


Eye Line winners leap into the future
Serene drama at White Eagle temple
Manchester's jewel box of delights
Asif Khan: pushing the boundaries

The RIBA Journal
July/August 2023
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Park and pavilions tell stories of Ethiopia

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PRACTITIONER WINNERS 94

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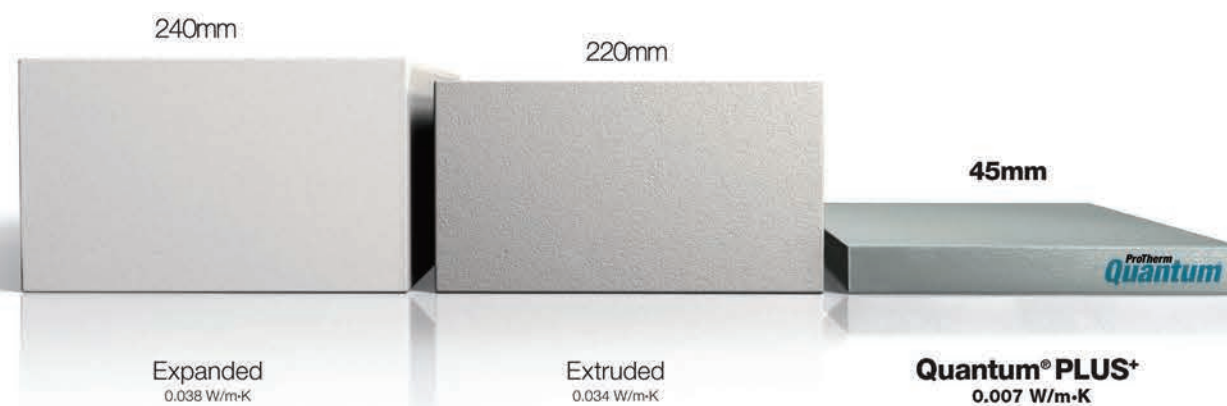
STUDENT WINNERS 100

Chia-Yi Chou's fascinating, folding forest tops the Student entries, with Victoria Wong's Hiroshima triptych second and Max Cooper-Clark's intriguing political drawings third



From coping with heritage to harnessing AI, via chakras, copyright and urban planning. Tell us what you make of it all at ribaj.com

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0.11	80	290	320
0.10	100	320	355

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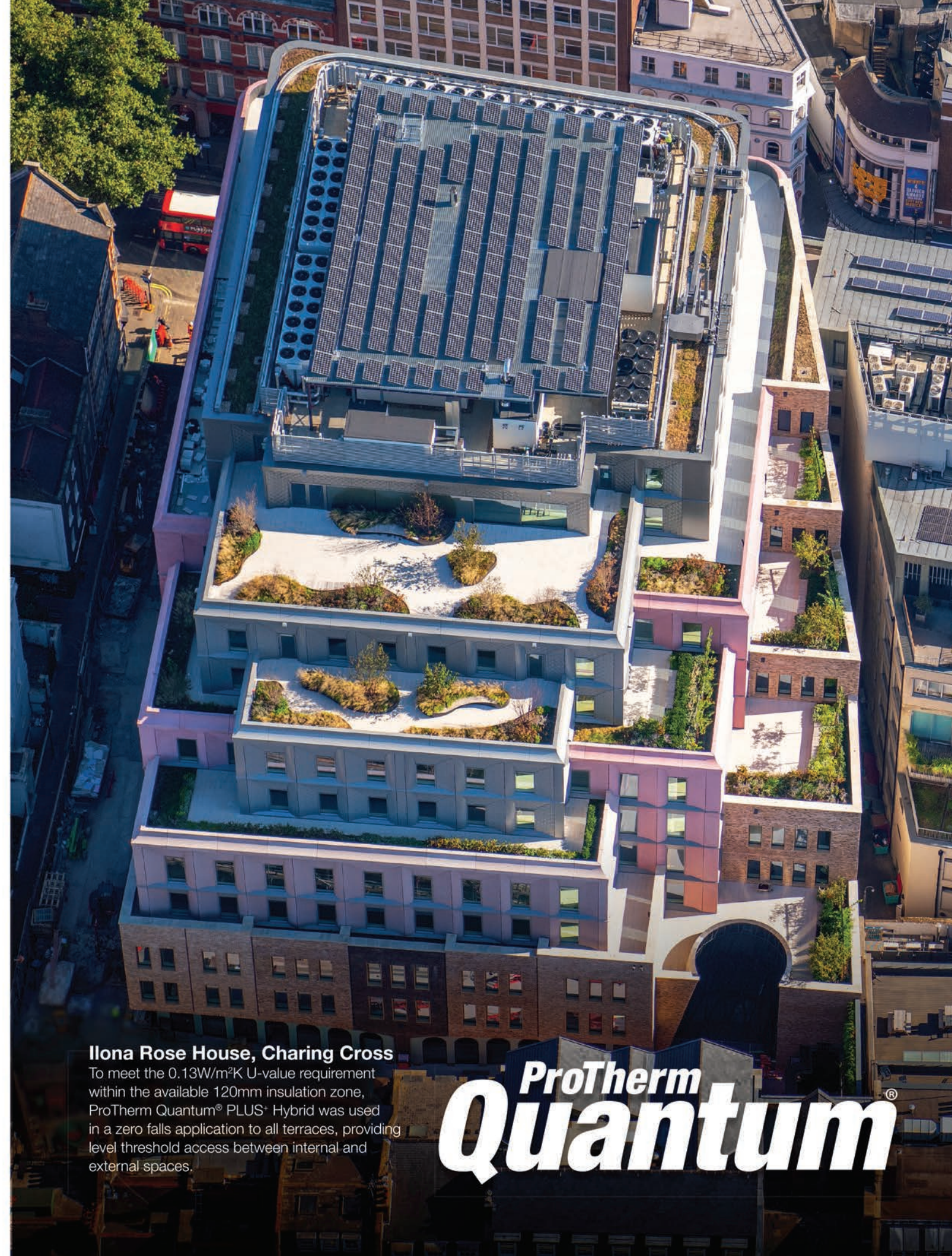
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Ilona Rose House, Charing Cross

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07

1: Buildings

**MELES ZENAWI
PARK, ADDIS ABABA,
ETHIOPIA**
STUDIO OTHER SPACES
Read the full story:
ribaj.com/meles-zenawi-park

Below View of the
landscaped courtyard
of the Meles Zenawi
Foundation's Guest
House.

Juxtaposed against a surreal cityscape vista from the foothills of Mount Entoto, covering 65ha of land nearly 2,700m above sea level, and surrounded by wild, untouched forests, Meles Zenawi Park sits at the most northerly edge of Ethiopia's capital Addis Ababa. Named after the country's late former prime minister, it is a treasury of architectural and landscape marvels; transparent, honest and inclusive socio-political stories of the state of Ethiopia embedded in them as you wander its winding garden paths.

The park was designed by artist Olafur Eliasson's Berlin-based architectural practice Studio Other Spaces, and consists of a 2.4km pedestrian path dotted with pavilions and five campus buildings for the Meles Zenawi Foundation. Pavilions have well-sculpted patios, social meeting spaces and gardens portraying key events of Ethiopia's recent past, while the standalone buildings each have different design concepts, materials and creative interpretations. The campus

is home to the administrative quarters of the foundation, but the garden walks and their 'stories' – rendered through the architecture, landscaping and nature beyond – give it subtlety rather than pandering to any monumental aspects.

Opening welcoming arms to visitors with its first and charismatic architectural encounter – The Outlook – the park maintains a sense of, and even transfigures, recent Ethiopian political history, its siting addressing both rural and urban contexts.

Highly prevalent and rhythmic African Juniper and other indigenous plants act as a harmonising tool across the park to offer a breathtaking and visceral experience of nature for visitors, while its paths reveal episodes in the life of Meles Zenawi.

Read as a whole, the park is experienced as an eloquent expression of Ethiopia's recent socio-political history, dancing alongside architectural and landscaping 'amusements' – all set in heavenly surroundings. ● Nahom Teklu Bekele



Calling for water

When a couple couldn't find the right site by the sea they decided to bring the water to them. Lyons Architects made it happen

Words: Isabelle Priest Photographs: James Brittain



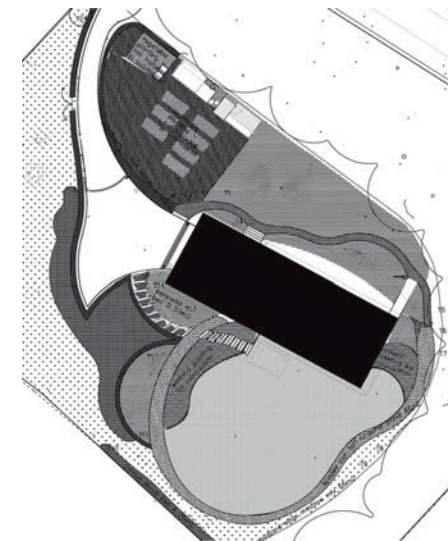
The wraparound walkway, covered by the low roof, is partially suspended over the lake.

Buildings House

The clients of Blackbird, a new build house near Kemble in the Cotswolds, had wanted a house by the sea for their next home. They are a couple, one an artist and the other coming up to retirement. Unable to find a suitable plot by the coast, when a paddock with planning permission came up for sale in a village near to where they lived, they went for it.

That was in 2016 – the year Hamish & Lyons (now Lyons Architects) completed Stepping Stones, a house raised on stilts above a manmade lake in Hurley, near Maidenhead. This was the inspiration the clients of Blackbird needed. Initially they had pursued the home they sought by redesigning a traditional house with planning permission via the council, but this was leading to a bulky building that wasn't working. They decided to reassess and in 2018 were introduced to Lyons Architects by a mutual contact. The sight of Stepping Stones sparked the idea of making a lake to fulfil their desire to live by water. The lake is approximately 32m in diameter, 2m deep. It is fully lined, so really it's a pond.

Until you realise the lake is manmade



Above Site plan with driveway, lake and house

Below View from the opposite side of the lake showing the steps down from the living space to the pontoon terrace.

IN NUMBERS

£1.125m
total contract cost

£5000
cost per m²

223m²
gia

you might think that because of the relationship of Blackbird to the water, the house fully maximises its setting. Knowing it is manmade could make it whimsical – and yet it doesn't. The site is rectangular. On two sides, including the one running behind the main road through the village, it is bordered by a 15m-deep strip of protected woodland that had to be preserved. Separated by tall trees to the west are other houses, while out the back to the south are fields.

When the clients bought the plot, this view over the gentle valley was closed off by trees. As the lake was created, the excavated soil was shifted to create a topography that accentuates existing level changes and opens the view. This had the added advantage that the house could be built, like Stepping Stones, on steel frame stilts, raising it from the ground to minimise its concrete footings and their embodied carbon. The water also reflects light into the building, has submerged heat pump pipes in it, helps cool the house in summer and blurs the woodland boundaries, drawing the house further into the landscape. As well as the





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Buildings House



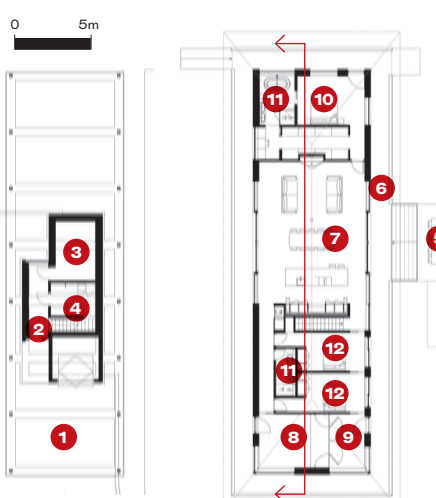
Short elevation view from the driveway, car port underneath.

clients, a host of wildlife has moved in.

From the entrance in the north west corner you realise none of this. The first view is of flourishing wildflower meadows planted with native species designed by Fox Fernley Landscape Office, either side of a sweeping gravel driveway. Nestled between the banks is what appears to be a modest chalet on legs. A balcony wraps around at the upper level, protected by an oversailing roof. All black except for the natural timber soffit, the building has just a few shapes – the low hat roof, boxy central volume, two large square windows and a chunky handrail. The building looks so embedded it could have been there for decades.

Visitors approach via a car port underneath. In front of them a simple main entrance opens onto a corridor hallway paved in terracotta. Ahead is

- | | |
|---------------------------|-------------------------|
| 1 Undercroft car port | 7 Kitchen living space |
| 2 Entrance hall | 8 Studio |
| 3 Plant | 9 Study |
| 4 Utility room | 10 Master bedroom suite |
| 5 Pontoon terrace on lake | 11 Bathroom |
| 6 Walkway | 12 Guest bedroom |



Lower ground and ground floor plans

a completely glazed view between the stilts out to the other side – a rowing boat casually moored between them. There's a utility, plant room and oak tread stair to the first floor to the right.

This might be the everyday entrance, but the best way to arrive is to walk back round the drive and up the long steps over the embankment between the olive trees. This path takes you to the whole being of the project; the lake and view to the valley. The luscious green transforms into a watery landscape – grassy edges blur into the reeds and butterflies are replaced by dragonflies. The house too turns from a modest chalet to a hovering Japanese-inspired Californian Case Study House. As you step onto the deck suspended over the water, the building reveals itself – 40m long with a double hipped roof overhanging at either end with a 1m deep terrace. Exterior walls are clad in Kebony vertical charred timber planks; the roof is covered with black diamond aluminium interlocking tiles. The references for the project are about plumage and aeroplanes but the need for them falls away.

From here steps lead up to a slightly off-centre four-part sliding glazed door. The width of the opening informs the width of the external steps and deck. This window is replicated on the other side of the building across the living space, connecting it visually to the water and woodland, the house deftly squeaked between. There is no guttering; rain soaks away into the lake or woodland.

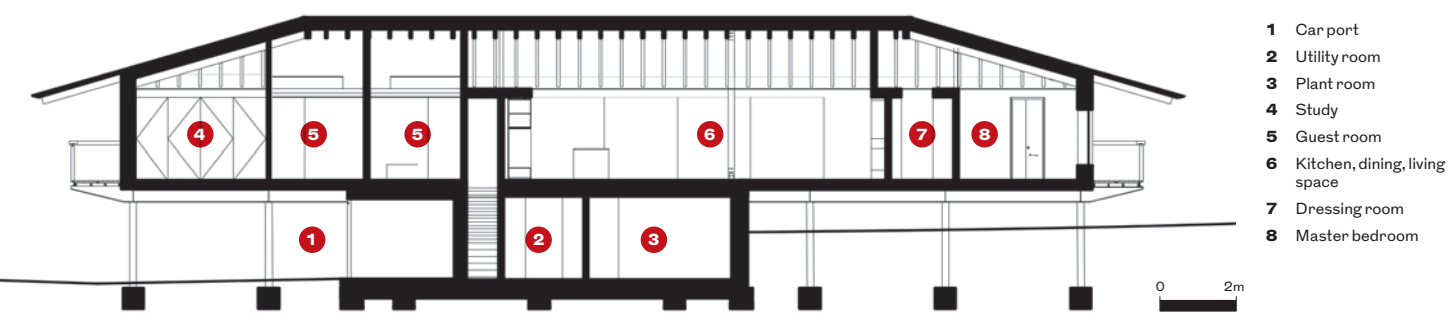
The flatness of the water is echoed in the flatness of the building's platform. It's all on one level, just positioned



The living space with the kitchen to the right and four-panel picture windows to the pond and fields beyond.



Left The solid walnut kitchen has an island and tall rear cupboards. The library/sleeping platform mezzanine will be above.



Section BB

perpendicular and rectangular. The lake laps at its feet. From this rear view, the building is surrounded by shrubbery and trees, dark like a shadow, and the symmetry is tempered by a hierarchy of windows, as practice founding director Nick Lyons explains: ‘They are full-height in the kitchen living space, shortened at the bottom for the study and studio to create a cill and shortened again top and bottom for the bedrooms.’

Entering at deck level, you go straight into the living space. The kitchen, with its granite-topped 4.2m-long island and solid walnut fronts is to the left, the dining area in the centre and the sitting space on the right, lightly separated by a green oak column. The ceiling is open to the rafters, showing the roof structure, while the floor is black oak band sawboards. One aspect of the brief was



Above The study can be expanded to create one room with the studio using concertina doors. **Below left** The corridor from the kitchen to the studio. Guest bedrooms come off to the left. **Below right** Guest bedroom with a sleeping mezzanine tucked into the roof space above.

Credits
Architect Lyons Architects with Hamish Herford
Structural engineer Momentum
Landscape architect FFLO
Environmental/M&E engineer QODA
Arboricultural SJ Stephens
Ecology MD Ecology

bedroom that looks over the pond and woodland. Joinery throughout is birch ply, matching the soffit. Finishes are in natural materials, including stone, marble and tadelakt in the bathrooms. Furniture is an eclectic mix of antique and mid-century. Furnishings are mostly white or natural tones, but the house is packed with paintings, ceramics and interesting objects. Light and airy spaces flow freely, making the home feel suitably relaxed.

The building has been designed to prepare for the future too, with the ability to live only on the upper floor with level access from outside. It is low-energy and super-insulated. On a bright early summer day with the windows flung open, the atmosphere is a compelling blend of serious architecture and laid-back living. ●

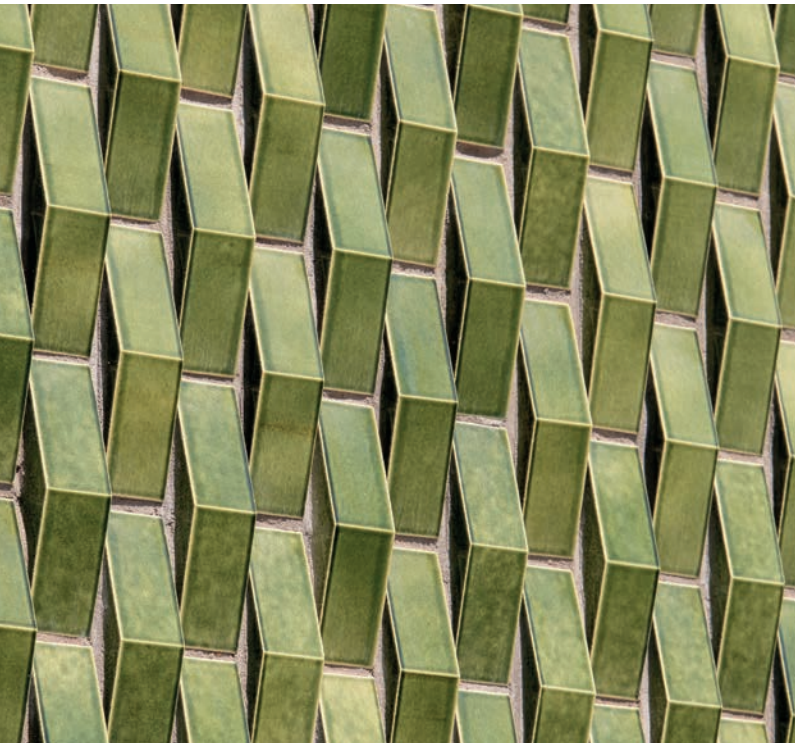


to be able occasionally to bring together several generations, yet be comfortable for two people. Spaces in which to put a sleeping bag have been maximised, including a mezzanine above the rear wall full-height units in the kitchen which is accessed by a ladder, and will double as a library. Beside the kitchen on the pond side a series of pocket doors leads through two guest bedrooms to the study. On the woodland side, a corridor gives access to the studio. Concertina doors separate this from the study, allowing them to become one larger triple-aspect space when required. Guest bedrooms each have their own mezzanine for more sleeping space.

On the other side of the living space is the master wing with a dressing area that runs the full depth of the building, its own bath and shower room, and



Great Eastern Quays



Set on a peaceful dockside, Great Eastern Quays forms Phase 1 of the Royal Albert Wharf development at the eastern end of the Royal Docks complex in London. Identified as the capital’s next up-and-coming business district, the historic docks are undergoing a three-phase regeneration.

The £81 million development includes a mixed-use masterplan, which has seen the creation of 350 high-quality, mixed tenure homes, the regeneration of internal garden squares and public areas along the river and docks, and the construction of additional commercial space aimed at business start-ups.

In order to achieve the distinctive historical warehouse visual designed by the architects, Taylor Maxwell worked closely with Maccleanor Lavington over a number of years to design and develop a bespoke blend of facing bricks and that would allude to the buildings of the area’s industrial past.

Glazed facing bricks were also used to provide a complementary contrast to the industrial inspired brickwork and ultimately create a striking finish to the facade.

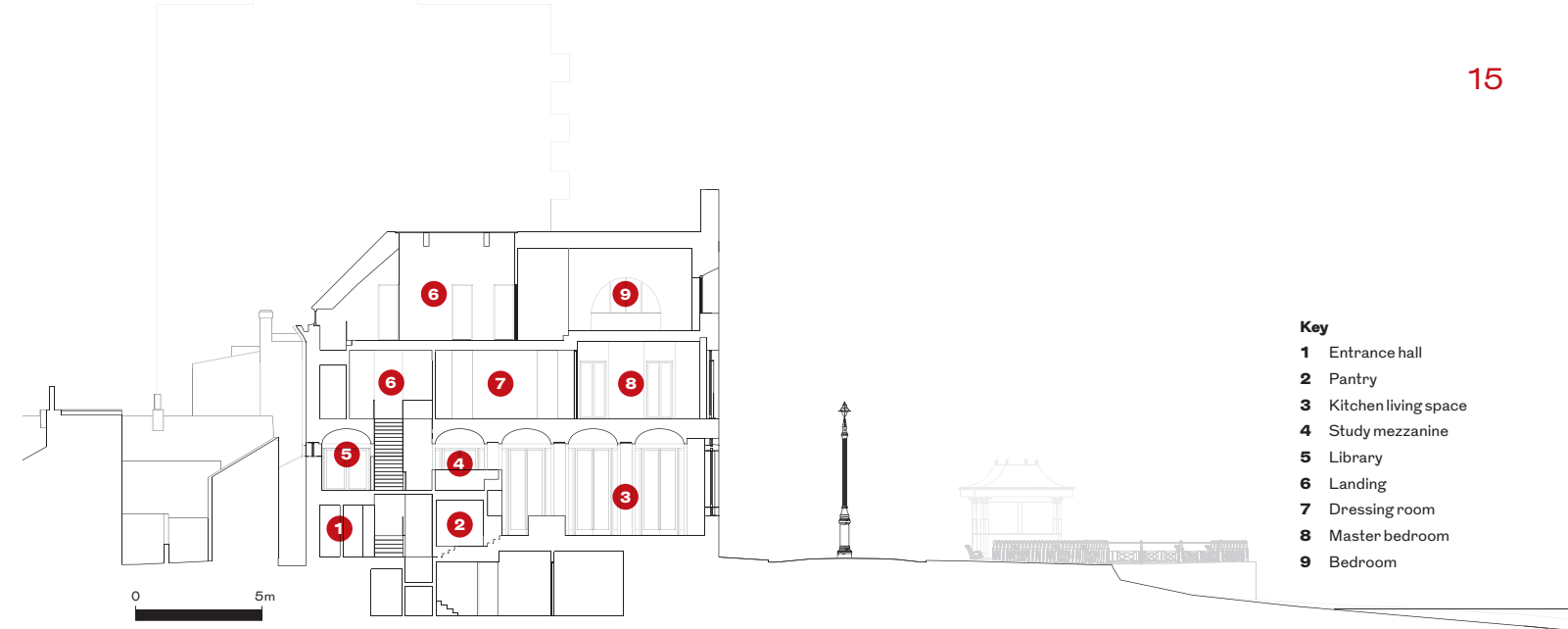
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Photography by Alex Upton.

Second life

Epic yet compact and welcoming, the new Medina House by Pilbrow & Partners preserves a piece of endangered Hove seafront referencing its heritage and the exotic

Words: Isabelle Priest Photographs: Ståle Eriksen



‘There is an interesting ambivalence to the building which I wasn’t expecting,’ says Keb Garavito Bruhn, founding partner at Pilbrow & Partners. ‘A lot of people see it as a rebirth... They don’t acknowledge it as a new building.’

Medina House on Hove seafront is a radical architectural sidestep from the post-war apartment buildings either side, the cottages behind and regency townhouses closer to Brighton city centre. This curious light brick building has arched windows, a garden wall colonnade and zinc dormers – and it’s sizeable, a fortress on the front, walled on all sides. It abounds with references, but is courageous and contemporary.

Medina House is a private house with a public history, much preceding its present incarnation. It isn’t difficult to find out who it is for, but this is the first time the house has been published in full. What’s interesting about the house is its visibility. It is located on an unusual part of the seafront where the buildings abut the promenade, one narrow road between it and the beach. Surrounding buildings are mostly former fishermen’s cottages, separated by passages known as ‘twittens’ that lead to the sea. The site was part of a Victorian bathing complex bridging Sussex Road that was built in 1896 and used seawater for its pools and slipper baths. The women’s bathhouse on one side, and the men’s on the other, are long gone.

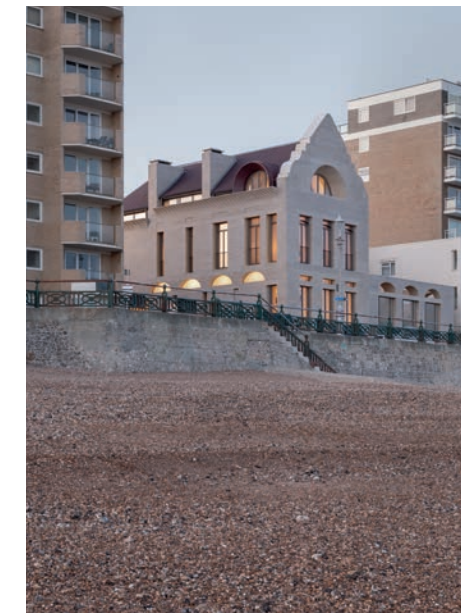
Pilbrow & Partners was brought onto the project in 2015 via a mutual friend of the client and Garavito Bruhn. Initially they intended to work with the existing

Opposite The main entrance elevation, now on Sussex Road. The barrel vault structure is reflected in the arched windows on the ground floor.

IN NUMBERS
740m²
gia

Credits
Architect Pilbrow & Partners
Structural engineer Eckersley O’Callaghan
Sustainability Etude
MEP Atelier Ten
Interiors Studio Ashby
Landscape designer Arabella Lennox-Boyd
Heritage and planning Montagu Evans
Contractor Size Group
Contractor’s architect Formation

Below View from the shingle beach of the new house with its main gable frontage and walled courtyard garden to the east, replicating the massing of the previous building.



structure; the former red brick bathhouse with a Dutch gable and entrance facing the beach that had been partially rendered in the 1920s. But after working on it for four months the team realised the bricks were too weak to be reused, which meant starting again from scratch.

‘It was an abused building,’ Garavito Bruhn adds. ‘It had had many owners, including a diamond merchant, then it was squatted and suffered fires. The last owner proposed towers on the site.’

The client, a musician and author couple, lived nearby and bought the site to preserve it. On a clear day you can see the white cliffs along the coast. Next door is Marrocco’s, an Italian restaurant known for its ice cream. The brief consequently was to maintain the qualities that led them to buy it – its aspect to the sea – but also create a sense of privacy with spaces of reprieve. And to make it as sustainable as possible too.

‘There was a huge affection for the building,’ says Garavito Bruhn. ‘It’s built into the collective imagination. People in the area knew its stages of existence and had strong connections to it.’

Consultation was intensive, with many interested groups for preservation that had started under the previous owner. One of these had recommended that it should be a family home, a stance which the council had adopted, so that was never in question.

‘The design is a significant departure in lots of ways,’ explains Garavito Bruhn. ‘Although we intentionally recalled the form of the gable and basic roof, we wanted to tie it in more broadly with the landscape, the chalky cliffs that have



stratification and erosion. Rather than a building that expresses as an assembly of components, could the building have a sense of being eroded? The wing emerges from the main mass and erodes towards the east, responding also to the changing heights of the urban situation.'

Once it was decided to demolish and rebuild, changes key to adapting a public to a private building were possible. This included moving the entrance from the promenade to Sussex Road and creating another to the garden from the twitten on the eastern side, to avoid the stones and water damage blown up by bad weather and for additional privacy. The other change was raise the building by around 2m, for these reasons and because at a certain point Pilbrow & Partners realised the internal spaces were a bit squat.

Nevertheless, overall, in form and arrangement, the building closely follows what was there before. The main volume remains perpendicular to the beach with its gable, then to the east is a lower wall where the pool had been. The three-bay window arrangement recalls the previous facade, replicated

Above Courtyard garden looking back to the living room's tall French doors.

Below The front Dutch gable with its bonnet arched second floor window.



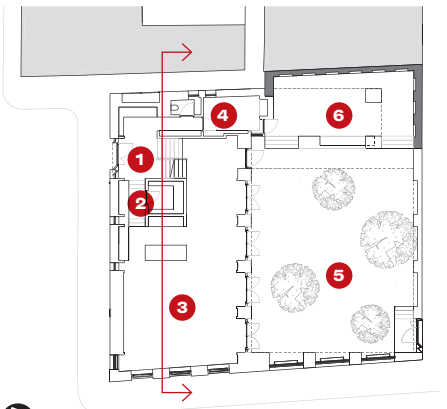
again on the garden wall, while the dormers are borrowed from the former men's bathhouse. 'We spent a lot of time drawing on what was there previously,' Garavito Bruhn adds.

The rear side wing is new, with a flat roof rather than pitched, and from the street adopts a more moneyed tropical architectural language with external plantation shutters, veranda and balconies. It is generally looser, more informal than the main portion of the house. Across the project, timber for the doorways, window frames, shutters and cladding is saltwater-resistant Accoya. The bricks are Petersen Kolumba, selected to emphasise horizontality and stratification, but also as the whitest bricks with colour-changing properties. In the space of our two-hour visit, the building changed from yellow to white and grey. The reveals of the arches and windows are split brick specials that turn the corner to create a sense of 'carving into the facade'.

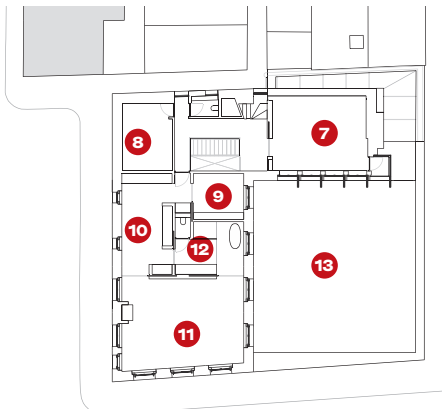
One of the trickier aspects of the elevation was how to deal with the garden wall windows. The practice

Buildings
House

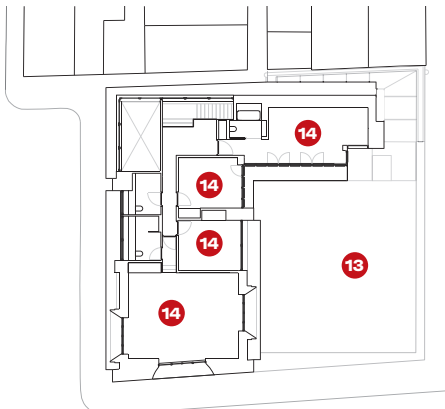
Ground floor plan



First floor plan



Second floor plan



had sought advice from engineers but eventually turned to find a solution through model-making and testing. The glass stops the prevailing south west wind, while the open arched transoms allow some wind through to prevent a whirlwind developing in the courtyard.

Inside, the building reflects the language of the exterior. From the main entrance hall there is an immediate sense of connection to all parts of the house. To the left is the WC and a small passage to a darker writing room. Ahead is the garden, a stair to the basement with another flying overhead to the bedrooms, and to the right steps through a pantry up to the main living room. This, as expressed externally, is on a grand scale – a 4.8m tall lateral crossing barrel vaulted ceiling, tall windows facing the sea, French doors opening onto the garden, a stone fireplace, solid oak floorboards and Venetian plaster that continues throughout the house. The kitchen comes first, with a huge hearth for an Aga backed by blue Moroccan splashback

Bottom left Retained Royal Doulton tiles from the original women's bathhouse in the sunken terrace.

Below The barrel-vaulted ceiling in the main living space. The vaults are set slightly apart for services to run between.

- | | |
|------------------------|-------------------|
| 1 Entrance hall | 8 Gym |
| 2 Pantry | 9 Snug |
| 3 Kitchen living space | 10 Dressing room |
| 4 Study | 11 Master bedroom |
| 5 Courtyard garden | 12 Bathroom |
| 6 Sunken terrace | 13 Void |
| 7 Music room | 14 Bedroom |





tiles. The sitting area is beyond, with dining space along the elevation of the courtyard. Looking back, the stair is open to the room and a mezzanine desk space overlooks the living area. You can catch glimpses of the galleried landing library beyond. The scale is epic, but compact and welcoming.

The views of the sea continue from the tryptic of windows in the garden where the landscape has been designed as diagonal planting between trees by Arabella Lennox-Boyd. Raised above the road with frosted lower glass panels, it gives you a sense of remoteness from potential crowds of visitors and the crashing waves outside. To the rear of the garden under the wing is a sunken covered outdoor lounge with clerestorey windows around the perimeter. Here the original tiles of the bathhouse have been preserved in situ, giving the feel of an archaeological discovery. However, the huge solid rectangular columns that hold up this and the accommodation wing above (music room on the first floor and bedroom on the second) create a heavy almost post-war Corbusian modernist feel. Yet the balcony from the mezzanine library interrupts that feeling again, taking you to an Italian hilltop town of narrow streets and houses. The immovable Moorish influences on the exterior disentangle into a building with



multiple faces, histories and geographies over a seemingly extended period. It's a joy that conversely creates a sense of permanence.

Upstairs, back in the main section of the house, is the master suite. To the left is an atmospheric wallpapered 'opium den', before the spaces bisect into a dressing space and bathroom, then the bedroom – directly above the living room and enjoying the same sky and sea views. The architecture – vaults, floors, windows, walls – is overlaid with sumptuous interior design by Studio Ashby, which has a fitting opulence. The stair to the second floor is enclosed. Here, windows to the north overlook the cottages and taller surrounding apartment blocks. They mean there is a variety of views, should one ever tire of looking at the sea.

This issue features two houses. It's fantastic that they can't be compared. Yet each has a formality and laid-backness that the architecture creates in different ways. What is particularly compelling about Medina House is that this is ambitious architecture commissioned by a private client that is in full view. You can stumble upon it, soak it up, develop an opinion, post pictures of it on social media, have conversations about it with your friends, critique it. What better kind of architecture is there than that? ●

Above left

The second floor landing in the roof space.

Above

The first floor galleried library off the staircase and main living space under one of the barrel vaults.

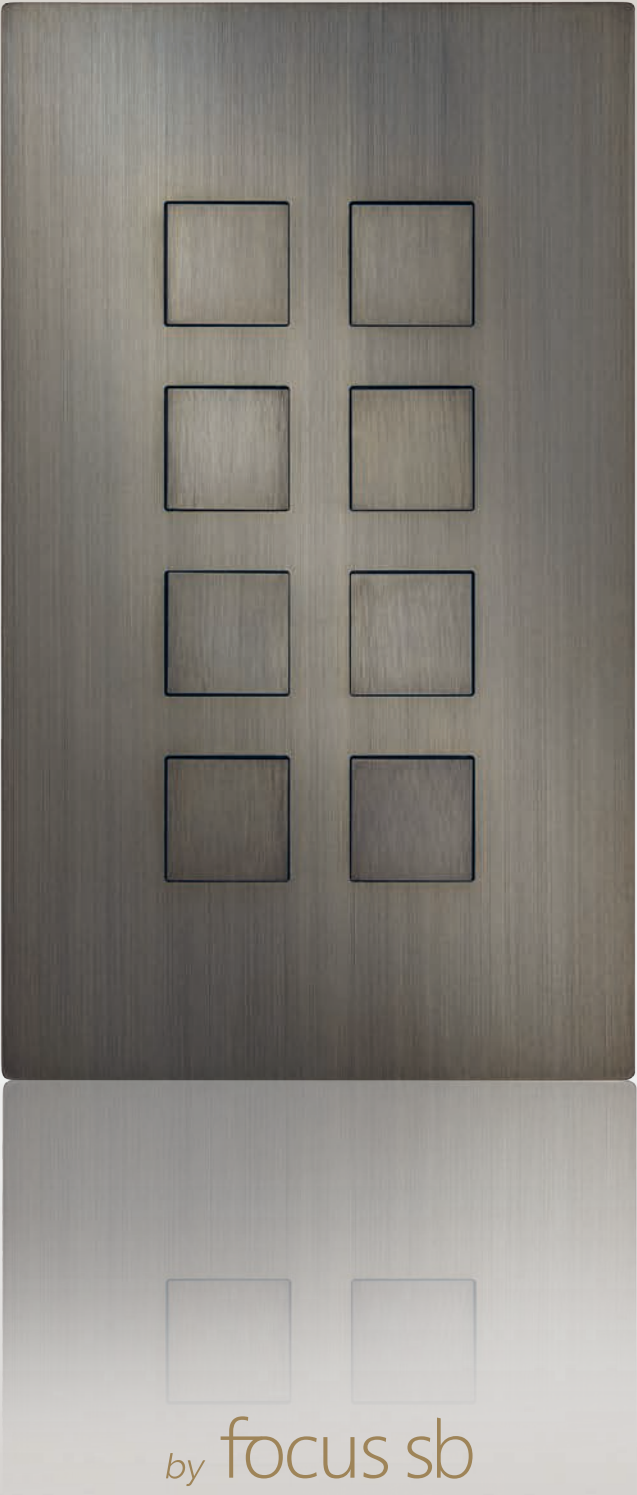
It's a building with multiple faces, histories and geographies



Looking out from the bonnet arch to the blue skies and sea of Hove.

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King's gambit

Hall McKnight had little room for manoeuvre with its semi-subterranean Quad Building at King's College London, but careful juxtapositions put all the pieces in place for a satisfying finish

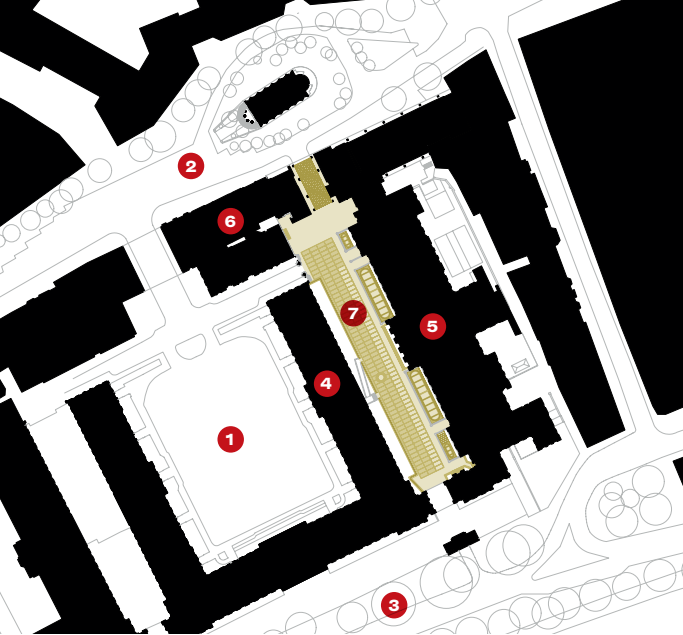
Words: Chris Foges Photographs: Johan Dehlin

There's a lovely moment in the new engineering department at King's College London, when you stand in the immaculate concrete shell of a high-spec workshop and look up though a glass roof to see the creamy stonework of an elaborate Georgian facade rising five storeys above. To one side, its giant rusticated base sits just beyond the windows. On the other, glazed walls reveal an equally striking juxtaposition as a scarred screen of ancient brickwork slices through a coolly clinical laboratory. It's through such careful layering – of old and new, of materials, spaces and views – that architect Hall McKnight has produced a remarkably practical yet characterful interior in the semi-subterranean Quad Building, set below a grand quadrangle at the heart of the grade I-listed campus.

Four buildings enclose the long

courtyard. The east wing of the 18th-century Somerset House, designed by William Chambers, was absorbed by the college in 2010. It faces Robert Smirke's slightly later King's Building, the university's original home. At the southern end there's another bit of Somerset House, facing out to the Thames. And to the north, on the Strand, a brutalist building added in 1972. The 3,000m² Quad Building, extending under the entire courtyard, was built in the 1950s and occupies the space between two bits of made ground: the courtyard at the level of the Strand, and the Thames embankment 9m below. Windows look into a deep, narrow lightwell on the west side that extends into a crooked passage leading to the riverside.

In 2015, Belfast-based Hall McKnight won consent for an ambitious plan to improve connections between



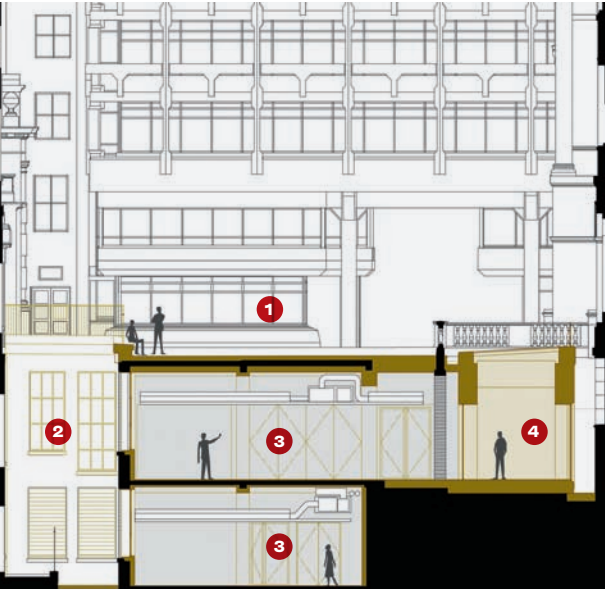
- Site Plan
- 1 Somerset House courtyard
 - 2 The Strand
 - 3 The Embankment
 - 4 Somerset House East Wing
 - 5 The King's Building
 - 6 The Strand Building
 - 7 The Quad Building



Above The renovated courtyard is now a sociable gathering space, and a setting for graduation photos.

Right Toplit workshops occupy structurally independent buildings in former lightwells.

Flexible teaching rooms and workshops can be easily adapted to other uses in the future



West-east section

- 1 Quadrangle
- 2 Lightwell
- 3 Teaching and learning space
- 4 Maker space
- 5 Somerset House East Wing
- 6 King's Building

Credits
Client King's College London
Architect Hall McKnight
Executive architect Rock Townsend (shell and core), Hall McKnight (fit-out)
Structural engineers Elliott Wood Partnership, Plan B
M&E consultant Aecom
Cost consultant Turner and Townsend
Lighting designer Light Bureau
Principal designer Hasco Europe
Main contractor Farrans Construction (shell and core), Overbury (fit-out)



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Buildings University

23

the disparate pieces of the campus, centred on a glass-roofed 'learning commons' under the quad. But following protests at the proposed replacement of some historic buildings on the Strand, the project was dropped. At the same time, King's agreed a lease on Aldwych Quarter, the grand arc of 1920s buildings across the Strand, shifting its centre of gravity northward.

So when the practice was asked to look again at the Quad Building there was less scope for radical surgery.

IN NUMBERS
3,280m²
gross internal floor area
£28.1m
construction cost
including external deck
£5,325/m²
construction cost
including external deck
23
months on site

Below The helical stair is lit from above by the oculus.

Bottom right The 'learning commons' in the Quad Building is lit by borrowed daylight and a stretch ceiling system.

Instead, the brief was to work within the disused, semi-derelict structure to make a departmental base where students could move freely between flexible teaching rooms and workshops, and which could be easily adapted to other uses in the future.

It also included a much-needed facelift for the courtyard itself, a dreary expanse of black asphalt. With the clay hollowpot deck unable to bear much weight, however, and a need to maintain level access with the Strand, the architect had to settle for a layer of resin-bonded gravel. 'We struggled with that,' says practice partner Ian McKnight. 'It's the last material most architects would choose for a landscape between two listed buildings.'

To add some distinction the surface is inlaid with a grid of metal strips, whose proportions echo the facade of the King's Building. Its off-centre layout hints at the axis of a symmetrical courtyard originally intended by Chambers, who planned another wing on the site of Smirke's building. The reference might be lost on the average passer-by, but the effect is well judged: sufficiently odd to have presence, but not enough to unsettle the wider composition. And the gravel, in two well-chosen shades of beige, harmonises with the surrounding facades, giving a new coherence to the whole ensemble.

As this surface is the most prominent 'elevation' of the Quad Building, Hall McKnight was keen to give some expression to what lies beneath. A circular concrete bench sitting in the



middle of the court turns out to be the top of an oculus over a new staircase. A double helix inscribed around the base is a nice touch: it was here that Rosalind Franklin captured the first images of DNA molecules. Similar structures cap four lightwells behind the stone balustrades of the King's Building.

These modest protrusions give a rough sense of an efficient plan that has replaced a warren of cellular rooms and lightless corridors: on each floor there are two big teaching spaces with adjacent workshops in new structurally independent buildings set within the former lightwells, and some circulation space in the middle. 'The concept is simple,' says McKnight. 'Complexity came from the interactions between the different levels and the neighbouring buildings, and with the layers of history'.

The way in is via the main entrance to the King's Building, and downstairs to its basement. Previously, the route then led on to low doors at either end of a long corridor, but Hall McKnight spotted the potential for a more impressive – and conveniently central – threshold in a dusty archive below the entrance hall. It doubles as an informal study area open to all students. Brick vaults have been limewashed, stiffened with steel lintels and panelled at low level with crisply detailed timber and sage-green fabric to conceal services. With Jean Prouvé-designed wall lights and vaguely mid-century furniture, it's elegant but comfortable.

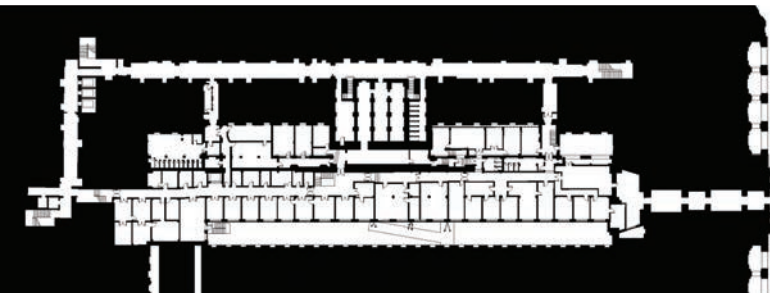
New openings in the 1m-thick walls lead to the Quad Building, and another small 'learning commons' – this time with a woodblock floor and an implied frame of chunky oak columns and beams, like a building within a building. Students might make a connection with the sumptuous Gilbert Scott-designed chapel on the upper floors of the King's Building. 'It is a bit of a conceit,' says McKnight, 'but in the various spaces shared with the whole university we wanted to make something of its time, with a level of detail and texture that relates to architecture made in a different age.'

With no external walls, daylight is

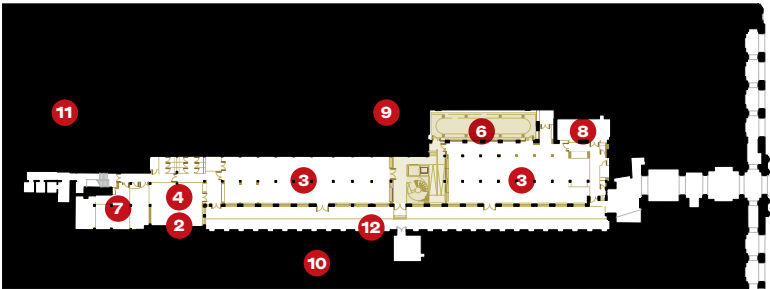
- 1 Maker space
- 2 Teaching and learning space
- 3 Learning commons
- 4 Research
- 5 Stair/lift
- 6 Project space
- 7 Fabrication lab
- 8 Plant room
- 9 King's Building
- 10 Somerset House East Wing
- 11 Strand Building
- 12 Lightwell

0 10m

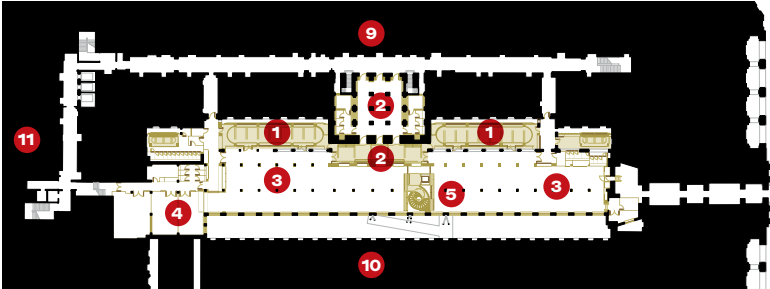
Existing basement



Second basement



First basement



Below From one teaching space a layered view takes in newly open brick arches, maker spaces beyond and the base of the King's building.



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borrowed from an adjacent teaching space, through windows set into a partition that encases existing columns and incorporates storage and display shelves for students’ work. Its evident thickness is of a piece with the weighty construction of the King’s Building.

There’s another echo of Georgian in the grandeur of a helical concrete stair set in an oak-lined hall below the oculus. It has a beautifully plastic quality, but the choice of material also reflects the practical challenges of construction. The only access was via the narrow passage to the embankment, and concrete could be pumped from outside.

The stair descends to the lower basement, where switchback ramps deal neatly with level changes across the site. It forms part of a route through the Quad Building accessible to all students – a lingering vestige of Hall McKnight’s original scheme – so views into the open-plan 120-seat labs on either side give the engineering department a visible presence in the campus.

These are more utilitarian, with a monochrome palette of pale grey resin floors and white-painted columns with a bump-resistant skirting of black MDF. Ceilings are laden with foil-wrapped ductwork – which caused some headaches in the design process, says Hall McKnight associate Emma Smart, as the building had to be insulated internally,



Above Toilets in lightwells in front of the King’s Building are shared with the wider university.

Below left Long views from teaching spaces through the stair hall help to mitigate any sense of claustrophobia.

Below right Informal study space in the former archive below the King’s Building.

An efficient plan has replaced a warren of cellular rooms and lightless corridors

and the roof is too fragile to take fixings.

Rows of custom-made light fittings spanning the width of the room were a significant but worthwhile expense. Their large surface area allows light intensity to be kept low. With adjustments throughout the day, that creates a convincing – if false – sense of abundant daylight.

The elegant simplicity of new fixtures and finishes is counterpointed by a string of brick arches that stand between the labs from the workshops – the last surviving piece of an 19th century structure that once stood on the site of the Quad Building, which supports the balustrade of the King’s Building above. The glass walls of the compact ‘maker spaces’ are set slightly back from this charismatic relic, enhancing the impression of depth and volume in a confined space, like theatrical flats.

It’s those subtle but significant details that define Hall McKnight’s approach here. Present throughout, they reflect an ambition to enhance the campus in a way that goes far beyond what was necessary simply to equip the Quad Building for use, improve energy performance or get listed building consent. Despite few opportunities for bold statements, this diligent, sensitive renovation has made a building that lives up to its extraordinary setting. ●



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What is embodied carbon in the built world, and how can it be reduced?

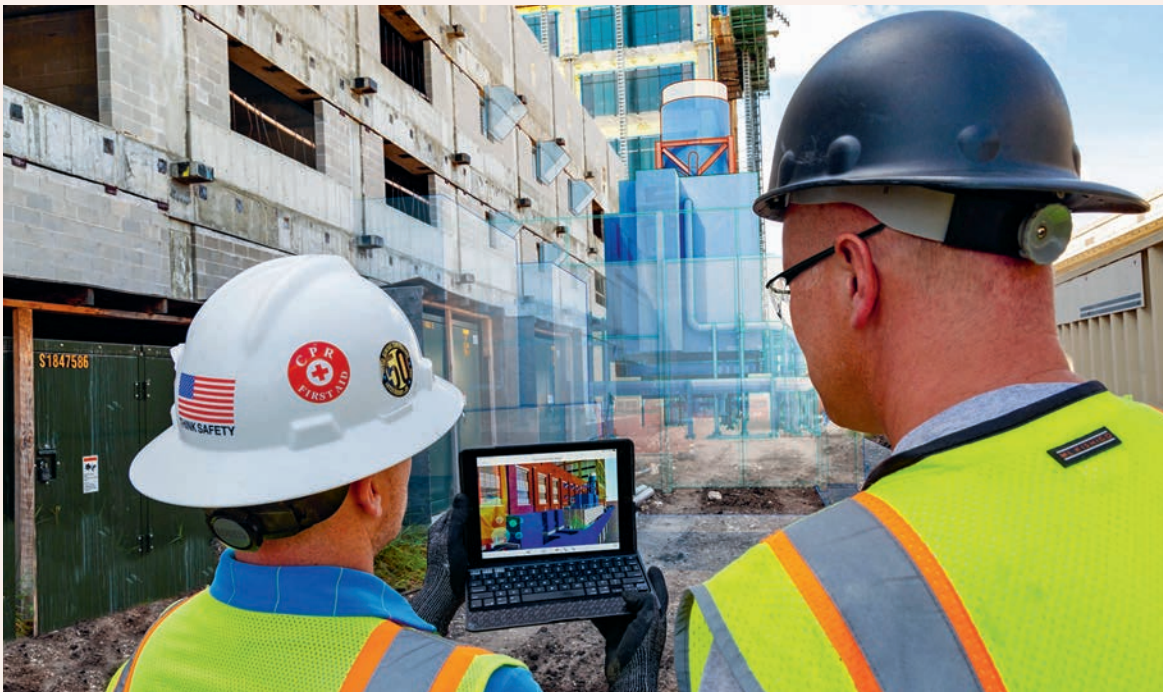
As regulation and technical advances cut operational carbon, the construction industry must look at how it can reduce embodied carbon too. Marta Bouchard, AEC sustainability lead at Autodesk, explains

More than 70 countries and 1,200 companies have committed to achieving net-zero emissions by 2050, according to the United Nations. The goal of net zero is to cut carbon emissions to curb climate change to protect the planet and future generations. Human-caused emissions of carbon dioxide and other greenhouse gases are a primary driver of climate change – which, if humanity wants to mitigate climate warming on the ecosystem, must be addressed from all perspectives, across all industries.

What is embodied carbon?
Embodied carbon in the context of the architecture, engineering and construction (AEC) industry refers to the greenhouse gas (GHG) emissions released into the atmosphere during the upfront activities necessary to construct or renovate buildings and infrastructure. Reported as carbon-equivalent emissions (CO₂e), the total accounting of GHGs emitted during the build phase is called embodied carbon because the environmental impacts associated with building activities are locked in place before building operation.
Embodied carbon includes all the upfront activities that are part of



Above and opposite During each phase of the building process – from planning and designing to constructing and operating – there are many ways in which the architecture, engineering and construction (AEC) industry can help reduce its embodied carbon to become more sustainable.



construction, as well as any kind of renovation – replacing a roof, fitting-out a tenant space or simply replacing carpet or repainting – activities that also generate GHG emissions. Before the building systems are operating, a carbon footprint has been formed.

Operational carbon
Energy from fuel-burning activities during building operations can be converted to the metric of operational carbon. Operational carbon, therefore, is the amount of GHG emissions released during the operational, or in-use, phase of a building; for example, it can be calculated from energy bills and reported annually. Operational carbon is the carbon-equivalent emissions associated with the operation phase of the building, including heating, cooling, lighting and power.

Embodied carbon vs operational carbon
Many AEC professionals – everyone from designers and contractors to operators and owners – understand and focus on reducing operational energy costs due to fuel consumption such as oil, natural gas, or electricity. CO₂e generated by the use, management, and maintenance of annual building

operations currently account for about 28% of annual global GHG emissions. Relative to operations, CO₂e generated by construction activities are accumulated and considered ‘locked-in’ as embodied carbon before the operational phase. Annually, embodied carbon accounts for close to 11% of global GHG emissions, attributed to the ongoing building activity and construction around the globe. Year on year, this is a significant carbon footprint and a big opportunity for the AEC industry to address associated GHGs beyond operational energy. Stricter building codes, more energy-efficiency equipment and lighting, and more renewable-energy sources will help reduce the operational carbon of buildings. As buildings become more energy efficient, a larger relative percentage of a building’s total CO₂e impact will be the upfront embodied carbon. As part of the design and renovate process, AEC professionals can influence and reduce carbon impacts in the built environment. Recognising the role that embodied carbon plays relative to the total CO₂e is key to identifying how the AEC industry can help mitigate the climate crisis by reducing its carbon footprint.

How the AEC industry contributes to GHG emissions
The built world includes living, working and recreational spaces made up of buildings, roads, bridges and transportation and distribution systems (for example, utilities). Everyday operations of these human-made systems affect the world’s ecosystem and contribute to climate change. The AEC industry yields significant influence over the planning, design, construction, and operations of the built environment. Notably, the building sector is one of the biggest contributors to GHG emissions, which cause global warming. Given this influence, the AEC industry is poised to adopt more sustainable practices and lead cross-industry decarbonisation efforts to reduce its impact on climate change. ●

This is an excerpt from an article that originally appeared on Autodesk’s Redshift, a site dedicated to inspiring construction, manufacturing, engineering and design leaders. Read the full article to learn more about how the AEC industry contributes to GHG emissions and what it can do to help reduce embodied carbon

Mindful lines

Geometric gymnastics and spiritual references create a sense of wonder and calm in James Gorst Architects' spiritual temple set amongst magnificent planting and views

Words: Eleanor Young Photographs: Rory Gardiner



White Eagle Lodge temple at New Lands in the South Downs.



To understand White Eagle Lodge's new temple near Liss in Hampshire, you should know that James Gorst Architects based the 1.1m structural grid on chakra lines identified by dowsing across the site. This is a project rich in references to the spiritual beliefs of the White Eagle Lodge.

To understand the multi-faith Lodge itself, you have to go back to 1936 when the medium Grace Cooke started channelling the spirit of White Eagle, who became her spirit guide. The teachings were shared and draw together Buddhism with its meditation practices, Christianity and astrology – or more specifically esoteric astrology. The current estate, New Lands, has been owned by the Lodge since 1945 and the latest temple builds on a 1970s one, on exactly the same sacred spot. The £5 million contract for the newbuild quoted in the local press is

part-funded by the sale of a lodge in Kensington.

Walking up through the meadows of the 11.5ha estate the new temple crests the ridge. The base is a low box, a lantern of tall clerestory windows rising from it, topped with a dome. It is bright white against the greens of the grass and trees. The courtyard behind, edged by library, prayer rooms, a meeting room, kitchen and foyer, is still invisible. It gradually unfolds through rich naturalistic planting as architect Steve Wilkinson and I approach.

I am unnerved by the idea of a spiritual group but reassured by the greeting of an elderly volunteer, perched at a foyer table with her Tupperware lunch. Nipping through a side door to the loo I am knocked out by the long view past a tree to the woods of the South Downs. The space slips from the mundane to sublime. Architectural

North south section

- 1 Lecture/communal space
- 2 Cloister
- 3 Temple

0 5m



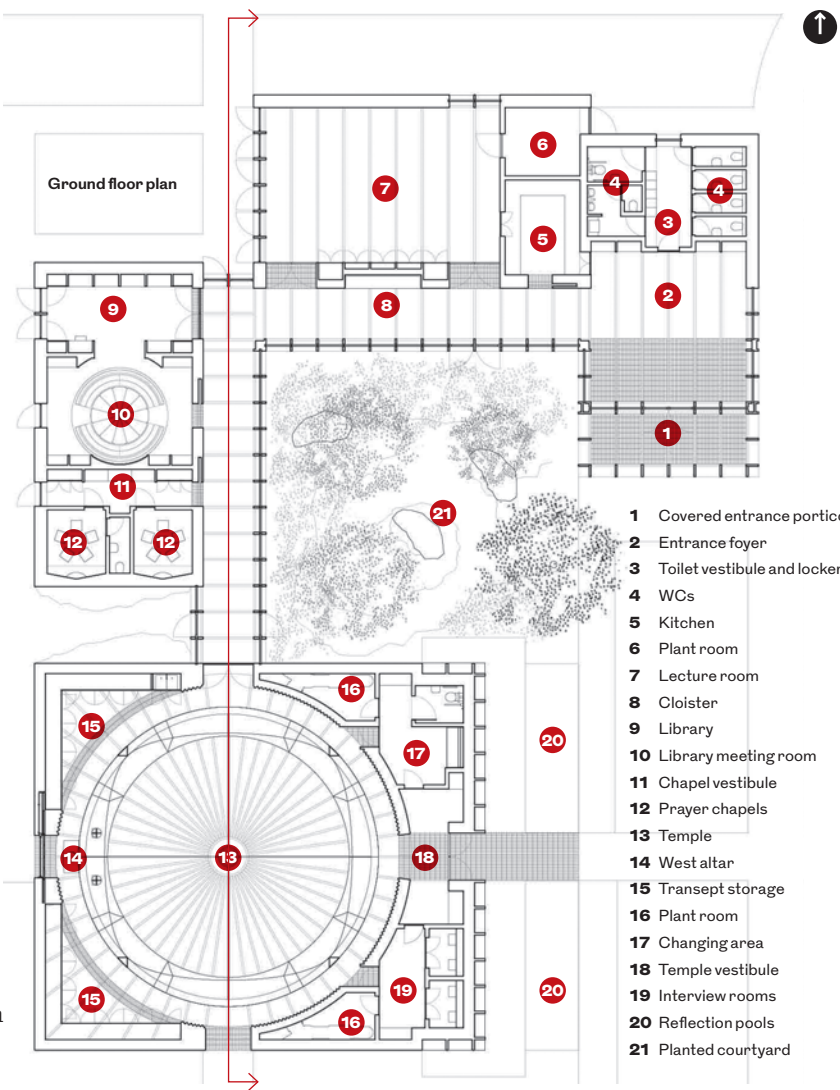
strategies ensure it is on the right side of sublime. ‘You should never enter a door to a blank wall,’ explains Wilkinson, ‘there are views through to wild flowers, to earth energies’. He uses the language of the Lodge, a place that advertises retreats exploring angelic healing, earth healing and astrology as well as special seasonal services.

Churches, temples and mosques have a long history of buildings with orientation, processional routes and conventions for prayer and worship. The team here visited Níall McLaughlin’s Bishop Edward King Chapel, Cambridge Central Mosque by Marks Barfield, Waugh Thistleton’s Bushey Cemetery, and Vajrasana Buddhist Retreat by Walters and Cohen. More explicitly, the temple here borrows from the 16th century Sikh Golden Temple in Amritsar in doors at each cardinal point, each of the four are double doors and together they strengthen the perception of an axis through the centre of the temple, which is on a ley line – an ancient route with a certain power and sacredness. At ground level an onyx altar marks the centre point. Above, the whole geometry of the roof and 48 timber beams visibly radiate from it, the oculus allowing the sky above to change the temple light as clouds scud past.

The remarkable drama of the temple comes from the sheer sculptural body of concrete supporting the 10m-high dome. Four pendentive arches create an inner circle of a smooth precast that speaks to the pale sheen of the ash joinery and furniture. The best moment is coming in from the changing and initiate-interview rooms through the east door, with shadows intensifying the light playing on the curving planes of offset projecting bricks, creating an ambulatory in tandem with the concrete arch.

Back to the mundane with an acoustic and structural rationalisation of this sublime space: the bricks are laid out to break up the sound waves and

Cutaway model showing east wall, temple and labyrinth under the temple.



The brick piers of the east wall of the temple echo the timber structure of the rest of the building, while alcoves house vents and create spaces for sitting in contemplation alongside the long pool.



The structure, the lights and even the movement joints in the polished concrete emphasise the geometry

all emphasise this geometry. Ordinary things are put aside, you barely see the organ, in a corner half hidden by an arch, while chairs and sinks for flower arranging are hidden behind panelling.

The rest of the complex has more recognisable forms. There is a brick-floored library, slightly compromised by the scale of the circular 12-leaved table from the previous temple and its bench seats. In here the walls are lined with specialist books from Chinese Zodiac Signs to Planets in Aspect, Clairvoyant Reality and The Unwilling Martyrs. Deep rooflights with an invisible gold wall wash two small prayer rooms in a Soanian light. A communal teaching or lecture hall neatly shares a kitchen with the foyer where visitors – this building is open to the public – can make their own drinks. These spaces are linked by a glazed cloister around a delicately planted courtyard.

The first temple on this site was white and for White Eagle Lodge – which takes care to spell out



offset the reflective arches – originally modelled in stone with the Stonemasonry Company, before the decision to move to precast for cost reasons. Acoustic treatment is also added through the ash veneer panelling which has tiny, almost invisible holes so the sound can be swallowed up in the bigger holes of the MDF behind. And then the structure. The arches support 48 timber columns, each taking the load down to just a 300mm triangle (though they do connect back with radial beams to the lightweight square box around them).

As one’s eye leaves the arches and oculus it rests on the doors; that to the south, divided as a stable door, opens to sky as the view drops away. The west looks through planes of glass to a sculpture in the meadows, and the north to the cloister and the rest of the temple complex. When they are closed, and the angle is just right, the handles throw a cross of light onto the floor – made as they are with four quarters of a circle of metal inset into the ash, and the tiny gap of a cross between them, representing the symbol of White Eagle Lodge.

Looking up you see the carved entablature of the 12 signs of the zodiac and it becomes clear that the structure, the lights and even the movement joints in the ground and polished concrete floor,

Left From the oculus at the top of the dome 48 beams span out to support it. The fixings are hidden.

Below The south door opens out from the projecting brickwork.

- Credits
- Architect** James Gorst Architects
 - Contractor** Beard Construction
 - Timber frame** Pacegrade
 - Structural engineer** Eckersley O’Callaghan
 - Landscape architect** McWilliam Studio
 - Service engineer** Skelly & Couch
 - Project manager / QS** Jackson Coles
 - Acoustic consultant** Theatre Projects
 - Planning consultant** Dowsett Mayhew
 - Furniture** Bench Studio
 - Joinery** Kingsdown



that white means light-filled, rather than related to skin colour – white has a strong symbolism. For James Gorst Architects the chalk downlands, and the white Janinhoff waterstruck brick that domes from them, was a starting point – chosen for dimensions that work with the 1.1m grid. The practice has used it smooth at low levels and rough above the 2.2m datum – here with a wash to knock back the creamier colour brought out by the texture. Deep glulam columns of Siberian larch around the cloister have been digitally sorted to remove larger knots for a simpler look, and brought together with European spruce (used inside) with a layer of white Danish oil. The colour is intensified by the approach through the circular chakra gardens, each planted with their own colours and representing different spiritual centres of the body.

The generous, though targeted, use of precast concrete perhaps would raise alarm bells with some about the embodied carbon of this project. There is also a good environmental story here in the way that the foundations and condemned concrete of the old temple was reused in the foundation and paths. An early analysis of the embodied carbon pushed the project towards a timber structure, including on the lantern under the dome. Another strong reason to create a highly insulated and airtight building was

IN NUMBERS

585m²
gia

25.9
annual kgCO₂/m²
emissions

300kg
CO₂eq/m² embodied/
whole-life carbon
(structure only)

that there was no gas on the site and only single phase electricity, so the ground around the building has been co-opted for ground source heat pumps and photovoltaics. Foul waste is dealt with on site, using micro-organisms in a Klartgaster before being fed into a drainage field. Cooling as needed comes via a shallow labyrinth below the building. The only place you might notice this is in the alcoves on the eastern outside wall of the temple where vents are disguised by benches.

Wilkinson obviously loves the site, and the close working with a wonderful small group of clients who took time to consider and reflect on decisions. Perhaps he would like some of the technical elements, the downpipes on the clerestory for example, to be more readable, but it seems right that the extreme geometric gymnastics and clever architectural moves are subsumed by the beauty of a building that repays the close attention of both architect and client. ●

Above The planted gravel courtyard gives a focus to the cloister while larger spaces face out towards the wider landscape.

Left One of the two library rooms with the inherited meeting table.

Right Set in the South Downs Dark Sky Reserve, an essential part of the design was controlling light spillage at night.



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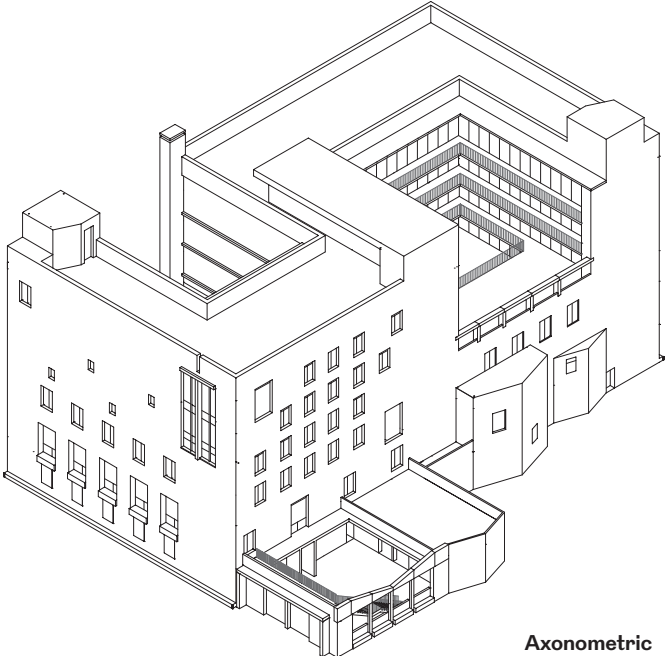
WE KNOW WHAT'S AT STAKE.

Pride of place

Henley Halebrown imposes civic presence with its Thames Christian School and Battersea Chapel despite a constrained south London site

Words: Richard Gatti

Below East- and west-facing courtyards are overlooked by access galleries that shade classrooms.



Axonometric



DAVID GRANDORGE (2)

While schools in European cities tend to be part of city blocks, in the UK they are often defensive spaces, set back from the street and protected by layers of chain-link fences or railings. A constrained site next to London's Clapham Junction station, and the obligation to colocate a 430-place independent secondary school with a Baptist church, have given Henley Halebrown the opportunity to do something different. Its Thames Christian School and Battersea Chapel is a building that gives civic presence to both institutions, while deftly managing requirements for privacy and security.

At first glance the six-storey building is a simple, almost cubic extrusion, but it rewards closer examination. What appears as a ground floor and piano nobile is in fact a set of double-height spaces for both the church and school, with large clerestories providing ample daylight. Above this sits most of the school, wrapped around two elevated courtyards facing roughly east and west, so that the accommodation plan is the shape of the number '5' of digital alarm clocks.

This enables the school to be inward-looking, as well as providing important acoustic benefits, reducing noise from the station across the road and protecting the rest of the surrounding Winstanley Estate from the sound of boisterous teenagers.

Sheer walls meet the site boundary on three sides, while the fourth elevation is moderated to account for an existing garden and strand of mature trees. Project partner Simon Henley describes two protrusions from the main facade that provide the edges of a sheltered, south-facing courtyard as being like a chest of drawers. The effect is both to supply a pleasant antechamber for the school itself, and to discreetly add an extra layer of security.

The school's main reception sits in the deeper of these 'drawers', and as you enter, your eye is drawn to the trees beyond. On such a small site in a dense urban area, it's refreshing to see that every opportunity has been taken to celebrate existing greenery.

The composition has a settled



NICK KANE

The impression is of something woven or hewn from a block of textured stone

Above Sheltered terraces protect against noise from adjacent rail lines.

Below Two double-height ground-floor spaces for the church and school form a 'civic plinth'.

quality, such that you don't realise that the road to the east has been relocated to frame views of the estate, nor that the plaza to the north is an entirely new creation – a civic gesture at the entrance to the Baptist church. Outside, a free-standing cross was salvaged from its former building. Like the school, the church has relocated from further north in the estate as part of a wider masterplan by HTA – with input from Henley Halebrown – that both provides additional housing and reorganises the green spaces into something more legible and enjoyable.

Like many of Henley Halebrown's buildings, the colour palette is restrained. Shades of creamy grey match both a new residential tower by HTA and the retained point blocks of the estate. The mortar is fairly closely matched to the brickwork, and complemented by precast concrete elements in a slightly darker tone. The impression is not of an assemblage of individual components, but rather of something woven or perhaps hewn from some great block of textured stone.



Cast study models highlight the towers that announce the school to the south and the church to the north

STÅLE ERIKSEN

Windows are deep set, with the piano nobile announced by larger, rigorously spaced openings underscored by thick precast sills. At higher level the windows are more playfully arranged, in part to meet the needs of individual rooms, and in part in response to planners' fear of blank facades. A set of rather beautiful cast study models illustrates the order and complexity of these facades, and highlights the little towers that announce the school to the south and the church to the north.

Anti-graffiti paint coats the ground floor with a strange, waxy texture. It is sometimes invisible, but from some angles or at certain times of day it gives a subtly darker shade to the brickwork, further grounding the building. This is a lovely detail, added after the planning

Above Models were used to compose 'unfamiliar' facades that distinguish a civic building in a residential area.

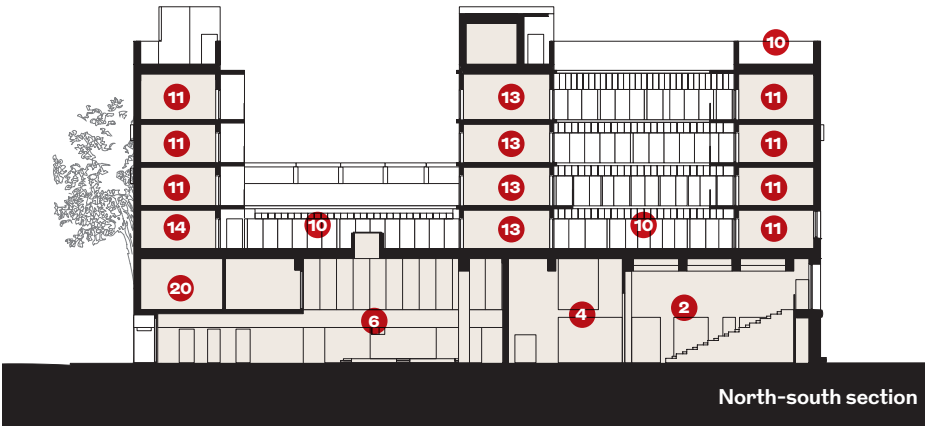
Below The school entrance and the chapel's baptistry protrude from the east elevation.

stages – and therefore after Henley Halebrown's involvement, as the practice was not novated – perhaps proving that Design & Build can have benefits after all.

From the entrance, the school is served by an open concrete stair that rises through the east end of the central bar of the '5'. This block is fully glazed, giving views onto the courtyards on either side and access to an external deck that leads to the classrooms. This is a recurring feature in educational buildings by Henley Halebrown, such as the Stirling Prize-shortlisted Hackney New School. Daylit and naturally ventilated routes to the classrooms make a stark contrast to the stagnant, echoing, strip-lit corridors of my own school memories.

The upper floors are typically one classroom deep – with some variation in rooms for music and one-to-one teaching – which means that almost every space can be dual aspect. Deck-facing walls are mainly glazed, and therefore have a very different character to the more monolithic external walls. On my tour, the head teacher explained that this degree of transparency is much appreciated, allowing not only for passive surveillance of the students in the 'corridors' but also providing important safeguarding benefits for teachers.

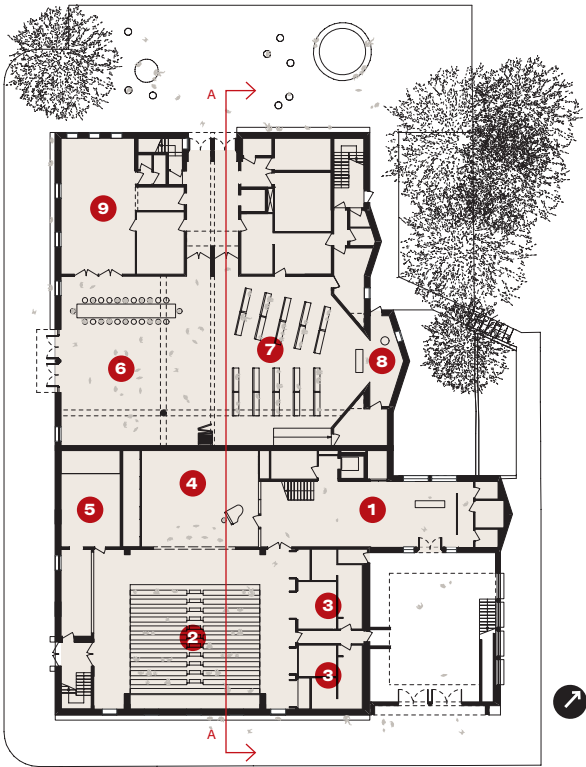
The decks also act as a brise-soleil to prevent overheating, which is just one example of the considered but unusual environmental thinking found throughout. This isn't a building covered in green roofs, solar panels or air-source heat pumps, and it has a fairly conventional concrete-framed structure,



- 1 School entrance
- 2 School hall
- 3 Changing
- 4 Drama studio
- 5 Kitchen
- 6 Church hall
- 7 Worship space
- 8 Baptistry
- 9 Nursery
- 10 Terrace
- 11 Classroom
- 12 Staff
- 13 Foyer
- 14 Science classroom
- 15 Sixth form social
- 16 Seminar room
- 17 SEN
- 18 Sixth-form study
- 19 Library
- 20 Pastor's office

Right The double-height worship space and adjoining church hall can be combined for big events.

Ground floor plan



First floor plan



Third floor plan



IN NUMBERS

£25m

total contract cost

5,175m²

gross internal floor area

£4,831

cost per m²



NICK KANE

Adaptable space has the potential to greatly expand the lifetime of the building

DAVID GRANDORGE (2)



with most of the support coming from the external facade and a small number of columns to the courtyard elevations. Concrete is largely left exposed so it acts as a thermal damper, mitigating extremes of temperature. In turn, this means that rooms can be serviced with a ceiling-mounted MVHR with a heating/cooling coil, simplifying the overall servicing strategy and reducing ductwork and plant room size.

It's a structure that enables a great deal of future flexibility; indeed even with the school roll filled to only half its capacity, there are already plans to enlarge the library. This pursuit of adaptable space rather than fixed rooms for specific purposes has the potential to greatly expand the lifetime of the

Above The school hall opens onto a drama studio that acts as a proscenium stage for performances.

- Credits
Client Winstanley & York Road LLP
Architect Henley Halebrown
Executive architect HLM
Structural engineer Pell Frischmann
Services engineer Desco
Quantity surveyor Martin Arnold
Landscape architect Farrer Huxley
Main contractor Midguard

Below Dual-aspect art studios on the fourth floor also benefit from top light.



building, making the initial investment – in both carbon and cash terms – more sustainable.

With no outside space at ground level, literally every roof space has been pressed into service for play and recreation; six areas with varied characters serve different age groups. These range in scale, sense of enclosure and aspect, as well as in their degree of surveillance, from closely-watched play spaces for the younger pupils to more independent spaces for sixth-formers.

Though compact and constrained, this is a school that works hard for staff and pupils alike. All the teachers I met were extremely proud of their new building, with one suggesting that they were the finest facilities he'd used in his 40 years on the job – 'saving the best till last,' as he put it. It is also a building that works hard in its context – deftly managing the fine line between being an integral part of the estate, and being a noteworthy civic presence in its own right. ●

Richard Gatti is a co-founder of Gatti Routh Rhodes, whose projects include the Bethnal Green Mission Church



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How to maintain safety and quality using cavity trays

Safety sits at the top of the specifier’s agenda, but how do you keep informed, maintain trust and juggle other pressures such as cost? A roundtable came up with some ideas



Below, left to right Fionnuala Murray, brand executive, Keystone Group; Nia Rodgers, senior architect, tp bennett; John Duffin, managing director, Keyfix; Alex Spinks, head of technical management, Fairview New Homes; Martyna Kielbasa, senior design & technical manager, L&Q Group; Simone de Gale, chair; Bernadette Barker, RIBA expert, Barker Consultants; and Craig Renton, architect and consultant.

At a time of increased scrutiny of fire safety, what is the best practice for architects when specifying non-combustible cavity tray systems? That was the subject of a RIBA/Keyfix roundtable discussion that sought to identify the difficulties and find a better way forward for manufacturers, specifiers, clients and occupants alike.

Designed to collect water that has penetrated the external skin of a cavity wall, cavity tray systems are one of the few products that pass through vertical fire barriers around the whole building. If specified and installed wrongly, these can compromise build quality and safety, increase insurance costs and

compromise homeowners’ warranties.

There was general agreement that problems arose from the use of ‘equal or approved’ in the building specification, which can lead to minimum selection standards when an A1-rated product may have been the original choice. This introduces more potential for things to go wrong, such as incompatibility with other specified materials, unless the substitutions have sufficient scrutiny.

Participants were not necessarily in favour of the removal of ‘equal or approved’ given the need for flexibility when there are supply chain issues. But they agreed there was a needed for greater awareness of the implications of substitutions, and crucially who was taking responsibility for the approval of these. Too often this is left to the site team or a subcontractor. Time also needs to be allowed in an architect’s contract for them to carry out their due diligence and replicate their research when a product is substituted. Perhaps architects have to learn to allow for this in their fee, suggested one participant.

Is there a way of better encapsulating what the architect required in the equal

or approved specification, perhaps with some form of checklist to prove that a substitution is equal?

‘You have to define what you’re asking for equivalence on,’ said one. Why not, asked another, require guidance to be ‘equal and approved’ instead? Getting building control involved from the earliest stage could also help with compliance and embed the product you want in the spec. One housebuilder had avoided the use of ‘equal or approved’ substitutions by standardising its own detailing and issuing them in instructions to architects as guidance. This had, they said, improved the quality of build.

Architects wanted to be confident that they were specifying a totally tested, robust, warranted system with reasonable conditions for that warranty.

It was clear that a greater flow and use of information in all directions would help architects understand the nitty-gritty of the products they are specifying and how they are used. All systems on the market achieve minimum standards and have differing approvals, but how can a product that

is cut, shaped and bonded together with tapes or mastics be considered equivalent to a fully designed, itemised, detailed and supplied system.

Knowledge of the benefits of cavity tray systems and where to use them is particularly important, said one architect, when they can be under pressure not to use them.

‘Let’s have all the knowledge we can. Let’s understand the product you are choosing,’ said one architect – and let’s ensure those proposing a specification change have the same understanding, which is quality- rather than price-led.

So what do architects want from cavity tray manufacturers to help with their specification? Early engagement with manufacturers, before order

stage, would enable architects to be better informed when writing their technical specification. This should include the full technical design specification and schedule, including fixings and corner and reveal details, and BIM information and drawings rather than rolls or lengths of product to be formed on site sometimes in less than desirable conditions. They want to know how it is assembled and disassembled, as well as details of the system’s embodied carbon, toxicity and renewable content. And they need to know the product’s durability and lifespan – it has to be compatible with the lifetime of the building. Brick facades should last hundreds of years so the non-maintainable components in them should too. And they want the manufacturer to be willing to develop the product and work with the architects ‘on the hoof’ if required.

As well as knowing what the product can do, architects at the roundtable want to know what would happen if anything did go wrong after the end of its, or its components’, shelf life. Long term access to information on the system specified

and its warranties was also identified as important.

And what do manufacturers want from architects? For Keyfix, it is important that architects have taken the time and made the effort to understand the issues in cavity tray specification, and ‘back us up’ by acting as ambassadors when a substitution is proposed to a less high performing product, rather than ‘going straight to the bottom’. Feedback from specifiers was also invaluable to help them improve product performance.

As one participant said, it’s about ‘opening up the discourse for learning’ in both directions.

This will ensure that lessons learnt and technical considerations are shared to help move forward together and ensure that all systems are compatible and complementary with an ultimate aim of achieving best practice and building integrity. ●



CHAIR:
Simone de Gale, RIBA national council member, honorary treasurer and board trustee, and chief executive and chartered architect of Simone de Gale Architects

PANELLISTS:

- Bernadette Barker, RIBA expert, Barker Consultants
- John Duffin, managing director, Keyfix
- Martyna Kielbasa, senior design and technical manager, L&Q Group
- John Moore, technical director, Karakusevic Carson
- Craig Renton, architect and consultant
- Nia Rodgers, senior architect, tp bennett
- Alex Spinks, head of technical management, Fairview New Homes



This RIBA event was produced in association with Keyfix. www.keyfix.com

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45

2: Intelligence

OBSTACLES THAT LED
TO ESTABLISHING DAF
CHRISTOPHER LAING
FOUNDER, DEAF
ARCHITECTURE FRONT

'Deaf Architecture Front aims to support deaf people who want to work in architecture. Personally, I want the right to do my Part 3 exam in BSL'

I've wanted to be an architect since I was eight, but there have been countless obstacles along the way. First, I couldn't see any black deaf architects – there were no visible role models to convince me it was even possible for someone like me to get into the industry. Then there's the language barrier – my first language is British Sign Language (BSL), and the level of written English necessary to get onto an architecture course seemed almost unachievable to me.

I did, eventually, get to architecture school, onto an MA and into a firm, but my experience was heavily affected by the additional burdens of having to find and manage interpreters, secure disability funding, advocate for myself, and do it all with no-one I could communicate with about my experiences.

These experiences led me to develop SignStrokes – a BSL lexicon of architectural terms – with architect Adolfs Kristapsons, and then to establish the Deaf Architecture Front (DAF), which launched in June.

DAF aims to support deaf people who want to work in architecture. It will provide advice, help secure funding for interpreters so students can do work experience, and encourage the production of information in BSL. Personally, I want the right to do my Part 3 exam in BSL.

DAF will give visibility to deaf architects, and create a network that shares tips and experiences. It will help the deaf community to participate in events – from building tours to public consultations – and campaign to improve guidance on deaf-accessible spaces, from lines of sight to light levels required for BSL. Eventually we will see DAF consultants who can advise on schemes, and ensure deaf perspectives are considered in the architecture of the future. ●

deafarchitecturefront.com



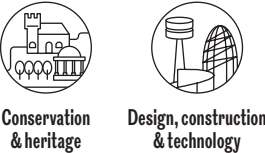
Intelligence is officially approved RIBA CPD. Look out for icons throughout the section indicating core curriculum areas.



Above Christopher Laing is the founder of DAF, a platform for activism, consulting and research

Asian fusion

Purcell had its work cut out at Manchester Museum, creating new exhibition halls in a Edwardian courtyard and a new entrance in a listed facade – all of it reversible. Tom Brigden tells how the firm worked with planning and site constraints on its £12 million South Asian Galleries



Left The new entrance for museum in the Haworth Building replaces the old entrance in the annexe (right) and the former one via the arch (left).

Below The new extension, in faience tiles, looking to the back of the museum's Haworth building.



Give us an idea of the context

Manchester Museum occupies a series of linked buildings on Oxford Road, most notably the grade II* listed 1888 one by Alfred Waterhouse. It was a family affair. Son Paul did the adjacent Haworth building in 1912 and annexe a year later – both grade II. Grandson Michael built onto this in 1927, linking it to the 1908 dental school. There were ad hoc additions over time as routes in and through the museum were always problematic. In 2003 an Ian Simpson Associates extension created an accessible entrance in the courtyard between it and Manchester University's 1901 grade II Rutherford Building but this was difficult to find as it was only reached via an arch on Oxford Rd. As the museum's remit was to use the chance of expansion to grow and diversify its audience, we had to address this – not least because our new South Asian Gallery needed to go into that courtyard space.

How did you deal with the new entrance?

There had been a lovely arched entrance in the annexe building in the past but re-using it was ruled out as it was accessed up stone steps and far too narrow for emergency egress. The client wanted an Oxford Rd entrance, but as it's listed, we had to consult Manchester city planners' conservation team, Historic England and the Victorian Society. It meant breaking the Haworth elevation by removing a stone window sill and transom. There was a lightwell in front with iron railings, which had to be filled in and railings (and basement lights) reconfigured, and highway stopping-up was needed to allow for the ramp access. Stopping up involved months of negotiations with the city highways department and could only start once we had planning and listed building consent. Building it required the road to be dug up – with university data and electric cables running through it – a co-ordination nightmare. The curious layout of the ramp's stone paving intimates the line of the former lightwell.

The new entrance is quite understated

We wanted to keep it really simple, but it's also informed by Part B regulations for escape. We couldn't have doors opening onto the 'highway' section of the ramp so inner bi-parting doors open outwards and the full height oak outer oak-board doors rebate into the oak side walls to allow clear escape widths. This gives the impression of a 'doorless' entrance, which we all liked. An architrave on the inner doors lines up with where the stone transom was – a historical reference to it.

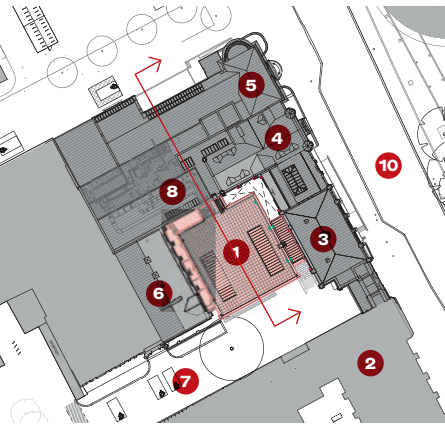
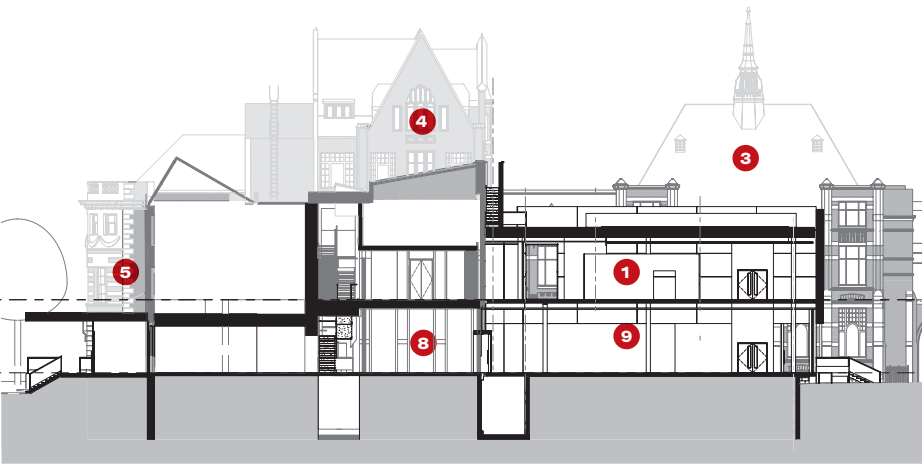
What about the new courtyard insertion to the rear?

As it's set off a small lane to the university campus with limited access and grade II-listed buildings all around it, it was a challenge to build – luckily we were able to plug into the 2003 Ian Simpson entrance extension without further disturbing any of them. The extension was conceived as a 'jewel box,' a total of 750m² of lower-level gallery space with the new dedicated South Asian Gallery above. The massing was again dictated by city conservation and Historic England concerns – which was mainly about the roofline and how it connected to the buildings around.

To gain consent we did context studies to prove our proposal did not obscure existing elevations – which meant creating a narrow lightwell around the new building and linking it back with recessed glazed connections to maintain the legibility of the listed elevations. Then there were roofscape concerns. Views of the Haworth's 'Hotel de Ville'-style roof were sacrosanct to Historic England and our building line was set to the upper string course line of that building so we did not impinge on it.

And your formal approach?

Being a high-grade museum space, it's conceived essentially as a highly secure decorated box. The upper level is expressed in 3D, formed, green faience tiles from Darwen terracotta in Blackburn, influenced by Manchester's 19th century terracotta tile traditions. We imagined the lower-level wall as mortar-bedded stone ashlar. But this



Top right Section through existing and new gallery spaces.

Above The new gallery is a courtyard insertion surrounded by grade II* and grade II-listed facades.

Below View of the hybrid steel and CLT structure of the South Asian Galleries. The ground floor slab, sitting on a steel subframe, is of reinforced concrete.

- 1 South Asian Gallery
- 2 Alfred Waterhouse building
- 3 Haworth Building
- 4 Annexe
- 5 Former dental school
- 6 Rutherford Building
- 7 Access lane to campus
- 8 2003 Ian Simpson extension
- 9 Special exhibition gallery
- 10 Oxford Rd

was a D&B contract in which we were novated, and as a result of cost and buildability concerns, limestone facing panels hung off rails on rainscreen cladding were chosen. Honed panels were supplied for maintenance reasons. Glazed areas needed to be 99% UV filtering, which accounts for their dark, highly reflective nature. One large floor-to-ceiling glazed opening is set into the wall of the exhibition space. The glass and frame are fully security-rated and can be closed off with blinds but provide a great shopfront for the museum on a lane much-used by students and staff. In the narrow lightwell on the perimeter we did not need to deal with direct sunlight, so glazed units are more transparent – allowing visitors to read the museum's listed elevations beyond and for the Rutherford building to bring light into its study spaces. The east-facing pair of sawtooth roof lights to the South Asian Gallery have oak slat blinds outside to cut out direct light, so both exhibition halls can be naturally lit – or not.

What was the structural strategy?

It's a hybrid steel and timber structure sitting on concrete foundations. There was a lightwell going to basement level running on three sides of the courtyard but we decided to place the piles further back than its retaining wall – 3.5m in fact – to ensure there'd be no effect on existing foundations. We have ground beams from this that cantilever out towards the three listed facades and the concrete slab and the steel structure sits on this. There are drained cavities on existing facades in the lightwell and movement joints between the new slab and old buildings. The interstitial glazed structure around is cantilevered off steel



beams and impinges – but does not rely on – the listed facades, meaning that it can move and breathe as it always has and that our intervention is fully reversible technically.

Why the hybrid structure?

A lot of considerations informed the structural strategy. Our environmental sustainability advisor was keen on the cross-laminated timber floors in the steel structure to cut the project’s embodied carbon but they brought clear benefits in other ways. This is a working, academic site and we had to minimise site logistics where we could. Bringing in pre-fabricated CLT slabs and inserting them in the steel structure using a crane was much better than constant concrete deliveries. That said, the new ground floor sits on a raised steel sub-frame and is made of insulated polished concrete, with the CLT slabs installed at first floor and roof level.



RICHARD KALINA

Above Detail of the locally-sourced 3D Darwen terracotta green faience tiles that were especially created for the project.

Another concern was construction vibrations. The museum’s very delicate collections are all held in the basements and could have been damaged by the works. Monitors were installed on site and fed live data to both the contractor and client during construction to ensure agreed limits were not exceeded. Also, the new toilets that we installed in the old building were located above these collections so we had to ensure that if water leaked here it could never reach them. As a result, we fitted specialist tanking all along the floor and up the walls behind the integrated plumbing systems.

It’s a highly serviced building – how was this co-ordinated?

Air handling happens in the suspended ceiling void below the CLT soffit, with a high level perimeter feed and central extract for the main gallery spaces. Main service risers run up either side of the new gallery entrance. The client wanted to maintain the potential for a roof garden as this is visible from windows facing the courtyard, so future loadings have been accounted for and heavy plant is on a flat roof of the 2003 extension, leaving the rooflights as the only elements at roof level.

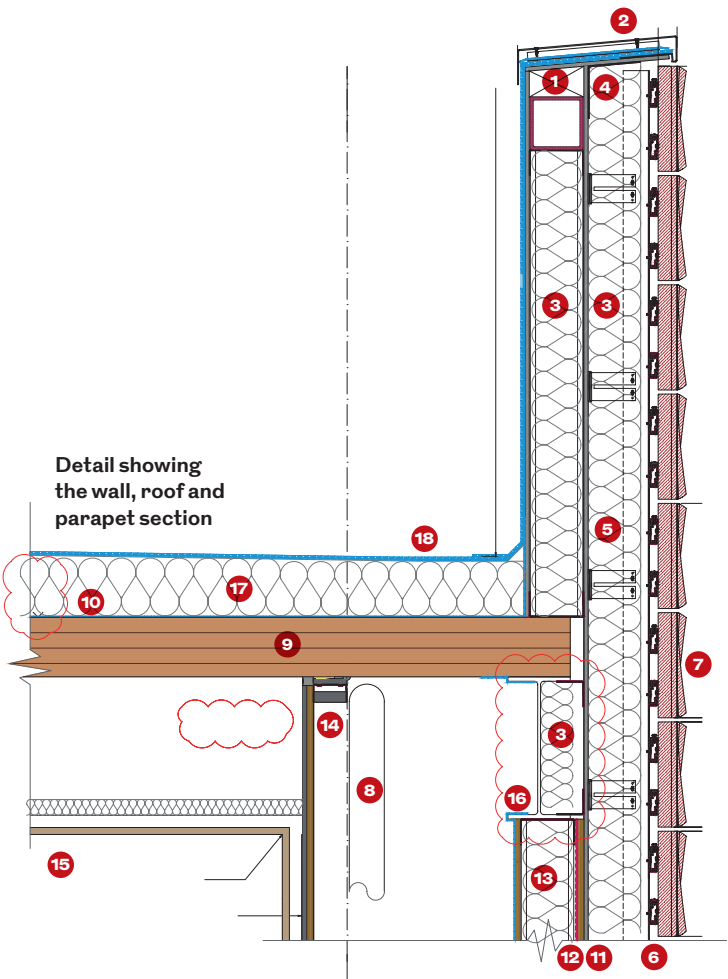
The suspended ceiling has electrical and data tracks installed to allow for fully flexible exhibiting and lighting. Metal ceiling panels are acoustically insulated behind to create requisite acoustic levels in the gallery spaces. And there’s a resilient layer in the first floor timber floor to deal with visitor footfall.

900m² for £12m seems expensive

Museum consultants were appointed to ensure that we met international exhibition-grade spaces. That’s not just about the servicing of the galleries but includes minimum heights for exhibits as well as reinforced floors to allow for cherry pickers, museum grade ancillary spaces, air tightness criteria and security design for wall build-ups. On top of these, logistics issues concerning single-point site access and accommodating the needs of a working university campus all added to the cost of the D&B contract. But yes, it was £13,000/m². ●

As told to Jan-Carlos Kucharek

- 1 25 x 120 top hat section brackets fixed to L bracket and batten with stainless steel screws. Section coated with liquid membrane lapped on capping sheet for waterproof joint.
- 2 3mm thick purpose made polyester powder coated parapet capping with factory welded butt strap joints fixed to top hat section brackets with stainless steel self tapping screws.
- 3 12mm cement cladding board.
- 4 150 x 150 x 3mm aluminium bracket fixed to SFS framing with stainless steel screws to support cement board capping.
- 5 Non-combustible rainscreen insulation.
- 6 Cladding support system.
- 7 Terracotta cladding panels.
- 8 Stainless steel cross-bracing.
- 9 CLT roof deck.
- 10 Vapour barrier.
- 11 18mm plywood.
- 12 Security mesh.
- 13 140mm insulation tightly packed between SFS framing studs.
- 14 Internal studwork.
- 15 Timber acoustic ceiling.
- 16 Air and vapour barrier stapled to plywood with junctions overlapped 100mm and sealed with double sided tape.
- 17 Tapered insulation to specified design.
- 18 Bitumen roof covering.



More for less: modular WikiHouse ups its game

WikiHouse tests show that SterlingOSB Zero not only offers better structural performance than the plywood it has traditionally used, it’s more sustainable and cheaper too



HUB WORKSHOP



WIKIHOUSE NL

WikiHouse is an open-source, modular building system based on standardised interlocking components that slot together in various configurations to create a high performance building.

The digitally fabricated blocks are designed to be manufactured by small, local CNC timber fabricators using open-source code, which is maintained in the UK by Open Systems Lab.

Originally the blocks were designed and fabricated using imported plywood but a programme of testing is about to begin at Imperial College, London, to verify Open Systems Lab’s analytical predictions that replacing plywood with West Fraser’s SterlingOSB Zero will give improved structural performance – as Gabriele Granello, engineering lead at WikiHouse explains.

Why the switch from plywood?

There are several reasons: SterlingOSB Zero is more sustainable – manufactured in the UK from timber grown in the UK. The carbon footprint of SterlingOSB Zero is lower than for plywood, it is cheaper and its predicted structural performance is generally better.

How can you be sure of its improved structural performance?

Our testing so far shows that the jigsaw joints fabricated using SterlingOSB Zero have a greater shear strength than

Above left Imperial College’s lab works with London-based Hub Workshop, specialist sub-contractor in CNC manufacturing and supplier of the WikiBlocks. Above right WikiHouse building in progress at De Stripmaker, Almere, near Amsterdam.

the same joints made in plywood, and improved stiffness. Imperial College is testing components and assemblies using SterlingOSB Zero to verify their performance.

What board thickness are you using?

We’re using the same 18mm thickness of SterlingOSB board as plywood to fabricate the components using open-source code from which WikiHouses are built. We designed the system so that small local businesses can get together to set up a factory for less than £100K to produce these components. We chose 18mm because that it is the optimum compromise between specification, performance, availability and space in a micro-factory for the CNC machine, stock, assembly and storage.

Has a WikiHouse been built using SterlingOSB Zero components?

There is a single-storey cabin currently under construction for a private client, but our roadmap for the system involves take-up from community organisations, housing associations and other affordable housing providers.

How do you design a WikiHouse?

All the information on how to design a WikiHouse is available free on www.wikihouse.cc, including a guide for designers. We’re targeting one and two storey buildings, which is what the off-the-shelf system has been optimised to deliver. There is a high degree of flexibility in what can be designed using the system. The only constraint is that because all the SterlingOSB Zero blocks are 600mm long and either 200mm or 250mm wide, the dimensions of the building’s footprint should ideally be a multiple of 600mm. If you want something different, you can develop special blocks, but it is much easier to drag and drop the standardised blocks from our website in order to build something beautiful and sustainable. ●



For more information on how SterlingOSB Zero can help your project go to uk.westfraser.com

Modern makeover puts 1830s Paris in the present day

Industrial wood and black steel combine to make a Parisian loft studio a contemporary but welcoming home, writes Andy Pearson



CAMILLE GHAREB (4)

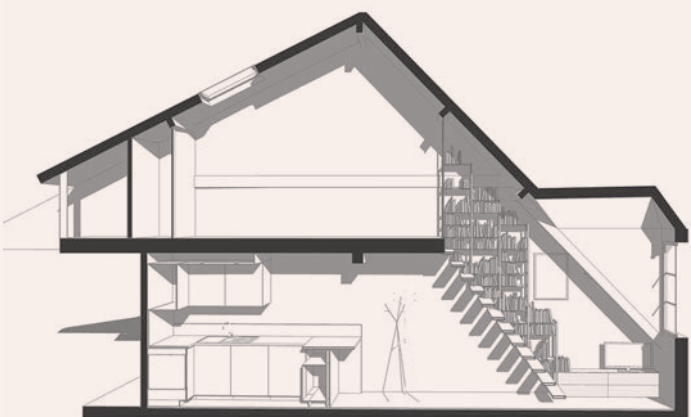
Florent Chagny Architecture (FCLA) has given a small Parisian loft apartment a distinctive industrial aesthetic using SterlingOSB Zero and black painted steel. The 50m² apartment is on the top floor of a wooden-framed residential building, built around 1830, in the 5th arrondissement. It's new owner approached FCLA and asked the architect to reimagine the duplex's dated interior. 'The client wanted to give a new identity to the old apartment he had just bought,' says FCLA principal Florent Chagny. FCLA's response has been to open up the dwelling by removing partitioning along with a huge 'useless' fireplace. A spiral staircase, added in the 1990s when the apartment was last renovated, was also removed. At the same time, the roof windows illuminating the upper level were replaced with thermally efficient contemporary units. These, along with

two white-framed dormer windows, now fill the new interior with daylight. Raw, unpainted SterlingOSB Zero and black steel give the opened-up spaces a contemporary, paired-back industrial-style make-over. It is an aesthetic that is both in keeping with the functionality of the semi-exposed roof structure that defines the apartment's angular, irregular form and the need to use space efficiently and effectively. Chagny says SterlingOSB Zero was chosen because it is 'quite warm' and it also complements the use of steel. An additional benefit is that because the

By choosing an industrial wood, a raw material usually meant to be hidden, we created a stylish interior

Sterling OSB is Zero, no formaldehyde has been added to the board during manufacture, which will also help in creating a healthy living environment. Enabling SterlingOSB Zero and steel, materials that would normally be concealed, to be the most prominent design feature required close attention to detail. 'The idea was to highlight the functionality and form of the materials used,' says Chagny. 'By choosing an industrial wood, a raw material usually meant to be hidden, we set out to create a stylish interior by focusing on all of the little details we had to draw on'. FCLA's extensive use of SterlingOSB Zero gives the apartment an edgy style that looks both cohesive and individual. Its use is most prominent in the kitchen which, along with the lounge, forms the apartment's open-plan lower floor. SterlingOSB Zero is used to give the doors of kitchen's modular wall- and floor-level units a distinctive grainy surface finish. This is in contrast to the

Left Industrial materials on the inside contrast with Parisian neoclassicism on the outside.
Right The upper level mezzanine bedroom maximises space in the rooftop apartment.
Below Section showing how rooflights and dormers fill the space with light.
Below right SterlingOSB Zero is even used for the fitted wardrobes and bed.
Bottom right The industrial aesthetic follows through in the kitchen where SterlingOSB Zero forms the doors of the units.



smooth, industrial black worktops, splashback and electrical sockets. A bespoke peninsular unit serves as a table for three bar stools; this section of countertop has been designed to slide to expose storage cabinets beneath, which then double-up as additional seating. SterlingOSB Zero is also used as a floor covering in the kitchen and lounge. The lounge includes a custom-made low-level SterlingOSB-faced storage cabinet, complete with a smooth black top and sides that reference the kitchen units. The use of this and other low-profile furniture in the lounge, coupled with the double height ceiling and daylight from the large dormer windows, fosters the impression of space and openness. A black steel stair, incorporating built-in book shelves, leads from the lounge to the upper floor bedroom tucked under the ridge of the roof. The bespoke stair's functional, open-tread

design, coupled with the open-backed book-shelf, would not look out of place in a 1950s factory archive store and both are very much in keeping with the apartment's industrial warehouse style. At the top of the stair is a glass screen with a slender black steel frame, giving it a more utilitarian appearance. The screen separates the bedroom from the living areas below; ensuring daylight can enter the space while providing an element of acoustic separation. The SterlingOSB theme continues in the lofted bedroom on the doors of a fitted wardrobe that occupies the entire back wall. This is complemented by a small custom-built SterlingOSB Zero storage cabinet. Even the bed is built from it, with the storage beneath housed in OSB drawers. A neutral white paint scheme has been used to complement the SterlingOSB Zero and black steel. A



bright power-blue finish to one of the party walls adds just enough colour to the lounge and bedroom to make the spaces feel welcoming and comfortable and relaxing. Chagny says: 'The client is really delighted to live in a new contemporary stylish space, with a high ceiling and much more light, which is very important in the centre of large cities like Paris.' ●

Timber marries aesthetics with carbon practicality

As the drive towards a carbon-free future gathers pace, the construction industry could be missing a trick when it comes to exploiting wood – in all its uses

In the absence of sustainable specification guidance from the government, it feels sometimes like it's industry driving sustainable practice in construction, leaving policy-makers trailing behind. But given the current energy crisis, putting pressure not just on the cost of heating and cooling homes but on the fabrication costs of industry supply chains, policy-makers should be pushing the idea that architects need to be doing more with less, and further embedding energy efficiency in designs. Surprisingly, even clients seem to be jumping aboard; look at The Office Group's commission to Waugh Thistleton for the UK's first mass timber workspace. Such inspired client-side forward-thinking is a balm to architects convinced that their sustainability arguments are not being heard.

As was highlighted in RIBA's PiP's Special Report (May/June 2023), even local authorities are looking at building energy-efficient homes, motivated by the Department for Energy Security & Net Zero's 'Building for 2050' report and the likes of the Better Social Housing Review panel. Pollard Thomas Edwards' partner of sustainability and innovation Tom Dollard now is working with Cambridge Investment Partnership – an alliance of the City Council and Hill Investment Partnerships – to develop Passivhaus-equivalent schemes of 6-70 units for social rent and market sale. Dollard describes Passivhaus as 'the optimum fabric-first solution' designed around low-cost, low-energy principles that are easy to embed if designs are considered from the outset. The use of structural timber in housing can be key to ensuring that designs are low in embodied energy as well as low energy in use. With structural timber banned in buildings above six storeys, perhaps

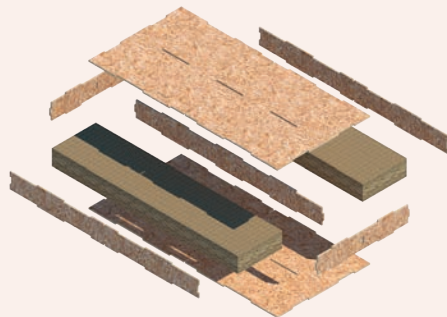


EDMUND SUMNER



Top Knox Bhavan's riverside March House in Berkshire.
Above The SIPs panels saved programme time and dealt well with challenging site logistics.
Above right The simple insulated timber panel construction methodology.

we will see more of this when current regulation, over time, better grasps the nettle of mass timber's fire physics to treat it more as a norm than a perceived 'risky' material. And where might timber work in retrofit? The UK Green Building Council states that, despite having one of the oldest and leakiest housing stocks in western Europe – two thirds of homes are EPC rated 'D' or below – 80% of the homes we live in today will still be inhabited in 2050. To meet zero carbon targets, 29 million homes will need retrofitting by then, but with demands to make home more airtight, architects should keep in mind the mantra 'no insulation without ventilation.' Letting walls breathe using lime



KNOX BHAVAN (2)

mortars, plasters and notably timber batt insulation systems means good insulation values need not result in troublesome and harmful moisture build-up in homes. But architecture has an aesthetic component, and integrating this with building performance, reaches the 'sweet spot' of design; take structural insulated panels, which embody the best of both. London practice Knox Bhavan's bespoke SterlingOSB Zero panel system was developed with specialist digital fabricator BlokBuild, for its RIBA Regional Award-winning March House. Saving time and money on programme and logistics for a bespoke home in Berkshire has married high performance with stunning aesthetics to realise truly aspirational architecture. It proves that sustainably sourced timber, well-designed and constructed, can help us all in the drive to a zero carbon future, and that wood will always have the power to wow. ●

Taking over a project? Key copyright factors

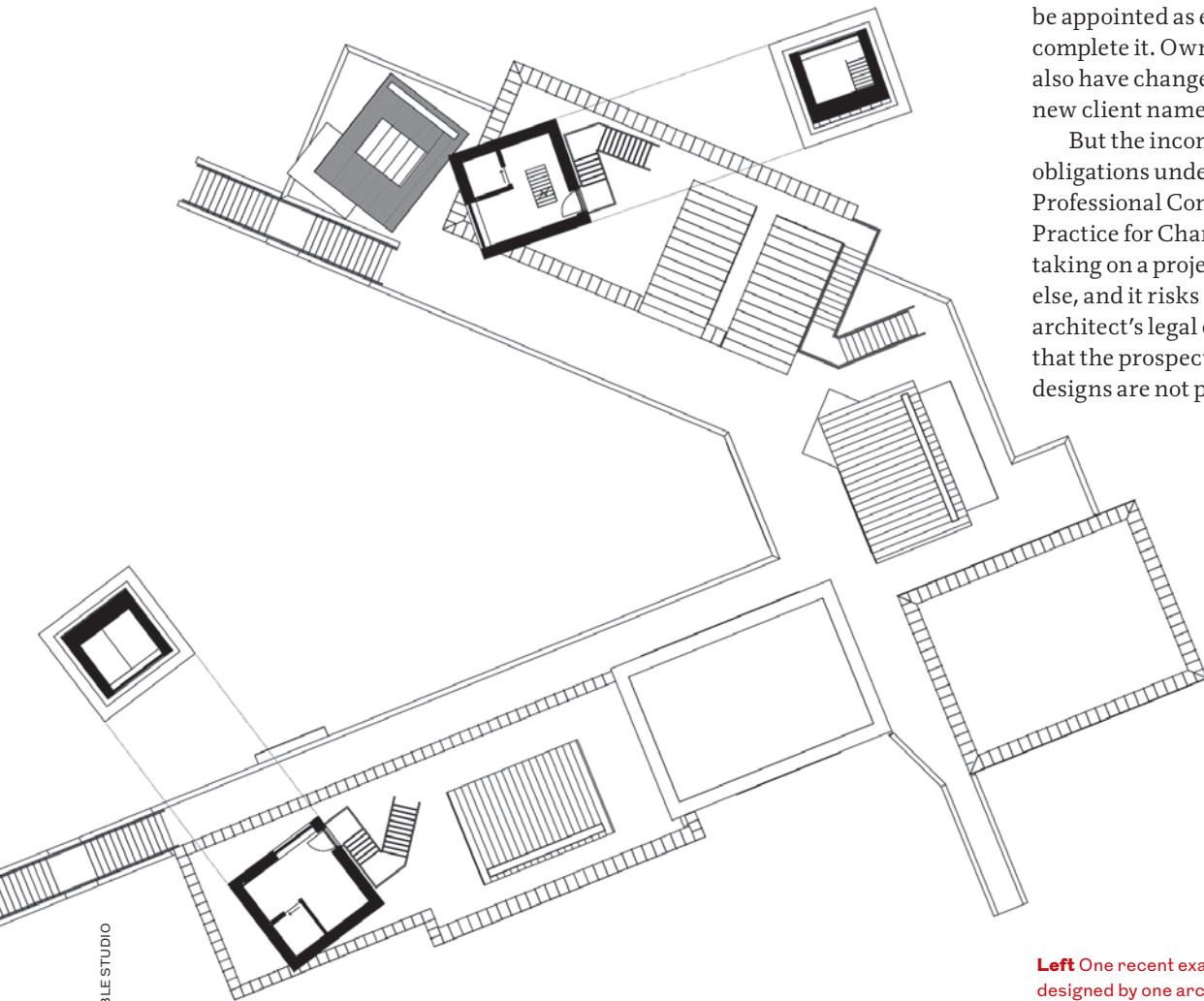
Copyright and licensing are thorny issues when taking over a project from another architect. Neal Morris looks at how to avoid an expensive breach



Conservation & heritage



Design, construction & technology



INVISIBLE STUDIO

Client assurances that everything is 'good to go' are never enough, and, with questions of copyright, architects need to take steps to ensure the right licence is in place to use designs 'It is not uncommon for an architect to be instructed to develop to completion the design of another architect,' says Smartarch director Christopher Smart, who has been dealing with complaints against architects via ARB and the RIBA for over 20 years. 'Such situations can arise when the first architect develops a scheme for planning and then the site is sold and another architect is engaged,' he explains. 'It can also occur in a design and build scenario when the original architect is not novated.' Where the original architect was commissioned to design a project to planning, for example, a second may be appointed as executive architect to complete it. Ownership of the site might also have changed, which will mean a new client name on the contract. But the incoming practice has clear obligations under the RIBA Code of Professional Conduct and RIBA Code of Practice for Chartered Practices when taking on a project started by someone else, and it risks infringing the original architect's legal copyright – and with that the prospect of legal action – if designs are not properly licensed for use.

Left One recent example of a project that was designed by one architect and taken on by another is East Quay in Watchet, worked on by Invisible Studio and Ellis Williams.

What are the contract provisions that apply for licensing?

The RIBA codes (Principle 3: Relationships; section 2: Previous Appointments) give clear guidance on the steps that chartered practices and members should take to satisfy themselves that the client does indeed hold a license to use design drawings, specifications and the like.

‘A second architect should check that the client actually has a license or some other authority to build out the first architect’s design,’ Smart recommends. ‘To be absolutely careful, perhaps a call should be made to the first architect to check that there is no impediment on the design being developed.’

What may be less straightforward are the contract provisions that apply for licensing, because different contracts treat the licensing of designs in different ways. The RIBA Helpline reports a number of enquiries recently from architects concerned about the legitimate use of other architects’ designs.

Rachel Gwilliam, senior legal manager at Bouygues Energies & Services and a member of the RIBA Standards Committee, says an incoming architect must start by establishing who owns the copyright: ‘It’s really important to understand what the original contract says and how copyright is treated, and it’s best to check the original contract with your own eyes.’

The original architect could have assigned copyright to the client, but this is rare. Typically, the architect retains copyright and grants a licence to the client to use the design. Gwilliam says the terms within this licence are critical. They may be broad in range, even allowing for multiple uses of a design on repeat projects, or there may be stated limitations.

What should architects do about fees paid?

Incoming architects should know whether or not they are allowed to modify or adapt the existing design, for instance, or whether modifications can be made within certain boundaries. This

can be particularly relevant in design and build contracts where the original architect has not been novated to the contractor.

The incoming architect must also check whether the granting of the licence is conditional on fees being paid and then check that those fees have indeed been paid. Most standard forms of contract have a provision that fees must be paid to enable licensing, but some are more architect-friendly than others. The RIBA Standard Professional Services Contract spells it out clearly: the architect can withdraw or suspend the copyright licence if any fees are outstanding.

If the licence does not exist at that time, the client has absolutely no right to use the design, says Gwilliam.

What are moral rights?

Moral rights – the right to be identified as the author of an artistic work – exist alongside legal protection of copyright, although they tend to be less well understood and may not be addressed in contracts.

Moral rights will continue to apply whether or not a licence has been granted to make use of copyrighted material. This means that clients and incoming architects may need to acknowledge the work of the original architect. This is not a matter of professional courtesy, but is a statutory legal right of the original author, says Gwilliam. Moral rights apply to drawings, models and images as well as the completed project itself.

Conversely, where the treatment or execution of an original design is regarded as derogatory, the original architect can demand to be no longer associated with it.

What does the RIBA Code stipulate?

Beyond establishing contractual rights, chartered practices/members must adhere to the RIBA codes when taking over work from a previously appointed architect.

The incoming practice should inform the original architect that they will be continuing with the project before accepting their own appointment.

‘It’s really important to understand what the original contract says, and it’s best to check it with your own eyes’

They should also seek assurances from the client that the previous appointment has been properly terminated; that the client holds a licence to use any information such as drawings, specifications and the like; and that there are no known outstanding contractual or other matters that would prevent them accepting the appointment.

Kirthana Neelala, professional standards manager at the RIBA, recommends that architects should not hesitate to quote their obligations under the Code to any client querying why they are requesting such information.

‘It is always good practice to document what reasonable steps you have taken. For conversations that have taken place or phone calls, it is generally good practice to write an email summarising the discussions. It does seem obvious, but maintaining written records of any changes to appointments or terms of engagement make a big difference if disputes arise at a later date.’

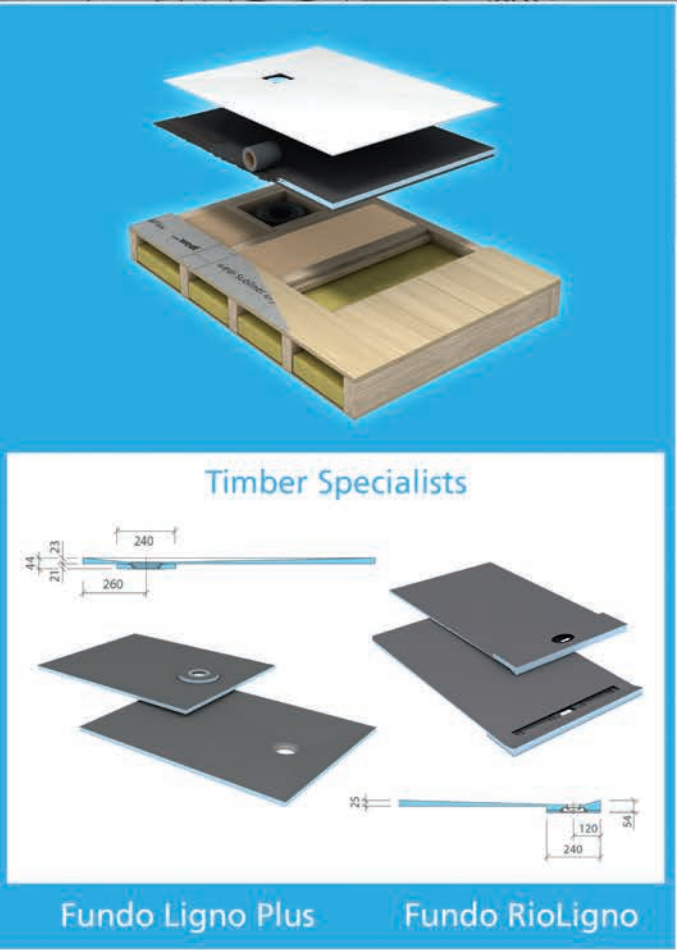
Chartered members and practices that have queries regarding previous appointments on projects, particularly where there has been a dispute or the incoming architect suspects there are unresolved issues regarding licences, should seek advice or contact one of the RIBA’s specialist practice consultants for guidance. ●



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Practice management: how and why to set the right fees

A studio’s basic viability is compromised if fees are pitched wrong, but how can practices get it right? A RIBA J webinar unravels some knotty issues

In our current economic climate – with volatile market conditions, inflation, high interest rates and tightened margins – fees, and how to pitch them right, have never been more important. Pressures, ranging from competition, legislation and building regulations changes, to insurance and staff costs, threaten risk – while technological advances like BIM drive efficiencies but also prompt clients to expect lower fees.

And ‘fees are an emotive subject,’ says webinar chair, RIBA publishing director Helen Castle. ‘Getting them right is about much more than finance.’ Fees affect every aspect of performance: overtime, staff morale and retention, client relationships, securing work, investing in growth and having the time to design better buildings – and undervaluing services sells the entire profession short. A studio’s viability is compromised if fees are pitched wrong. So how can practices get it right?

Perhaps it’s easier to answer this by looking at how some businesses get it wrong – ‘business’ being the operative word. ‘Until you run a business you don’t understand it in real terms,’ says architect Clare Nash, of Clare Nash Architecture, partly because, she says, a lack of relevant modules in architecture courses hinders students at the outset. Indeed, in researching his book, the RIBA’s Good Practice Guide: Fees, Peter Farrall, architect and senior lecturer at University of Liverpool, was dismayed



TOTAL
SYNERGY

This RIBA J event was produced in association with Total Synergy: totalsynergy.com

- Architecture has a culture of low fees compared to many other professions. Have the confidence to talk money with client to be part of a culture change.
- Be clear on your business model and the type of work you want to be involved in; don't let a lack of understanding of your own financial position be the reason you are taking on or turning down projects.
- And remember, fees are often inversely proportional to the amount of overtime demanded of staff. Think carefully about this correlation and the strains it places on those around you. It's your responsibility not to undervalue your own work.

people understand the time taken on jobs. She advocates teaching younger members of staff and students about the business management side, and seeking a mentor who can give advice.

Nash’s business model is likewise geared around a wholesome work-life balance to ensure staff wellbeing, and notes that women in particular are increasingly open about pressures faced at work, ‘being more honest about what is going on behind the scenes’. Rather than being cagey towards competitors, she recommends networking with other businesses to promote more transparency around fees, including learning from non-architecture but local businesses. Van Zanen notes that Total Synergy’s online community of software users has evolved over time as practitioners use it to solve business problems together, further suggesting a move towards co-operation. And Attanayake reports that the collaboration groups which her practice set up in their early days still share information, with beneficial outcomes for the businesses: ‘It is historic that architects are siloed and protective,’ she says. ‘Businesses need to be nimble for longevity.’ Finally, as a Part 3 examiner privy to plenty of ‘gory details’ of practice management, Farrall too believes there has been an improvement in recent years in terms of openness and resourcefulness from practices, which in turn helps maintain professional standards and consistency over fees.

To end on a positive note, as Farrell sums up: ‘Understand why you are in business, and value your skills.’●

before committing to a fee, he advises. And clarifying the responsibility matrix with contractors is important to establish roles and how to charge.

Understanding the client

Nash’s practice, whose projects are primarily private residential, has devised its own tailored Plan of Work, using ‘lay-person terminology’ to offer clients clarity. This sets out what the home-owner gains in each stage, she says, ‘because clients like to know what is coming and when’. Fees are generally fixed, with additional work charged hourly. Duncan eschews the percentage fee altogether: ‘It seemed fairer and our clientele seemed happier to see that we were giving our time and explaining what the time was for.’

Indeed, at the basic level, ‘what you are selling is a piece of time’ says Damiaan van Zanen, Total Synergy’s head of partnerships. Understanding the maths behind what makes a business profitable, or merely break even, is pretty fundamental. Farrell outlined a series of analogue calculations, which can be used to determine staff hourly charge-out rates to arrive at a desired profit margin. This was elaborated on further by van Zanen, whose role is to help practices make sense of their data with technology to make projects more profitable. Total Synergy helps users to understand costs, set the right rates, build fees, assess performance and iterate for future projects. Such software can be used to connect staff salaries, overheads, billable hours and profit targets, with key metrics aligned to the Plan of Work to achieve accurate calculations. Van Zanen typically works alongside architects and engineers; the latter are ‘more analytic and scientific in approach’ to their fees, he says. Adopting a similarly objective attitude can help architects manage fees with confidence.

Of course, ‘there’s no point in having all the data unless you do something with it,’ says Duncan, who favours a regular (in her case, monthly) review of how the business is performing. Nimi Attanayake, director of NimTim Architects, says monitoring business

performance and understanding base costs and break-even points led the practice to make several key decisions about the affordability of entering competitions, although she acknowledges that it is lucky to be able to only take on invited competitions. The practice has also won two contracts in the London Mayor’s Framework, which firms must bid to be on before entering it. The risk the practice took here was only made possible by understanding the financial impact of taking the hit. Knowing what you are going into, she argues, is key to success or failure. ‘You may decide to take the hit but not see the return for 5-10 years... unless you have gone in with your eyes open, able to withstand it as a business, it will fail.’ Sometimes a practice simply has to turn work down – always difficult when a design challenge seems creatively appealing.

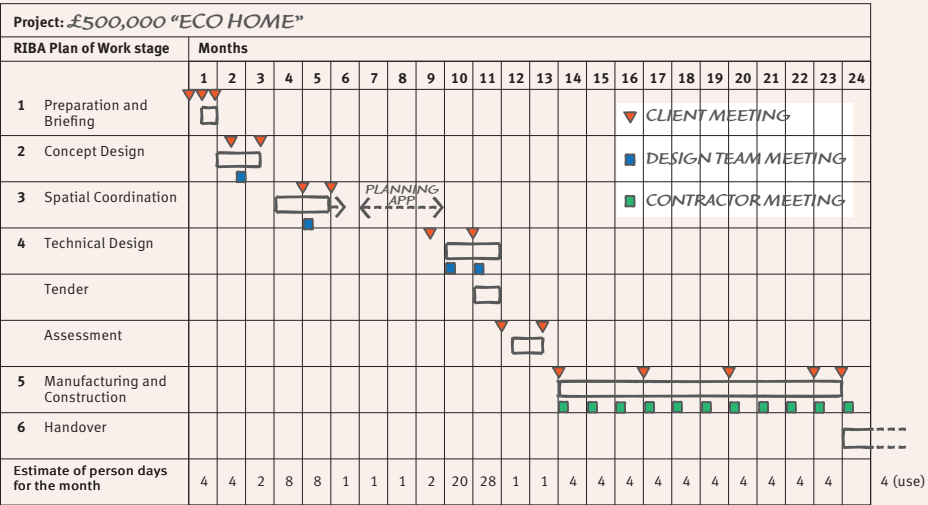
Learning and wellbeing

Attanayake also feels it is important to be transparent with her staff about salaries, to involve them in invoicing and to hold regular meetings to help them improve efficiencies. Involving employees in the business shares responsibilities and creates a culture of learning and openness.

Duncan takes a similar view, with a no-overtime policy, which not only helps maintain work-life-balance, and in turn helps diversity, but ensures that

Architects’ average hourly rates (£)	
Position	£
Partners/directors/sole principals	106
Salaried partners & directors	122
Associates	96
Architects (5+ years ARB registered)	85
Architects (<5 years ARB registered)	75
Technologists	67
Architectural assistants (Part 2)	63
Architectural assistants (Part 1)	54
Other chartered professionals	77
Other fee-earning staff	64
Office management/support & admin	47

Source: RIBA Business Benchmarking 2022, the full data by practice size is available to chartered practices



Total 125 person days @ £400 per day = £50,000 plus profit 15% plus risk 5% = £60,000

that ‘many firms put forward non-viable fees because they have a poor grasp of their own business model and costs’. The concern is mirrored by RIBA past president Jane Duncan, founder of Jane Duncan Architects + Interiors. ‘Business planning, or non-business planning, among architects has been a long-standing concern of mine,’ she says; conducting two surveys, seven years apart, alarmingly little had changed in terms of the number of studios with poor business plans. ‘As a director you have to run a practice and a business,’ she says, which is why conferences such as RIBA’s Guerrilla Tactics exist – to help designers grasp the relevant concepts.

Practical matters

This RIBA J Practice Management webinar channels practical advice into four key areas: how to package fees to make them accessible to clients; addressing the relationship between fees and billable hours; reviewing fees in the context of the business plan; and the role of fees within the holistic business.

There are several ways of charging for work: percentage fee; lump-sum/

Above A project resource programme is essential to calculating your own fees.

fixed-fee; and time charge/cost-reimbursement. While each has its place, a decision on which is most appropriate should depend on resources, historic or published benchmark data, and the client relationship vis-a-vis the project requirements.

‘Your appointment document is the datum against which your fee, services and outputs are measured,’ says Farrall, ‘but it needs to be seen in the context of the procurement route which is not always evident at the outset.’ Since each procurement route has different challenges, which affect fees, it is important to state certain assumptions at a very early stage. Farrall also advises using the RIBA Plan of Work 2020 for the fee proposal to outline candidly where expertise and time will be devoted. At an early juncture, Stage 2 can be ‘a useful stopping off point to review the scope and fee once the project is better defined’, he says. Feasibility studies are a good way to gain client confidence while establishing the viability of projects

Workshop: fresh ideas for the city

With the motor car’s dominance of our cities in retreat, what can we do with the roads and parking space they will leave behind? Five architects will propose new uses for urban public space



Cars parked in Piazza Sordello, Mantua, in 1961, photographed by Ivy Wolfe.

Slowly but inexorably our cities are being reclaimed from the motor car. It might well be the most profound change to the urban environment in the coming decades. Birmingham City Council, for example, has launched a 20-year plan that could see its inner ring-road turned into a park. Glasgow plans a city-centre People First Zone, and councillors are joining campaigners in calls to replace the M8. The pattern is repeated across the world, from the traffic-free core of Ljubljana and Barcelona’s expanding Superblock system to Shenzhen’s planned Net City, a carless district the size of midtown Manhattan.

This trend offers the prospect of a renaissance in public space. While roadways will still be needed for access, what might be done with the part of every ordinary side-street now claimed by on-street parking – 14km² in London alone? Or with newly redundant surface car parks, or bleak expanses of asphalt at once-busy junctions where traffic has dwindled to a trickle of bikes and trams? New landscaping might change the

complexion of the city, but perhaps we can do more. At a one-day design workshop hosted by RIBA Journal and Marshalls Bricks & Masonry, five architects will develop ideas for versatile pieces of ‘infrastructure’ that could enhance use and enjoyment of the public realm. Participating teams are asked to propose robust, durable structures that might support or enable a range of social and cultural activities, from public gatherings to live performance, active travel to adventurous play. Something more open – and open-ended – than conventional buildings, but with greater utility, potential and presence than the ordinary components of urban landscaping.

‘We all need places that make us feel happier, safer and more sociable,’ says Dean Harris, managing director of Marshalls Bricks & Masonry. ‘As part of the Marshalls family, we believe it’s our responsibility to help shape these places, through the products we supply and the way in which we operate, creating spaces that give people the freedom to work, play, create and grow. Spaces that enhance people’s lives; because the better our environment, the better we can be.’

The five practices bring a broad range of experience in the design of public space, informed by a variety of interests and specialist knowledge: Studio Multi, based in London and Amsterdam, intends to take inspiration from novel approaches to the public realm in mainland Europe; Tonkin Liu draws on the stories unique to any site to make socially and environmentally responsible public spaces; Native Studio aims to create contextually sensitive spaces that embed a sense of belonging and encourage cohesion; What if: projects has a particular interest in community-led schemes that address the need for shared space in dense urban environments; and vPPR, designer of the Camden Highline, has a particular interest in the way public space serves young people.

You can see the results in the September issue of RIBA J and – who knows? – perhaps on some newly car-free street in the future. ●

Waving, not drowning

Is the high street dying or simply changing? Vicky Payne reports three key findings from research carried out with two colleagues – and the message is positive

Images: David Rudlin, Vicky Payne and Lucy Montague



Everyone has a childhood high street memory don’t they? Mine is being allowed to get Pick and Mix at the Llandudno branch of Woolworths (RIP) on the odd family Saturday shopping trip.

The book High Street is the story of a two-year research project looking at 100 high streets – fascinating, emotive and revealing places that are inextricably woven into our lives and our built environments.

The book looks at the history of UK high streets, and notes that the current crisis is nothing new; high streets have been in a state of almost perpetual distress since the birth of self service shopping in the 1950s. Today it is far more a crisis of big retail than a failure of places. As for the future, despite (or

perhaps because) research from Savills suggests that the UK has up to 40% more retail space than it can support, the book concludes optimistically.

High streets are about far more than retail and are far more resilient than you might believe from the headlines. Here we share three of our book’s nine recommendations for how high streets can evolve and live on.

Everything but the kitchen sink
A huge wave of retail investment in the early 2000s focussed primarily on town centres because planning policy effectively put a stop to out-of-town development. Today both in- and out-of-town retail are having problems, and while there is no great demand to

build more out-of-town schemes, it is important, when thinking about where to redistribute that 40% excess retail space, to maintain a tight focus on centres.

This should apply beyond retail to a whole range of uses that can be served by public transport and generate activity to support the wider area. Stockport, for example, wants to relocate Stepping Hill Hospital on its periphery to a new facility on the site of the vacant Debenhams department store, and sell the old site for housing to fund it. The same could be taken to secondary schools, council services, universities, libraries and leisure facilities, as well as new offices, housing and even light industrial. This approach to creating active high streets not only builds resilience to change but is inherently sustainable from a spatial planning perspective.

Left Debenhams in Cheltenham: what is the future for high streets without their anchor tenants?
Below The leadership in Barnsley believes investing public money in town centres is a key regeneration tool.



Wisest is he who knows he does not know

Speaking of resilience, as we explored the waves of crisis that have buffeted high streets over decades (supermarkets, the internet, Covid), one thing becomes clear; we don't often see them coming. So to ensure resilience we need to plan with a degree of humility, aware that we don't know what will come next.

Gone are the days of large single-use shopping malls for example, often built on the rubble of demolished small shops and businesses. Even if these large schemes were once viable, they put all their eggs in one basket. The shopping centre model – based on an anchor department store that generates footfall, allowing it to be built off-pitch – is vulnerable if that store closes.

The urban environments that adapt best to change seem to be made up of small and medium-sized flexible units fronting onto streets and public spaces that are naturally busy because of their connected nature. But what are we to do where mistakes have already been made? Shopping centres can be divided into smaller units, the roof removed to let in light and air, and underused space repurposed for other uses including public facilities, leisure and offices.

The book looks at Nottingham, where

Urban environments that adapt best to change have small and medium-sized flexible units fronting onto naturally busy streets

Below Gone are the days of large shopping malls like Meadowhall in Sheffield.

Top right The high street now needs different business models, as with Kommune in the old Co-op department store in Sheffield.



the monolithic Broadmarsh shopping centre is being redeveloped. In such cases it is sensible to reinstate historical street patterns or use techniques like Space Syntax and footfall modelling to understand what spatial configuration would have been most likely to evolve over time in that location. New space should be designed with floor-to-ceiling heights, fenestration, entrances, floor plates and servicing to suit a range of uses. This would allow the scheme to weather change and remain usable into the future.

Flipping the script

Falling rents and shorter, less certain leases mean the retail development of the last 20 years is no longer viable. The notion of new shopping centres anchored by a department store and catering to select blue-chip retailers is no longer an investable proposition – as many places have found to their cost. More worryingly, the cyclical maintenance and refurbishment of existing retail space looks increasingly unrealistic in all but the strongest town centres. We need a new development model; the book's case studies point to three possibilities.

The first is for developments in town centres to base viability on residential and office development. Abandoned retail schemes are now often pursued as housing or office schemes, the retail on the ground floor being largely incidental. Sometimes the retail is only there because it was a planning requirement



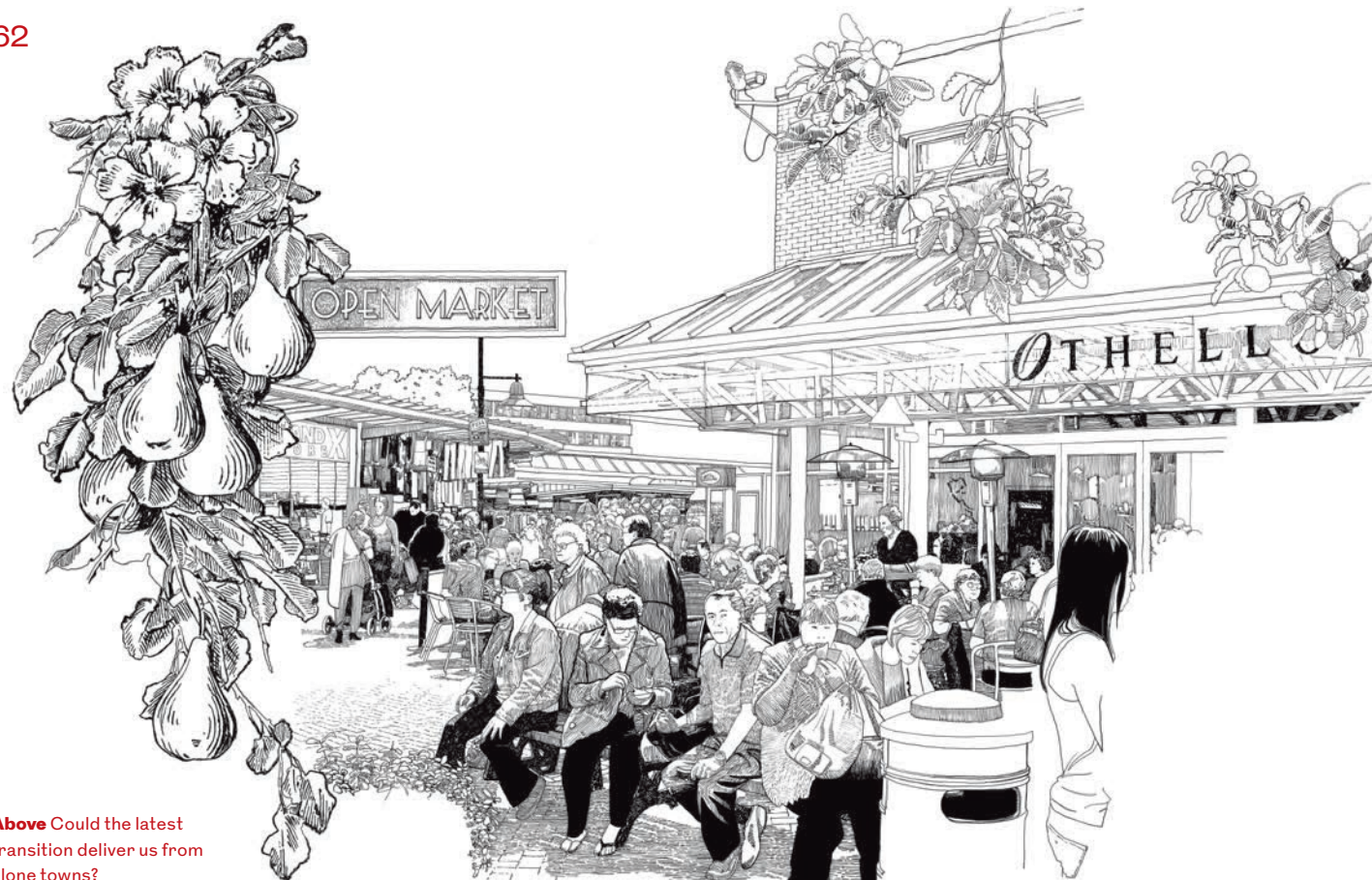
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Above Could the latest transition deliver us from clone towns?

and is likely to target food and drink uses rather than traditional retailers. Some schemes, like City Centre South in Coventry, have been criticised for demolishing part of the retail centre for what is essentially a residential development. The scheme's attempt to develop the 'Pavilion' to promote new local independent businesses and artisans has unfortunately turned out not to be viable.

The second approach is to find a different business model – as we saw with Bobby's independent department store in Bournemouth, Kommune in the old Co-op department store in Sheffield, and the market in Altrincham. All have been promoted by developers who know how to make a profit while nurturing small independent businesses. As the developer of Bobby's says, it is possible now for a small developer to buy good quality retail space for less than it would cost to build. By keeping capital costs low, developing space incrementally, and being flexible and responsive to tenant needs, it's possible to build a viable business model.

The third approach is public intervention. As the leadership in Barnsley told us, investing public

money in town centres is an important regeneration tool. This isn't about local authorities investing in retail to generate income – that's a very bad idea at the moment. It is about using public borrowing to buy vacant retail space or even whole shopping centres as a way of bringing them back into use. This may involve a fund to buy up or take on the lease of empty units. Councils can then use them as a tool for regeneration, letting them to local businesses and other activities.

Many councils have taken the opportunity to buy old shopping centres and malls as they come on the market, often at knockdown prices. Wigan council was delighted to buy the Galleries shopping centre in 2018 for less than half what it had sold it for 10 years earlier, and Bradford recently bought the Alhambra Centre. Some councils have gone further, undertaking direct development. The investment will generate sufficient income to cover borrowing costs and may even generate a small surplus, if not one that a developer would regard as a commercial return. However, even if the development makes a small loss, the benefit in terms of jobs created,

economic activity and investment in property make it very good value for money.

The high street is dead, long live the high street

The authors went in search of the (latest) crisis on the high street and found instead town centres and high streets in a state of transition. It is a painful transition involving the loss of many anchor retailers, Covid lockdowns and a cost of living crisis. If we can create a town centre economy that is more diverse in terms of the type of retailers, mix of uses and range of activities, then the transition, painful as it is, may end up being positive. It might deliver us from the clone towns of the 2000s and create town centres nearer to those that exist in the popular imagination – community hubs with a range of distinctive retailers and leisure uses with a strong identity and a sense of place. These are all public goods and are too important to be left to the vagaries of the market. High streets need to again be a focus for public policy at national and local level, to allow their diversity to flourish. ●

High Street by David Rudlin, Vicky Payne and Lucy Montague is published by RIBA



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Tested and approved: the reformulated Dulux Trade Diamond Matt

With climate change awareness spreading to all corners of life customers are asking for more sustainable paint. A new, 99.9% VOC-free formula for Dulux Trade ticks all the boxes

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To showcase its commitment to quality, Dulux Trade Diamond Matt now comes with a 'Tested and Approved' by Professional Decorators' seal of approval. This showcases the rigorous three-stage testing process carried out by experienced professional decorators to ensure Dulux Trade Diamond Matt delivers on durability, as well as improved opacity and sustainability.

¹ Based on in-can VOC content, measured in accordance with ISO 11890-2:2013



For more information on Dulux Trade Diamond Matt, go to: www.duluxtrade.co.uk/diamondmatt



A durable paint for the modern world

Dulux Trade Diamond Matt's compliance with EN ISO 11998 Class 1 and BS 7719 Class C, and its capacity to withstand 10,000 scrubs, mean it can be repeatedly cleaned, ensuring that unwanted stains can be easily removed without damaging the paint film on the wall and making the professional finish last even longer.

Dulux Trade Diamond Matt already contained a hydrophobic surface that repelled water-based stains such as red wine and coffee. Thanks to new binder technology in the upgraded formulation, the product now has resistance to oil-based stains too, such as food or cosmetics. The technology helps to stop stains from being absorbed by the surface and makes them easier for the end user to remove.

This was meticulously tested by the Dulux Trade Research and Development (R&D) team in the lab, using substrates painted with white Dulux Trade Diamond Matt and measuring the whiteness of the paint before and after the food and cosmetics had been applied and wiped away.

Improved opacity

To improve the opacity of Dulux Trade Diamond Matt, more titanium oxide has been added to the formulation. On top of this, adjustments to the balance of raw materials in the mix to reduce roller mottle have improved the smoothness of the finish.

The journey to 99.9% VOC-free

The previous Dulux Trade Diamond Matt included semi-VOCs to form a strong film and offer quick drying times at a range of temperatures. However, the upgraded product uses an innovative binder technology that forms a film even at very low temperatures, without the addition of semi-VOCs. The paint also includes a new latex that doesn't require coalescing solvents and has switched to completely VOC-free versions of additives. As a result, Dulux Trade Diamond Matt is now proudly 99.9% VOC-free.

Thanks to these updates, this water-



The technology helps to stop stains from being absorbed by the surface and makes them easier for the end user to remove



based paint delivers quick drying times, helping professionals work quickly and efficiently – but with added sustainability benefits.

Peter Rhodes, national sector manager for building design at AkzoNobel, explains: ‘The fact that Dulux Trade Diamond Matt is compliant with BREEAM, LEED and WELL environmental standards, is 99.9% VOC free and long-lasting means it’s the clear sustainable choice for a diverse range of projects. We’re confident these enhancements will reassure architects and specifiers that Dulux Trade Diamond Matt should be the go-to durable, sustainable paint option that will provide winning results for their customers.’

Reducing waste

Waste is another issue in the construction and decorating sector, with commercial and industrial waste accounting for around 33.8m tonnes of waste in England in 2020. Dulux Decorator Centre aims to tackle this by offering a can recycling service to help professional decorators reduce the impact of paints and coatings after use.

Dulux Decorator Centre accepts a wide range of dry or empty metal or plastic paint cans, as well as those that have contained emulsions, gloss paints, undercoats and primers, floor paints, exterior and masonry paints – and those that have contained water-based or solvent-based products. Plastic cans are shredded, washed, and sent back into the plastics market, while metal is remelted into new steel and returned to the general market.

Since its introduction, over one million empty paint cans have been recycled. Decorators are also encouraged to donate unused paint to Community RePaint, a reuse network sponsored by Dulux.

Tested & Approved by professional decorators

As well stringent tests in the lab, Dulux Trade ensures its paints undergo rigorous evaluation from professional decorators in external conditions,

explains Hannah Beeke, R&D Team Leader at AkzoNobel.

‘Our Tested & Approved process is designed to truly put products to the test and we do this by working closely with experienced professionals.

‘We worked with our expert decorators to trial the new Dulux Trade Diamond Matt and used their feedback to make further improvements to the formula. We then took the range into field trials where it was tested under external conditions – enabling us to see how it will perform for our wider customer base. This rigorous process means that we are confident the new Dulux Trade Diamond Matt range is the best it can be and will genuinely deliver the durability and sustainability benefits professionals are looking for.’



We’re confident these enhancements will reassure that Dulux Trade Diamond Matt should be the go-to

A decorator’s view

Desmond Cass runs D Cass & Son, a family decorating business in central London, which has been established for 65 years. He has been a Dulux Select Decorator for 26 years and was the Grand Winner of the 2019 Dulux Select Decorators Awards. He was asked to take part in the ‘Tested & Approved by Professional Decorators’ process.

‘Painting and decorating is a really satisfying way to make people’s living environments more enjoyable,’ he says.

‘Choosing the right product is key to this so the project you’re working on runs smoothly and to budget. As a Dulux Select Decorator, we put a two-year guarantee on all our work, so the product we use must be good. You can be as diligent and meticulous as you like when prepping a room for painting, but if the product you use isn’t up to standard, it’s all a bit pointless.

‘Modern painters and decorators will do plenty of research before buying a new paint and we want to know what other professionals think. Sustainability is also becoming more important for customers and we’re starting to get inquiries for low odour and low VOC products.

‘The people who use paint daily understand it the best. That’s why I was more than happy to be part of Dulux Trade’s external testing panel, as it’s imperative the trade is involved with the product development process.

‘Decorators tried a wide range of paints on several surfaces, giving feedback on their performance and finish. It was a blind testing, so we had no idea which products we were using. The process was thorough, so we got an idea of how the paints performed in real life scenarios.

‘It’s vital for decorators that paints have been tested by other professionals, which is why the Tested & Approved seal of approval is so important. Having since used Dulux Trade Diamond Matt, I’m impressed with its opacity. It is beautiful to apply and you’re safe in the knowledge it will stand the test of time. Ultimately, decorators want quality at a fair price, and Dulux Trade delivers.’ ●



It’s vital for decorators that paints have been tested by other professionals



*For further information about the Tested & Approved process visit: www.duluxtrade.co.uk/testedandapproved



SPECIFY RESPONSIBLY

The ongoing issue of hard - to - treat walls in the UK can be overcome utilising Spacetherm, an ultra - thin insulation for thermal upgrades, saving valuable space without altering the exterior fabric of the building.

3: Culture



Michael Collins talks to me while on holiday in Boston's fringes, where ash and smoke from wildfires raging in Nova Scotia have channelled south to hang in the air and turn Massachusetts' limpid summer Moon an apocalyptic orange.

Perhaps it was once like that here at Beckton Jetty. From 1870 coal barges plied the Thames to feed what was world's largest gasworks for 100 years until its closure, when coal-gas production stopped and the gasometers finally ceased their inexorable piston. Now the site behind the jetty lies abandoned as a lorry park, encroaching development rising nearby to intimate a future.

'I find ruins of any kind relaxing – it's as if

the landscape is at rest,' Collins tells me, adding that photography is, itself, a kind of archaeology; ironic, when that discipline provided the earliest and most enduring subjects for the camera during the great excavations in Egypt, Italy or Greece.

His view is that the British have an ambivalent relationship to industry, having to either recreate it as a theme park or obliterate its traces altogether, so I ask him if his image embodies a nostalgia for something past or just an expression of absence? The truth is even more benign. 'Whatever is going on in the world, this stands like some industrial Persepolis; mutely, as a river flows by.' • Jan-Carlos Kucharek

Michael Collins
Beckton Gasworks
Pillars No.2, London.
2022

Fuji GFX 100
with a 63mm lens

Neo gives barns a new lease of life

The neo® range from the Rooflight Company helps give new purpose to derelict 19th century barns in rural West Dorset

Rooflights provided a key design feature in converting a collection of derelict 19th century barns into an accessible, farm education and holiday site for a not-for-profit organisation.

When the owners of Wraxall Yard approached Clementine Blakemore Architects to help transform the run-down site in the West Dorset Area of Outstanding Natural Beauty, the strategic brief included two priorities. The first was to ensure accessibility and inclusivity for all, and the second was that the restoration be sympathetic and pay homage to the site's agricultural heritage.

Planning restrictions meant that achieving a good source of natural light in barns that traditionally have no windows was a challenge. The Rooflight Company's neo® rooflights were the perfect solution for both light and ventilation. The modern design aligns with the architect's brief for repairs to be 'visible and pragmatic', while also using reclaimed and naturally derived, low carbon materials where possible.

The agricultural rusticity of the design contrasts with the comfort of the accommodation itself. With its lining to glass® design, the neo® provides modern punctuation and effortless integration between interior and exterior. Its motorised opening plays an instrumental role in creating cross ventilation in conjunction with the doors, providing



Above The Rooflight Company's neo® rooflight installed on award-winning project, Wraxall Yard.

Top and below right Stunning vaulted ceilings with neo® rooflights allow for an abundance of natural light, while their signature flush finish create unobstructed views across the fields beyond.



Book a CPD scan here

www.therooflightcompany.co.uk
For further information on the full range of rooflights, please contact: enquiries@therooflightcompany.co.uk

a well-ventilated room at the touch of a button, for the comfort of guests.

Use of seven neo® rooflights was key to the design and function of the development, which is why the architect specified this effortlessly elegant rooflight. The space reflects both its environment and heritage while offering comfort and accessibility to guests. Testimony to the design and quality of the project is the High Commendation received by Clementine Blakemore Architects in the 2023 MacEwen Awards and its winning of the 2023 AJ Retrofit Awards. ●



'If only leaky homes could also be fixed en masse from space; perhaps an insulation zapper would do the trick'



Global warming: is it time to panic?

Eleanor Young wonders what it will take for us to take climate change seriously

It seems hard to believe that it was only in 1972 that we first saw the whole earth as a lonely green and blue ball floating in space. The Blue Marble picture, captured en route to the moon, has become iconic.

From the busy space of the thermosphere, where satellites orbit in temperatures of up to 2400°C, there have now been many more images. From those satellites, NASA's time lapse images have captured the polar ice caps retreating. Soon we will be looking at earth from satellites in the familiar flame tones of thermal imaging as one company, Satellite Vu, launches eight satellites with high definition thermal imaging. HOTSAT-1 reached orbit in June after its (no doubt carbon-costly) rocket launch.

Last month Leeds City Council took part in a pilot for this satellite imaging that will eventually spy out leaky homes from 500km into space. It plans to use the data to help with its £16.8 million Net Zero Homes plan to upgrade dwellings. It will also help build bids for grants to fund more of this work. If only leaky homes could also be fixed en masse from space; perhaps an insulation zapper would do the trick.

A massive injection of capital from central government would also be welcome. This seemed to be on the horizon, possibly at next election, with Labour's promise of £28 billion a year for its Climate Investment Pledge – some of which was intended for insulation and retrofitting. It would have also aided newbuilds with plans to make British-made steel carbon neutral. But the current economic mess has seen shadow chancellor Rachel Reeves step back from commitment.

It is not the time to go soft on carbon targets. While the UK basks in another hot summer spell, the weather around the world has all the warning signs of climate change – with the eight

hottest years on record in the last eight years. Meanwhile the global prediction of the National Centers of Environmental Information in the United States is that this year will also be hot enough to join the record books, a reflection of the impact of record highs of the big three greenhouse gases – methane, nitrous oxide, and carbon dioxide.

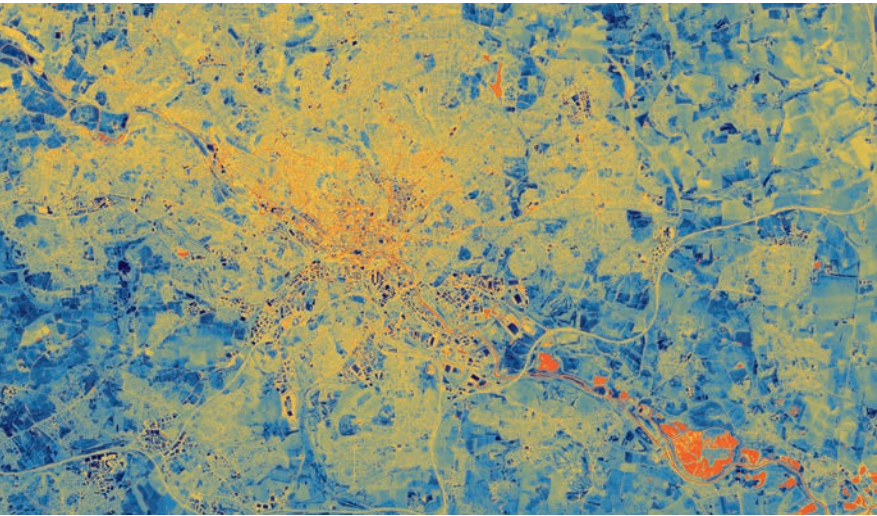
The orange glow, taste of smoke and airway clogging particles taking over Boston and New York from Canadian wildfires over 1,000 miles across the border has been widely reported. But on the West Coast of the US wildfire smogs are now becoming a regular occurrence, with authorities urging residents to buy mechanical filters and set up clean air spaces in their houses – a kind of panic room to retreat to when the threat of climate change gets too much.

The question of action is becoming a hotter topic. Can we get to insulation, rocket-fuelled or otherwise, before we start needing to retrofit our homes with climate panic rooms? ●

ONLY ON RIBAJ.COM

If we judged people by where they live, architects are far closer to artists and actors than to bricklayers or quantity surveyors. Where do architects live? The Census knows: ribaj.com/census

Below Leeds according to thermal mapping in April 2023.



STEPHANIE WUNDERLICH PHOTO: LEEDS CITY COUNCIL



All present and correct

In his last column as RIBA president, Simon Allford leaves feeling he has achieved his aims and excited for the institute's future

In September, just over 1,000 days since I became president elect, I will be stepping down from the role. Medical science says the first 1,000 days in anyone's life sets the precedent for all the days to follow. It also talks of the last 1,000 days, but in relation to an end-of-life journey, so it is not – despite how it has sometimes felt during my tenure – relevant to this Institute or this column.

Of course, like all presidents, honorary officers, members of council, board, committees and the indeed the staff team, I am just passing through. I ended up here because I was very vocal in my criticism, demanding that the profession storm its London HQ and 'take it back for architects and architecture' and fill the building with architectural life. Past president Jack Pringle shared my mission, and together – I as president, he as chair of board – we have worked with the similarly committed of the wider group to help build a team and a long-term plan. So I will step down happily knowing there is a continuity plan that will allow RIBA to move to the next level in fulfilling its Charter commitment. It will be better equipped to serve society, engaging with its members, public and government in leading the design of the low carbon future. This ambition is now embedded in the governance and organisational structure, and collective mindset.

Crucially, it is also reflected in the plans for the architecture of organisation's headquarters. Though architecture has limits it can help those it accommodates to define a better future. So the RIBA has embedded the idea of the House of Architecture in all that we do and a number of us are signed up long term as stewards of this project.

This overarching project has dramatically reduced our property footprint and, in a few years, our magnificent but inaccessible and decaying forever-home at 66 Portland Place is to be turned into the accessible generous and delightful centre of architectural discourse we have long needed. Our plan also involves cataloguing, digitising and generously sharing our magnificent world class collection of more than 4.4 million drawings, objects, photographs, models and books, helping give the RIBA a clear



outward-looking public identity as a generous host. A place where ideas about the design challenges of today and tomorrow are aired and shared. This model of RIBA as an Institute of Ideas is vital to its future. With everything in one building – mirrored in a virtual world – we can support architectural action by our members and others around the world as we work collaboratively to design the low carbon future.

We have tough targets and 2030 is just seven years away. But I believe that by sharing knowledge we can make the rapid progress required. Alex Gordon PPRIBA was right when he said the future 'means more climbing on other people's shoulders and less ad hoc originality'. Which is why we need a House of Architecture. Innovation is about learning from history as we seek to address the great problems we face. Problems that demand great thinking from us all.

This will require considerable effort and engagement. Like Groucho Marx, we architects are not keen to join any club that will have us, but the RIBA is the best vehicle for supporting academe and practice in dealing with the bigger picture. We invented it and we need to make sure it is seriously useful and seriously fun.

These are exacting but exciting times, and with the engagement of members old and new, the re-modelled RIBA can enable us all to play a vital role in designing a better future. ●

Above One of the RIBA's digitised collection – a design for a waterside office block with helicopter terminal by R Seifert & Partners in 1970.

STEPHENSON ROCKS
The RIBA's summer exhibition, *The Architect has Left the Building*, is a considered patchwork of architectural joy and cinematic vignettes sourced from the archives of celebrated photographer and filmmaker Jim Stephenson. Until 12 August. More detail at architecture.com

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It's all in the mind

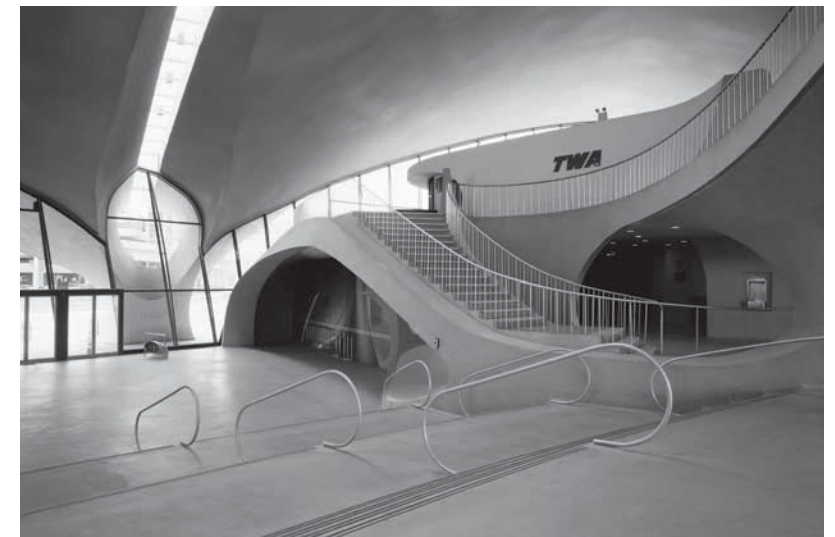
Will Wiles uses his human faculties to work out why AI can never create art, or architecture, that has any real creativity

The plot of William Gibson's cyberpunk novel *Count Zero* (1986) hinges on a question of authorship. Who is the anonymous artist of a remarkable series of found-object collages? The answer is no one – no artist, anyway. They are made by a neglected artificial intelligence hiding in an orbital server farm, and their melancholy meaning must remain somewhat inscrutable.

When I first read *Count Zero* 30 years ago, the thought of art made by artificial intelligence felt brilliantly exciting and subversive. Today, I fear we may already be tired of it. AI art may emit the odd twinkle of novelty or strangeness, but that doesn't alter its fundamentally dreary, imitative nature, and its plagiaristic reconstituting of the work of real human artists with the creative insight of an auto-completed text message. It is guessing what the talented might have made of the instructions of the talentless.

Gibson's *Boxmaker* beguiled with its glimpse of the inner landscape of an alien mind. Today's AI art just offers a bleak view of the mundane contents of human minds in the tech sector, for whom human art is unnecessary expense and human artists an obstruction. A few months ago, feeling more open-minded and curious about the technology, I argued that architecture was probably one of the better placed arts to weather this tempest of dross, given its reliance on a wider suite of practical and management skills. But with the AI industry's apparent eagerness to sink its talons into anything faintly enriching to the human spirit, that might change. Hopefully professional bodies and the public at large will get their act together in defence of human creators.

Yet the subject still has its intriguing aspects. Its defenders claim that creative effort is still required to get the best results, in the writing and refining of the text prompt that the machine works on. It's a nugatory skill, far more reliant on knowing the right keywords than any descriptive flair, and hardly equals the work of an artist or architect. A client can't claim credit for an architect's work because they wrote the brief. A good brief surely goes a long way, but not all the way. Nevertheless, the machine's reliance on



prose expresses something about the way words underwrite other arts.

Alberti regarded architecture as a sort of rhetoric – a way for a society to express its beliefs and virtues. It is part of a conversation, and conversation can be part of art. Eva Hagberg's recent *When Eero Met His Match* examines Aline Saarinen's contribution to her husband Eero's career. Hagberg makes a case for the importance of talking as part of the making of architecture. Aline worked as Eero's publicist: she discussed his projects with him, and then talked about them with the press. In Hagberg's telling, this helped clarify the ideas and images the great Finnish-American architect employed on his later projects.

It's a curious feature of artistic creation – be it book, painting or building – that a fully formed idea is never fully formed. It is not present in the head in every detail, waiting to be mechanically reproduced in the real world. It's only when you start working on it that you discover what it really is. If I experience a creative problem, and I write to someone about it, I often find that summarising the problem on the page provides the solution: the question answers itself. Expressing something in the form of a text prompt, an instruction or an 'elevator pitch' isn't bad practice. But it's where the work begins, not where it ends. ●

Read Will Wiles at ribaj.com or here every other month

Above Does Eero Saarinen's work, seen here at the TWA terminal, New York, show that talking can be a form of authorship in architecture?

BRINGING THE INSIDE OUT

As I write, AI enthusiasts are touting the technology's expansion of the frame of classical paintings, showing what the painters 'left out'. An asinine exercise with predictably dire results. But I do wonder if – just for fun, you understand – an AI application could be made to join in an architectural guessing game: figuring out the internal layout of a building by looking at it from the outside.



Experimenting and making drive Asif Khan, where buzzing creativity and burgeoning success belie Khan's gloomy predictions for the automatised of design and construction by AI

Words: Eleanor Young Portrait: Agnese Sanvito

Wonder world

'What should we do with the final 25 years of our profession?' asks Asif Khan.

For the past 15 years Khan has been building up his own practice, and things are looking good. During his part 2 at the Architectural Association he was talent spotted to follow Thomas Heatherwick in building a seaside structure at Littlehampton; in 2010 there was a Design Museum fellowship, and at the London 2012 Olympics the exploding red and white planes of the Coca-Cola Beatbox Pavilion. Then there was a slew of lively temporary projects. But now Asif Khan as a practice is competing and winning projects for cultural giants where curation and deep thought are just as much part of the design as drawing up plans and programmes.

The practice's reworking of Smithfield Market for the Museum of London is due to complete in 2026 and it won the competition for the renewal of the Barbican Arts Centre last year. It designed the 21m-high carbon fibre gates for Dubai Expo 2020 and the 650ha of public realm that has become a new quarter. And it has a museum and space centre in the Middle East and projects in the Republic of Kazakhstan.

So why the dire warnings for the architecture profession? In Khan's analysis, technology, financial greed and our depletion of natural resources – from ecosystems to materials we extract – combine in the form of artificial intelligence and robotics to create a seamless, architect-free process from design through to construction. Which is, in effect, a money making, resource gobbling machine with few limits that can tear through the biosphere. Quietly, with energy and deep, gentle pauses to draw out what he really means to say, Khan

makes a case that speaks to your heart. I ask him if this is about extinction. He is more optimistic than that in person, but his recent short film, *Kalpa* (the Sanskrit word for birth and destruction at a cosmic level), takes us through two billion years of the earth's history and the near future, from microscopic organisms through industrialisation to humanity's self destruction.

He was in early on AI, beta-testing DALL-E pre-launch, and saw what it could do. And he knows how far things have moved even in his 43 years. 'Even Vectorworks or Revit can work out a staircase for you,' he says. 'All professions in construction can be automated.' But that is not all bad. 'The worst architecture will get better when it is automated,' he says lightly, as we discuss poor quality housing estates and awkward offices.

Below Inside the Museum of London, a visualisation of the building that will open in 2024. Appointed with Stanton Williams, Asif Khan took on one of the two market halls.



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Culture Profile

That still leaves some big questions for the last 25 years of the profession as he sees it. 'Should we design with panels and prefabs to be assembled by robots? Or do things that are a brilliant celebration of ingenuity?' He has an urgent call to action for humanity: 'We must learn to value human creativity.'

He sees the possibility of a fightback following the model of the slow food movement that emerged as fast food was recognised as a problem – which brought a focus on home cooking, great alternative chefs, farmers using permaculture and the explosion in sourdough and artisan bakers. Does that reach the whole of society? Probably not. 'It may be more challenging and less affordable,' he concedes. He is planning something of a research project on this, ahead of his RIBA + Vitra talk in September, which will take it as its theme.

As we tour his east London studio it feels like creativity is already being valued. The light industrial unit is inhabited by fantastical original models and mock ups and a dense library that leaps from social justice to magazines. Some magazines were collected before his Bartlett Part 1, when Khan discovered a deep love of craft and making at the Prince's Foundation which rivalled his teenage interests in computing and film. There is a cluster of desks with the team at work. And then there is more, we walk through the climbing wall, cut and installed between lockdowns in a test for a new CNC Smart Bench: 'a few of us like climbing'. We edge around a newly laid brick wall in the centre of the workshop,



Above An early project – Beatbox pavilion in London's 2012 Olympic Park.

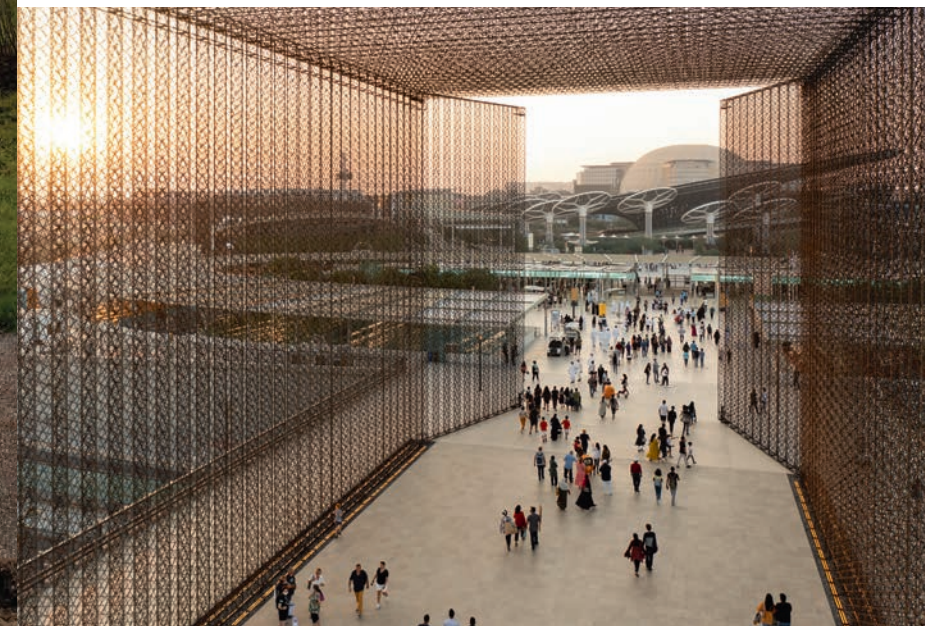
Below The remarkable carbon fibre gates at Dubai Expo 2020.

Below right But the last legacy here will be a new quarter, the landscaping designed by Asif Khan.

ready to test renders, and stop at a bench for trying out fabrics – starting with market sacks – for the Museum of London. Then there is the messy workshop. 'Everyone is encouraged to be in the workshop for their projects and to understand materials,' says Khan. A structural model of a self-supporting wall of stone and glass is for an installation with Theaster Gates, in a dock on Liverpool's waterfront. 'We work it through then test it with engineers,' explains Khan.

There are similar riches in the archive. Here are the slim black A4 boxes in which Khan gathers his inspirations and sketches for projects, a column light unused from a project that will make it in one day, a droplet of plaster, a series of droplets that they now know how to produce to perfection – perhaps the method could be used for making chocolate? The 5000 pages for the public realm at the Dubai 2020 Expo, 500 from the practice figuring out junctions and locations of plants, 1000 from collaborator Aecom – each marked up by the practice.

Its latest project, the Museum of the Incense Road in Saudi Arabia, avoids the monolithic approach of many museums in favour of pavilions creating an extension of the public spaces of its host village. With this Khan estimates the office has enough work for 100 architects. They will be recruiting but he wants to keep the practice small and work out a model to multiply its work, perhaps as with Aecom, perhaps using the model of film production, where people are brought together project by project. Khan is puzzling this out, he has never had a blueprint of practice to





ASIF KHAN/MIR

work from having skipped that stage in his career. It might not be easy though. ‘Clients are now asking us to do everything, from programme to logo,’ he explains.

Some of the projects will take many years to realise, like the work on the Barbican with Allies and Morrison. This is one Khan is particularly attached to – he was taken there as a child, playing in the public spaces. He might be a London boy but his geographical hinterland is rich and complex, with his father coming from Pakistan and his mother growing up in Tanzania. Through his Japanese ex-wife and their children he has a strong attachment to Japan, where he has taught, and he looks to Kenya Hara – Muji art director, a mentor and collaborator – for advice and inspiration. His current wife is Kazakh: ‘A revelation to me, Kazakhstan connects the world together,’ says Khan.

But in recent years he has found himself in his work in Dubai. There is a shared Islamic heritage and many more connections. They enabled Khan to connect with deep parts of his identity. ‘There were things that I hadn’t allowed to be present in my work creatively. It is something a lot of diaspora people feel. You want to be assessed by the measure of the society, on your ability to assimilate. I had put away things I had learnt as a child, as I have grown older I am ready to go back to them... The funny part that is our individual identities are fundamental to our personal happiness, purpose, dialogue with peers and what contribution we make to society. It has to come from within, from your heart.’

Throughout our interview Khan paints a picture of a dynamic studio, with colleagues (each warmly named) jumping up to make models and sharing stories of trips. He talks about it as a teaching practice – always investigating, often in new territory – and it is obvious that it’s a personal

Above left Model for Tselinny Centre for Contemporary Culture, Kazakhstan.

Above A consultation visualisation for a pavilion in Canning Dock, designed by Asif Khan and Theaster Gates. This is part of a 10 year long plan to revitalise the dock by National Museums Liverpool.

Right Museum of Islamic Manuscripts, Sharjah.



one, pursuing his ideas. When long-time fellow director Peter Vaughan joins us we move into more material detail. But even then Khan values the less tangible: ‘He asks all the questions that stretch the narrative,’ he says of Vaughan. I am interested in the tension between big thinking, experimentation, investigation and the exciting process of design versus gruelling long projects and Khan’s commitment to serving demanding clients, often jumping on a plane to do so. I want to see Khan’s own experimentation and whether he is being sucked into management, so I ask about the last model he made. And there they are, little squiggles of plasticine, an acrylic grid, coloured Jenga style blocks. In each sequence of models his is the first, the roughest, the one most likely to get thrown away, but holding the seed of an idea.

This hive of industry and creativity seems a long way from Khan’s dystopian vision of the future. Long may it stay that way. ●

Details of Asif Khan RIBA + Vitra talk: architecture.com



ASIF KHAN (2)



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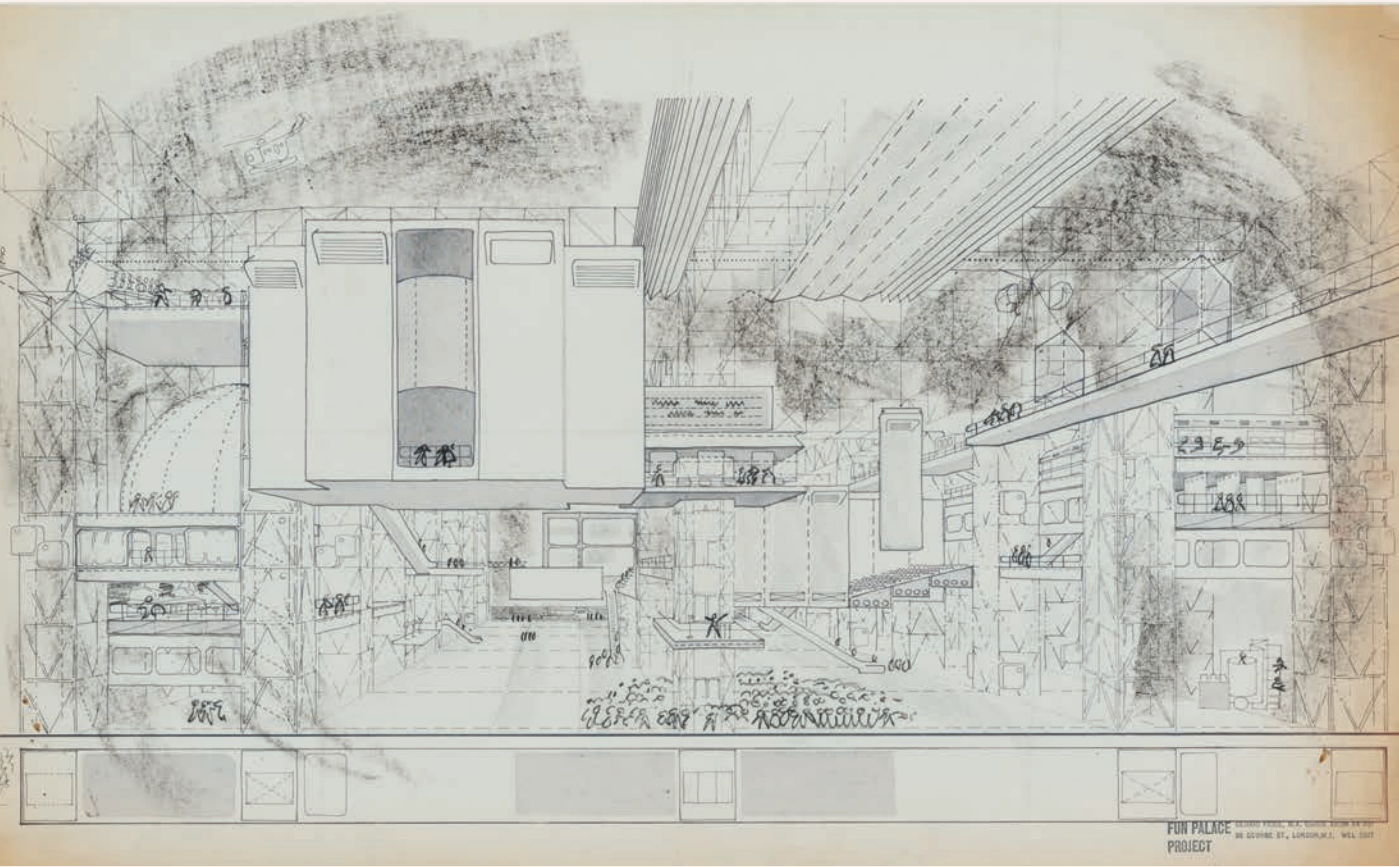


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Department 4 Education: last chance to enter

The department store has seen its popularity decline, but demand for schools continues unabated. Could one become the other? This competition to imagine how it could be done closes on 7 July



THE BRIEF

Choose any UK department store, redundant or not, and show us how it might be turned into a small secondary school for 750 pupils with an average class size of 30. Inspired by the likes of Cedric Price and Joan Littlewood's 1960 Fun Palace perhaps, how can the plan form accommodate new educational uses? How could the complex programme and adjacencies of classrooms, labs, refectory, library and school hall play out within the deep plan? Could you knock through floor plates or repurpose the atrium – and what about roof level? Will it fit in a playground or even a playing field? And how does the new programme manifest outside? The Victorian schoolhouse was intrinsic to the city fabric – how might it be again? Using SterlingOSB Zero as one of the main components in your intervention, show us how your design generates an exciting 21st century re-imagining of a 20th century building type.

While we know the SterlingOSB Zero will be used in conjunction with other materials, consider its nature to ensure propositions reflect its materials capabilities where it is specified. SterlingOSB Zero used externally should be adequately protected with a suitable cladding material and insulation; this may also apply to internal finishes.



Above M&S' Art Deco Oxford Street store in London.

Opposite Fun Palace: Interior perspective 1964. Coloured pencil, ink and ink stamp on reprographic copy paper. 49.6 x 81.2cm.

Below Peter Jones department store, Sloane Square, London, by William Crabtree, 1939.

JUDGING

Chaired by the RIBA Journal, judges will look for imaginative and successful responses to the competition brief that also makes best use of SterlingOSB Zero in its specific context. Pre-fabrication or CNC fabrication to create novel forms will be considered. While other materials may form an integral part of any proposition, it is expected the design will make good use of SterlingOSB Zero.

In this ideas competition, the winning proposal will be the one that the judges consider unites the programme for a school and its attendant spaces with the volume, floor plate and site context of the chosen department store in the most exciting and imaginative way. Blue-sky thinking to interpreting the brief is welcomed – if carried out with conviction!

JUDGES

This year's judging panel will be Holly Lewis, cofounder of We Made That; Proctor & Matthews Architects' Stephen Proctor; Buttress Architects director Chithra Marsh; David Connacher, marketing manager of West Fraser UK and will be chaired by Jan-Carlos Kucharek, deputy editor of the RIBA Journal.

DEADLINE

Entries should be received no later than 14:00 UK time on Friday 7 July 2023.

TO ENTER

Go to ribaj.com/departement-4-education-enter. Entries must include the following, laid out on no more than two A3 sheets, supplied electronically as pdfs and uploaded to the official entry website.

- Plans and sections explaining the nature of the school intervention.
- 3D axonometric or internal perspectives conveying the school project at key positions in the building.
- Supplementary images, eg schematics of structure or programme, that would best convey your proposition.
- An explanation of no more than 500 words describing the choice of department store and core ideas for the design concept, siting, layout and internal configuration.

NOTES

- The judges' decision is final
- First prize £2500.
 - Three commended prizes of £500
 - No correspondence will be entered into by the organisers or judges regarding entries or winners.
 - Shortlisted entries will be notified in writing.
 - Shortlisted entries will be invited to the winners' announcement and prize-giving on 21 September 2023.
 - Email any questions to ribaj.department4education@riba.org



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Culture Review

Lesley Lokko's post-colonial reset

Venice Biennale's 'uncomfortable and uplifting' Laboratory of the Future confronts architecture's complicity in colonial violence and environmental destruction. Chris Foges looks at a bid to change the status quo

The 18th Venice Biennale of Architecture is presented as a turning point, both for the festival and the discipline. 'Rupture' is the word used by its curator, the Scottish-Ghanaian architect, teacher and writer Lesley Lokko. That's probably right. Until now, the most exalted platform in architecture has been given to the grand schemes and *recherché* preoccupations of established stars, mostly from Europe, the Americas and Asia. Lokko's Laboratory of the Future instead turns the spotlight on people and places that have been not only under-represented here, but largely excluded from the story of architecture.

For the first time, architects and artists from Africa and its diaspora comprise the majority of the 89 contributors to the exhibition, presented in two giant venues at the Arsenale and the Giardini, surrounded by the national pavilions that make up the other half of the event. The gender balance is

MARCO ZORZANELLO



Above Debris of History, Matters of Memory by Gloria Cabral and Sammy Baloji with Cécile Fromont.

50-50; the average age just 43. Many are what Lokko calls 'hybrids', working across disciplinary and cultural boundaries. All were asked to address twin themes of decolonisation and decarbonisation, and to 'bring their authentic selves'.

The result is a bold, complex exhibition that seems urgent and deeply felt. It is uncomfortable and uplifting, forcing us to confront violence and environmental destruction in which architecture is complicit, while pointing – in a vague way – to a more equitable future. Like all recent biennales it is vast, scattershot and uneven, but just about held together by Lokko's clarity of purpose.

Some of the most potent exhibits deal with the enduring legacies of historic exploitation. With architect Gloria Cabral and historian Cécile Fromont, Congolese photographer Sammy Baloji has produced a rippling, glittering wall of smashed brick and coloured glass, scored with precise geometric patterns. The motifs derive from textiles from the Kongo kingdom and Brazil – places linked by the slave trade – while the structure is made of demolition waste from the former imperial capital, Brussels. It is a beautiful evocation of the idea that value can be created from the 'debris' of the past.

Miami-based Germane Barnes challenges the assumption that the dominant voice in architecture can speak for all. His gnarled column carved from black marble, representing diasporic identities, is offered as a 'sixth order' that rejects the rules of the classical tradition. It finds a chilling echo in an exhibit by Mabel O Wilson with Höweler & Yoon. In sound and light they convey what little is known about 4000 enslaved people who built the University of Virginia, whose Thomas Jefferson-

Left Griot, by Studio Barnes, incorporates the 'Identity Column' which stand on an axis from the entrance to the Arsenale.

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Culture Review

designed classical Rotunda represents the power of reason. The words of one, Isabella Gibbons, are stencilled on the backdrop: 'Can we forget the crack of the whip, cowhide, whipping post... No, we have not, or ever will'.

Alongside painful histories in the guise of ostensibly beautiful objects, there are heart-on-sleeve celebrations of identity and community. Lokko calls it a 'collective outpouring of pride and joy'. One standout is an alluring triptych by Kolkata-born, London-based, Arinjoy Sen. Made with Bengali garment workers, it depicts architect Marina Tabassum's bamboo monsoon shelter and scenes of communal construction among palms and meandering watercourses, in a hymn to co-operation between people and with the planet.

Another recurrent theme is ongoing plunder of far-away lands. A son-et-lumière by Andrés Jaque dramatises an unexpected link between New York's \$25bn Hudson Yards and Xolobeni in South Africa. The exaggerated lustre of stainless steel skyscrapers relies on titanium extraction that depletes the soil and throws up choking dust.

Thandi Loewenson's intricate drawings tie exploration of the cosmos to the exploitation of African sites from which satellites were launched. They are etched on graphite mined in Mozambique – a major component of the batteries integral to much sustainable technology. It's a telling illustration of Lokko's contention that decarbonisation and decolonisation are



Above Kwae, a space for reflection and events at the Arsénale, designed by Adjaye Associates, is one of few large-scale structures in the exhibition.

inseparably connected. 'After all,' she says bluntly, 'the Black body was Europe's first unit of energy'.

These are complex stories, not easily communicated through the sort of art-objects that predominate, or at the breakneck pace of a large show. Most exhibits need long captions – unhelpfully in small type and low light. The effort required is usually rewarded, but it's hard going.

Also frustrating is a general absence of buildings, although a small sample of African projects hints at a serious effort to develop new languages for architecture whose starting point lies outside the Western canon. David Adjaye presents current work on both sides of the Atlantic – from the national cathedral in his native Ghana to the Newton Enslaved Burial Ground in Barbados – whose design is rooted in local cultures and geography. Niger's Atelier Masōmī shows its striking public buildings against chalk wall-drawings of vernacular Sahelian architecture. A clay structure by Francis Kéré explores the low-carbon potential of traditional construction in Burkina Faso.

You also get a fascinating glimpse of Koffi & Diabaté's sustainable masterplan for the town of Ebrah in Côte d'Ivoire. Otherwise there's little engagement with large-scale development. It is a significant omission. Africa's population is expected to double by 2050, and perhaps 80% of the buildings it will need don't yet exist. Choices



Left Graphite drawing by Thandi Loewenson.

Right Process, an exhibit by atelier masōmī, pairs models of the architect's projects with chalk drawings of historic vernacular buildings in the Sahel.



MATTEO DE MAYDA (2)

ribaj.com

The RIBA Journal July/August 2023

ANDREA AVEZZÙ



made now will shape the lives of billions and determine global efforts to decarbonise. Nowhere does the design of buildings matter more.

At its opening, however, Lokko rejected criticism that the exhibition ‘stops short’ of architecture, saying: ‘The opposite is true; it’s our conventional understanding of architecture that stops short’. The discipline, she argues, is broader than the profession, taking a legitimate interest in all aspects of land use, and in territories defined instead by culture, economics or technology.

Work on show includes research, community organising and activism. A gripping film details architect Alison Killing’s Pulitzer Prize-winning work to identify China’s Uyghur concentration camps from satellite photos. Architectural skills are also deployed to recognise spaces claimed by those who don’t get to shape the built environment. Le Laboratoire d’Architecture uses simple line drawings to map nomad encampments in Tunisia and halts for travellers’ caravans in Lausanne. A film by London-based Gbolade Design Studio documents social networks forged by the Windrush generation through dominoes clubs.

Lokko insists, too, on the primary importance of the imagination in building a better future, especially where circumstances seem to limit possibility. So we get a fair bit of freewheeling speculation, unfettered by the practicalities of concrete propositions. In that vein are diverse contributions by Estudio AO, MMA Design Studio and Forensic Architecture which examine below-ground traces of ancient settlements in South Africa, Amazonia and Ukraine. These finds are pitched as inspiration for more sustainable, egalitarian forms of urban organisation, though what that might look like remains unclear.

A fantastical suggestion comes from Brooklyn-based Nigerian artist Olalekan Jeyifous. In a room set up as the lounge of an imaginary African transport hub, he presents a counterfactual history in which extractive colonial rule was

Above Counteract, an installation by Kéré Architecture, demonstrates low carbon construction using traditional techniques – and makes a welcome rest stop.

replaced with a continental conservation effort mingling advanced technology and indigenous knowledge. Imagery depicts people shuttling about on drones, clad in the wide lapels and military fatigues of 1960s liberation movements.

Jeyifous’ exuberant, immersive installation is an anomaly in a biennale with significantly fewer room- or building-scaled exhibits than recent editions. Instead we get textiles, digital works and films. In places the show seems stretched very thin.

In part, that reflects a laudable effort to minimise environmental impact. It’s also about money. Although sponsors have pitched in, many exhibitors lack the resources of the large practices who usually appear here. Lokko addresses that point with rare frankness at the entrance, listing barriers to participation that range from software priced for the Global North to difficulty in securing visas. The connection between means, representation and the opportunities that follow might be one of the most valuable insights visitors take away. If this biennale triggers a recalibration of expectations, so much the better.

Lokko prefaced the show by saying that its ‘essential gesture’ would be change. And it seems unlikely that the biennale will revert fully to type; a dam has burst. But what effect will this exhibition – which offers more questions than answers – have beyond its walls? As Lokko advised participants, quoting Maya Angelou, it’s not what you did or said that people remember, it’s how you made them feel. For many visitors I spoke to, the Laboratory of the Future was received like a cool drink in a desert. They left energised and optimistic that this is indeed a transformational moment, helping to catalyse a more diverse, pluralistic and ethical turn in the culture of architecture. Lokko is hopeful, too, if circumspect. ‘All events are beginnings in some ways,’ she says. ‘This one offers a unique platform. More fool all of us if we don’t build on it’. ●



Right Afrofuturism by Olalekan Jeyifous – the imaginary lounge of a transport hub on the Barotse floodplain.



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Obituary

English Heritage's best known public figure, champion of 20th century architecture and a RIBA fellow, author of multiple books and notably involved in the Twentieth Century Architects series



WILDE FRY

Elain Harwood 1958 – 2023

The historian Elain Harwood, who has died aged 64, was a tremendous force of energy which she devoted to 20th century architecture in Britain, chiefly the period after 1945. Born in Beeston, Nottingham, her love of architecture was sparked by a visit to the Nottingham Playhouse with her Brownie troupe. Proceeding to a history degree at Bristol, she ventured out with Reece Winstone's pictorial guidebooks to find buildings in obscure parts of the city.

After looking for a career in museums, she passed the Civil Service exams and joined the Department of Environment, landing in the newly-created English Heritage. Her interest was never exclusively limited to modernism; when she took the post-graduate diploma in conservation at the AA, her thesis was on Victorian asylums. She later took a PhD on the development of London's South Bank.

The listing of post-war buildings began tentatively in 1988, but with the establishment of the Post-War Listing Sub-Committee in 1992 Elain took on the role of processing research, which was carried out through printed sources, phone calls to architects and expeditions to discover what remained unmolested. Not all the sub-committee's recommendations made it through the double filter of EH's own Historic Buildings Committee and ministers who sought to curb excesses that would excite the press. EH managed this situation effectively with publications and exhibitions, and a more pluralistic view of the period began to emerge.

By 2002 the post-war programme was reduced to a reactive ad-hoc process, but she had been commissioned to write what became Space, Hope and Brutalism, English Architecture 1945-1975, published in 2015. It was an exceptional opportunity that she grasped with both hands,

accumulating facts from archives across the country, from interviews in which she became a valued friend of many retired practitioners, and from on-site inspections.

Elain's single-author books included three guides to post-war listed buildings, the Pevsner City Guide to Nottingham, and a popular series of style-focused books, including Art Deco Britain and Brutalist Britain. She was invited to write for the first issue of Twentieth Century Architecture, the new-style journal of the Twentieth Century Society (C20), and became an indispensable colleague over a further 14 issues.

When C20 and English Heritage worked with RIBA Publishing to launch the series Twentieth Century Architects Elain was a key figure, working with me to commission titles, and contributing one on Chamberlin Powell & Bon. Now with Liverpool University Press, the series numbers 21 books, with more in the pipeline. John Allan reviewed them as 'mercifully free from twaddle', which might have been Elain's motto as a writer. Her work was recognised by the award of an Honorary Fellowship of the RIBA in 2022.

Elain was also an indefatigable lecturer to audiences at home and abroad and made many appearances on radio and TV. She was probably English Heritage's best-known public figure, although she preferred to work directly with her subject area rather than rise up the ranks to administrative heights. Further roles included work with Architects' Lives, the National Life Stories oral history project, and Cambridge University's Masters in Building History.

She is irreplaceable as a friend and inspiration to many, apart from the achievements listed here. She still had so much more to give. ●

Alan Powers is an architectural historian and trustee of the Twentieth Century Society

IN MEMORIAM

Sydney John Hill
ELECTED 1956,
HERTFORDSHIRE

John Michael McIntyre
ELECTED 1969, ARGYLL

Julian Arthur Farrall
ELECTED 1970, NORFOLK

William Frederick Howe
ELECTED 1972, KENT

John Michael Bowers
ELECTED 1984,
HERTFORDSHIRE

Brian Geoffrey Falk
ELECTED 1955, NORFOLK

Gerald Burgoyne Gillham
ELECTED 1961, YORK

Edward Hardy
ELECTED 1963, BOLTON

Trevor Welch
ELECTED 1963, PULBOROUGH

Geoffrey James Frankham
ELECTED 1964, BROMLEY

Michael Tastard
ELECTED 1980, ABERDEEN

Robert Michaels
ELECTED 1986, LONDON

Mark David Slocombe
ELECTED 2003, BURY

Ronald Louis Guy
ELECTED 1956, BRIGHTON

David Ian Richards
ELECTED 2014, WARSASH

To inform the RIBA of the death of a member, please email membership.services@riba.org with details of next of kin

Eye Line 2023

Artificial intelligence has penetrated our annual drawing competition. Does it promise great new things or foretell doom? Will Eye Line – or the profession – ever be the same?



2023 JUDGES
Rana Begum RA
 Artist
Jes Fernie
 Curator and writer
Alan Power
 Architect and Eye Line
 2022 practitioner winner
Hamza Shaikh
 Architect and podcaster
Jan-Carlos Kucharek,
 Deputy editor,
 RIBA Journal

So many questions this year! The judging session was dominated by a debate on AI in architectural representation, spurred by a number of AI Eye Line entries for the first time. Ultimately it led me to the strange and obviously rhetorical inquiry: 'How good an architect could Martin Amis have been?' But in a way, even that was only a counter point to a much earlier question, posed by an entrant on RIBA's Twitter account, which had asked whether AI submissions would be considered. 'Why not?' I had thought at the time, 'After all, how would we even know?'

And that sense of not knowing was expressed by (almost) all the other judges. By Rana Begum, noted artist working in the 'real' visual and spatial realms, independent curator and writer Jes Fernie and 2022 Eye Line Practitioner winner Alan Power, an architect clearly at home as much in front of an easel as a monitor. Only Hamza Shaikh, architect at Gensler, architectural podcaster and author of the book *Drawing Attention*, which analyses the cutting-edge drawing techniques of students and architects in the profession, seemed to be able to offer the AI insights we all needed.

Shaikh was there at the beginning when AI platform Midjourney had only 5000 users, when the prompt notation for renderings was still in gestation and producing limited outputs. Now there are 1.5 million users and with its 'diffusion model', Shaikh tells us, which draws on image sources from across the web, the potential to generate AI images of incredible complexity and nuance is now possible. But there's one caveat, he adds – as long as we know how to ask for it.

'Simply typing in a prompt isn't good enough,' explains Hamza. 'The skill is in developing the prompt notation – which could be hundreds of words – and it needs architects to understand how and where it is used in the order, which changes the nature of the output.' Confused? We were.

And it turns out that it was not just an image he was looking for but



The potential of AI image generation to transform the profession seems excitingly, scarily, within reach

Above Practitioner Simon Crockford's pen on paper and digital media 'Prison of the Mind' was a Piranesian work offering temporary solace from the chasm of AI's potential.

Opposite Practitioner Andy Shaw's 'Mackintosh Wynd' digital drawing using Midjourney, merging Charles Rennie Mackintosh's south of France village forms, while picturesque, fell short of the hybridisation required.

Below One of practitioner Stephen Parnell's AI entries after his Twitter query. 'Lost Futures 3: People's Republic of South Yorkshire: Sheffield 1982...exploring undocumented, unknown, undesigned, unstoried, unexplored brutalist media constructions.'



how other techniques and skills might 'hybridise' the drawing to make it something unique and of the artist. 'I'm interested in processes and medium and pushing the boundaries of that, using AI but in combination with other techniques.'

If that sounded like a tall order, it was. None of the three AI submissions, two of which you see here to consider yourselves, made it past his critical eye. But in seeing the compositional beauty even of these examples, the potential of AI image generation to transform the profession seems excitingly, scarily, within reach.

Perhaps the vastness of that potential drew us all momentarily to the solace of Simon Crockford's pen-hatched 'Prisoner of the Mind', a contemporary reimagining of Piranesi. For Shaikh, it seemed 'to resonate with the idea of the isolation of social media,' but it transpired that those of us still at the social media base camp of LinkedIn failed to connect to that idea. And with judges still working, in articulating 3D, real, space, perhaps that accounts for the eventual winning entries in both categories.

But with the hybrid AI art era looking like it is visible on the horizon, it felt that this year we had hit a kind of watershed moment. What sort of architects will we be in the near future, and what skills will we need? Shaikh thinks architects will need to learn to articulate better with language and notation. 'So will architects have to become wordsmiths?' I ask. 'Perhaps,' he answers, 'and what if you ran a prompting competition instead?' The questions keep coming. ●

eye line

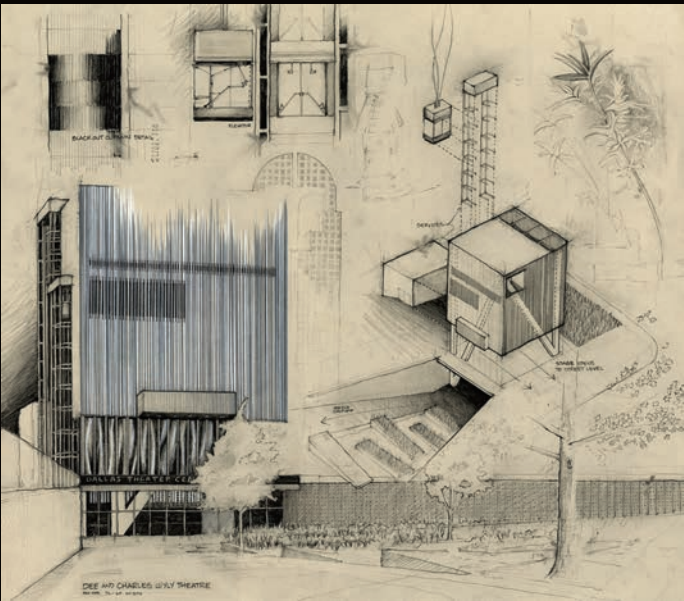
First, Practitioner
Dustin Wheat
Lecturer in architecture, University of Texas at Arlington, USA

‘I believe sketching is a reflection of how we internalise our world,’ explains our 2023 Practitioner winner Dustin Wheat. And with what skill he gives us a glimpse into his. The collage of pages from his Moleskine sketchbook, which revolved around his thinking for the design of a house for an astronomer, were as captivating in their detail as they seemed broad in their scope. Wherefore the octopus, from whose tentacles the rest of the drawings seem to emanate? And the yellow overlay (butter paper?) that creates formal connectivities over the conceptual ones. And it seems even Wheat was not sure where it the process would lead: ‘Each page had to consider how it was going to stitch together both vertically and horizontally, keeping me in the dark until completed.’

All the judges were beguiled by the result. ‘His sketch process seems to prototype a real world being created by idiosyncratically working through an idea – all done consummately,’ said Jes Fernie. ‘It’s amazing in linking one apparently unconnected image with one another,’ added Rana Begum. Hamza Shaikh added that while Wheat submitted three drawings, each displaying a proficiency that only arises from ease with the medium, ‘the sketch book montage evidences a serious level of skill; he’s a talented draughtsman; I even love the Post-It notes that run through.’

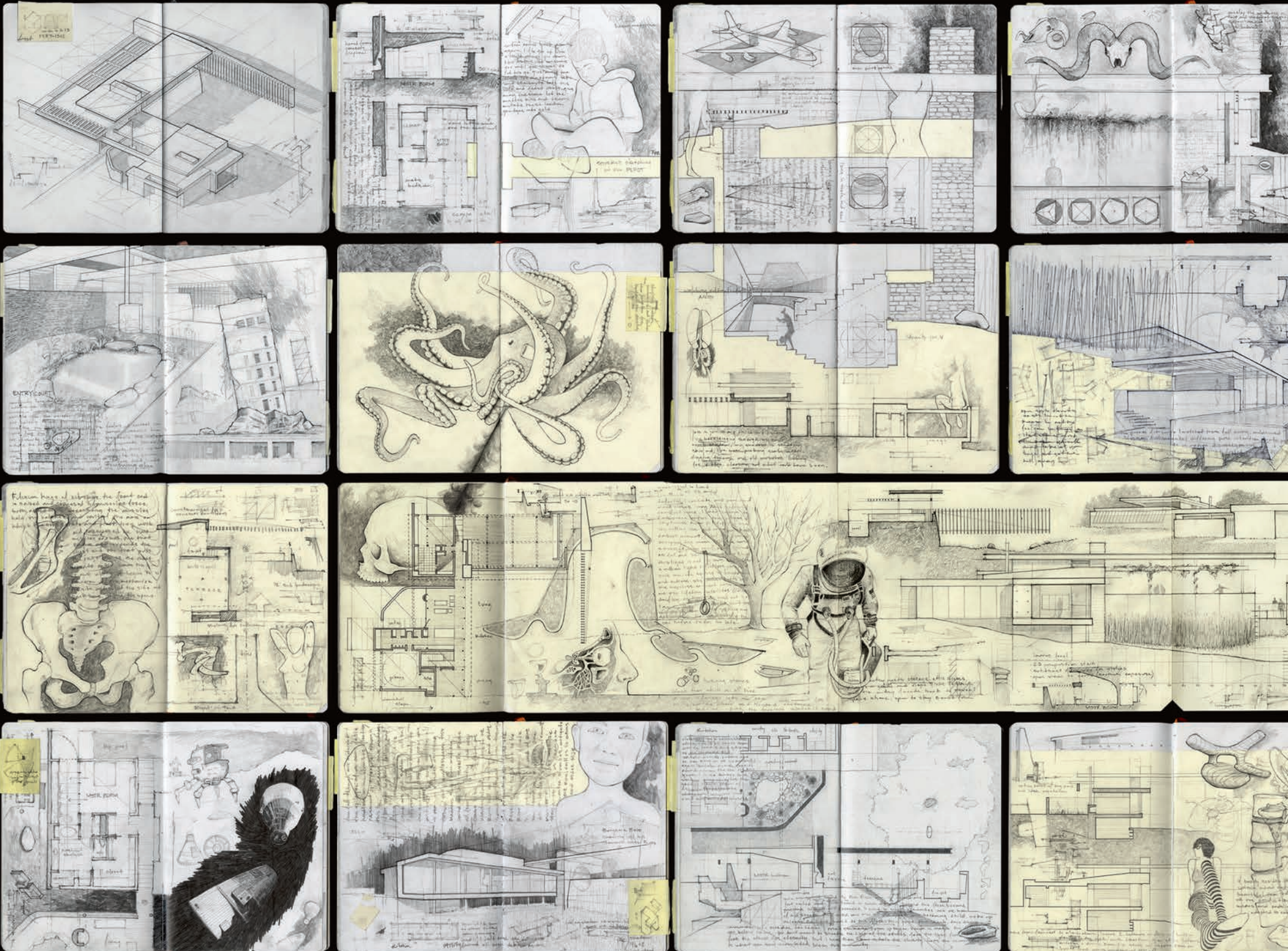
Wheat’s sketch of Le Corbusier’s Saint-Pierre, Firminy, chapel, impossibly supported on a fantastic mesh of strange timber, intimates a later hallucinogenic communion between him and Charles-Édouard outside Amsterdam, ‘...together, laying in a field of tulips’. A travel sketch of OMA/REX’s Wyly Theatre in Dallas meanwhile, was a skilful pencil render completed in-situ over many hours, in which he realised the importance of ‘bringing a goddamn chain.’ The personal nature of his interpretations charmed judges with their introspection, humour and humanity.

And while Alan Power was keen to note the hand-drawn sketchbook’s ‘singular nature’ compared to other entries, Begum was as drawn to his work’s potential to be randomised ‘in seeing what would happen if pages were mixed in a different way to generate a new arrangement’. Sublimating both ideas with themes arising from this year’s judging process, Fernie observed ‘the work appeals to me in the same way that we talk about AI’s hybridity; he’s using the old technologies of paper, pen and pencil but he’s similarly playing with format and scale, the future and past.’



Right Thinking
Architecture.
Graphite, Moleskine,
Loose Paper,
850 × 1130mm.

Left
WYLY Travel Sketch.
Graphite, Ink,
Colour Pencil,
400 × 450mm.



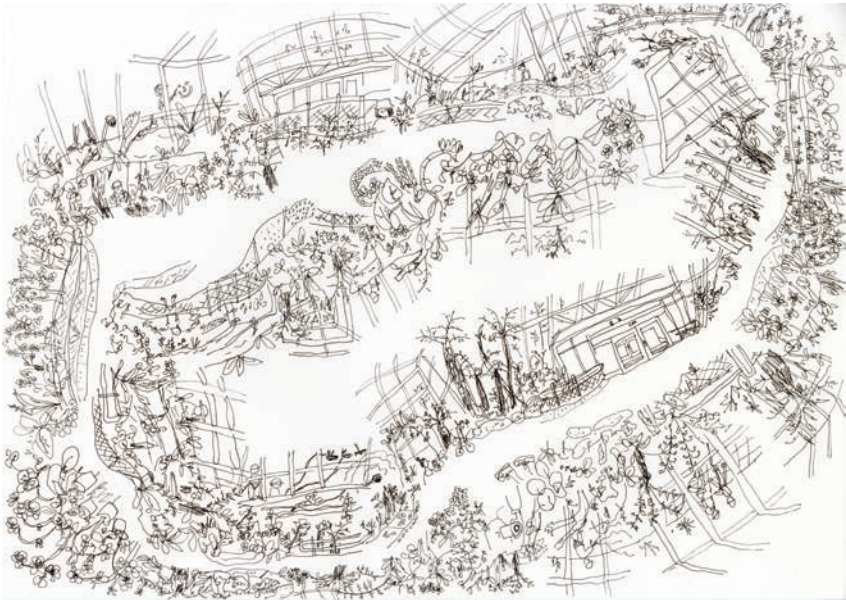


Left Barbican,
Winter Light.
Reduction linocut,
410 × 310mm.

Second, Practitioner
Wyn Gilley Senior architect, ArchitecturePLB, London

Narrowly missing out on an accolade last year, persistence has rewarded Wyn Gilley with his atmospheric 'Barbican, Winter Light.' The judges acknowledged the obvious coda of the Barbican estate as an architectural and social vision that seems unattainable today, but this did not detract from the Gilley's clear love of the subject and evident skill in representing it. Depicting Cromwell Tower in a rare moment of warm, mid-winter light, 'the reflected image provides a further transfiguring of the tower as it melts into the organic mass of water lilies below,

creating a point where water, plants, sky and concrete coexist and intermingle.' The judges all admired the skill of Gilley's five-colour linocut, with each colour handprinted following the gradual reduction of the block. Winning last year for his oil painting skills, judge Alan Power was 'struck by the beauty and delicacy of the foreground, particularly for a linocut.' Fernie too liked 'the complexity and composition of the multiple colour layers,' while Shaikh was impressed by his 'pushing the use of a traditional artistic craft in a way that's outshining progressive technologies on display here — and really successfully.' Jan-Carlos Kucharek felt the raw technique liberated the architect from self-imposed controls: 'Watching architects lino-cut is like watching them enter another world.'

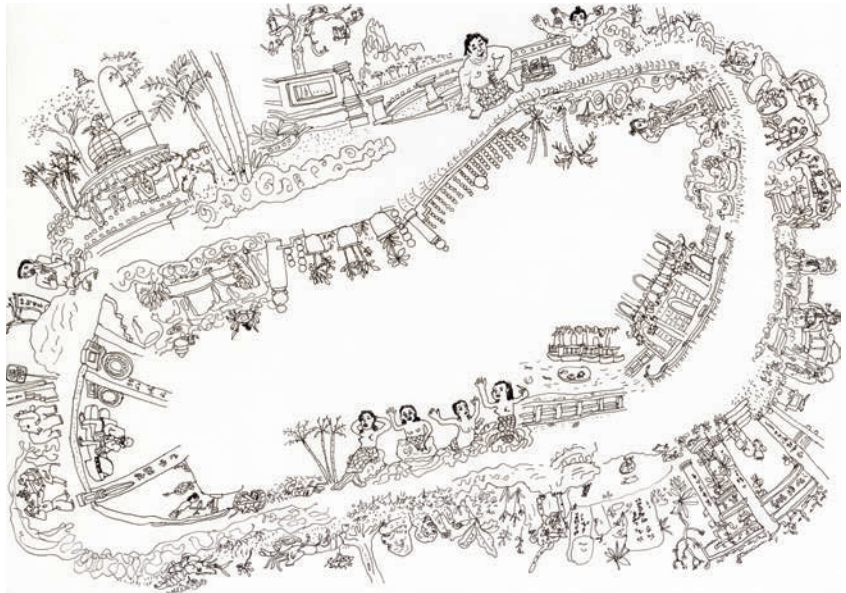


Third, Practitioner
Jolene Liam
Freelance architect, London

Over three years of previous entries in which she has been commended, Jolene Liam has allowed the judges into her world, where slowly and gradually she offers views a unique glimpse that every year expands by an order of magnitude — and secured her third place.

She initially started in her flat, but this year Liam takes us on a psycho-geographical journey through the parks of Singapore as she winds into — or unwinds out of — the perceived experience. 'Developing on from Gordon Cullen's concept of serial vision,' she explains, 'multiple views are merged into continuous loops, creating their own forms. Through documenting my own experience, I wanted to find a way of capturing the spirit of each place.'

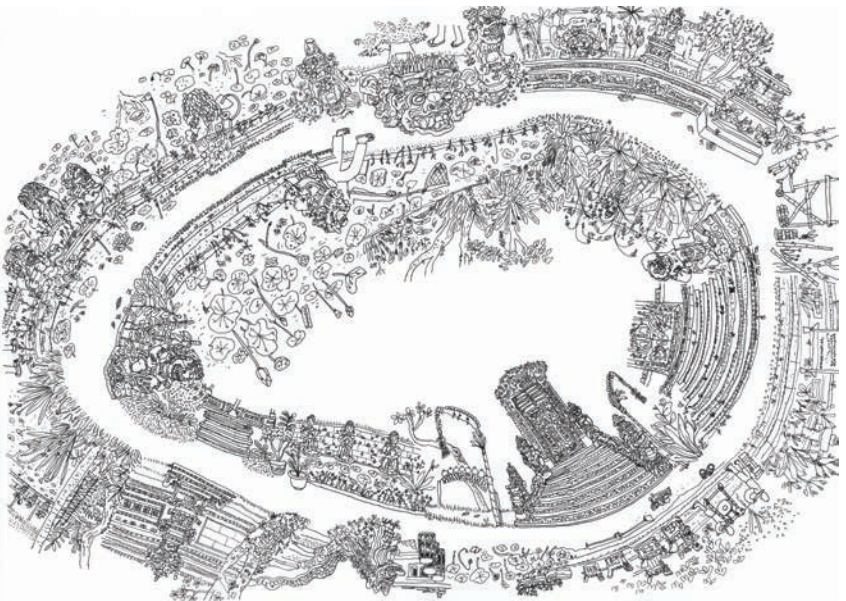
Alan Power appreciated 'what she's trying to do in terms of changing scale every time she presents her work for judging'. Hamza Shaikh meanwhile, versed in more technologically-generated fly-throughs, was impressed, thinking 'She's developing a new way of interrogating space, evaluating its qualities in a super-interesting way,' with Begum seeing it as a 'novel way of looking at architecture.' RIBA's Kucharek saw the uncharacteristic looseness of two images as 'seemingly drawn more from the unconscious' — and was backed up by Fernie, who saw the 'messiest' drawing as the most convincing, where Liam's experimenting had most authenticity. 'She's entering into a more sketchy, intuitive and imaginative viewpoint where she is no longer obsessed by the detail, to come to a more free-form conclusion.'

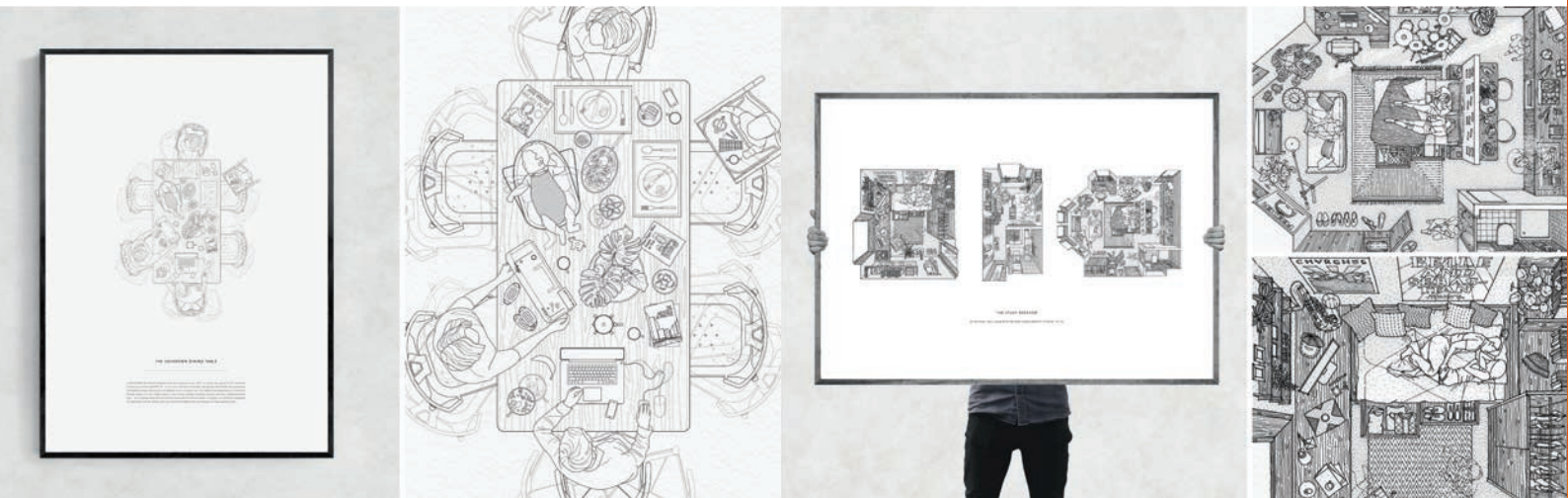


Top Glasshouse Gardens
Walking Map.
Ink on paper, 297 × 420mm

Middle Haw Par Villa
Walking Map.
Ink on paper, 297 × 420mm

Bottom Ubud Water Palace
Walking Map.
Ink on paper, 297 × 420mm





Commended, Practitioner
Michael Lewis
Architect, Feilden Clegg Bradley Studios

It was the presence of the human that appealed to the judges with architect Michael Lewis' representations – based on both a student housing project carried out while at FCBS and the way Lewis' own home transformed during the Covid-19 lockdown. Despite a standard orthographic representation of the latter, the layering of potential usage in all its forms, like a Neufert data manual on steroids, lent a complexity that raised the drawing from the prosaic to the philosophical.

While Shaikh enjoyed the graphic play – ‘his ethos is to show the life in space anchored through orthographic representation’ – he wondered if it could have been pushed further, adding: ‘If he had done something more prescient I think it would have had more power.’ But Fernie enjoyed the expression of human physicality embodied in the architect ‘holding’ his own work, returning to the idea of the body-centred design, noting ‘I appreciate the valid relationships he sets up between architecture, the space and the humans within it.’

Above left
The Lockdown Dining Table. CAD line drawing, 420 X 594mm

Above right
The Study Bedroom. Hand drawing, 841 X 594mm

Below left
Mosque with 49 Minarets/ Red Mosque, Pettah, Colombo. Digital mixed media, 1150 X 900mm



Commended, Practitioner
Sandeepa Vithanaga
Architect, Art'O'San Studio, Colombo, Sri Lanka

Two of Vithanaga's submission of three images of local urban subjects challenged the judges with a seemingly sugar-coated view of colonial architecture that seemed to be at odds with contemporary dialogue on empire, but this striking image of the Sri Lankan capital's Red Mosque was of a power that had it springing from the screen.

Kucharek felt that at the stated reproduction size, the work would be ‘totally immersive, almost hypnotic’ while Begum felt that the ‘flatness of the image is offset by the saturation of the colour in a compelling way.’ Hamza Shaikh pointed out that: ‘I’m from that background ethnically and resonate with its sensory stimulus.’ But while the popsicle stripes soak the viewer's gaze, he was more drawn to the human detail of the image's foreground: ‘Seen together, the image is almost overwhelming and the fact that she's captured all that is incredible.’

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ELEANOR YOUNG
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Have you set up your practice with a splash? Have you danced your proposal to a great competition win? Have you sourced inspirational local materials? Have you tapped into the circular economy? Have you built up team confidence in contracts and fees? Have you made community consultation a pleasure? Or created a killer campaign?

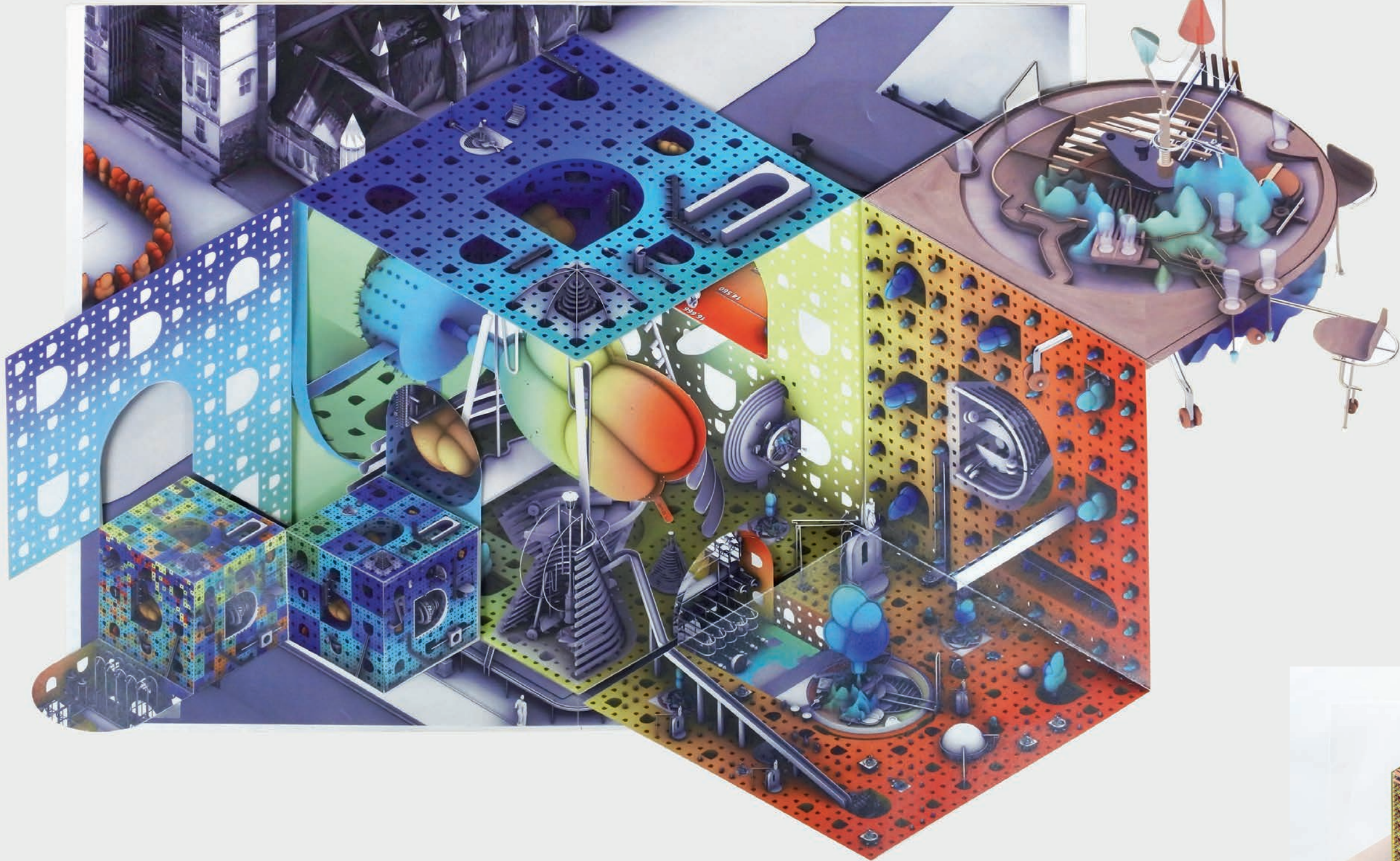
Whether your talents lie in design, management, clear-sighted thinking or working with teams on site, in education or in forging your own collaboration network, we want to hear from you. Entry is free.

Deadline for entries: Wednesday 6 September 2023, 14.00

Winners will be profiled in the RIBA Journal and on ribaj.com and invited to an exclusive Class of 2023 roundtable.



ribaj.com/enter-rising-stars



Above The Study of Unfolded Forest.
Digital rendering and physical paper collage.
594 × 841mm

First, Student
Chia-Yi Chou
Bartlett School of Architecture, UCL

Chia-Yi Chou's MARCH project asks what happens if you optimise the surface area of forest using fractal geometry whose 'three-dimensional fractal shapes create endless surface area, making it 1,000 times more efficient than authentic woodland for carbon capture.' Using the concept of the 'fractal cube' Chou invites us into her virtual forest, but to do it requires the use of a third dimension beyond that of the traditional drawing. This is a fractal cube that seemingly unfolds and opens out 'to elaborate on the dynamic and illusion of scale... where different scales of building elements are uncovered through the unfolding process.'

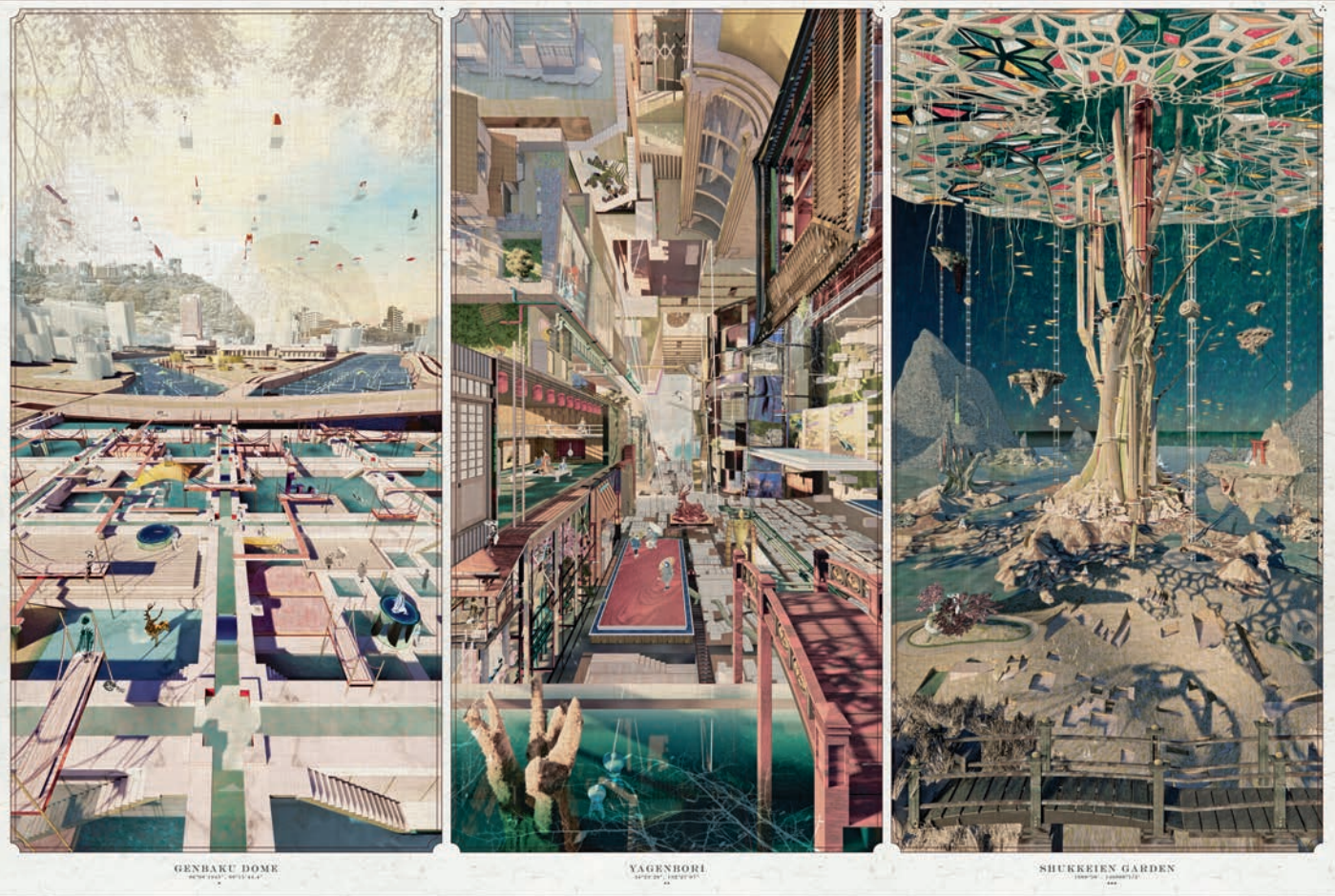
All the judges were enamoured by the evident skill and playfulness on display in Chou's submission, which kept them wondering what was truly three-dimensional and what was not, or what unfolded and what didn't, bringing a curious tension to the work as presented. They were fascinated by the wide-ranging Archigram/steam punk/Meccano-like conceptual references of her drawing sculptures and the consummate level of detail that had been worked into them.

'I love this as an idea of how you can make a drawing, big in both thinking and presentation. It's pulling everything out from two-dimensionality into three in a way that is totally engaging,' said artist Begum. Power seemed unconcerned as to whether the it was a in fact a sculpture, saying: 'It's extremely skilful in terms of its drafting and use of colour, and whether it is or not, it conveys the impression of a three dimensional model.' Shaikh also noted the image-making skill: 'It's a digital collage but then she's printed it and worked in on it to create a mixed media collage and then she's introduced the dimensional interactivity – impressive.'

'The paper flaps enable the dynamic juxtaposition of different scales through the process, creating unexpected spatial illusions and enchanting visual effects,' said Chou of her work – and Fernie was sold on it. 'She's doing absolutely everything that we want her to do. Experimenting on a climate future while referencing past aesthetics; attempting a DIY 3D approach layered onto beautiful drawings. For me it blows the other entries out of the park.'



Right The Unfolded Forest-1.
Digital rendering and physical paper collage,
594 × 841mm



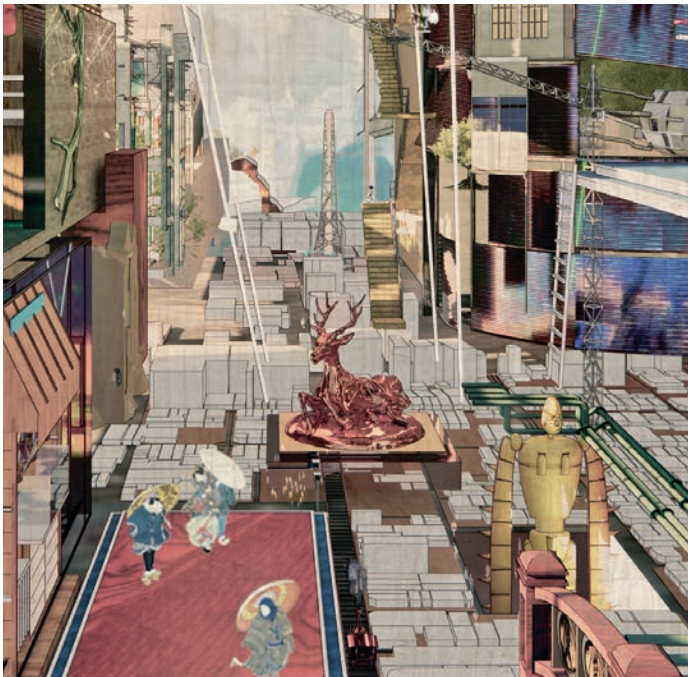
Second, Student
Victoria Wong
Taubman College of Architecture + Urban Planning,
University of Michigan, USA

Wong's stunning triptych, as notable for its sheer size as level of detail, also deals with themes of a big scale. 'Architecture is essentially an internalisation of society yet an externalization of ourselves,' says Wong, quoting Lebbeus Woods, and her project 'adapts Japanese aesthetic theories of transience and imperfection and applies them to the city of Hiroshima... Investigating the decay and death of artefacts and events, [the project] illustrates the new collisions of regrowing and reshaping our relationship with different agencies.'

In this strange space where the city's past, present and future seem to collide, Wong has created three cameos that are highly evocative, not least for a precision that implausibly seems drawn out of the realms of pure fantasy. Shaikh was struck by the 'brilliant' levels of technical modelling skills on display. 'The concept is a heavy one but the drawing bears it out – you can keep just zooming in.' That sense of detail was echoed by Power who mused: 'It makes you wonder if they didn't look at Bosch's Garden of Earthly Delights' as an inspiration.'

The otherworldliness was picked up on by Kucharek who felt the level of detail 'intimated the graphic complexity of Tarot cards at super-scale,' and Fernie agreed. 'What I love about this is not only is it technically proficient but the Tarot-like formatting is so interesting,' she said. 'The layering of meaning into the graphic and traditional use of colour with the text beneath references past culture but brings the future into the frame. It's very compelling.'

Above Into the Void: Fragment Time, Space, Memory, and Decay in Hiroshima. Digital modelling/ rendering/sketching, 1219 × 1829mm. Detail below.



Third, Student
Max Cooper-Clark
Royal College of Art, London

Using the agricultural history of his site in the rural Alentejo region in southern Portugal, Cooper-Clark draws attention to a forgotten historic symbiosis of this land's soil with its former tillers with modern 'colonial extractivism... desertification, soil erosion and a continuum of racial capitalism in the exploitation of migrant workers from Portugal's historic colonies.' He draws a worrying picture of over-intensified land and human exploitation based on subsidies that have helped mar the contemporary landscape.

Even bagasse, a by-product of olive oil extraction, is no longer used as a natural fertiliser but 'burned as a monetizable fuel,' making the land ashen. So this story evoked in charcoal, to 'reflect the overlaying and accumulation of systems in its technique – evocative of the particulate pollution – figures layered and rubbed away to reveal the histories and cartographies that pervade contemporary land uses.'

Judges were struck by the politics of the drawings and how their materiality resonated with the issues, Begum calling the interplay 'striking and intriguing.' Power was impressed by how the images 'convey the unexpected, apocalyptic nature of modern-day farming and the individual at the centre of it.' Fernie added: 'The storytelling is fantastic – counterpointing [simple charcoal-based techniques] with big themes of global, industrial-scale farming.'



Top right Layered Anatomies.
Charcoal on Paper,
594 × 594mm

Above Extractive Bodies.
Charcoal and Acetone Print on Paper,
594mm × 594mm

Right Eroded Horizons.
Charcoal and Acetone Print on Paper,
594 × 594mm



Commended, Student Naomi Vallis
School of Architecture and Planning, University of Auckland, New Zealand

Using Marco Frascari’s notion of the ‘Architectural Monster’, Vallis hones in on ‘how the migration, transportation, and integration of Mughal tectonics to New Zealand has conceived “monstrous” building traditions that represent two different cultural contexts.’ Vallis attempts to capture the final moments of this historical assemblage (her ‘monster’), ‘showing the extraction, comparing and assembling of various architectural forms from South Asia to New Zealand [exemplifying similar traditions] through the collision of Mughal and Gothic arch, pergolas, masonry towers, polychrome brick tectonics and terraced forms dismantled and reassembled to create the culturally hybrid representation we see.’ Kucharek enjoyed ‘the almost Klee-like qualities of the assemblages’, while Begum was drawn to a complex mingling of manual and digital representation to create a strange, layered effect. Fernie liked ‘the way she introduces narratives through different colours [and] human figures that engage with the architecture’.



Above Monsters In Architecture: A Section of a Living Monster. Rhino 3D line work modelling, watercolor and Photoshop collage work., 850mm X 300mm
Top right Monsters In Architecture: The Illicit Cross-Cultural Breeding of Architectures. Rhino 3D line work modelling, watercolor and Photoshop collage work, 840mm X 525mm



Below left Kid Fiction: Independent Mobility. Digital illustrations hand-sketched using a Tablet. 1440 X 1020mm
Below right Kid Fiction: Biodiversity Extinction. Digital illustrations hand-sketched using a Tablet. 1440 X 1020mm



Commended, Student
Sweta Solai Sanker
Royal College of Art, London

‘Through a collaborative approach involving ideas of fictional world-building or collective gameplay, ‘Kid Fiction’ focuses on ideas of how we can better understand, value and empower children as individuals in their own right, using architecture as an intermediary body of communication.’ So Sanker goes rogue, collaborating with primary school pupils to identify issues and solutions for the world around them. And, boldly drawn on a tablet with extreme colour and sophistication, Sanker feeds us scenarios of a Tube system reimagined as a network of slides and Hyde Park as the site of a form of electrolytic conversion that generates energy from microbial fuel cells. Jes Fernie ‘loved the magical references to children,’ while artist Begum and architect Power pored over the child-like playfulness of the images, which nonetheless stood up to interrogation. Begum added, ‘Colours are seductive and reflect the subject, but there’s such density and thought here too which you only see if you keep zooming in.’

Notice of RIBA Annual General Meeting

RIBA’s Annual General Meeting will be held on Thursday 28 September 2023, 14:00 to 15:00 (BST) at RIBA, 66 Portland Place, London, W1B 1NT and online.

The Agenda, together with the Annual Report and Accounts, will be published on www.architecture.com/agm2023 on Tuesday 5 September 2023.

To attend the AGM, please register at www.architecture.com/agm2023 no later than 12.00 (BST) on Wednesday 27 September 2023. When you register, please indicate whether you wish to attend the meeting in person or online.

Whilst all RIBA Members may attend the AGM, only Chartered Members are entitled to vote.

Yours sincerely,
Graham Devine,
Honorary Secretary

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Czech pavilion
Bruxelles World's Fair, 1935

Architect, artist, set designer, teacher, industrial designer ... Antonin Heythum (1901-1956) had a varied and fulfilling career that brought him from his native Czechoslovakia to the United States. In Prague, where he had received his degree in architecture, he joined the avant-garde artists' group Devětsil and exhibited his work both in his country and abroad. In the 1920s he also designed residential buildings and sets for theatrical productions, but his first high-profile project was the Czech pavilion at the Bruxelles World's Fair of 1935. In 1939 Heythum went to the United States

with his wife Charlotta, also an architect, to work on the installation of his country's pavilion at the New York World's Fair and to design the Czech section at the Golden Gate Fair in San Francisco: here a display of Czech traditional crafts and views of historical buildings were offset by the thoroughly modern exhibition design. After the outbreak of World War II, the Heythums decided to remain in America, where in 1941 Antonin founded the department of industrial design at the California Institute of Technology in Pasadena. ● Valeria Carullo

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