

Midlands' massive new hospital stacks up
Coming home: House of the Year shortlist
Senses prevail at school for deaf children
Liam Young profile: Our duty to the world
Rising Stars: 12 architectural influencers

The RIBA Journal
November/December 2024
£15/€30/US\$35





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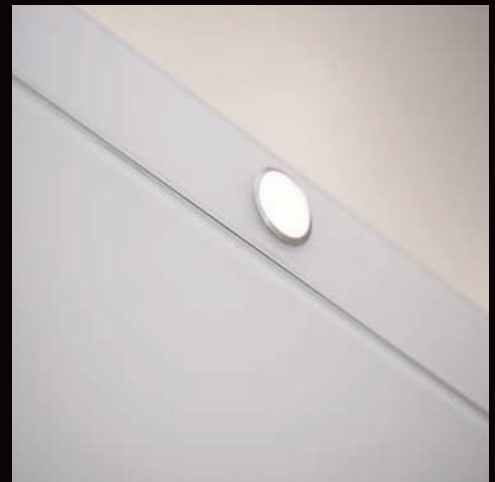
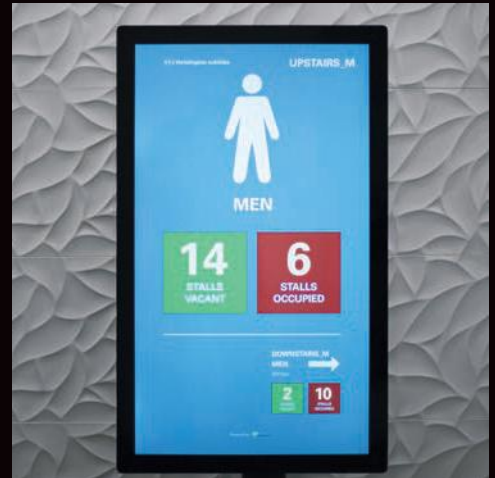
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Midland Metropolitan University Hospital by Cagni Williams, HKS and Sonnemann Toon, photographed by Paul Raftery

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RIBA



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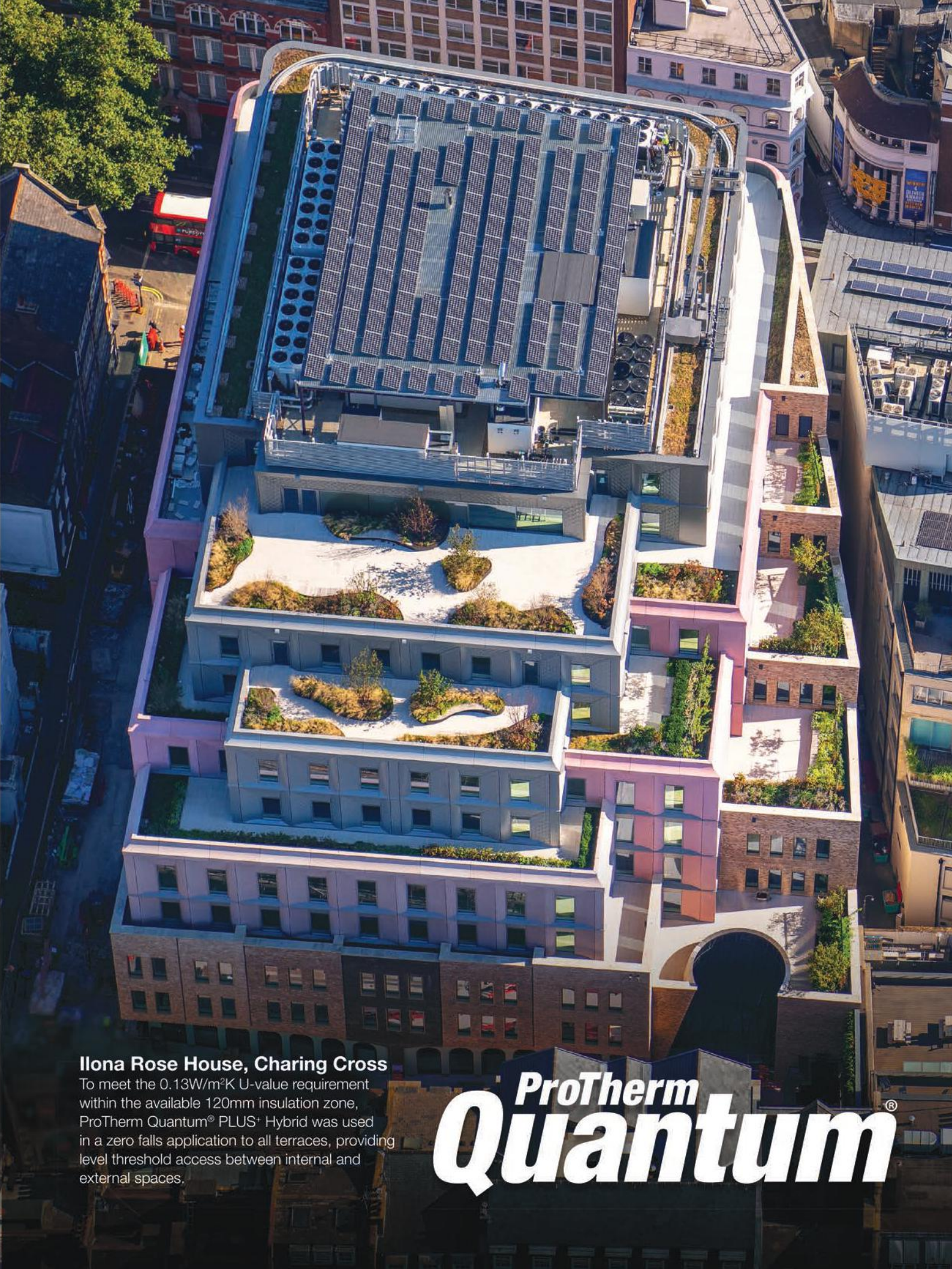
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1: Buildings



CENTRAL STATION, SYDNEY METRO

JOHN MCASLAN + PARTNERS

READ THE FULL STORY:

ribaj.com/sydney-central

Sydneysiders don't generally take pride in their city, yet on 19 August, when the new metro line opened, the public joy was immediate and palpable. And what thrills people isn't just quick new routes of travel, it's also the grandeur of the stations themselves. Of the eight additional stations, five are designed by UK architects: Foster + Partners, John McAslan + Partners and Grimshaw. These occupy the centre of the new line, so perhaps it's natural that they're also the most prestigious, the most lavish and – which doesn't necessarily follow – the best.

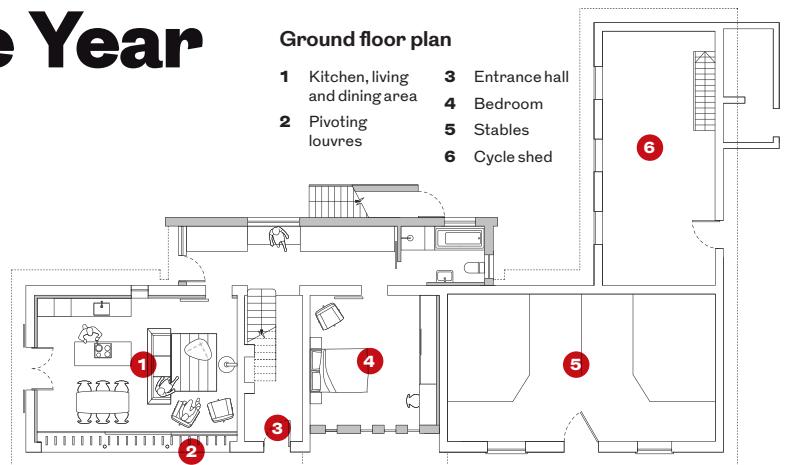
Throughout the project, a ubiquitous brown-terracotta-pink toning dominates as a nod to historical contextualism – in local lore, the 'Sydney sandstone aesthetic' – in a somewhat facile manner. Luckily, the architecture more than compensates. The latest stations are grand, airy, clean and alight with spatial drama. They are also, despite their immense depth, generously connected to the streets. Central Station is the high point of the quality arc. In collaboration with Australian practice Woods Bagot, McAslan has deftly inserted the two lines deep beneath the existing heavy rail, generating a project whose elegance of detail does full justice to the elegance of the idea. The Northern Concourse is pivotal. Fed by escalators from below and above, roofed by a 35m asymmetrical light-filtering cantilever and washed by fresh air and sunlight, it is thronged by travellers moving in all directions, including from a new arched entrance beneath the century-old Central Electric building. This wonderful intervention in Sydney's congested heart recognises that there are two modes of transport inherent in any railway station – movement by train, and movement on foot.

It's not often that infrastructure on this scale improves the lot of the ordinary foot-soldier, as well as the commuter. But this, and the new Sydney Metro more generally, is such a project. ●

Elizabeth Farrelly

RIBA House of the Year

Architects balance heritage, sustainability and modern technology in the six homes shortlisted for this year's competition, which address multi-generational living, challenging sites and demanding logistics



PLAS HENDY STABLE BLOCK STUDIO BRASSICA ARCHITECTS

The Arts & Crafts stable block required substantial repair.



This Grade II-listed Arts & Crafts stable block sits in an idyllic countryside setting near the Welsh-English border in Monmouthshire. Built in 1906 alongside a main house, the original building included a tack room, hay loft and coach house. However, over time, the structure lost its original purpose and needed substantial repair.

Studio Brassica was commissioned to refurbish and extend the stable block, transforming it into a beautiful and functional new home for the client, an extended multi-generation family group. The project sensitively balances heritage and ecological obligations, along with upgrading the building to the latest sustainable technologies and ensuring thermal comfort.

Inspired by the Arts & Crafts fabric, Studio Brassica employed simple materials, detailing and variation in a spirited way, making the old harmonise with the new. Original external sliding doors have become internal doors and west-facing external shutters. Sawtooth

The project balances heritage and ecological obligations, with an upgrade to sustainable technologies



Above Bespoke pivoting louvres are a sun-shading device and provide privacy.
Below Original external sliding doors are now grand internal doors.

Credits
Structural engineer Element Structures
Contractor G Adams Construction
Ecology consultant Acer Ecology

bricks create a dynamic weave effect on the facade and reflect the changing light. These are glazed dark green on the front to echo fireplace tiles in the main house.

Active and passive sustainability measures have been incorporated into the design. Most notably, a substantial section of the south facade has been opened up to bring warming daylight to a dark tiled floor for passive heating during the winter months. Glazing replaces solid sliding doors, and innovative pivoting louvres were devised to form a privacy screen and sun-shading device. The system uses a simple gear mechanism and is manually controlled using a hand-operated repurposed cartwheel.

The jury praised the sensitivity and imagination of the retrofit. 'The design introduces lightness and humour through an architectural language that complements the original building without being constrained by it,' it reported. 'Sustainability is woven into the building's narrative... existing elements are thoughtfully re-purposed rather than replaced, reinforcing the project's commitment to both heritage and innovation'.

WHAT IS YOUR FAVOURITE FEATURE OF THE HOUSE?

Claire Priest and Ben Crawley

The pivoting louvres in the main living space, which were developed with local metalworkers and constructed off site. They were inspired by the adjacent period vinehouse and can be operated by hand using a salvaged cartwheel. It provides a delightful, mindful daily ritual of opening and closing.

While we always knew the living room would be a special place, it continues to surprise us. The sunlight really animates the space and brings a great warmth to the room when bouncing off the terracotta-coloured louvres.

WHAT WAS THE GREATEST CHALLENGE?

There were many challenges, but a key one was finding the right contractors and craftsmen. We had a lot of meetings with different builders during the tender process to find the right skill sets. The project contained both detailed heritage items and contemporary aspects and it was difficult to find builders with a good mix of the two.

A good relationship during construction was essential as it allowed us to work collaboratively to retain the design intent and find cost-effective solutions.

WHAT LESSONS FROM THE PROJECT COULD BE APPLIED ELSEWHERE?

We believe that finding innovative ways to make the most of existing buildings is critical to address the climate crisis.

In this project, we were lucky to have the opportunity to repurpose a remarkable listed building and salvage lots of existing materials and features. Although balancing environmental and modern requirements with heritage concerns was challenging, gaining the support and trust of the council heritage team early on was critical to moving the project forwards in a proactive way.

If we can get this balance right in future projects, we can not only conserve resources, but also connect with history, and create places that improve people's quality of life.

EAVESDROP
TOM DOWDALL ARCHITECTS

Credits
Structural engineer
 Richard Dowdall
Main contractor Self-
 build managed by Tom
 Dowdall Architects
Landscaping Client



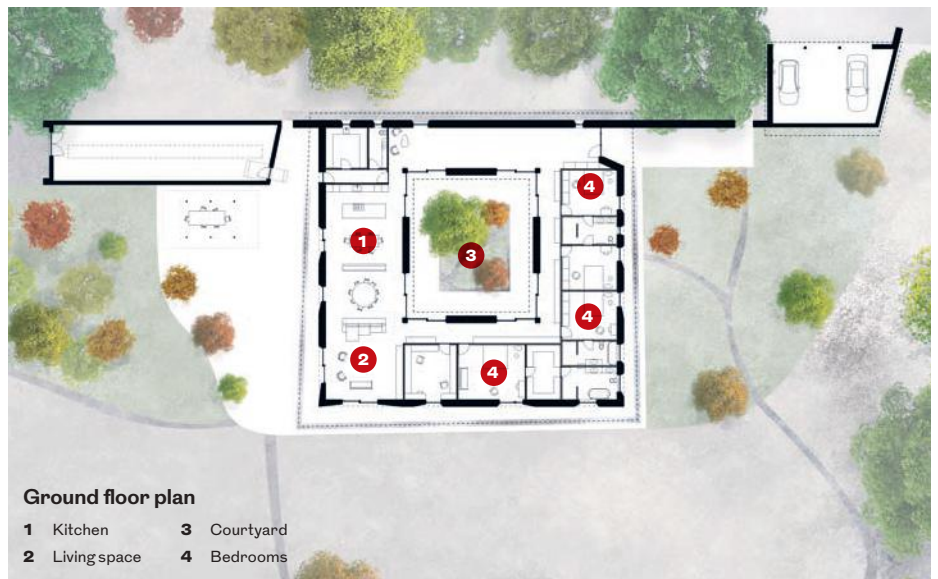
The single-storey plan wraps around a tranquil courtyard.

RORY GARDINER (4)

Situated in the bucolic grounds of their former family home in Sussex, this carefully crafted house was designed by architect Tom Dowdall for his parents. They wanted a home which was more accessible, manageable, sustainable and truly integrated into the landscape.

Eavesdrop is a single storey, with level thresholds throughout, built around a generous landscaped courtyard. Its distinctive roof rises dramatically to form a generous living space which can open up to host friends and family. All four bedrooms and the study have stunning views of the garden, surrounding woods and wild meadow.

From afar, the house melds with its surroundings and looks as if it has



always been there. Built on the site of a former tennis court, it nestles discreetly behind the bordering tree line. Close up, the beauty of its detailing is evident. Different textures, finishes and laying methods of Clipsham stone create nuanced contrasts between surfaces. Bespoke furniture, made from stone offcuts and the ash timber flooring, adorns the space and adds character.

Sustainability has been carefully considered and the house is built to Passivhaus standards; it is triple-glazed throughout and heated by a small, efficient gas boiler. The courtyard helps regulate the internal temperature and openings can be adjusted to enable natural cross-ventilation on warm days. The roof has been designed so that it overhangs further on the facades where the sun is most prominent, providing shade. Notably, the design also anticipates more sustainable systems in the future: for example, the roof detailing has been devised with the installation of photovoltaic arrays at a later stage in mind.

The client is delighted with the result, remarking: 'Our retirement home is heavenly. It is warm in winter, cool in summer, comfortable, on a single level, and wheelchair-friendly throughout with no ledges, steps or thresholds. We are bathed in peace, tranquillity, calmness and restfulness.'

The judges were equally impressed with the architect's first significant project, noting that the house is 'future-proofed for the potential needs of old age, while clearly enabling multi-generational family use.' They also commended its exceptional energy efficiency which 'adds to the experiential comfort without compromising the clear architectural ambition'.

It is warm in winter, cool in summer, comfortable, on a single level, and wheelchair-friendly throughout



WHAT IS YOUR FAVOURITE FEATURE OF THE HOUSE?

Tom Dowdall The courtyard is my favourite feature. The idea of it as the heart of the home was central to the project from the very beginning. Yet how it is actually used and feels now built has been a great surprise. I never imagined that the arcade around the courtyard would appear like an athletics track to kids, yet they seem drawn to tear around it lap after lap! It has been a place to play, as well as to pause, and this feel permeates the whole house. It is proof to me that no matter how much you visualise something, the built reality can always surprise.

WHAT WAS THE GREATEST CHALLENGE?

The greatest challenge was undertaking such a complicated build as a self-build. My parents and I decided to manage the construction ourselves in an attempt to reduce costs (compared to traditional procurement) and to choose which tradesmen we worked with.

Building a highly thermally efficient house together with such a complex structural geometry required a great deal of attention to all construction joints and details to ensure their integrity. Inevitably, not all work packages flowed seamlessly from one trade to the next and there were times where we needed to be hands on and learn a skill quickly to fill the gap.

WHAT LESSONS FROM THE PROJECT COULD BE APPLIED ELSEWHERE?

Having managed this construction so closely, I do believe that architects are well suited to take such a direct role in projects of this size and, risk aside, I would encourage others to do so.

Working closely with the trades on site allowed many complicated details to be resolved with pragmatic ease and led to a better design overall.

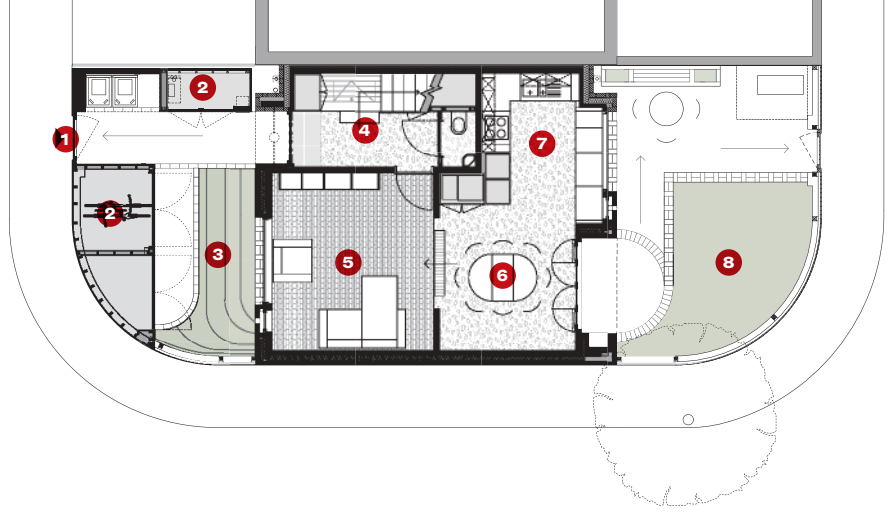
Top Eavesdrop is integrated into the existing landscape.

Middle The roof's varying ridge height provides shade and shelter.

Left The courtyard opens fully.

PECKHAM HOUSE

SURMAN WESTON



The project playfully subverts the traditional urban terraced house.

Ground floor plan

- | | |
|-----------------|---------------|
| 1 Front gate | 5 Living room |
| 2 Stone | 6 Dining room |
| 3 Front garden | 7 Kitchen |
| 4 Entrance hall | 8 Rear garden |





This infill corner site is Surman Weston's first self-build project, developed as a family home for one of the practice founders. Close to the bustling centre of Peckham, the house is a creative take on the terraced south London house and makes a positive contribution to the street, with playful details and a strong environmental conscience.

The Flemish bond brick facade is flush until shoulder height, when the headers gradually recess and eventually disappear to make a hit-and-miss perforated brick parapet to the roof garden and attenuate the house's otherwise monolithic form. Privacy is ensured by curved timber fencing, topped with a sedum roof that hides storage for bikes and bins. The convex garden gate and entrance arch display

charming wit – along with the greenhouse perched on the roof.

The project uses low carbon materials, such as Lignacite for load-bearing inner walls, and strives to limit material waste; blockwork walls are made from recycled construction waste, timber ends form surfaces internally and brick off-cuts were recycled as pavers in the garden.

Ground-floor living areas are finished with a lime slurry, allowing the blockwork to be read with subtlety as an interior finish. Thoughtful detailing is evidenced in the staircase's blue steel handrail, the greenhouse as a glass rooflight with its cork insulated retractable access way, and the perforated brick parapet braced internally by slender tubular steel angled supports. This is a well-considered, durable and highly imaginative design.

Jurors were particularly impressed by the charm and nuance of the project: 'This is a playful and bespoke family home that brings a smile. It elegantly doesn't compete with, but rather complements the existing context. The design offers a sense of lightness to its corner plot, through a carefully crafted exterior and balanced, proportionate volume arrangement. It subtly subverts the urban terrace row typology.'

WHAT IS YOUR FAVOURITE FEATURE OF THE HOUSE?

Percy Weston and Tom Surman The rooftop garden with its greenhouse is probably the most unusual feature and enjoyable part of the house. The house is right in the middle of Peckham, but the roof feels like a bit of an oasis above the hubbub of the bustling area. The greenhouse is a lovely space, particularly in the spring and autumn, when it's a bit too cold or wet to sit outside to have dinner or a drink, but you still want to be outside.

WHAT WAS THE GREATEST CHALLENGE?

We began building at the start of 2021 and within months the price of materials and labour had skyrocketed due to the war in Ukraine and Brexit. To offset these price increases, and to keep the project on budget, we spent a huge amount of our own time at the house, physically on-site doing all sorts of manual labour jobs. Being on-site more was a double-edged sword – it led to us probably changing our mind about certain elements of the design more than we might have done otherwise, but it also meant that every detail had a lot of consideration and we were able to experiment at every turn... this probably did mean it all took longer though!

WHAT LESSONS FROM THE PROJECT COULD BE APPLIED ELSEWHERE?

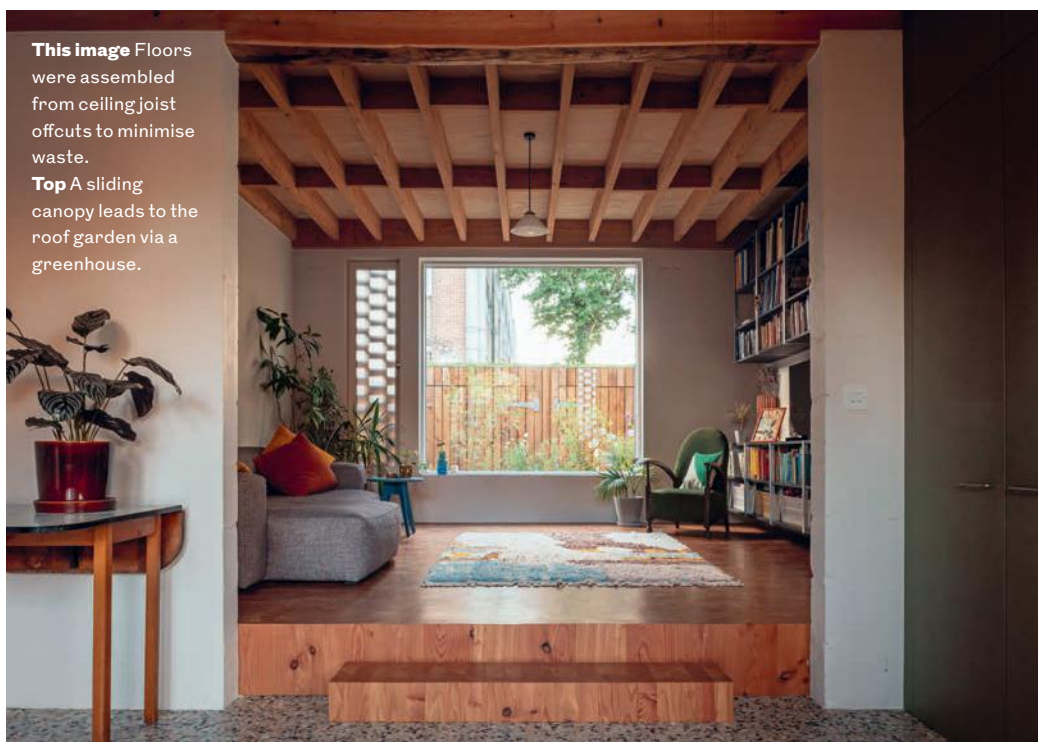
Going back to the rooftop, we really felt that maximising green space in this urban site was a primary design driver and think that this is one of the key successes of the house. While the greenhouse is quite pretty (we think) and relatively cost-effective, it serves several practical purposes as well. In the summer it helps drive stack ventilation, for instance, drawing air through the house, but it's also useful for boring but essential things, like drying washing.

Credits

Structural engineer
Structure Workshop

Main contractor
Surman Weston Construction

Services engineer
Peter Deer & Associates

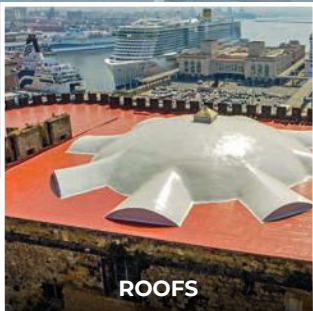


This image Floors were assembled from ceiling joist offcuts to minimise waste.

Top A sliding canopy leads to the roof garden via a greenhouse.

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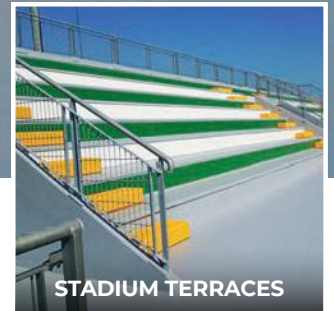
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THE HALL

TAYLORHARE ARCHITECTS

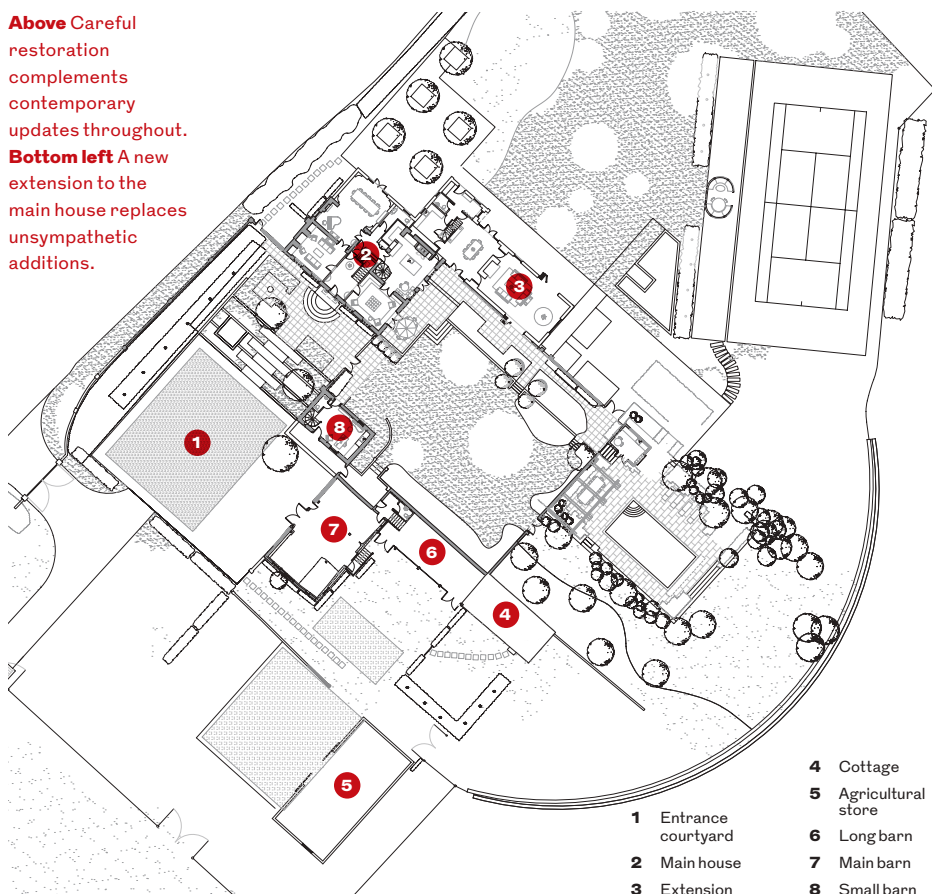


BUILDING NARRATIVES (2)

Adjacent to the Area of Outstanding Natural Beauty in the Kent Downs, this Grade II*-listed 16th century house with Grade II-listed barns and outbuildings had become tumbledown and been unsympathetically modified over the years. The client wanted to revive and transform the estate into a sustainable home-for-life while enhancing its forgotten character. TaylorHare Architects achieved this with finesse, reinstating a coherent design narrative and harmoniously weaving together old and new.

A spacious extension to the north-east of the main house replaces piecemeal 20th century additions. This, and a repaired cluster of outbuildings, surround a bucolic grassy courtyard. A

Above Careful restoration complements contemporary updates throughout. **Bottom left** A new extension to the main house replaces unsympathetic additions.



new barn stores agricultural equipment and provides a roost site for bats.

Internally, a natural appearance was reinstated, with a focus on honest, handcrafted, high-quality materials. In the long barn original brickwork and a ragstone wall have been exposed, and repaired English oak beams frame the space. A new polished concrete staircase, with a bespoke iron handrail made by a local blacksmith, elegantly connects the ground to the upper level and incorporates a fluted ash kitchenette. It is an ensemble of careful restoration and sophisticated contemporary refreshes.

A good sustainability strategy effectively reconciled with the historic site to achieve modern green living, sympathetic to the setting. Measures such as zoned underfloor heating, smart lighting, slimline double-glazing and a water-source heat pump system in a new lake, have contributed to the buildings' energy efficiency. The scheme took a holistic, considered approach to landscape and ecological enhancement alongside the works to the buildings.

The jury reflected that the buildings have been 'given a new lease of life' and praised the architect's sensitive approach: 'The project brings together traditional craftsmanship and 21st century appeal in a modern family home. The key success lies in its masterful combining of old and new, enhancing and restoring what was already there, while producing an addition that befits both its context and its clients' daily needs.'

BUILDING NARRATIVES (3)



Above Original materials were repaired and exposed where possible.

Left Slimline double-glazing has significantly improved thermal efficiency.

Right Four bespoke iron handrails were made for the project by a local blacksmith.

Credits

Structural engineer

Price & Myers

Contractor

B&B Builders

Interior designer

Stephen Richardson-

Pope

Landscape architect

Marian Boswall

A coherent design narrative weaves together old and new



WHAT IS YOUR FAVOURITE FEATURE OF THE HOUSE?

Christopher Taylor Re-instating, repairing and internally exposing the timber roof of the main house was a labour of love.

Removing the 1960s plasterboard false ceilings, which previously concealed dark, uninviting, irregular spaces above, allowed for an unexpected change in volume and atmosphere from those of the floors below. An oversized rooflight adds drama as it filters light down through the house via the restored secondary staircase.

That sense of the unexpected in a home with a familiar appearance heightens the focus on craftsmanship which, interwoven with natural materials, lends distinguished yet warm domesticity.

WHAT WAS THE GREATEST CHALLENGE?

When we first visited, most if not all the original heavily timbered and ornamented interior had been lost. The challenge was to create a home that would enhance and restore this forgotten character without being pastiche or ordinary.

We could have easily added a contemporary extension, as a clear delineation of new against old, but chose a more discreet and inventive approach which required careful understanding of the house's history. We wanted the project to sensitively marry the old with the new, where the works undertaken feel almost invisible, as if they have always been there.

WHAT LESSONS FROM THE PROJECT COULD BE APPLIED ELSEWHERE?

Buildings of historical importance and sustainable construction are too often considered to be poles apart. However, the use of a renewable water-source heat pump removed the need for conventional radiators, helping restore rooms to their original character without compromising thermal performance.

While a significant investment, the system should pay back in less than 10 years and will generate its own energy for many years to come. We believe The Hall provides a viable prototype for incorporating green technology into similar historic buildings and creating low impact, sustainable and carefully restored homes.

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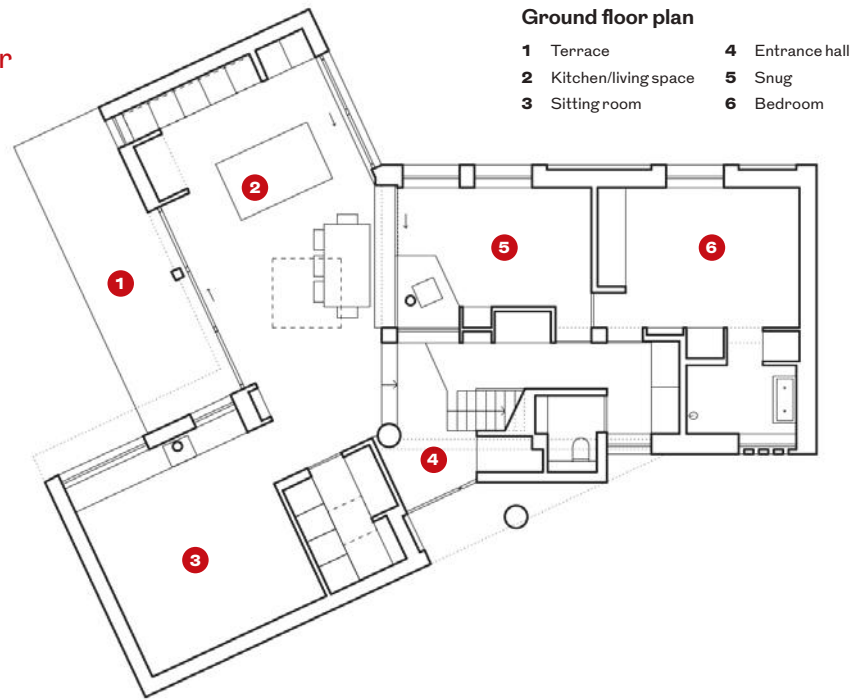
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SIX COLUMNS
31/44 ARCHITECTS

Below A south-facing terrace is drought-resistant and rich in insect-friendly planting.



Six Columns is an inventive and bespoke home for one of the founders of 31/44 Architects, designed to meet their family's changing needs over many years. Sited in a previously undeveloped side-garden, it completes a row of semi-detached houses in a leafy south London suburb. The home draws on an eclectic array of personal and architectural references while achieving a sophisticated use of space and materials.

As the name suggests, there are six columns on the front and rear elevations. A single-storey volume to the left breaks up the two-storey pitched volume to the right, and the entrance is at the junction between the two. The facade adopts the brick-and-terracotta-tile materiality of the nearby houses, but there is also inspiration from further afield – a column in front of a white-veined, dark green marble wall evokes Mies van der Rohe's Barcelona Pavilion.

Inside, the hallway unfurls into a





generous open kitchen, dining and sitting space which is flanked by two gardens. Exposed timber beams and simple robust timber panels are used throughout the ground floor. In the living room, a clerestory is created via glazing between the chunky plywood beam ends to admit light while maintaining privacy from the street. A single air-source heat pump provides all the house requires for heating and washing, with bills a fraction of typical running costs.

The overall design hinged on navigating existing trees, notably a large, protected sycamore to the rear of the site. The resulting fragmented footprint has created harmonious external spaces and is a feast for the eyes at every turn.

The judges commended 31/44 Architects' ability to 'turn challenging constraints into opportunities with admirable technical confidence' and its adept approach throughout: 'The building displays the architect's mastery, weaving materials and references into a holistically orchestrated family home. The expression is simple and yet refined, without a hint of being forced.'

Opposite Six columns adorn the front and rear elevations.

Right The design navigates a protected sycamore tree.

Above Both gardens can be seen from the open kitchen, dining and sitting space.

Credits
Structural engineer Price & Myers
Main contractor Atlant Construction
Building inspector
 London Building Control

The home draws on an eclectic array of personal and architectural references and materials



WHAT IS YOUR FAVOURITE FEATURE OF THE HOUSE?

Will Burges After building houses for clients, it's odd living in something so bespoke and tailored to how we live. However, we've already begun to make adjustments – the idea for the house was that it would be 'unfinished' in some ways, enabling easy change and fine-tuning. I didn't like the idea that it would be seen as the perfect expression of my, or the practice's values, that felt too fixed. We continue to learn from the things we make, and of course how we live evolves. The house had to be able to move with us. We're enjoying thinking about the next small tweak... there's a list!

WHAT WAS THE GREATEST CHALLENGE?

It's difficult to pick a single moment – one seemingly huge challenge just kept getting replaced by the next. Finding the land was a huge hurdle, then it became about achieving planning consent and ultimately about persuading a bank to lend us the money.

WHAT LESSONS FROM THE PROJECT COULD BE APPLIED ELSEWHERE?

As a studio, we want to continue practising the architectural language we believe in while finding new and different ways to deliver it. Six Columns has become a useful exemplar when discussing future projects with clients, as it demonstrates the visual outcome of design techniques we would like to use to build more thoughtfully.

For example, externally we used cement panelling on a timber frame, only employing in-situ concrete where necessary, to create a visual weight to the architectural elements while minimising materials with high-embodied carbon.

Also, we can now point to differences between the finishes on the ground floor, which features a masonry inner leaf and self-finished materials, and the first floor, which has more conventional plaster finishes on a heavily insulated timber frame.

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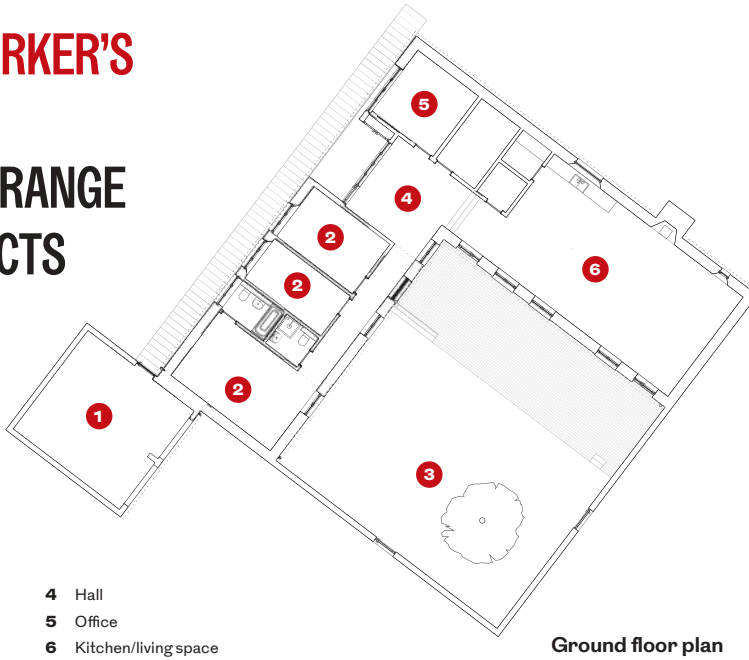
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FARMWORKER'S HOUSE

HUGH STRANGE ARCHITECTS



- 1 Garage/workshop
- 2 Bedroom
- 3 Courtyard
- 4 Hall
- 5 Office
- 6 Kitchen/living space

Ground floor plan

This deceptively simple house sits in a wooded corner of a field on a working farm, a mile inland from the Cornish coast. The farm owner client commissioned the architect to provide accommodation for the farm manager and the result skilfully balances the agricultural and domestic, the humble and grand.

The house is barely visible from beyond its immediate realm and sits lightly yet robustly in the rural setting. It is single storey with a pitched roof and L-shaped in plan, with a wall closing off the other two sides to create a delightful courtyard garden – a place for play, drying washing and growing vegetables. It contains domestic activity, discouraging its intrusion across the agricultural domain.

JASON ORTON



Cows can graze right up to the house's outer walls.

Inside, subtle moves gently guide and play with perceptions of the spaces. A wide, full-height opening leads to the open-plan living area and a small, domestic-scale doorway to the contrastingly cellular bedroom wing. The positioning of a fireplace and two windows is reminiscent of a manor house. However, a small, high window on the gable filters morning light through the roof timbers as if in a barn.

The material palette is restrained and sophisticated: the home-grown Douglas fir roof structure is exposed, floors are dark brick, recalling Victorian stable pavers, and the walls are unpainted lime plaster – a smoother, silkier version of the roughcast outside. Beneath the plaster, walls of hollow clay blocks exceed ever-tighter building regulations requirements for U-values and airtightness without need for additional insulation, membranes or a cavity.

The jury recognised the project's exceptional discipline and judgement, commenting: 'This is a great example of a clear design response to a brief delivered with rigour and material sensitivity. The L-shape plan with a walled courtyard garden allows the cows to graze up to the boundary walls, provides a well-sheltered environment and thoughtfully delineates the domestic boundaries.' ●



Above Underfloor heating draws energy from a ground source heat pump.

Credits
Structural engineer Price & Myers
Contractor GTL Construction
Services engineer Ritchie + Daffin
Planning consultant Peter Wonnacott Planning

It skilfully balances the agricultural and domestic, the humble and grand

The courtyard garden is a place for play, growing vegetables and domestic activities.



WHAT IS YOUR FAVOURITE FEATURE OF THE HOUSE?

Hugh Strange So near the Atlantic, at times the site basks in glorious sunshine, but often it is battered by wild winds and torrential rains. I think the house really succeeds in navigating these contrasting environmental conditions: the thick walls, low-slung sectional profile and L-shaped plan provide shelter from the elements, while the regular and generous openable windows onto the courtyard garden invite outdoor living on sun-drenched summer days.

I'm very happy that we achieved this feat, not through complex formal or technological solutions, but with a rigorous design that combines simple and considered planning with a direct approach to construction and detailing.

WHAT WAS THE GREATEST CHALLENGE?

My model of architectural practice is predicated on close involvement with works during site operations. I like to develop a collaborative relationship with builders, working together to resolve issues, and keeping an open mind as to how the design might develop. This project was particularly problematic in this respect, as it was undertaken during various Covid-19 lockdowns. As a result, I certainly visited the site less than I would usually, and this enforced distance presented a real challenge to my normal working methods. Like others, I relied on FaceTime site visits and the like, but missed the sense of proximity and immediacy.

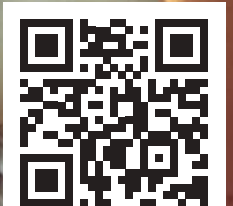
WHAT LESSONS FROM THE PROJECT COULD BE APPLIED ELSEWHERE?

The house is atypical of contemporary rural dwellings in some ways, yet it addresses many of the issues facing contemporary development in the countryside.

Containment of the domestic realm within the walls of the courtyard and the primary orientation of the house towards this garden space allow the surrounding field to remain untouched. The project favours modesty, compactness and restraint over sprawl and encroachment. Hopefully there are lessons in this for wider application in rural housing developments.



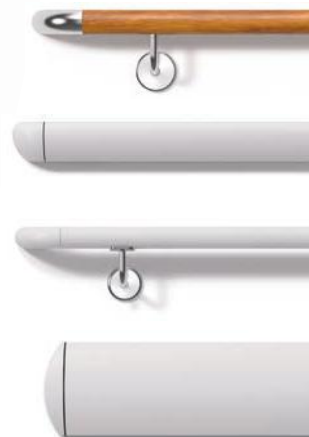
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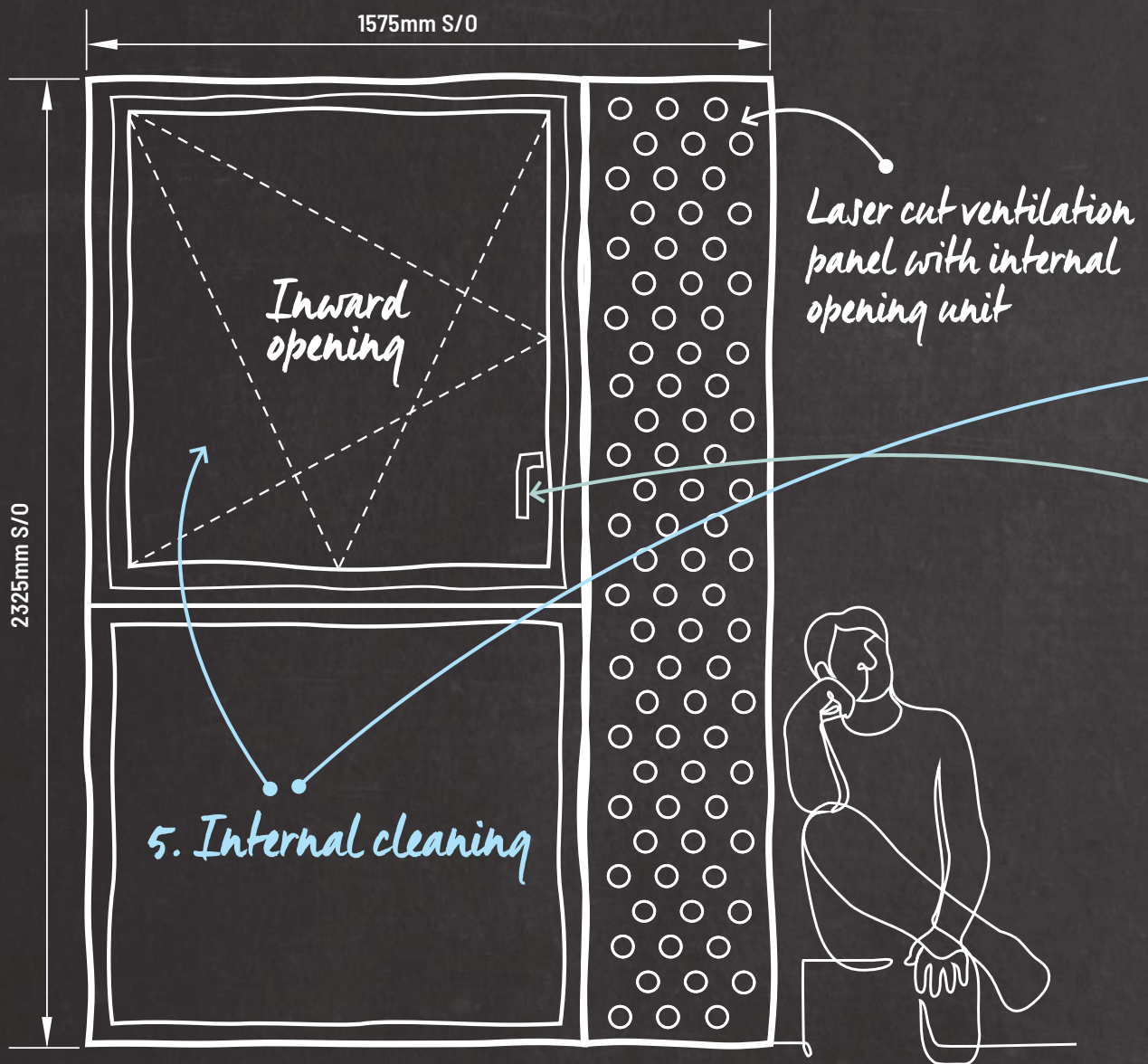
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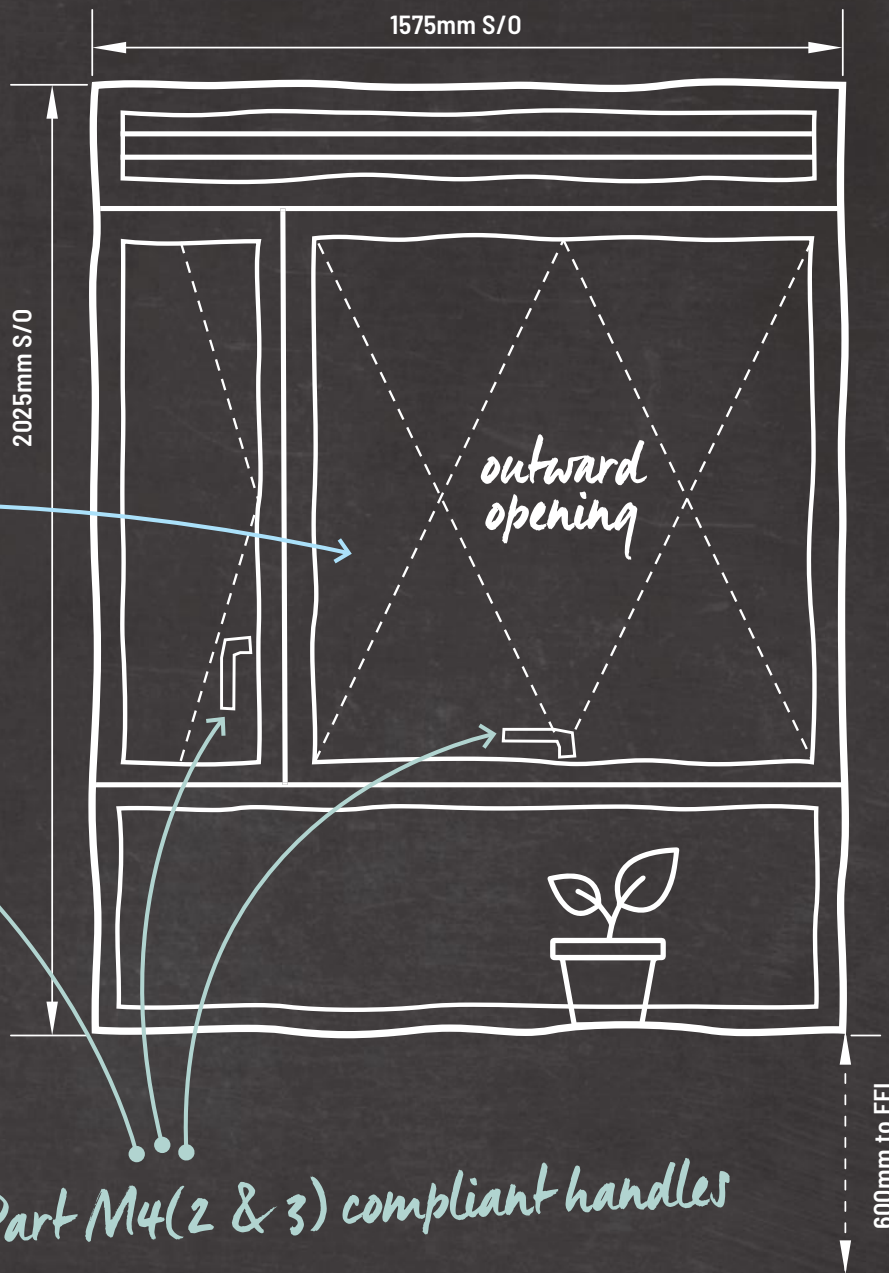


Pondering the key issues of window performance

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Clinical impression



There's no missing the Midland Metropolitan University Hospital, for its massive size and ambition to nurture wellbeing and recovery

Words: Chris Foges
Photographs: Paul Raftery



Big hospitals might be the most difficult buildings to design. Circulation is a real head-scratcher, needing discrete routes for staff, visitors, 'blue-light' arrivals and bed-bound patients in constant motion between wards and clinical areas. Added to that are countless conduits for fluids, gasses and data to rival those of any science lab. There's a panoply of spaces with unique and onerous requirements, from adjacency to infection control. So the question in my mind, en route to the new Midland Metropolitan University Hospital, is whether it's been possible to do all that, on a tight budget, and still deliver a pleasant, even uplifting experience for patients.

Section A-A

- 1 Main entrance
- 2 Clinical podium
- 3 Plant
- 4 Parking
- 5 Lightwell
- 6 Wards
- 7 Stair tower
- 8 Winter garden
- 9 Terrace

First impressions are ambiguous, but hopeful. The 736-bed acute general hospital, which replaces two existing facilities, sits on a 6.5ha brownfield site in Smethwick, just west of Birmingham. Towering over terraced houses and tatty sheds, the 11-storey megastructure has a scale and functional clarity that might more readily suggest industrial than therapeutic use, but there's evident refinement in neat steel and terracotta cladding, delicate cross-bracing and inset balconies. The impact is further softened by glimpses of greenery on high-level terraces and the building's signature feature – a quilted ETFE enclosure wrapping over one end.

Opposite Midland Metropolitan University Hospital by Cagni Williams, HKS and Sonnemann Toon.

This image Looking south across a new park, the 4000m² winter garden is the primary circulation and social space.

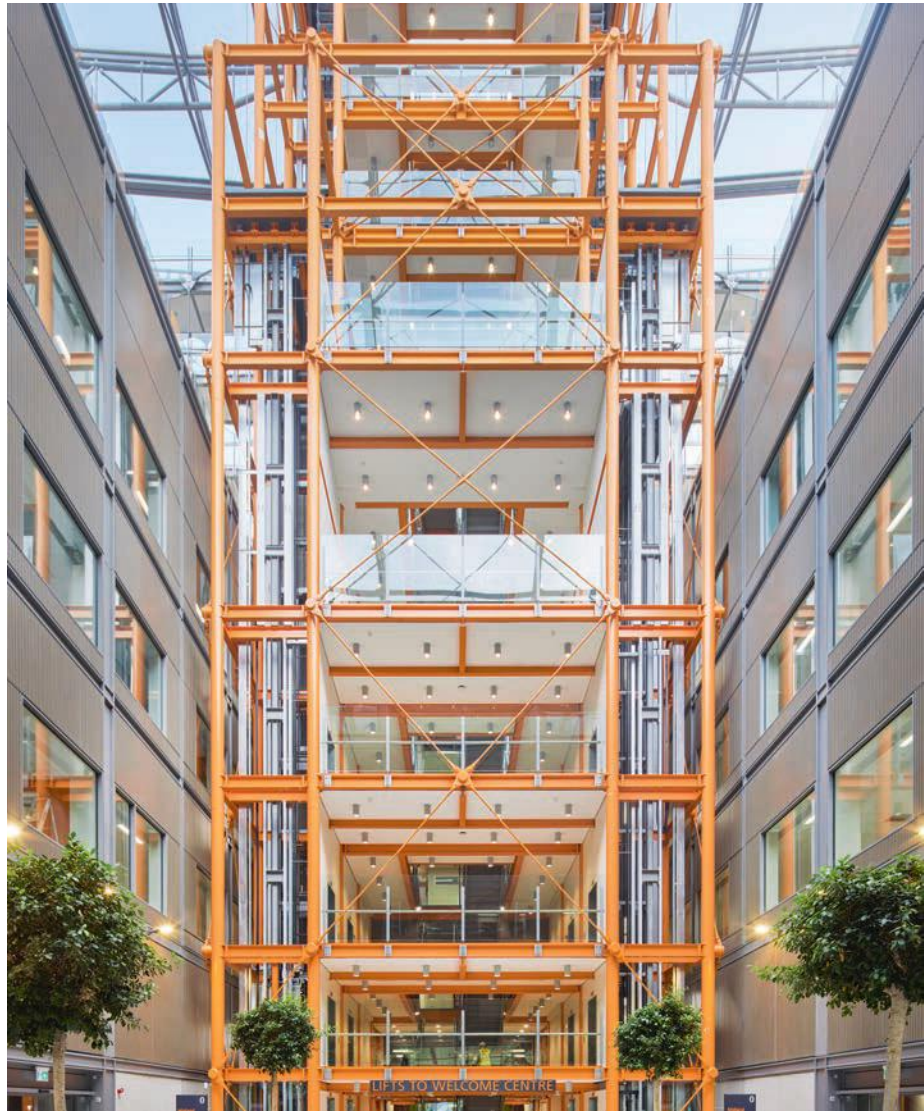


The imposing bulk arises from the architects' early decision to reject the sprawling arrangement envisaged in the brief in favour of stacked accommodation. That has several advantages, says Laura Cagni of Cagni Williams, which worked as architectural design lead alongside HKS as architectural project lead and Sonnemann Toon as architectural clinical lead.

One is efficient planning and reduced travel distances. A logical layer-cake has produced a form resembling a super-sized hovercraft. At the base is a two-storey carpark, partly hidden by cutting the building into sloping ground. It is topped by a three-storey rectangular podium with chamfered corners, containing all clinical departments, from A&E to operating theatres. Above this 'hot block', a boxy superstructure faced in orange terracotta contains the wards. At the southern end they meet an external winter garden, sheltered by that sloping plane of translucent ETFE like a six-storey windscreen.

Another benefit of a compact footprint is to free much of the site for landscape. 'It's important to have breathing space', says Cagni. 'Hospitals shouldn't be fortresses; they need to extend open arms'. She was conscious that by providing public space MMUH could catalyse regeneration of the country's second-poorest borough, and also – from personal experience – that patients can feel a shocking sense of disjuncture between isolated, antiseptic hospitals and the world beyond. 'Healthcare is what the community does to help you out when you are ill,' she says. 'You are not left on your own, and the building should reflect that.'

Approaching MMUH across the new 'village



Above Primary circulation for visitors is via bold-coloured lift and stair towers. More private lifts take patients from wards to clinical floors.

Left Main entrance. The whole building is set out on a 7.8m structural grid that underlies a 300mm planning matrix.

green', through a ring of trees and swathes of shrubs and grasses, there are encouraging signs of welcome. Along the southern end, bench seating is integrated in a double-height concrete colonnade. In the middle an ETFE canopy fans out to mark the main entrance.

Inside, visitors pass through a broad, lofty passage lined with acid-green bathroom pods, and into a giant lightwell through which rises one of three brightly coloured Hi-Tech stair towers. It's light, palpably spacious, and looking up towards the pillowy roof, the view is frankly awesome. From here, lifts shuttle swiftly to all departments and wards above. For the sick or anxious visitor, wayfinding has been made easeful and intuitive. 'It's designed with two things in mind,' says HKS partner Francis Gallagher. 'If you know where you're going, you can get there quickly; if not, go to the welcome centre on Level 5.'

Emerging there, the heart lifts again. The

reception desk marks the entrance to the voluminous winter garden – six storeys high, extending to about an acre, and with skyline views of the city on three sides. Its scale is dizzying; bridges run between four ward wings arranged in an E-shape, which frame distinct shop-lined piazzas where more lightwells plunge down to courtyard gardens below. Ringed by planted terraces, and with paving dotted by trees and lamp-posts, it feels like an extension of the park below. ‘It’s a non-briefed communal area,’ says Cagni. ‘You can have an art exhibition, a market, or kids running and playing.’

There’s a clear similarity to the glassy concourse of London’s mould-breaking Evelina Children’s Hospital, designed by Hopkins Architects – where both directors of Cagni Williams previously worked. Seeing the effect of corridor-free circulation, fresh air and abundant daylight made a powerful impression, says Cagni.

At MMUH the winter garden was originally intended to be glazed, but that proved unaffordable; ETFE was substituted for a quarter of the price. A proposed glulam timber frame had to be swapped for steel trusses. To retain a vital sense of warmth, punchy shades of orange have been applied liberally across internal terracotta facades and the stair towers – ‘a “designer’s colour”, not a muted NHS colour’, says Cagni.

These adjustments only hint at the obstacles encountered during the building’s decade-long gestation. Most significant was the collapse of contractor Carillion in 2018. Balfour Beatty stepped in to complete the job. ‘The amount of work that has gone into it is unbelievable,’ says Balfour Beatty commercial director Steve Reeves.

He estimates, for example, that there are more than 20,000 instances where services pass through fire walls. Ensuring compliance was greatly complicated by the minimal space allotted to

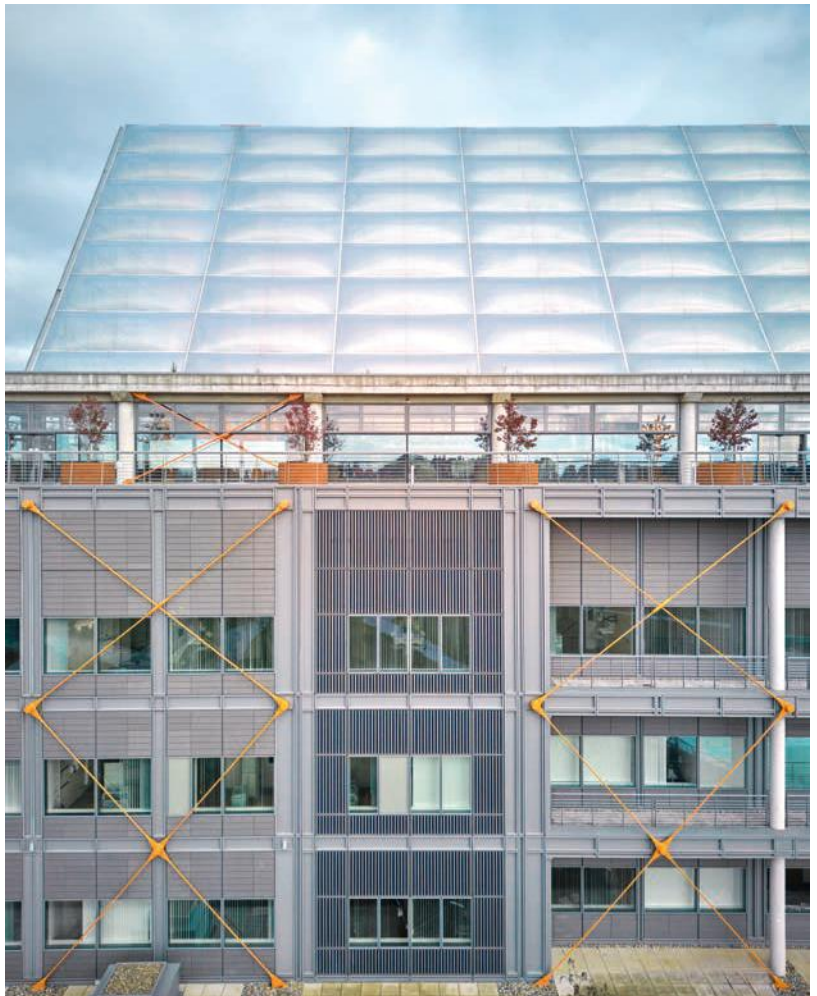


Above Wards look into the winter garden.

Below left Access to A&E and maternity is via a ramp to Level 2 on the building’s long west side.

Below Cross-bracing in the facade obviates internal shear walls, giving freedom to reconfigure interiors as needs change.

Its scale is dizzying; bridges run between ward wings which frame shop-lined piazzas and lightwells to courtyard gardens below





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Buildings Hospital

services, arising from the original cheese-paring PFI contract.

In that context, the generosity of the winter garden is particularly remarkable. 'Everybody said it was impossible', Cagni recalls. The key was the efficiency achieved throughout the building by a regular 7.8m column grid, avoiding expensive transfer structures. This useful dimension works for parking bays, just as it does for bulky equipment like MRI scanners, and also for multi-bed and single-bed wards, thanks to some deft tweaks to the geometry of partitions. 'There was a lot of testing,' says HKS partner Jane Ho, 'working out where we could challenge NHS guidelines but still provide the necessary functionality'.

Complex clinical planning was guided by the precepts of patient-centred design – the idea that an environment that promotes wellbeing can improve recovery. There is, sadly, limited evidence of that in the materials palette: wards are kitted out in functional but dull plasterboard, vinyl and ceiling tiles. This is not inevitable, as shown by the wooden floors and soffits at Herzog & de Meuron's Kinderspital Zürich, which opened a week before MMUH. 'I would love the freer rein that architects have on the Continent,' says Gallagher, 'but we have the constraints of public funding and different rules on maintenance'.

Instead, attention was directed towards ensuring good daylight, with big windows oriented towards interesting views, access to green space and other amenities that help relieve a hospital stay. In the paediatric department we stop in a play area with a zesty yellow floor and glass walls looking into a leafy lightwell. 'We also challenged ourselves to pepper the building with small spaces where you can go for a bit of silence or to get your head together,' says Gallagher. 'That's something you don't often see in UK hospitals'.

Some hard-won successes are so subtle that the casual observer might miss them. Critical care departments are often windowless as patients are

IN NUMBERS

166,600m²
gross internal and external
floor area

84,000m²
gross internal floor area

13
operating theatres

500,000
local users



The winter garden opens onto planted terraces on the roof of the clinical podium.

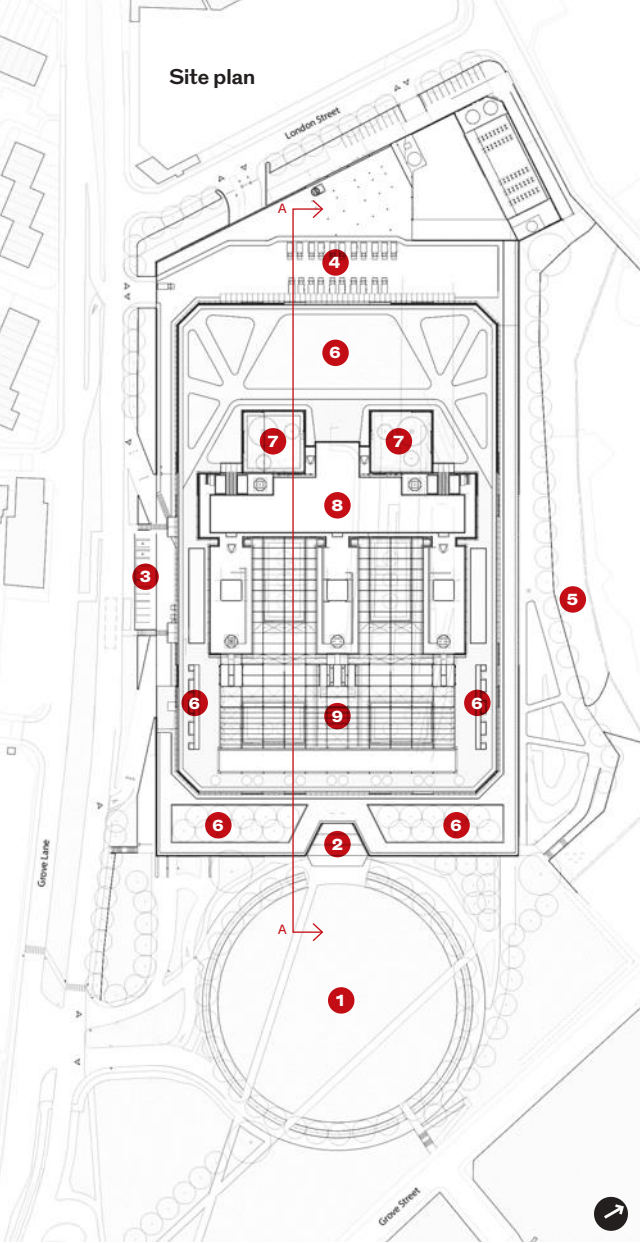


Angled ward doors allow good visibility, and adjoining isolation areas.



Bays are designed to allow beds to face the window if preferred.

Site plan



**Buildings
Hospital**

Credits
Client Sandwell and Birmingham NHS Trust
Architects HKS, Cagni Williams, Sonnemann Toon
M&E engineer Hulley & Kirkwood
Structural engineer Curtins
Landscape consultant Grant Associates
Fire consultant OFR Consultants
Acoustic consultant Aecom
Town planning consultant Turley
Accessibility and inclusion Edna Jacobson/About Access
Main contractor Balfour Beatty

- 1 Park
- 2 Main entrance
- 3 Ambulance ramp
- 4 Service yard
- 5 Canal
- 6 Terrace
- 7 Lightwell
- 8 Ward block
- 9 Winter garden
- 10 Parking
- 11 Mortuary
- 12 Plant
- 13 Emergency
- 14 Cardiology
- 15 Short-stay ward
- 16 Imaging

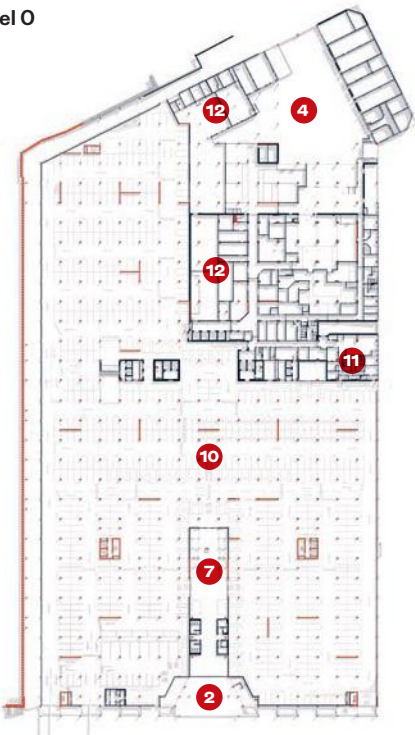


Above On the spacious concourse on Level 5 are the welcome desk, shops and art gallery.

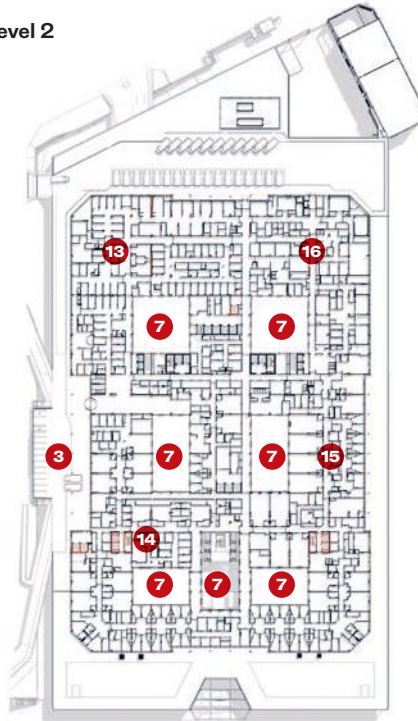
typically unconscious, but here the architects were determined to introduce natural light; at some level, says Jane Ho, they might still be aware of their surroundings.

So will the design of this hospital produce real clinical benefits? 'Absolutely', says Dr Sarb Clare, deputy chief medical officer. 'The things that are fundamentally important to patients - light, comfort, colour - have really come through, and I would expect most of our KPIs to come down, from length of stay to mortality.' That's quite the endorsement. If the delivery of MMUH confirms that big hospital design is unusually hard, it's also clear that it can bring outsized rewards. ●

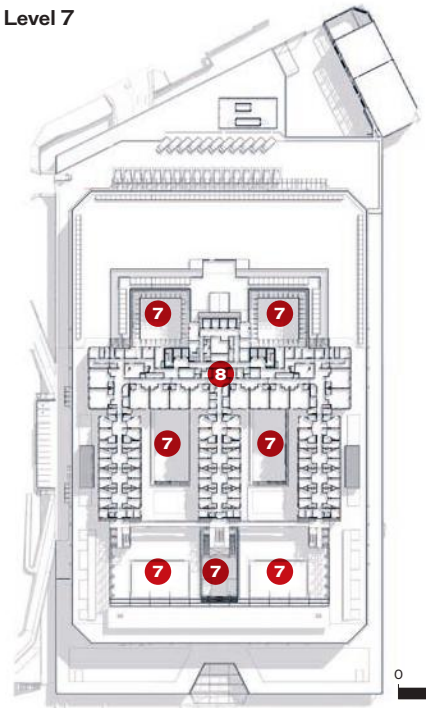
Level 0



Level 2



Level 7



0 20m

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Social construct

A photograph of a modern interior space, likely a lecture hall or meeting room. The room features a wooden floor with a herringbone pattern, a large white screen on the left wall, and a glass wall on the right. The ceiling is dark with recessed lighting. A large, curved concrete structure is visible on the left side of the frame.

Haworth Tompkins reinstates the early intentions of the Warburg Institute in a refresh hoping to entice public visitors

Words: John Jervis

Buildings Gallery

The Warburg Institute – one of the more reticent buildings in Charles Holden’s masterplan for the University of London – elicits varying reactions from passers-by. Some scholars shiver with the reputations, histories and meanings wrapped up in this hallowed space. Others have a mild familiarity with the Warburg name and prestige, but uncertain understandings of what goes on behind this anonymous facade. And the bulk of us, academic or otherwise, walk past oblivious. It is this diversity that Bill Sherman, director of the Warburg since 2017, is seeking to address with the £14.5 million ‘Warburg Renaissance’ – a once-in-a-generation attempt ‘to draw in people who have never entered before’.

The institute is dedicated to the study of global cultural history and the role of images in society, exploring how memories of the past shape the present. It evolved out of the extraordinary library gathered by art historian Aby Warburg in Hamburg during the early years of the 20th century. Having gained a purpose-built home there in 1927, it transferred to London in 1933 to escape the Third Reich. Despite becoming part of the University of London in 1944, both books and institute continued a



Above The reception features a restored Coade Stone frieze of the nine muses.

Opposite The concrete ellipse on the auditorium’s ceiling surrounds a false oculus.

Below The new desk in the expanded reception.

IN NUMBERS

£14.5m
project value

4930m²
total area

1636m²
site area

peripatetic existence, while offering a base for scholars of the heft of Ernst Gombrich and Francis Yates. It finally arrived at this permanent seven-storey Bloomsbury home in 1958.

Holden’s introverted design, with its Neo-Georgian and Neoclassical elements, received a poor reception from critics, Nikolaus Pevsner comparing it to a telephone exchange. In practice, it has proved well-wearing and popular with users, but urgently required an infrastructural overhaul and organisational tweaks to reflect the institute’s changing priorities. In this context, the choice of Haworth Tompkins as architect is hardly a surprise, given its previous successes reorganising and respecting historic buildings in the cultural sphere, plus its much-appreciated attachment to large-scale physical modelling. The National Theatre, London Library and Victoria & Albert Museum have all benefited from this meticulous approach.

In most aspects, the result is deliberately low-key, respecting the original architecture: its intent, qualities and quirks. Heating, lighting and digital infrastructures have been largely replaced – from water pipes embedded in the floor slabs in the 1950s, to such 1990s endowments as dropped ceilings, underfloor heating, strip lighting and



carpets. Much-needed attention has also been given to roofing and drainage, the former covering top-floor galleries currently used by the Slade School of Fine Art. These once housed an offshoot of the Courtauld Institute, which had originally been intended to inhabit a matching block alongside.

The most challenging aspects of the renaissance, however, have involved, first, re-establishing the tight relationship between the institute's intellectual ambitions and the building's architecture, which has frayed significantly over the decades. Secondly, the project needed to address additional needs that were overlooked within the original plan or have since emerged – 'what has been lost or abandoned along the way' in Sherman's words.

The most obvious of the latter is the new ground-floor 185m² gallery running parallel to, and visible from, the street. Replacing a line of offices that ran alongside a narrow, double-loaded corridor, this modest but welcoming space with suspended screens is accessible to the general public. Harking back to the communal spaces of the institute's Hamburg home, and to Warburg's commitment to debate and



HUFTON+CROW (4)

The new gallery harks back to Warburg's commitment to debate and display

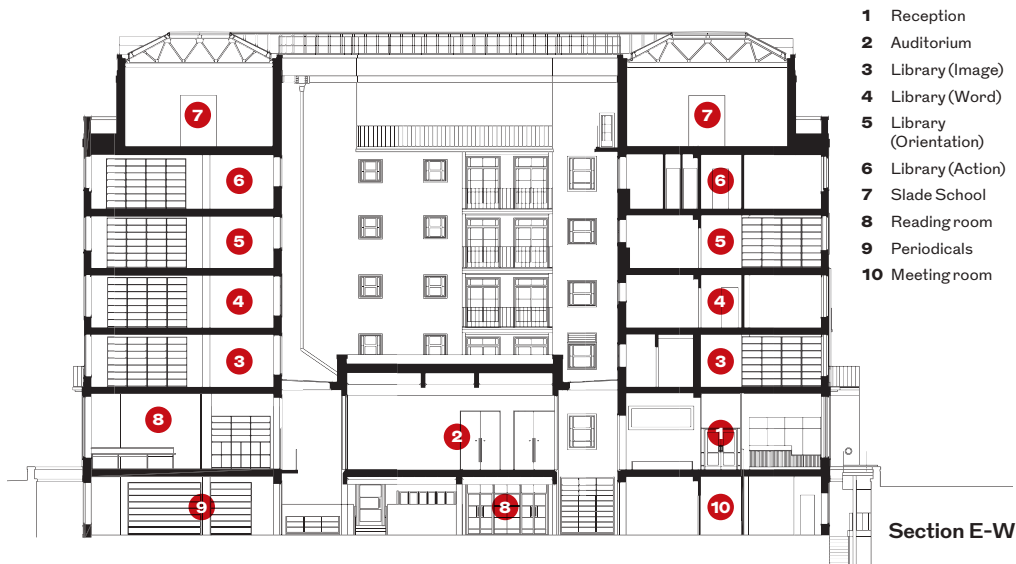
Above A series of offices has been removed to create the new gallery space.

Below The main reading room provides controlled access to the library stacks.

display, it increases the transparency of the institute's physical and intellectual pitches. A strong series of exhibitions has been lined up, and the gallery affords a permanent home for Edmund de Waal's Library of Exile installation.

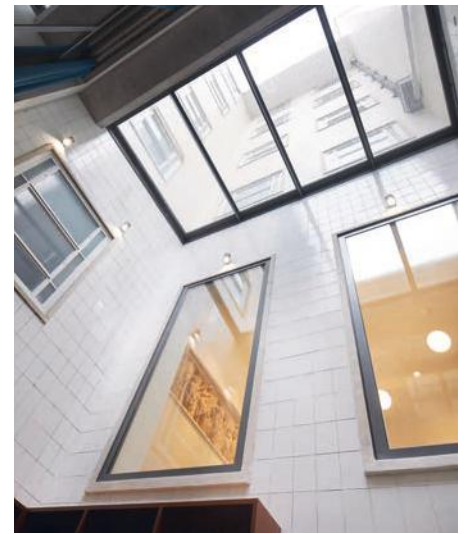
The entrance foyer has also been refreshed, expanding the claustrophobic original by removing its glazed reception desk, and siting a larger open replacement further back, with joinery echoing Holden's design. This allows those without reading cards through the





- 1 Reception
- 2 Auditorium
- 3 Library (Image)
- 4 Library (Word)
- 5 Library (Orientation)
- 6 Library (Action)
- 7 Slade School
- 8 Reading room
- 9 Periodicals
- 10 Meeting room

Section E-W



Above The white glazed tiles were initially intended to light an enclosed courtyard created by the unbuilt Courtauld Institute.

Credits
Contractor Quinn Heritage London
Project manager / Cost consultant Artelia
Building control Assent
Structural engineer Price & Myers
MEP / Services engineer Skelly & Couch
Acoustics Gillieron Scott Acoustic Design
SKA Assessor B Sussed
Fire engineer The Fire Surgery
Heritage consultant Alan Baxter

Below Perforated brickwork on the extension's facade acts as a brise-soleil.



FRED HAWORTH

institute's forbidding doors for the first time, gaining immediate access to the gallery. Through tall windows, visitors can see across the external courtyard to the main reading room, and into Haworth Tompkins' one major addition to the plan – a two-storey structure inserted into the courtyard to provide 330m² of extra space.

Clad in grey bricks on its main facade, this structure otherwise consists of exposed concrete inside and out, echoing Holden's industrial buildings.

Above is a public 140-seat auditorium, with an ellipse in crisp concrete on the ceiling. This pays homage to the shape of the Hamburg reading room and its skylight, reflecting Aby Warburg's exploration of the coupling of astrology and astronomy. A reading room for the special collections is housed below, adjacent to the archives, periodicals and photographic collection around the perimeter, which have been reorganised and now adhere to best conservation practice, while unlocking space, and potential, elsewhere. Two light wells offer natural light, enhanced by the original glazed white tiles cladding the courtyard's interior.

This regained space in Holden's building is used to increase room for readers, insert teaching facilities, and firmly reinstate Warburg's division of his library into four subjects: Image, Word, Orientation and Action. As at Hamburg, each is given a specific physical location in a manner that Fritz Saxl, the first director, called 'a body of living thought', and the current director calls 'proto-digital'. Now, each one occupies its own storey, with auxiliary rooms occupying the remaining floor area as the collection permits, and the various functions flowing into each other. Image, for instance, occupies the entire first floor bar librarians' offices. Word, one storey above, leaves space for meeting rooms and academic offices, including the director's. Stacks have been returned to



Linoleum has been reinstated in the library stacks.

Holden's restrained facades remain intact.



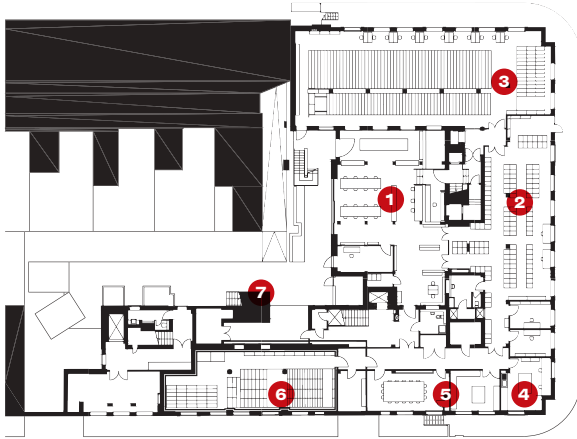
Buildings Gallery

their original orientation, perpendicular to the windows, allowing natural light to penetrate, expanding shelving by 40%, and providing space to accommodate 20 years of future acquisitions. The newly visible windows, with secondary glazing, give views over Bloomsbury, while offering a friendlier facade to passersby.

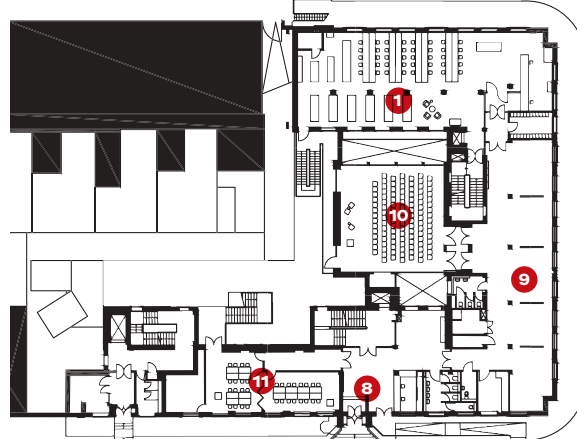
Throughout the project, as much of the original woodwork has been retained or unveiled as possible, from the elegant fluted columns and shelving in the main reading room to the woodblock floors scattered throughout. Sapele additions, such as the acoustic panels in the lecture theatre, are similarly sensitive. This care – along with a dash of ‘architectural surgery’ – is representative of all Haworth Tompkins’ adjustments to Holden’s architecture, which are intelligent, practical, pragmatic and respectful of both atmosphere and fabric. Will they draw punters through those forbidding doors? Let’s hope so. ●

HUFTON+CROW

Lower ground floor plan



Ground floor plan



First floor plan



Second floor plan



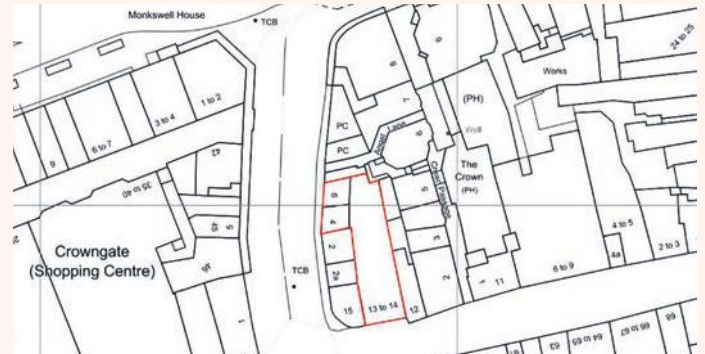
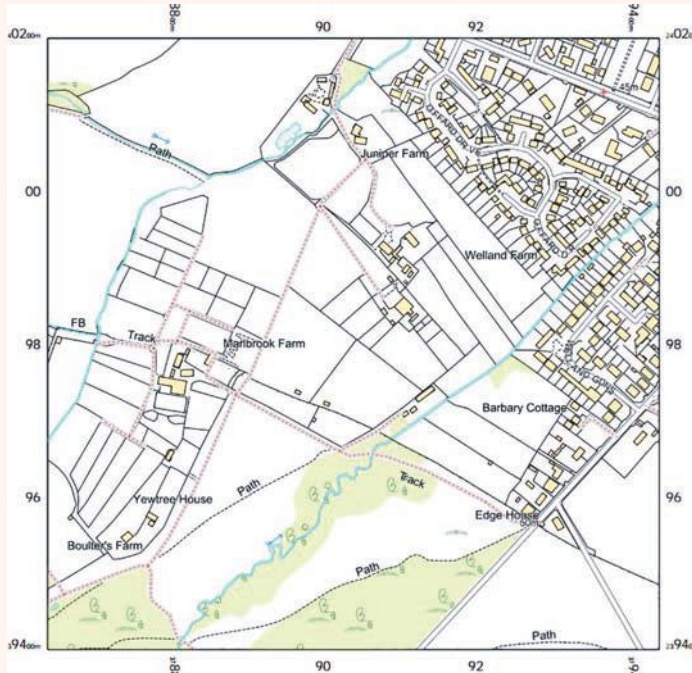
- 1 Reading room
- 2 Photographic collection
- 3 Periodicals
- 4 Conservation studio
- 5 Meeting room
- 6 Archives
- 7 Courtyard
- 8 Reception
- 9 Gallery
- 10 Auditorium
- 11 Classroom
- 12 Library (Image)
- 13 Librarians' offices
- 14 Library (Word)
- 15 Study room
- 16 Academic offices
- 17 Director's office

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OS produces plans at three basic scales, offering 1/1250 for most towns and 1/2500 for the rest of Britain except high mountain and moorland areas. In addition to the basic scales, 1/10,000 scale mapping is available. There are similar scales for Northern Ireland.

Prices start at: £11 for PDFs, £17 for TIFFs, and for DWG/DXF, £18.35.

Contours

Height data and contours surveyed by O.S Terrain and Lidar can be added to any basic scale plans.

All 1/10,000 mapping includes 5m contours but these can be omitted if they are not required.

Dubai comes of age with The Lana

Foster + Partners' elegant, luxurious seafront scheme gives an authoritative taste of the Emirati city's future

Words: Vicky Richardson

Movement and urban mobility define the design of The Lana, which underlines the success of Dubai against the odds of economic crisis and climate insecurity. Raised on tall white columns with high-level open gardens, it draws the eye through voids in the hotel and apartment complex, accentuating the sense of movement and connection to the city. The design seems to anticipate a time when we might arrive by personal air vehicle (PAV) to the landscaped upper levels, which allow movement between its two towers.

It wouldn't be surprising if Dubai Municipality, whose modus operandi is the 'vision statement', was already developing a PAV vision, and such a move would no doubt be embraced by The Lana's architect, Foster + Partners. But for now, guests and residents make do with a choice of arrival by car, water taxi or bike, or on foot. The latter two

DORCHESTER COLLECTION (2)

This image and right

Voids throughout the height of the building contain several of the seven gardens that were the social focus of the design.

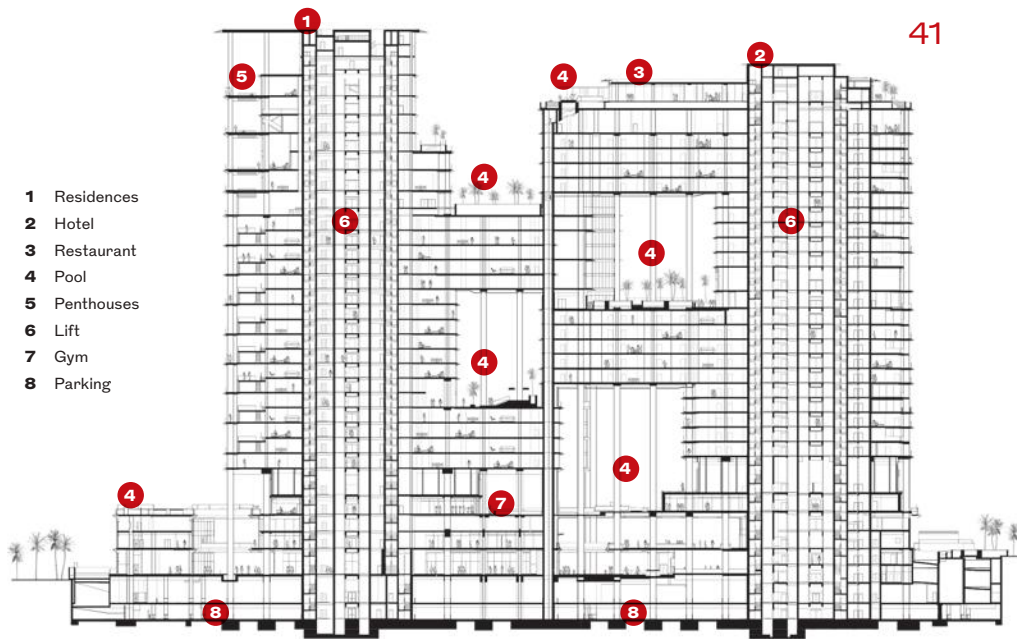
NIGEL YOUNG / FOSTER + PARTNERS



mobility options might seem banal to Europeans, but in the context of improvements to the walking and cycling infrastructure of Dubai offer the ultimate form of luxury – liberation from the tyranny of dense, road-based urban development that characterised the first three decades of its development.

The Lana, which opened in May, is a 30-storey luxury hotel that cleverly interlocks with its twin, a 31-storey tower offering 39 ‘branded residences’, with interiors for both by the French studio Gilles & Boissier. Commissioned by developer Omniyat in 2013, when the emirate was beginning to recover after the devastating crash of 2009, it was originally intended to be only an apartment building. The brief was later altered to incorporate the Dorchester Collection’s first hotel in the Gulf, reflecting the shift in confidence as visitor numbers to Dubai recovered. The combined hotel and residential buildings occupy intersecting towers that pivot to follow the edge of the Marasi Bay Marina, a section of Business Bay that was bought by Omniyat in 2023.

The pair of buildings is the first significant architectural offering at Business Bay and seals its success as Dubai’s most up-and-coming neighbourhood, with 12km of waterfront promenade close to both downtown Dubai to the south, and northwards to the newly constructed Dubai Design District where Foster + Partners is based. Completion of The Lana marks 20 years since the



- 1 Residences
- 2 Hotel
- 3 Restaurant
- 4 Pool
- 5 Penthouses
- 6 Lift
- 7 Gym
- 8 Parking

North-south section

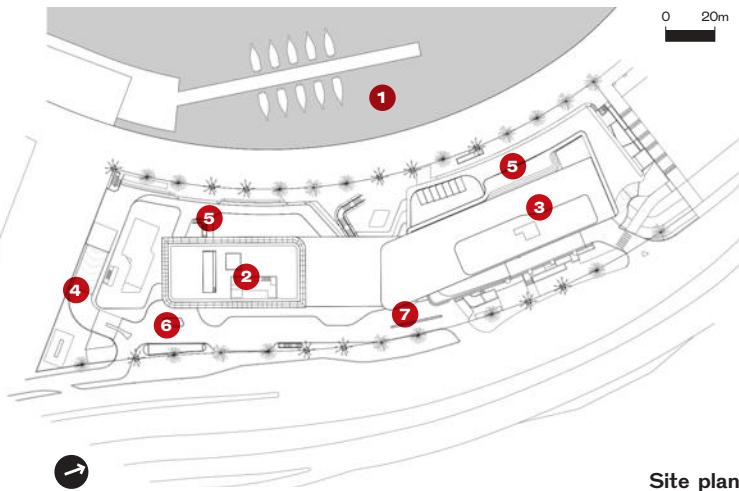
IN NUMBERS
13,619m²
 site area
125,045m²
 total built area
225
 hotel rooms
7
 gardens

practice’s first commission in UAE – the Index, an 80-storey office building in Dubai’s financial district that tested new approaches to sun shading and passive cooling. The practice has since completed ICD Brookfield Place (2020), the House of Wisdom in Sharjah (2021) and the Mobility Pavilion at Dubai Expo (2020). Next year its Zayed National Museum will open at Saadiyat Island, Abu Dhabi, a building of huge cultural and political significance which the practice won in competition in 2010.

The Lana’s design is distinguished by its fluid form and horizontal, tapered white fins which create the impression of super-thin floorplates but increase in depth to provide shading. Formed from moulded white GRC cladding, the horizontal fins wrap around the soffit of the upper terraces and of a soaring, quadruple-height elevated entrance hall where vehicles swoop in to deposit

- 1 Marina/canal
- 2 Residences
- 3 Hotel
- 4 Ramp to basement
- 5 Podium
- 6 Residents’ entrance
- 7 Hotel drop-off

Below Covered hotel drop-off and VIP parking with a Dubai skyline view across the marina.



Site plan





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guests. Dwellers in The Lana Residences can make use of the connecting gardens to access all the facilities of the hotel, and also benefit from their own high-level swimming pool. Hotel residents have an extraordinary infinity pool on the 30th floor, with views of the Burj Khalifa.

Foster + Partners' game with multi-level gardens is a response to several factors. The firm raised the entrance in order to maintain public access at ground level along the marina, with retail units and cycle and pedestrian routes that connect to the city's fast-growing network of cycle and walkways. This also allowed for a separate entrance to the hotel ballroom on the ground floor, which opens onto a waterfront terrace, so that it can be run as a parallel venture to the hotel for exclusive dinners, weddings and events, in the spirit of the London Dorchester. High-level gardens respond to consumer demand for outdoor living and allow Omniyat to offer the advantages of self-contained villas with their own outdoor spaces, combined with the benefits of a tower with services on tap, spectacular views and connection to the city centre.

Dorchester Collection hotels are marked by their elegance and focus on guest service, which traditionally begins



Rooftop infinity pools overlook the city.

It seals Business Bay's success as Dubai's most up-and-coming neighbourhood

Credits
Client Omniyat
Architect Foster + Partners
Collaborating architect BSBG
Structural consultant BG&E
Mechanical engineer

Clarke Samadhin
Landscape consultant VDLA
Lighting engineer Lighttouch
Facade, LEED consultant Meinhardt
Main contractor Roberts

the moment you step out of your vehicle. At its Beverly Hills Hotel in LA, the swooping drive and covered entrance are renowned, and there is a nod to this at The Lana, where a curved driveway surrounded by lush planting and sculpture arrives into a soaring covered space where tall white columns lift your eyes to the surrounding city; there is a sense of expansive space, coupled with a dynamic view of the dense Dubai skyline, centred on the spectacular Burj Khalifa.

The Lana Residences have their own separate entrance which is no less grand. The latest example of the branded residence, these apartments are some of the most expensive on the Dubai property market; in May 2024 the four-bedroom, 1538m² penthouse broke the emirates' record, selling for \$37.8 million. This has given Omniyat confidence to build two more towers designed by Foster + Partners adjacent to The Lana, and to describe the area as an 'ecosystem' that evokes Dubai Creek, the original cultural and economic heart of the city.

The use of this environmental term to describe what many people see as the least sustainable place on earth might seem surprising. But the critics of Dubai who were so vocal during the COP28 in 2023, where Norman Foster played a key role, should not have been so hasty. Dubai aims to reduce its energy consumption by 30 per cent by 2030, and, perhaps more significantly, aims to have entirely switched to clean, renewable energy by 2050. Indications are that these are not

INGEL YOUNG / FOSTER + PARTNERS

AHMED ALNAJJI



Throughout the building deep overhangs shade outdoor spaces so they can be used year-round.



meaningless targets – Dubai has already built the world's largest solar park with a range of highly innovative technology including a 262m-tall solar tower, the largest in the world.

The Lana's deep overhangs, balconies and vertical gardens reduce the need for air conditioning. But this is still fundamentally a glass building that requires constant cleaning and cooling – something that is all too apparent on a summer's day when maintenance men hang from the south facade of the building, polishing the immaculate glazing and white fins in full sun and searing heat. I'm told there are strict regulations to protect them and that working outside at the hottest time of day is not allowed. Nevertheless, it is a relief to be on the air-conditioned side of

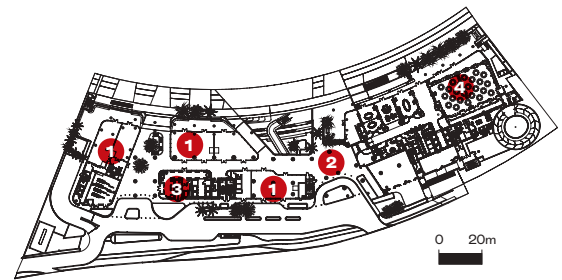
Buildings Hotel & residential

the glass and I suspect that The Lana's lush vegetation and outdoor spaces only come into their own during the winter months.

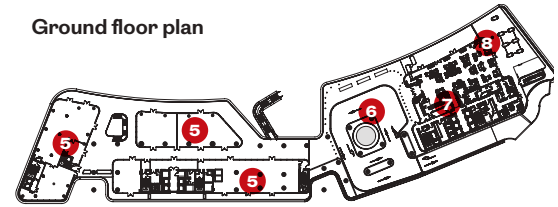
But the commitment of Dubai Municipality to allowing life to continue outside during the summer is genuine. The 2040 Urban Master Plan aspires to double the area of the city devoted to green and leisure spaces, and to create green corridors for sustainable mobility. Recent reports from the Colombian city of Medellín, which has also invested in green highways, suggest that such a strategy could reduce the temperature by five degrees.

The Lana anticipates a time when Dubai will be taken seriously for its architecture and urban planning instead of being dismissed as 'bling city' or as a 'tombstone to capitalist hubris' (as a Guardian headline from 2009 put it following the crash). Marking the current edge of the Business Bay development with construction plots as far as the eye can see to the south, the scheme is already a future classic that suggests the next phase of development for Dubai will be as a city for people. ●

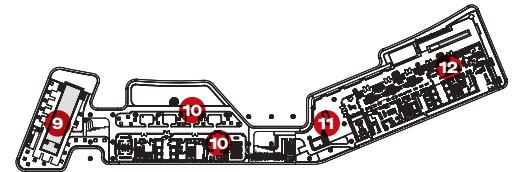
Vicky Richardson is a curator, writer and former head of architecture at the Royal Academy



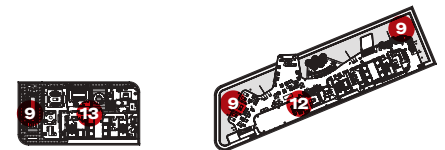
Ground floor plan



Level 2 floor plan



Level 4 floor plan



Level 29 floor plan

Top left Duplex suite overlooking the Marasi Marina.

Left Designed by Gilles & Boissier, the lobby features an arch motif and rich palette including pink marble and alabaster.

Below Bedroom suite.

- 1 Retail
- 2 Outdoor pedestrian route
- 3 Residents' entrance
- 4 Function hall
- 5 Licensed unit
- 6 Hotel drop-off
- 7 Hotel lobby
- 8 Garden
- 9 Pool
- 10 Gym/yoga
- 11 Outdoor space
- 12 Restaurant
- 13 Penthouse

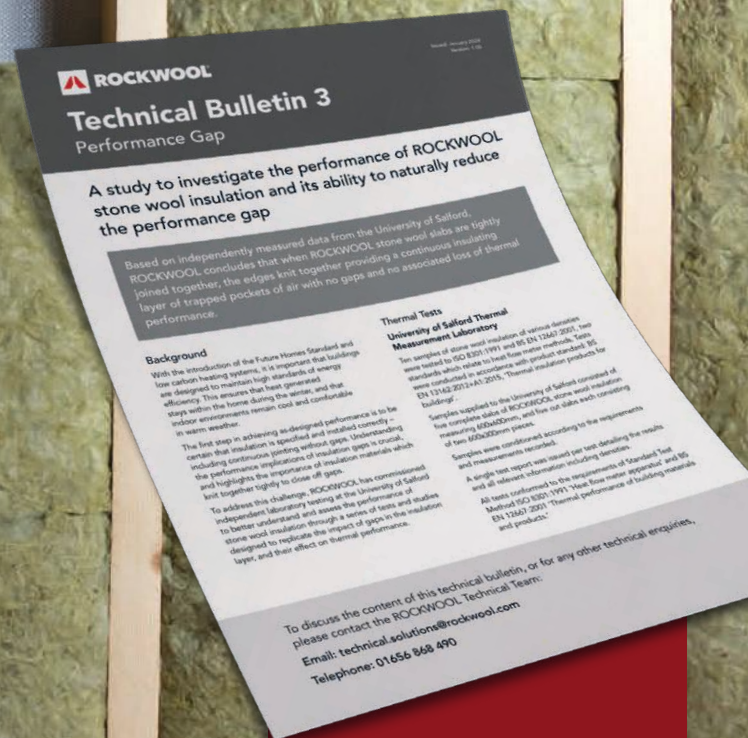


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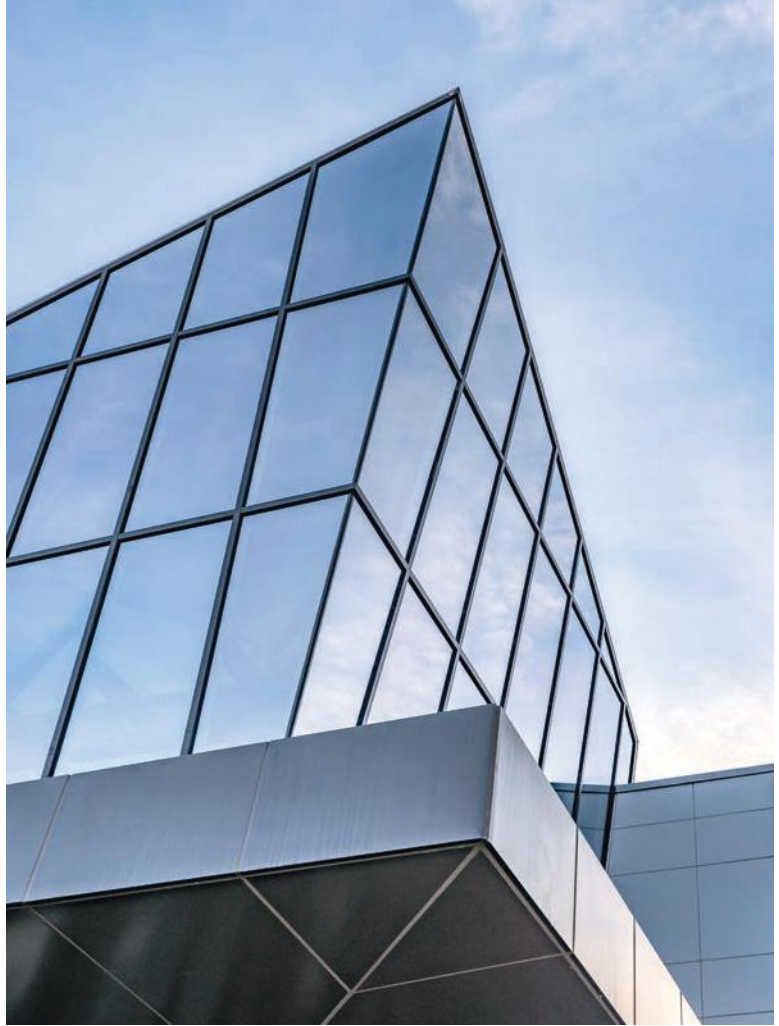
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House extensions: thinking beyond the box

Extensions might spring from a need for extra space but all have the potential to transform the whole house. Our Reinventing the Home webinar is packed with inspiring and creative responses that go far beyond the standard

Presenters:

Erin Edmondson, architect, and Miles Kelsey, associate, Will Gamble Architects; Robert Houmøller, co-founder, Merrett Houmøller Architects; Amrita Mahindroo, director, DROO Architects; Tony Culmer, managing director and owner, Maxlight; Chris Foges, contributing editor, RIBA Journal (chair)

maxlight

Below Palm Springs by Will Gamble Architects brings some Californian modernism to London



A well-designed house extension can, with just a few key moves, unlock new possibilities for how clients want to live in their homes. So said RIBA Journal contributing editor Chris Foges introducing the Reinventing the Home webinar in partnership with Maxlight.

Often such projects are precipitated by change. At Colonnade, a south London house refurbishment and extension by Will Gamble Architects, the clients sought a better home for their own growing family and visitors.

Associate Miles Kelsey described how the project retained the essence of the Edwardian home by reinstating period features in more formal spaces at the front, but added variety by opening it up at the rear. Its kitchen extension is defined by fins onto the garden, in 'a modern interpretation of a colonnade'.

This mediates between inside and out, enabling views out but with some separation rather than a vast expanse of glazing. Slatted partitions inside give some separation between spaces while retaining a visual connection. A roof extension creates a new master suite with inbuilt study space. Roof and floor insulation was increased and oversized radiators enable future use of heat pumps.

The practice's Palm Springs project is an extension and reconfiguration of a Grade-II-listed home in north London, inspired by the Desert Modernism of California. As per Colonnade, the biggest

changes were at the rear, where an open-plan extension on the lower-ground floor was designed for flexible working, relaxing and entertaining uses with full-height glazing. With capacity to host groups of up to 25 people, sliding pocket doors enable sub-division if required. The architect also upgraded the energy efficiency of the building fabric, and introduced eight solar panels. A cork-clad garden studio, 'The Hide', is discreet, with a monopitch roof topped with sedum.

Maxlight's Tony Culmer looked back on the changing use of light in kitchens over 50 years, which has led to larger areas of glazing and great improvements in the energy efficiency of glass.

As a designer and manufacturer of architectural glazing, Maxlight has often worked with Amrita Mahindroo of DROO Architects, who presented several newbuild and extension projects. These include The Crescent House, a rear kitchen extension of a Victorian house for a chef on the site of an existing shed. A sweeping glazed curve in the garden maximises natural light and provides an airy kitchen studio where the chef can work and film her YouTube show.

At Platform House, rather than taking an open-plan approach, DROO created a carpet of levels with a stepped ground and ceiling plane. Combined with bespoke joinery, it 'packs lots of little moments inside the typical Victorian terrace space,' said Mahindroo, who also discussed extensions' ability to create longer prospects through a property.

Other residential projects include Castle Lane in Victoria, where DROO used curved bow windows to extend the living space and create cross-views down the street. In this way, the glass is used 'to cheat the street', according to Mahindroo.

Robert Houmøller of Merrett Houmøller Architects presented Taper House, an extension that boldly removed part of the first floor to create an airy kitchen-diner. The Victorian townhouse was previously full of boxy spaces, said Houmøller, with a poor relationship to the outside. The client wanted 'warmth and humanity' with high ceilings and a multi-faceted central space. Houmøller credits the client with pushing the practice to be

ambitious and 'make it bigger, better and more exciting'.

The result created a double-height space by losing a bedroom and adding a side return and rear extension, both with tapering roof forms to minimise the impact on neighbouring properties. A Scarpa-inspired elevated pond stretches alongside the new rear dining area while the extension terminates in a covered 'coffee in the rain' porch. A bedroom and a mezzanine overlooking the kitchen sit on the first floor, with more accommodation on the second floor and in a converted loft.

Merrett Houmøller worked with All & Nxthing on the interior, which combines clay plaster and oak structure with new brick flooring and exposed brickwork that tells the story of the original house. The result, he suggested, is 'dynamic without being too busy'.

Chris Foges described it as bringing a bit of Marrakech to north London, and cited a comment from a webinar viewer about the value of all presented projects in showing how much more can be gained than the ubiquitous 3m box at the back.

While the featured projects eloquently demonstrate how houses can be successfully reimaged for modern-day use, a good client as well as a good architect is invaluable, as Miles Kelsey earlier pointed out in relation to Colonnade: 'It does require an awful lot of energy and resilience...and that's something we're really grateful for'. ●



Merrett Houmøller's Taper House in north London.



Crescent House by DROO.

2: Intelligence

**FORMULATING AN
INDUSTRY-WIDE UK
NET ZERO CARBON
BUILDINGS STANDARD**
DAVID PARTRIDGE

In May 2022, a cross-industry group of BBP, BRE, the Carbon Trust, CIBSE, IStructE, LETI, RIBA, RICS and UKGBC joined to develop a standard to define the requirements for net zero carbon (NZC) buildings in the UK. This was to enable the industry to robustly determine whether our built assets are net zero carbon, and in line with UK climate targets. The pilot was published at the end of September.

We aimed to provide clear, consistent, science-based metrics that buildings must achieve to call themselves NZC. The standard includes limits on upfront carbon, operational energy use and refrigerant leakage, as well as rules about fossil-fuel use (none, bar emergency power), and district heating and cooling networks. It sets targets for on-site renewable generation, and reporting requirements for lifecycle embodied carbon, operational water use, electricity demand and delivered heating/cooling. Off-setting is not permitted to stay below the limits specified, but it is voluntary for those who wish to set off their residual emissions.

These criteria were reached by balancing a 'top-down' analysis, which seeks to distribute the UK's share of the carbon and energy budget between 13 different sectors and typologies covered by the standard, with a 'bottom-up' review of actual performance being achieved in each of those sectors, based on evidence provided by the whole industry. The UK Net Zero Carbon Buildings Standard (NZCBS) team would like to thank the work of the many individuals and organisations from across the sector who have supported and contributed, and look forward to working closely with them to pilot the standard on real projects, so as to deliver Version 1 within the next 12 months. ●

'We aimed to provide clear, consistent, science-based metrics that buildings must achieve in order to call themselves NZC'



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



David Partridge is chairman of the Related Argent Partnership and the governance board of the UK NZCBS, and a trustee of the UKGBC and the LandAid Charity. He also sits on the advisory boards of ConstructZero and Standard Gas. Find out more: nzcbuildings.co.uk

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Up down, in out, sorts the planners out

A complex series of set-back, sloping, mansard roofs enabled Nick Baker Architects to add two storeys to a warehouse roof in a conservation area to create a new London hotel

Words: Jan-Carlos Kucharek



Design, construction
& technology



Conservation
& heritage

London's new Wilde Aparthotel sits in a 1950s red-brick former warehouse on Middlesex St, once the site of Petticoat Lane market on the City fringes. On the edge of an 'At-Risk' Conservation Area, planning sensitivities meant that to extend two floors up, Nick Baker Architects had to think outside the box. NBA director Alyn O'Donnell and The Budgen Partnership structural engineer Ali Mohajeran discuss the design constraints and construction choices that resulted in its multi-faceted roof.

What was the project planning history?

Alyn O'Donnell: We've worked with the client on smaller residential projects for the last 12 years. In 2018 it approached us with a plan to convert this five-storey, 3100m² building into a 106-room aparthotel, for which it needed two extra

storeys of hotel accommodation – 17 rooms – adding 500m² of internal area.

While the building itself isn't listed, its position on the north-west edge of the At-Risk Wentworth St Conservation Area meant planners were very sensitive to the building's height and wanted to ensure any vertical extension was sympathetic to building and context.

Before being bombed in WWII, the site had been a Victorian pub and we thought about butterfly and gambrell roofs when designing our two-storey extension. The planners opposed either brick or glass, leading us to develop our 'folded arch' proposal. This created a subservient profile to the existing building's mass and broke up the roof form relative to other buildings in the area. Its double mansard gave extra surface area for dormers while setting back at an angle so there's no defined roofline. It gained planning in February 2021.

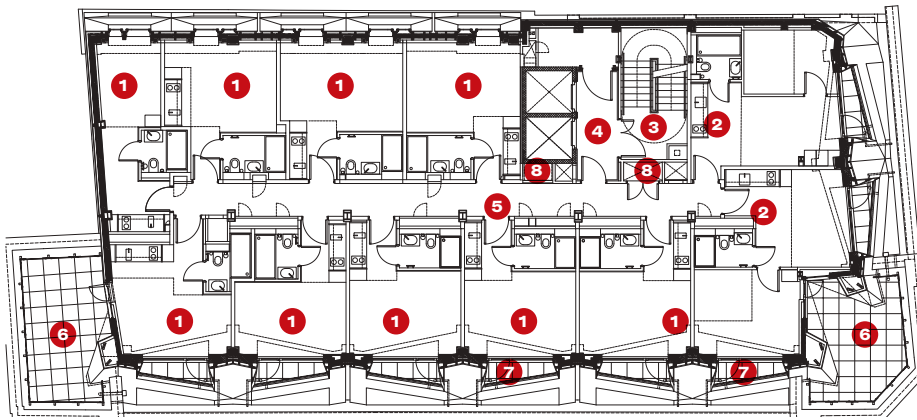
What was the condition of the existing structure you were building onto?

AO'D: It's a curious hybrid structure of steel columns and beams internally

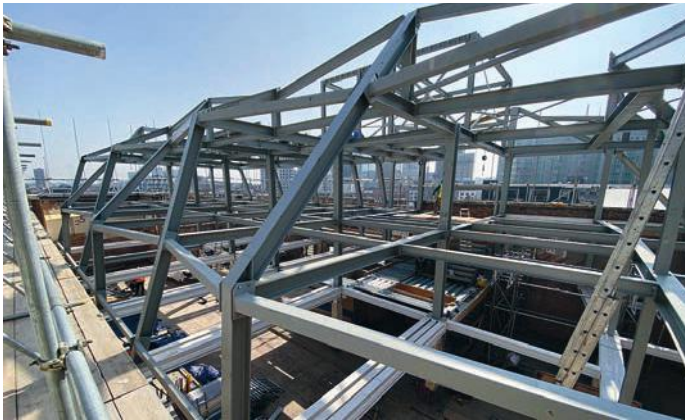
supporting 200mm thick pot and beam concrete floors, with the beams bearing out onto the loadbearing perimeter brick walls. The 15.5m 'short' side of the building has a column positioned mid-span and these run across the 'long' face at 4.4m centres.

Ali Mohajeran: The main challenge was to create the additional two floors plus roof for plant equipment without forcing a change to the existing foundations – the last thing we wanted to do was take up ground-bearing slabs and expose the foundations to underpin or reinforce the pad footings. We designed the underground drainage to avoid clashing with the existing foundations. It helped that the original building was designed for warehouse loadings of 5kN/m² and hotel loadings are markedly less than that at 2kN/m² plus allowance of 1kN/m² for lightweight partitions. The aim was to be as sustainable and economical as possible without compromising robustness and the required geometry.

Part of the gain was in reducing the dead load of the building. A 5th floor added in the 1970s was removed and the



- | | |
|--------------------|-----------------|
| 1 En-suite bedroom | 5 Corridor |
| 2 Corner suite | 6 Terrace |
| 3 Emergency stair | 7 Balcony |
| 4 Lift lobby | 8 Service riser |



Opposite The multi-faceted, zinc-clad steel and timber structure met planning demands for a roof extension that was more 'broken down' in scale.

Left The faceted complexity is visible in the arrangement of the primary steel structure.

Below left Roof corner elements had to work with walls that did not interface at 90° angles.

Below The timber carcassing structure for the same corner, constructed in the workshop before being delivered to site.

roof-level mansard, some of it imposing a uniformly distributed load (UDL) of around 500kg/m² – which we felt couldn't be supported by a panelised timber system. We thought the better option was to use a new primary steel-framed structure bearing off the existing with a secondary structure of timber rafters between acting as the carcass for the zinc cladding and forming the dormers.

Another reason for implementing steelwork was to provide enough vertical and horizontal ties to prevent disproportionate collapse. In addition to the adaptability capabilities of the timber rafters, they were more sustainable and readily available.

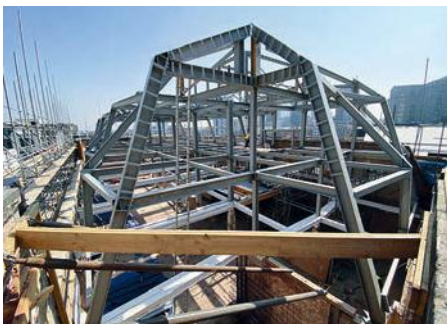
So why not steel for the carcass too?

A O'D: Again, it was about on-site adaptability among other things. Here we used 200mm rafters with stone wool insulation between, 30mm plasterboard on the inside and 75mm batons, 18mm ply and nominal 0.8mm zinc thickness. With a Metsec system not only is it non-adjustable on-site, but we would need to account for the thermal properties of the framing. We would have had to insulate on the outside face, increasing the 325mm section we ended up with – and eating into the net areas. We didn't want panels turning up on site that wouldn't fit. Timber was more forgiving.

How did you generate the complex form?

A O'D: It was more about creating complexity out of relatively simple geometries. Each 4.4m structural bay forms a room and every other steel column rakes at one of two angles, meaning horizontal connecting steels also rake in and out to meet them. Most new steelwork for beams, vertical central columns and raking perimeter columns was conventional 254x254 UC sections. Set on the existing mid-span columns, central columns to the vertical extension were the heaviest available at this section size – 132kg/m – to withstand forces at the steel-to-steel connections.

To articulate the timber faceted bay geometry, we experimented with 3D software but found old-fashioned



NICK BAKER ARCHITECTS

original fourth floor roof exposed and stripped back to its steel 406x140x39 UB beams. We sandwiched these between two new 356x171x57 UB steel I-beams to create the requisite rigidity for the loading of the new mansard structure, and then employed a metal web posi-joist system to replace the existing 5th floor and create the two new floors. At a dead load of 1kN/m², these weigh in at a fifth of the original concrete floors.

Why did you use steel for the primary structure rather than mass timber?

A O'D: We did think about a pre-fabricated mass timber system but we knew the building wasn't true. Rather



than being at right angles, the corner of the building was in fact about 85° and the structural columns we were bearing onto weren't in alignment. We were concerned that faceted elements could arrive and might not fit on site as a result. This led us to think that the best way to deal with that was with a design approach that could allow on-site operatives to work around such inaccuracies.

AM: The main driver for us was that there was a lot of heavy plant hidden behind the

parallel projection in AutoCad was the simplest and most accurate way to work out the profile of each timber rafter. Once these were established, we double-checked them in a 3D model. Bespoke corners at both ends were done in SketchUp. This way we were able to create the joiner's cutting schedules.

It was procured as a JCT traditional contract with CDP so the construction programme's critical path was key. We looked at different ways to fabricate the envelope but in the end, via the contractor, we went with a timber frame manufacturer based in Lithuania. We sent our 2D AutoCad files; using these and the steelworker's shop drawings they developed their own drawings and connections. From this, they CNC-cut a kit of parts, numbering and referencing them. These were packaged and shipped over and were assembled on-site by a local joinery sub-contractor.

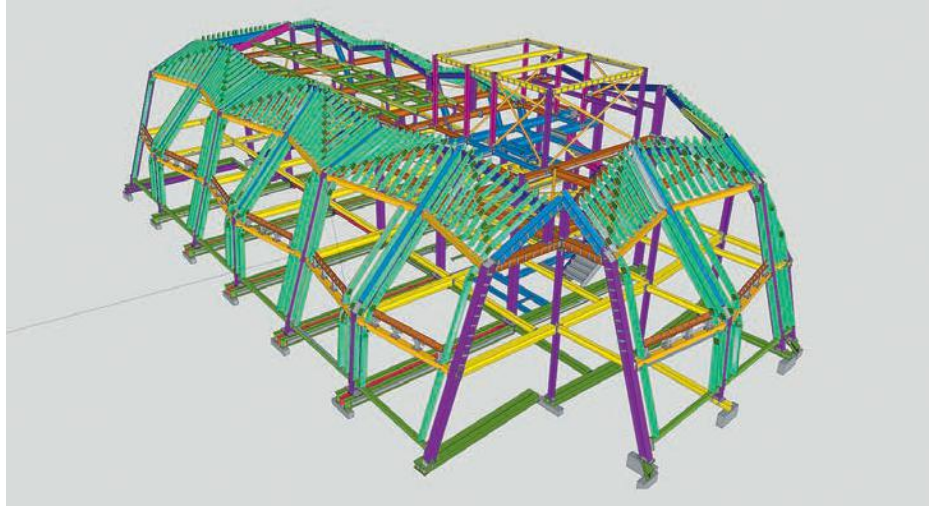
What were your construction timescales?

A O'D: Steel erection took three weeks. Installation of the posi-joist flooring followed, working level by level, at a rate of three to four weeks per level (5th floor, 6th floor and roof); then the timber frame was installed. This was produced in four sections, with the main rafters fabricated first, then the framing to the rear of the building, corner sections forming the terraces, and finally the timbers forming the dormers. This allowed production to start early for the main sections of framing, while fabrication drawings for the dormers were still being developed.

Each section took 8-9 weeks from the start of the approvals process to completion of installation on site. The approval process for the subcontractor's fabrication drawings took about three weeks and once these were signed off, the turnaround on the fabrication of each section of the timber frame was two weeks including shipping, followed by three to four weeks' installation time.

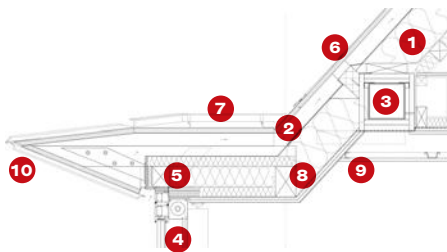
How did you consider the detailing of the zinc cladding?

A O'D: We wanted to use a cladding system that could be worked on-site



Above This 3D SketchUp model amalgamates information from steel frame and timber frame subcontractors, to check alignment of elements.
Below The geometry of protruding dormers adds to the complexity of the overall form.

and so opted for zinc, which allows for bespoke finishes, shapes and junctions. We initially wanted to use single-welt interlocking 'flat-lock' zinc tiles throughout. But working with the manufacturer Rheinzink, it was apparent that the minimum fall for zinc tiles was 10°, which meant the upper levels of the faceted roof needed to be standing seam zinc sheet, which can be installed at a minimum fall of 3°. The falls are partially in place to



- 1 200mm Rockwool
- 2 75mm timber batons and air void
- 3 Primary steel structure
- 4 Reynaers CS77 high intensity door
- 5 Timber section below profiled rafters with support steels at 200mm centres
- 6 Zinc tiles on underlay and 18mm ply substrate
- 7 Standing seam zinc hip and ridge
- 8 Timber section
- 9 2 x 15mm plasterboard
- 10 Zinc standing seam on underlay w/edge drip profile

prevent water staining the pre-patinated graphite-grey finish we specified.

Drainage from the upper sections of the roof is detailed to run to a shallow gutter positioned between each bay. This ensures that rainwater is controlled to prevent water staining the finish. These gutters run down to a deep perimeter gutter that is located behind the loadbearing brick facade at 5th floor level. This collects water from the whole roof - including the dormers, which throw water either side onto the main roof, before it runs into the gutter.

What about the dormer window design?

A O'D: To create a sharp line all around, we wanted a wide but slim framing detail to the dormers, which took quite a lot of engineering. We settled on a steel fin detail running at 200mm centres either side of the timber section over the window and door glazing sets to allow the zinc to run around it to make the deep frame detail. It runs either side to distribute load evenly as we had to allow for both snow loadings and possible human load for access or maintenance, so it needed a counterbalance to prevent a bending moment 'twisting' the timber section above the double-glazed frames.

As above, so below?

A O'D: We wanted to express the geometries evident on the roof level at ground level too. Cladding the ground level facade in green glazed tiles by Darwin Terracotta not only picked up on the site's past history as a pub (we chose green as it is the livery colour of the Truman brewery) but the bespoke faceting we designed referenced the complex geometries that are going on above. ●

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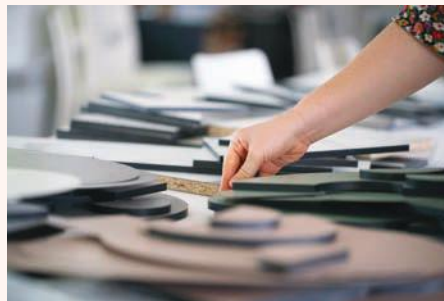


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Above Wilsonart's team of decorative surfaces experts is on hand to guide material selection.

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Sensory perception

Manalo & White and Richard Lyndon Design emphasised sightlines, light, colour and even acoustics to create an enabling learning building for Heathlands, a school for deaf children

Words: John Jervis Photographs: Rachel Ferriman



Inclusive
environments



Design, construction
& technology



IN NUMBERS

£850,000
total contract cost

250m²
total area

£3,400/m²
GIFA cost

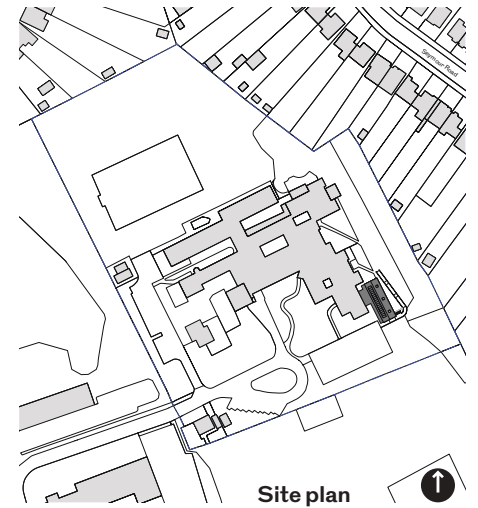


The new block is a cheerful yet harmonious presence, topped by photovoltaic panels.

Twenty minutes' walk outside the centre of St Albans is Heathlands, one of the country's leading schools exclusively for deaf children. Funding issues have caused others to fall by the wayside, leaving this much sought-after opportunity for deaf pupils to learn and socialise in the same environment, and through the same languages. This year, a two-storey block has been added, designed by the team of Manalo & White – a practice with a strong record in education and social projects – and Richard Dougherty of Richard Lyndon Design, also director of architecture at Gallaudet University, Washington, DC.

Heathlands' current home was built in 1975 as a single-storey primary school for deaf children, with very few adjustments to meet its pupils' specialist needs. Its later expansion into secondary education also involved few adjustments for the mixing of age groups. A different mindset has now been applied, shaping the architecture around the children, with the aim of optimising wellbeing and education, and reducing the 'deaf attainment gap' engendered by the additional linguistic and educational challenges faced by deaf children.

The original brief was to add an extra floor with three classrooms to a slim single-storey block, but Dougherty, who is himself deaf, says, 'My instinct was that this was the biggest mistake they could make,' entailing narrow corridors, restricted size, unnecessary expense and an inconvenient central location. Instead, the team proposed a simple two-storey structure, open on all sides, built from natural materials, in a scruffy,



Site plan

overlooked corner – all within the same tight budget.

The goal was to maximise impact – six classrooms were delivered, and a new play area reclaimed from the scrub – while opening the door to a potential transformation of the campus. Primary schoolchildren are taught in three dedicated rooms below, with secondary pupils in three subject-specific rooms above, providing both contact and separation between ages. Each room accommodates a small horseshoe of desks, providing uninterrupted lines of sight between all occupants, and is painted blue so every skin tone stands out, making signing clearer. Large east-facing windows illuminate the teachers opposite, while additional windows high up provide cross-ventilation and even light, reducing glare and distraction.

Acoustic measures are vital – for instance the panels lining the vaulted ceilings on the top floor – to reduce background noise that can interfere



An overlooked corner houses the project.



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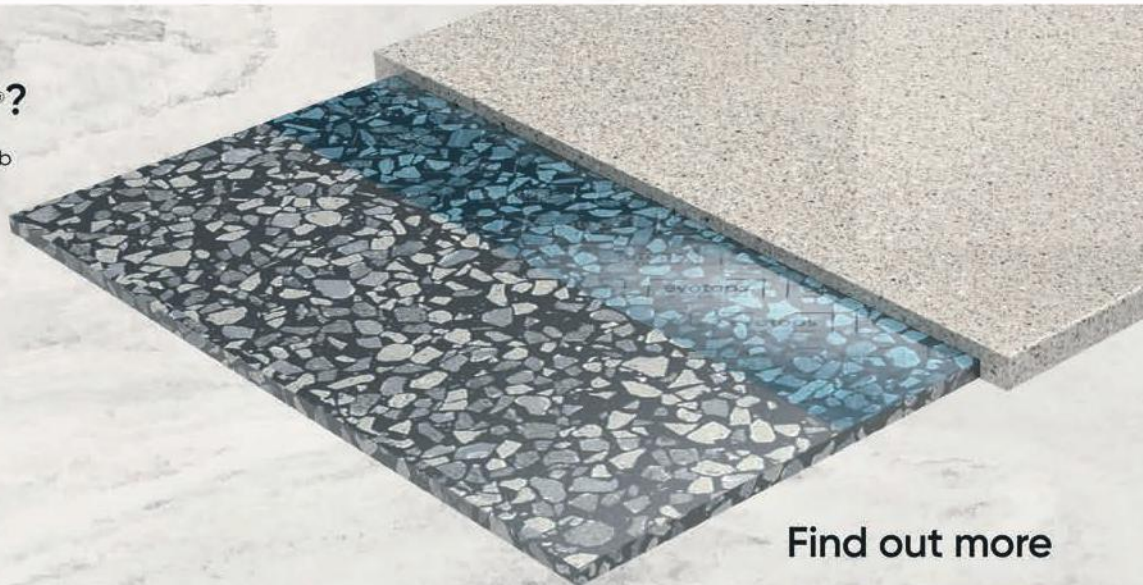
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Intelligence Specialist school

with hearing aids and cochlear implants. Ceiling-mounted NVHR (natural ventilation with heat recycling) units ensure a comfortable environment all year round, avoiding the need for space-consuming floor units. Such measures minimise visual and auditory strain, creating calm, stress-free environments to facilitate the extended periods of intense concentration required to teach and learn through sign language.

The relationship between interior and exterior has been carefully considered. Each room opens directly to the outside, dispensing with space-consuming corridors and enabling pupils to step outdoors to refocus. On the top floor a wide, screened external balcony links to the adjacent art block – itself rearranged with generous corridors acting as additional rooms with space for lockers and displays. Similarly, broad external stairs double as a seating area for conversations or teaching, while a lift (only the second on the campus) gives access to the upper levels of both blocks – especially useful to those with additional disabilities. Dougherty says: ‘When designing educational spaces, people talk about classrooms and their thresholds, but for the deaf community, what’s really important are liminal, in-between spaces – that’s where incidental learning happens, the watercooler moments.’

Stairs and railings are bright yellow,



Above Liminal spaces, such as the covered link shown here, act as additional rooms.

Below A play area has been created from scrubland behind the new block.

Right The screened balcony leads to broad stairs offering space for conversation.

Credits
Project manager and quantity surveyor Omnium
Mechanical, electrical and plumbing XCO2
Structural engineer engineersHRW
Design & Build contractor Gemstone
Cladding James Hardie
Roof VM Zinc

as is the framing of windows and doors, ensuring visibility – and a pop of colour – in children’s peripheral vision. ‘When walking and talking with another deaf person by your side you tend to take in a wider scope,’ explains Dougherty. ‘It’s important to highlight openings, so the bright yellow is invaluable, providing contrast and safety benefits.’

The building exterior is clad in green fibre-cement panels to match foliage, with a regular grid of timber battens. Some of these protrude further than others to engage deaf children’s often heightened senses, whether through a constant play of shadows, or the materiality that dovetails with pupils’ pleasure in running their hands across surfaces. ‘We didn’t want to create a nondescript building like others on the campus,’ says Dougherty, ‘but one animated with colour, texture and shade.’ Initial concern about the possibility of ‘a weird IKEA-type building’ has evolved into a warm embrace from all.

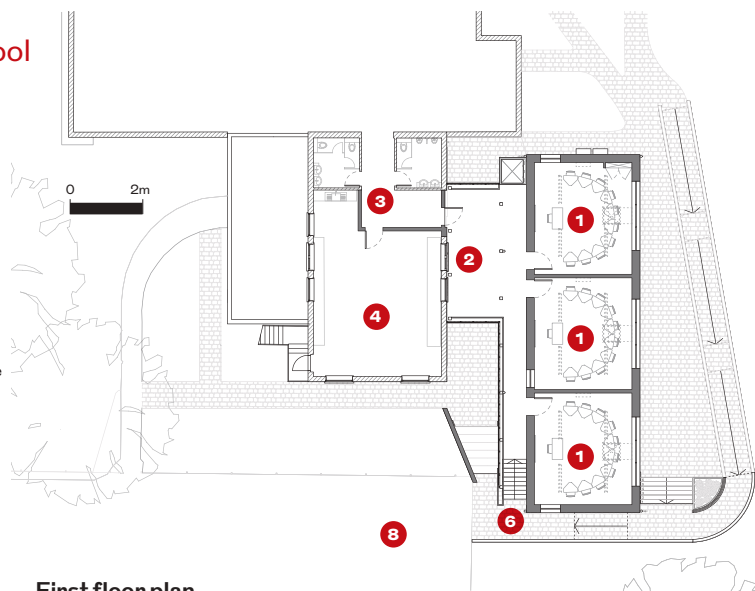
The bright yellow on stairs, railings and window frames is invaluable, providing contrast and safety benefits



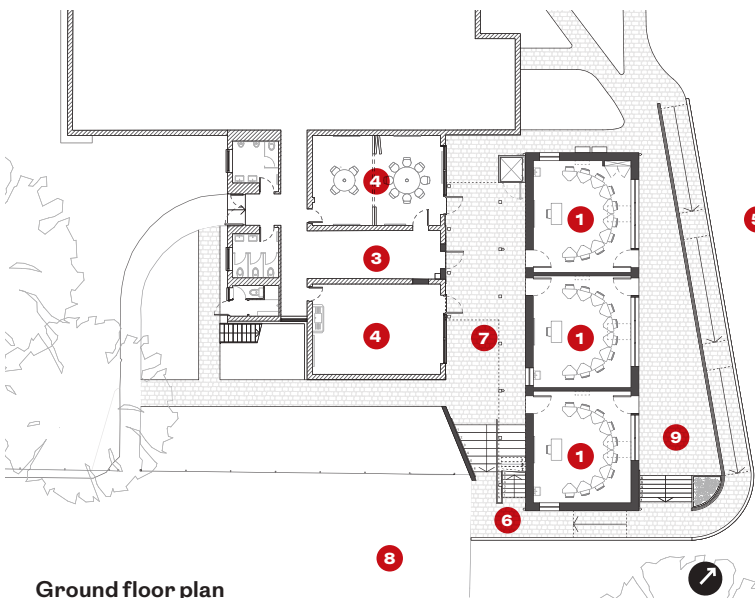


Intelligence Specialist school

- 1 Classroom
- 2 Covered link
- 3 New corridor
- 4 Existing classroom
- 5 Play area
- 6 Upper plaza
- 7 Lower plaza
- 8 Existing playground
- 9 Outdoor teaching space



First floor plan



Ground floor plan

A huge amount of care has been taken over details that bring life to what is, in many ways, a modest structure. All are keen to pay tribute to early workshops with the children and, despite inevitable glitches, the tenacity of the design-and-build contractors. Stepping back, Steve Fox, commercial manager at Manalo & White, says, 'One of the nice things is the simplicity. It's just six classrooms, no corridors – you have to go outside to go from one room to another – there are benefits and beauties in that.' Some aspects, such as colours, can now be rolled out across the campus relatively quickly. Ongoing expansion has already consumed

Above Raised battens provide additional visual interest.

Below All skin tones stand out against the blue walls, aiding communication.



the additional space (A-levels are being introduced), so a cohesive masterplan is being drawn up with proposals for a sports hall, dedicated sixth-form college, sign-language centre and additional boarding.

Throughout, the attitude has been to recognise deafness as a gain, and create an environment embracing that; one that supports interaction, engagement, communication and understanding – conditions which benefit everyone, deaf or otherwise. In many ways, it seems frustrating that it has taken so long to discover and implement these relatively straightforward, humane and effective principles. On the other hand, it is the generous dimensions of the 1970s campus that permit this vital transformation. One can't imagine such largesse today. ●

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Five key moves to turbo-charge decarbonisation

Judicious use of AI, a more proactive approach to sharing insights and design that starts with sustainable materials were among key findings in our recent roundtable



The urgency to reduce carbon emissions from the built environment is not lost on architects. With 25% of greenhouse gas emissions in the UK coming from the construction and use of buildings, much is riding on the ingenuity of architects and clients to think and act differently.

The challenge is multi-fold. Balancing upfront embodied and operational carbon is a key issue; ensuring that buildings perform as designed is another. And then there's working out how to integrate considerations into workflows to help make the right decisions and steer their clients down more sustainable paths.

RIBA Journal assembled a group of architects and design professionals to discuss such pressing matters and examine how technology can be harnessed to help reach these decarbonisation goals. The round table was held in association with Autodesk and chaired by RIBA Journal deputy editor Jan-Carlos Kucharek.

Key points included the need for a holistic approach to sustainability; integrating embodied and operational carbon considerations; increasing biodiversity; and the importance of education and behavioural change. Participants emphasised potential of AI – but were concerned about the vast amount of energy its processing will consume. They also highlighted a need for accurate data and real-life intuition, something AI cannot always deliver.

The conversation also touched on the potential for interoperable solutions to democratise access to decarbonisation tools and help big and small practices alike. The event produced five key messages.



ALEXIA GLASGOW-ALEXANDER

Above from left Golnaz Ighany, BDP; Elias Anka, Kohn Pedersen Fox Associates; Marta Bouchard, Autodesk; Denise Chevin, writer; Smith Mordak, UK Green Building Council; Claire Brady, Useful Projects.

Right from left Simon Sturgis, Targeting Zero; Tomas Millar, Millar Howard Workshop.



Fundamental change

Participants believe technology can support designers on the path to decarbonise but felt strongly that it should not simply be used to support and augment what they do already. We need to fundamentally change our resource-intensive practices. Instead, technology should help drive radical change, rooted in first principles of architectural design.

'I worry that conversations about using technology sometimes centre on efficiency and optimisation, and I think that can veil the need to make more systemic change,' said Smith Mordak, CEO of the UK Green Building Council. 'We don't want to just do what we're

doing, only harder and faster. We're still fundamentally trying to recreate buildings from a high carbon era, but with a bit less carbon. But there are many other ways of building that we have known for thousands of years, and a lot of us have forgotten the lessons they teach. As architects, we're all trained in what is beautiful architecture, what is great architecture, and often what is being heralded is inherently high carbon and inherently unsustainable. But the problem with a lot of AI is that it's been trained primarily on practices from the 20th century.'

Mordak said part of the problem was that a client's brief, or 'back of the napkin sketch by the genius' was

Right Interrogation for lower operational carbon and enhanced thermal comfort in BDP's upgrade of James Stirling's 1968 History Faculty Building, Cambridge.

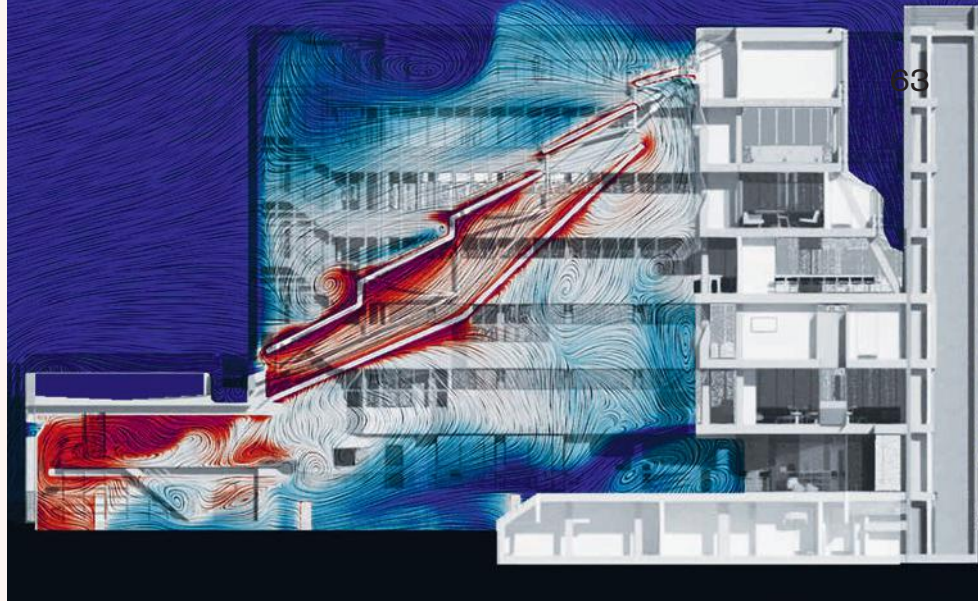
often the starting point for decision-making about design and then it was a case of finding materials to deliver that. Instead, it would make sense to 'reverse the order of decision-making and start with the resources we have and then design back from that, but it is very difficult within the current roles and systems', adding: 'We need better mechanisms for deciding how we're going to use all of our resources. Technology has a role to play in helping us make those decisions together.'

Others, including Claire Brady, associate director of Useful Projects, agreed, hoping that technology could be used to help drive innovation in the way buildings are designed. 'The ability to ship any material from anywhere and use unlimited resources, which is the approach we have adopted in the past, has allowed us to become a bit lazy,' she said.

It was certainly felt that with so much change afoot, this was an exciting time to be an architect and to play a part in changing many traditional assumptions. Simon Sturgis, author of the RICS Wholelife Carbon Standard, said that today's need for housebuilding is on a scale not seen since the 1970s, and yet we must address this demand in a way that still meets our net zero ambitions. 'It's not impossible, but it does mean we have to build those houses in a way that hasn't been done before.'

Democratise carbon intuition

There was a strong agreement that over-reliance on technology to measure carbon impacts is potentially damaging in the hands of those who do not understand the foundations of carbon data inputs and carbon calculations. 'I've seen quite a lot of people presenting their carbon



BDP

Right Visualisation of US firm MBH Architects' 300-unit Project Phoenix housing in West Oakland, California. MBH used Autodesk's Forma generative tools to optimise sunlight, sound and wind constraints and to develop its mycelium cladding panels that made the project carbon neutral.



MBH ARCHITECTS

assessments, and you think what on earth are those figures all about,' said Sturgis. 'We've got to use our natural intelligence – and develop a sort of "carbon intuition", so that you know the impact a material might really have on embodied carbon and be able to spot mistakes if you input the wrong information.'

Elias Anka, senior environmental specialist and associate principal, Kohn Pedersen Fox Associates, agreed: 'I think technology and simulation is the way forward to make better-informed decisions about decarbonisation. But it's very important to highlight education and make sure that everyone knows what they're doing.'

Golnaz Ighany, architect-sustainability director, BDP, said her

philosophy was that all designers need to be part of sustainable design considerations – and although everyone does not need to know everything, they needed to have a baseline understanding to be able to ask the right questions of an expert group within the practice.

Software tools can quickly inform clients to choose more sustainable options

Participants flagged up the huge benefits of being able to call on various tools to guide more sustainable decision-making early in the design process. For example, Anka said that being able to use AI-enhanced tools for daylight and wind modelling, or even safety and public health studies, often involved sending designs to be modelled by consultants, for which results would have taken two to three weeks to arrive in the past. 'So we have to try to tap into engines and platforms that produce outputs quickly, not necessarily focusing on accuracy, but more on trends and patterns. When you're doing parametric or iterative

The ability to ship any material from anywhere, and use unlimited resources, has let us become a bit lazy

design, that's very useful.'

Anka also pointed out that carbon assessment tools were very useful in discussing options with clients as they could be used to easily demonstrate the impact of certain designs or materials on energy performance.

The technological transformation is here – and small practices will benefit

Meeting net-zero goals will require bringing together data, analysis and insights and then making sense of a huge sea of information, said Marta Bouchard, AEC sustainability lead at Autodesk. 'And we need the professional expertise of architects to help make sense of all that data in the context of the project, because tech can't do it alone.'

The traditional 'silo' way of working has resulted in siloed use of technology, pointed out Bouchard. 'But the new generation of technology enables a more integrated relationship between [it and] AECO professions, including interoperability, connected data and workflows that support more connected teams. I really think this is the next frontier, where technology providers enable access to sustainable solutions through an open and diverse tech ecosystem.'

Tomas Millar, co-director at Millar Howard Workshop, was also enthusiastic about the way technology was becoming more democratic, citing the likes of OpenAI.

'Software is becoming easier and easier for people to use and programme themselves. So it's not unrealistic that even a small provincial practice like ours could be creating its own software, especially with the use of AI. What's exciting about that is it means that we're potentially going to start using software that's being developed from the ground up rather than the top down, as has been the case in the past.'

Share what good (and bad) looks like

All agreed that the task of cracking the net-zero challenge needed to be solved at scale rather than on a project-by-project basis – but there was disappointment

ALEXIA GLASGOW-ALEXANDER



Left Our round-table panellists outside the RIBA.

Below Architect Tomas Millar has been applying his own version of sustainable 'carbon intuition' in the refurbishment of his family home in Stroud.

MILLAR HOWARD WORKSHOP



at the industry's lack of transparency. Everyone is addressing decarbonisation in their own way, observed Sturgis, and there was no willingness to share details that could genuinely help others. He reminded the group that the industry had come together to produce the new UK Net Zero Carbon Building Standard frameworks like the RICS Whole Life Carbon Assessment, yet the data to validate the results of these methods is riddled with gaps.

Businesses, of course, need to protect their own IP, but data on building performance could be shared anonymously in the effort to upskill the wider profession.

Encouragingly, the round table participants said they were detecting the start of some quite informal knowledge-sharing on the ground – with small practices more likely to swap ideas, said Millar. BDP's Ighany concurred, adding she was part of an informal network of sustainability experts who share ideas and support each other. ●

What one benefit do you think technology can bring architects in optimising embodied and operational carbon to accelerate decarbonisation?

Simon Sturgis, Targeting Zero and author RICS Wholelife Carbon Standard

Enhancing natural intelligence – helping people understand better and provide carbon intuition.

Tomas Millar, co-director Millar Howard Workshop

Sharing knowledge is key to all this, and I think technology could be used more to enhance the knowledge-sharing process.

Golnaz Ighany, architect and sustainability director, BDP

Enabling architects to think out of the box and go beyond traditional, conventional way of designing. Technology can support them to be bold and go beyond boundaries.

Elias Anka, senior environmental specialist – associate principal, Kohn Pedersen Fox Associates (International)

If technology can help optimise both operational and embodied carbon, that would give architects and designers the time and resources to focus on things other than carbon like health and wellness, adaptability, and accessibility.

Marta Bouchard, AEC sustainability lead, Autodesk

I think a great benefit of technology is to do the heavy lifting – such as simulations and analysis – to free up the ingenuity of human resources, and technology offers the opportunity to do that in one place.

Smith Mordak, architect, engineer and CEO, UK Green Building Council

We have loads of technology already. Some is thousands of years old, and we're forgetting it. So, I would like to see humans making best use of the technologies that we already have to produce more sustainable buildings.

Claire Brady, associate director, Useful Projects

Technology could be used to help with a feedback loop of information. There is knowledge out there but if people aren't aware of it then they're not accessing it, and we're missing opportunities.



Allies and Morrison's Plot 440 proposal for Cambridge Science Park was developed through strong communication between the design team and the project management team to ensure cost and carbon considerations were aligned.

Cost considerations in projects go beyond the bottom line

Liam Kelly looks at ways to work with value engineering without losing the sustainable approach to design that the world needs



Business, clients & services



Sustainable Architecture

The saying 'Form follows function' has morphed into 'Form follows finance,' as coined by Carol Willis in her 1995 book of that title. Since we know how the end-product of a design process is largely a result of the financial structure of a project, why are we not doing more to understand the nuance of this?

It is a complex picture but five key moves, including some self-education, can help retain sustainable designs. As a sustainability professional and co-founder of BEF: Built Environment for the Future, my focus is on how we stop downgrading our sustainability ambitions for the built environment

as soon as the inevitable 'value engineering' process begins.

In 2019 we saw a huge surge in the concentration on creating more sustainable places. Extinction Rebellion protests and launch of Architects Declare – which many architectural practices, engineering consultancies and other stakeholders in the built environment signed up to – was a statement of unity and ambition to make change happen.

Different times

Now, five years on; in the aftermath of a global pandemic, a worsening of

geopolitical tensions and international uncertainty in the financial markets, we find ourselves perhaps taking our proverbial foot off the gas. The UK's Future Homes Standard has lowered its ambition for energy performance standards from previous proposals set out in 2021; funding of offshore wind projects collapsed with only recent attempts to revive the plans; and a hardening of the insurance market has left designing with materials other than steel and concrete a huge hurdle to overcome.

These difficulties have coincided with a tightening of purse strings from developers and contractors. Fast-rising material costs driven by globally high inflation has meant any ambition to drive down embodied carbon using natural, recycled or lower embodied carbon materials is more than likely to slowly be eroded until the design returns to business as usual. What a depressing situation!

Though the majority of architects bemoan the role of 'value engineering', we seem to lack the necessary financial knowledge and vocabulary to be able to argue the value of key sustainability measures, which tend to come at an increased capital cost. This is true whether it be from improving fabric performance, switching the structure to stone or timber or even simply retaining a building rather than demolishing one.

Money talks

Financial decisions are made from the clichéd bottom line, done typically within a spreadsheet and usually without much discussion with the architect regarding the concessions to be made. It is in this disconnect between project managers, cost consultants and the design team that frictions arise, and relations wear thin. Rather than keep to this business-as-usual mode of operating, why shouldn't we switch to a collaborative and open way of understanding the sustainability priorities and possibilities of the project with the whole team?

While we may not need to know the

Financial decisions are made from the clichéd bottom line, done typically within a spreadsheet and usually without much dialogue with the architect

intricacies of financial modelling, we should be numerically literate enough to question analytical assumptions – such as design lives, inclusions of operational energy savings, construction programme timings etc. The way in which we educate ourselves should be through dialogue with those who analyse our projects through a financial and numerical lens.

Working together

Early-stage workshops with clients, cost consultants and project managers may help to identify shared ambitions for a project and develop understanding between the project team disciplines to reinforce a shared vision. This is, furthermore, likely to align with the client's initial ambitions. Recent years have seen more briefs setting their sights on net-zero buildings, and we need to raise our engagement to meet those targets. All too often a brief will weaken its sustainability ambition to appease more traditionally valued aspects such as net internal area, density and the provision of amenities.

In answer to the next iteration of 'Form follows...', we should see this as an opportunity to move to a collaborative and collective process of building places, where there is cohesion between all the members of the project team. For any other designers in a position to influence sustainability ambitions I would suggest the following five considerations may help:

- Understand where value lies for the client. Whether there are pure financial

priorities or also social and wellbeing priorities. Blend in the human and fiscal elements of the project.

- Understand where the money is coming from. Who are the investors and what sustainability ambitions/regulations are they aligned to?
- Befriend the cost and project managers. Getting the whole team to feel driven to deliver sustainability can breed a positive mentality.
- Get familiar with the jargon (if you're feeling nerdy). It may be the hardest part, but understanding key terms like CAPEX, OPEX, REPEX, IRR, NPV and other alphabeti-spaghetti acronyms is useful and involving. Knowing that can help us to critically analyse costing exercises and make sure we are comparing options fairly.
- Finance should not be viewed as a barrier to building sustainable and regenerative places, but as another facet of design.

'Work smarter, not harder' should be our mantra when faced with budgets that may on the surface pose difficulty to achieving a brief's sustainability ambition. Perhaps in the future we will even come to redefine value, focusing on the community, health and economic benefits that come with collaborating for a better future. ●

Liam Kelly is environmental design lead at Allies and Morrison, heading up the delivery of environmentally responsive design and Passivhaus at scale

BEF: Built Environment for the Future, brings together young professionals from across the industry to learn together and champion sustainability in more projects by applying and understanding each other's skills and expertise.

Early-stage workshops with clients, cost consultants and project managers may help identify shared ambitions for a project



28, Wigmore Street. London W1G 9RJ



Consensus is key to housebuilding plans

With the Labour government looking to vastly increase house-building, consensus will help achieve the right balance of density and quality, argues Fabrizio Matillana



Places, planning
& community



Design, construction
& technology

The National Planning Policy Framework (NPPF) consultation proposes changes to bolster housebuilding. Of note are the reinstatement of housing targets, strategic planning across authorities, a new standard method and calculation, 'acceptable in principle' on approval for brownfield land, and promoting mixed-tenure development.

Another change is the promotion of 'grey belt' areas of released green belt safeguarded by 'golden rules'. These would seek to ensure 50 per cent affordable housing, new infrastructure and green space.

These changes aim to send a strong signal in favour of housebuilding that is strategically informed, regionally co-ordinated and takes advantage of 'grey belt' areas. It also has safeguards for quality, tenure mix and infrastructure, and caters for a variety of tenures. The government has recently launched consultation on 'brownfield passports' to 'explore ways in which providing more explicit expectations for development could lower the risk, cost and uncertainty associated with securing planning permissions on brownfield land'.

There is a risk, however, that to achieve this renewed housebuilding ambition and deliver the required targets, housing quality is vulnerable to compromise. We need innovation to build consensus rather than compromise – and architects are well placed to work with planners on achieving this.

Compromise and balance

The practical implementation of the proposed 'acceptable in principle' in brownfield land and 'golden rules' in grey belt land can raise issues of planning balance. Decisions to meet housing growth may challenge contextual densities and raise issues of how effectively new development turns this intensification into high-quality housing.

There is a tension of perceived density conflicted with strategic imperatives and local communities' response. The last government attempted to tame this debate with concepts such as 'provably popular', 'gentle density' and 'beauty' – though with little inroad. Even in a highly regimented policy landscape like London, the tension of meeting housing targets and higher density is already prevalent in called-in applications. Local authorities without design policies and supplementary planning documents (SPDs) are particularly vulnerable.

The planning system, at its heart, is a balancing act of material considerations that planners weigh to achieve their local plan objectives. These include land use, amenity, bulk, housing mix

We need innovation to
build consensus rather
than compromise



and sustainability. Such considerations can be objectively verified (daylight/sunlight for instance). Others, such as massing, townscape impact and quality of accommodation, can be seen as subjective. These design-related matters lie at the core of context-informing density, versus target-defining density. This is a grey area that, at times, leads to delays due to lack of clarity, differences of opinion or an absence of consensus, as shown in more detail in my research (see table overleaf).

To de-risk the design 'grey area' of planning, design planning tools can be adopted such as design codes, SPDs and guidelines. These can create the necessary consensus to ensure an efficient planning process.

Design codes

Design codes have risen in prominence and are already a feature in the NPPF. Their implementation is showing potential in bridging the grey area of housing targets, site allocation, context and what a high-quality design response to the site might be.

In brownfield projects, the use of design codes can provide a golden thread through long development time-scales. I worked as a design officer on the first phase of Meridian Water in north London. This was an ambitious project that used design codes to de-risk its delivery. An outline application with a design code (and parameter plans)



Left City of London City Cluster maximum tall building height contour rings.

Below Meridian Water Phase 1A with Brambling House, by Urban Projects Bureau, Hawkins\Brown, HTA and Fisher Cheng.

VU CITY

informed a subsequent reserved matters application. Following changes in the market, Phase 1 was split into two (Phase 1A and 1B), where one was following the design code and parameters plans, and the other had much more intensified plots, due to viability pressures. The design code became a tool to bridge two halves and design a coherent place. Phase 1A had robust design planning tools which, despite its long application process, allowed it to consistently deliver on the design code's ambition.

A key building in phase 1A is Brambling House, by Urban Projects Bureau with input from the wider collaborative team of Hawkins\Brown, HTA and Fisher Cheng. It deftly stitched the existing suburban context with a gradation of intensification and was typologically robust to absorb changes in budget, without risking the quality of its affordable homes. Its successful delivery was substantially de-risked by a pre-application process that checked the use of the design code and parties that subscribed to its adherence. Other tools used such as design charters, a client-side design review panel and a robust planning performance agreement ensured this collaborative thread and compliance of design planning tools.

When considering the proposed NPPF wording of 'acceptable in principle', greater weight would have been given to its brownfield designation, altering the planning balance and



JACK HOBHOUSE

the weight given to other material considerations, such as design quality. The work on preparing these design planning tools, aside from their place in reviewing an application, set an ambition for the place. Most importantly, it achieved a consensus that stakeholders subscribed to and aided its planning process. This early work ensured high-quality place-making, irrespective of what a planning balance decided. The 2024 Planning Awards for best housing scheme (500 homes or more) and Editor's Pick recognition for Meridian Water is a testament to this work.

De-risking with borough guidance

Borough-specific design guidance further de-risks planning where specific characteristics of a borough are

identified. In Islington, the New Build Design Guide is used by the council's New Build Team, which is delivering new council housing. There are moments of alignment with the Greater London Authority (GLA) Housing Design Standards but also of more detailed guidance. The GLA's London Planning Guidance (LPG), for example, does not specify the housing mix, leaving boroughs to set it out. The New Build Design Guide does this for council-owned homes. It also sets a preference to put family homes at ground floor level. The GLA's LPG sets that as a 'best practice' requirement. Reflecting inner London space constraints, the New Build Design Guide has guidance on how to consider privacy in locations below 15m. This is absent in the GLA's LPG.

The New Build Design Guide is used to plan high-quality infill schemes within existing estates. Coupled with resident consultation and a collaborative dialogue with the local authority, schemes can achieve their housing mix requirements and deliver high-quality communal amenity and architectural design. There are already examples of specific borough guidance informing a development brief, and pre-application processes that understood the guidance and policy alignment required to deliver a successful scheme to planning.

Other options for building consensus

These projects show how consensus can be built from design planning tools – the preparation of guidance and codes with stakeholder consultation to inform the development brief. This is essential to ensure a planning balance that is less a compromise and more a unanimous confirmation from all parties on densification, particularly in areas where this challenges the existing context.

Other such initiatives include Barking and Dagenham’s BeFirst’s MMC Pattern Book. This combines aspects of a design code with building types that are linked to established procurement chains. This can further de-risk projects and ensure cost-effective procurement from the outset. The City of London, meanwhile, has created the Tall Building



Contours 3D model in Vu.City for the City Cluster and Fleet Valley. This visualisation de-risks discussions of townscape, daylight/sunlight and can create consensus by giving a clear signal of height potential.

Design lies at the forefront to clarify the grey area of objective/subjective assessments in the planning balance. The NPPF refers to design planning tools that cut through this uncertainty. Architects are the best equipped to offer further innovation in this field. The government should continue the funding of Office for Place’s Pathfinding projects for design code production, but also other initiatives that work in this

Above As housing targets point to options such as estate infill, it’s vital that new proposals show the sensitivity to place seen at Mae’s RIBA Award-winning Agar Grove in Camden.

territory of de-risking and consensus making, such as pattern books and 3D plan-making. Moving beyond a discourse of solving a housing crisis, design planning tools can communicate new visions, create ambition and instil pride in new places. This, one can agree, is a goal that all parties can reach a consensus on. ●

Fabrizio Matillana is an architect and an RIBA Journal Rising Star for 2020

Land Use		Housing				Design				Amenity					
Local Plan	SPD	AAP	Use Mix	Maximum Affordable	Tenure Split	Mix of Units	Over Develop	Height	Massing Bulk	Quality	Context Character	Visual Setting	Open Space	Over Looking	Daylight Sunlight
Location tested (Plan)	Location tested (Plan)	Location tested (Plan)	Location tested (Plan)	Target tested (%)	Target tested (%)	Context tested (opinion)	Context tested (opinion)	LVMF Tested (opinion)	Context tested (opinion)	Context tested (opinion)	Context tested (opinion)	Context tested (opinion)	Design tested (opinion)	Design tested (opinion)	Design tested (opinion)
			Target tested (%)	Viability Tested (£)	Viability tested (£)	Target tested (%)	Design tested (opinion)	Design tested (opinion)	Design tested (opinion)	Design tested (opinion)	Design tested (opinion)	Design tested (opinion)	Target tested (%)	Model Tested (evidence)	Target tested (%)
			Stock tested (units)		Stock tested (units)	Viability Tested (£)	Matrix tested (u/he)	Location tested (Plan)	Amenity tested (see Amenity)		Harm tested (opinion)	LVMF Tested (opinion)		Distance tested (m)	Light tested (lux)
						Stock tested (units)		Amenity tested (see Amenity)			Amenity tested (see Amenity)	Harm tested (opinion)			
Infrastructure		Transport				Sustainability				Environmental					
School	GPS	Public Facilities	Public Realm	Car Parking	Sustain. Trans.	Highway Impact	Reduce CO2	Energy Efficiency	Renew Sources	SUDS	Ecology	Micro climate	Air quality	Polluted land	Waste
Location tested (Plan)	Location tested (Plan)	Location tested (Plan)	Location tested (Plan)	Target tested (%)	Target tested (%)	Model tested (report)	Target tested (%)	Target tested (%)	Target tested (%)	Model tested (report)	Survey tested (report)	Model tested (report)	Target tested (%)	Target tested (%)	Target tested (%)
Needs tested (sqm)	Needs tested (sqm)	Needs tested (sqm)	Needs tested (sqm)	Plan tested (report)	Plan tested (report)		Design tested (opinion)	Design tested (opinion)	Design tested (opinion)	Design tested (opinion)	Design tested (opinion)	Mitigate tested (report)	Model tested (report)	Model tested (report)	Model tested (report)
													Mitigate tested (report)	Mitigate tested (report)	Mitigate tested (report)

Left An analysis of objective and subjective material considerations in planning.

FABRIZIO MATILLANA

Subjective / Objective

The VELUX logo is displayed in white, bold, uppercase letters on a red rectangular background.

VELUX Heritage conservation roof windows were installed between exposed purlins to brighten the dark top landing and extend into the adjacent shower room. This allowed daylight to flow through the central staircase of the house and maintain the natural ventilation flow.

The project has created a versatile and inviting space for the family to enjoy for generations to come, while preserving the heritage of the building.

For more on the case study and on VELUX Heritage conservation roof windows, visit velux.co.uk/heritage

The background image shows a staircase with a dark wooden handrail and white balusters. Two VELUX Heritage conservation roof windows are installed in the ceiling, allowing natural light to enter the space. The windows are white-framed and have a dark frame. The sky is visible through the windows, and the overall atmosphere is bright and airy.

Bringing
daylight into
the dark core
of a period
home

Daylight from Above

Register now to enter the VELUX awards run in partnership with the RIBA Journal celebrating the effective introduction of light to enhance internal spaces

'No space, architecturally, is a space without natural light,' said Louis Kahn. 'I am designing an art museum in Texas. Here I felt that the light in the rooms structured in concrete will have the luminosity of silver...' That building was, of course, the Kimbell Art Museum, whose long, narrow rooflights at the apex of blank-walled concrete barrel vaults produce an almost numinous glow, and have fired the imagination of countless architectural successors.

Kahn's meditations on daylight at the Kimbell – collected in a memorial anthology, *The Theme is Light* – take in its myriad purposes and effects. He talks of the capacity to surprise, and produce a variable mood that changes with the weather, and of daylight's role in 'making manifest' the nature of a space. There are practical and poetic concerns: control of the 'injurious effects' of daylight through

the careful design of roof windows, and the coherence of those 'natural light fixtures' with the tectonic language of the building.

The Daylight from Above awards, organised by VELUX in partnership with the RIBA Journal, will take an equally holistic view. The aim is to celebrate projects where the arrangement, use and enjoyment of buildings has been transformed by the introduction of natural light as an integral element of a larger architectural idea. When the awards open for entries later this year, we will be seeking outstanding projects in two categories: Light, Space and Atmosphere; and Heritage Conservation.

Light, Space and Atmosphere

Top-light can produce startling beauty in interior spaces, and add skylscapes and a sense of the weather

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to the architect's palette. It can also be the key that unlocks opportunity in spaces deep inside a building's plan, or on constrained sites. The Light, Space and Atmosphere category will recognise projects where daylight design has played a decisive role – from the transformation of dismal circulation areas into valued parts of the home to the injection of joy into everyday life through the animated play of shadows.

It will be open to new and adapted residential projects in the UK, completed in the last three years, that incorporate any VELUX sloped or flat roof window as part of a considered and creative approach to daylight.

Judges will be looking for projects that show both rigour and imagination in the introduction of natural light. How does design for daylight enhance comfort, whether that is through softening shadows or avoidance of excessive contrast? Have the energy impacts of both natural light and solar gain been considered? Does the placement of windows relate to the movement of the sun, and to the geometry of interior spaces so that reflection and illumination are controlled? And does it, in all those ways, enrich both the architecture of a building and life within?

Heritage Conservation

Adaptation and renovation of historic and heritage buildings requires special sensitivity. Introducing daylight can not only alter their outward experience, but also require structural adjustment or alterations to interior finishes. A special category in the Daylight From Above awards recognises the first generation of projects that use products from the new VELUX Heritage conservation roof window range to enhance historic and heritage buildings, in sympathy with their character and value.

Launched in 2023, Heritage conservation roof windows are available in nine sizes, with a sleek, slim-fit profile that was designed to suit all types of retrofitting or roofing

The aim is to celebrate projects where the arrangement, use and enjoyment of buildings has been transformed by the introduction of natural light



Opposite Filtered daylight washes the concrete walls of a new home.

Above Atmosphere and ingenuity – with natural light used to unlock spaces in the home – will be celebrated in the 2025 Daylight from Above awards.

Left Launched in 2023, Heritage conservation roof windows open new possibilities in the renewal of historic buildings.

projects in historic buildings: velux.co.uk/heritage

Entries to the Heritage Conservation category will be assessed on the skill and judgement with which historic buildings of any type have been adapted through the introduction of new Heritage conservation roof windows. Has the introduction of daylight extended the useful life of a protected structure? How have the placement and installation of windows responded to architectural character and local context? How does the quality of natural light affect appreciation of the existing structure? Contenders might be alterations to listed buildings, or those responding to the demands of conservation areas, or simply interventions in those parts of our built heritage where careful handling, discretion and high performance are all of paramount importance. ●

ENTERING THE AWARDS

Daylight from Above award entries will be assessed by an expert jury, chaired by RIBA Journal contributing editor Chris Foges: Percy Weston is co-founder of Surman Weston whose Peckham House is shortlisted for the 2024 RIBA House of the Year Award; conservation architect Deniz Beck is the founder of Deniz Beck Partners; Gianni Botsford leads Gianni Botsford Architects; and Richard Williams is senior architect development manager at VELUX.

Prize-winners in each category will receive £5000, commended entries will be awarded £1000, and all shortlisted entries will be published in the RIBA Journal.

Have you completed a project where daylight has had a transformational impact? Visit our website now and register to be notified when the Daylight from Above awards open for entries later this year: ribaj.com/products/daylight-from-above

The Daylight from Above awards are organised by VELUX in partnership with the RIBA Journal. velux.co.uk

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3: Culture



Fregene wasn't always a resort; in fact, until the 20th century it didn't really have a beach, starting life in the 3rd century BC as a small port for nearby Rome. In 1666, Clement IX planted a pine forest on its shores to help soak up the silt from the Tiber's mouth, but it was Mussolini's epic drainage project in the 1920s that transformed this marshy coastline. By the 1960s, Fregene was a playground for Rome's bohemians and elite – Fellini hosted Pasolini and Mastroianni among others at his villa.

Two such bohos were architect couple Giuseppe Perugini and Uga de Plaisant. Their Casa Sperimentale, a strange concrete structure nestled in the pine groves, was a conceptual 'treehouse' raising questions about what architecture is and the nature of habitation. Built in-situ over the 1970s as a summer house, it is still owned by the creators' architect son – abandoned, overgrown and definitively unfinished.

Dom French and Andy Tye were asked to photograph the building as part of a project by the Bartlett's Sabine Storp and Patrik Webers to digitally document its current state. Clambering in, around and about it for three days, French says it was 'extraordinary,' unlike any commission they'd done: 'It doesn't really make sense inside or out but there's clearly conceptual rigour. It has no living spaces to speak of, as it was designed part-open to the elements.' Its condition has made it host to new guests – graffiti artists, influencers and ravers, who seem to align with its sublime decay. Has it ever been squatted? 'Squatted?' he says. 'Technically, there isn't really anywhere to squat in...' ●

Jan-Carlos Kucharek

French + Tye
Casa Sperimentale, Fregene, Lazio, Italy 2018

Camera: Nikon D800 with
AF-S 24-70mm f2.8 lens

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'It is easy to see why one might want to pass on the running of a construction project to a higher form of intelligence'



Are you hearing me?

Communication has been the make or break of projects for thousands of years. Will we ever master it, asks Eleanor Young

The Tower of Babel is perhaps the most famous myth of hubris. In the Christian Bible those who built the Tower of Babel speak together, planning to 'make bricks and bake them thoroughly' as they build 'a tower that reaches the heavens'. The brick ziggurats around Mesopotamia built between 2000 and 500 BC, including the Ziggurat of Ur in what is now Iraq, were structures to honour gods as well as for more commonplace gatherings.

The Babylonian builders of the Bible seem worryingly invincible to God: 'The Lord said, "If as one people speaking the same language they have begun to do this, then nothing they plan to do will be impossible for them".' In an echo of these fears, the winner of the Nobel Prize for Physics, Geoffrey Hinton, one of originators of the building blocks of machine learning, expressed similar concerns about the potential power of AI. Speaking to the BBC he said: 'I worry that the overall consequences of this might be systems that are more intelligent than us that might eventually take control.'

God's canny muddling of the Babylonians' language to disrupt their communication may not be an option for Hinton, but lesser mortals than these often encounter the same problem.

Alongside the Bible and a Nobel Prize-winner, let's throw in presenter Kevin McCloud who regularly tests this critical ingredient for progress. Setting another *Grand Designs* house project up for a dramatic 47 minutes, he warned one couple not long ago that the build process would unavoidably take over their lives. And indeed it did for that particular pair. One early hiccup saw the project stall as the groundworks contractors and brickies failed to agree who should build the blockwork layer in between the two.

A friendly local builder and some wise words resolved matters there. But reflecting on such an apparently intractable problem it is easy to see why one might want to pass on the running of a construction project to a higher form of intelligence rather than expending AI on door schedules. However, I suspect that machines may never want to take over construction – or would contrive to turn architecture into a standard product, as governments over the years have attempted.

You can also see one very human branch of the Tower of Babel story: why people might have fallen out over a building project – even one substantially smaller than the Tower of Babel – as they realise they not speaking the same language. We all know that it doesn't need divine intervention to make communication a problem. ●

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exhibition review:
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Below Ziggurat of Ur, Iraq.





No easy housing fix

The UK shortage of available homes needs better than the laudable initiatives to build more. Muiyiwa Oki demands action

Ah, the housing crisis—a topic as perennial as the British weather. In 2024, the dream of home ownership feels as distant as a hot day in November. The notion that giving up smashed avocados and skinny lattes will somehow pave the way to a mortgage has become a running joke at political party conferences of all colours and persuasions. But behind the laughter lies a grim reality: the housing market is a labyrinthine mess, and the younger generation (me included) is stuck in a Hotel California with no exit in sight.

Let's start with the numbers. In 1985 the average salary was £14,000, and the average house price £29,000, just over twice the annual income. Today that average price has skyrocketed to about £288,000 in the UK, more than eight times the average salary. It's no wonder the under-40s are feeling the pinch. Added to this, rents, especially in London, are soaring, and apps like SpareRoom and OpenRent used for finding rental property and flat shares, feel like a reincarnation of the Hunger Games. The idea of saving for a deposit while paying exorbitant rent is absurd.

The new government's response? To deliver 1.5 million homes over the next five years. This is a welcome vision and goal to aspire to achieve. But every big-hairy-audacious-goal comes with blind spots and challenges. Past attempts at pushing up housing targets has left those in most need behind, making homes that ordinary folk can ill afford. The last Labour government's vibe was 'modernisation', summed up by the 'education, education, education' mantra. The new one is 'growth' cemented by 'housing, housing, housing.'

So where do we go from here? At RIBA, we've launched our latest report, Foundations for the Future – a new delivery model for social housing. Almost 1.3 million households are waiting for a home. In the meantime, local authorities across England spent £1.24 billion in the year up to March 2023 on reducing homelessness, including temporary accommodation. The report proposes using local authority-owned land to build mixed-tenure developments of social and market homes, reinvesting revenue from the sale of market homes to build more mixed-tenure developments.

As architects, we have a unique opportunity to rethink the very concept of housing. It's not just about building more homes; it's about redefining what a home is. We need to understand the nature of the domestic environment and the structure of the modern family. We must question the value of ownership and explore alternative models like co-housing and intergenerational living.

Architecture can offer innovative solutions by thinking from first principles. What if we designed homes that were adaptable to different life stages? Use our representational techniques to envision futures that are currently unimaginable? The architect must not just respond to the housing crisis but shape the future of the home.

We need to promote ways and policies that encourage people to move across different types of homes at different life stages, making better use of the existing housing stock. We should champion sustainable development that aligns with the UK's Net Zero Carbon Buildings Standard. And most importantly, we need to ensure that our designs are safe, sustainable and accessible, catering to the diverse needs of society.

The housing crisis is complex and requires a multifaceted approach. It's not just about building more homes; it's about designing proactively and strategically to meet the needs of the population and our communities in adaptable ways. Architects have the power to lead this change, to challenge the status quo and to offer solutions that are practical and innovative. It's time to roll up our sleeves and do it. After all, my future home depends on it. ●



RIBA Award-winning housing at Eddington, North West Cambridge, by Wilkinson Eyre and Mole Architects.

DISCIPLINARY SANCTIONS

The RIBA Hearings Panel found Ashworth Parkes Architects breached Principles 2 and 3 of the RIBA Disciplinary Rules for failing to:

- Advise its clients in writing of the likelihood of achieving the client's requirements and aspirations changes during the project.
- Keep its clients reasonably informed of the progress of a project.
- Ensure terms of appointment concerning its client were clear, agreed and recorded in writing.
- Include details of its written complaints procedure.
- Provide a written complaints procedure.

The panel decided the sanction for this be a public reprimand.

The RIBA Hearings Panel found Matthew Beasley of Margate was guilty of breaching Principles 1, 2 and 3 of the RIBA Code of Conduct including that he:

- Made misleading and/or false statements.
 - Lacked an appropriate complaints process.
 - Co-operated in putting the work through a secondary company for the purpose of (the client) avoiding VAT.
- The Panel decided the sanction for this be a Suspension from membership for a period of six months from 23 September 2024 to 23 March 2025.



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But is it Art?

Will Wiles grapples with what he is supposed to feel at immersive art shows... and senses the distinctions start to blur

Earlier this year I visited Frameless, the ‘ultimate immersive art experience’, in Marble Arch, London. Famous works of art are projected onto the walls, ceiling and floor of large subterranean galleries, gently animated, and accompanied by music. The visitor experiences renowned and familiar works anew, and perhaps a few they don’t know. Then it’s off to the gift shop.

Frameless is one of a number of ‘immersive’ experiences that have opened in London in recent years. Outernet, next to the rebuilt Tottenham Court Road Tube station, offers a walk-in immersive display. The Van Gogh London Exhibit in Spitalfields is similar to Frameless but focused on a single artist. Lightroom in King’s Cross combines art with other interests – at the moment David Hockney and the moon landings. Pulse: Beyond Delight in Borough ‘offers a spectrum of experiences that encapsulate Seoul’s vibrant spirit.’ And there’s Dopamine Land in Knightsbridge, which has colour and light installations intended to stimulate production of what it calls ‘the happy hormone’, if you want some basic neurological gratification, at the cost of feeling like a button-mashing electrode monkey. There are others.

But isn’t it all just basic neurological gratification? At Frameless was I meant to enjoy the art on a significant level, or just enjoy the pretty colours and music, like a toddler?

I was reminded of the opening scene of Ben Lerner’s 2012 novel *Leaving the Atocha Station*, in which the narrator visits the Prado, Madrid’s immense museum of art. There, he observes another visitor approaching paintings, staring at them, and then bursting into tears. Is this stranger grappling with private grief? Or is he having a profound experience of art? The thought unnerves the narrator: ‘I had long worried that I was incapable of having a profound experience of art, and I had trouble believing that anyone had, at least anyone I knew. I was intensely suspicious of people who claimed a poem or a painting or piece of music “changed their life”, especially since I had often known these people before and after their experience and could register no change.’



Left Immersion or inundation? Visitors confront Hokusai’s *The Great Wave off Kanagawa* at Frameless.

The pattern repeats, and security guards become concerned, but the scene discharges without serious incident, or explanation.

One painting the sobbing man confronts is *The Garden of Earthly Delights* by Hieronymus Bosch, which is also in Frameless, and works very well as an enfolding, exotic landscape, crammed with detail. It’s from an age in which art was approached with very different cultural antennae.

The popularity of Frameless and the others shows they cater to a need – but what? Simple amusement? Instagram-fodder? Or a desire to be stirred on a deeper level? And truly the same questions apply to the Tate or the National Gallery. How much should we enjoy ourselves there? How deeply should we feel? Sobbing is too much, but is there also too little? This anxiety is an inevitable result of treating art as an essential vitamin of secular metropolitan citizenship.

Perhaps ‘secular’ is the key word. Some time after visiting Frameless, I noticed the dog that didn’t bark. Where was the religion? It lurks in the background of a lot of paintings. But the *Garden of Earthly Delights* was the only obviously religious work. I’m not criticising – accessibility is plainly the priority, and Caravaggio’s *Judith Beheading Holofernes* might be stirring but it might also upset the under-fives. Frameless made me reflect on how galleries have often worked to improve the emotional experience of art by experiments with architecture, lighting, projection and assorted pizzazz. But the original Frameless is the interior of a Baroque church. ●

ILLUMINATING EXPERIMENT

A prototype of Frameless might be found in the work of artist and architect Frederick Kiesler, who was possessed of a near-fanatical desire to dissolve limits between environment, art and ideas, to create drastic and visionary spaces for art. Kiesler designed Peggy Guggenheim’s groundbreaking modern art exhibition space *Art of This Century* in 1942. Paintings were displayed frameless, at rightangles to the curved walls, which were in unusual materials and colours. Kiesler programmed the spotlights on the art to turn off every three seconds in sequence, disrupting the way the visitors viewed the works. ‘People complained,’ Guggenheim wrote in her autobiography, *Confessions of an Art Addict*, so the lights were left on.



Architecture trains us to do much more than design buildings, says Liam Young. There's a responsibility to use those skills for the good of the whole planet

Words: John Jervis Portrait: Shaughn and John

Man of the world

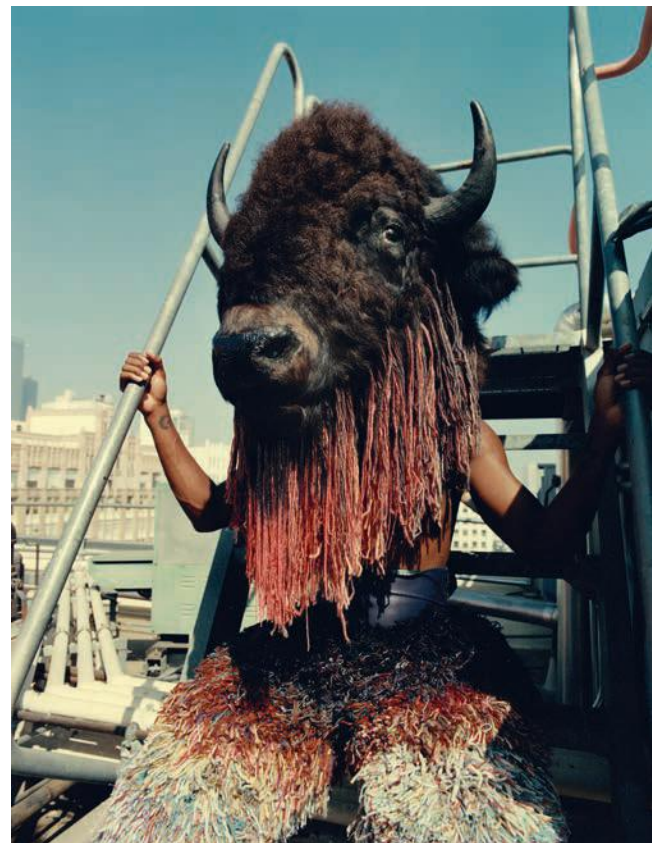
Liam Young's estimation of the architecture business is mixed. He feels his 'really conservative' education at the University of Queensland ('I learned how to do timber detailing on residential houses and argue about medium density in Australian suburbs') provided him with valuable skills to operate in spheres well beyond architecture's traditional stamping grounds. One example he gives: 'Among our great capacities as architects is that we can synthesise ideas from the world of science and technology with concepts and visual narratives from culture and art practice.' Another, perhaps proven by his own eloquence despite having been 'a very shy kid': 'Architects have always been great communicators, and that's part of how we're trained.' With caveats for those in social justice, social housing and sustainability, Young is less keen on how many architects employ those skills, putting their practices at the service of capital: 'There have to be other ways we can deploy our really extraordinary knowledge and capacity to engage in important questions, rather than making trophies and trinkets for the rich.'

At this year's BFI London Film Festival, Young's *The Great Endeavour* – a collaborative undertaking involving scientists, technologists and creatives – was on display at the open-access, immersive Outernet next to Tottenham Court Road tube station. Described in the press release as an 'inspiring cinematic experience', and by Young as 'a science illustration project', it depicts the building of a new global infrastructure – one as extensive as that of today's fossil-fuel industry – to remove atmospheric carbon. For Young, this undertaking will be 'this generation's

moon-landing', requiring international consensus and co-operation. He characterises his belief in the feasibility of this 'new planetary imaginary', replacing the West's shipping of its environmental problems to the Global South, as both 'deep pragmatism' and 'radical optimism'.

Climate change, Young says, is no longer a technological problem, but a cultural and political one. To address this 'crisis of the imagination',

Right Planet City follows a continuous festival dancing through the city, intersecting with different carnivals and cultures, with costumes designed in collaboration with Ane Crabtree.



LIAM YOUNG, VFX SUPERVISOR ALEXEY MARFIN
PHOTOGRAPHER DRIELYS

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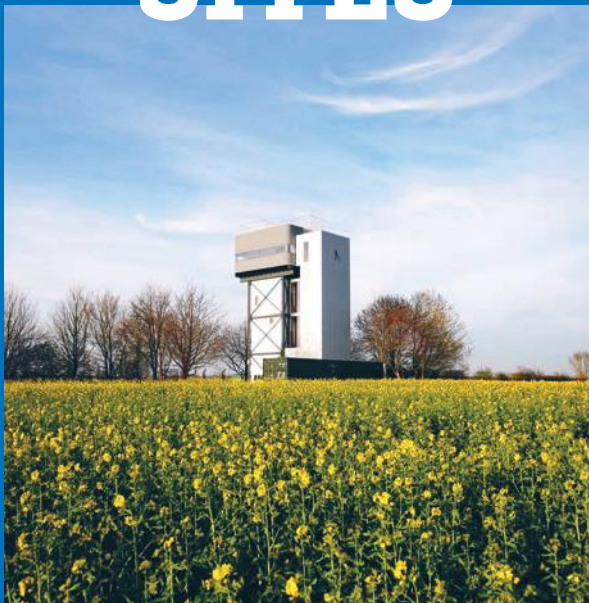


Image: Water Tower, Tomkin Liu © Dennis Pedersen

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LIAM YOUNG, VFX SUPERVISOR ALEXEY MARFIN

a shared narrative about technology, and about our collective futures, is desperately needed. His previous 'world-building' movie, the acclaimed if controversial Planet City, portrays a single hyper-dense megacity, leaving the rest of the world as a massive, recuperating wilderness. The goal of these projects is to generate conversations around the necessity of radical solutions, rather than offering blueprints: 'Even if people revile such densification, at least we're talking about one version of the future, which is degrowth, and living more compactly.' Another version, it turns out, is to stop reproducing and shrink the global population, raising 'big, tough questions, like who gets to have kids' – which, he agrees, would make for a really controversial film.

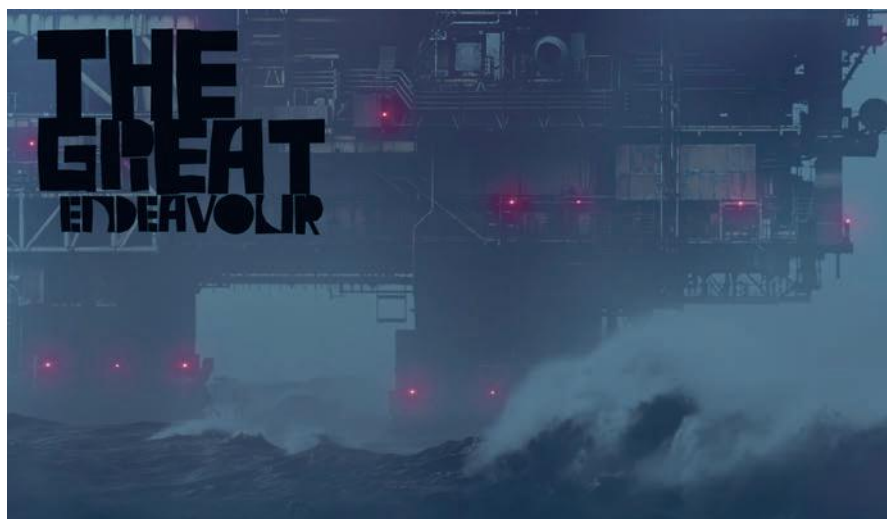
For Young, all these conversations need to happen rapidly, and outside the sparse realms of architectural-monograph buyers and film-festival attendees, with the coded, gated languages of architecture and climate science replaced with another of Young's neologisms, data dramatisation: 'If you really want to make work that engages with future issues, things like global climate collapse and the broad structural changes required to dig ourselves out of various apocalypses we find ourselves in, then one route is exploring speculative narratives in forms that are disseminated to a more general public and play on the forms of fiction.' The scenarios can appear dystopian – 'the work of a Bond villain' – thus the cinematic sublime is used to capture the imagination, and question our shared conceptualisations of our future, whether glass and steel topped by unlikely treescapes, ineffective low-carbon policies, or the localism of 1960s environmentalists ('We failed them ...

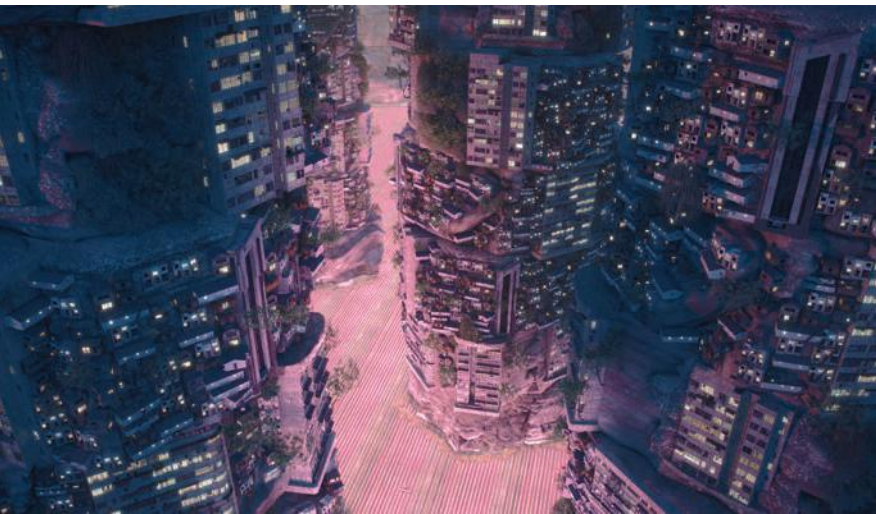
Above The Great Endeavour chronicles 'the largest engineering project in human history' to remove carbon dioxide from the atmosphere.

Below The new infrastructure required would be equivalent in size to that of today's entire global fossil-fuel industry.

but we're not going to solve the climate crisis by growing tomatoes in our back yard').

In 2018, to further these ends, Young moved to Los Angeles to embed himself in the entertainment industry, feeling that its mediums and the discipline of architecture were moving ever closer together. The relocation has brought drawbacks and opportunities: 'I thought architecture was conservative, but it's got nothing on the film industry. But that's why I think it's a space with great potential, because it's very easy to walk into a room and to be the one person that's filled with ideas.' There, he's set up the innovative Masters in Fiction and Entertainment at SCI-Arc, creating scaffolding and shortcuts for students, particularly those without the wealth and privilege associated with architecture schools, 'to achieve escape velocity and go out and work in different kinds of territories'. Neoliberal narratives along the lines of 'create the practice





you want to work at' cause particular ire: 'It's just ridiculous for someone without a trust fund.' He sees many graduates ending up in, and ideally suited to, the video-gaming and digital worlds, where 'architects and designers ... have extraordinary capacity for power and change'. He explains, 'Immersive media, video games, VR, AR, these aren't filmic mediums. The language of cinema doesn't really apply, but the language of space does ... of threshold, scale and transition. This is the language of architecture.'

It's part of Young's wider commitment to teaching, with professorships at Cambridge, Princeton and MIT, and roles at many other institutions: 'I wouldn't say I enjoy it exactly, but I see it as a responsibility, I'm trying to practise what I preach ... If I'm talking about issues with the ways that architecture is taught or its institutionalised problems, then I have a responsibility to be involved in creating other teaching models and forms of practice that help train another generation of designers to do this kind of stuff.' That 'stuff' is where he sees architecture going: 'One of the great tragedies of the profession is that we've defined ourselves so narrowly – as solely involved with the making and shaping of buildings as physical objects.' Architects should instead see their training as multifarious, particularly given the shared if unspoken understanding that 'the real stuff you learn is stuff that happens when you finally get to an office'. With the shrinking numbers of graduates getting licences, this expanded scope would strengthen the profession, offering other areas in which to be useful and productive, among which he numbers not just entertainment and culture, but also consultancy and politics.

It all sounds a bit like Young's own career,

Above Housing the entirety of the world's population, Planet City's dense metropolis would allow the creation of a globally scaled wilderness.

Below Scattered throughout Planet City, clad in Ane Crabtree's festival costumes, are those who might live and work in this massive conurbation.

which he characterises as 'a lifetime of hustle to find a way that this type of work supports itself and sustains a life.' That included a stint at Zaha Hadid Architects, where he found that those things he wanted to talk about – 'the imminent arrival of autonomous vehicles, drone technology, AI governance, all these things destined to define and shape urban experiences and cities in our lifetime' – were a sideline: 'The conversations in what was supposed to be this extraordinary forward-thinking office were on form, shape and icon.' It has also included time spent as a 'futurist or design consultant' for Ford, Mitsubishi and others, but this multifaceted life is, perhaps, not quite as unusual as it once was: 'People used to characterise the work I do as being on the margins, but I think that the pendulum has decidedly swung, to the point where the people that graduate and follow the traditional path to licensure, depending on the school, can often be in the minority.'

Despite all this, Young views himself very much as an architect – 'I still write that on my customs forms' – and his work as 'directly shaped by my grounding in architecture', framed by his belief that 'making buildings is just one thing that architects do'. Given his proficiency as interviewee and TED talker ('seen by 3 million people', he informs me), most of the responses I elicit have already had multiple roll-outs, which, although mildly ego-deflating, is entirely understandable. So if you want a more complete, more serious and probably more accurate account of his voluminous thinking, just google 'Liam Young', and prepare to concentrate. ●



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Can we really put retrofit first?

At a panel discussion accompanying the Building Centre's recent social housing exhibition, experts sought ways to put retrofit, rather than newbuild, at the top of the agenda. Pamela Buxton reports

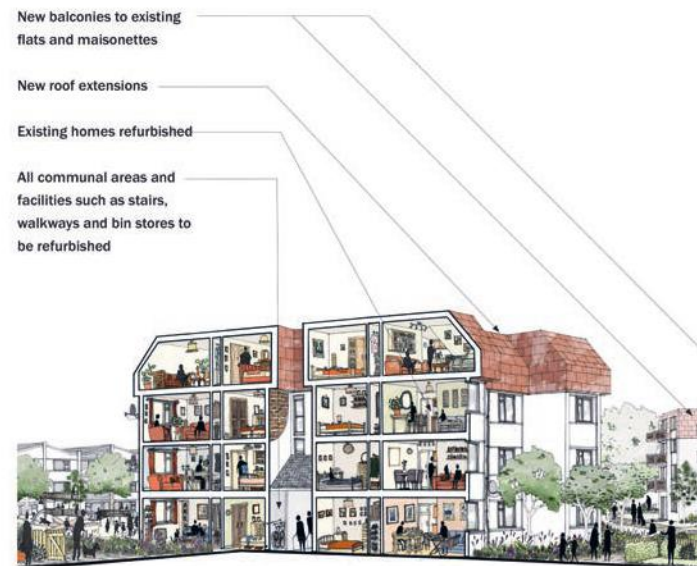
Should retrofit over redevelopment be the default approach for social housing? Given both the climate crisis and the need to improve and increase social housing, the case for estate retrofit over demolition and newbuild seems compelling. But what can be done to overcome the many technical and financial barriers to estate renewal?

Industry experts tackled this pressing subject at a panel discussion at the Building Centre, organised by ECD Architects, ASH (Architects for Social Housing) and AAB Architects in tandem with the Retrofitting Social Housing: Alternatives to Demolition exhibition (now closed).

With pertinent timing, the event took place in the same week that the government announced both a new wave of the Warm Homes: Social Housing Fund (formerly the Social Housing Decarbonisation Fund), and a consultation on energy efficiency standards for the social rented sector. With funding over three-plus years, this would give much needed long-term certainty for social housing providers, said Guy Woodroffe, the fund's head of policy, who talked of a 'shifting focus' precipitated by the change of government and a commitment to significant scale-up of social housing activity – whether retrofit or new, additional homes: 'It's not either or, it's both'.

Panellists

Chaired by Loreana Padron, associate director/regional head of sustainability ECD Architects
Allan Dunsmore, director, Conisbee
Steve Groves, head of building maintenance, Portsmouth City Council
Jack Ostrofsky, Retrofit London programme director, London Councils
Anne Power, professor of social policy, London School of Economics
Guy Woodroffe, head of policy social housing for the Social Housing Decarbonisation Fund, Department for Energy Security and Net Zero



Notwithstanding this potentially positive backdrop, no-one was underestimating the many complex challenges to making this happen. There was broad consensus of the benefits of a retrofit approach over newbuild, except in cases where buildings were structurally unsafe or there was zero housing need. Advantages ranged from cost, carbon and community benefits, including the need to avoid the loss of social housing so often precipitated by redevelopment.

Anne Power, professor of social policy at the London School of Economics, said there was 'almost never' a justification for demolition, and talked about the 'blight' and 'excruciating agony' of the redevelopment process on residents. The community impact was also raised by Jack Ostrofsky, Retrofit London programme director at London Councils, who mentioned that while architects were sometimes 'very enthused' about the 'place-making' potential of redevelopment, residents might well feel it already was their place.

Portsmouth City Council's head of building maintenance, Steve Groves, explained the strategy behind the decision to carry out an EnerPHit deep retrofit of the 11-storey Wilmcote House instead of the initially-considered demolition, which was explored in detail in the accompanying exhibition. Completed in 2018 by ECD Architects, this large panel system (LPS) block had multiple problems including inadequate heating and damp and mould in most properties, but residents didn't want to move. Despite its complexity, retrofit came in at £166,000 per unit compared with £485,000 for newbuild, after associated costs such as demolition, loss of rent and homes loss payments were factored in.

However since the start of that project, rent caps, and the impact of increased focus on building safety following Grenfell, means that, said Groves, 'we're in a completely different environment financially to what we were in 2012'.



Left Industry experts at the Retrofitting Social Housing: Alternatives to Demolition event.



'If we could regulate embodied carbon, it would make everyone think about retrofit over demolition'

Left AAB Architects tested whether retrofit could deliver the client's brief while reducing ecological harm on Camden's West Kentish Town Estate in an RIBA-funded research project.

Allan Dunsmore, director of engineer Conisbee, made the case for the embodied carbon-saving benefits of retrofit, pointing out that while the embodied carbon of building materials traditionally accounted for one third of a building's carbon, this was now nearer half following recent reductions in operational emissions. Therefore by re-using existing buildings, or at the very least the structure, the savings 'can be massive'.

Asked about the technical barriers to retrofit, especially for LPS blocks rather than 'more robust' in-situ structures, he said that while a lot of upfront investigation was required, engineers could usually find a way to enable their safe retrofit.

On the question of whether estate retrofits are chasing the right energy targets, Woodroffe talked about the forthcoming consultation on energy efficiency standards and the possibility of EPC targets for social housing on the horizon.

'The simpler and the more understandable we can make it, the better,' he said, advocating a 'no regrets' approach to ensure that whatever is being done today is going to be fit for the future.

London Councils' Ostrofsky talked about the need to identify the right pathways to net zero for a variety of different building types via 'an innovative, data-driven approach'.

Innovation in everything, from financing to design, management and tenant liaison, is needed, according to Woodroffe, to enable retrofit to be done at pace and scale. 'It's not just about materials and the heating system, but how you deliver it on the ground, how you engage with tenants, how you finance things... a whole suite of things that are needed to really scale this up,' he said.

Panellists had plenty of ideas for how the new government could help drive retrofit over newbuild.

'Part Z please,' said Dunsmore of the proposed



ARCHITECTS FOR SOCIAL HOUSING

Above At St Raphael's estate in Brent, west London, Architects for Social Housing demonstrated, on behalf of residents, that rebuild was a cheaper alternative to newbuild.

Below The 11-storey panel-system Wilmcote House in Portsmouth was retrofitted by ECD Architects to EnerPHit standard.



TIMOTHY SOAR

amendment to Building Regulations that would mandate whole-life carbon emissions. 'If we could regulate embodied carbon, it would make everyone think about retrofit over demolition,' he said.

Power suggested there should be requirements for the replacement of any social housing that is demolished on a one-for-one basis, and for any newbuild to have a social housing element of at least 20% as a driver for retrofit. She also advocated the need for those doing retrofits to 'bite the bullet' and aim high in terms of carbon reduction, rather than just doing the minimum.

But it was the need for greater long-term certainty on funding that came up again and again, rather than a lack of will to do retrofit.

'I do see local authorities and social providers struggling on their knees in terms of funding, said Portsmouth City Council's Groves. 'I think there needs to be a whole different look at how we are going to do this... all we're feeling at the moment is more regulations and no more money, and that's a big issue for us.'

This was reinforced by London Councils' Ostrofsky, who talked about an 'arterial bleed' in terms of social housing provision. 'Rents have been capped but costs have sky-rocketed and we can't deliver.' ●



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Insightful educator, urban designer and architect, and associate member of Archigram, who inspired generations of architects

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Colin Fournier 1944 – 2024

Professor Colin Fournier, who has died aged 79, was an associate member of Archigram, an architect, urban designer and prolific writer whose innovative ideas inspired generations of students. His vision and boundless creativity, coupled with a magnetic personality, has left an indelible mark on the architectural and academic worlds and in the hearts of those who knew him.

Fournier displayed an early passion for the built environment. After completing his studies at the Architectural Association in London, he further developed his expertise in urban design in California as planning director at Ralph M Parsons Company, leading major projects including the new town of Yanbu in Saudi Arabia. Throughout his life he was driven by a desire to improve the relationship between human life and the cities we inhabit.

Fournier continued to practice even as his commitment to teaching grew over the course of his career. With former Archigram colleague Peter Cook he designed the Kunsthaus Graz gallery (2003) – the ‘friendly alien’ – for which he received Austria’s Goldener Ehrenzeichen medal. ‘The Kunsthaus is biomorphic’, he said. ‘It is not clear what animal it is. It is not really a museum; it is an impatient building demanding for things to happen’. He partnered with Bernard Tschumi on the planning and urban design of the Parc de la Villette in Paris (1987), and designed the acclaimed Open Cinema in Guimarães, Portugal.

‘Colin combined a brilliant intellect, a poetic mind and superb diplomatic skills,’ remembers Tschumi. ‘He used all three with consummate ability on everything he did, including being invaluable to the project for the Parc de la Villette. Besides being a remarkable urban designer, Colin was one of the most dedicated educators I’ve ever met, challenging several generations of students

to discover unexpected horizons in architectural thought and practice.’

In 1998 he joined the Bartlett School of Architecture, where he taught for 17 years, initiating the Urban Design MARCH programme and developing into it a course of international repute. With his vast knowledge, infectious enthusiasm and insightful critiques, he pushed students to think beyond conventional boundaries and develop their own individual approaches. The response Fournier sought was never solely cerebral; he placed equal emphasis on the poetic and emotional content of their work.

From 2013 Fournier was a visiting professor at the Chinese University of Hong Kong, where he also acted as chief curator of the Bi-City Biennale of Urbanism/Architecture, and president of the jury for the M+ Museum competition. Latterly he taught at Confluence Institute in Paris, having returned to live in the city of his childhood.

Fournier built deep connections with his students, many of whom became leaders in their fields. His mentorship inspired creativity and cultivated intellectual curiosity.

Colleagues recall a man who could effortlessly move between topics with deep insight and a lightness that made even the most complex ideas accessible. To his friends, he was a trusted confidant, a captivating storyteller, and a person whose company was always enriching. He loved travel and art, and never stopped learning.

Colin Fournier not only made remarkable contributions to architecture and urban design but was an exceptional human being – a thinker, a teacher and a friend who made the world more beautiful with his ideas and presence. He is survived by his wife, Dominique Piwnica, and his son from his first marriage, Neil. ●

Graciela Moreno is an architect and masterplanner

IN MEMORIAM

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ARBROATH, ELECTED 1956

Bryan Frederick Holdsworth Houchin
BEDFORD, ELECTED 1963

Michael Henry Richard Earl
LONDON, ELECTED 1969

John Kenneth Living
LONDON, ELECTED 1971

Patrick James McVicker
EAST GRINSTEAD, ELECTED 1973

Saty Roy
HUNGERFORD, ELECTED 1976

Nicoline Bess Van Den Berg- Alma
KUALA BELAIT, BRUNEI
DARUSSALAM, ELECTED 1995

Peter Plumridge
BURY ST EDMUNDS, ELECTED 1951

David William Hedworth
BRIDPORT, ELECTED 1960

Leonard Victor Chamberlain
LEOMINSTER, ELECTED 1961

Rev Robert John Mason
WORTHING, ELECTED 1963

Anthony John William Collins
SEVENOAKS, ELECTED 1963

Colin George Crowfoot
LEIGHTON BUZZARD,
ELECTED 1954

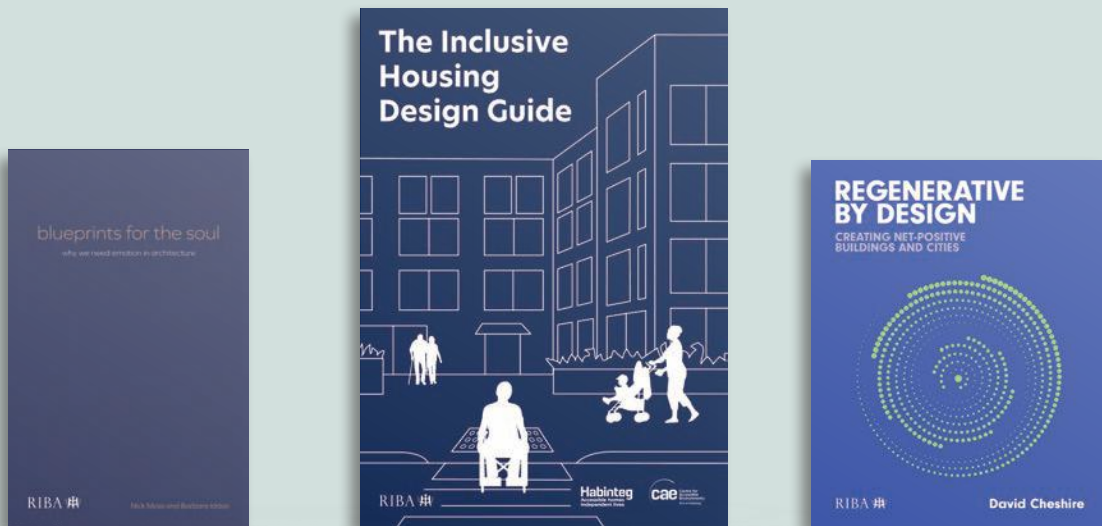
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DOING THINGS BETTER



Rising Star Marina Strotz played an important role in bringing the National Trust pocket parks in east Birmingham to fruition.

PAUL WRIGHT

This year's talented cohort of 12 Rising Stars demonstrate both an impressive variety of accomplishments and an entrepreneurial ability to make positive change, both inside and outside the profession.

A number of themes shone particularly strongly. Several of the cohort are working to reduce embodied carbon, whether through research with potentially wide-ranging impact or through individual projects. Others are embracing the circular economy and regenerative design principles. Some are exploring bold new directions away from traditional practice, including a startup to harness the power of AI for retrofit, and another for architectural films.

There is also a willingness to share knowledge and provide support, whether through mentorship programmes that help to broaden access to the profession, or through international platforms for emerging practices.

Impressively, many have done all this in tandem with busy day-jobs.

As judge James Purkiss said: 'They've seen something that could be done better, and done something about it.'

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The standard for this year's Rising Stars entries has been fantastic. They have all demonstrated a strong sense of entrepreneurship through designs that minimise emissions, make use of cutting-edge technology and push the boundaries of what is possible. They are a privilege to see and be a part of.

Ben Brocklesby,
sales and marketing director, Origin

THE 2024 JUDGES



Martyn Craddock,
Chief executive,
United St Saviour's Charity



Peter Laidler
Founder and director,
Structure Workshop



James Purkiss
Retrofit manager,
Cambridge City Council and
2023 RIBA Rising Star



Fiona Scott
Founder and director,
Gort Scott



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RIBA director of publishing
and learning content

Produced by RIBA Journal
Editor: Eleanor Young
Words: Pamela Buxton
Designer: Linda Byrne
Sub-editor: Simon Aldous



DION BARRETT

ARCHITECTURAL FILMMAKER DEDICATED TO COMMUNICATING THE ARCHITECTURAL PROCESS

Founder, *Architecture.Film*
 Part 1 2011 Part 2 2015

'I genuinely believe in the power of film, and how it can be utilised to benefit the profession,' says Dion Barrett, who recently transitioned to full-time filmmaking four years after qualifying as an architect.

Barrett studied at Liverpool John Moores University and worked as an architect at Associated Architects in Birmingham and at Fabric in Solihull. His journey into film began when he started documenting his own architectural projects as well as events at the Birmingham Architecture Association. He began creating work for other practices and set up *Architecture.Film*, which he describes as a studio to uncover the stories behind the built environment.

He sees filmmaking as an extension of architectural practice, and a way of communicating the complex process of delivering buildings rather than just documenting the end result. His aim is not just to concentrate on aesthetics but to educate too by creating 'something both beautiful and informative'.

'I'm passionate about using my skill set as a filmmaker and architect to promote innovation, highlight great buildings and advocate for the profession to other professionals and the public,' he says.

He has now produced more than 100 architectural films, ranging from documenting live events to project showcases, educational films and documentaries. These include *Village Stories* for Jestico + Whiles. This post-occupancy evaluation of Greenwich Millennium Village encouraged residents to speak for themselves, and won last year's inaugural AJ100 Communication Initiative of the Year award. Meanwhile, a series of research-focused films with *Me Made That* included themes such as the intensification of industrial land

and the importance of cultural spaces in the cities. The 30-minute educational film *Zero Carbon House* explored the importance of sustainable design.

Judges commended how Barrett was using his architectural knowledge to communicate architecture – and the value that architects can bring – to a broader audience.

'To be able to use what you learn about architecture to tell complex stories is really important,' said Fiona Scott, adding that this was quite difficult to do well.

Barrett's referee, Anna Parker of *Intervention Architects*, praised his commitment to inspiring others, whether by providing paid work experience opportunities to architectural students from non-traditional backgrounds, or as a visiting lecturer at the University of Wolverhampton.

What piece of architecture or placemaking do you most admire and why?

The Barbican has always held a special place close to my heart. It's actually where I proposed to my wife. Impressive on every scale, it's a filmmaker's dream, blending massive concrete forms with intricate details, an interplay of light, shadow and texture. It perplexes me how something so brutal can feel so welcoming. The Barbican is a bold urban sanctuary. The bustling waterside terrace speaks to its allure. Two-thousand homes arranged around schools, a church, library, a lake, a conservatory and an entire arts centre. Once you've actually figured out how to navigate the labyrinth, is this utopia?



This image Filming for Jestico + Whiles.

Left Filming on site for GPAD.





NICHOLA BARRINGTON-LEACH

FOUNDER OF INTERNATIONAL COLLABORATIVE PLATFORM FOR EMERGING PRACTICES

Director and architect, NVBL Architects

Part 1: 2010 Part 2: 2014

Judges were fulsome in their praise of Nichola Barrington-Leach's 'very impressive' work, which ranges from cultural installations to residential refurbishments, exhibitions and handcrafted objects. 'A nice combination of inventive and rigorous,' said Peter Laidlaw.

Barrington-Leach set up her practice after studying at the Bartlett and the Architectural Association (AA), and describes her work as centred on regenerative design principles, conscious material sourcing and circular economies. 'I strive to reduce embodied carbon and contribute to a carbon-neutral future for architecture,' she says.

For Three Stone Columns and a Roof, a photography studio in Acton, her practice persuaded the client to opt for

What piece of architecture or placemaking do you most admire and why?

I am inspired by many spaces and architectural works for a variety of reasons. I have always loved the South Bank, the National Theatre, and the Royal Festival Hall for their long-term contribution to providing cultural and civic spaces within the city. The work of Lacaton & Vassal, with its philosophy of reuse over demolition, is more poignant than ever. Additionally, Renée Gailhoustet's legacy has deeply inspired me to envision a future of generous, high-quality, and sustainable housing for the UK.

a hybrid structure of stone boulders and timber instead of just timber, significantly reducing the carbon footprint. Air and Stone, for Clerkenwell Design Week 2022, was a temporary civic square using only biodegradable and reclaimed materials with the existing trees as the structure.

In 2023, she was awarded the Royal Academy of Arts Residency, where she explored the work of sustainable housing architect Renée Gailhoustet.

'Nichola produced the most detailed and thorough analysis of Gailhoustet's housing projects ever completed,' said her referee Vicky Richardson, former head of architecture at the Royal Academy.

Barrington-Leach also co-founded the International Architecture Collaboration, a platform for emerging practices to exchange ideas and collaborate.



KATIE FISHER

DEDICATED TO EMPOWERING AGENCY IN THE BUILT ENVIRONMENT AND DRIVING POSITIVE CHANGE IN THE PROFESSION

Architect and founder, CARD Projects (Collaboration, Agency, Research, Design)

Part 1: 2014 Part 2: 2017

What existing problem would you most like to tackle?

Following on from the Architecture Foundation research on inclusive play spaces, I am keen to improve access within public spaces – in particular public play spaces. The UN's Convention Rights of a Child states that every child has a right to play, and the fact that only one in ten play spaces is accessible to disabled children is staggering. If we can improve public play spaces for everyone we can improve the quality of life for so many people.

Katie Fisher wowed judges with both her dedication to making positive change in the profession and her commitment to ensuring more people have a voice in their local built environment.

'She has so many roles,' said judge Martyn Craddock, citing her position on the RIBA Council, her ambassador role at the Architects' Benevolent Society, and her co-chairing of the Architecture Foundation Young Trustees.

The latter included contributions to initiatives such as Peer Review (rethinking the architectural crit system), Thesaurus for Change (challenging the barriers of industry jargon) and Life Outside of Architecture (amplifying career options outside of the traditional route). She also

Right Tiles made from upcycled waste for bench by Katie Fisher and Siraaj Mitha Siraaj Mitha.

initiated research on new design guidance on inclusive play spaces, platforming the voices of disabled young people and their caregivers.

'I am always looking to make positive change in the industry, she says.

Fisher recently set up CARD Projects (Collaboration, Agency, Research, Design), a 'socially engaged' practice that focuses on empowering agency in the built environment using art, architecture, engagement and education.

She previously worked at Stanton Williams and then Grounded Practice, where she created a policy for mental health as well as a social value and engagement that scored 100 per cent within a GLA Framework application.

'Katie has a brilliant energy for ensuring people are at the heart of the built environment,' said referee Chloe Phelps, chief executive of Grounded Practice.



DHRUV GULABCHANDE

PROMOTES DIVERSITY IN THE PROFESSION THROUGH MENTORING

Associate director and architect, HFM Architects;
founder and lead mentor Narrative Practice; associate lecturer, UAL
Part 1 2013 Part 2 2018

To date, more than 740 young people have benefited from Narrative Practice, a mentoring initiative set up four years ago by architect and teacher Dhruv Gulabchande.

The non-profit venture, aimed at participants from under-represented backgrounds in architecture, was informed by Gulabchande's own experience growing up as part of a South Asian family of asylum seekers living in council housing in Bradford.

He is clearly on a mission to support both aspiring and emerging architects, whether a 16 year old exploring a possible career in the built environment or a young practitioner needing advice about a workplace matter.

'I wish I'd had it when I was younger,' he says of the programme, which offers free one-to-one sessions, networking opportunities and careers advice in partnership with leading architectural practices.

Seeing the mentoring events in action and the

positive results they bring is clearly hugely rewarding for Gulabchande, who says: 'I have the satisfaction of being able to see myself in these students every month.'

Narrative Practice began during the pandemic when Gulabchande offered mentorship online, initially to overseas-based students whose education had been disrupted. Soon, he was talking to several each day.

After a couple of years, this morphed into in-person mentoring in the UK with Gulabchande and a small team of other mentors, before expanding further through collaborations with practices and educational institutions. Up to 40 participants are mentored at sessions each month, with about a quarter returning for further sessions.

'NP aims to engage with our collaborator leadership teams to showcase diversity and inspire them to pursue similar success,' he says.

The programme also includes a Saturday school pilot for students aged 16-plus.



JAMES BUDGEN

Above Narrative Practice mentoring collaboration sessions at Wilkinson Eyre's London Office.

'Dhruv's creative vision is matched by hard work and an ability to deliver,' said referee Claire Pollock, partnerships lead at Allford Hall Monaghan Morris, which has hosted several Narrative Practice sessions. She also praised his skill at forging successful collaborations.

His achievements also impressed the judges.

'He's driven by a desire to help others facing similar challenges to his own,' said Fiona Scott.

'It's impressive how many people he's reached. He's already making a positive change through his work,' added Peter Laidler.

Gulabchande's achievements are all the more impressive given that he combines his day job as associate director at HFM Architects with a teaching role at Central St Martins.

What existing place would you most like to tackle?

I'd like to tackle Bradford's once-rich, industrial high streets, now vacant and overshadowed by the Broadway Shopping Centre. Growing up in this historically significant city, once the wool capital of the world, I've seen these central retail spaces decline. I'd be keen to support efforts through community mentoring, architectural consultation and integrating Bradford's story into academic design briefs, to actively discuss reconnecting the fragmented urban fabric and restore its vibrancy.



ANDRE KONG

BALANCES ROLE AT HEATHERWICK STUDIO WITH SMALLER-SCALE ARCHITECTURE AT HIS OWN PRACTICE

Architect, Andre Kong Studio and Heatherwick Studio
Part 1 2011 Part 2 2014

Fashion designer Virgil Abloh, who combined working for Louis Vuitton with his own label, was one of the inspirations for architect Andre Kong when he sought ways to expand beyond his project leader job at Heatherwick Studio.

With going it alone too risky without a financial safety net, Kong instead negotiated a 50-50 split between his job at Heatherwick, where he works on major commissions such as Google's London headquarters, and his own fledgling practice.

This combination of roles clearly suits him well, enabling him to continue 'thinking strategically on a very big stage' at Heatherwick while his own practice focuses on small-scale public realm and housing projects 'with a meaningful

purpose and brief'. He believes each informs the other, enabling him 'to grow as a designer'.

So far his own studio has completed 15 projects, including A Cautionary Benchmark, a bench in the Royal Docks built in collaboration with local students using reclaimed metal, which visualises the impact of flooding. Residential extensions include Stepped Loft, with three distinct volumes that pull out of each other like a telescope.

One of the approaches he's keen to pursue at his own practice is circularity. 'Most of the resources we need for building are already out of the ground, though many are trapped in landfills,' he says. 'Reusing existing structures shouldn't be conservative – adaptive

What piece of architecture or placemaking do you most admire and why?

I greatly admire Neave Brown's Alexandra and Ainsworth Estate in London for its exceptional combination of form, function, and community spirit. It showcases the best of Brutalist architecture with its bold, geometric shapes and carefully crafted details. The playful, sculptural design isn't just beautiful but also serves a vital social function, encouraging interaction and fostering a strong sense of community. The thoughtful layout promotes communal living while maintaining privacy.



POPPY LEVISON

DISABILITY ACTIVIST DRAWING ON HER EXPERIENCE AS A BLIND WOMAN TO ADVOCATE FOR INCLUSIVE DESIGN

Part 2 architecture student, RCA
Part 1 2023 Part 2 2026

Right Seats at The Table, London Festival of Architecture 2023, in collaboration with DisOrdinary and Re-Fabricate.





seeAsaw ocean awareness installation in Governors Island, New York.

reuse can be as exciting and expressive as new builds. The industry urgently needs to develop material banks, allowing architects to design more easily with existing materials.⁴

Designers, he adds, need to think more strategically about how the materials they're working with could be reused at a later point. 'A design is only a point in a material's life,' he says, arguing that architects' duty of care extends to the planet.

Kong, who is of Portuguese-Chinese descent, is a keen mentor, working with organisations such as Accelerate, POC (People of Colour) in Architecture and Freehold, a forum for LGBTQ+ professionals in the property sector.

It's a pivotal moment for his studio – he's about to take on his first member of staff as he sets out to grow the practice.

Judges were impressed with Kong's ability to make a success of two very different ways of working. 'We look forward to seeing where it takes him,' said Peter Laidler.

BEAM CENTER

'As far as I am aware there aren't any blind architects in the UK. I want to show that it can be done,' says Poppy Levison, a Part 2 architecture student and disability activist.

She has already achieved a great deal. She is a fundraiser and course lead for The DisOrdinary Architecture Project's Architecture Beyond, a foundation course taught entirely by blind and visually impaired people, which she herself attended as a student back in 2019. She was on the team behind DisOrdinary and Re-Fabricate's Seats at the Table installation and events programme at the London Festival of Architecture (LFA) 2023, and was part of the LFA curation panel for 2024. She is also a young trustee for The Architecture Foundation.

During her two years as an architectural assistant at DSDHA, she co-authored its Retrofitting Cultural Infrastructure report and taught alongside practice co-founder Deborah Saunt at the London School of Architecture, where she is teaching again

this year. 'Poppy demonstrated talent and insight in guiding postgraduate students as they addressed the hugely sensitive topic of how to recast policing in the city,' said Saunt, who was also Levison's referee.

During her Part 2, Levison is hoping to further her research into gendered violence against disabled women and the role of architecture within that. She points out that disabled women are statistically twice as likely to be assaulted. Vulnerability is increased by the frequent positioning of difficult, unsupervised routes that disabled people often have to navigate in buildings and on public transport.

She is also keen to address the lack of attention given to access design at architecture school, and to help change a tendency for architects to treat access as a 'box-ticking' issue.

'When access is taught in architectural education, it's very much taught as a building regulation,' she says. 'That perpetuates the view that it's a problem to be solved.'

She is also interested in what can be learned from how visually-impaired and blind people experience space, and how consideration of this might expand concepts of beauty. 'I am excited for what architecture could be if it embraced disability,' she says.

What piece of architecture or placemaking do you most admire and why?

The Wellcome Collection, London, is one of a handful of spaces that take a progressive attitude towards accessibility. I particularly admire the toilets because they are gender neutral, have a combination of accessibility options, including ambulatory, accessible and changing places toilets, clearly labelled with sinks of varying heights. It considers as many needs as possible.



STEPHEN PARKER

ON A MISSION TO CREATE THERAPEUTIC ENVIRONMENTS THAT SUPPORT MENTAL WELLBEING

Architect and mental health planner,
Stantec Architecture
Part 1 2014 Part 2 2016



Rising Stars

Stephen Parker describes himself as striving 'to educate, advocate and elevate mental health issues through the lens of design'. As a co-leader of Stantec Architecture's mental health practice, he has designed many mental health, addiction treatment and development disorder clinics around the world, including mental health inpatient units in Canada.

Based in Washington DC, Parker is actively shaping policy on design in this area, co-authoring the US Veterans Administration's Inpatient Mental Health Design Guide and being a founding member of the Center for Health Design's Mental & Behavioural Health Environment Network. He also volunteers as an associate of the Design in Mental Health Network, which is based in the UK.

Parker's interest in designing for the mental health sector was informed by the experience of friends who suffered PTSD while serving abroad as well as that of his father (see box right).

'How do we change the narrative so that people are willing to address their mental health and aren't scared to ask for help because of the fear of where they'll end up?' he asks, adding: 'Democratising design knowledge around mental health is really a key part of how I advocate.'

Judges were impressed by Parker's desire to drive change. 'He uses his lived experience to inform his work, particularly around mental health,' said Martyn Craddock. 'Stephen's dedication to design and advocacy for mental health facilities is inspiring and transformative,' added James Purkiss.



HEATHER MCNEILL

SUSTAINABLE DESIGN ADVOCATE
DELIVERING PASSIVHAUS, PASSIVHAUS PLUS, AND ENERPHIT PLUS PROJECTS

Director, A D Practice and Passivhaus designer
Part 1 2015 Part 2 2018

What piece of architecture or placemaking do you most admire and why?

The Stirling-prize winning Goldsmith Street development in Norwich by Mikhail Riches speaks to me on a number of levels. Firstly, all 93 homes are Passivhaus-certified so they are highly energy efficient. However this goes hand in hand with healthy living environments and low energy bills, particularly when it comes to heating, essentially solving fuel poverty. This is something often overlooked in social housing, which this entire development is. Also unusually for social housing, the houses are architecturally interesting and a lot of thought has gone into the pedestrianised zones between blocks.

Heather McNeill's passion for sustainable design was sparked by her Part 1 final project. She hasn't looked back since, taking a Part 2 at the Centre for Alternative Technology and qualifying as a Passivhaus designer soon afterwards.

Since then she has helped steer St Albans practice A D Practice in a new sustainable direction, securing its first Passivhaus project, which formed the case study for her Part 3 and was runner up in the Passivhaus Trust Awards.

A string of Passivhaus, Passivhaus Plus and EnerPhit Plus projects have followed. McNeill, who is currently on-site with her own EnerPhit house, agrees that she is on something of a mission to spread the word. As well as partnering with self-builders on Passivhaus homes, she is working with trusted local builders to help encourage the 'shift in mindset' that is required to build to this standard.

It is possible, she says, to build houses that are both energy efficient and architecturally striking. 'It definitely can be done,' she maintains. 'The more Passivhaus gets taken up, the more people will push the boundaries.'

She enjoys the 'really collaborative' nature of Passivhaus projects, and would love to tackle larger-scale commissions, such as co-housing and social housing in the future. Meanwhile carrying out her own EnerPhit project has been an 'eye-opener'.

'I definitely have a better understanding of where clients are coming from!' she says.

What existing building and problem would you most like to tackle?

In emergency departments, there is a secure holding room for psychiatric patients. The one my father, Clark, found himself in at our hometown hospital was a windowless room. His delusion paranoia required coercion, spatial confinement and chemical restraint that ultimately led to 13 medications on his chart. The systemic problems of mental health access, the stigma of place and design's role in helping, not hindering, mental wellbeing is the purpose of my practice.



MARINA STROTZ

DEDICATED TO INTEGRATING NATURE INTO THE BUILT ENVIRONMENT

Associate director, Intervention Architecture
Part 1 2013 Part 2 2017

In addition to her collaborative work at Birmingham practice Intervention Architecture, Marina Strotz trained as a horticulturalist and helped design and deliver a project that won a BBC Gardener's World Gold award. The Wander and Wonder garden is now a therapeutic space at the Rookery Gardens assisted-living mental health facility.

The Swiss-British architect's commitment to collaborative design was praised by her referee, Intervention Architecture director Anna Parker, who described her as a 'change-maker with plants and technology as her medium'.

Parker added: 'Her energy is effervescent for actioning how we can work together to improve the way people live whilst benefiting places and "greening the grey" – truly admirable quality in a young architect.'

Strotz is an advocate of 'genuine' community engagement through actively collaborating with local communities and stakeholders to ensure projects are developed with the community rather

than imposed upon them, building skills and fostering a sense of ownership.

'Today, there's a detachment between large public projects and surrounding communities, where engagement often feels like a formality,' she says.

She led the transformation of neglected spaces in economically deprived parts of east Birmingham into pocket parks, involving the local community in the co-design and co-build process. Current projects include a park in collaboration with the local community in Erdington – the first part of a project to convert a Victorian swimming baths into a community and enterprise hub.

In 2022, Strotz became the first female president of the Birmingham Architectural Association (BAA)

'In a city dominated by commercial practices, she clearly brings a genuine community-led approach,' said judge Fiona Scott, while Martyn Craddock added: 'Marina's tenacity in combining horticulture and architectural design shines through this application.'

Right Design of pocket parks at Firs and Bromford, for the National Trust, involved the community.

What piece of architecture or placemaking do you most admire?

The Water Aid Garden at the Chelsea Flower Show by architect Je Ahn and landscape designer Tom Masse integrates sustainable design with a powerful narrative on global water access. Its innovative use of materials is not only beautiful, functional design but also raises awareness about clean water's importance and climate change. Unlike other show gardens, the garden will have a life after and be relocated to Manchester, continuing its mission to inspire and educate.



PAUL WRIGHT



New-build Passivhaus home in Harpenden.



CATHERINE SINCLAIR

WORKING TO REDUCE WHOLE LIFE CARBON FROM THE EARLIEST DESIGN STAGES

Architect, Space Architects and KTP associate, Northumbria University
Part 1 2017, Part 2 2020

Early intervention is crucial for whole life carbon (WLC) reduction according to Catherine Sinclair, who is on a mission to bring WLC analysis to the forefront of the design decision-making process.

Through a knowledge transfer partnership (KTP) between Northumbria University and Space Architects, she is developing a digital analysis tool that can analyse the WLC of design decisions from the earliest stages, including location, form and structure. This enables WLC analysis to be treated as a core rather than specialist activity within architecture.



Above Sinclair presenting research at the European Council on Computing in Construction.

'Design decisions that are made at the start of a project define, often unknowingly, the whole life carbon of a project,' she says. 'A design-analysis-base tool removes the inaccuracy of early stage embodied carbon prediction.'

Her referee, Northumbria University associate professor Zaid Alwan, praised her 'huge contribution' to addressing WLC across the RIBA project stages.

'The systematic approach designed by an architect, for architects, integrates embodied carbon of materials, analyses design decisions and analyses both operational and embodied carbon from the earliest stages of a design project,' he said.

Judges were similarly taken with Sinclair's dedication to WLC reduction, and the potential impact of the research.

'She's an innovator in bringing whole life carbon analysis into design, which is crucial to tackling the challenge of climate change,' said James Purkiss.



SAVANNAH WILLIAMS

SUPPORTING AND MENTORING PEOPLE OF COLOUR IN THE PROFESSION

Architect and founder of POC in Architecture
Part 1 2018 Part 2 2021

Savannah Williams combines a full-time job as an architect with POC in Architecture, an organisation she set up in 2020 to support people of colour in the profession.

'Through university I didn't have a mentor or any black or brown tutors, and wanted the younger generation to avoid the same unwanted feelings of isolation or imposter syndrome,' says Williams, who studied at the University of Liverpool and the University of Westminster.

Judges were hugely impressed with her achievements at POC in Architecture, which began as an online platform for architecture students of African and Caribbean heritage to showcase their final projects. The initiative has since grown to include a mentoring



Above Williams organised a two-week model-making workshop in 2023 at Foster + Partners' London offices.

programme pairing Part 1 and Part 2 students with a qualified architect over a four-month period. Support includes careers advice, portfolio and CV assistance and interview preparation.

The organisation stages an annual exhibition, hosted this year at Morris + Company and showcasing the work of 50 students. Williams also organised a two-week model-making workshop in collaboration with Foster + Partners, both this year and last.

Judge Peter Laidlaw praised Williams for 'addressing her own experience in providing a role model to the next generation of architects'.

She's reaching people in different ways,' added James Purkiss of her organisation's many different outputs.

While Williams admits that organising POC in Architecture single-handedly can be stressful, she says 'it's worth it seeing the network that it is today'.

She hopes to continue tackling the issue of inclusion for minority ethnic groups in the UK within the architecture industry, with the aim of being able to grow a team so that POC in Architecture can expand its outreach and support even more students.

What piece of architecture or placemaking do you most admire and why?

The work of Yasmeen Lari and the simple approach of using three readily available materials is inspiring as well as being zero carbon, zero cost, zero waste and zero poverty. The innovative design, tackling poverty and creating self-sufficient communities, shows the huge impact architecture can have. It creates motivation to continue to work towards change within the built environment, using resources that are available to us whilst creating beautiful architecture that has a positive impact on the inhabitants' wellbeing and quality of life.

'We all know that people of colour are severely under-represented in the profession,' said her referee, Paul Hiron, professional knowledge manager at the RIBA, 'which makes Savannah's POC In Architecture community not only important for aspiring architects, but also crucial for creating a more diverse future.'

What piece of architecture or placemaking do you most admire?

The Yinka Ilori Launderette of Dreams in Islington, north London, was a public installation that brought people together; an adventurous, playful space that reminds us to not lose sight of our imaginations. The originality of the piece draws on Ilori's childhood memories, shifting the somewhat monotonous to exciting and high-spirited. It shows a side of architectural thinking that can be forgotten, drawing on our playful side. I admire spaces that provide positive social interaction and bring communities together.



RAN XIAO

PIONEERING THE USE OF AI TO REDUCE CARBON EMISSIONS FROM EXISTING HOUSING STOCK

Chief executive, Planarific Part 1 2011 Part 2 2014

'I needed something different and more adventurous,' says Ran Xiao, of his move from mainstream architecture to AI technology entrepreneur.

Xiao moved to the UK from China to train in architecture after initially studying electrical engineering. Following several years at Hawkins\Brown as a Part 2 architectural assistant, he completed a PhD on machine learning applications in architecture at the University of Cambridge before focusing on the responsible use of AI in design.

His start-up, Planarific, which now employs four staff, is using AI to reduce carbon emissions as part of retrofits of large housing estates. The project arose out of his participation in Innovate UK's Net Zero Heat Innovation Lab, a five-day residential competition, for which he formed partnerships with local authorities, charities and academics. His team won, securing £6 million in funding including £630,000 for Planarific.

The competition was pivotal in bringing together his architectural and technology capabilities. 'I found a problem I can solve, and I have the ability to look at things both from an engineer's point of view through machine learning and maths, and also as an architect,' he says.

Planarific is working with local authorities to accelerate the surveying of properties using drone technology, then using machine learning to categorise housing types and apply pre-tailored design solutions as part of carbon-reducing retrofits. This approach helps identify where offsite manufacturing can be used effectively. Pilot projects for several thousand homes are in the pipeline, with a long-term aim to support the retrofit of up to 300,000 dwellings annually.

The initiative made a strong impression on the Rising Stars judges. 'Ran's entrepreneurial work could revolutionise housing retrofit and make a significant impact on people's lives,' said judge James Purkiss, who is retrofit manager at Cambridge City Council.

Ran, who still works as an architect on private residential projects, is also interested in using AI to develop a product with manufacturers for the neglected market of small-scale home improvements.

What piece of architecture or placemaking do you most admire?

One of my favourite pieces of architecture is the Louisiana Museum of Modern Art outside Copenhagen. I admire the way it effortlessly connected a diverse set of spaces with the local landscape and views, and created an unassuming and welcoming space to experience a fantastic art collection. It is a masterclass in using a limited palette of simple materials – bricks, glass, clay tiles, solid timber – throughout the interconnected spaces of varying scale.

THE RISING STARS 2024 SHORTLIST

MATT BONNEY

PROJECT ARCHITECT AND SUSTAINABILITY

LEAD, GCP CHARTERED ARCHITECTS

Sustainability advocate with expertise in energy assessment, Passivhaus design and life cycle assessment

EDWARD COUPER

ARCHITECT, WILKINSONEYRE

Combines working for an international practice with a long-term initiative to build climate change resilience in Pacific island communities

LUCAS FACER

DIRECTOR, LUCAS FACER ARCHITECTS

Leads a research-based practice focused on repair over new build, circular economy and regenerative design principles

ANDREW JACKSON

FOUNDER OF ANDREW JACKSON ARCHITECTS

Entrepreneurial architect whose innovations include an AI-powered application to minimise the negative impacts of value engineering

CHUN-LI REID

FOUNDER OF BOLD,

PART 2 ARCHITECTURAL ASSISTANT

Creator of BOLD, a platform exploring concepts for social change including *Cooking with an Architect*, a show that considers architecture through the lens of taste

MAIA ROLLO

PART 2 ARCHITECTURAL ASSISTANT,

NIMTIM ARCHITECTS

Committed to co-creation with communities, as well as diversifying the profession as a course leader for the Accelerate programme at Open City

GIDEON SEGLAH

ARCHITECT, HLM ARCHITECTS

Advocate for diversity, equity and inclusivity, both at HLM Architects and within the wider profession through collaborations with organisations including *Blueprint for All* and *Beyond the Box*

JAINA VALJI

ARCHITECT AND DIRECTOR, COPY AND SPACE

Founder of a digital twin technology company and advocate for the broader adoption of AI in architecture

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Tue 5 Nov , 12.30pm-2pm	Made by Walking: Designing for a Sensorial Experience of Architecture
Wed 6 Nov , 12pm-1pm	Cover to Cover – Drawing Attention
Wed 6 Nov , 9.30am-7pm	RIBA Guerrilla Tactics 2024: Thrive, the versatile practice - Conference
Wed 6 Nov , 3pm-4pm	Net Zero Carbon Course – Module 1 - Introduction to Net Zero Carbon
Thur 7 Nov , 9am-4pm	RIBA CPD Expo – London
Thur 7 Nov , 1pm-5pm	Preparatory course for the ARB prescribed exams
Mon 11 Nov , 12pm-1pm	RIBA CPD Hour: Future-proof Construction: Specify the right materials & systems for balconies & terraces, Ryno
Tue 12 Nov , 1pm-2pm	Specialist Conservation Series – Module 4 - Timber Framed Buildings and their Conservation Approach
Wed 13 Nov , 12pm-1pm	Net Zero Carbon Course – Module 2 - Embodied Carbon
Wed 13 Nov , 1pm-4.30pm	Advanced Conservation Course–Module 1 - Conservation in Practice
Fri 15 Nov , 9.30am-10.30am	RIBA CPD Hour: Roof Windows in Modern Construction, Fakro GB Ltd
Mon 18 Nov , 12pm-1pm	RIBA CPD Hour: An Introduction to Specifying Aluminium Curtain Walling, Reynaers Aluminium
Tue 19 Nov , 1pm-4.30pm	Advanced Conservation Course–Module 2 - Conservation in Practice
Fri 22 Nov , 9.30am-10.30am	RIBA CPD Hour: What Sound Can Do for Your Designs, Quiet Mark Certification

Mon 25 Nov , 12pm-1pm	RIBA CPD Hour: Washrooms for Education, Bushboard Washroom Systems Ltd
Tue 26 Nov , 1pm-4.30pm	Advanced Conservation Course–Module 3 - Construction & Services
Wed 27 Nov , 3pm-4pm	Net Zero Carbon Course – Module 3 - Operational Energy

DECEMBER

Mon 2 Dec , 12pm-1pm	RIBA CPD Hour: Principles of 'Type A' Barrier Waterproofing to the New British Standard 8102:2022, Newton Waterproofing
Tue 3 Dec , 9am-5pm	RIBA CPD Expo: (Online) Doors, Floors, Windows, and Walls
Tue 3 Dec , 1pm-4.30pm	Advanced Conservation Course–Module 4 - Construction & Services
Wed 4 Dec , 12pm-1pm	Cover to Cover – Conservation Guide: Learning, Understanding, Practice
Wed 4 Dec , 3pm-4pm	Net Zero Carbon Course – Module 4 - Measuring Performance
Fri 6 Dec , 9.30am-10.30am	RIBA CPD Hour: Wet Room Solution, Wedi Systems
Fri 6 Dec , 12pm-1pm	Cover to Cover – High Street
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MARTIN CHARLES/RIBA COLLECTIONS

The Stilt Garden, Hidcote Manor Cotswolds, Gloucestershire, 1907-1930

Influenced by the landscape architect Thomas Mawson, the gardens at Hidcote were laid out between 1907 and 1930 by the amateur designer Lawrence Johnston. Constructed as a series of outdoor rooms, combined with framing vistas, they became a landmark in garden design. The Stilt Garden, planted in 1915, comprises two cubed blocks of tall, clipped hornbeams, enclosed by box hedges of yew, framed by a pair of gazebos at one end. This is landscape as architectural form, seen through the eyes of the architectural photographer Martin Charles – one of his best images, taken in deep snow. In full leaf the trees would appear as solid geometric form,

but photographing them leafless in a wintry landscape changes this. Focussing on one corner of the cube they appear as an almost transparent plane. Charles described his approach to architectural photography in the *Architects' Journal* in 1979, noting how his 'eye has developed towards patterns'. The leafless triangle silhouetted against the sky, the regularly spaced tree trunks, falling shadows and footprints criss-crossing the snow encapsulate this concept. ●

Suzanne Waters

An Architect's Eye, an exhibition of the work of the architectural photographer Martin Charles (1941–2012), is at the RIBA Library until 19 December

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RIBA Journal

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Published by RIBA

1834 Ltd

Registered office:

66 Portland Place,

London W1B 1AD

Reprographics by

The Logical Choice

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