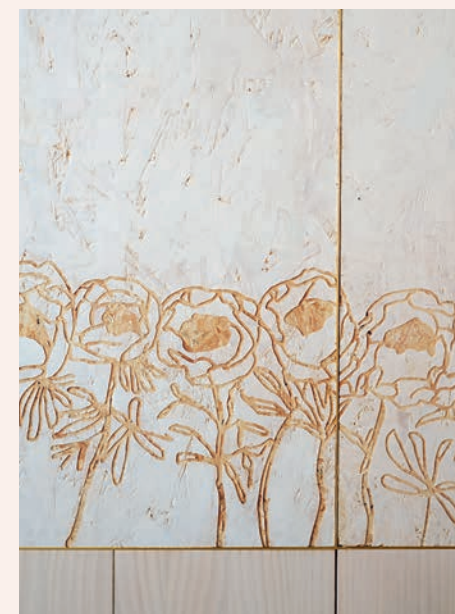
The floral peony image used on the SterlingOSB Zero was generated using artificial intelligence (AI). Tsuruta says he was playing around with DALL-E, an AI program that generates images instantly from text prompts: 'We typed in flower many times. It gives you a choice, you select one, modify it a little and so on... the choices are infinite but the decisions are yours'. He says using nature as an inspiration has echoes of the Arts & Crafts movement, but while that was a reaction against technology, 'we have embraced it'.

The digitally-created image was engraved on the SterlingOSB Zero by transferring co-ordinate data to a CNC router – a digitally controlled cutting and carving machine. First the OSB is treated with oil containing a light pigment to create a contrast between the surface of the board and the CNC engraving. 'Because the SterlingOSB Zero is layered, it did take a bit of trial and error to get the cutting blade and cutting speed right,' he explains.

OSB has also been used as a wallcovering in the toilet on the lower level. In this small enclosed space, the architect has playfully (and successfully) contrasted SterlingOSB Zero boards with Carrara marble slabs. 'Marble is one of the most luxurious building materials and OSB one of the most functional. We wanted to express that contrast,' he laughs.

SterlingOSB Zero edged in brass has also been used to construct the bathroom furniture. Here the architect has embellished the precisely detailed cabinetry with subtle cut-out silhouettes of bats, which Tsuruta says are a popular auspicious symbol in the far east. He says it is important the symbols are ambiguous additions so people talk about them. 'Why images of bats in the bathroom and why the Thames River?' he says. 'Such a question would evoke a conversation between occupants and visitors which we hope adds colour to their everyday life.' ●

TIM CROCKER (5)



**Opposite** The lower floor has been opened up by removing all internal partitions to exploit the flat's dual aspect. The floating timber stair leads to the upper floor.

**Opposite below** Tsuruta Architects was unable to alter the concrete structure of the 1950s block.

**Top** The tatami-matted floor has been raised to create an intimate bedroom.

**Above left** AI was used to generate the peony image for the engraving.

**Above right** Brass-edged SterlingOSB Zero boards contrast with Carrara marble in the downstairs toilet.

**Left** Engraved SterlingOSB Zero is used as wallpaper in the tatami room.



# Natural, safe and sustainable

Bernie Roberts, National Product Manager for Cladding Solutions at International Timber, looks at trends and specification considerations for architects



The UK timber cladding market is growing, providing numerous design opportunities for buildings and homes.

### Current cladding trends

Connecting the built environment to nature with the use of biophilic design is a huge trend at the moment. Introducing a biophilic aesthetic on the external facade of a building helps to blur the line between indoors and out, producing a more organic flow between building and nature.

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### Factors to consider

Timber species, profile and additional coating options are all things to consider when designing and using cladding.



**Above** Siberian Larch cladding used to create a beautiful waterside retreat. Images courtesy of Studio-Fuse.

**Below** Accoya cladding installed vertically to create a modern look.



Softwood, hardwood and modified timbers all play a part in the design stage, and we recommend a 10% wastage allowance on all cladding timbers – with up to 15% on Thermowood, due to its brittle nature.

Once a profile has been chosen, the timber should be durable enough to meet the service life required. Where the natural durability of the timber species is not good enough, a wood preservative, factory impregnation or a modified timber should be specified.

Many timbers can be left uncoated to weather naturally to a silver-grey colour over time, but elevation should be borne in mind. A northern elevation will not get as much exposure to the elements as a one that is south facing, while a southern elevation will require more maintenance if the cladding is coated.

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# 2: Intelligence

**RESILIENCE REWARDS  
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BUSHRA MOHAMED,  
MSOMA ARCHITECTS

Architects establish practices for various reasons, from creative control to financial reward. For me the impetus was frustration with the profession, which is homogenous in its culture and demography. The global response to the death of George Floyd gave me confidence to make the leap, aged 30. It was a partnership, but our ambitions differed. Msoma was formed a year ago, and now has two part-time staff.

There have been highlights, like designing or curating exhibitions at the Design Museum and the Venice Biennale, but it's also incredibly tough: lonely and financially challenging. Since starting the practice I've got quite obsessed with trying to make it work both as a business and a creative endeavour. I'd worked closely with practice directors, so had some understanding of how firms were run, but was surprised by how much mental space is taken up by balancing competing demands. Valuable support has come from former tutors and networks like Black Females in Architecture, but I'd like a business mentor. Our training is inadequate – from understanding our value to navigating frameworks.

At the outset you have to invest in defining the proposition of the practice – how to stand out. Our purpose is to foreground the identities of minority communities, with a particular focus on cultural projects and housing. Being explicit does shape the enquiries received. Current work includes a mosque for a British-Yemeni community and 60 flats in Kenya. We're also on the Mayor of London's Architecture & Urbanism Framework. Projects like that will be a calling card, but building it up takes years and you need to eat. Those timescales aren't something I'd fully considered, but some naivety has also been an advantage. Passion gives you the drive to keep pushing every day. If you've got that, go for it. ●



Intelligence is officially approved RIBA CPD. Look out for icons throughout the section indicating core curriculum areas.



*'I'd like a business mentor. Our training is inadequate – from understanding our value to navigating frameworks'*

**Left** Bushra Mohamed: Passion gives you the drive to face the challenges of running your own practice.



# Average earnings grow by fastest rate ever

Architects’ 15% average earnings rise wipes out recent years’ under-performance as salaries restore their long-term trajectory, reports Aziz Mirza



## THE KEY FINDINGS OF THIS YEAR'S RIBA/THE FEES BUREAU ARCHITECTS EMPLOYMENT & EARNINGS SURVEY:

- architects' average earnings on 1 April 2023: £50,000
- a rise of 15% from last year
- average earnings keep up with inflation over the long-term
- 13% work part-time
- 5% unemployed or not working for other reasons



Architects have seen average earnings rise by the largest figure ever recorded – up by 15% on the year to April. That’s the stand-out finding from this year’s RIBA/The Fees Bureau Earnings Survey. That rate of increase is more than twice as fast as any increase figure since this survey began in the 1980s. That’s a staggering achievement. After six years of poor performance, whether brought on by pandemic recovery or supply-side issues, architects’ earnings have now returned to their long-term trajectory. For at least 15 years, between 1995 and 2010, we saw average earnings rising consistently year on year. The financial crisis brought the first set of doldrums, and ever since then that long-established pattern was replaced by one in which average earnings were nearly always outperformed by inflation.

This year sees earnings fully make up for recent years’ under-performance. Finally, growth in architects’ average earnings between 1995 and 2023 exactly matches inflation over the same period. However, to a certain extent it’s disappointing to see that average earnings have only matched, and not exceeded, inflation over those 30 years.

The relationship between changes in the number of architects and in earnings is fascinating, and we’ve pointed before to the way these supply-side factors appear to affect average earnings. The number of architects grew very gradually between 1995 and 2008, while average earnings rose quickly. The financial crisis brought a period of turbulence, but the economy had settled down by 2014 – by which time the growth in the number of architects started to accelerate. Between 2014 and 2020 more than 8,000 architects were added to the workforce. From 2016, however, average earnings stopped growing and then, in 2019, actually fell. Falling earnings during a period of economic growth was, until then, unprecedented. And it’s hard

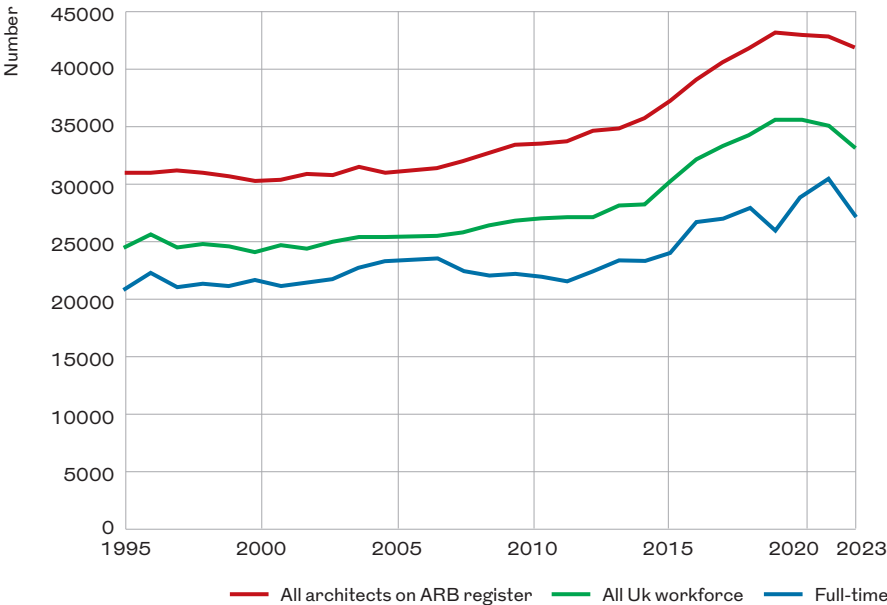
not to link the big rise in the number of architects with the fall in average earnings. If we leave the disruptive effects of the pandemic to one side, we can see a revival of the link between architect numbers and average earnings happening this year. The workforce shrank by nearly 1,000 architects this year, and this may have contributed to the record rise in average earnings.

So, the big picture is one of a slightly smaller profession but rising earnings. This year, the largest rises are recorded by salaried architects working in private practice or elsewhere. Once again, it is those working for private companies as in-house architects or consultants who record the largest pay rises, up by 33% this year (although last year’s figure was unusually low). Public sector architects’ average earnings are higher by 19% in local authorities or even more in central government. The sector which employs more architects than any other, private practice salaried, shows a 13% improvement on last year’s figure; rising from an average £40,600 to £46,000.

Partners and directors in private practices saw their average pay rise by 9%. This is considerably less than the increase for salaried staff although it remains in line with inflation. Their pay pattern is also far better than that of sole principals, whose average earnings fell significantly, by 13%, over the year. The average sole principal architect currently earns £40,000 while the average partner and director reports an income of £60,000 – half as much more than sole principals.

It now appears that earnings in private practice are moving ahead strongly, although partners and directors are restricting their pay rise to no more than inflation while offering their staff substantially larger pay rises. This is probably to aid retention and recruitment. We can also see that the level of almost all fringe benefits offered to architects has increased this year; further evidence that employers are very serious in their efforts to retain and recruit. Indeed, the rate at which average earnings for salaried architects in private practices are increasing now out-

Long-term trends in the number of architects in employment, 1995 - 2023

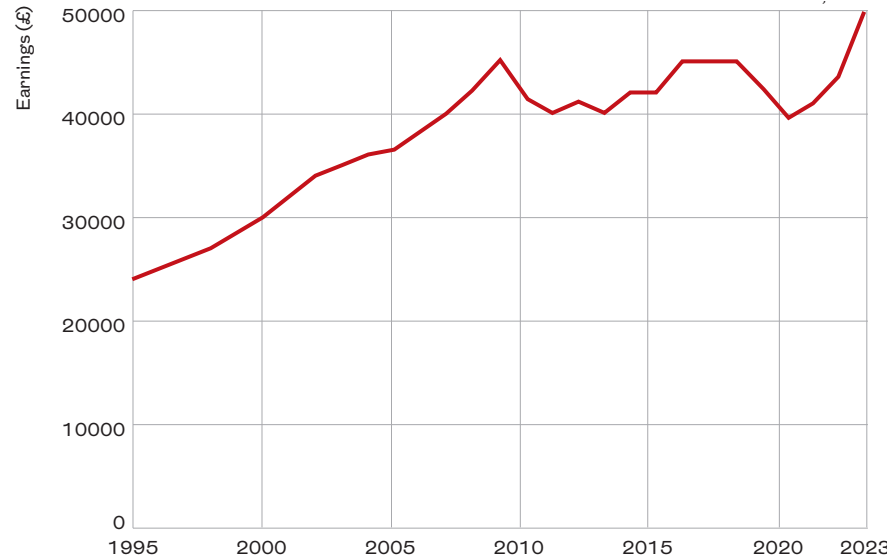


Architects' median earnings by field of employment, 2023

Field of employment (£)	Lower quartile	Median	Upper quartile
Sole principals	25000	40000	58000
Principals in partnership	42000	60000	80825
ALL PRINCIPALS	35000	52000	75000
Private practice salaried	38563	46000	53875
Private in-house	57374	70000	86000
Local authorities	41296	50039	54114
Central government	49953	60000	67000
ALL	38500	50000	66690

Darker colours represent higher earnings

Trends in architects' median earnings, 1995 - 2023





performs that of partners and directors by a significant amount. Partners and directors’ average earnings have only just reached their pre-pandemic average, while salaried architects’ pay exceeds their pre-pandemic high by 12%.

This year’s survey shows that unemployment remains very low, less than 1%, although more architects are not working for other reasons (4%). Some 13% of the profession works part-time, but as in previous years, more than twice as many female architects (22%) are working part-time compared with male architects (9%). Historically there has been a gender pay gap where average architects’ pay received by male architects exceeds that received by females. In 2023 that gap narrowed to 8%, returning to its pre-pandemic level.

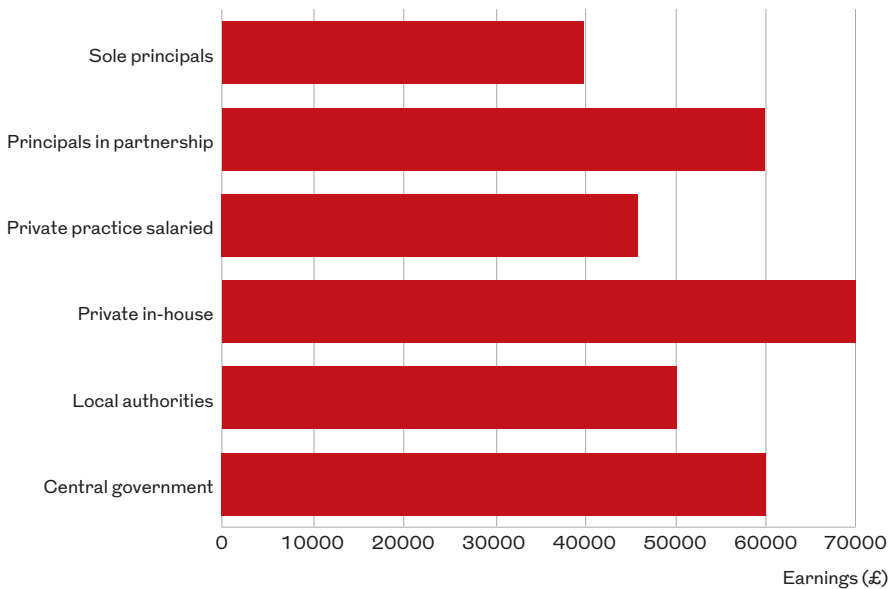
The RIBA/The Fees Bureau Earnings Survey now includes more data about the profession’s diversity. The gender split is 68% male, 32% female and 1% ‘other’ or ‘prefer not to say’. Ten years ago, 23% of architects were female (‘other’ was not recorded). Ethnically, 4% of architects are Asian or Asian British, 1% Black/ African/Caribbean/Black British, 1% mixed/multiple ethnic groups, 2% ‘other’. The proportion who are white has remained unchanged at between 92 and 94% over the past 20 years – no sign of a more diverse profession on that metric. About 8% of architects consider themselves to have a disability or a long-term health condition; dyslexia being mentioned most often, followed by physical, hearing or multiple conditions.

And in a new question this year as a proxy for measuring access to the profession, 53% – the majority – say they were the first generation in their immediate family to go to university. It will be fascinating to see how these measures change over time.●

Aziz Mirza is a director of The Fees Bureau

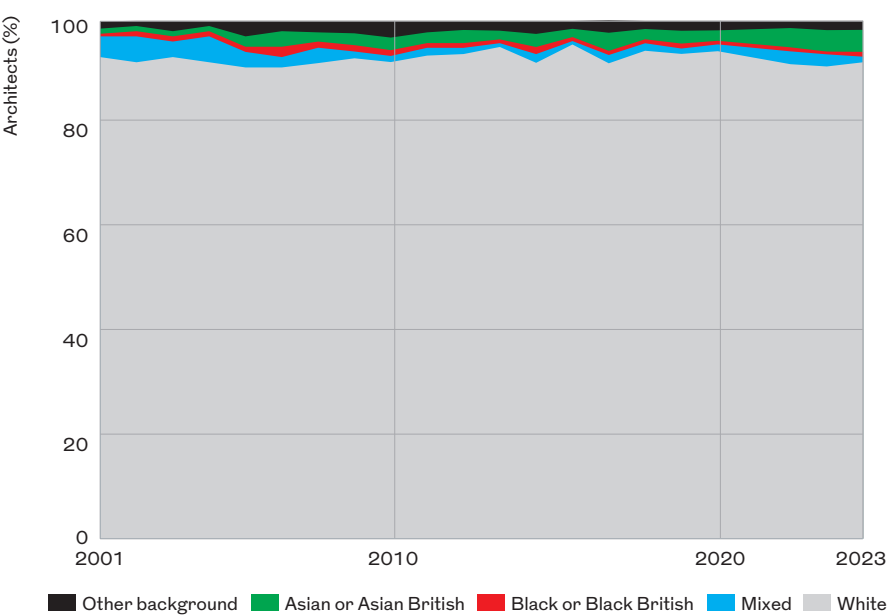
The annual RIBA / The Fees Bureau Architects Employment & Earnings Survey is a research survey conducted among RIBA members and excludes members based overseas. A sample of members was invited by email to complete an online questionnaire form in April to July 2023. A full report on the survey, Architects Earnings, includes detailed tables and charts, and is available to buy from The Fees Bureau at [www.feesbureau.co.uk](http://www.feesbureau.co.uk)

Architects’ median earnings by field of employment, 2023



Salaried architects' pay now exceeds their pre-pandemic high by 12%

Trends in architects' ethnicity, 2001 - 2023



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## Take good care of your feet

Foundations disrupt ground and release carbon, and damage biodiversity. Less invasive methods are effective so let's use them, says James Mickelburgh



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**Below** Removable steel foundations support Cigue's 88m² wooden house.

Healthy soils can act as a carbon sink absorbing carbon and storing it. Up to 20% of the world's CO<sub>2</sub> emissions come from the release of carbon due to of ground disturbance; an estimated 133 billion tonnes of carbon have been released from soil since measurements began. The fact that this is mainly due to tilling and ploughing for agriculture does not let construction off the hook.

Site strips and excavations in construction contribute to the release of carbon as they disturb the ground. This increases the rate of decomposition of dead plants and animals, roots and soil organisms and so speeds the release of carbon into the atmosphere. And the existing biodiversity of soil has a critical role to play, contributing to the function of all ecosystems.

'It isn't just topsoil disturbance that needs consideration, it also matters where that soil goes,' says James Gilroy, lecturer in ecology at the University



MARIS MEZULIS



of East Anglia. 'If soil is left exposed to the air or water on the surface carbon emissions will be much higher. If the soil is immediately buried again somewhere else the carbon may remain stored although that depends on whether the soil organisms survive. So an important question is what you do with the material you dig up.'

Most carbon stored in the ground is in the top 1m, and predominantly the top 0.3m, explains Gilroy. This is particularly problematic as even on small projects the typical sub-structure working zone lies within these depths.

Early design to minimise ground disturbance can reduce carbon release, while re-purposing of excavation spoils can reduce the amount of carbon emission from a site, helping maintain some of the soil's sensitive ecosystems.

The starting point on a construction project is to understand the ground we are working with. Then we can protect its ecosystem, mobilise its inherent load bearing properties and develop efficient, low-impact designs that work with it.

A detailed site investigation is critical. Early geotechnical inquiry may include in situ testing and collection of samples for laboratory testing. These should give a sense of the organic make up of the

Most carbon stored in the ground is in the top 1m, and predominantly the top 0.3m

ground. Francis Williams, director at Ground and Water, explains: 'Data can be accumulated that tells an engineer the type of ground, its load bearing capacity, susceptibility to movement and whether it is contaminated.'

But even after a detailed site investigation, foundation designs are often conservative. The greater the foundations and the more the site is stripped, the more the soil's structure is destroyed and sequestered carbon released into the atmosphere – not to mention costs and the embodied carbon of the materials used. Conservative engineering of foundations isn't the way to create a more robust foundations; costly mistakes are more often the result of misunderstanding ground conditions.

Ensuring a building is designed to suit its specific ground conditions allows the best foundation solutions to be chosen.

Low rise, single or two-storey projects with lightweight superstructures

which employ materials with a degree of malleability will permit the use of a number of low-impact, no-concrete and even no-dig techniques.

Happily, solutions with a lower impact on biodiversity also tend to have lower embodied carbon. This is important as new foundations can produce 17%-31% of the total embodied carbon of a building project, according to LETI's Embodied Carbon Primer.

At the Nest House designed by Studio Bark, structural engineer Structure Workshop showed one way. It used fully demountable Jackpad foundations, on the Wye Valley scheme, which are both recycled and recyclable and crossed with a grid of reclaimed railway sleepers.

In France, in a regional nature park in Limousin, architecture practice Cigue used removable steel foundations and floated its simple wooden house above the ground at Saint-Julien le Petit.

Designers should not be afraid to pursue innovative techniques or suggest alterations to the building design to reduce impact and ground disruption. Various suitable alternatives include steel screw piles, vibro stone columns, timber piles, jack pads and stone trench footings. A comparison of embodied carbon in foundations suitable for low to medium rise construction by the Institution of Structural Engineers shows that significant carbon reductions (in the materials) can be made by using vibro stone columns – at the bottom of the list at 5-10kgCO<sub>2</sub>e/m<sup>2</sup> – rather than concrete strip footings at 100-125kgCO<sub>2</sub>e/m<sup>2</sup>.

They are often easier to re-use than standard concrete foundations, so help a building to move towards being circular – following LETI's verdict that buildings can only be considered whole life net zero if all components are reused or demountable and reusable. ●

James Mickelburgh is a director of JensenHunt Design, structural engineer

**Left** Studio Bark and Structure Workshop used Jackpad foundations for Nest House, constructing it with a student team.

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# Mandatory Biodiversity Net Gain is imminent: Are you ready for it?

Biodiversity Net Gain becomes a legal requirement on new developments in November. Rather than seeing it as an ecological planning hurdle, it should be viewed as a powerful tool to promote smart and sustainable development design

The high level of interest in the RIBA Journal's Designing for Biodiversity Net Gain webinar, which attracted more than 900 viewers, suggests a desire in the profession to get up to speed on mandatory BNG. The new regulations will require a minimum 10% uplift in the overall biodiversity value of a development site as part of planning. This becomes law in November for most developments in England under the Town and Country Planning Act 1990, with small sites following next April, and nationally strategic infrastructure projects in November 2025.

'People are eager to know more,' said RIBA Journal managing editor Isabelle Priest, who chaired speakers and panellists ranging from ecologists and architects to lawyers and local authorities.

First up was Ben Stansfield, a partner specialising in planning and environmental law at Gowling WLG. He set out the new requirements for a BNG plan to be approved by the Local Planning Authority as a pre-commencement condition before work can start on site. This improved biodiversity needs to be maintained for at least 30 years. Local planning authorities may require a greater uplift – some already ask for 20%.

Once the site's baseline biodiversity level has been established, the proposed BNG Plan can be calculated using a Biodiversity Metric tool – templates for these plans will be available from Defra. The BNG Plan can comply using on-site or off-site methods, or both. For example, obligations can be met by on-structure, on-site, and/or adjacent to site measures on areas under the developer's control. Off-site measures may include land controlled by the developer or offsite habitat banks. Statutory biodiversity credits will also, initially, be available to buy from the UK government, but at uncompetitive prices.

Stansfield had some concerns over potential delays while BNG plans were approved or decisions legally challenged, and how the required biodiversity uplift would be monitored and enforced over the 30-year duration. BNG works are to be secured via a Section 106 Agreement under the Town and Country Planning Act, or by conservation covenant with a responsible body. There were 'lots of question marks' over the enforcement of the latter, he said, as it was difficult to assess the long-term financial burden for many sites. Legal agreements will bind those with an interest in the land.

'We'll get there. It'll all be fine. But we

could have a couple of tricky months ahead of November and then in December and January,' he said.

Emma Toovey, ecology director at Environment Bank, struck a more optimistic note, preferring to see BNG not as another burden, but as 'an amazing opportunity' to address the decline in biodiversity, with the potential to be transformative.

She advised getting baseline assessments done early, and working with a competent ecologist using the Biodiversity Metric tool to minimise the project's biodiversity impact before considering BNG delivery.

'It's not a tool that you should be just applying right at the end of the process as some sort of scoring calculator. You're missing a huge opportunity if you're only using it for that purpose,' she said.

After running through how BNG can drive high quality spaces (with potential for urban cooling, increased property value and much more) she set out potential challenges. On-structure greening, for example, can be costly and difficult to implement, with limited gain. She urged consideration of habitat banks, such as those from Environment Bank, as an alternative to compromised on-site options, which can be delivered within the local authority or national character area. These have the advantage of being able to deliver at landscape-scale, creating the best outcomes for nature, and are managed by biodiversity experts with all funding for the full term secured. Off-site mitigation also leaves more space on-site for recreational green spaces and amenities. Statutory biodiversity credits should be considered the last resort.

Panellists from local authorities in Lichfield and Sutton described their own, already-established BNG policies, which have slightly different models and metrics. Lichfield has had a policy in its local plan for BNG since 2016 and also an SPG, and requires

'An amazing opportunity' to address the decline in biodiversity, with potential to be transformative



**Above** The Home of Gardening Science at RHS Wisley achieved more than 10% BNG.  
**Opposite** Off-site habitat banks maximise gains for nature, freeing up development land for recreation and amenities.

20% BNG over the habitat that's being lost. For off-site BNG, the first preference would be for this to remain in district.

Sutton's Rosie Whicheloe said the borough has had a policy for no net loss in its local plan since 2018. Its own BNG metric will be updated from November, and it has a full-cost recovery approach to ensure the council doesn't end up picking up related costs. She said it was keen to avoid BNG offset going outside the borough.

Wilkinson Eyre head of sustainability Nuno Correia called for the industry to upskill itself in biodiversity to understand better how design decisions affect the new BNG metric, and said it is working with experts to prepare for the BNG. The practice achieved beyond 10% BNG at RHS Hilltop, its recent scheme at Wisley. Meanwhile at its recent Battersea Power Station restoration and repurposing, biodiversity measures included green roofs and a tower set apart from the main building for birds to nest in.

'Everyone's on that learning journey,' said Derwent London head of sustainability John Davies, who added that it was critical that all members of the design team played their part to introduce meaningful and manageable habitats. He raised the difficulties of achieving BNG on highly constrained central London sites, and the

question of whether local communities are losing out if this happens off-site instead.

Viewers' questions included how long ecology baseline assessments last (two years), and whether BNG banks were taking land from food production. Lichfield's Kristie Charlesworth said farmers providing BNG sites may wish to diversify, or find new uses for land that didn't affect food production.

Perhaps the webinar's most important message was the need for early engagement.



**Above** Cobham Manor, designed by PRP, in east London, which has achieved more than 10% BNG.

Angeli Ganoo-Fletcher, director of landscape at PRP, described the practice's approach of 'preserve, protect and then enhance', with BNG added to a set of standards to follow at each RIBA project stage. On one recent project in Tunbridge Wells, it achieved a 20% BNG.

'BNG can't be an afterthought anymore,' she added. 'It needs to be part and parcel of that inception meeting where we're all around the table with the architectural client, because we'll have to target that 10% – and sometimes more than that.' ●



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Firing clay bricks to over 1000°C in fossil fuel-powered kilns is energy-intensive. A finite natural resource, clays have to be mined and shipped around the globe and they generate difficult to abate process emissions.

The brick making industry is taking steps to address its impact on the environment. A decarbonisation and energy efficiency roadmap has funded projects designed to cut energy consumption and emissions, and future plans include an investment in efficiency and renewables. For example, Forterra's new Desford plant uses low-carbon fuels like hydrogen (as Michelmersh is doing with its HyBrick) and electric-firing. In 2022 the Brick Development Association reported a reduction of 8kg CO<sub>2</sub>e/m<sup>2</sup> since 2015, with the industry average for clay bricks of 26 kg CO<sub>2</sub>e/m<sup>2</sup>, as against 27.3 kg CO<sub>2</sub>e/m<sup>2</sup> for the average traditional clay-fired brick (EPD 2019-2024 Brick Development Association).

However, with high demand for bricks increasing the UK's reliance on imports from Europe and beyond and the government aiming to build

300,000 homes a year by 2025, a range of ambitious measures will be required to keep national net zero carbon targets for 2050 within reach.

Stepping up to the challenge, brick makers and researchers are spearheading low carbon brick alternatives that harness low-energy and circular approaches such as reused demolition waste, kiln-free curing and alternative cement-free binders, with new factories being rolled out and test-bed construction projects under way.

**Below** K-Briqs are 90% certified construction waste and formed without a kiln, radically reducing their embodied energy.

**Above** Pending final certification in September, the brick will be ready to supply early adopter projects in 2024.



### K-Briq by Kenoteq

Embodied carbon:

Estimated 1.006 kg CO<sub>2</sub>e/m<sup>2</sup> (A1-A3)

Time to market: Final BBA certification for UK expected September 2023

Coming in at less than 5% the embodied carbon of a traditional clay-fired brick, K-Briq leads the pack in terms of its reduced energy impact and with 90% of the product comprising construction and demolition waste it is also understood to have the highest recycled content of any brick on the market.

K-Briqs can be a replacement for traditional clay or concrete bricks for most exterior/facing brick applications, with comparable strength and the added benefits of higher thermal mass, reduced weight and offered in 13 stock colours.







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### Intelligence Materials

The product is not fired and the relative lack of water in the mix, combined with the use of a proprietary cement-free binder, allows it to cure in under 24 hours. 'End-of-waste' status from the Environment Agency proves it is free from any toxins and 100% recyclable.

The company is currently working with two construction and demolition waste contractors. Lucy Black, head of business development at Kenoteq, says: 'It's critical we work with certified waste management partners who provide waste streams to the correct quality and granular density and in line with regulations.'

Kenoteq's factory in Scotland has capacity for 5 million bricks per year, and early adopter projects in 2024 will include a high-performing net zero retrofit for a housing association, a large civic project for a local authority and a welcome centre for a key developer, plus smaller extension and interior projects.

Exploiting a localised approach to waste materials sourcing and product distribution, Kenoteq has plans to take production to different regions and countries.

'We will move very quickly to establish license franchise agreements with other waste contractors and ultimately distributors,' explains Black. 'We'll probably have six to eight factories across the UK over the next five to six years and we have patents granted in the US and Europe and one pending in Canada, so these countries will initially form the focus of our international operations.'



#### **Porotherm by Weinerberger**

Embodied carbon: 17kg CO<sub>2</sub>e/m<sup>2</sup> (cradle to gate A1-A3 based on current EPD certificates for 100mm cavity masonry blocks)

Time to market: Available now

Giving a modest reduction in carbon footprint compared to traditional clay bricks, Porotherm is arguably more attractive as a replacement for concrete blocks, with the 100mm cavity masonry blocks saving around 40% embodied carbon against its concrete equivalent.

Morgan Sindall says using Porotherm blocks instead of traditional cement blockwork when constructing the Addenbrooke Care Home in Gosport, Hampshire, saved 324.5 tonnes of embodied carbon.

Already a mainstay solution for residential buildings in Europe, the thin-joint system comes in a range of sizes so it can work for inner leaves / rendered outer leaves of cavity walls, monolithic single leaf external walls, infill panels within framed structures and load bearing and non-load bearing partition walls.

The blocks require lower kiln temperatures to fire, explains Andy Oram, Porotherm project manager at

EH Smith Builders Merchants, UK distributor for the product: 'Firing is one of the inescapable downsides of a fired clay product, but Porotherm is fired at a lower temperature, at 985° Celsius, versus between 1100 and 1500°C for traditional brick.'

Units are perforated and incorporate 30% of materials from alternative, recycled or secondary sources, reducing the need for virgin clay. Units slot together and therefore require less mortar to bond, which cuts demand for water during construction by 95%.

'Taking out an enormous amount of water from the manufacturing and laying process has technical benefits around the construction method, because you don't have to dry the wall out using heaters and dehumidifiers that run off electricity to make it dry before applying the plaster finish,' says Oram.

The 365mm monolithic block is used most commonly in the UK, generating about 47 kg/m<sup>2</sup> of carbon, but that 'essentially gives you your entire wall,' says Oram, taking out the need for brick, cavity insulation and concrete blocks. 'You just need to apply the finish to the inside and outside,' he concludes.



**Above** Library House in London by architect James MacDonald Wright used Porotherm as an alternative to concrete blocks and exceeded RIBA Climate 2030 Challenge standards.

**Right** Porotherm needs less mortar to bond, cutting water demand during construction by 95%.

**Left** K-Briq used in a Gail's bakery.



Design Museum Gent is on site; the new wing will house galleries and event spaces to broaden the museum's cultural programming and visitor outreach.



**Gent Waste Brick**  
Embodied carbon: 26.25kg CO<sub>2</sub>e/m<sup>2</sup>  
A-D to EN15804+A2:2019  
Time to market: One-off  
To give an idea of the struggle it is to make blocks low carbon it is worth hearing Carmody Groarke's story. It worked with a team of material specialists, lawyers and regulators to develop the Gent Waste Brick for use on the external facade of a new wing for the Design Museum Gent in Belgium. Comprising 63% recycled local municipal waste and using hydraulic lime as a primary binding agent instead of cement, the bricks are cured rather than fired and gain strength through

carbonation with atmospheric CO<sub>2</sub>. This results in a brick with one-third of the embodied carbon of a typical Belgian clay brick when measured over a 60-year life cycle (0.17kg CO<sub>2</sub>e/kg compared to 0.54kg CO<sub>2</sub>e/kg for a typical Belgian clay brick). This will save a total 107 tonnes of CO<sub>2</sub> to construct the extension, versus using clay brick. With a hyper-localised and 'easily-production replicable' approach, bricks are made on a brownfield site in Gent with no emissions, by-products or waste. Certification involved testing against European Norms and consultation with the Belgian Construction Certification Association, the certification body for the construction sector.

The project was funded through a grant from Belgian government-backed Circular Flanders and developer Sogent, and, says Carmody Groarke architect Sian Ricketts, provides valuable lessons for related work in the UK: 'What we really took away from [it] is the fact their waste streams are really easily accessible compared to in the UK,' she says. 'To start replicating this approach, we need to be improving our waste streams and waste systems to make them more



**Intelligence Materials**  
accessible, which means getting a set of principles in place and a methodology.' Looking to move the innovation forward, the architect is working with PhD students at Imperial College London through the Design Museum's Future Observatory research programme to see how the same principles of reusing excavation waste in a brick can be combined with cement replacements currently in development. 'There's an embodied carbon element to lime, which is the product of fired limestone, so if we can take as much of the embodied energy out of the process as possible using different binders, it will be very interesting,' says Ricketts.

**Also coming to a wall near you?**  
Nominated for this year's prestigious Earthshot Prize, Sugarcrete, developed by the University of East London with the support of Tate & Lyle Sugars, is a low carbon alternative to bricks made from sugarcane by-products. Architect Grimshaw unveiled its first technical application in the form of a prototype slab. Researchers at the US University of Colorado in Boulder have developed a 'living' brick able to grow itself by sucking CO<sub>2</sub> from the atmosphere. The technology raises the prospect of carbon positive bricks and more efficient self-healing construction materials. ●  
With thanks to Footprint+ Conference which brought these companies together

**Left** Using the Gent Waste Brick instead of a typical clay brick for the museum will save 107 tonnes of CO<sub>2</sub>.  
**Below** The brick uses recycled municipal waste sourced from within 7km of the project.



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# How can architects use technology to decarbonize?

Technology is key to architecture’s bid to decarbonise. Six professionals discuss tech’s role in cutting carbon, promoting a circular economy and designing efficient buildings

Architecture must urgently decarbonise, and to do this before 2050 (the UK government’s net zero target, which is already considered too late) the industry must harness tech. Each panel member had a different success story about the marriage of sustainability and tech. For some, it is the efficiencies in a practice’s workflows or materials choices; for others, the ability to make data-backed decisions and champion them to stakeholders. For others still, the ability to mobilise fellow architect-activists across borders has been key.

So how does tech support the delivery of projects from inception to completion and beyond? Which of its capabilities should architects be mastering and where are its areas for improvement? These questions formed the basis for a lively discussion.

**Practice culture and knowledge levels**

There was consensus that tech has made sustainability expertise more accessible, fast-tracking processes and giving designers ownership. PRP associate Kartikeya Rajput emphasised the positives of a trajectory towards ‘optimisation’ whereby different tools – around daylighting, embodied carbon, thermal comfort, acoustics etc – will be in dialogue. When this comes of age, it will ease the ‘push and pull’ of competing priorities, with decisions ‘not driven by egos or by individual knowledge’ but by science.

Yet there were cautionary tales too about vaunting technology as the



**Above** Grimshaw’s RIBA Award winning Bath School of Art and Design, a great example of where being able to access original plans and drawings helped enable a retrofit based on the circular economy.

solution to climate change. ‘In the wrong hands, software can lead us down the path of thinking something is the right answer, but we have been asking it the wrong questions,’ said Kay Scott, associate in regenerative design at dRMM and a member of ACAN.

‘What is required ... is to have a more holistic understanding of sustainability that allows you to be a critic of the tools you are using.’ Competency is fundamental yet not all users fully grasp software’s limitations.

Gensler climate action and sustainability lead Rhiannon Laurie described the status quo as a ‘slightly dangerous turning point’ whereby architects are told: ‘You need to design sustainably, you need to own it, off you go!’ but are given insufficient support,

such as the fall-back of sustainability experts to quality-control the tech-informed outcomes.

‘Why can tech not become more of an educator?’ asked Skidmore Owings & Merrill sustainability lead James Woodall. Practices with limited resources would benefit from tech companies providing wider sustainability training, he argued. ‘Many practices want to raise the aspirations of their projects. It is not a competence gap but a confidence gap.’

**Tech and the project life cycle**

‘Early-stage decisions massively impact on embodied carbon ... Do these have any tech answers?’ asked chair and RIBA Journal editor Eleanor Young.

Grimshaw principal Paul Toyne said: ‘We don’t have a very good evidence base for what we should be keeping within existing buildings.’ Given the increasing pressures of resource scarcity, this is a concerning gap. Currently, appraisals focus on the

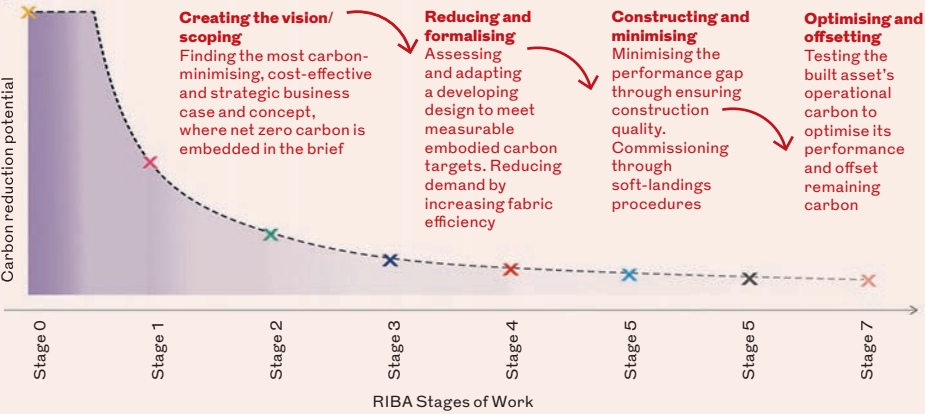
amount of carbon being added. Scott agreed: ‘We could benefit from a tool which looks at an existing building and applies to it a number of factors that can say “this building was constructed in this year, we think this was its construction system, this is how much carbon we think is sequestered in the system”.’ A potential PhD project for an architectural historian perhaps.

These early project stages offer the greatest carbon savings potential, but – due to tech limitations and industry protocols – many opportunities are lost. There was a feeling that tech is not exploited enough; that certain carbon and environmental modelling tools are ‘crude’ or ‘rule of thumb’-based; and that there is still a high reliance on ‘experts’. While tools today are backed by complex calculations, the validity of the data driving them is not always clear, which leaves users uncomfortable about relying too heavily on it. The discrete/siloed nature of many tools, meanwhile, does not reflect the true interconnectedness of environmental factors. All this creates an environment of risk.

Moreover, the panellists agreed that outputs from these tools would be more useful if presented as a flexible range than as fixed numerical values; probabilities would reflect an acceptance that factors may alter. As Hewitt said: ‘Having a modelling tool that will enable you to explore a whole range of options really fast, without having an expert build a model for each permutation (around massing, shape, orientation, fenestration etc), and creating a bandwidth of results would be really helpful.’

Scott also pointed out that pre-emptively specifying given products with good environmental product declarations (EPDs) too early can backfire when the designs meet a real-world scenario.

Detrimental carbon outcomes also arise when sustainable products are value-engineered or ambitions scaled back due to financial viability. ‘One thing we could really benefit from would be fast cost-consultancy tools ... which could give us an indicative



**Above** Understanding what savings can be made at each stage helps with a more intelligent use of BIM to make those savings, and understanding where the sweet spot is.

number, a baseline,’ suggested Mischa Hewitt, founder of Passivhaus designer Earthwise. ‘All the different models are great ... but then we hit the reality of cost and we scale it back. The brutal cost of inflation has meant there is enormous compromise.’ Such data does exist but being proprietary is difficult to access.

For Woodall, the question is: how do we embed what we are seeing into a design? In his view, environmental tools could be more ‘forward thinking’. Beyond offering ‘red-flag warnings’ when data or parameters appear incorrect, tech could actively help generate design solutions with the calculations generated from these tools.

‘It is at the early stages that you can make the biggest carbon saving but it depletes over the project life cycle,’ continued Scott, referring to the widely circulated LETI diagram (above) that shows how carbon might be saved at each RIBA stage. ‘Conversely, BIM level detail increases; you hit the sweet spot around Stage 3 to 4 when the BIM model gets really intelligent and can produce really accurate carbon assessments and energy models.’ This reiterates the need for early-stage accuracy as even small changes in BIM parameters can magnify carbon outcomes.

Autodesk sustainability lead and architect Marta Bouchard agreed. To avoid a performance gap, ‘we have to find that carbon opportunity sweet spot and bring it into the BIM software’.

Procurement pressure also leaves little time for architects to undertake further modelling, research or crucial conversations with environmental experts at this juncture.

And while BIM excels at simulating a real-world scenario, there are significant departures, including context and ability to be dynamic over time, and materials quantities modelling compared to how quantity surveyors do it. Another area where BIM could improve is designing-in ‘tolerance’ – modelling a repurposed wonky door or rammed-earth wall, for instance, in an acknowledgement of craft. The ‘perfection’ of a BIM model favours the rectilinear, but an ability to tolerate irregular elements is increasingly important in the circular economy. ‘I would love a BIM model one day to take the site and tell the modeller about the repository of materials from deconstructed buildings – like an inventory of urban mining,’ said Laurie.

‘There is a lot of opportunity to help those workflows be a lot faster,’ added Bouchard. ‘You want to be able to design, analyse and iterate in an integrated way, but how do you get this existing built environment into a BIM ecosystem? It is a top priority for us at Autodesk.’

**Materials**

Materials passports, while in their infancy, are one means by which digital threads can take construction to a circular-economy model, integrating the digital documentation of components into the BIM space.

The leap to adoption is huge but the participants believe it will get easier



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as data is leveraged. Meanwhile, many practices must take their own steps. ‘At Gensler, our physical library is being digitised and vetted while we use databases to verify information about materials,’ said Laurie. ‘Understanding what we have before we begin to design [is crucial].’ Toyne agreed, emphasising the importance of inventory audits: ‘There will be a cycle and we must start somewhere, by building our libraries.’

Unfortunately, the hindrance here is not tech’s limitations but a lack of industry transparency. ‘To share data with people who are competing for the same work is culturally too difficult,’ observed Woodall. Rajput agreed. ‘All the firms are doing their own thing and the language isn’t consistent,’ he said. Toyne proposed open sharing of manufacturers’ product testing results. ‘[Data] needs to be open source,’ he said. ‘It needs to be accessible, and credible. And we are up against time. If we’re squabbling, we have no chance. We need a market transformation.’

Existing attempts to encourage data sharing have had disappointing uptake but there is a new initiative by the Built Environment Carbon Database on the horizon. Perhaps RIBA awards project

data could form the basis of a central repository, mused Young. ‘Get people to disclose what they are uncomfortable disclosing,’ proposed Woodall. ‘We should all be sharing this because it’s about things that are bigger.’

POE and feedback loops

‘There needs to be a way of making feedback more passive,’ said Rajput, adding that post-occupancy evaluations (POE) shouldn’t be a chore for users. Whatever systems are proposed to clients, they need to be of value to them – for example, focusing on occupant wellbeing – as well as a way for architects to acquire environmental data. ‘It needs to be quick to mobilise,’ said Woodall, citing a web-based comfort survey app created by US practice Kieran Timberlake, that measures temperature, humidity, personal activity level, air quality, visual and auditory stimulation and more. ‘This is a different level of insight than previously was possible and the sort of thing most architecture practices should be embarking on,’ he said.

The digital twins concept – creating a digital representation of a real-world asset – is another nascent technology that requires end-users to be fully invested in the ongoing sustainability of facilities management, prepared to embrace the full potential of a unique maintenance model. Autodesk is witnessing increasing interest from the asset owners’ side, Bouchard observed. ‘They’re saying: I don’t want my handover to be a bunch of paper; I want a digital twin,’ she said.

Roundup

What advances do architects want from technology in the short-to-medium term? For small to medium practices, Scott ‘would want more handholding and nurturing from the software companies, with more range-based, scenario outputs’. Rajput focused on widening access to tech. ‘We should be thinking not of software but tools, in a common language that user, client and architect can understand and everyone can scrutinise,’ he said. Woodall added:

‘In a perfect world, there would be more reflection and less competition. Technologies should be built on collaborative effort.’

Bouchard summarised: ‘Flexibility, interoperability and transparency are the key words. Tech users say “I want to see the data, I want some configurability”. In this cloud-based, AI-based future, we will get there if we embrace this as a community of professionals. This goes beyond software; if we accept we are all trying to achieve sustainable outcomes, this will drive the conversations to build more partnerships in this industry.’ ●

HOW DO EACH OF OUR PARTICIPANTS BELIEVE THAT TECHNOLOGY HAS HELPED DRIVE SUSTAINABLE ARCHITECTURE SO FAR?

**Activism:** There is an improved capacity to ‘share ideas and make sure they stay out there ... groups have mobilised through collaborative platforms and gained access to international networks across borders via tech’ – Kay Scott, associate in regenerative design, dRMM, and member of ACAN

**Making objective value judgements** ‘It’s so great to be able to move towards the correct answer when you are designing ... it’s not just someone’s feeling, it is data driven’ – Rhiannon Laurie, climate action and sustainability leader, Gensler

**Modelling made easier** ‘I’m struck by how easy it has become to model embodied carbon. Twenty years ago, that took a long time ... now, it is so easy to model carbon in an independent way. There has been a huge step change’ – Mischa Hewitt, founder, Earthwise

**Democratisation** ‘Our ability to convey [ideas] and statistically validate them democratises things, allowing designers to access [sustainability expertise] to allow for that personal ownership of ideas’ – James Woodall, sustainability lead, Skidmore Owings and Merrill

**Optimisation** ‘[The concept of] sustainability has existed in every age – for instance in vernacular architecture – but there was an age in which a burst of tools were developed that were existing in different silos. Where technology shines today is in how these disparate tools can be brought together, ie optimised’ – Kartikeya Rajput, associate, development consultancy, PRP

**Efficiency and empowerment** ‘Tech enables you ... to fast-track design decisions, and design things in real time for the better’ – Paul Toyne, principal, Grimshaw

**Helping businesses realise the value of sustainable choices** ‘At Autodesk, I feel in a privileged position to bring more tools to more people...so that they can iterate, analyse and ultimately demonstrate the value of sustainable choices – via business cases and return on investment – in pursuit of high-performance building design’ – Marta Bouchard, AEC sustainability lead at Autodesk

# 3: Culture



Playas Arenal, Mallorca  
Trevor Clark  
1970s  
Hasselblad large-format camera.  
Kodak 120 film

When just a kid in the late 1960s, artist Jake Clark moved with his parents to a fishing village in Mallorca, where his dad had clocked the nascent mass tourism industry even under Franco; and where, for a time, he was the only British commercial photographer.

With the multi-storey resorts of Palma Nova and Magaluf rising like concrete castles out of the sand, Clark was soon working for the Thompsons or Skytours shooting exteriors, restaurants and poolsides to sell hotels to next season’s hordes; a task he carried out methodically but artfully. In a bar shot, he’d pose people holding brightly-coloured cocktails and if an urban pool area looked a bit bleak, he’d dangle a palm frond in the foreground ‘to make it look more tropical’.

In retirement, photographer Trevor never quite got his son Jake’s fascination with the thousands of photos he’d amassed but was happy that they served as an inspiration for his art. Were he still alive, publishing a book of them as a form of ‘social document’ may well have bemused him.

Jake still wonders why he is so fascinated by them. Part of it is the sun-soaked colours that pick up on the vivid euphoria of being on holiday. Perhaps it’s also the hotels’ municipal nature: ‘They’re generic, functional, even utopian, with balconies that wouldn’t look out of place on an east end council block; their pools can feel like a lido.’

As for this specific image, it’s the forms as well as the colours. ‘I like his flares set against the hotel’s modernist grid – I paint flares a lot. Fernand Léger’s modernism was all about cones, cubes and spheres; maybe for me the flares are just a kind of tapered cone.’ ●

Jan-Carlos Kucharek

The Package Holiday 1968–1985 by Jake Clark. March 2024. Hoxton Mini Press



Above Modelling can help reduce wastage, for example on when a mix of brick is used. Here the RIBA-award winning Trafalgar Place in Elephant and Castle by dRMM, London shows the impact of mixing bricks.



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*'Beauty is a persuasive concept and  
it's undergoing a resurgence. But it is  
problematic as a political concept'*



## Bath stadium design lands in hot water

Build or don't build? Realistic or ridiculous  
targets? Classical or contemporary? Bath's  
controversial Coliseum relights an old fire

Here is a project that reaches beyond the bounds  
of architecture, or its small-city location.  
Apollodorus Architecture's classical Coliseum-  
style Bath rugby stadium is a counter proposal  
in the best tradition of counter proposals. It is a  
dramatically alternative view of a development  
site that has floored the efforts of local team  
FCBS and high tech hero Grimshaw. And it has  
gone wild online with millions of views and over  
19,000 likes on one tweet/post.

It has made a mark because of its looks: stone  
arches, flags... Apollodorus Mark Wilson Jones,  
architect and historian, knows his classicism.  
And so the marmite conversation ensues.

To many people the Coliseum stadium design  
looks like 'proper' architecture: 'beautiful,' they  
comment. But the meat of Wilson Jones' analysis  
of the latest proposal, designed by Kay Elliot,  
is the way this large building in a historic city  
centre meets the river and the building next to it,  
and a critique of a visualisation style that shows  
glass as transparent when it rarely is, with a roof  
floating above, as they rarely do. It is about the  
fundamentals of design and how that is conveyed.

However, beauty is a persuasive concept and  
it's undergoing a resurgence. I get beauty, I see it  
on my morning walk and I come back energised  
and happier for it. But it is problematic as a  
political concept. Beauty was threaded through  
Michael Gove's bombastic yet fearful speech on  
housing in July. He trod a careful line; protecting  
the shires while bolstering and building up the  
cities. Beauty or beautiful was used 20 times. Point  
three of his 10 point plan for long term housing  
was 'Building beautiful - and making architecture  
great again.' Green did pretty well too.

It is as if, with these nebulous tools, councils  
will be able to conjure up the growth and new  
housing numbers that Gove has conceded

they should no longer be required to build.  
Governments have often been frustrated by  
the inability to reach housing and regeneration  
targets that they set - but ask housebuilders and  
housing associations to deliver.

Planning has long been blamed (reform  
the planning system!). NIMBYs too (reform  
the planning system!). Architecture, of course  
(reform the planning system! Design codes and  
the Office for Place will see to that!) The housing  
market itself often avoids the spotlight, as do the  
financial norms/systems that underpin it.

The Coliseum for Bath blows that out of  
the water for one prestige project. It offers a  
convincing counter vision. And it says this  
version is beautiful, it is worth investing in.  
Architecture, of any style, has to have that power.

● In the meantime look out for more reforms to  
the NPPF, due to be announced in the autumn,  
and a flying squad of planners with £13bn behind  
them landing on areas of regeneration focus. ●

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I look back a lot,  
but I love to look  
forwards too. I like  
to be 10 years ahead  
of everyone else!

UN Studio's Ben van  
Berkel looks back on  
his career:  
[ribaj.com/van-berkel](https://ribaj.com/van-berkel)

**Below** Classical  
but also problem  
solving, Apollodorus  
Architecture's counter  
proposal for a new  
rugby stadium in the  
city of Bath.



STEPHANIE WUNDERLICH PHOTO: APOLLODORUS ARCHITECTURE

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The RIBA Journal September 2023





# Back to the futurism

A big infrastructure anniversary sets Will Wiles wondering whether the adapt and refit boom might revive practical but unfashionable interventions

London’s Waterloo Station is 175 this year. Named for a British military success, this most martial of London’s terminii is more of a monument to the mixed record of British infrastructural planning. The station was not initially intended to be a terminus at all – for decades the line was to cross the river into central London. The bombastic Edwardian building built by JW Jacomb-Wood and AW Szlumper, with its ‘Victory Arch’ designed by JR Scott after World War One, is the result of the defeat of this dream. An unintended terminus has been joined by an aborted terminus: Nicholas Grimshaw’s marvellous Eurostar station, a high-tech monument at last back in use after being abandoned for St Pancras.

I was thinking about this chequered history recently while passing Waterloo on a different railway, the one from Charing Cross that trundles across Waterloo’s front porch, undercutting the grandeur of the Victory Arch. These railways don’t intersect, but they used to, and the rail bridge that once connected them now carries another high-tech relic: the 1990s tubular metal walkway that links to Waterloo East station. Well used but not well loved, this curious jetway is now worse for wear. But it still has some futurist dash, not least in its confident defiance of context, a vacuum cleaner attachment slotted into a wedding cake.

Or perhaps it’s more like a piece of life-saving equipment intubating a wheezing monster. Nowadays this sort of intervention is expected to be more polite, but there was a time when it looked like the future. On 31 December 1989, The Observer newspaper published a special edition of its colour supplement looking forward to London in 2010. In the centrepiece of the supplement, architects offer two competing possibilities for the city. Stephen Gardiner and Joan Scotson’s vision is humane, green and small-c conservative, taking advantage of the falling population to remove the ‘chaos and ugliness’ of main roads and modern housing estates and expand greenery into every corner. It’s a little dull, especially when contrasted with what Nigel Coates and Brian Hatton offer up. This is a cyberpunk London with Dan Dare touches such as weather blimps, monorails and



crystal data towers. But most interesting is their vision of architecture as offering ‘software’ rather than the hardware of comprehensive redevelopment and heavy engineering: where buildings are constantly altered, upgraded and refitted rather than torn down and replaced.

This rather sharply combines the late 1980s heyday of high-tech with the drive towards preservation, aesthetic upgrades and facadism inspired by the future King. Coates’ and Hatton’s main image shows the city riddled through with cybernetic enhancements, bolt-ons and plug-ins, while ‘bad’ buildings get approved facades. Rather than smoothed into seamless contextualism, London’s ‘general confusion’ is celebrated and intensified. Old buildings look old, thanks to overt modern servicing.

As I say, parasitic high-tech enhancement is now rather out of favour. Services are supposed to be out of sight and out of mind. Pods and tubes are quaint. We want our cyborgs to be less like the functional, ad hoc Borg of Star Trek and more like the stealthy Cylons in the rebooted Battlestar Galactica. But at the same time, architects are under increasing pressure to retain and refit buildings rather than demolish and rebuild; change-of-use and a changing climate are increasing the need for adaptation of existing stock; and money is tight. The rough practicality of the cybernetic plug-in – with Coates’ and Hatton’s concern for the aesthetic – might be due a revival. ●

Will Wiles’ latest book, *The Last Blade Priest*, has won the Red Tentacle for best novel at the 2023 Kitschies

Left Parasitic plug in: Haus-Rucker-Co’s Oase No. 7 at Documenta 5 in 1972.

**STREET WISE**  
Like any set of predictions, The Observer got a few things right on target and much else way off. But what’s most intriguing is that it missed the really big picture: the Urban Renaissance of the 1990s. The backdrop to its thinking is that London and other big cities will inevitably continue to grapple with crime, decline and a shrinking population. It’s useful to remember how pervasive that urban pessimism was in the 1980s.

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Muiyiwa Oki brings an egalitarian determination to the RIBA presidency, but he believes his ambitions to improve practice culture should appeal to all

Words: Eleanor Young Portraits: Ivan Jones

# Rebel with a cause

Muiyiwa Oki becomes RIBA president this month. To get here he won not one but two elections. The first was unprecedented. Young practitioners, coalesced in groups like the Future Architects Front, Section for Architecture Workers and Architecture Climate Action Network, got together to ensure that the younger generation was represented. Four candidates made their case at a pre-hustings hustings and Oki was selected. And then he won again among the wider membership.

His young age (32) and his ethnic background, even his recent architectural career working with Mace, mark him out as different from previous RIBA presidents. At an event shortly after his election, around themes of decolonisation and education, he was surrounded by well-wishers buoyed up with enthusiasm. Here and in other conversations over the last year it is clear to see the hope he has engendered for the future of the profession and the possibility of change in architecture.

We meet in Sheffield School of Architecture, on the 16th floor of the Arts Tower, surrounded by the designs and ideas of the final show. He chose this location, it is a nod to the impact his part 1 and part 2 studies here have had on his thinking. 'Teaching at Sheffield was participatory, it got you close to the community, you had to go out and talk to people. It was doing live projects before most universities – you actually had to have a client and solve a problem for them,' he says.

Being an architect was an breakout move. 'As

the child of first-generation immigrants you have a defined pathway before you, engineering or medicine,' he says. But he wanted to be creative, to make things and to serve the common good. And he did well in his south London school, hanging out with other 'third culture kids' – melding the culture of where they lived with that of their parents or nationality. He lived in Lagos, Nigeria, until the age of 11. Reflecting now on his times in Nigeria, as a kid and later visiting, gave him a clear sense of inequality and an understanding that decisions have power. He is determined to thread this awareness through his presidency.

He spent four years at Grimshaw, working on the North London Heat and Power Project and on HS2. On both he was pleased to be working on something bigger than architecture. 'It was doing something for the community,' he says. 'Architecture has a life bigger than buildings, around the common good.' Working client side as concept guardian on the heat and power project, he, as part of Grimshaw, had to ensure a quality design as a contractor took on the project. As part of the scheme Oki also delivered a new community centre for Edmonton Sea Cadets. He values the practical aspect of problem solving and working across different teams, of communicating and of the process itself.

You can trace the quiet rebellion of choosing architecture through his early architectural heroes and their deconstructivist tendencies – from Lebbeus Woods through Coop Himmelb(l)au and Zaha Hadid. Later came Lacaton & Vassal

**Opposite**  
Communicating and convincing are core architectural skills. How can the profession celebrate and make the most of them, asks Oki?



*Oki doesn't attack so much as appeal to the best side of his audience: 'I want to create the profession I want to be in'*

**Right** Participatory design and problem solving are just two of the lessons Oki took from Sheffield.

for its work on deep retrofits and interventions the practice designed to be replicated. He admits he's bit of a rebel – how else would he have ended up running for president on such a ticket?

As he waits, you see his fingers tapping. Not impatient but full of rhythm, his body poised to join in. And yes, Oki is a drummer. In Sheffield, with rounds of parties and a basement to practice in, he was part of a band. At his home in north London, not far from the ground of his football team Arsenal, there isn't space for a drum kit or even a scaled down electric version – a familiar story for many of his generation. He recognises the generational divide that has become increasingly obvious in the last few years as architectural workers have found their voice. His voice is one of the most prominent.

Oki was elected on a commitment to take a critical stance, as Simon Allford was before him. But Oki's position, as laid out in the RIBA Journal before that election, was also critical of some of the profession's business practices. He identified in particular the 'toxic working culture', highlighting overwork and underpayment among architectural workers. Despite that he is not a tear it down rebel; earlier this year he took the initiative to present to architects of the elected RIBA council how his manifesto pledges worked with existing plans (he will have the voices of seven members of the Just Transition Lobby on the council – who won seats in July, also brought together by the Future Architects Front). Oki doesn't attack so much as appeal to the best side of his audience. Wouldn't anyone want a happier, healthier team and practice? 'I want to create the profession I want to be in,' he says.

He has worked for nearly two years at Mace – best known for its role as a contractor – as a senior architectural manager, advising public sector clients on delivery. However, this autumn he not only takes on the RIBA presidency, he is also shifting to focus on net zero carbon within the retrofit team. 'I feel there is an opportunity there,' he explains. 'It comes with a few risks, but if we don't seize it, it will go elsewhere...'



**ALSO SERVING UP...**

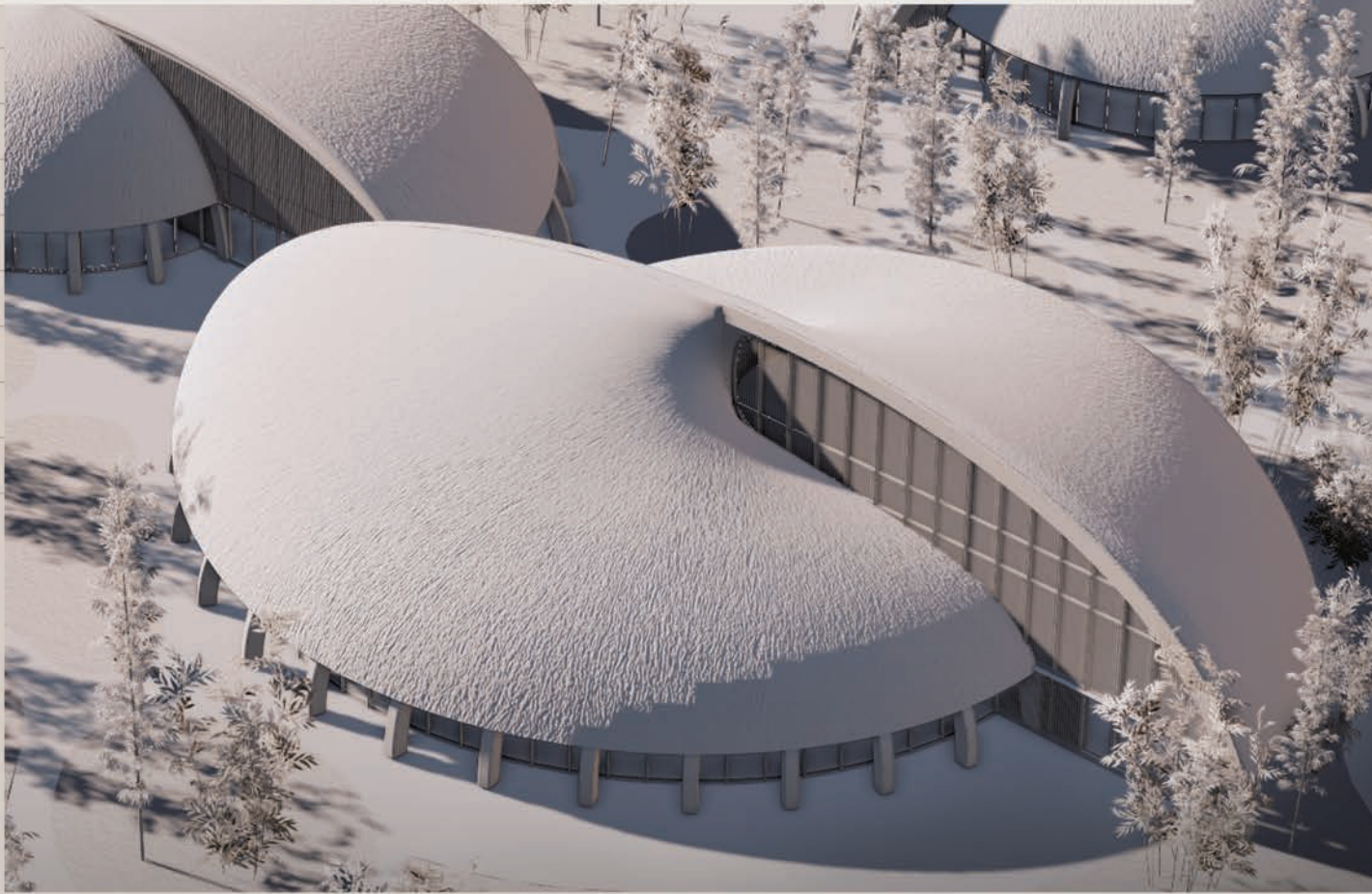
Activities in Oki's spare time include watching football and cooking. 'To make food is this celebratory thing. Cooking is not just a means to an end, it's about process and community.' On his menu is 'an amazing recipe' of spaghetti with oil and peppers, and jollof rice. 'I like Nigerian food,' he says. But don't ask him for baked Alaska, he tried that and it ended in disaster. He cooks for his partner, friends, family and siblings. 'On birthdays, I tend to take over the kitchen in houses: I'm a flamboyant cook; it's not just about eating and sustenance. It has got to look good.'

Oki can be both serious and rather fun. Throughout a complex interview and photo shoot for the RIBA Journal and the film being made for his inauguration, he was positive and engaged, always making the most of things. That plays into one of his other presidential priorities, a better telling of the story of architecture, from concept generation to delivery, with all the convincing and engagement it takes along the way.

He calls it architecture without boundaries, where those skills can go beyond building design to cleaning up the energy supply and decarbonisation of homes and places and where the narrative is about helping to solve problems in the environment but also beyond. 'Architects have been working on this for years. But we haven't celebrated it or communicated it or made it part of our everyday work. It is good for the planet and it is good for Greta,' he says.

When Allford took office he also hoped for disruptors. And here is Oki, right at the heart of the architectural establishment. He is taking on two of the biggest issues of our time, generational inequality and sustainability. Watch this space. ●

# RIBA China Architects: building contemporary China



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## Culture Review

# Inside the mind of the architect

Royal Academy show explores the thinking of Herzog & de Meuron: it's all about the people and a constant questioning of the world

The Royal Academy of Art's new Herzog & de Meuron (H&dM) exhibition tackles the perennial problem of how to display architecture in a gallery head-on. Rather than plumping for a retrospective-style, chronological canter through the Swiss practice's 45-year, 600-project career, this exhibition is refreshingly trying something different, with mixed results.

There isn't the reassuring structure of a thorough overview of the practice's impressive oeuvre to hang onto, or even a timeline of key dates and works. Nor do we hear from practice founders Jacques Herzog and Pierre de Meuron themselves (although there is a conversation with the former in the catalogue). The emphasis is rather more on the process and experience of architecture, with models and films in particular serving as the necessary 'substitutes' for the architecture itself. And don't be alarmed at the sight of visitors waving their phones around – they're just getting to grips with using Augmented Reality (AR) to conjure up additional imagery – a first for the RA.

While best known in the UK for creating the Tate Modern out of the Bankside power station in 2000 & 2016, H&dM's prolific catalogue spans



**Above** See the models and materials relating to key projects such as Herzog & de Meuron's Elbphilharmonie Hamburg, 2001-16.

several continents and many sectors – including stadia, hospitals, concert halls, libraries and many more – without, as the RA notes, a signature style.

Architecture and Drue Heinz curator Vicky Richardson describes H&dM as being in a constant process of 'questioning the world' and the role of architecture rather than resting on its laurels. She hopes the exhibition will bring visitors right into this process of inquiry.

'It's part retrospective but more importantly, about architecture itself, and bringing the public into a process that might seem complicated, but is all about people,' she says.

The exhibition's three galleries offer very different experiences. Visitors enter into a recreation of part of H&dM's Kabinett archive in Basel, which acts as a working resource and laboratory for the practice rather than simple storage. Here, on three tall, warehouse-style vitrines, are displayed models, materials and other objects relating to selected projects, some completed and some in progress. Models include process studies in foam, wood, plastic, wire and more, some showing multiple iterations of design development. It's an arresting display, and may be fascinating for those already familiar with the finished design of key projects such as the Bird's Nest Stadium in Beijing (2008) and Elbphilharmonie Hamburg (2016). But it's frustrating that it's necessary to consult the gallery guide to find out even basic explanatory information, and insights into the design.

Some of these displays are AR enabled to offer another layer of visitor experience via a smart phone app. Once you've cracked how to access it, the AR is rather fun – who isn't fascinated by how a services model of the Elbphilharmonie can seemingly pop up in a gallery aisle for you to step back and appreciate? But whether such technology always offers more in terms of understanding than the physical models in the vitrines is a moot point. The AR indicators also

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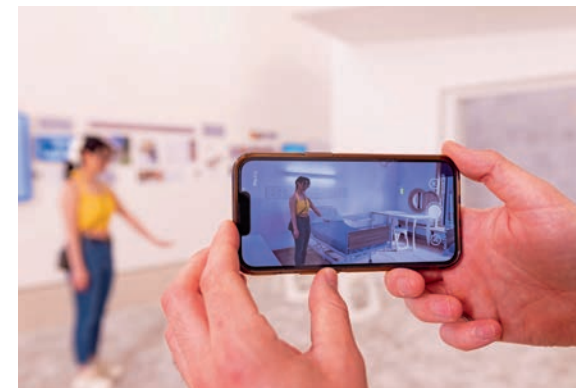


**Left** Installation view of the Herzog & de Meuron exhibition.





## Culture Review



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© HERZOG & DE MEURON (2)

act as visitor catnip – it's hard not to be naturally drawn to their novelty, perhaps at the expense of paying sufficient attention to neighbouring models without AR capabilities.

On the perimeter walls are stunning large-scale images by photographer Andreas Gursky and artist Thomas Ruff, which illustrate the practice's interest in how architecture is perceived. Like the models, these could have been usefully supplemented with further explanation to aid understanding of the practice's work.

The second gallery features two films showing H&M's work in use. One film scrolls through a host of buildings on three parallel screens. In contrast, filmmakers Bêka & Lemoine's exhibit focuses on a single building – the REHAB Clinic for Neurorehabilitation and Paraplegiology in Basel. Here, the architects responded to the client's wish for the centre not to look or feel like a hospital. The design is clearly playing an important supporting role – the building is described as 'the most unexpected therapist of them all' – although the architectural focus in the film is light touch. Instead, the emphasis is on a series of engrossing interviews with rehab patients on their journey towards recovery. The third and final gallery explores a single commission in detail – something that's usually lacking in more conventional architectural retrospectives, and is altogether more successful.

The subject is a 'live' project the Universitäts-Kinderspital Zürich. This children's hospital is on site and has been 12 years in the making. The aim of this gallery is to unravel the design process behind such a complex building, and it does just that. There is room to explore the design thinking in some depth, including consideration of the site and the rationale behind the concept for a low, horizontal form punctuated with courtyards. We learn how the organisation of the building was informed by the Zurich streetscape, with 35 different 'neighbourhoods', a main street,

**Above left** Installation view showing Bêka & Lemoine's Rehab from rehab film, 2023.

**Above right** Augmented reality reveals a room in the children's hospital

**Below** M+, Hong Kong, designed by Herzog & de Meuron, 2012-21.



KEVIN MAK

squares, side streets and gardens. There is detailed consideration of the design of the wood-lined children's rooms, plans, visualisations and REVIT models explaining facade elements, internal layout and servicing. I wonder if the RA has previously exhibited a plan identifying all the electric sockets in one room in any of its big architectural shows. Footage taken just a few weeks ago shows the recent state of construction, and here there is more fruitful use of AR, which can be navigated to move between how the spaces look under construction, and how they will appear when completed.

And there the exhibition ends. Just a little sprinkling of more regular retrospective content might have greatly enhanced understanding of H&M's work. But this unconventional presentation is clearly not aiming to be that kind of comprehensive show, for better and for worse. ●

Herzog & de Meuron, until 15 October 2023, The Gabrielle Jungels-Winkler Galleries, Royal Academy of Arts, Piccadilly, London

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### Obituary

High tech pioneer and Royal Gold Medallist whose enduring commitment to honest, practical architecture produced a raft of beautiful and influential buildings



TOM MILLER

## Michael Hopkins 1935 – 2023

As a boy at Sherbourne School, Michael Hopkins' favourite escape from classrooms and homework was a cycle ride through the Dorset countryside looking at churches and country houses. From then on, architecture and building were seen as pleasurable pastimes, not dull work but escape from dull work. In the years before he entered full-time architectural education, he worked in the offices of both Frederick Gibberd and Basil Spence, and while a student at the Architectural Association became a protégé of Oliver Hill, designer of the Midland Hotel in Morecambe.

The son of builder, Hopkins was a practical man. How a building was built always interested him more than what it looked like. Le Corbusier, painter and architect, had less influence on him than the British 'functional tradition' of watermills, warehouses, bridges and viaducts. His eight-year-long partnership with Norman Foster was founded on a shared desire to look afresh at lightweight, factory-made building components as the basis of a new architecture. With separate contributions from Richard Rogers and Nicholas Grimshaw, they developed the style known as high tech.

But it was not a style in the purely visual sense; it was a practical philosophy. The Hopkins House in Hampstead, influenced by the famous Eames house in California, exemplified that philosophy and became the perfect demonstration piece for the new practice – Michael Hopkins & Partners, later Hopkins Architects – that Hopkins set up with his wife and professional partner Patty in 1976. Further elegant, minimal assemblages of lightweight components followed, such as the 1980 Greene King Brewery warehouse and the Patera building system of 1982 – later adapted for the practice's Marylebone headquarters.

In 1990, the Schlumberger Research centre

in Cambridge added a new material and a new form to the repertoire: the fabric canopy. Hopkins was now beginning to distinguish himself from his high tech confrères. But the decisive change of direction came at Lord's cricket ground with the Mound Stand redevelopment, completed in 1991. Because of the constraints of the cricket calendar, it made sense to preserve, renovate and even extend the existing arcaded base of the stand, designed by Frank Verity in the 1890s. For the first time in his career Hopkins was obliged to work with that most traditional building material: brick. He fell in love with it, old-fashioned, heavy and laborious though it was. A lightweight superstructure with a signature fabric canopy completed the ensemble, but it was the solid brick base that had inspired Hopkins. Perhaps the Mound Stand was a milestone in another sense too. He was becoming famous and was beginning to be talked about as the British establishment's favourite architect.

But he had not left the high tech philosophy behind entirely. One aspect remained as a strict principle: truth to materials. In a high tech building no faking was allowed. If a roof appeared



MATTHEW WEINFREB

### IN MEMORIAM

**Kenneth Middleton Smith**  
ELECTED 1953, TWICKENHAM

**Ronald John Brown**  
ELECTED 1953, LANCASHIRE

**Derek Parker**  
ELECTED 1958, CALIFORNIA, USA

**Douglas Peter Faulkner**  
ELECTED 1959, WEST VANCOUVER, CANADA

**Phil Sykes**  
ELECTED 1967, MACCLESFIELD

**Michael Andrew Cyril Parry**  
ELECTED 1970, WARWICK

**Anthony Robert Leach**  
ELECTED 1972, HARROW

**Grant Roger Mainwaring Littler**  
ELECTED 1973, ESSEX

**Peter Francis J Reeve**  
ELECTED 1973, BERKELEY

**Jaroslav Vonka**  
ELECTED 1979, HARLOW

**Michael Francis Whyte-Venables**  
ELECTED 1993, CHICHESTER

**Keith Murray Maplestone**  
ELECTED 1958, PETERBOROUGH

**Left** The Hopkins House on Downshire Hill, Hampstead, London, was a calling card for the practice.



to hang by tension rods from slender steel posts, then it did. At the end of the 20th century, in large buildings, brick was commonly used to conceal a hidden steel or concrete frame. Hopkins rejected this deception. If it was brick, it must work like brick, not just look like brick. If there were openings to be bridged, then what was required was not a hidden lintel and a row of headers but a real arch with real tapered voussoirs. And he stuck to this principle, applying it to all materials and structural forms throughout his career.

Perhaps it was his new love for brick that unlocked a taste for other traditional materials: stone, wood, bronze and lead. At Glyndebourne Opera house the big unified oval of the auditorium sits comfortably alongside the old country house because its brick arcades and lead-covered roof belong to the same building tradition. The bricks, hand-made to imperial dimensions, were laid in English bond.

Low energy consumption became another important aspect of Hopkins' architecture, though here the initial impulse came from employees such as John Pringle, Ian Sharratt and Bill Dunster, for whom the Hopkins office was a career launchpad. The whole form and character of Portcullis House, an extension to the Houses of Parliament (the ultimate establishment client), arose from principles of passive environmental control. It is as if light, heat, and the movement of air have themselves become building materials that must find their own form rather than have form imposed upon them. The ventilation system, terminating in 14 bronze chimneys, can be read like a logical diagram in the finished building.

But perhaps here another important aspect of Hopkins' architecture becomes apparent: a kind of openness and honesty, a willingness



DENNIS GILBERT

to do the obvious thing that anybody can understand where other architects might resort to awkwardness and pass it off as subtlety. Those 14 chimneys might have been the invention of a plain-speaking Victorian engineer. Charles Barry dressed up his air ducts as gothic pinnacles on the building opposite but Hopkins felt no need to pretend that his were anything but air ducts.

Hopkins was not a classicist. If anything his architectural principles were gothic in inspiration. His buildings nevertheless display classical virtues such as regularity, repetition and symmetry. The simple U-shape plan of the Forum in Norwich, for example, embraces a big, shared public space that would be monumental were it not so brightly lit and cheerfully welcoming. The influence of Louis Kahn has sometimes been detected in Hopkins' monumentality and also in his logical form-making: 'what the building wants to be'. He never objected to this comparison. And yet the Velodrome for the 2012 Olympics, its unified form arising naturally from its function, is neither monumental nor Kahn-like. Is it too simplistic to compare its 'about to take off' aspect with the flamboyant tents that were so strikingly attractive a feature of so many earlier projects?

In recent years, foreign clients have begun to appreciate the virtues of this most English of architects. As one might expect, they have often been establishment institutions, especially universities – Harvard, Yale and Princeton among them. And there has been a big expansion of work in the Middle East, managed from Dubai. The Buhais Geology Park Interpretive Centre in Sharjah at first seems unconnected to Hopkins' now familiar formal and material repertoire. But the hovering, circular, copper-coloured forms have a typically simple geometry, perhaps derived from the burial sites and natural fossils nearby.

The London office, now run by five principals, employs 138 people. In 1994, Michael and Patty were jointly awarded the RIBA Royal Gold Medal. Michael was knighted in 1995. He is survived by Patty, their children Sarah, Abigail and Joel, and 11 grandchildren. ●

Colin Davies is an architect, writer and lecturer

**Above** The roof of the Schlumberger Centre, Cambridge, was Britain's first permanent Teflon-coated tent.  
**Bottom left** Portcullis House stands above Westminster Tube station, also by Hopkins.

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# After the car

  
**Marshalls**  
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**RIBA****J**

Couldn't there be more to the city's post-car public realm? RIBA J teamed up with Marshalls Bricks & Masonry to create the Public Space Design Day, inviting five practices to offer a wider reaching response to using traffic's vacated spaces





Marshalls Bricks & Masonry would like to thank all who took time to register interest in participating in this event, and those who took part on the day.

It was so insightful to watch the teams work on their ideas and even more interesting to hear the ideas presented back. Some truly creative minds.

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# Introduction

When Florian Beigel conceived of the Half Moon Theatre in Islington – with its robust blockwork internal facades and spatial flexibility – his vision was to link a space for theatrical performance with the life of the street. ‘What if that capacity was extended throughout the public realm?’ asked RIBA Journal contributing editor Chris Foges, introducing the Public Space Design Day hosted by RIBA Journal and Marshalls Bricks & Masonry. The workshop asked five teams of architects to propose new uses for urban spaces liberated by the ‘slow but inexorable disappearance of the car’.

When we envisage replacing roads with public realm, the usual vision is that of a landscaping intervention – seating, water features, café tables, plants. But is there an opportunity to do more? The brief asked participants to propose versatile structures that could enable a range social and cultural activities – something ‘more open-ended than conventional buildings’, but with greater potential for use and with greater presence than the standard elements of landscape design. The structures’ sturdiness and economy should be facilitated through the use of Marshalls’ concrete bricks.

The five teams convened at 66 Portland Place, in a grand room overlooking the four-lane A4201 linking Regent Street to Regent’s Park. Despite Marylebone’s leafy appearance, traffic noise is a constant presence, an apt reminder of the purpose of the day’s exercise.

And as the day progressed, the atmosphere in the room heated up along with the rising June temperatures, and the increased volume of rush-hour traffic. What had felt like a convivial undergraduate studio session in the



This page Native Studio debates options; and Cany Ash and Conor McDonagh respond to presentations.



morning developed into something resembling a Masterchef countdown – canapés included – as the teams prepared to present their thinking to each other and to guest reviewers Cany Ash of Ash Sakula Architects, Conor McDonagh, assistant director of economic growth at Ealing Council, and Dean Harris, managing director of Marshalls Bricks & Masonry.

The brief was intentionally open, allowing the practices to choose their own sites and areas of interest. And indeed, it became immediately clear that a diverse range of scenarios and had emerged. Echoing the mention at the beginning of the day of the Half Moon Theatre, an interest in performance made itself felt in many of the designs, as did a spirit of play – reflecting a brief that called on entrants to ‘let your imagination run riot’. But underlying the fun, each characterful intervention showed a determined attempt to accommodate and improve conditions for those who are currently alienated or underserved by the public realm – humans, animals and plants alike. ●



# Studio Multi

**Project team:**  
Emma Lynn (founding director)  
Petr Kalab (senior architect)  
Wei Lim (architectural assistant)



Studio Multi, whose offices are split between London and Amsterdam, focused its intervention on Waterhouse Square, an under-performing and underused public space outside its Hatton Garden studio. The practice proposed a reconfiguration of the space which reuses materials already on the site, bolstered by the introduction of Marshalls’ concrete bricks.

The square is bounded by roads, behind which buildings with minimal links to the street appear to turn their backs on a space which could connect them. Dotted with an excess of bins but no seating, amid a smattering of trees, this should be a place which offers back to the public realm; instead it is where ‘people eat their lunch standing up’, noted Petr Kalab.

Aldo van Eyck’s public playgrounds characterise Amsterdam’s neighbourhoods, explained Emma Lynn, and although many have been adapted after years of use they have led to a better understanding of how children play. Crucially, such play areas (and others inspired by them) are secure places for children where adults too can ‘drop their shoulders’. Their abstract shapes encourage both children and adults to think creatively.

Also drawing on Copenhagen’s

**Opposite top** Studio Multi envisages use of white Castleton stock facing bricks to brighten a dark site and contrast with foliage, along with recycled stocks. Brick bonds take inspiration from Alvar Aalto.

**Above** Studio Multi’s structure threads between existing trees, and replaces an asphalt surface.

**Below** The modular nature of concrete brick is reflected in the form of the multipurpose structure.

Climate-Resilient Neighbourhood strategy – which allows citizens to make changes at ground level to relieve the effects of heavy rain – Studio Multi’s intervention proposes lowering the ground in places and building it up in others. The portions are modular and geometric – a little like the Giant’s Causeway; the proposal is intended to be ‘economical in means’ says Lynn.

This sustainable drainage system would benefit the beleaguered trees and would be added to with a multiplicity of bricks, in manner redolent of Alvar Aalto’s experimental Muuratsalo summer house, which joyfully explored brick’s aesthetics and weathering properties.

The low-lying, fragmented structure – which takes cues from the nearby Grays’ Inn walled garden and the urban grid of the quarter – snakes through the square. Components include a gateway swing, a mega-bench, a water bowl and planter, and a climbing structure. Importantly, with its irregularity and variety of textures, the intervention shuns a top-down approach and allows for a multiplicity of affordances. As Connor McDonagh commented: ‘I can see this being a kind of assault course, a space for kids, a space for teenagers – a living playground’.

It shuns a top-down approach and allows for a multiplicity of affordances





vPPR

Project team:  
Catherine Pease (director)  
Michelle Wong (architect)  
Stephanie Lloyd (architectural designer)



**Above** Crisp, monochrome Capel White stock was selected.

**Below** vPPR elaborated on its design for the Camden Highline.

**Opposite** Measures such as open corners balance safety with privacy.



‘Teenagers are too old for the playground and too young for the pub’, says Catherine Pease. They cannot legally drive, so society’s reliance on cars limits their freedom of movement further still. And due to a gender bias in public sports facilities, girls are even less well catered for than boys. Moreover, unlike countries such as Germany where play areas are frequented by children and teens alike, British teenagers are often embarrassed to be seen in ‘children’s domains’. All this means that teenagers ‘are left with nowhere to go’. These nascent members of adult society, impressionable yet striving to navigate their place in the world, are marginalised in the public realm.

Drawing on an existing project, ‘Play with(out) Grounds’ (2019), vPPR’s intervention comprises of a series of structures for teenagers to occupy. Positioned along the proposed Camden

Highline (an elevated greenway occupying a disused railway, designed by vPPR), these form a ‘family of little follies’. They are connected via sight-lines and unified by a shared palette of pale concrete brick, dialoguing with each other and with their streets.

The Camden Highline area is characterised by an overlap of railway arches, disused elevated tracks and narrow surrounding streets. The follies would play a connecting role while each addressing a context-specific need, activating the space around them. They are intended to encourage different types of civic participation,

from performance to commerce – a place for being, a place for watching, a place for entrepreneurship and so on. In one situation, the structure suggests a zone for performance, with concentric seating; in another, origami-like folds offer surfaces and corners to relax in privacy.

The follies’ forms were in part inspired by Aldo van Eyck’s sculpture pavilion in concrete blockwork at Sonsbeek, Arnhem. The simplicity of concrete bricks, proposed vPPR’s Stephanie Lloyd, makes for a calm, sober exterior but potential to create ‘magical spaces’ on the inside, open to appropriation like a teenager’s bedroom.

What teenagers lack is ‘a private space but within a public place’, suggests Pease, and these structures are intended to provide security – ‘safety in being seen’ - balancing public visibility with much needed privacy. ●

A series of structures for teenagers to occupy forms a ‘family of little follies’





# Native Studio

**Project team:**  
Sanaa Shaikh (director)  
Zeina Al-Derry (associate director)  
Vandana Goyal (associate director)



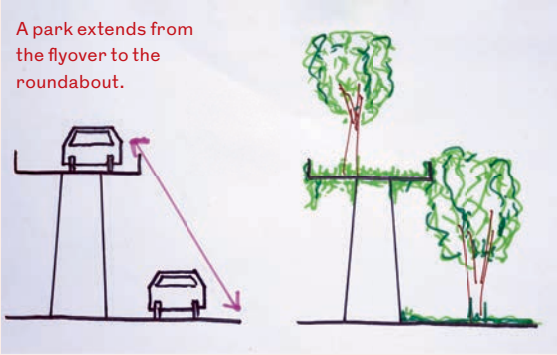
**Above** Structures formed in Edmonton stocks reference historic red brick facades on Old Kent Road in south London.

**Below** The project comprises a new park and structures beneath the flyover.



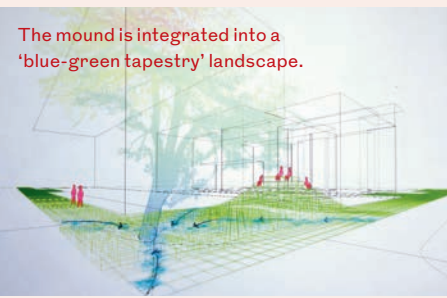
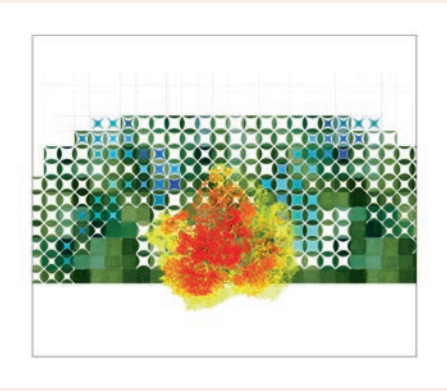
Native Studio's chosen site was the Bricklayers Arms intersection at Elephant and Castle in London, where multiple arterial roads converge: a four-way roundabout, flyover and bypass now occupy the site of a former coaching inn. It is an uncomfortable zone between inner-city and suburbia, peripheral but inhospitable due to a car-centric infrastructure. Any notion of the '15 minute city' (having important amenities within reasonable walkable or cyclable distance) seems far-fetched here. 'While the 15-minute city is fantastic in some respects', notes Sanaa Shaikh, 'it could limit social mobility, cohesion or the ability to learn from each other in diverse situations.' So in rethinking the road-dominated landscape it was

important to retain the sense of a 'node of movement' while addressing problems of 'a lack of green space, availability of healthcare, social connection and access'. Focusing on the flyover and roundabout, the intervention reuses, connects and greens these structures in a way that retains the social legacy of the historic inn. It reclaims them for pedestrians retaining reduced car access round the north of the site. Flyover and roundabout are linked by a sweeping stair that doubles as performance seating, in front of an open, green public space. Introducing an element of play ('a real snakes and ladders game', as reviewer Cany Ash described it), slides 'tether' the upper walk to the ground. The two levels would also be linked by a digital screen, featuring community announcements and other relevant content. Concrete brick structures under the flyover could accommodate pop-ups. Cascading planting, as part of a wider landscape strategy, would reintroduce biodiversity. 'Historically, the pub would have been the heart of the community', commented McDonagh. 'Now the site is being repurposed to support a new community, offering an opportunity for social cohesion'. ●



# Tonkin Liu

**Project team:**  
Anna Liu (director)  
Catherine Healy (architectural designer)  
Hannah Lewis (architectural designer)



'We approached this project using our placemaking methodology,' said Catherine Healy. 'We asked questions which redefined the brief, looking at nature, people and place through a time perspective'. Taking London as the point of departure, the group considered 'what was', 'what is', and 'what could be'. Cities were once forests, fields, rivers and mountains, but today's environment suffers the fires, floods and droughts of climate change. Landscapes are defined by roads and contaminated by the detritus of human habitation. Clans have been replaced by globalised cultures, siloed communities and loneliness. Yet cities have the potential to be 'exuberant, nature-powered' places even in climate change. 'Many communities around the world have a sort of built-in intelligence,' explained Anna Liu, 'sharing a support system and intelligence that helps the community become climate resilient'. 'What is the origin of a public space?' asked Liu. 'In my mind it was meeting someone under a tree.' Trees have the potential to be landmarks, valued as part of a 'cultural economy'. Liu cites a Japanese tradition of propping branches with walls and the like to support growth. These assemblages of limbs and struts are often 'really beautiful spaces' she said. If London's road system became

obsolete, the network could become a 'tree and rainwater infrastructure', where these hard-working providers of oxygen, shade and habitat, rarely given enough space in the public realm, become focal points of outdoor community life. A mound housing a precast Marshalls rainwater harvesting tank would provide seating, its gradient nourishing the tree roots with water. SuDS (sustainable drainage systems) replace asphalt, forming a 'green-blue-tapestry' based on Marshalls' Grassguard paving and Biofilter systems. A beautiful tree unique to each local community, paired with a singular mast that hosts light and habitats for wildlife at a high level, would give height and legibility. These multifunctional 'Social SuDS Spots' would form part of a broader, holistic network – an architecture of SuDS and trees – that integrates people with nature, activates spaces and mitigates against flash flooding. This proposal explored how 'nature-powered conveyance, retention and purification' can create a 'water-sensitive city', forming the basis of placemaking and thereby social change. 'It is not just about repurposing the hard landscapes, it is moving beyond that', said Connor McDonagh. Cany Ash agreed: 'It flips the paradigm so that trees come first'. ●





# What if: projects

**Project team:**  
Gareth Morris (director)  
Alexandros Xenophontos (architectural production)  
Heidi Rustgaard (choreographer)



Taken over by creatures and plants, the structures will ‘transform the city’

This exploration in ‘multi-species conviviality’ aims to bring people’s attention to an encounter with wildlife, while encouraging habitats and resilience.

‘We looked at architectural references worldwide where habitats coexist,’ said Gareth Morris. ‘They have always had a space in the city’. Indeed, diverse inspiration ranged from north African mud-brick dovecote towers to Oscar Niemeyer’s brutalist O Pombal in Brasília and the perforated brick walls of Laurie Baker’s Indian houses.

What if: projects’ intervention proposes concrete brick structures of different sizes, offering habitats for various wildlife species and responding to the scale of the public realm. At the smallest scale, they accommodate small species such as hedgehogs or foxes; the largest, rising to 10m, accommodate species of birds and bats. Holes in the walls enable them to be inhabited, their sheer faces recalling the cliffs in which sea birds nest.

To form a network of structures, the group proposed that they converge with London’s lost rivers – illustrated by a string along the River Effra, culminating at Brixton’s Loughborough Estate, which is characterised by its high- and low-rise modernist blocks. ‘I like the idea of restoring the Effra,’ said reviewer Conor McDonagh. ‘The idea of being able to

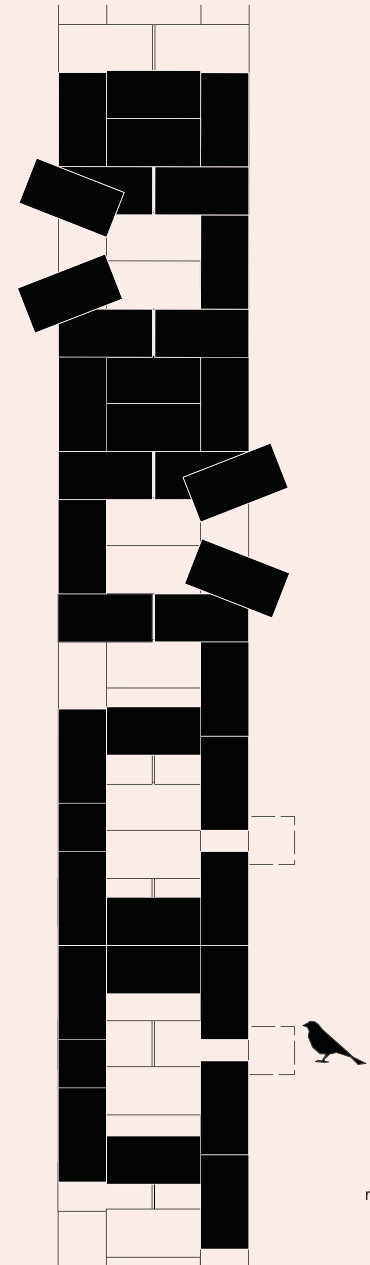
walk along it, and the structures getting bigger along the journey towards the source, captures the imagination’.

The structures are intended as ‘third places’, explained Alexandros Xenophontos, aiming to be accessible, non-commercial public spaces. They also provide a changing scenography and a backdrop to public events. ‘It becomes an endless, evolving multi-species performance’, explained Heidi Rustgaard.

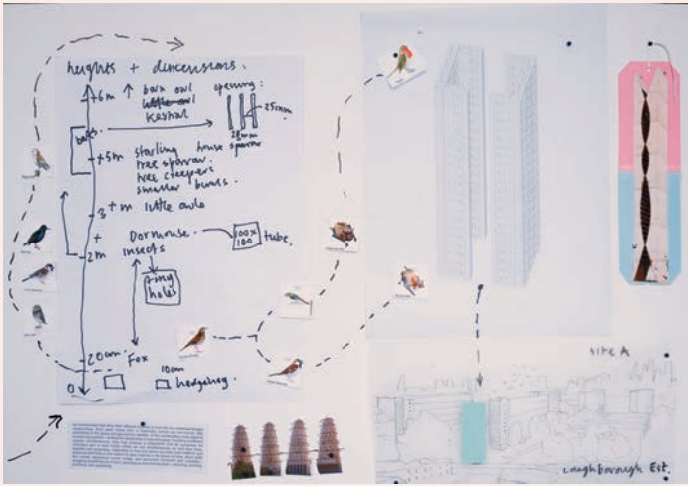
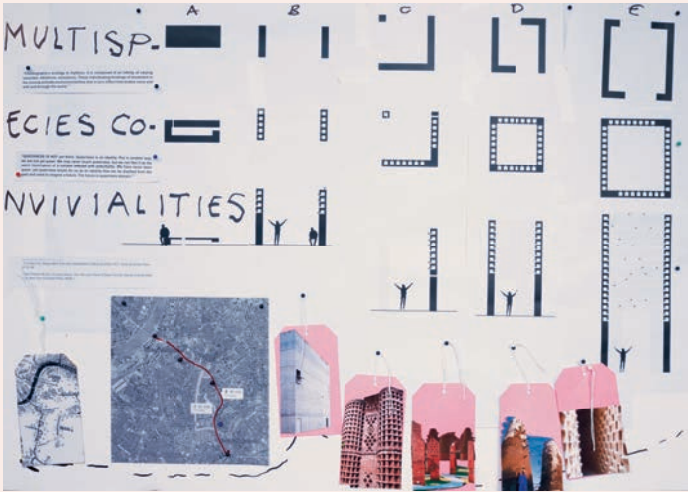
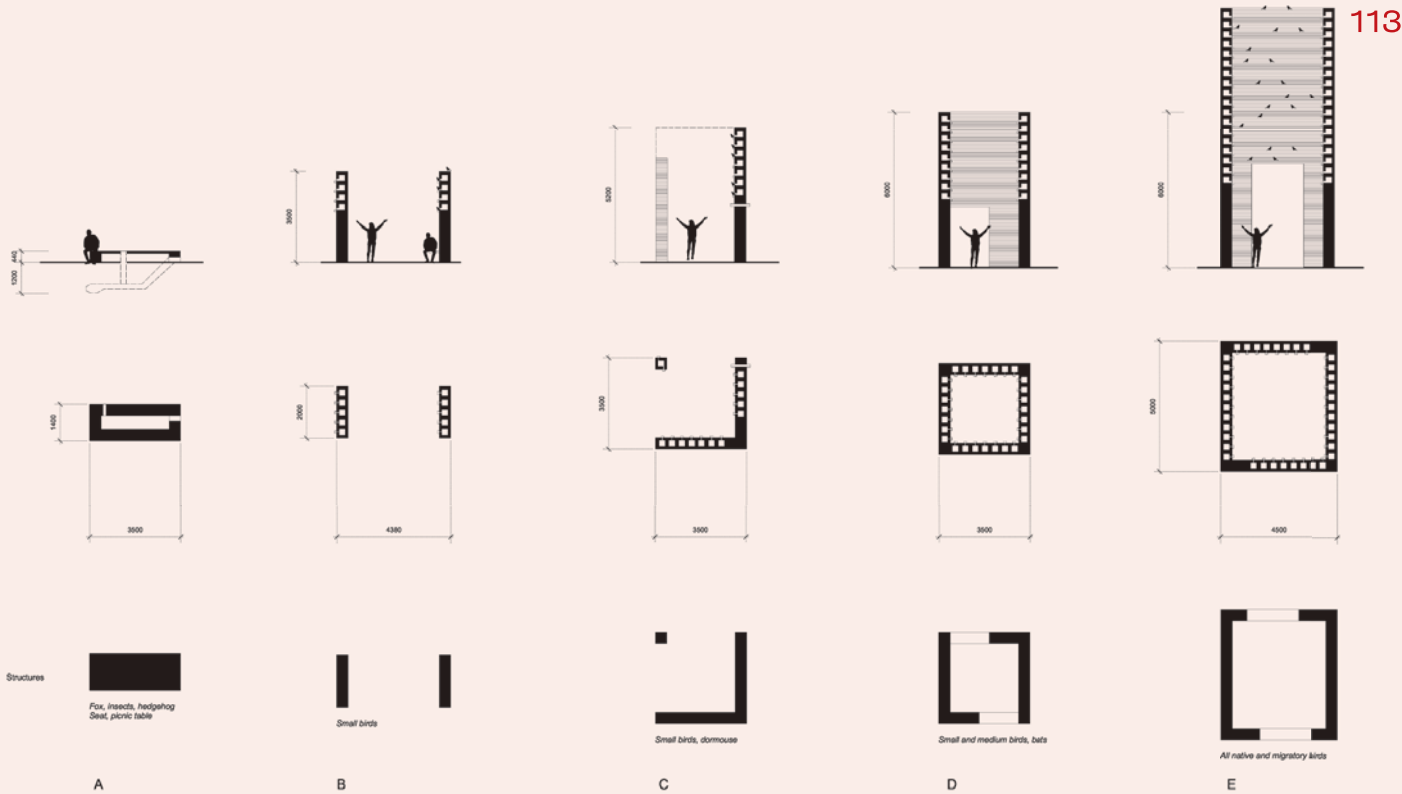
With the eventual overtaking of the structures by creatures and plants, the intervention will contribute to ‘the transformation of the city’, proposed the team, manifesting the rhythm of the seasons. The interaction between human voices, animal sounds and the resonance provided by the architecture itself would create a ‘new, poly-rhythmic sound-score’ – experienced either individually or collectively as a composition. This is an environment which suggests a different reality, noted the reviewers, and has the potential to offer a unique and powerful experience. ●

**Above** What if: projects proposes to use Marble Grey facing stocks – a blend of light and dark greys giving a marbled appearance.

**Right** Thick walls of concrete brick incorporate nesting boxes.



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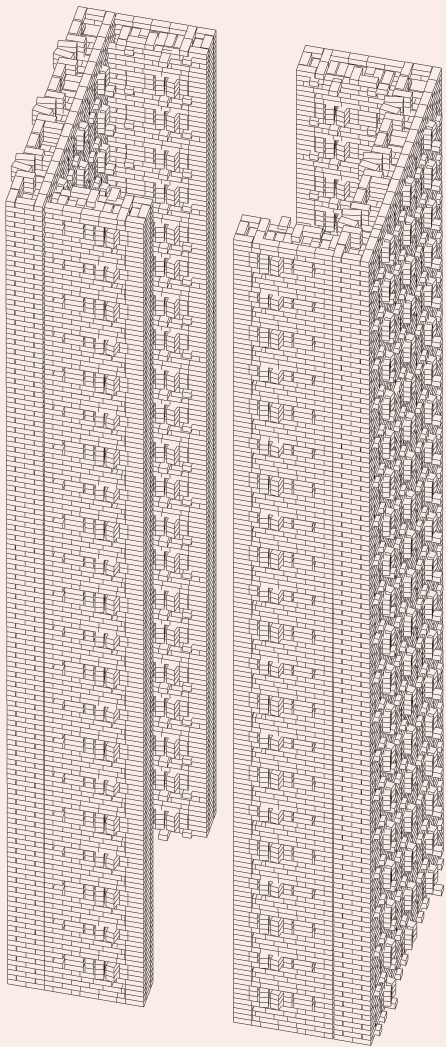


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**Above** Structures of various sizes provide shelter for diverse species such as insects, dormice, hedgehogs, birds, bats and foxes.

**Left** The proposal draws on precedents including mud brick dovecotes in Sharm El Shaik, Egypt.

**Right** The tallest tower stands among the slab blocks of London’s Loughborough Estate.



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**Newcastle Civic Centre**  
Newcastle, 1956-67

Designed by the city architect George Kenyon to fulfil both administrative and ceremonial roles, the Newcastle Civic Centre was completed in stages between 1956 and 1967. A striking building and one of the few surviving examples of 1960s architecture in the city, it is finished with high-quality materials throughout, while the elliptical council chamber stands out with its exposed concrete wall. The Civic Centre is also notable for its sculptures and other examples of modern public art, including two abstract murals by Victor Pasmore, an engraved glass screen by John Hutton, a tapestry by John Piper and the River

God Tyne external sculpture by David Wynne featured in this photograph, which was published in the Manplan 7 issue of The Architectural Review, on the theme of 'local government'. Here the building was criticised as a 'flamboyant folly' built in a city where funding was needed for more essential services, but it is now considered of great architectural significance: it acquired grade II\* listing in 1995 and was included by the 20th Century Society in its 2014 list of 100 Buildings, 100 Years. ● Valeria Carullo

Wide-angle view: architecture as social space in the Manplan project 1969-70, RIBA, September 2023

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Many thanks for a riveting presentation on acoustics.  
It's an area I advise in as an architect,  
so completely relevant and of interest.

Best CPD this year!  
★★★★★

SonaSpray fcx acoustic ceiling spray in 22 Bishopsgate.  
DesignLSM & Andrew Meredith Photography.

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