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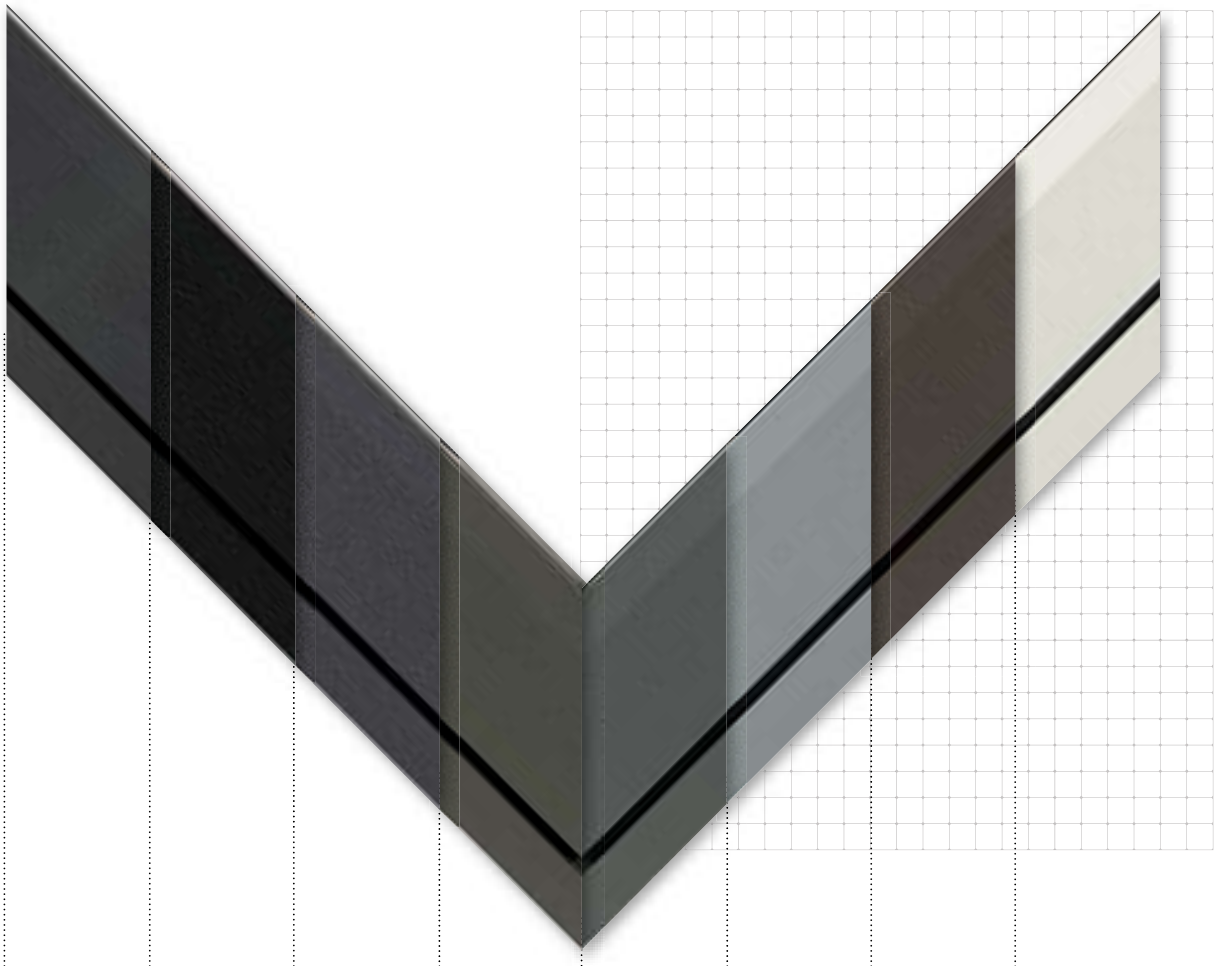

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# 1 Buildings


DAVE BEWICK



**On the cover**
Clancy Moore Architects' Arklow Wastewater Treatment Plant, County Wicklow, Ireland, photographed by Johan Dehlin

# 2 Intelligence


FISHER STUDIOS



He has evolved the accepted concept of the garden in Chinese architecture into 'shengjing', a notion encompassing the poetic arrangement of landscapes and the spiritual experience they offer

**Andong Lu and Helen Castle profile**
**Li Xinggang: ribaj.com/birds-nest**

# 3 Culture


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*Photo: Ben Luxemore*


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12

# 1: Buildings

**MUSEU DE ARTE CONTEMPORÂNEA ARMANDO MARTINS, LISBON**
METRO URBE
Read the full story:
ribaj.com/macam-lisbon

Lisbon has no shortage of historic palaces, nor of boutique hotels or contemporary art galleries. What it has lacked until now, it turns out, is a project merging these typologies. MACAM, designed by Lisbon-based studio Metro Urbe, is a rare hybrid – part hotel, part museum – yet weaves a cohesive architectural narrative out of its different elements. Commissioned by industrialist Armando Martins, it occupies and expands the Palácio dos Condes da Ribeira Grande, an 18th-century mansion in the Junqueira district, known for its elegant riverside villas. The striking new wing, with its screen of custom-made ceramic pieces by Portuguese artist Maria Ana Vasco Costa, accommodates temporary exhibition spaces; the original palace hosts hotel amenities, public areas and the main galleries for a collection of modern art gathered over five decades.

No clear precedent existed for such a merger, yet the benefits are clear. The privately funded museum adds cultural resonance for guests, while revenue from the hotel supports both operations and preservation of historic fabric. The challenge of combining a modern art gallery with a boutique hotel dictated a layout that could accommodate disparate demands without conflict – hospitality spaces depend on unobstructed circulation and comfort, while a museum requires strict climate, lighting and security protocols. The design team focused on striking a balance between historic areas and modern facilities, rather than treating the former as vestiges. The restored baroque chapel, for instance, is equipped with modern lighting rigs and advanced sound systems, enabling it to transition into a platform for contemporary performances. The result is architecture that expresses its history, yet welcomes different interpretations: the line separating museum-goer from hotel guest fades, and new ways to engage with art and architecture are fostered. More, in a context where tourism often strains heritage sites, this multi-use model is a viable means of revitalisation, expanding upon adaptive reuse, and bringing art, hospitality and history together in a single immersive encounter. ●

Daniela Silva

FERNANDO GUERRA | FG+SG

# Special blend

A gate lodge on an Irish estate skilfully combines influences while making the most of its modest plot via a mezzanine level and cruciform plan

**Words: Flo Armitage-Hookes  Photographs: Peter Molloy**

The cruciform plan creates corner porches for boots, equipment and lounging cats.

Few buildings can be described as simultaneously domestic, agricultural and celestial. However, a new gate lodge peeking over hedgerows in the Irish countryside deftly melds typologies, references and family life.

A striking red pyramidal roof, capped by a rooflight, tops a single storey. Corners have been eroded away to form a cruciform plan and four porch spaces. No front is obviously distinguished, and the facade seems to repeat and rotate as you walk around, refusing to turn its back on the landscape. Palladio's Villa La Rotonda, Louis Kahn's Trenton Bath House, Borromini's San Carlo alle Quattro Fontane, local gate lodges and farm outbuildings influenced the design – but none so much as the clients.

Needing to be closer to elderly parents, clients Belinda and Peter – with daughter, Stella May – wanted a new home on the family estate in County Meath. A2 Architects proposed a site at the threshold, which offered passive surveillance, easy road access and the opportunity to create something unique. 'They have this idiosyncratic life, where one is a farmer and one is in the high arts,' the practice's director Peter Carroll tells me. 'It's an impressive coupling.' Remarkably, Gate Lodge's design attends to these distinct occupations, and to a shared love of music.

STELLA MAY AUSTIN

Suppliers
**Polished concrete flooring** Carroll Concrete Concepts
**Skylight** Folding Door Company
**Windows and doors** NorDan
**Corrugated steel roof covering** Tecron
**Internal and external lighting** Hicken Lighting
**Kitchen and internal joinery** Costello Joinery

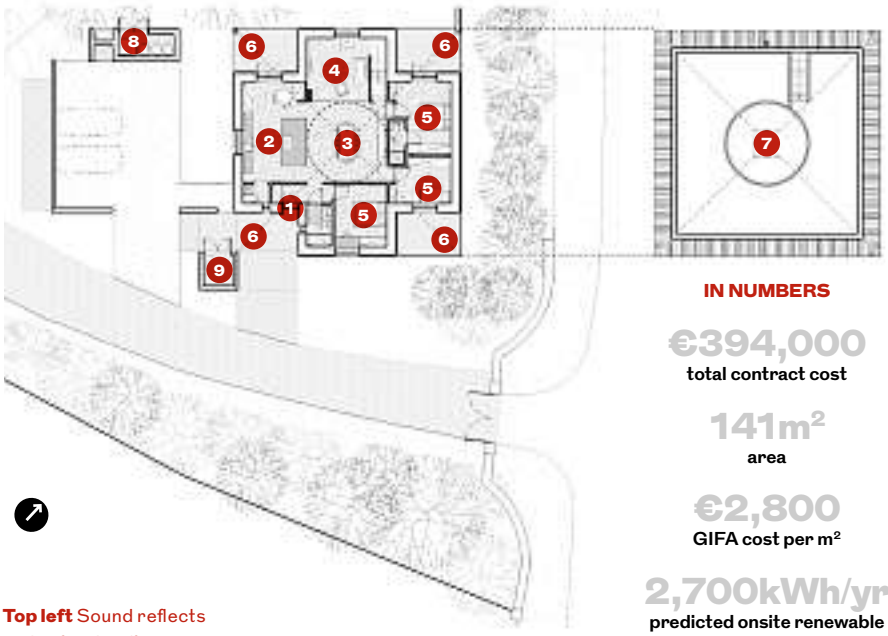
Credits
**Architect** A2 Architects
**Client** Peter Austin and Belinda Quirke
**Contractor** Balcon Construction
**Civil and structural engineer** Peter Brunner

Porch areas create sheltered pockets for removing muddy boots, storing wheelbarrows and sitting outside. Interiors are simple, robust and muted – using plasterboard, plywood, painted MDF and polished concrete – meaning that it doesn't matter if some of that mud makes it past the front door.

'There's a pragmatism around the layout of the house – aside from its inner drama,' prompts Carroll. A kitchen, living room and bedrooms occupy the

**Top** Minecraft model of Gate Lodge by the client's daughter.

**This image** The house is positioned at the estate's entrance.




**IN NUMBERS**

**€394,000**
total contract cost

**141m²**
area

**€2,800**
GIFA cost per m²

**2,700kWh/yr**
predicted onsite renewable energy generation

**3,800 kWh/m²/yr**
actual annual electricity usage

**Top left** Sound reflects and refracts off unusual geometries in the mezzanine.

**Below** A gaping oculus creates 'inner drama'.

1 Entrance
2 Kitchen
3 Dining table
4 Living room
5 Bedroom
6 Porch
7 Mezzanine
8 Plant room
9 Farm storage

perpendicular wings, with a dining table positioned centrally. Here, a sweeping oculus reveals a mezzanine level above and a roof tapering to a glowing, square skylight. It's mesmerising, but not overdramatic. The light is soft, dissolving across walls and filtering down to the ground floor. 'Even in the summer, it's not a Star Wars moment where you get this beam coming down onto the dining table,' Carroll reassures me. 'Our task was to ensure that that everyday comfort was not going to be overwhelmed by this rather spatially charged interior.'

Up in the mezzanine, music is listened to, composed and performed. Sitting below the rim of the oculus, you can be immersed in another world. It's an escape from the domestic and work spheres below, but one where you can still be called for dinner.

There is no accident in the clarity and confidence of shapes throughout the project. A2 painstakingly suppressed extraneous details: recessing windows, clipping sills, hiding smoke alarms and resisting the temptation to add more rooflights to the mezzanine. 'We wanted to be in command of the overall form and a family of details,' asserts Carroll.

Gate Lodge is essentially a bungalow with a lofty attic, but one reimagined in evocative and attentive ways. Bold internal gestures far exceed expectations of the footprint and budget and, despite all of the precedents it draws on, I've seen nothing quite like it. ●

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# In the pink

Allies and Morrison's School of Public Health for Imperial College London is adaptable and inviting, meeting the needs of its varied users

**Words: Flo Armitage-Hookes Photographs: Jack Hobhouse**

**IN NUMBERS**

**7,940m²**
GIA

**270 people**
use the building daily

**255 kg $CO_2$eq/m²**
embodied carbon

**2.59 m³/h.m²**
air-tightness at 50pa

Five years ago you would have been forgiven for asking: what is public health? Then came Covid and we were thrust among daily briefings, disease tracking, policies and prevention. Health leaders emerged from obscurity and filled our screens. Since then, unsurprisingly, Imperial College London's School of Public Health has seen an increased interest in its courses. However, Allies and Morrison's new building for the school in north-west London was first conceived in 2017, predating all this.

In some ways, the building is modest. Facades breathe in, recede, or step down, back or in – attending to their different contexts. You're never presented with a fully formed rectangular face. At eight storeys, stepping down to four in one corner, it mediates between a looming accommodation block on one side and a Victorian terrace on the other. It's also eye catching and adamantly cheery. Pink metal cladding, playfully described by Allies and Morrison director Laurie Hallows as 'desert sand at sunset', frames large windows. These are set back into a lattice of precast concrete with 80 per cent limestone, creating a whitish hue. The overall impression is of a muted, regimented candy cane.

Located in Imperial's White City campus, devised to enable expansion and

**Left** A palette of pinks, reds, and light concrete unifies interiors and exteriors.

**Right** Receded ground-floor glazing creates a porch area.

external collaboration, the School of Public Health completes a cluster of educational, research and residential projects around a central green on the north site. The building brings together formerly far-flung research teams whose studies range from infectious diseases and obesity to how long children spend on their phones. Work is data-driven and largely desk based, but with community groups coming in for sessions and outreach.

A horseshoe of common area wraps around a reception desk and speed gates on the ground floor. Spaces for teaching occupy floors 1-2 and research and community engagement floors 3-7. The eighth level remains ready to be kitted out as soon as need and funding arise, while the facade is extended upwards to screen the roof plant behind.

You may imagine that serving the needs of students, researchers and the public – as well as different modes of teaching – would require an elaborate, Tetris-like design, but Allies and Morrison has kept it simple. Floorplans

**Above left** For privacy, the south facade is stepped with east-facing windows.

**Left** The building mediates between a high-rise residential block and Victorian terraces.

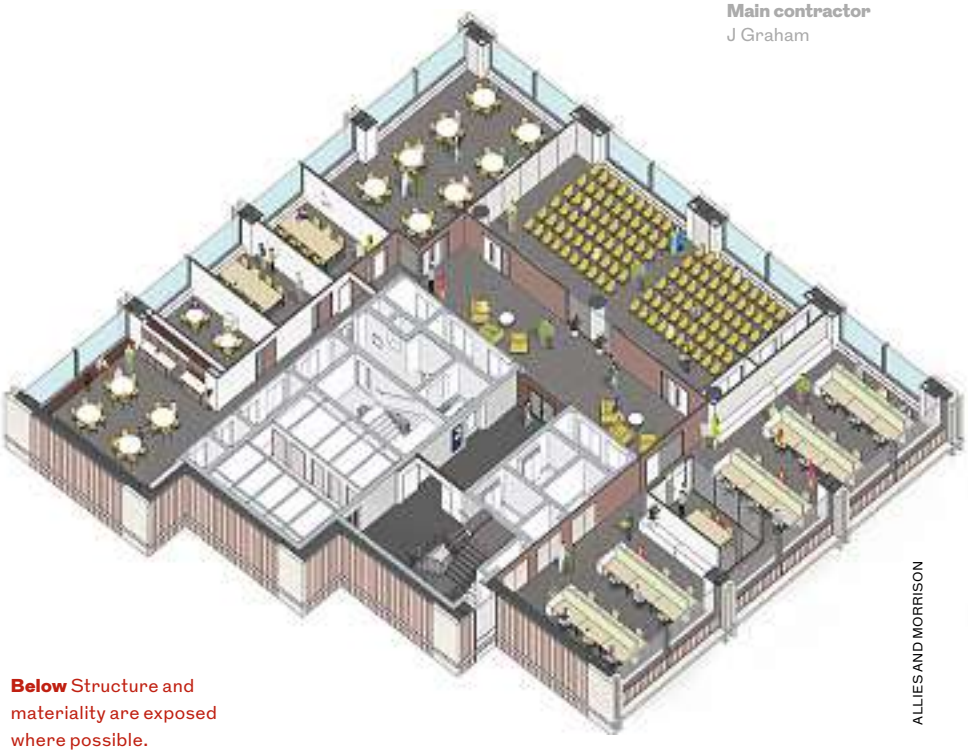
1 Entrance
2 Cycle storage, plant, showers
3 Reception, communal area
4 Teaching space
5 Offices, research and community engagement space
6 'Joker' floor
7 Roof plant

**North-south section**

**Left** The main stairwell is spacious, light and elegant.

**Below** Isometric illustration of floor 2 showing bay configuration.

Credits
**Client**
Imperial College London
**Architect**
Allies and Morrison
**Landscape** Gross Max
**Structure** Curtins
**Services, lighting, sustainability, fire**
Hoare Lea
**Acoustics** WSP
**Access, facades**
Buro Happold
**Project manager**
Gardiner & Theobald
**Main contractor**
J Graham



ALLIES AND MORRISON

were designed around a standard bay size of 7.8m x 7.8m for flexible and generous configurations. A bay, the width of a double window unit, can be subdivided into two smaller rooms or combined to create larger spaces where needed. 'It's a very mathematical, rational building,' reflects Hallows. On the third floor, one bay is a community engagement space (tubs of Lego fill the cabinets and a felt-tip scrawl is pinned up), four bays are grouped to form an open-plan office space for researchers, and another is sectioned into two two-person offices.

No lecture theatres were necessary as the school mainly offers postgraduate courses and has deliberately shifted to more interactive and seminar-based approaches. Design-wise, this was liberating and allowed for more adaptable, multiuse set-ups. The main teaching space on the second floor is three bays but can easily be divided using a manually operated partition.

Another quirk is that the school offers a fully online master's course – and has done for years. 'I had never heard of Zoom when we started in 2017,' recalls Hallows. 'Yet, in every meeting room, it was part of the brief to always have a screen for hybrid collaboration at all different scales of space.' This stipulation has really paid off post-Covid, with spaces well equipped acoustically and technologically.

A complementary palette of pinks and burgundy follows you through the building – in the stairwell metalwork, acoustic panels, kitchen units, tiling and smaller meeting-room doors. 'We didn't want the building to feel clinical to members of the public,' says Hallows,

**Below** Structure and materiality are exposed where possible.

explaining the choice of colour. 'It's responding to the terracotta and brick of the Victorian terraces and is also a warm, healthy, kind of shade.'

Glazing wraps around three sides at ground-floor level, allowing views of the common area while letting light in. People are chatting round circular tables, informally working on higher benches and even playing table tennis. The glass is set in from the main facade, creating a covered porch space for school groups to gather or for students to socialise. Chunky, circular concrete columns line this outdoor area and also feature inside the building.

All these small moves create a sense of continuity between inside and out, soften the threshold between public and private and prepare visitors for the space they are about to enter. However, the atmosphere could have been completely altered if a very strict Secure by Design officer had got his way. 'He wanted full-height speed gates [in the lobby], like you're going through customs,' says Hallows. 'It would have been intimidating. He luckily retired!'

Public health is a wide-ranging and people-focused subject and Allies and Morrison's building embodies that. It's adaptable, inviting and attends to the needs of a variety of users. Walking around, it feels healthy. Windows at the end of corridors offer natural light and sightlines across west London and the campus's central green. Concrete is exposed where possible, most notably in the beautifully pared-back main staircase, creating a real sense of refinement and tangibility throughout.

The pinky palette is charming in places yet, in a less generous mood, I scribbled 'fleshy' and 'sludgy' in my notebook. However, jumping on the tube after my visit, I looked up at Latimer Road, one stop away, where the platform is awash with soft pinks and caramel reds. The School of Public Health's shades may not be to my taste but they're certainly of the locale.

**Above** Flexible communal space wraps around the reception desk.

**Below left** Large windows illuminate corridors and offer vistas across London.

**Below right** 'Zoom rooms' were part of the original brief.

Suppliers
**Facade cladding, curtain walling, external doors** NA Curtain Walling
**Precast concrete facade** FP McCann
**Precast concrete stairs** Flood Precast
**Lifts** Kone
**Internal partitions and ceilings** BPC
**Bespoke joinery** Paragon
**Architectural metalwork** Environmental Fabrications
**Power float concrete flooring** Lazenby

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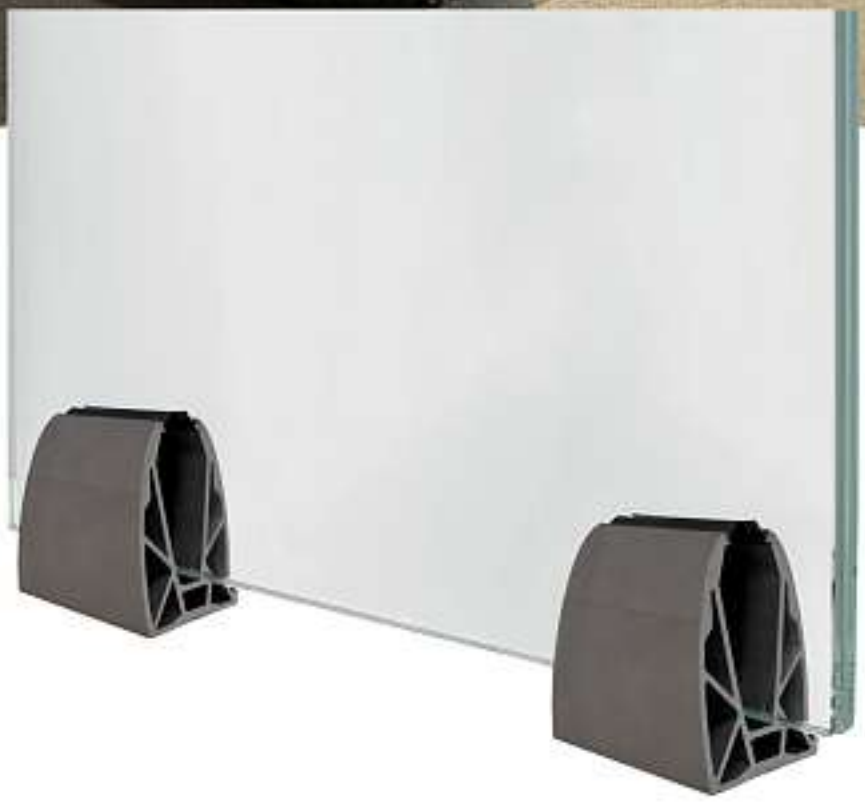

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# Let it flow

Archaic wastewater infrastructure has throttled the town of Arklow's growth – but after decades of delay, Clancy Moore Architects' radically inventive solution is a success on every level

**Words: Shane O'Toole Photographs: Johan Dehlin**

**IN NUMBERS**

**12,234m²**
internal area

**3.2ha**
site area

**13,500**
Arklow population

**1.8km**
tunnelling to reach site

The 'Ferrybank' site is bounded to the south by a river quay, to the east by a road and to the north by a sea wall.

Building infrastructure is Ireland's Achilles heel. The state seems incapable of taking it seriously to get ahead of the game. Despite the government setting a target of 50,000 new homes a year, the national water utility Uisce Éireann has neither the mandate nor funding to service land for growth. Neglect of investment over many decades has left the company struggling to achieve water and wastewater compliance, replace ageing and failing assets, and build resilience in the existing system – never mind plan for expansion.

The threat of swingeing fines from the European Union for non-compliance with environmental legislation offers hope the gridlock will be broken sooner rather than later. But in the meantime, squaring this circle will need creative thinking; not just from engineers, but also from urban planners and architects.

That is why the Arklow Wastewater Treatment Plant is among Ireland's most invigorating 2020s projects. It marks the first time an architect has been a key part of a wastewater treatment plant's design team, anywhere in the world. The inventive design broke a generation-long planning logjam that had stopped a vital piece of infrastructure being realised. The resulting piece of civic – not merely civil – infrastructure speaks of the public good, sets an optimistic future for Arklow and offers a model for Ireland's urban and infrastructural development.

Located at the mouth of the River Avoca, 65km south of Dublin, Arklow's proximity to the capital has led to it becoming a commuter town, with a population of approximately 13,500. Despite its strategic location, Arklow's growth has been curtailed by the lack of a municipal wastewater treatment plant. Until the commissioning of the new facility, raw effluent from the town travelled through the century-old combined sewer and drainage system. Untreated waste was discharged via sewage outfall pipes into the Avoca in the town centre, and into the coastal marine environment of the Irish Sea. The inky spume of sewage made the river and foreshore unsafe even for canoeing.

This led the Environmental Protection Agency (EPA) to classify the river and its environs as 'seriously polluted' in 2007. Arklow was one of four large urban areas placed on a list of 21 of Ireland's 169 large towns not meeting European standards for effluent treatment. This in turn led to the EU referring Ireland to the European Court of Justice, for failure to comply with water management rules. In 1993, 1999 and again in 2005, attempts had been made to develop a suitable wastewater treatment plant for Arklow. For both financial and political reasons, none came to fruition.

In 2016, Uisce Éireann invited tenders for the design of a sewage

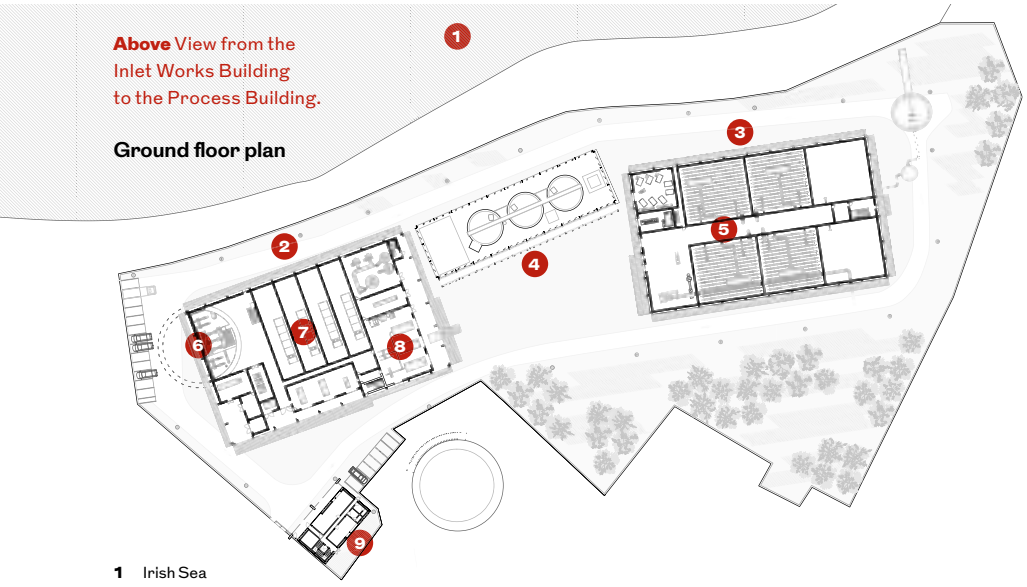
**Above** Human-scaled elements contrast with the monumental form of larger buildings.

**This image** A small lab building sits at the site entrance.

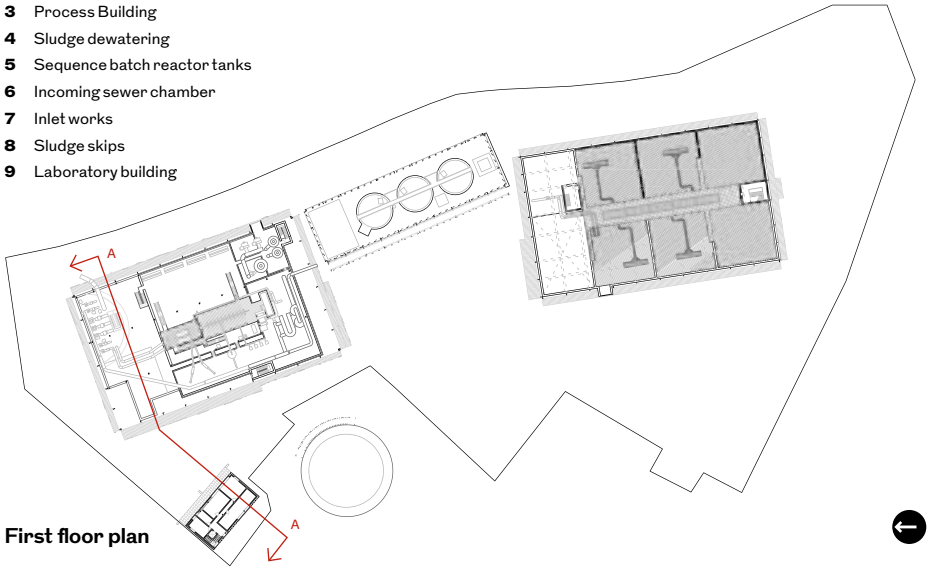
Credits
**Client** Uisce Éireann
**Lead consultants**
Arup (design), Ayesa Engineering (detailed design and site)
**Lead architect**
Clancy Moore Architects
**Lead contractor**
Ward & Burke
**Structural design**
Coyle Kennedy
**PSDP** Tobin
**Long sea outfall** Van Oord
**Structural steel** Cavan Roofing and Engineering
**Cladding** Crown
**Concrete tunnelling pipe**
Tracey Concrete
**Landscaping** Avondale
**Odour control system** CMI
**Metal platforms and stairs**
Mackey Plant
**Partitions** Suburban Ceilings
**Lift** Ascension Lifts

**Above** View from the Inlet Works Building to the Process Building.

**Ground floor plan**




1 Irish Sea
2 Inlet Works Building
3 Process Building
4 Sludge dewatering
5 Sequence batch reactor tanks
6 Incoming sewer chamber
7 Inlet works
8 Sludge skips
9 Laboratory building




**First floor plan**

treatment plant as part of strategic state infrastructure. Engineering design work commenced on this basis but, given the site's prominent and visually sensitive location, the national planning board reviewed and halted the design until an architect was engaged as part of the design team to deliver a more sensitive approach. This was with regard to the long-term future of the lands around the site for amenity and residential use, and to allay concerns about open tanks and plant potentially restricting the town's expansion into the port area. Dublin-based Clancy Moore Architects was added to the engineering design team following an invited competition.

The design that emerged was a radical reinvention of a typical wastewater treatment plant. The site, comprising man-made ground, likely constructed from spoil from the nearby Avoca Copper Mines, had been used as a First World War munitions plant, employing 5,000 at its peak, and latterly as a storage facility for heavy fuel oil, sodium hydroxide and nitric acid held in tanks still existing on the site. The entire area is contaminated with elevated concentrations of heavy metals including copper, zinc, lead and arsenic.

Instead of excavating to sink tanks into the site as is usually done, Clancy Moore proposed that all works be placed on the surface, avoiding the need for widescale remediation and giving the

plant a unique urban presence, although much remains invisible. Some 1.8km of new tunnelling brings the town's raw effluent to it, while the marine outfall, which was manufactured in Norway and towed to site before being precisely positioned on the sea bed, is 900m long.

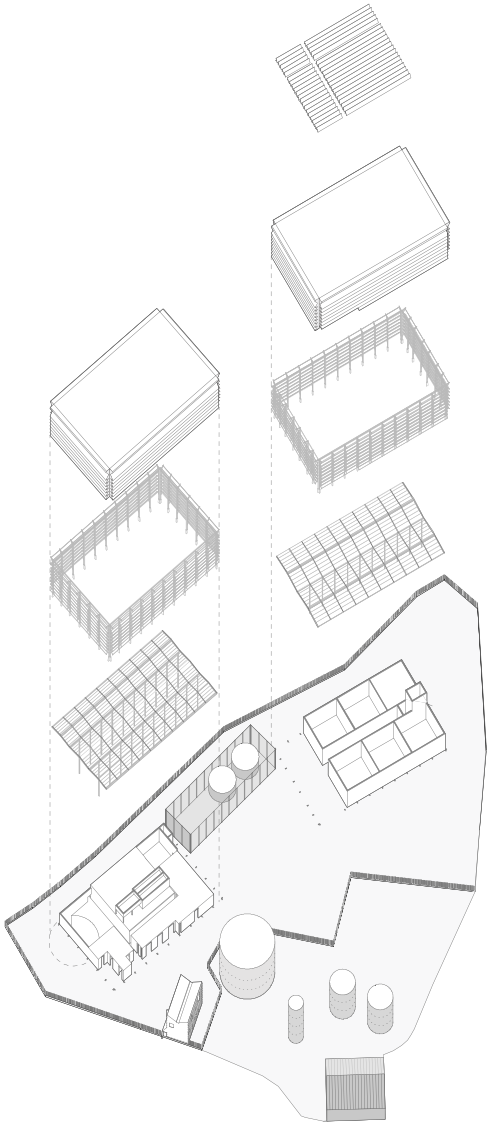
The next innovation was to stack the plant processes, so that unlike a conventional plant which pumps multiple times from tank to tank, in Arklow there is only one pump lift, with the rest of the flow driven by gravity, dramatically reducing the plant's energy needs. A roof, made for ongoing internal adjustment and periodic servicing of the plant by robotic gantry cranes, is topped with a solar farm, using photovoltaic generation to offset the plant's energy use. Stacking the processes also enabled one-third of the site to be set aside for rewilding, as part of a belt of interlinked ecologies of plant, insect and bird life along this part of the coastline.

With green credentials firmly established, the architects set about slotting the plant into its context, both urban and marine. Its main functions are held in two big boxes, each veiled with a louvred skin that distributes air, assists with odour control and hides the operation of the plant from view. They have the scale of blank harbour buildings but are full of character, both from a distance and up close.

The construction is direct but refined: stubby, acid-washed, wedge-shaped concrete piers that support a bolted, galvanised steel structure, fairfaced concrete interiors, and a few flush windows facing windfarms out at sea on the Kish Bank and behind the town in the Wicklow mountains. The immaculately detailed fibre-cement cladding changes atmosphere with the passing light, both day and night, and with the temper of the sea. Shadowed in sunlight and drizzling water from its corrugations when it rains, it is a joyous success at every level. A small laboratory, clad in flat fibre-cement scales, holds the street like a gate lodge, waiting for a more urban future to arrive.

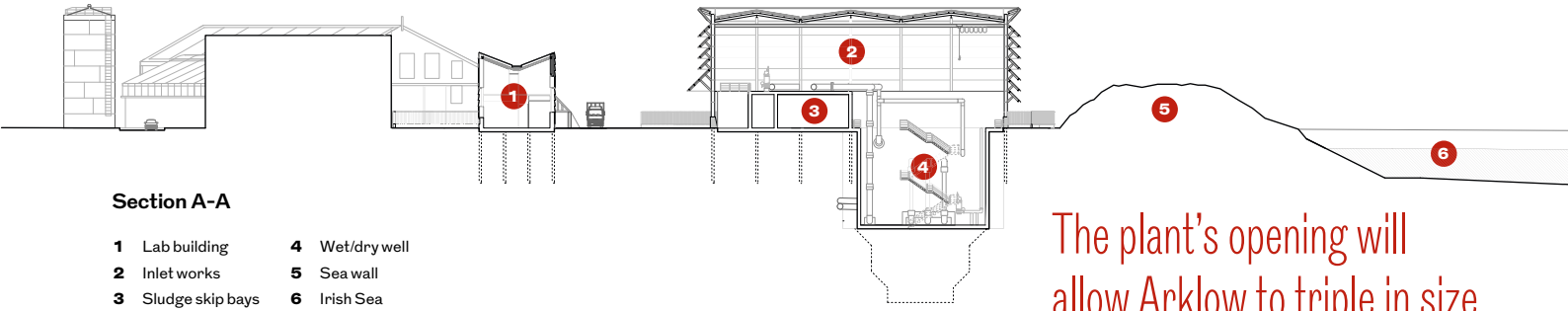
'Colour mattered way more than the material choice,' says architect Andrew Clancy, citing as one influence the sea holly that flourishes on the beach beyond the site. 'Beauty is a thing,' he adds, 'but you never aim directly for it.'

Many beautiful things fed into this design. The lab building has a faint hint



**Top left** Materials include flat and corrugated fibre-cement panels and acid-washed in-situ concrete shear walls.

**Above** Exploded axonometric.
**Below** Louvred facades control odour and provide nesting places for birds and bats.




**Section A-A**

**1** Lab building
**2** Inlet works
**3** Sludge skip bays
**4** Wet/dry well
**5** Sea wall
**6** Irish Sea

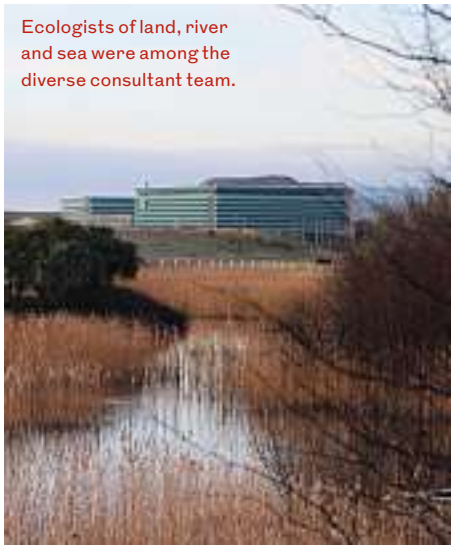
Other than the deep inlet pumping station, the plant is mostly above ground.

## The plant's opening will allow Arklow to triple in size

of John Hejduk's housing in Kreuzberg, Berlin, while the veiled buildings share an affinity with Herzog & de Meuron's central signal box at Basel and the Ricola storage building at Laufen in Switzerland. The surface fixings to the corrugated sheets recall Otto Wagner's Vienna. The architects themselves cite the influence of Hans Christian Hansen's mid-century tectonic works in Copenhagen.

Operation of Arklow's new lean, green cleaning machine is fully automated, staffed by a team of three engineers who are supported by remote monitoring. Its opening heralds a dramatic change in the town's economic and environmental context, allowing it to triple in size, to 36,000 inhabitants, over the next generation, while remediating many kilometres of river, and hundreds of square kilometres of marine ecology. Gently radical in so many ways, this thoughtful work of architecture in support of engineering is set fair to become an essential reference for wastewater treatment plants everywhere. ●

**Shane O'Toole is an architect, critic, curator and RIBA International Fellow**



Ecologists of land, river and sea were among the diverse consultant team.

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**Opposite right**
Wetwall Alloy Collection decor: Nero Portoro.

**Opposite far right**
Zenith decor: Cloudy Cement

**Opposite bottom left**
Zenith decor: Marbre Veneto.

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Polyrey decors: Blanc Megève, Chêne des Alpilles and Marbre de Paros.

**Simplified selection process**

We understand the unique challenges architects face on residential projects, especially around selecting the right engineered surfaces for kitchens and bathrooms. With more materials, decors, and finishes available than ever, finding the perfect match can be overwhelming.

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Streamlining surface specification helps retain crucial material and product information within the sector, which might otherwise be lost because of the phasing out of libraries at architectural practices. Wilsonart tackles this challenge by providing comprehensive reference guides and technical data online, in print and face-to-face, ensuring architects have the necessary information to make rationalised decisions. By viewing Wilsonart as a trusted advisor, architects can bridge these knowledge gaps and be confident the surface specification decisions they make meet the required criteria – a key focus when it comes to building design.

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**Kitchen-conscious design**

Wilsonart's wide surfaces range caters to varying budgets and requirements. With our 'good, better, best' surface selection model, architects can easily adapt to changing project needs and budgets.

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Wilsonart is dedicated to addressing the challenges architectural practices face, from simplifying the selection process to bridging knowledge gaps and ensuring sustainability compliance. By partnering with Wilsonart, architects can rely on our expertise and comprehensive resources to deliver high-quality residential surfaces meeting modern construction demands.

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Scan the QR code to discover more about the RIBA CPD-certified courses Wilsonart offers


Same scale

# Potential energy

Farrells' Chelsea Waterfront scheme absorbs the former Lots Road Power Station, spans two boroughs and oozes wealth. But its integration of public realm and affordable housing holds out the possibility of an inclusive future

**Words: Jan-Carlos Kucharek Photographs: Andy Stagg**

Last time I was in Lots Road was one night in 2004, on an impromptu pub crawl from Sloane Square along the King's Road. With time called at World's End, the suggestion of a nightcap forced a march to Lots Road's after-hours 606 Club. From memory, it was some way down a long, empty street, the narrowness accentuated by the looming presence of Lots Road Power Station's high wall of brick and glass. Passing down a stair from street to jazz, I had the presence of mind to note, despite its proximity, how set apart it felt from Chelsea's affluence. Even here, a form of post-industrial edge condition; I half-expected to spot Richard Sennett at a table, raising a glass to it all.

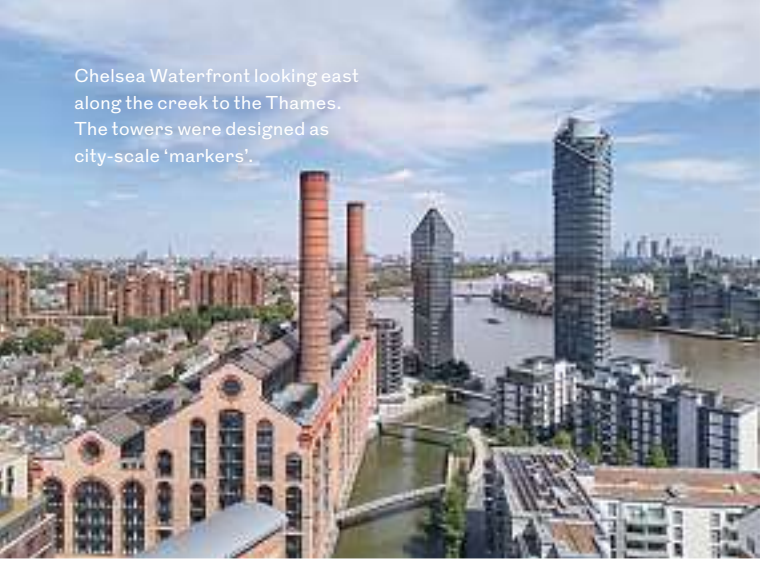
That would have been a year before Farrells secured planning permission for the 4.6ha disused power station site's redevelopment: ultimately 710 homes with commercial and community use and public realm, marketed as Chelsea Waterfront. I can't vouch for what Sennett would make of it, but the client was chuffed enough to ask poet laureate Simon Armitage to write The Drift, a poem etched into its waterside paving, musing on a different kind of current.

When American financier Charles Yerkes founded the Underground Electric Railways Company in 1902 – a nascent London Underground – the need to power the 'Yerkes Tubes' resulted in Lots Road's imposing power station and coal yard, which opened at Chelsea Creek in 1905, a quarter century before it was dwarfed by Giles Gilbert Scott's huge Battersea power station, just east on the Thames's south bank.

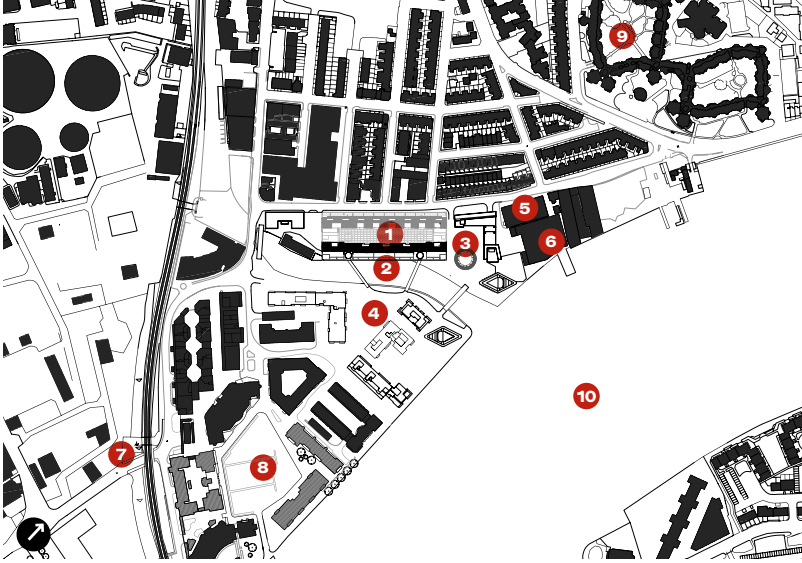
**Opposite** Chelsea Waterfront and Lots Road, looking south over the Thames.

**Below** The former coal yard is on the scheme's Hammersmith and Fulham side.

HISTORIC ENGLAND



Chelsea Waterfront looking east along the creek to the Thames. The towers were designed as city-scale 'markers'.




**Location plan**

1 Powerhouse
2 Chelsea Creek
3 RBKC site
4 Hammersmith and Fulham site
5 Pumping station
6 Super Sewer site
7 Imperial Wharf station
8 Chelsea Harbour
9 World's End estate
10 River Thames

FARRELLS

The latter closed in 1978, infamously going through a string of client hands and gonzo planning schemes before being reborn last year as a vast, niche retail offering swathed in high-end real estate and landscaping by a menagerie of architects. Lots Road's history, by comparison, is markedly less dramatic. With the Tube's power source moving to the Grid, decommissioning began in 1992, the site was reportedly sold to Hutchison Property Group (part of JV Circadian) for £34 million in 1997 and the power station closed in 2002. Permission for the £1 billion scheme, which remained in Farrells' hands through to completion last year (along with Formation Architects and BPTW), was gained in 2005.

**IN NUMBERS**

**260**
**Powerhouse apartments**

**54**
**West Yard social rent units**

**50**
**East Yard social rent/ shared ownership units**

**112**
**mansion block social rent units**

**Below** East Yard, looking south past Powerhouse to the market-sale Rotunda apartments.

**Below right** Southeast-facing balconies in Powerhouse enjoy full sun and wide views over the creek and Thames.

'The difference is that Battersea is perceived as a destination for the capital, whereas this is about where people live, local context and connectivity,' says Farrells partner Shevaughn Rieck. She's leaning over a large model of the development in the capacious and brass-floored marketing suite, next door to 606 Club's reassuringly downbeat entrance.

Rieck may be right: the clue's in the fact that they extended a Tube line to reach Battersea. Here, the nearest you get to TfL is its existing substation at the west end of the site, which still feeds the network. Otherwise, it's a walk to Imperial Wharf Overground station, connecting to salubrious junctions at Clapham and Willesden. It was, I'm told, a planning condition to enhance the site's low PTAL (public transport accessibility level) rating by adding new bus and river boat services, but one assumes the luxury apartments' residents won't be availing themselves of those above one of 500 underground parking spaces. Yet with the constant crowds buzzing around Battersea, those living here may actually relish the relative disconnect of the peripheral condition they've bought into.

At the time consent was being sought, the power station, despite its age, was

## Affordable housing has similar prominence to that for market sale, and nestles into Randle Siddeley's wider landscape strategy

**Right** Inside one of the two retained chimneys that form part of the site's public route.

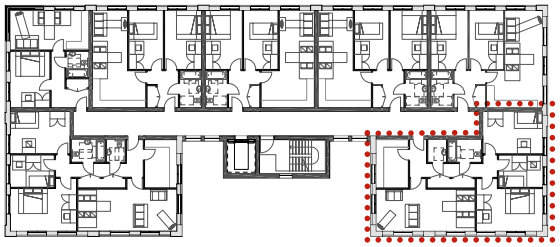
**Below** The Powerhouse street's massive lighting installation was designed by Fiona Barratt-Campbell.

**Bottom right** Market-sale blocks' lobbies are indulgently fitted out by various designers.

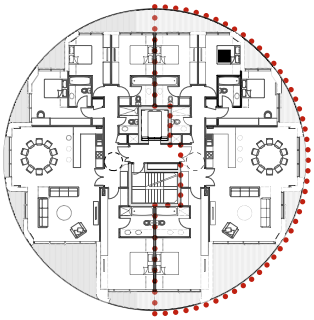
not listed. But Farrells had the idea of centring the masterplan on repurposing it for residential use, creating two strips of 18m-deep dual aspect apartments behind its striking 130m-long facades, with a central, glazed 'street' between. Two chimney stacks within it form a key part of the public realm strategy, serving as city-scaled entry points to the site and part of a network of new routes through from the streets to the north, south to Chelsea Creek and the Thames, re-establishing a long-lost link to the river. The idea intrigued not just the client, says Riecke, but, crucially, Historic England, which entered into a 'gentleman's agreement the power station wouldn't be listed if we carried out what was proposed'. In so doing, the original corroded, 6,000-tonne steel frame of the now-renamed 'Powerhouse' was removed and replaced by a more housing-friendly concrete one.

Consent was complicated by the fact that the creek represents a dividing line between Kensington and Chelsea and Hammersmith and Fulham boroughs, meaning Farrells had to run two planning applications in parallel – necessitating some trade-offs. Two new rhomboid market residential towers, for instance, at 130m and 92m – aimed

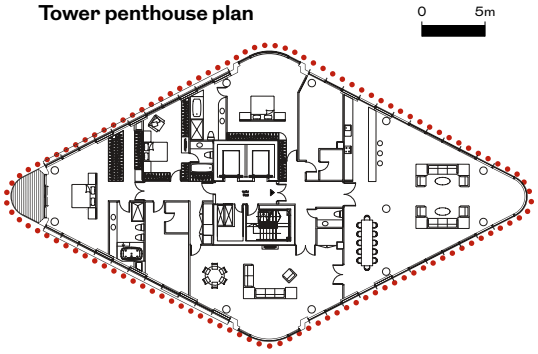
**Affordable block floor plan**



**The Rotunda floor plan**



**Tower penthouse plan**




at creating visibility via wide river views to the east and west – actually swapped boroughs. The 37-storey tower on the RBKC site moved over to H&F, replaced by the 25-storey one, to address adjacent Lots Village's overshadowing concerns. Such co-operation evidences how local authorities might promote site development and investment at typically underfunded borough edges. But the headline was that the resulting joint consent demanded 39 per cent of total on-site housing provision (277 units) be 'affordable'. It is of note that 61 of those – albeit for intermediate rent – are in the 260-unit rewired Powerhouse.

It's trite to go into the clear benefits blank cheques offer, but indulge me. A market-sale three-bed flat at 50 per cent more than GLA standard areas is up for £2.5 million; the three-bed apartment I viewed in Powerhouse, at over 230m², is £4-5m. The Rotunda, in the site's East Yard, has five-bed apartments of 420m² and a top-floor penthouse nearly double that: more than enough room to swing your Persian Blue. A triplex penthouse atop of one of the towers, Riecke informs me, is up for £21m. But what's of interest here is less what the property values are but where it sits, and its relationship to the affordable component.

On the RBKC side of the site, the affordable housing bookends Powerhouse and was originally consented to be clad in terracotta panels. But, Rieck says, when Lots Village gained Conservation Area status in 2014, the consent was revisited via Section 73, to upgrade the finish of the two blocks to brick. The change has served it well, with a muscular, eight-storey facade of dark brick to the west 'evoking the power station's found condition', and to the east, a three-storey face of sheen-like London brick, picking up on that of the heritage pumphouse next-door. Set back on the north side to align with this, it defers to the Powerhouse's east corner. From here the housing rises to eight storeys as the L-shaped block steps back to form East Yard, at its centre the blue engineering-brick Rotunda building taking the place of a former gasometer. Dark aluminium

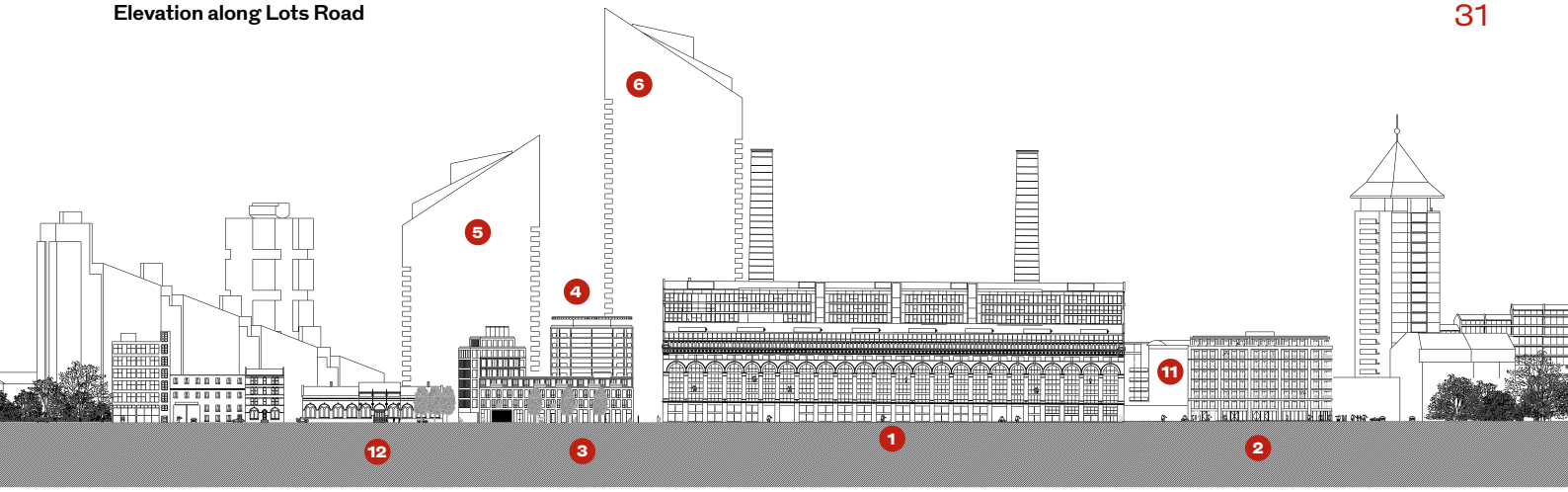
**Above** Three-bed flats' relative size: affordable, The Rotunda and tower penthouse apartments.

Credits
**Client** Hutchison Property Group
**Architect** Farrells
**Detailed planning and tender architect** BPTW and Formation Architects
**Interior design**
**Powerhouse** Fiona Barratt-Campbell
**Clubhouse** KCA International
**Landscape design** Randle Siddeley
**MEP, cost and EA** AECOM
**Structural and civil engineering** Buro Happold
**Main contractor** JRL Group & Ardmore Construction Limited

**Bottom right** The dark brick, eight-storey affordable block on Lots Road echoes the power station's robust architecture.


FARRELLS (3)

Elevation along Lots Road




cladding replaces brick on the concrete structure's 'yard' side, with windows to kitchens looking onto open deck access. More identifiable as London Plan-sized, these flats are nonetheless dual aspect.

At the H&F site on Chelsea Creek's west bank (the ex-coal yard), the entire development is new build, and here Farrells decided on four four- to nine-storey blocks: a mansion-block language. Market flats, faced in Caliza Capri limestone click-system cladding, sit west of the 70-apartment, fully glazed rhomboid tower, enjoying views of the Thames and forming a notional courtyard behind the new riverside 'water gardens'. To its north, affordable units adopt the same form, albeit clad in more quotidian terracotta louvred panels. While less ostentatious, it's interesting the block has similar prominence to market-sale units, and nestles comfortably into Randle Siddeley's wider landscape strategy.

Over 50 per cent of the site's area is devoted to public realm, Rieck explains, with the caveat that this will be open from dawn to dusk daily via the gates into

**Left** Affordable housing staggers up southeast to form East Yard. A nursery will be at ground level.

**Below** Looking southwest on Lots Road, affordable homes are set back to defer to Powerhouse's corner.

East and West Yards and the two gates into Powerhouse, with hard landscaping segueing into its covered 'street' of water features, benches and planting. Three bridges over the creek link to softer landscaping on H&F's side, with swale beds, serpentine paths, grassed areas and the 'water gardens' creating a varied landscape promoting both movement and dwelling. Rieck adds that once Super Sewer works complete south of the pumping station, involving additional public realm, a new, 600m stretch of Thames Path will be open to the public.

It's easy to be cynical about the wealth on display, and what constitutes affordable remains highly contentious. Yet I left Chelsea Waterfront oddly encouraged by an architectural strategy that seemed to work hard to embed one within the other. Footfall is still low – ground-floor commercial units are yet to be leased out – but that will be helped by a mooted supermarket, restaurant and gym/spa, which should also help the public lay claim to an arm's-length stake in this private waterside amenity.

Meantime, Chelsea Academy school opposite is yet to occupy the large ground-floor space allocated to it in the Lots Road West block. At the East block a 120-child nursery, with play space in East Yard, is close to opening too. Kids' shouts and squeals, all being well, will drift to the Rotunda, to be the bugbear of a local WhatsApp group. And maybe one day, the community will feel confident enough to shed its defensive edge, and east and west gates, to open fully to the city's ebb and flow, letting its inhabitants sluice from street to shore and back, no matter the hour. Now that would be a piece of placemaking. Perhaps Simon Armitage could pen something on it.

**Above left** The landscaping strategy forms connections from the neighbourhood into the site.

**Above** Once Super Sewer works are complete, the design will deliver 600m of new Thames Path.

**Below left** Granite water features in front of the lower waterside tower on the RBKC side.

**Below** The scheme's 'water gardens', which can be accessed from the Thames Path.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# Hues in the house

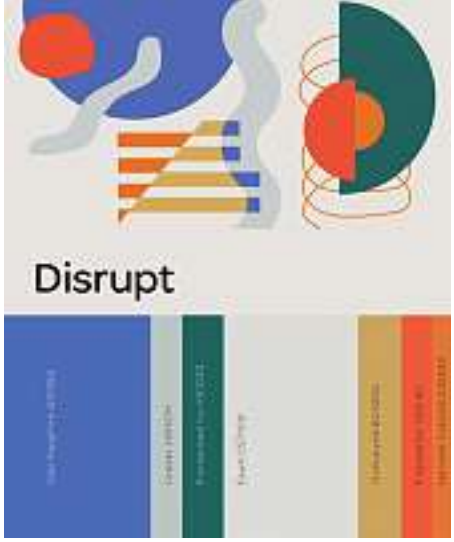
Colour is as important a building material as bricks and mortar, said Office S&M's Catrina Stewart and Hugh McEwen during a webinar on the use of colour in design

Colour has 'significant symbolic power, which, if not used carefully, can be very disruptive,' warned colour theory expert Vien Cheung, an associate professor at University of Leeds. Her presentation, Colour, Symbolism and Functionality, kicked off an engaging webinar sponsored by Crown Paints, which explored how colour can be used to assist functionality, foster wellbeing, maximise impact and generally elevate the quality of design in the built environment.

Colour carries significant information. It can be used for identification, categorisation and notification, enabling many useful visual cues. Some of these are of primal importance, such as: is this item safe to consume or use?

Cheung explained that, although individuals perceive colours differently, studies demonstrate cross-cultural consistencies, including a fondness for blues, a sentiment that red is 'angry', and the relegation of yellow to the bottom of many people's lists of favourites.

Colour plays an enormous role in the consumer experience too. Customers take only 13 seconds with 'first choice decision-making' in stores, with colour preference a big factor. When translated to marketing strategy, the wrong colour decision can even spell success or failure for a business. In an infamous example in 2011, United Airlines offered white carnations to passengers on a maiden Pacific flight, ignorant that this signifies death and misfortune in Hong Kong.




Translated to architecture, Cheung identified several interesting examples of colour's ability to guide and manipulate. In Tokyo, experimentation with blue light filters in tube stations lowered the suicide rate. In the USA, meanwhile, prison cells painted in a calming 'drunk-tank pink' led to a reduction in violent outbreaks. Iowa's Kinnick football Stadium is famous for its pink away locker rooms, though whether this 1979 initiative weakens opponents' resolve, or simply reinforces gender stereotypes is up for debate.

'There's true power in the possibilities colour creates, and harnessing this effectively has a positive impact on the world around us,' observed Jemma Saunders, Colour Specialist at Crown Paints, citing Crown's latest Colour Insights report. Crown Paints' colour studio conducts research, hosts collaborations and supports bespoke commercial projects. The Colour Insights report and its 2025/2026 palettes have been established with input from diverse experts.

Colour palettes are developed that are suitable for today's needs, such as designing for neurodiversity, complementing sustainability goals or embracing technological innovations. The neutral colour base of the Colour Insights' G-local palette, for instance, is brightened with injections of green and orange, celebrating the intersection of traditional materials with new technologies – colours that complement the use of sustainable building materials. Meanwhile, in the Co palette, neutral greys are enlivened

FRENCH+TYE

**Below** At Graphic House, Hackney, Office S&M used colour to help reveal the home's past and current archaeology.

**Top right** Two of the five palettes from Crown Paints' Colour Insights report offer contrasting as well as complementing colour themes.


by colour pops of coral reds and yellows, encouraging conviviality and collaborative co-working. The Disrupt palette, meanwhile, is digitally synthetic, with electric blues clashing with vibrant orange. In each case, the colour palettes have been carefully assembled to balance and harmonise while creating narratives.

Colour's narrative potential also translates into the work of architecture and interior design practice Office S&M. Key considerations are the way colour transitions between indoor and outdoor spaces and how it interacts with lighting to alter a room's ambience. 'We see colour as a building material, as important as bricks and mortar,' explained Catrina Stewart, who co-founded the practice with Hugh McEwen.

McEwen elaborated on how colour theory enables a viewer to perceive difference in space and create perspective within the context of art history. 'Artists and designers have understood this,' he argued, so 'architects should do as well'.

Known for the vibrancy of their projects, the pair illustrated how they apply colour theory in practice across various settings. At the MEplace Nursery in London's King's Cross, for instance, as well as providing a learning tool, colour was used for its social benefits. Spaces for different age groups were allocated different colours, and interactive elements, such as handles and hooks, were differentiated from those of adults – a visual cue that improved children's ability to 'read' the building. Colour was also used to 'bring the scale of spaces down'; a differentiated plinth with a darker wall colour gave the appearance of a reduced scale appropriate for the children. Various tools such as colour charts and colour readers facilitated the translation of the same shades between materials.

In the practice's Valetta House in Ealing, the clients' daughters' space on the second floor was differentiated by a joyful use of yellow, including the staircase, which resembled a 3D game of snakes and ladders, encouraging play.

This use of yellow was inspired by John Soane's use of stained glass lanterns to 'manipulate the weather'. Soane 'talked about it bringing the Mediterranean light into a grey London home,' explained the architects, and here too it introduces warmth and sunshine. The project also used colour as a means of recording time; cedar shingles on the exterior changed from red, when first installed, to grey, melding first with brick then with grey slate, signalling the change that comes with the passing of time.

In Office S&M's Graphic House, an Edwardian House in Hackney for graphic designer clients, the architects were interested in the 'archaeology of colour', celebrating different generations who had lived previously in the house by seeking out 'different opportunities to fossilise elements of history through colour'. In the future, 'someone will uncover these layers of colour (including a shocking pink in the toilet) and remember this period', the architects hope.


VIEN CHEUNG

**Top right** Colours can act as signals, such as here for nutritional data.
**Below** At Office S&M's MEplace Nursery, colour is used as a visual cue to help kids 'read' the building.


MEGAN TAYLOR

And what of the sensory impact of colour? How can it be used to improve mood and wellbeing, accommodate neurodivergency and improve accessibility? While colour preference is highly personal and a certain level of trial and error can be useful when working with residential clients to make interior decoration choices, all participants pointed to established, rigorous research which should guide the use of colour in key settings, such as education.

Cheung, who is involved in studies around colour and dyslexia, highlighted the need to avoid red ceilings in classrooms, as these are not conducive to a calm environment. McEwen pointed to RNIB colour guidance for improving accessibility for partially sighted individuals. Saunders referenced research by Dr Magda Mostafa, autism expert and creator of the Autism Aspectss Design Index, with colour recommendations for transition between spaces, colour zoning, high and low intensity colours for areas of high energy or focus, and for both hypersensitive and hyposensitive individuals. In all such settings, Crown's Colour Consultants are able to make suitable recommendations.

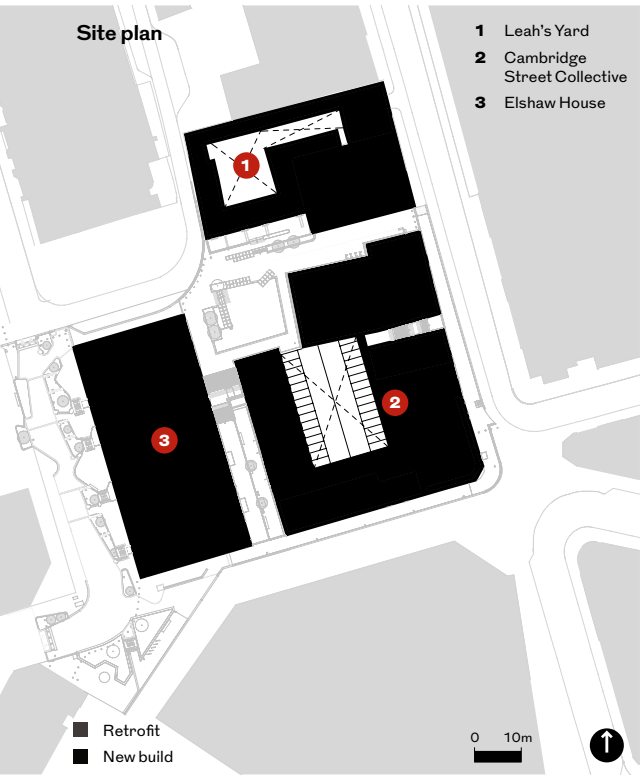
As Saunders commented: 'Colour is an expression. Instead of playing it safe, it can introduce a joyful energy into a space for all to enjoy' – surely speaking for all participants and architects present.

CROWN PAINTS

# Space saving solution

A decade after a scheme to demolish and rebuild its city centre collapsed, Sheffield is instead nurturing its history as it regenerates its heart

**Words: Laura Mark Photographs: Dave Bewick**



**Left** Looking up Charles Street towards the Corten roof of FCBS's Cambridge Street Collective food hall.

**Above** The facade of the Elshaw House office building opens onto a new urban green space, Pound's Park.

In the past two decades, Sheffield city centre has been undergoing an overhaul. The latest piece in the puzzle includes a new sustainable office building, Europe's largest food hall – and, importantly, the bringing back to life of some of the city's most important heritage assets. Tasked with this was a team made up of Feilden Clegg Bradley Studios (FCBS), Lathams and Leonard Design.

It's no secret central Sheffield suffered greatly when the Meadowhall shopping mall, four miles out by the Tinsley Viaduct carrying the M1 over the River Don, opened in 1990. Since then, the problem of how to return life to the city has generated many proposals, all stalling or failing to come to fruition.

Today's scheme is a result of the scrapping of a £600 million development named Sevenstone, which would have involved the demolition and rebuilding of a huge swathe of the city centre by architects including O'Donnell + Tuomey, Hawkins\Brown, Stiff + Trevillion, Acme, Allford Hall Monaghan Morris and BDP. The long-drawn-out process and the eventual cancelling of the project in 2013 was blamed by many for ongoing damage to investment in the city centre.

# Instead of cutlery, people are making podcasts or music

Known as Heart of the City 2, the masterplan that replaced that failed scheme went in for planning in 2015. Drawn up by Leonard Design, it moved away from large retail units – which had been the focus of the Sevenstone scheme – to smaller maker spaces and locations for local businesses. Rather than demolishing the city's existing buildings, the new proposals drew on the street plan that was already there to create a scheme with more of a neighbourhood-scale of development.

The heritage buildings – or at least their facades – would be left intact. By splitting the development up into smaller blocks following the existing street pattern, each could be approached separately or handed over to different partners or developers, further reducing the risk to Sheffield City Council – which had stumped up the money for the project – and ensuring the scheme would be delivered.

**Above** At Leah's Yard, the narrow cobbled streets running between historic 'little mesters' workshops have been opened up.

**Left** The scheme negotiates the area's differing levels, creating pockets of outdoor seating in between the office building and food hall.

Credits: Leah's Yard
**Masterplan architect**
Leonard Architecture Design
**Architect (phase 1 and phase 2 delivery), heritage consultant**
Lathams
**Architect (phase 2)**
Feilden Clegg Bradley Studios
**Client**
Sheffield City Council
**Structural engineer**
Arup/Eastwood Consulting Engineers
**M&E consultant**
Arup/Cuba Consultants and Coops EMBS

FCBS joined the long-running saga in March 2019. Around the same time, a decision was made that to make the scheme viable, less would be built and more of the area's heritage architecture retained. This included listed buildings that had shaped this part of Sheffield – such as a Grade II-listed Sunday school and the Grade II*-listed Leah's Yard – and an 1830s chapel building that, while not listed, was also important to the area.

Named after Henry Leah, a Victorian maker of die stamps for silverware, Leah's Yard had previously housed 18 'little mesters' workshops – small workspaces for highly skilled craftsmen who made cutlery and tools – set around a courtyard. It had been included in Historic England's Heritage at Risk register of threatened buildings, and was in danger of being lost.

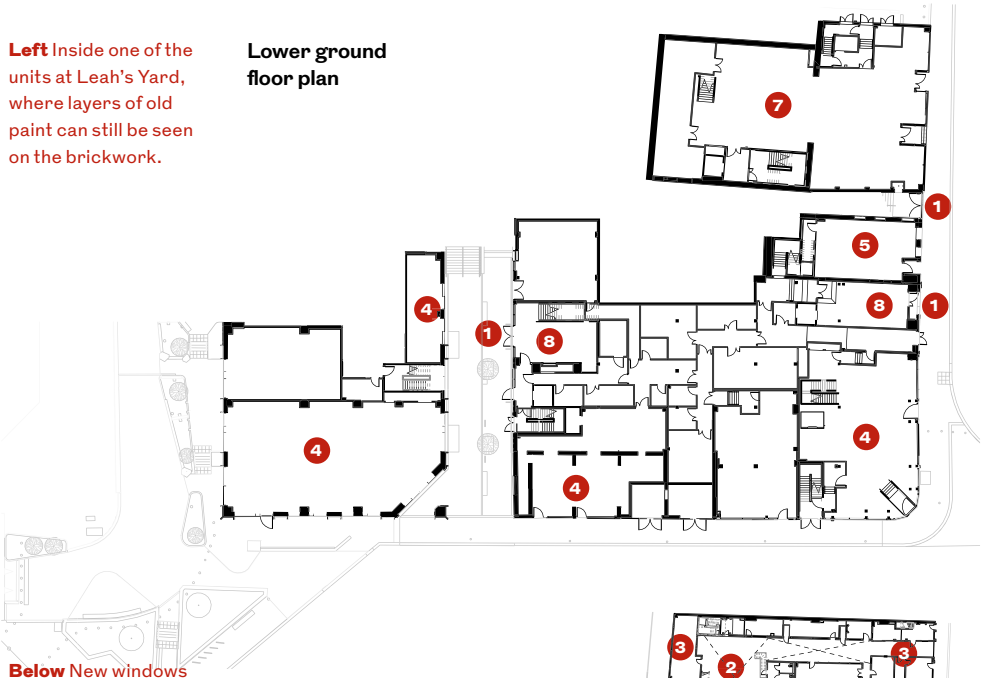
At Leah's Yard, Leonard Design and Lathams began work to stabilise the building before FCBS developed a strategy to bring the units back into use. The resulting design has seen those on the ground floor occupied by local businesses – such as a book shop, a chocolate shop, an art gallery, a plant shop and a beer store – while larger spaces on the upper floor now house podcasting studios, charity offices and a barbershop. 'It represents the modern idea of making – instead of cutlery, people are now making podcasts or music,' says FCBS senior associate Simon Richardson.

From the street Leah's Yard is signalled by its restored sign, which hangs above the entrance

**Left** Inside one of the units at Leah's Yard, where layers of old paint can still be seen on the brickwork.

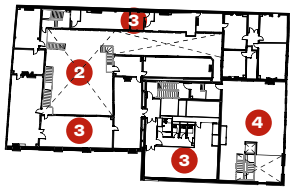
**Below** New windows and brickwork are carefully stitched into existing historic walls.

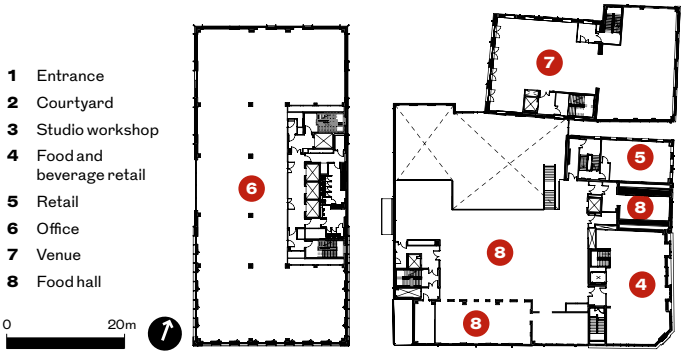

**Lower ground floor plan**



**Upper ground floor plan**

**First floor plan**






to the courtyard. It has all been smartened and cleaned up – the windows painted letterbox red. I've probably walked past hundreds of times, barely noticing the sign that hung above the street, but this now has a presence, and there is a feeling of pride as people pass by. This little yard of previously neglected workshops is part of what Sheffield was built on. At one time, little mesters would have been found all over the city. A vital piece of heritage has been restored, and something that had almost been forgotten is known – and used – once more.

Next to Leah's Yard are the Sunday school and chapel buildings. The 1830s chapel had been extended in the 1930s, and much of FCBS's work here has been around rationalising this and uncovering parts of the original fabric. The new food hall, Cambridge Street Collective, knits both the Sunday school building and the chapel into its fabric, uniting disparate parts as if making them shake hands. It was here that architects have had to


**Top left**
The original sign for Henry Leah & Sons' Cambridge Street Stamping Works has been kept above the way in to Leah's Yard.

**Above, left and below**
Inside the Cambridge Street Collective food hall, where FCBS has created a vast multi-storey space beneath a new roof.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**Above** New insertions are visibly different to existing buildings, but still reflect Sheffield's industrial heritage.

**Right** Seating on roof-level terraces provides a sense of how the development relates to surrounding streets.

deal with mediating across different uses, balancing a lot of sensitivities and unresolved edges, stitching together heritage architecture with new build.

Old paint can be seen on the corner of one of the retained facades, while an existing steel structure has been uncovered and painted black. These sit side by side with new concrete stairs, fresh steel, and glass facades that marry up in the joins between the myriad buildings.

The food hall, which also contains a cookery school, is a vast space spread over multiple floors and half-levels that negotiate the one-storey drop across the site. Two roof terraces are also tucked in between the new Corten roof spaces. From here, you can get a real sense of how this scheme knits into the rest of the city centre. You can see the streets heading out from what is known as Henry's Corner, after a café bar that stood there for decades, to the first phase of the Heart of the City project. There we find the Peace Gardens, Pringle Sharratt Richard's Millennium Galleries and Winter Gardens, Hodder + Partners' office building, St Paul's Tower and the steel-clad car park dubbed the 'Cheesegrater' (by Allies and Morrison). It feels a part of a much wider transformation of central Sheffield.

The food hall also houses a cookery school.

# There has been a welcome move away from demolition and towards the idea of creating places based on heritage and existing character

Suppliers
**Metal riser doors** Cisco
**Timber doors** Homes Joinery
**Ironmongery** EM-B
**Glass Crittall screens – standard and FR** Radii Planet Group
**Acoustic panels** Troldtekt
**Partitions** British Gypsum
**SFS** EOS + ETEX
**Insulation** Rockwool/Foamglas
**Curtain walling** MB Glass (Reynaers)
**Curtain walling glass** Saint-Gobain Glass
**Timber windows** TRC Contracts
**Weathering steel and anodised cladding** Certa
**Waterproofing** Pudlo
**Natural vent ridge and turrets** ALPS
**Stone copings** Woodside Cast Stone
**Lifts** OTIS
**Reception desk** TS Booker
**Speedgates** Boon Edam
**PPC Stairs** Flood Precast

Former brick openings can be seen on the inside of the food hall.

**IN NUMBERS**

**22,475m²**
total area including terraces and public realm

**18,545m²**
whole-scheme GIA

**£470m**
wider Heart of the City regeneration total cost

**Right** Along Wellington Street towards Henry's Corner the facade has been retained.

Credits: Cambridge Street Collective, Bethel Chapel and Elshaw House
**Architect and delivery** Feilden Clegg Bradley Studios
**Masterplan design** Leonard Design
**Client** Sheffield City Council
**Strategic development partner** Queensbury
**Structural engineer/ M&E/fire/acoustic** Arup

There has been a welcome move away from embracing demolition – which the city, throughout the postwar era, has often been so keen on – and towards the idea of creating places based on heritage and existing character. If the masterplans that came before had gone through, we would have lost history-steeped workshops and other spaces that have so much to tell us about Sheffield's past.

The soul is coming back to the Steel City, and this scheme could be a major catalyst. The last piece in the puzzle will be to reinvigorate the former Cole Brothers (John Lewis) building that sits across the road from Leah's Yard. But this sensitive redevelopment sets a tone, and offers a great example of adaptive reuse that many of the UK's other post-industrial cities could learn from. ●

**Laura Mark is an architecture critic, lecturer and curator based in Sheffield**

# Building confidence with timber: why STA Assure is essential for architects

The Structural Timber Association's comprehensive quality assurance scheme offers certainty to architects balancing compelling, efficient designs with strong green credentials

In today's fast-evolving and increasingly complex construction landscape, architects are under constant pressure to deliver buildings that are both visually compelling and structurally efficient, with strong sustainability credentials. Structural timber is an increasingly important material in meeting these expectations. Ensuring reliability, safety and compliance is a challenge regardless of structural approach. That's where STA Assure becomes indispensable for the structural timber sector.

Developed by the Structural Timber Association (STA), STA Assure is much more than just a badge – it's a comprehensive quality assurance scheme that gives architects the confidence to specify structural timber with certainty. Built on independent audits and robust compliance checks, it ensures that member companies are not only meeting but exceeding industry regulations.

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**Above** A completed timber-frame housing development.

Beyond quality, STA Assure promotes compliance with health and safety legislation, including the Construction (Design and Management) Regulations 2015, through its Site Safe procedures. It is also recognised by key warranty providers including NHBC and LABC Warranty, giving peace of mind to specifiers, clients and insurers alike.

For architects, specifying an STA Assure accredited member means aligning with a system that supports high standards, technical excellence, and sustainability. Backed by invaluable resources like the Pattern Book for Fire Safety and the Design Guide for Separating Distances, the STA is a partner in smarter building.

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# 2: Intelligence

**THE GOVERNMENT'S HOUSING AGENDA NEEDS NOT ONLY SIZE, BUT SUSTAINABILITY**
PHINEAS HARPER, CO-AUTHOR, DESIGN FOR NEIGHBOURHOODS

There's no such thing as a sustainable house. A solitary home, however energy efficient or responsibly designed, is always part of a wider context. You can insulate walls, orient windows to maximise thermal gain, locally source bio-based carbon-sequestering construction materials, and plant only indigenous species of garden shrub. But a house is only as socially and environmentally sustainable as the neighbourhood it is part of.

In July 2024, after the election of a new government boasting the most ambitious housing agenda of the 21st century, the Design Council Homes Taskforce formed. We set out to develop policy to support the delivery of 1.5 million homes within the UK's 1.5°C climate commitments, drawing ideas from across the design sector, and in particular from architects. Over months of round tables and site visits, the taskforce has developed Design for Neighbourhoods – 10 core neighbourhood-scale policy recommendations which could enable the delivery of far more, far higher quality, well-designed, environmentally sound homes supporting thriving communities.

From common-sense legislative tweaks such as counting derelict homes returned to use towards national housebuilding targets, to better regulating high-embodied-carbon materials, Design for Neighbourhoods is a game changer for British housing policy. Central to the paper is the concept of a strategic whole-stock approach, embracing the economic and social opportunities of refurbishment and housing upgrades alongside new construction.

'We cannot afford to repeat past mistakes,' my fellow taskforce member Sadie Morgan of dRMM says. She's right: bad design always costs more in the long run, shoring up eye-watering remediation bills and baking in car dependency. There's been a lot of chat in the media about newts, bats and tearing up red tape. But the challenge facing the future of UK housing isn't rare amphibians. It's that 74 per cent of newly built British homes are poor or mediocre. That is not good enough – either to meet our climate obligations under the Paris Agreement, or to foster thriving communities.

The government must match its ambition for quantity with genuine and holistic quality. Design for Neighbourhoods sets out how. ●

*'There's been a lot of chat about newts, bats and tearing up red tape – but the challenge facing the future of UK housing isn't rare amphibians. It's that 74 per cent of newly built British homes are poor or mediocre'*

**Below** Phineas Harper is an architecture critic, artist and founding member of the Design Council Homes Taskforce. They are an opinion writer for the Guardian, former CEO of Open City, and a trustee of the Twentieth Century Society.


KAMIL KOŽUCH

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

# Metals futures

Copper Bottom, near Oxford, is architect Adrian James's bold, angular home. Its unusual look belies a low-impact timber-frame house that optimises solar gain, is zero carbon in use and aims to offset its embodied carbon within 30 years. Jan-Carlos Kucharek asks its owner about the thinking behind the form

**The copper cladding makes the home extremely conspicuous. Was it difficult to get planning permission?**

Strangely, given its adjacency to protected meadowland and the green belt, it was relatively easy. The site is at the very end of a lane and was formerly the lower garden of the next-door property. When they sold us the land, it was on the understanding that there would be a height restriction and no windows looking north to their property. This was fine by us, since the key view is to the east; and south was green belt land. The planners were concerned with the perception of the house from the public rights of way to east and south, while the landowner was happy with our design's clerestory windows, which preserved their privacy.

**Can you explain the reasoning for the home's angular form?**

The 235m$^2$ home's diagram is simple. We wanted it to be two-storey for compactness, with living spaces and bedrooms facing south – so the parameter of a cuboid was there from the start. The aim was also to make it net zero, generating more energy than we used, so we sloped the roof to the south to use as much PV on it as we could. On-site energy generation is at 134 per cent.

Given the south-, east- and west-facing aspects, we needed to protect all the windows on these sides. We could have created a cube and attached brise soleils onto the building to do this, but this would have involved a lot of metal, embodied energy and potential cold bridges when fixing it back to the structure. So we decided to embody the brise soleil within the form of the house using angled timber trusses on the wall attached to a simple box-like superstructure of highly insulated SIPs panels, delivering an overall U-value of 0.261W/m$^2$K.

The shading concept may have been influenced by Marcel Breuer's 1970 offices for IBM in Boca Raton, Florida, but there's a hint of Mario Botta, even Shin Takamatsu, in there. I was struck by Philippe Starck's 1989, copper-clad Nani Nani building in Tokyo at the time, though I also used copper on my previous home. I worked at John Outram's office earlier in my career, so a 'strong' form didn't bother me.

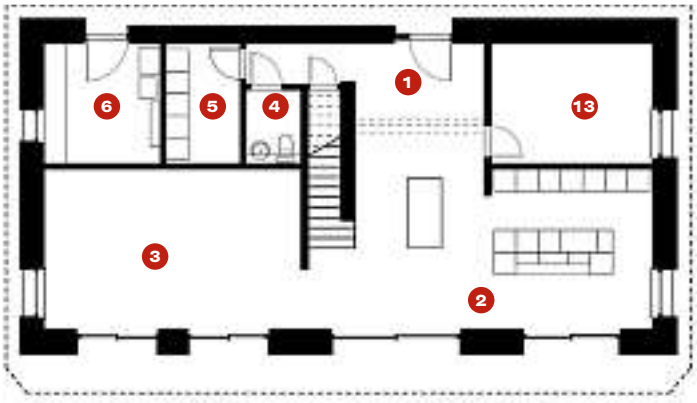
The upshot is that the copper cladding becomes a drape for the formed

timber frame, so once we created the necessary 900-1200mm 'prows' to protect the windows set into the SIPs structure from solar gain, the sculptural form really just evidenced itself.

**What about the use of copper – isn't it high in embodied carbon?**

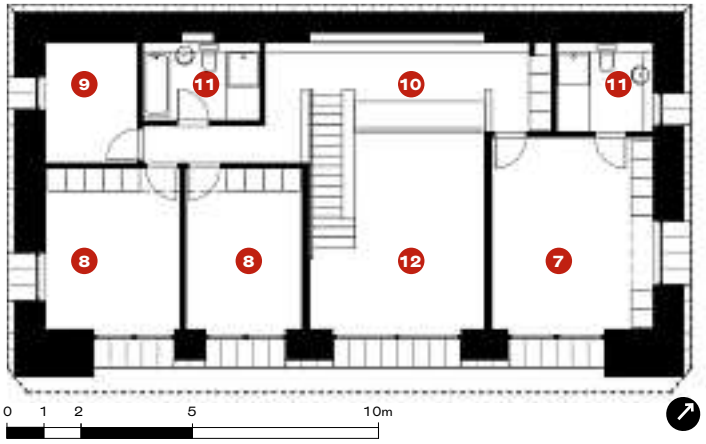
Most carbon-capture calculations you download have a very high rating for copper as it's smelted, but the reality is that isn't the case. Most copper used for cladding is recycled wiring; this is 100 per cent recycled and recyclable. We went for a pre-patinated copper finish since I wasn't convinced the inevitable weathering differentials on different faces and facets of the building would ultimately look satisfactory. It also gave a monolithic form, which we liked. The actual copper finish is a mere 0.6mm thick, which means very little of the material is used, despite its covering all four sides of the house. We considered using Corten, but panels would have been at least 5mm thick – a lot heavier – and we would have had to use interface fixings. As it was, we used the same guys who clad our first home years ago – real craftsmen, who have done a great job with the standing-seam cladding here.

**Ground floor plan**




1 Entrance
2 Kitchen/ dining
3 Living
4 WC
5 Storage
6 Plant room
7 Main bedroom
8 Bedroom
9 Study
10 Corridor/ workspace
11 Bathroom
12 Double-height space
13 Gym Space

**First floor plan**




FISHER STUDIOS (3)

**Opposite** Every face of the home has been engineered to consider its energy efficiency.
**Left** The 'prows' above the glazing maximise solar gain in winter and minimise it in summer.
**Below** The house, approaching from the access lane. The clerestory glazing above the entrance porch works for nighttime purging.

**What about the foundations?**

The ground quality was so good that we only needed shallow 600mm concrete strip foundations, and very little concrete was used. Had we needed more, we would have opted for screw piles. We used standard concrete as GGBS would have meant either mixing a full mixer batch – or mixing it on site, which the engineers weren't happy with. As it is, it makes up just a small proportion of the home's 217kg$CO_2$/m$^2$ carbon footprint.

**Can you explain the heating, cooling and PV strategy?**

Despite a skin of highly insulated SIPs panels, the floors are concrete

FISHER STUDIOS

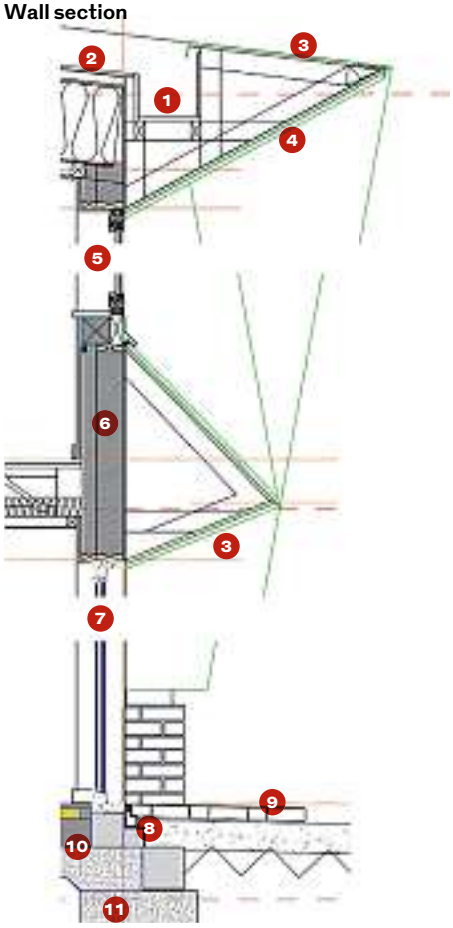
**Above** Concrete floors, porcelain tiles and a solid brick wall – with some characteristically sharp mortar – help with the thermal mass.

and we have a solid brick wall at the centre of the home. That introduces a lot of thermal mass, helping steady the internal temperature. The house has a low form factor, triple glazing and the commensurate insulation to be Passivhaus. We have one air-source heat pump for hot water and the underfloor heating. If the house overheats during the day, we open the clerestory glazing for nighttime purging – and most of the time, this suffices.

We installed a Zehnder MVHR system in the plant room, which does the air handling and, most of the year, works as it should. We have found that for about two weeks in summer, if heat builds up during a hot period, there is no scope to cool the house sufficiently despite all these measures. So we introduced a small air conditioner, which we can use at this time. Its controversial, I know, but it was important to be pragmatic about future-proofing the home.

The plant room also has a PV battery and inverter to convert it to AC power. A typical house will have five or six solar panels on the roof – we have 37! That means we are massively overproviding electricity. Our annual $CO_2$ emission is -3.36kg$CO_2$/m$^2$ and we aim to offset the embodied carbon used in the home's construction within 30 years.

**Wall section**




1 300mm-wide gutter with 150mm fall
2 Single-ply membrane fixed to 18mm WBP ply roof deck
3 0.7mm standing-seam copper cladding on breather membrane on 18mm WBP sloping plywood
4 Timber Innovations timber supporting frame
5 Triple-glazed aluminium window section
6 Timber SIPs panel: breather membrane on 9mm OSB board; 40mm prefabricated timber frame wall panels insulated with 140mm PIR between 50mm PIR over vapour barrier; 25 x 50mm battens at 600mm centres
7 Triple-glazed aluminium sliding door with brush seals
8 Blade threshold drain by Aquabocci
9 Square-edge pavers laid on sand blinding on crushed limestone MOT Type 1
10 150mm C35 concrete slab with A393 mesh with 50mm cover on 1200 gauge DPM on 200mm compacted MOT
11 Type 1 600 x 600mm C20 concrete strip footing

**You said you weren't quite Passivhaus?**
Not quite – we achieved 2.95m$^3$/h.m$^2$ – but it was a driving aspiration. For instance, we achieved the recommended 50 per cent glass ratio on the south side to promote solar gain in winter, though we were compromised by having a double-height space in the centre of the home, meaning the Passivhaus floor-to-volume algorithm worked against us. We also would have needed greater levels of airtightness, which, while gained with the tilt-and-turn triple-glazed aluminium windows we specified throughout, wasn't achieved with the sliding doors in the ground-floor living spaces. Sliding doors can be problematic if you're looking to achieve stringent airtightness, since they tend to involve a brush rather than a silicone seal at the more affordable end. You can just feel a little air coming through if you put your hand to the tiny gap between the frame sections, and that's where we fell short.

**How did you deal with roof access?**
There is no dedicated roof access per se. We'll need to access the roof every couple of years to maintain the PV panels and gutter, which at 300mm wide and with a 180mm fall, is large enough to deal with the run-off from a 10-degree roof slope, as well as leaf accumulation in this rural location. Set behind the top prow, it has a 160mm-diameter outlet that runs down within the SIPs panels to a low-level stainless steel hopper. Leaves from the roof wash down to here and can be removed by hand. This avoids the need for regular roof access and is helped by an occasional drone inspection.

**How has the design been received?**
Local residents and passers-by like it, but reactions from architects are mixed. The thing they seem concerned about is the void between the 'skin' and structure, which is seen as non-functional. But that's not the case; it is, in fact, an embodied brise soleil that performs an essential role in dealing with solar gain as our climate gets hotter and wetter. The home is designed to last 100 years – every building erected now should have blinkers around its windows!

Credits
**Client** Adrian James and Sarah Shekleton
**Architect** Adrian James Architects
**Structural engineer** SOLID Engineering
**Services engineer** CBG Consultants
**Principal designer** Adrian James Architects
**Approved building inspector** Vale of White Horse District Council
**Main contractor** GC Interiors

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These independently verified EPDs provide transparent data on the environmental impact of Q-railing products, helping architects, designers and contractors make informed, sustainable choices for both residential and commercial projects.

The EPDs were completed in accordance with EN 15804+A2 and third-party verified in accordance with ISO 14025 to meet requirements for establishing product life cycle environmental data.

Q-railing architectural sales manager Darryl Holloway commented: "Introducing Environmental Product Declarations (EPDs) for Q-railing's five main systems empowers customers by providing transparent, reliable data on the environmental impact of our products, allowing them to make informed, sustainable choices.

"By providing this critical information, we support customers in meeting green building standards, enhancing their own sustainability initiatives and contributing positively to the environment. With the growing demand for eco-friendly construction solutions, EPDs help customers stay ahead of regulatory requirements while building trust with their stakeholders.

"This initiative ultimately enables our customers to make responsible decisions with confidence, knowing they are choosing solutions that align with their sustainability values."

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- Stainless-steel post railing systems: Q-line & Square-Line
- Aluminium railing systems: Easy Alu Glass & Vertical Bar Infill

**Below** Q-railing stainless-steel post railing systems as shown here for stairs Ocean House Apartments, Carlyon Bay.

**Top right** Q-railing frameless glass balustrade with aluminium base channel, Ocean House, Carlyon Bay.

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ISTOCK | VTT STUDIO WITH ANALYSIS BY VISTA

# Boring facades can seriously damage your health

What do psychology and neuroscience tell us about what architects should promote or avoid in facade design? Eleanor Young speaks to two experts

Design, construction & technology

When Thomas Heatherwick launched his 'anti-boring' campaign in 2023, rapidly followed by a BBC Radio 4 series, Building Soul, and his book, Humanise, it felt like another bit of architect-bashing, this time from this designer extraordinaire who has made it his business to go beyond sculptures and buses to design buildings – with an expressive gin distillery and Google's UK headquarters among his achievements.

Yet two new academic studies using biomarkers and carefully controlled experiments to understand the impact of facades on the people around them have shown that architects have the opportunity to improve wellbeing with the outsides of their buildings.

In the emerging fields of architectural psychology and architecture neuroimmunology, the impact of buildings is being unravelled with experiments in the lab and on the street. They are the missing link between the best architects' professional instinct about the impact of buildings and understanding how visual stress and lack of arousal (boring design, as Heatherwick would have it) can contribute to negative public health outcomes.

**Above** Areas marked in yellow may induce higher levels of visual stress based on the Visual Stress Analysis Tool (ViStA), developed at the University of Cambridge. This identifies potential visual stressors in the built environment by analysing spatial features that may contribute to visual discomfort. Using computational analysis, ViStA quantifies how elements like contrast, spatial frequency and pattern scale interact with the visual system.

I spoke to Colin Ellard, a psychologist at Canada's University of Waterloo, and Cleo Valentine, a researcher and systems designer at the University of Cambridge who specialises in architectural neurophysiology and bioethics. (Valentine is also senior research and innovation lead at the UCL/RISE Centre for NeuroArchitecture and NeuroDesign, RISE Research Institutes of Sweden). Both have undertaken studies on facades, supported by

ISTOCK | VTT STUDIO

Heatherwick Studio, adding specific facade focus to their wider work on the psychology and neuroscience of our built environment.

They explain how architecture can strongly contribute to allostatic overload, so when we perceive a threat, the stress it creates releases cortisol and other stress hormones. This shifts our systems to the sympathetic nervous system – fight or flight. With regular or chronic stress this cascades through our systems, taking its toll on our body's systems and, in response, produces an inflammatory response in the brain and body. This has been linked to a huge number of ailments, from cardiovascular and coeliac disease to allergies and arthritis.

Ellard adds that the psychological impact of not engaging with our surroundings – the absence of arousal – can lead to self-harming and addictive behaviours. This has been noted by the extended science of boredom (from James Danckert, among others).

**Above** This facade image has a strong element of repeating patterns with high contrast and scores 1.8 on the FraLac scale which runs from 0 to 2, with 2 being the least complex.

Low complexity buildings were perceived to be highly boring and unattractive, while high complexity buildings were rated as being interesting and attractive

## NEUROPHYSIOLOGICAL RESPONSES

By Cleo Valentine

Our research at the University of Cambridge explores the intersection of architectural design, neuroscience and human health. We are investigating how architectural facades affect neurophysiological responses, with a particular interest in understanding the relationship between visual patterns and forms in building facades and measurable changes in brain activity and stress responses.

Our interest in this field stems from compelling evidence that humans have evolved to efficiently process natural visual scenes, which follow specific statistical patterns such as the 1/f amplitude spectrum (Wilkins, 2016). Modern architectural environments often deviate significantly from these natural patterns, potentially creating visual environments that our brains find inefficient to process. When buildings feature high-contrast, repetitive patterns, they may induce visual discomfort and physiological stress in viewers (Wilkins et al, 2018).

To contribute to this emerging field, we employ an integrated methodology combining computational analysis, clinical biomarkers and advanced data-processing techniques. Our computational approach uses Fourier spectral analysis (Penacchio & Wilkins, 2015), which allows us to quantitatively assess architectural images by breaking them down into their component spatial frequencies. This reveals the underlying visual structure of building facades and helps identify patterns that may cause neural strain.

We complement this computational analysis with clinical measurements using functional near-infrared spectroscopy (fNIRS) and heart-rate variability (HRV). The fNIRS technology uses light in the near-infrared spectrum to measure changes in blood oxygenation in the brain, providing a non-invasive window into neural activity when participants view different architectural designs. Simultaneously, HRV monitoring measures the subtle variations between heartbeats, offering insights into autonomic nervous system responses and physiological stress levels. Together, these biomarkers allow us to observe real-time physiological reactions to visual architectural stimuli.

By elucidating the connections between design elements and physiological responses, this approach aims to enrich architectural practice and drive innovations that enhance public health.

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‘Science cannot define an optimal building. Instead, we’re aiming to identify specific features that may cause harm’

So, to the two studies. Both concentrated on analysing reactions to buildings of different facade complexity, as analysed by fractal geometry and visual stress. Ellard’s study used walking tours around London and Toronto to take in six buildings for five minutes each, taking 100 people around, one at a time. Participants were monitored using mobile sensors for skin conductance – an established method for measuring levels of arousal – as well as questionnaires. The images of the buildings they were asked to take in had been analysed for visual complexity using the FracLac plugin for ImageJ, with subjective reports of complexity used to corroborate the software analysis.

‘Low complexity buildings were perceived to be highly boring and unattractive,’ says Ellard, ‘while high complexity buildings were rated as being interesting and attractive. Our findings demonstrate that boring, low complexity buildings are not merely an aesthetic concern – they can affect people at a raw, physiological level.’

Ellard’s study is unusual in that it takes the study out onto the street – a complex place for experiments but one where he thinks there may be stronger reactions than in the lab when participants are just showed images.

Valentine’s research (see page 52) has found that visual stress is related to high-contrast, visually repetitive patterns, ‘fundamentally those that are as far from nature as possible’. Her findings are awaiting peer review before full academic publication.

The work of both Ellard and Valentine has already made some impact on architects. Ellard recalls architect friends ‘yelling’ at him after he talked about some of his findings.

ISTOCK | NATALIA KIRSANOVA

**Above** This image also scores 1.8 on the FracLac scale.

Valentine remarks: ‘Some architects may feel a scientific approach is prescriptive – as if it’s trying to dictate a building’s design. But science currently cannot define an optimal building. Instead, we’re aiming to identify specific features that may cause harm, so we can better understand their impact and avoid unintended consequences.’

There is solid evidence, they both agree, that the cumulative effect of high-frequency grading – regular repetitive patterns – is a negative one. ‘I have every sympathy with architects who don’t want to be coded out of existence,’ says Ellard, ‘but it is a social responsibility.’

So what should architects should be aiming for? Drawing on his wider experience, Ellard recommends awe, ‘which is similar to when people experience natural splendour’. Ellard also acknowledges that buildings that have stood the test of time often seem to elicit a positive response – a harder thing to design in, but not impossible. ●

### ENLISTING BRAIN-MAPPING TECHNOLOGY

The US-based Allen Institute has just finished mapping the brain and its many, many cell types and neurons, and shared it freely with the world. So it is not surprising that Thomas Heatherwick has continued his campaign to make more human buildings through a partnership with the institute.

Its president and chief executive Rui Costa explains that the visual cortex (just mapped) shows that when the brain can predict something, it does so and then stops paying attention. The inhibitory neurons cancel out the lively work of pattern recognition, he explains. ‘Novelty makes us move, both mentally and physically,’ he says with excitement.

He wants the city to draw us into it but we need to screen shapes (as we would drugs) to understand their effects. The technology of brain science that can measure electrical activity in the brain is now moving out of the lab and into the street with mobile EEGs. These can measure more real-life interactions which can add depth and a level of distance to opinions that often define how we understand reactions.

Heatherwick and the team behind his Humanise campaign are already looking at not just the public conversation but also how a planning policy might be framed to focus attention.

‘They should hold attention for the time it takes to pass a building,’ says Heatherwick. ‘We have that embedded in planning for the city and street distance, but not for the door distance, up close … this is about everyday buildings.’

# BUILD ONSITE FLAT PACK

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# Unpicking the small print

How will the Planning and Infrastructure Bill affect architects' work? Eleanor Young summarises the most important proposed legislative changes

Legal, regulatory & statutory compliance

Read the legalese of the Planning and Infrastructure Bill, which first hit the House of Commons mid-March, and you would be forgiven for thinking it is just a rather painful copy edit of the Town and Country Planning Act 1990. But that is just how changes in the law work. The government has high hopes for the bill, which it launched with the headline: '"Biggest building boom" in a generation through planning reforms.' Here we gather some of the government sources in plain English, to give you an overview of the areas likely to have the most impact on architects.

**Planning fees**

Local planning authorities (LPAs) will be able to set their own planning fees to cover their costs. Any additional money raised will be reinvested back into the planning system. The government itself quotes the development management system as suffering an overall annual funding shortfall of £362 million. The fees will still have to be 'appropriate', as judged by the secretary of state. The government fact sheet states that this safeguard 'will prevent LPAs setting fee levels above cost-recovery'.

**Clarity over delegation to officers (or not) nationally**

A national delegation scheme will be set up to rule which application types are delegated to officers and which to planning committees. The government fact sheet states that the changes should focus committees 'on those applications which require member input and not revisiting the same decisions'.

**Smaller, trained, planning committees**

The bill also sets out to control the size of planning committees, with the government empowered to 'prescribe requirements relating the size and composition of a committee or sub-committee'. Planning committee members will be required to undertake relevant training.

**Neighbouring authorities working together across boundaries**

A new system of strategic planning across England will group neighbouring authorities to provide cross-boundary spatial development strategies. The secretary of state will be able to give direction on particular policies or entire plans for timetabling, housing distribution or other reasons.

Authorities that have elected mayors will be given new development management powers.

Updates to the National Planning Policy Framework (NPPF) will follow, guidance states. RIBA is recommending that a design vision be included as part of strategic spatial strategies.

ISTOCK | KELVIN JAY

**Above** Who will get to choose what gets planning on future projects such as the Citu development along the River Aire in Leeds?

**Pooled environmental contributions**

A Nature Restoration Fund will be introduced, which developers will be able to pay into to discharge environmental obligations more quickly than they are under a project-by-project approach. At the same time, the fund will allow for larger-scale interventions. This could make inroads into simplifying the fraught issue of nutrient neutrality, which stalled many projects when it was introduced and has demanded an additional layer of expertise in design teams and from planners.

**Also in the bill**

- Development corporations will be strengthened
- The compulsory purchase order process will be reformed
- Nationally Significant Infrastructure Projects (NSIPs) will have streamlined processes, including at consultation
- People living within 500m of new electricity transmission infrastructure will receive electricity bill discounts of up to £2,500 over 10 years.

**When is the bill likely to become law?**

Expectations are that the Planning and Infrastructure Bill will progress through the House of Commons and reach the House of Lords around mid-July. Scrutiny is likely to continue during the autumn. The government is expected to make this bill a priority, especially in light of the recent Office of Budget Responsibility forecast, which highlighted planning reform as a key driver of growth.

**When can we find out details of how the bill works in practice?**

Even when it becomes law, it currently only gives secretary of state the power to intervene in many of these areas – so precise details will emerge over time.

# Planning delays demand dialogue

As the Planning and Infrastructure Bill goes through Parliament, an architect argues that legislation alone will not fix planning's real problems

Legal, regulatory & statutory compliance

ISTOCK | SOLSTOCK

**Above** Extensions of time for planning can make you feel like you are holding onto projects by your fingertips: a symptom of a system under strain.

It's Monday, and my inbox has another two extension of time (EoT) requests waiting for me. This is happening so often that planning departments have stopped typing out the full term. The planning officers – who still haven't even picked up the application, 12 weeks after submission – in no way invite dialogue, just a token reply of, 'Yes, we accept the delay so that you don't just put it to one side.' Our local department proudly proclaims that officers meet 90 per cent of their applications on time. What goes unsaid is that if you don't accept the revised deadline, you may never get a response at all. One client tested this and is still yet to have a response; in the end we resorted to a new application and agreeing the EoT.

Things that could have easily been solved earlier in the process become immovable stumbling blocks which require re-consultation or, worse, resubmission. It's easy to be sceptical that certain officers have learned that time is a powerful weapon. By stalling discussions, requesting excessive revisions, or letting applications linger, they can entrench their position to wear down agents and applicants. The prolonged appeal process acts as a further deterrent, making it easier to reject proposals without having to justify decisions via meaningful engagement.

Then the first coffee kicks in, and I remember the deep-rooted struggles of planning departments. Under-resourced and overwhelmed, they face an ever-growing list of responsibilities to ensure compliance, often while having to cope with outdated systems and limited staff. The sheer volume of applications, policy updates and legal requirements creates a relentless workload, stretching planners to their limits. What should be a structured, efficient process instead becomes a battle against bureaucracy, with professionals forced to balance public interest, developer pressure, and government mandates – all while lacking the necessary support.

On top of these challenges, a significant portion of planning fees now goes to the Planning Portal. Designed as an affordable solution for cash-strapped departments struggling with IT, it has since cemented its position as a majority provider. At the time of writing, householder applications cost £258 (local authority fee) plus a £70 fee to the Planning Portal – an extra 27 per cent – for an application type that accounts for 50 per cent of all submissions nationally. For some smaller fee applications, the portal adds as much as 70 per cent on top of the local authority fee.

This fee is justified by the Planning Portal's need to develop its own business. However, even a basic review of its filed accounts shows that, over the last five years, pre-tax profits have increased by 175 per cent to nearly £7 million. That's despite the fact that planning applications have consistently declined throughout this period.

According to government statistics, annual planning application numbers have fallen by 36 per cent over the same five-year duration. Rather than a decrease in construction activity, it could be that people are tailoring projects to avoid the need for planning permission or simply choosing not to apply at all – gambling on the likelihood of weak enforcement, which is all too evident in many areas.

Regardless of the commercialisation of a statutory regulatory body, delays in the planning system should not be used as an excuse to avoid engagement. While planning departments are under huge strain, the solution lies in greater transparency and a return to open dialogue. If time pressures are leading to strategic inaction, better communication could ensure that delays do not replace reasoned decision-making. A planning system that is slow but considered is far preferable to one that is slow and obstructive. ●

The architect-author of this piece has chosen to remain anonymous

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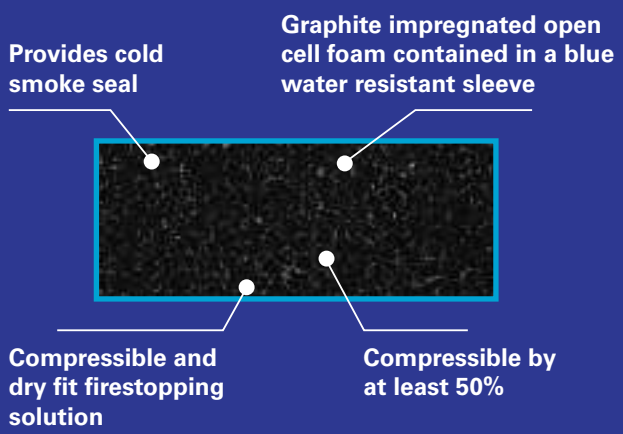


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# Preparing the pipeline for the push

Both architects and the building control system's gatekeepers need to gear up to ensure its changes can be effectively implemented

TOBY MORISON

When the government formally responded to the Grenfell Tower Inquiry's final phase 2 report in February, it accepted the inquiry's findings and said it would act on all 58 of its recommendations. Deputy prime minister Angela Rayner said the government would take 'tough action' and it has delivered significantly on that pledge with the new safety regime set out in the Building Safety Act.

In October 2023, the previous government introduced the second and third gateways in its regulatory framework for residential buildings, care homes and hospitals of 18m or over in height – classed as higher risk buildings (HRBs) – and closed the transitional arrangements window six months later.

This framework is overseen by a new building control system led by the new Building Safety Regulator (BSR), which also operates the registration system for inspectors. Alongside this, the Building Safety Act has brought other changes, notably the dutyholder and competency requirements now governing all projects.

All players in construction are on a steep learning curve as they get to grips with the changes in requirements, processes and culture demanded by the new regime. The gateway 2 design checkpoint for HRBs has been a particular sticking point, with projects now subject to in-depth scrutiny. Determination of applications has been taking far longer than the statutory 12 weeks for new build and eight weeks for works to existing HRBs. A Freedom of Information (FOI) request by consultant Project Four found that more than 90 major new-build projects were awaiting approval while only 11 had cleared the hurdle since the BSR began assessing schemes in 2023. As nine of the 11 were 'in flight' schemes – submitted before the new regime came into operation – just two had fully navigated the gateway.

There has been some contradiction between guidance and legislation, with an issue over whether roof gardens counted as an additional storey being clarified at first-tier tribunal. Questions over how the hard stop in design at gateway 2 fits with the reality of design-and-build procurement remain. 'We're seeing a little bit of a hurdle as the interpretation of law that's been drafted by lawyers comes into practice, with

us trying to design for it or the people living in these buildings,' said Hawkins\Brown technical director David Brook. He was speaking at the conference, Fire Safety: Designing and Specifying for the Building Safety Act, organised by RIBAJ in partnership with Hilti. This took place in London in March and was the companion to a similar Manchester event in February.

The FOI figures showed more than 20 applications had been either found invalid or needed further information, highlighting designers' uncertainty around the level of detail they need to provide to BSR. 'Precedents are only just being set,' said Brook. For clarity, designers are looking to the two new-build projects that have inadvertently become trailblazers by achieving approval: Broadway Malyan's 434-home Dyecoats development in Leeds; and Maber Architects' The Square in Beeston, Nottinghamshire, containing 419 student studios.

Hawkins/Brown has worked to try to pre-empt compliance issues. 'In fire-stopping design, we know the MEP design comes late and we know largely that the design is locked down for that,' explained Brook, 'so we are almost trying to design a process on how we will bring nine parties together.'

This was echoed by Caleb Smith, Hilti's engineering marketing manager – fire protection and facades. 'The design of passive fire protection is complicated because there are so many stakeholders,' he said. 'As experts we should be ready to support through design. Every time we're involved early in the design process, it vastly improves the prospect of getting a compliant design first time.'

Support can take many forms. Last year, Hilti introduced training focusing on the design process. Product information is also key, with data needing to be 'clear, accurate and accessible,' said Smith. But this approach is rare among manufacturers, which is why the Code for Construction Product Information is working to raise standards. Ben Oram, head of technical at Buckley Gray Yeoman and founder and chair of the Architectural Technical Leads Group (ATLG), pointed out: 'We're at the start of a very long process of trying to get that [clear] information from manufacturers and suppliers.'

In this evolving context the 'person who has most change to swallow is the client,' said conference chair Jane Duncan, past RIBA president and chair of the RIBA's expert advisory group on fire safety. The RIBA is preparing client guidance but, for now, architects are plugging the knowledge gap. Paddock Johnson director Victoria Millward said her practice had produced presentations and training sessions, adding: 'We've done a lot of hand holding, to be honest.'

The industry may have to prepare for more change. The Grenfell report concluded that the definition of an HRB, a fulcrum of the new regime, was 'essentially arbitrary'.

'It needs further consideration,' said Brook. 'Specifically about people's ability to escape. As the regime settles in and starts to function successfully, it's likely we'll see that definition expanded, possibly to bring heights down and possibly to bring in other very tall buildings or other risky use classes.' ●

'The design of passive fire protection is complicated because there are so many stakeholders'

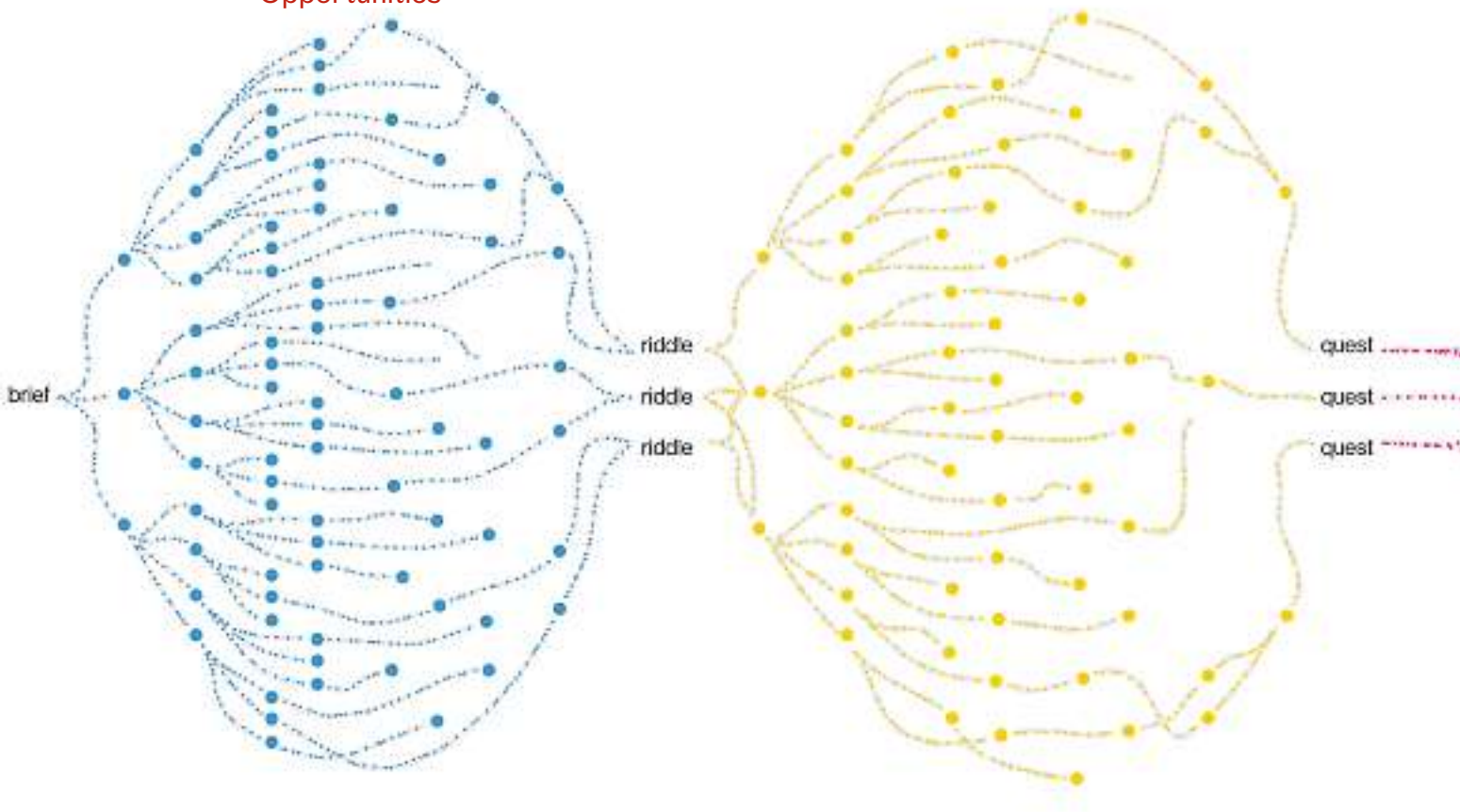

KEVIN NIXON

**EVENT SPEAKERS**

**David Brook,** technical director, Hawkins/Brown
**Paul Bussey,** architect, CDM and BSA principal designer consultant, and member of RIBA Expert Advisory Group on Fire Safety
**Jane Duncan** OBE, RIBA past president, chair of the RIBA Expert Panel on Fire Safety, consultant, Jane Duncan Architectsi
**Amanda Long,** chief executive, Code for Construction Product Information (CCPI)
**Nigel Ostime,** consultant, Hawkins\Brown and Ostime Consulting, RIBA author
**Caleb Smith,** engineering marketing manager – fire protection and facades, Hilt

**INDUSTRY PANEL WITH AUDIENCE Q&A**

**Pictured above L to R):** David Brook; Jane Duncan (chair); Caleb Smith; Joan McCoy, director, White Ink Architects; Victoria Millward, director, Paddock Johnson; and Ben Oram, head of technical, Buckley Gray Yeoman.




# A design process to deliver innovative placemaking every time

In unprecedented times of challenge, architecture must question and redefine its priorities, to connect with nature and serve people and places, argue Anna Liu and Mike Tonkin in an exclusive extract from their new book

Design, construction & technology

Architecture should not just be about architecture. It should be about much more than itself, questioning and searching beyond itself to redefine the priorities in our time.

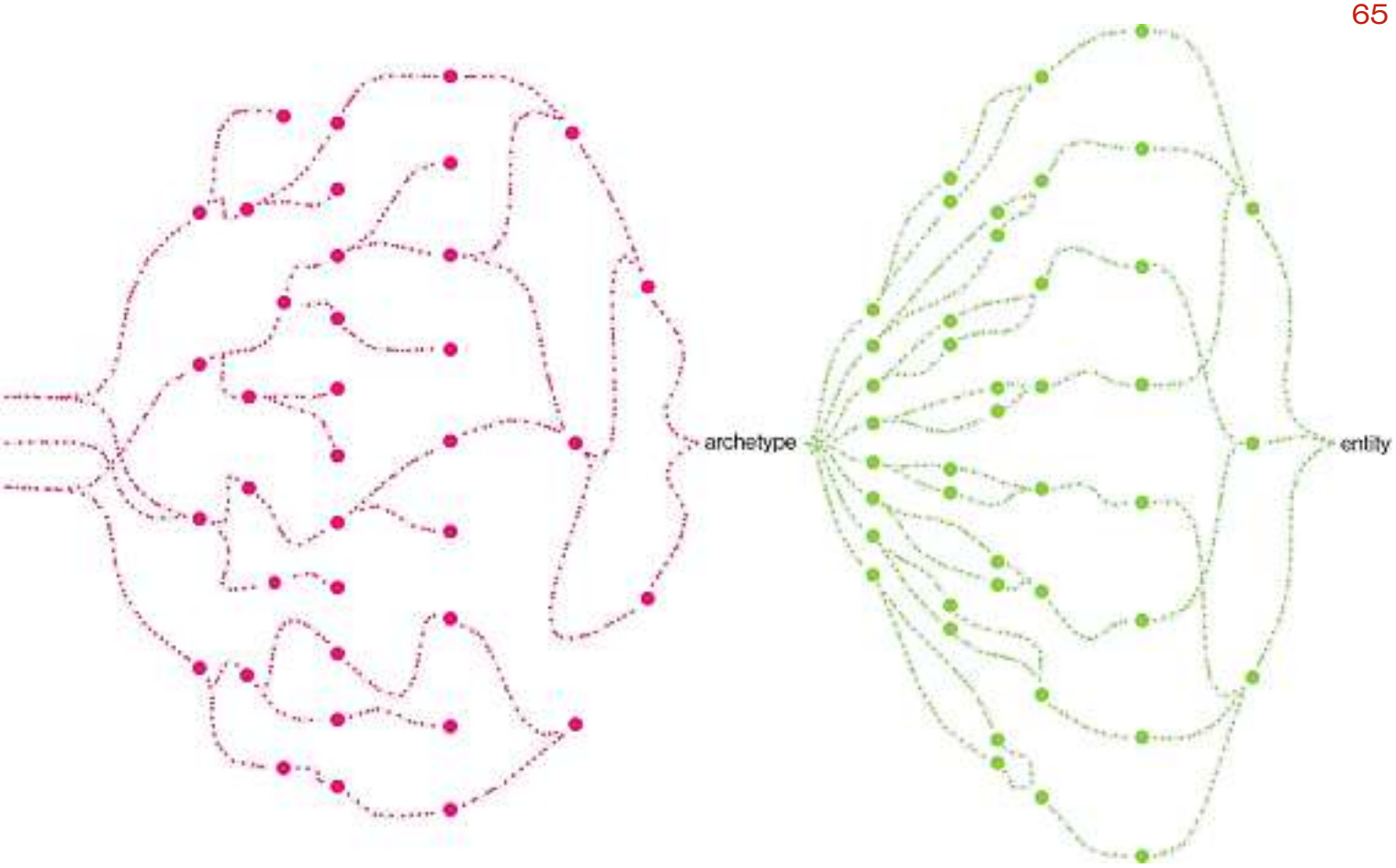
We are living through a time of unprecedented, ever-changing social and environmental challenges, potentially stifling creativity through the practice of minimising risk. Challenging times call for a greater level of invention and responsiveness, a form of practice that addresses the evolving needs of our time.

**Four sequential, responsive steps**

In our book, Asking, Looking, Playing, Making (ALPM), we describe Tonkin Liu's design process. This offers four organised, sequential and responsive steps that disassemble complex problems into multiple specifics, nurturing lateral design solutions. For more than two decades, this nature-focused process has been developed through teaching and practice, and Mike's practice-led PhD, and has been used in all the studio's projects from design competitions to built work.

**Storytelling is the design tool**

Stories touch hearts and minds: a powerful tool to unite people. The four stages, ALPM, use the storytelling tools of riddle, quest, archetype, script and entity. Each stage expands through the subject matters of nature, people, and place, and through the time perspectives of past, present, future. Given that these factors are different from project to




TONKIN LIU

**Above** Diagram of the design process: asking, looking, playing, making. It works by identifying many rich inspirations, expanding experimentation and giving a model for making.

project, the logical consequence of using the process is that every project emerges as a unique and original story. The story's autonomous vehicle promotes collaboration that expands beyond the sphere of architecture, evaluating findings and crafting solutions that resonate with each project's context.

**Nature focus**

The design approach considers our position concerning nature from a broader perspective. Reset the geography in a biodiverse, impactful future of which the project is a connected and active part. Respect, harness, conserve, frame and delight in nature's elements such as sunlight, rainfall and wind, which have functional and experiential roles in architecture. Seek, uncover and share symbols in nature that are most resonant with each project. Identify a principle from nature to guide the project towards an advanced, nature-based design.

**Asking**

Asking dismantles the project brief and builds a word cloud that reassembles it into a riddle that reveals clues, contradictions and provocations. Involving first-principles questioning, it is done collectively in workshops with clients, stakeholders and key collaborators. In the architectural profession, this stage vastly expands the project's potential and the longevity of the client's brief, and aligns with RIBA Stages 0 and 1.

**Looking**

Looking visualises the riddles, builds a wall of inspiration and results in quests to reveal influences, intention and new ways of seeing. It involves research and visual references. Done collectively with specialists, looking amasses their mindsets, knowledge and imagination. In the architectural profession, this stage shapes the project's architectural intent and aligns with RIBA Stages 1 and 2.

**Playing**

Playing translates the quests into three-dimensional forms, culminating in the creation of an archetype. Models, sketches and diagrams explore fundamental spatial arrangements through design alternatives. Form-finding, towards typologies that respond to the project's pragmatics and poetics, results in an architectural archetype, a universally recognised symbol, an identity and a story. Models, sketches and diagrams explore fundamental spatial arrangements through design alternatives. In the architectural profession, this stage aligns with RIBA Stages 2 and 3.

**Making**

Making translates the archetype into a script that generates a family of parts to deliver a seamless, holistic entity. This phase involves detailing, fabrication and prototyping, where technical design is guided by the story towards materials, techniques and construction systems. Making is undertaken with people who cherish craft to bring the story to life in an integrated entity. In the architectural profession, this stage aligns with RIBA Stages 4 and 5.

TONKIN LIU

DAVID VALINSKY

**Top** Tonkin Liu's Swing Bridge at Crystal Palace in south London evolved through reference to bony fish and the dinosaurs whose listed sculptures it controls access to.
**Above** Biomimetic principles help establish the lightweight structure – the skeletal combs of the deck extend up to act as balustrades.

## Stories, myths and symbols

Stories have symbols. Architecture creates symbols. Both stories and architecture communicate shared values, meanings, ideas and social structures. ALPM searches for archetypes that convey unique yet universal, readily accessible symbols. Built symbols encompass local characteristics, connecting people with nature and with other people. Symbols change preconceptions and trigger new possibilities, reimagining present circumstances for a new future. Through its emotional impact and shared imagination, a built project can help to build social unity – and a strong sense of place.

We need to de-silo our mindsets… through our imagination and through thinking in different timescales

## De-siloing mindsets

Just as the professionals within the industry – including architects, engineers, specialists and contractors – are siloed within their expert knowledge, so are many within the natural sciences: geology, biology, physics and chemistry. We all need to de-silo our mindsets in order to bring about the much-needed cultural shift. This can be done through our imagination and through thinking in different timescales. The ALPM process questions and reimagines nature and culture's overlapping system through the time perspectives of past, present and future. Nature forms a constant guide to embedding long-term and holistic thinking into the creation of architecture.

## Innovation

The shaping of our future requires a collective commitment to lateral as well as forward thinking. ALPM is an approach among many that strives for architectural innovation through enabling a nature-focused evolution. A systematic questioning of each project – what it is, what it does, how it works, how it is made – ALPM guides pragmatism in light of the project's story, which brings poetry to problem-solving. Architectural excellence is redefined through responsive, holistic and long-term design thinking, encouraging projects to be unique, culturally resonant and rooted in nature. Nature is a driver; the story is the vehicle; the design process is a guide; and innovation in placemaking is the aim. ●

This article is in part excerpted from Asking, Looking, Playing, Making by Anna Liu and Mike Tonkin of Tonkin Liu, RIBA Publishing, £28, 144pp

# Tile of Spain unveils latest collections and trends at Cevisama 2025

The Spanish tile industry showcased an inspirational selection of new collections at this year's Cevisama trade event, combining innovation, quality and design

**Right** Groovy Tiffanys and Groovy Dec.N2 Tiles by Cevica.

Bringing together the worlds of innovation, quality and design, the Spanish tile industry showcased an inspirational selection of new tile collections at this year's Cevisama. From retro-inspired designs to modern takes on classic terracotta tiles and a whole host of shimmers and glazes, Tile of Spain's manufacturers presented a fresh take on what will be leading the world of tile design in 2025.

**A new take on terracotta**
Synonymous with traditional, Mediterranean interiors, terracotta has been a longstanding popular colour and style choice. From geometric patterns to glazed accent features and textured reliefs, the latest tile collections take the classic warmth of the terracotta colourway and blend it with a contemporary twist, providing a fresh, new take on a European design classic.

**Decorative florals**
Drawing inspiration from nature itself, decorative floral patterns are fast becoming a staple in many manufacturers' portfolios. Ranging from bright and bold tropical designs to more delicate detailed patterns, these decorative florals are making big statements on walls and floors, creating striking works of art in residential and commercial projects alike.

**Left** FS 1827 Sage Tiles by Peronda.

**Retro revival**
From the kaleidoscopic patterns to the 70s palettes, there is a marked nod towards a retro revival in the latest tile collections. A true hint of nostalgia can be seen with zesty colourways taking centre stage, whilst striking patterns create visual focal points, allowing interiors to celebrate bygone design eras in a new, contemporary fashion.

**Shimmers and glazes**
Whilst matte finishes remain popular, a shift towards more shimmered glazes and accents has begun to come through for 2025. Iridescent flecks and metallic finishes in various colourways are finding their way into a variety of tile collections, from the bolder tones of bronze and blue to the more subtle natural and wood-toned shades.

Representing 125 ceramic tile manufacturers across Spain, Tile of Spain promotes the incredible quality and values worldwide of the Spanish tile industry. Versatile, durable and authentic, Spanish tiles offer unique characteristics and unlimited aesthetic possibilities whilst acting as a global benchmark for their high degree of innovation.

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**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**

# Bringing daylight into the dark core of a period home

# Daylight from Above Awards

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RIBA J The RIBA Journal

Welcome to the 2025 Daylight from Above Awards, organised by VELUX in partnership with the RIBA Journal. Over the following pages, we celebrate how toplight can enhance our experience of buildings, whether through overt and dramatic treatment of daylight or more subtle and nuanced approaches.

Judges considered entries in two categories. Light, Space and Atmosphere rewards new or adapted residential projects that incorporate any VELUX sloped or flat roof window. The Heritage Conservation category invited entries for any historic or heritage buildings that use products from VELUX's new Heritage conservation roof window range.

# Judging the awards

Casa Bassa by Francesco Pierazzi Architects topped the Light, Space and Atmosphere category.

GIANLUCA MAVER

Daylight from Above judges were looking for projects that used natural light to the benefit both of architecture and of those using it

'Of all of the entries, this one best used light as a material.' So said judge Gianni Botsford of Casa Bassa, one of the winners of the 2025 Daylight from Above Awards, organised by VELUX in partnership with the RIBA Journal.

That was just the sort of quality the judges were looking for in this competition, which celebrates the role that natural light can play as an integral part of a successful design concept.

Awards were made in two categories, with most of the entries in the Light, Space and Atmosphere category for residential projects. In this section, judges were looking for 'the skilful use of daylight to enrich both the architecture of a building and life within'. This includes consideration of how toplight can be used to enhance comfort, and management of the energy impacts of natural light and solar gain. They were also looking for intentional use of this light; seemingly wilful, irregular rooflight positioning, for example, did not impress the panel.

Several of the entries demonstrated dramatic use of toplight as part of a funnel-effect pyramidal roof central to the design. The resulting effect varied according to the materials this was combined with, including the effective use of CLT for a therapeutic residential setting. According to judge Deniz Beck, this created 'a really lovely nurturing environment with the light coming from above'. This proved equally effective in other entries with light funnelled onto bright white surfaces and bounced around the room, or in combination with corrugated-effect walls, as at Casa Bassa. A new-build rural house was appreciated for its subtle use of toplight in combination with textured clay plaster walls, praised

NICK OSBORNE (2)

by judge Percy Weston as 'pared back and sophisticated'. Panel chair Chris Foges added: 'You're seeing the effect of light rather than the source of light – it's very deliberate.'

Judges were also interested in other ways daylighting could be harnessed to create what Botsford termed 'pockets of interest'. This could be manipulation of toplight to give interesting shadows and a pleasant ambience, or to curate views while protecting privacy.

Sometimes well-designed toplighting enabled better use, as in the redesign of a London loft which transformed a previously unsuccessful conversion as well as improving its energy efficiency. This ambition particularly impressed judge Richard Williams of VELUX, who appreciated the use of new daylighting to address not only energy consumption but health and wellbeing. Other projects demonstrated use of toplight to unlock the potential of a deep site. One unusual project created a glass atrium that brought light all the way down through a three-storey North London house.

But there was a clear winner in the Light, Space and Atmosphere category – Casa Bassa, designed by by Francesco Pierazzi Architects – which impressed every one of the judges and was, as Botsford said, 'all about the light'.

In the Heritage Conservation category, judges were interested in projects that demonstrated a considered response to the architectural character of the building and its local context, and that used natural light to enhance appreciation of the existing structure.

There were two particularly strong contenders – Rolfe Kentish Architect's Trewarveneth Studios in Newlyn, Cornwall, and Lower Paradise Mill in Macclesfield by Cymes Conservation. The latter was the unanimous winner, impressing judges with its well-judged replacement of the former silk mill's 26 roof windows.

'The sensitive introduction of conservation rooflights has revived the building's historic relationship with natural light,' said Beck, who particularly liked how the new windows are, like the originals, fitted flush with the slate roof.

Both category winners receive a £5,000 prize, with £1,500 each for four other commended entries. All are explored in the following pages.

**Above** The Heritage Conservation category was won by Cymes Conservation for Lower Paradise Mill.

**Left** The jury gathered at RIBA to evaluate entries.



**JURY**

**Deniz Beck** Conservation architect, founder of Deniz Beck Partners and the Sustainable Conservation Trust
**Gianni Botsford** Director and head of design at Gianni Botsford Architects
**Percy Weston** Architect and co-founder of Surman Weston
**Richard Williams** Senior architectural development manager at VELUX
**Chair: Chris Foges**
Contributing editor, RIBAJ

GIANLUCA MAVER (5)

## Light, Space and Atmosphere

**Winner: Casa Bassa, by Francesco Pierazzi Architects**

Judges liked the sparing and strategic use of natural light at Casa Bassa, a standalone garage redevelopment that provides additional accommodation in the grounds of the client's main house in Guildford, Surrey.

The building provides an escape for the client's teenage daughters as well as a flexible gym, occasional office and bedroom for guests. Redevelopment was chosen instead of expansion of the main home so as to deliver a more memorable experience, according to the architect. The plinth of the old garage was retained and original steel girders reused as part of the mansard-roofed redevelopment.

Architect Francesco Pierazzi says the design intentionally explores an aesthetic where the extremes of the light spectrum serve as key architectural tools. This is particularly the case at the entrance. Visitors arrive in a narrow stairwell, with a shaft of dramatic toplight encouraging them up twisting stairs – something the judges particularly enjoyed – before opening out into the more expansive, light-filled main accommodation level above. This journey is intended as a 'progression of emotions from enclosure to openness', says the architect. With its expansive picture windows giving views of the distant North Downs, this is a deliberate contrast, noted the judges, with the dark and monolithic exterior.

The architect's use of a VELUX roof window was an integral part of the overall daylighting strategy. The project incorporates a 780 x 1400mm VELUX MK0 with a manual centre pivot to bring light through an inclined wall, enabling the angular, canted geometries that characterise the house.

The project demonstrated how toplighting doesn't have to be expansive, juror Richard Williams pointed out, but can be effective with the strategic use of just 'a small shaft of light'. This was the case with the stairwell light, described by judge Percy Weston as 'an economic use of natural light, used in the right places'.

Deniz Beck liked how the light helps visitors to read the turning staircase, and all the judges appreciated the way the light played on the corrugated-effect walls.

According to the architect, the concept for these was loosely inspired by algorithms formed of binary patterns of 0s and 1s, in reference to the client's expertise in the use of AI. As well as the walls, this binary division also informs the rhythm of other elements such as the timber goalpost frames, zinc cladding, charred timber, battens, and porcelain tiles. This gives texture to surfaces to maximise the interplay of light and shadow.

As another judge, Gianni Botsford, said: 'For me this seems to be all about light, all about texture'.

**Daylight from Above Awards**
Light, Space and Atmosphere: Winner

# Toplighting doesn't have to be expansive – it can be effective with the strategic use of a single shaft of light

**Opposite** The dark exterior contrasts with the light found within.

**Top right, right** Toplight plays on the ribbed walls to aid navigation and create pockets of interest.

**Below, far left** A pivoting VELUX roof window admits light through the canted wall of the 'mansard'.

## Light, Space and Atmosphere

**Commended: House in a Barn, by Artel 31**

'It's a really good example of repurposing done in a quite engaging way,' said judge Gianni Botsford of House in a Barn, a highly unusual conversion of a former silage barn in West Oxfordshire.

Designed by Artel 31, it creates a fully breathable timber-framed home within the steel portal frame of the original structure, from which materials have been salvaged as part of the cladding. The result preserves the barn's character, incorporating the new-build accommodation and sheltered adjacent amenities outside the home's thermal environment.

The architects used Passivhaus software, natural light modelling, and wind studies to determine window sizes and orientations, so as to allow natural light penetration and optimise climate resilience. VELUX roof windows light the master suite (where the old barn roof was removed) and the first-floor core below the existing rooflight in the original barn roof. As well as providing ventilation and light, the electric VELUX windows have smart closers and blinds for inhabitants' safety and comfort.

A multilayered polycarbonate wall along the main access corridor provides excellent insulation and lets natural light in. This facade, noted judge Percy Weston, was particularly interesting. The project uses an air-source heat pump for energy-efficient heating, photovoltaic panels, mechanical ventilation with heat recovery and biodiverse landscaping.

**This image** Light filters in to the living space through a polycarbonate wall.

**Left** VELUX roof windows give additional daylight to bedrooms.

The design achieves a play of light and shade.

Elements of the barn are recomposed in new facades.

CHARLES EMERSON (4)

JULIAN CORNISH-TRESTRAIL

**Left** A continuous glazed slot articulates the junction of old and new.

**Right** Toplight from a VELUX roof window is warmed by reflection on a painted surface.

**Below** Diverse roof openings bring daylight deep into the plan.

JULIAN CORNISH-TRESTRAIL (2)

## Light, Space and Atmosphere

**Commended: Discovered House, by Robert Dye Architects**

Judges liked the way the light was handled in this retrofit and rear extension to a Victorian semi-detached house in Islington, north London.

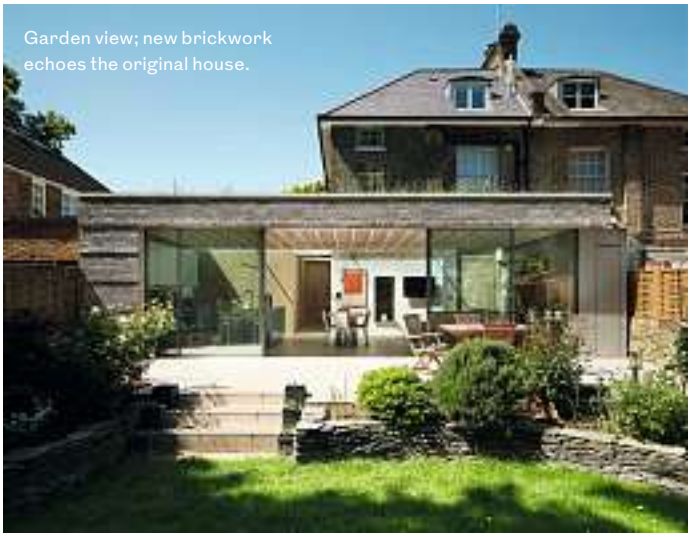
Robert Dye Architects opened up the rear of the building by removing previous leaky extensions to 'rediscover' the original house. A new extension was then added across the back to create a light-filled kitchen and living space with improved connection to the garden.

VELUX roof windows are used to bring dynamic light into the extended house. Over the ground-floor shower room, the toplight is combined with coloured panels on the internal face to bounce a warm glow into the space. Another, used in a horizontal format on the second floor, frames a panoramic view of tree foliage.

In the kitchen, the timber-framed extension is delineated from the original house by what the architects describe as a 'glass moat' skylight. This T-shaped slot brings natural daylight including an hour of sunlight onto the 'discovered' part-exposed brick and lime-rendered corner of the original villa.

Judges praised the variety of ways used to bring light in, combined with different materials, and especially liked the use of the glass moat to separate the new from the existing house.

The super-insulated rear extension connects to a rebuilt garden patio, and contributes to the project's considerable thermal upgrade, which also extends to the main roof, a renewables strategy, rainwater harvesting and the removal of all gas energy.



Garden view; new brickwork echoes the original house.

The timber internal face of the new roof windows is sympathetic to existing structure and finishes.

**Heritage Conservation**
**Winner: Lower Paradise Mill, by Cymes Conservation**

Twenty-six of VELUX's new Heritage conservation roof windows have been installed at Lower Paradise Mill, a working museum created from a Grade II-listed silk mill in Macclesfield. Built in 1862, this was one of many such mills in the town, which became the UK centre of silk weaving. It operated until 1981, and now forms part of Macclesfield's Silk Museum.

The roof repairs help safeguard the future of the building, and provide improved natural light to better appreciate the workings of the Jacquard looms, and the quality and colours of the fabrics.

Judges appreciated how the extensive window replacement has enabled continuity of use at the Victorian mill, which had suffered from leaks and risk of storm damage. This had led to protective sheeting being erected, its yellowing hue compromising the quality of light.

All rooflights were replaced, along with repairs to the cast iron gutter between the double-pitches of the roof. This was relined in aluminium. The historic Welsh slates, which were laid in diminishing courses, were removed, documented and re-used with the addition of a breathable membrane.

According to Cymes Conservation, VELUX's Heritage conservation roof windows delivered a sensitive external metal appearance. They could also be fitted flush with the slates due to their very slim construction height. This enabled the new windows to conserve the character of the historic building, by resembling the elegant profile of the originals, but with added durability. Internally, the finish is timber. The product also had familiar flashing details and simple structural carpentry that could float over the historic purlins. The VELUX windows were, unlike bespoke replacements, readily available, and took one hour each to install.

'The VELUX Heritage conservation roof window fits historic buildings perfectly; it is brilliant, well-designed and of great quality,' said Simon Revill, conservation architect at Cymes Conservation.

During the repairs, the window arrangement was rationalised with siting moved away from the valley gutter for more protection against bad weather. Consistent placement within the diminishing courses also made slating work easier. 'The original window locations remain visible through thoughtful use of contrasting roof finishes, despite the replacement of the rooflights with high-performing modern equivalents,' noted judge Deniz Beck.

NICK OSBORNE (5)

The original window locations remain visible through thoughtful use of contrasting roof finishes

**Left** Positioning of the new roof windows retains a memory of their predecessors.

**Below** Good, even daylight enables visitors to appreciate the historic looms.

**Heritage Conservation**

**Commended: Trewarveneth Studios, by Rolfe Kentish Architect**

VELUX Heritage conservation roof windows played a key role in the conversion of a derelict granite outbuilding into three affordable artists' studios for the Borlase Smart John Wells Trust in the Cornish town of Newlyn. The site is within the historic Newlyn Conservation Area, renowned for the artists' colony that has been there since the mid-19th century.

The outbuildings were previously the latrine, coal store and playground shed of an infant school. This was converted into artists' studios following its closure in 1961.

The conservation area location required the sensitive use of rooflights and the reuse of as much of the existing building fabric as possible. Ten VELUX Heritage conservation roof windows with single glazing bars were used to bring evenly distributed, diffuse light into the new studios. These were set flush in reclaimed Cornish slate roofing, which was wet laid in lime mortar, in diminishing courses as has been traditionally done in West Penwith for centuries. The windows were fitted in combination with a standard VELUX flashing kit.

The three rooflights per studio were placed at the top of the pitched roof to provide excellent 'sky factor' daylight from above for artists working at easels, on the walls, and on tables. Daylight naturally varies during the day, and blinds can be manually positioned to diffuse the light or cut out direct sun. The rooflights can also be manually opened using a winder pole to provide cross and trickle ventilation.

Interior linings were kept simple with white-painted fire-resistant plywood following the profile of the insulated timber roof structure, and tucking into the lining grooves in the white-painted frames of the rooflights.

ROLFE KENTISH ARCHITECT (2)

**Above** Ten new rooflights sit flush with Cornish slate, which sits on battens and counterbattens in a warm roof build-up.

**Right** Positioning of the Heritage conservation rooflights takes account of both working and display needs.

**Far left** Alterations to the roof are largely hidden from the street.

**Left** New roof windows light an attic bedroom.

**Heritage Conservation**

**Commended: Polkirt Hill, by Rowett Architecture**

The addition of new VELUX rooflights has transformed the neglected attic of a Grade II-listed 18th-century townhouse in the seaside village of Mevagissey, Cornwall. Rowett Architecture aimed to balance preservation of the historically significant building with modernisation in order to improve the lifespan of the property.

A key move was the introduction of natural light into the previously dark attic, achieved with the installation of discreet VELUX Heritage conservation roof windows. These celebrate the building's original features by highlighting the character of the prominent, preserved roof timbers in the attic bedroom and bathroom. By illuminating these historic elements, the windows establish a visual dialogue between the old and new, fostering an appreciation of the heritage of the building, suggests the architect.

The practice collaborated with conservation consultants on the introduction of the new windows, which are positioned to be invisible from the street level. The introduction of natural light has not only transformed the attic into a bright, inviting space, but also contributed to the property's sustainability by reducing reliance on artificial lighting, decreasing energy consumption and promoting a more friendly living environment.

According to the architect, the project shows how contemporary interventions can breathe new life into historic buildings. 'By thoughtfully integrating daylighting,' says the practice, 'it bridges the gap between preservation and modernisation, ensuring the continued enjoyment and relevance of these heritage assets for generations to come.'

ROWETT ARCHITECTURE (4)

**Far left** The existing attic space was lightless and in poor condition.

**Left** St Austell-based Rowett Architecture enjoys the contrast between crisp new details and preserved elements.

MAY - SEP 2025

Sydney Modern Project, Australia, SANAA. © Iwan Baan

# WHAT'S ON

© Martin Charles / RIBA Collections

As we prepare for the temporary closure of 66 Portland Place for refurbishment on 31 May, check out highlights from our programme of public exhibitions and events celebrating architecture of all disciplines.

Our exhibitions, talks, and lectures will continue at RIBA North + Tate Liverpool and other locations in and around London.

Closes 31 May, Architecture Gallery, RIBA, London

## Difficult Sites: Architecture Against the Odds

Last chance to see our exhibition exploring remarkable feats of architectural achievement in the face of tricky terrain, awkward urban plots, challenging remodels, and more.

Closes 31 May, Practice Space, RIBA, London and RIBA North + Tate Liverpool

## RIBA Royal Gold Medal 2025 SANAA: 10 Projects

Showing in both London and Liverpool, the displays will celebrate this year's Royal Gold Medallist, SANAA, through a series of photographs by renowned Dutch photographer Iwan Baan.

8 May, 7pm to 9pm, RIBA North + Tate Liverpool and 20 May, 7pm to 9pm, RIBA, London

## Film Night: Tokyo Ride

Watch a special screening of Tokyo Ride, a visually immersive journey which explores the Japanese capital through the eyes of SANAA's Ryue Nishizawa. Playing in both London and Liverpool.

15 May, 7pm to 8.30pm, RIBA, London

## RIBA + VitrA: Building Empathy: Unity of Place

Hayatsu Architects, Baxendale Studio, and Publica join us for our first talk of the 2025 series exploring the power of design to create positive change in communities.

*Sponsored by VitrA Bathrooms*

20 May, 7pm to 10pm, RIBA, London

## RIBA Late: Under (Re) Construction

Join us for an evening of insightful architecture talks, curator-led tours, music, and live performances from our creative collaborators, including RIBA Honorary Fellow Rhael 'LionHeart' Cape, and the Royal College of Art.

7 June to 14 September, Liverpool

## RIBA supports Liverpool Biennial to present new work by Elizabeth Price

Experience a new commission by Turner Prize winner, Elizabeth Price, which draws on our architecture collection, and hear from her at an in-conversation event before the festival starts.

7 June to 25 August, RIBA North + Tate Liverpool

## Where the Work Begins

Explore the evolution of artist workspaces from the 1800s to today, drawn from our collection and beyond. This display features artists and architects including Antony Gormley, MJ Long, and more.

**Find out more and plan your visit at:**
architecture.com

RIBA
Architecture.com

# 3: Culture

Andrew Meredith's home went from Dudley to Ealing, London, via a detour in Falmouth to study photography. Various commissions meant regular trips into central London for shoots – along the Westway. Over 20 years, he claims he'd 'driven it so many times, I knew it like the back of my hand'. Until in 2021, in that way we all reflected on our givens post-lockdown, he realised he didn't.

With its dramatic, fleeting views over the city, the Westway's 4.6km raised section, completed in 1970, came at a cost. Carving west London in two, it was the subject of protest so divisive that similar plans elsewhere were axed. Meredith read up on its troubled history of compulsory purchase and construction: shunted communities; an old lady's battle for her garden; obdurate delays which begat a hoarded-up no-man's land, which begat a gangland along the planned line of the road.

His shot across the Westway captures this historic fallout. Distant Westfield, towers vanishing into fog, while below are 'junkyards, traveller camps, hidden homeless'. 'All walks of life,' he observes, either side of a road where walking is forbidden. ● **Jan-Carlos Kucharek**

**Andrew Meredith**
**Wood Lane, Walking the Westway. London, 2021**
Mamiya 7ii, 50mm lens. Kodak Portra 160NC film

*'Is the arch and window combination an eye? If so, where is the nose? And the mouth? Are they hoping it will fall into place?'*

# If the face fits

What are the patterns we are looking for in our buildings? And can babies help us discover them? Eleanor Young investigates

**What do babies spend time looking at? Faces were long thought to be what would draw their attention most. But one research project has shown that babies spend more time looking at a picture of a building. Anna Franklin of the Sussex Baby Lab has also shown that babies spend significantly more time looking at complex structures with arches and flourishes than similar, but plainer, images of buildings when they are shown the two together.**

**Listening to Franklin, watching her video of a baby's slow eyes lingering, I wonder what this means. Are the babies puzzling out the details looking for signs of the imprint of faces; is the arch and window combination an eye? If so, where is the nose? And the mouth? Are they hoping it will fall into place? Like the Face House in Kyoto, Japan, by Kazumasa Yamashita, or the rather less sophisticated, and less well known, Transformer House, in Koenigswinter, Germany. With the compound face-i-tecture making me smile a little, I started on a hunt for social media accounts devoted to sharing pictures of such friendly buildings.**

**It was a rather disappointing search, to be honest, and required a lot of squinting and imagination. I feel like I have seen more convincing faces in architecture when caught unawares around the city. Turns out two windows and the downturned mouth of an arched suburban porch – even with a perfectly placed snub nose of burglar alarm – don't really cry out 'face' to me, although eyelid sun canopies help. Though I did uncover the phrase 'facial pareidolia', which can also apply to seeing Jesus in a drainpipe in Coventry (true story, see the Coventry Telegraph – and Daily Mail – in 2010).**

**I am not sure where faces would fit into the hierarchy of Christopher Alexander's 253 patterns, as laid out in his Pattern Language. The book goes deep behind and beyond the elevation of a building, evoking places to dwell, like the alcove or sunny counter. Alexander writes: 'Many of the patterns here are archetypal – so deep, so deeply rooted in the nature of things that it seems likely that they will be a part of human nature, and human action, as much in 500 years as they are today.'**

**So forget about my diversion into architecture and facial features – those babies are searching for archetypal features in buildings, a language of both safety and nurture; power and joy as Alexander would have put it. Now all we need is to set up an experiment to test that hypothesis.**

**Left** Where do we see faces in architecture? Certainly on the Face House in Kyoto.

**ONLY ON RIBAJ.COM**

Restoration and extension of a Victorian house damaged by bombs, tree roots and neglect has created a private oasis

**House extension**
**ribaj.com/lordship**

STEPHANIE WUNDERLICH PHOTO: ISTOCK | GEORGECLERK

# Don't imitate your idols, think like them

Talk the language of now, but never let the status quo limit you, argues Muyiwa Oki

At every stage of our lives, we look for idols – figures who shape and inspire our ambitions and show us what is possible. Early in my journey, I admired the modern masters: Mies van der Rohe, Le Corbusier, and Frank Lloyd Wright.

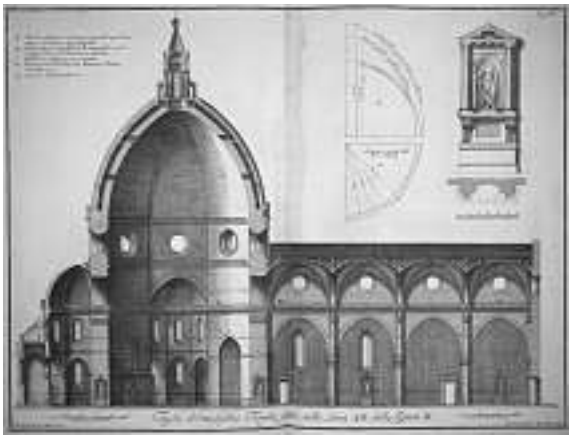
I was fascinated by their ability to create a new architectural language responding to their era's industry. Fallingwater, with its seamless integration into nature; Corbu's 'home as a machine for living in' – thrilling in their audacity.

Now, in a career milestone, I ask: are these still my idols? Should I still model my practice on them? More pressingly, do their ideas still speak to today's realities? In a recent town hall at the University of Brighton, a student put it plainly: what type of architect do you want to be?

If history tells us anything, great architects were not great because they were merely creative. They deeply understood, and responded to, their context. Even the Renaissance virtuosos – Andrea Palladio, Filippo Brunelleschi, Michelangelo – worked within their time and spoke their era's language. The Catholic Church was a driver of the Renaissance, so their work told the story of the Christian faith in domes and sacred geometries. Modernism was forged in the fires of industrial change – the rise of manufacturing, the advent of new materials, new power sources like electricity, the growth of new liberal economies, and the age of the automobile – and its architects met a new world with novel forms and functions.

I'd posit that today, the ruling force of our time is economics, not the church nor the machines. Arguments for preserving public space, or urban regeneration, have to be justified in economic terms. We defend museums by citing their role in local economies. We push to make space for girls in public parks, laying out the case in reduced crime rates and increased property values. Everything must prove its worth through the market lens. And if you don't speak that language, you don't get to participate in the debate.

That's where architecture finds itself. When architects design buildings, we shape economies, cities and policies. Yet, too often, we see our role as separate from economic debates, as if architecture



**Left** Filippo Brunelleschi understood the language of his time in sacred geometries, as seen here at the Cathedral of Santa Maria del Fiore in Florence, Italy.

exists in a cultural vacuum. But, as Ha-Joon Chang argues in his book Economics: The User's Guide, systems aren't fate. There is no single way for an economy to function – there are choices, policies and incentives that drive behaviour. Similarly, there is no single way for architecture to shape society.

So, what kind of architect do I want to be? One who changes things, because right now, there's a poverty of ideas – a suffocating consensus that architects can only work the way they do. The first step to changing the world is refusing the premise that the status quo is inevitable.

But change demands engagement. We can't just sit in studios, sketching. We must step into economic and political conversations. We need to understand the financial mechanisms driving development: who funds what, why policies prioritise specific outcomes over others, and how we can incentivise good stewardship of the built environment. The world is desperate for architects who fight, not with bricks but with ideas. High-quality housing isn't just a design problem – it's a power problem. Cities aren't about beauty – they're about justice. Economics? That's just the battlefield.

This isn't about abandoning design,but seeing architecture as a force operating within, and able to challenge, the economic frameworks shaping our world. The best way to honour our idols is not to repeat them but to think like them: see the world as it is; imagine how it could be better.

**RIBA LATE AT NO 66**

On 20 May 2025 we're hosting the final RIBA Late before the temporary closure of 66 Portland Place. Join us for one last evening to enjoy insightful architecture talks, curator-led tours, plus live music from RIBA Honorary Fellow LionHeart and a unique collaboration between RIBA and the Royal College of Art.

STEPHANIE WUNDERLICH PHOTO: RIBA COLLECTIONS, DRAWING BY BERNARDO SANSONE SGRILLI 1733

# Eye Line 2025: call for entries

RIBAJ's annual, international competition showcasing students' and practitioners' drawing and rendering skills is now open for 2025 entries

Is your gift for visual expression as sharp as your imagination? Eye Line, RIBAJ's annual, international competition showcasing drawing and rendering skills, is open for 2025 entries. As ever, we are asking for images, in student and practitioner categories, which brilliantly convey architecture, in any medium or combination of media.

We are seeking the finest work, here and internationally, from those at the sharp end of representation. Images of all kinds, from hand-drawn concept sketches to technically proficient and layered renders, are eligible. 'Drawing' includes any method by which the power of an architectural idea is communicated, whether of existing buildings or works of the imagination, and AI entries will be considered if they are declared as such.

Practitioners and students are eligible to enter different categories:

- Student category: images made by people in architectural education, or who are submitting work executed before final qualification.
- Practitioner category: images made by architects who are fully qualified and working in practice or academia, whether for real-world projects or exploring ideas or experiences.

Winning entries will be published in the July/August RIBAJ and on ribaj.com, and we hope to have a winners' party and show at the RIBA. Our colleagues at RIBA's Drawings and Archives Collection inspect winners for potential inclusion in their famous archive.

Last year's student winner was the National University of Singapore's Kun Yi James Lim, whose fractured plan and elevational images, shot through by rays of sun, aimed to give expression to fleeting moments or past remembrances – a Proustian projection of human experience. Practitioner winner was Welcome to Tribuneville, from Luis-Miguel Lus-Arana, a professor at Spain's University of Zaragoza. His epic, 3m-long drawing, showing 60 entries from the 1922 Chicago Tribune Tower competition, is an obsessive menagerie of building types and styles, imagining a new, fantasy quarter for the Windy City.

Every year we are gratified by the originality, wit and talent in evidence with Eye Line, our international, free-to-enter drawing and visualisation award. Practitioners and students – show us your best work and seize the opportunity to join a prestigious cohort of past winners! ●

**Above** Robert Evans, Design Centre at Carsington Water. Oil paint on panel 450 x 250mm. Second place, Practitioner, Eye Line 2024

### 2025 JUDGES

**Mary Duggan**
Director, Mary Duggan Architects
**Samantha Hardingham**
Independent writer, designer and educator
**Luis Miguel Lus Arana**
Winner Eye Line 2024. Associate professor, University of Zaragoza School of Engineering and Architecture
**Bongani Muchemwa**
Director, McCloy + Muchemwa Architects
**Jan-Carlos Kucharek (chair)**
Deputy editor, RIBAJ

### EYE LINE RULES

We seek the best 2D representations of a building design or concept via visual means. They may be hand- or digitally drawn, incorporating collage or any combination or overlay of methods. Video and straight photography are excluded. AI entries to the Eye Line competition should be stated as such.

- Enter in either the student or practitioner category. The RIBA Journal reserves the right to reallocate entries to a different category if deemed necessary.
- Maximum of three images per entry, from different projects or all from the same one.
- Joint entries on which more than one person has worked are eligible, with authors stated.
- All entries must be uploaded via the link below. We cannot accept physical works. Images must be at 300dpi, file size maximum 25MB.
- Work must have been produced within the three years up to the competition closing date and must not previously have been entered for Eye Line.

**Enter at: ribaj.com/culture/enter-eye-line**

### INFORMATION REQUIRED

- Title of work(s) if applicable, and medium.
- Name of the author(s) of the entered work.
- Name of organisation where author works or studies.
- Email, postal address and phone number.
- Dimensions of the original work as presented, in mm.
- Date work was completed.

### KEY DATES

**Deadline: Friday 9 May 2025, 14:00 BST**
Judging: End May 2025
Winners and commendations published: RIBAJ July/August 2025 and online.
Exhibition opens (provisional): August/September 2025
Correspondence: eyeline.ribaj@riba.org

eye line

# Powers of Ten: play with scale to gain pounds

Can you create an object, installation, building or urban intervention that plays on the idea of scale, to inspire wonder, drama – or shock? Using SterlingOSB Zero as a material for transforming spatial perception, you could win £2,500

In 1977, the American architects Charles and Ray Eames released a groundbreaking film. It was based on Dutch educator Kees Boeke's 1957 book Cosmic View, which looked at our universe and planet – and us – in an attempt to visualise the world we see, the inner world we can't, and the distant ones we can barely comprehend.

The result was a nine-minute film, The Powers of Ten. Opening with a couple lying on a picnic blanket in a park, it is a study in orders of magnitude, zooming out exponentially to the edges of the universe, before zooming back into their bodies to the size of an electron. The Eameses' clever scale shifts take us from a 1:1 understanding of reality, to revealing the complexity and magic of existence.

Architects have had a technical fascination with scale ever since the Renaissance, when the idea of drawing buildings as a prerequisite to building them resulted in an abstraction that effectively brought the modern profession into being. They still occupy this territory, albeit with contemporary technology: like the Eameses' film, architects can 'zoom in' or 'zoom out' of their drawings ad infinitum, with no loss of detail.

**Investigating the nature of scale**

In our competition's 10th anniversary year, we are asking you to utilise SterlingOSB Zero board to investigate the nature of scale.

Take inspiration from Borromini's arcade at the Palazzo Spada – a sophisticated perspectival play on scale – or Thomas Chippendale using elements of grand classical architecture and incorporating them at far smaller scale in his famous 18th-century furniture. Using mirrors, in 1909,

Kengo Kuma and Associates' M2 Building, Tokyo 1991.

JOHN BARR/RIBA COLLECTIONS

Adolf Loos created a Tardis from his tiny 1909 American Bar in Vienna.

TIM BENTON/RIBA COLLECTIONS

architect Adolf Loos made a tiny Vienna bar look enormous, while in 1970s Italy, practice Superstudio ran black-and-white grids on its Quaderna furniture and imagined extending them to cover the world. And what about Frank Gehry's binoculars?!

What would YOU do? Using SterlingOSB Zero as your base material, we want to see you putting your imagination and ingenuity to use, in order to create your own physical meditation on the nature of scale.

It might be a model, sculpture, piece of furniture, mise-en-scene, a building, a folly – or even a monument! What we'd really like is to get a sense of how you are playing with the principles of scale to intrigue, amuse or confound the viewer, using the simplicity of SterlingOSB Zero – with other materials, perhaps – to create something that is both captivating and illusory. ●

ORCH CHEMELLO/RIBA COLLECTIONS

## WHO CAN ENTER

We welcome entries from experienced architects, emerging architects, those in Part I and 2 professional training, and diploma and undergraduate architectural students. Applying to all, we want the emphasis to be on imagination and fun – so enjoy yourselves!

## JUDGING

Powers of Ten judges, chaired by RIBAJ's deputy editor Jan-Carlos Kucharek, will look for imaginative responses to the brief that make best use of SterlingOSB Zero. We anticipate other materials and surfaces will form an integral part of any proposition, but expect SterlingOSB Zero panels will be the main constituent of the design. Because this is a conceptual brief, we do not require entrants to meet building codes or standards.

In this competition, the winning proposal will be the one that in the judges' view proves the most imaginative, intelligent or playful response to interrogating the nature of scale. It may have a context – or none at all – but we expect it to be theoretically buildable, and that a construction strategy could be evidenced.

You should also be able to explain the specific benefits that using SterlingOSB Zero brings to your proposal – whether that be in terms of structure, space-forming, sustainability or aesthetics.

**Left** Frank Gehry's Chiat/Day Building, Venice, Los Angeles 1991.

## DEADLINE

**Entries should be received no later than 14:00 BST, Monday 23 June 2025**

## TO ENTER

**Go to ribaj.com/powers-of-ten**

Entries should be submitted on no more than two A3 sheets, supplied electronically as PDFs and uploaded to the official entry website.

How you choose to describe your proposal is up to you but may include:

- Plans and sections explaining the proposal nature, its structure and material choices.
- 3D or perspectival images that communicate how any play on scale is being achieved.
- Any supplementary images (such as model shots or visualisations) which entrants feel would best convey the proposition.
- An explanation of no more than 500 words should be uploaded to the website entry form, describing the proposal and in what way it claims to meet the brief.

**Find out more about the nature of SterlingOSB Zero at ribaj.com/osb-properties**

## NOTES

- The judges' decision is final. No correspondence will be entered into by organisers or judges regarding entries or winners.
- First prize of £2,500; three Commended prizes of £500.
- Shortlisted entries will be notified in writing, with entrants subsequently invited to the winners' announcement and prize-giving event, which will take place on 25 September 2025.
- By entering this RIBAJ competition, West Fraser has your agreement to using your name/company name and collateral produced by our marketing agency – videos, interviews, case studies, images – for our company's website, social media, digital and print media titles.
- Please email questions to ribaj.powers-of-ten@riba.org

At the Venice Architecture Biennale, Carlo Ratti is harmonising ideas to tackle the climate crisis. Architects must be agents of change, he says

**Words: John Jervis Portrait: Andrea Avezzù**

# Choir master

**Below** The Other Side of the Hill by Geoffrey West, Roberto Kolter, Beatriz Colomina, Mark Wigley and Patricia Urquiola uses microbial communities that balance consumption as a tool to explore global population futures.

ALL IMAGES COURTESY LA BIENNALE DI VENEZIA

**At the launch of the Venice Architecture Biennale, held at the Ca' Giustinian in February, journalists questioned Carlo Ratti closely on Michelangelo Pistoletto, the politicisation of architecture, and this year's theme, 'Intelligens. Natural. Artificial. Collective.' A month later, ill-prepared after time-zone confusion, I ask Ratti over Zoom if he possesses the ability to switch off, if he feels exhausted, if he's ever considered building an extension. Simultaneously, he's going from bus to departure gate at an unspecified airport, passing through security: 'Everything you have electronic take out, separate, just the phone? No tablet, computer? No liquid?'**

**But what can you ask a guy whose 800-word 'about' page introduces him as 'scientist, designer, and public intellectual'; chronicles his advocacy, architecture, consultancy and philosophy, and his tech startups; mentions the 750 scientific publications he has co-authored; and closes with 'Sensory City Philosopher' and 'Best and Brightest' accolades from Bloomberg and Wired respectively? All that's while directing MIT's Senseable City Lab and his own eponymous practice, and juggling multiple multinational positions. And how do you scratch the surface of an event with a near 1,000-page catalogue?**

**Ratti answers my questions with grace, plus updates on his boarding progress, leading them gently back to the matter at hand. Asked about the difficulty of coming up with fresh ideas as a serial event organiser (he's even curating the French pavilion at Expo 2025 Osaka), he pivots to this year's egalitarian approach: 'Usually, the Biennale is more of a top-down process – the curator will just make a list and invite people – but we wanted to start out by listening, with salons wherever travel was taking me. It could be a dinner or aperitivo; there was a breakfast at 7am in Zurich, very Swiss, and a midnight meeting in the middle of the desert around a campfire. It was a way to listen to local communities – to architects and other disciplines – about the most important topics we should be engaging with today.'**

Similarly, common threads were sewn between national pavilions, facilitated by four preparatory meetings: 'Just by bringing people together, all these cross-references started resonating among them, even without my intervention,' Ratti goes on. 'I'm hoping we'll see a Biennale where different voices are harmonised, but via this natural, bottom-up approach.'

The outcome of all this listening is the focus on synergising diverse intelligences, but the order in which these are listed in the exhibition's title is intended as a mild provocation: 'Everybody, when you talk about intelligence, thinks about AI, instead of celebrating a still much-superior form of intelligence, which comes from nature, and has been shaping the place we live in for a very long time.' Through further discussion, the event was conceived as a a forum to bring together professions, generations, backgrounds and nationalities, leveraging their diverse knowledge in order to rethink the built environment for climate crisis and peak population.

This emphasis on the importance of people (thus the affected 'gens' in the title) led to the rash decision to hold an open call. 'We wanted to listen to voices all over the world, from all disciplines,' Ratti says. 'For us, it was both daunting and thrilling – we were flooded, and had to reply to thousands and thousands of emails.' Didn't that also mean saying no to thousands of people? 'You know, the interesting thing is that, when people take time to engage with a topic, you find that almost every voice has something interesting to say. So, it was difficult, but I made a point that we really wanted to reply to everybody.'

The result is an international exhibition that is, in Ratti's words, 'a kind of choral construction' – more than 750 participants spread across 280 projects – 'different voices, each with its own autonomy, somehow having references and resonating with others, creating broader multilayered conversations'. The diversity of contributions is highlighted but, understandably if less idealistically, the display kicks off with one of many all-star installations, The Other Side of the Hill. Designed by Patricia Urquiola, it delves into population collapse via the medium of microbial communities, and involves scientists Geoffrey West and Roberto Kolter, as well as architecture theory gurus Beatriz Colomina and Mark Wigley.

Because of the ongoing refurbishment of the Central Pavilion, this year the Biennale extends into the city itself, increasing both its reach and its efficacy as a research catalyst. 'My budget was the same', Ratti notes, 'so it created fundraising issues, but it became an opportunity to turn not only the Giardini and Arsenale, but other parts of Venice into a laboratory. And for me there's something exciting about the fact that Venice, the most fragile city in the face of climate change and population, can act as a lab for developing new ideas. One where, as architects, designers, planners, and with the help of other disciplines, we can try to find solutions to these challenges, then explore how to replicate them elsewhere.'

This geographic dispersion around Venice, along with an ambitious public program, is part of efforts to broaden audiences, creating 'short circuits' that lure new visitors to the Giardini. 'It's something we're really trying to do,' says Ratti, 'especially as the topics we're discussing are ones that should engage all of us, and ones where you want to have feedback loops. We should not

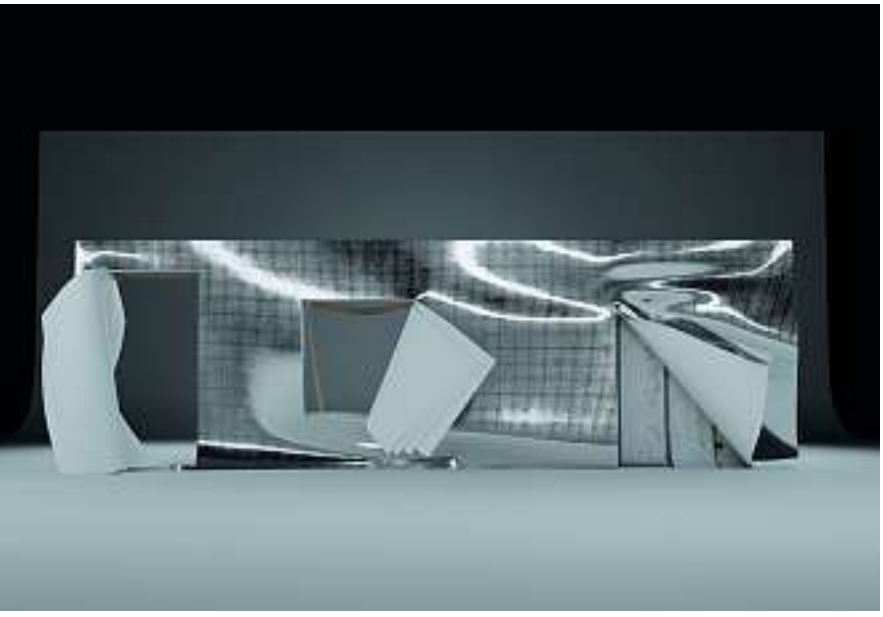
**Above** Canal Café, by Diller Scofidio + Renfro, Aaron Betsky, Natural Systems Utilities, SODAI and chef Davide Oldani, aims to purify canal water 'to create the best espresso in Italy'.

**Below** Gateway to Venice's Waterways, by the Norman Foster Foundation, Michael Mauer, Ragnar Schulte, Miguel Kreisler and Christopher Hornzee-Jones, moots floating mobility hubs for the city's lagoon.

think of ourselves as Promethean architects with solutions, but more as offering proposals that people will need to evaluate, look at, engage with, and decide if they want in their own cities.'

That changed responsibility for architects, in the face of an altered planet, is a key concern for Ratti. He cites science's very different approach to authorship and collaboration as a preferred model, and words such as collectivity, interdisciplinarity and – again – listening make regular appearances. In his view, the current shift from mitigation to adaptation in response to extreme climates places architecture in a leading role. 'If you look at how we as architects can help following the fires in Los Angeles, the floods in Valencia and Bangladesh, or the drought in Sicily, the only way we can do it is with the built environment at the centre,' Ratti says. 'So somehow, it's going back to the very origin of architecture, with the primitive hut in the forest, protecting ourselves from a climate that's against us… This is something that resonates with the design community – I sense a lot of excitement – but we need to change our mindset.'

**Top left** Living Structure by Kengo Kuma, Sekisui House – Kuma Lab, Matsuo – Iwasawa Lab, and Ejiri Structural Engineers fuses Japanese joinery with AI to turn natural timber into a structural material.
**Above** Manameh Pavilion, by Rashid and Ahmed bin Shabib, Alia Al Mur, Yusaku Imamura, Jonathan Shannon and Vladimir Yavachev, employs indigenous cooling techniques from the Gulf region.
**Below** SpaceSuits.US, by Jeronimo Ezquerro, Charles Kim, Stephanie Rae Lloyd, Sam Sheffer, Emma Sheffer and Emily Wissemann, rethinks insulation via space-suit technology.



I try to convince him that this realignment turns the architect – and Ratti – into a conductor rather than enactor of ideas. He doesn't bite, nor does he accept that it moves architecture firmly into the political realm. 'I like the way Herbert Simon looks at the natural and the artificial worlds: they have a lot of similarities in the way they evolve – in the way that, by trial and error, mutations can be successful or not,' Ratti continues. 'So I like the idea of architects and designers as agents of change, almost like mutagens in the built environment, trying things that can help us to make it more resilient, and can help us live better. Within this framework, you can look at the design process as something open – as in nature, it doesn't have a finished status, but keeps on transforming.'

Despite serious reservations about the ecological impact of temporary exhibitions – thus concerted efforts at circularity this year – Ratti is still a believer in the Biennale concept. 'If you think about labs as places to bring different voices together and develop ideas, physical space – the built environment of architecture – has important components that are not replicated online, where we tend to be much more polarised and hear what we want to hear,' he says. 'A beautiful component is inevitability – even voices we wouldn't answer in the digital sphere, they are there in the physical space and we need to confront them. I think that's an important reason for coming together in general, in cities, and in a Biennale.'

We agree that sentiment makes a pretty good signing-off point, and before boarding he concedes that he will probably switch off after the opening: 'When I participated in the Biennale in the past, that was always a moment for me to get some distance from our work, step back, and see it in the context of a broader network. So, I think that process will be important as a curator, looking at what we've done together, at the unexpected connections in these choral voices.' Which doesn't really sound like switching off – but perhaps flight mode will enforce that.

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The German émigré architect was a trailblazer for postwar modernism, co-designing the Sports Pavilion for the Festival of Britain

# Ursula Bowyer 1925-2025

Ursula Bowyer was one of a small group of women who, after the Second World War, significantly influenced perceptions of the architect and contemporary architecture in England. Joining a profession dominated by men she worked energetically as a practitioner while engaging with diverse communities as an advocate for the importance and value of design.

She worked with her architect husband Gordon Bowyer (1923-2019) for more than 50 years and built a significant practice defined by thoughtful collaboration, a dedication to contemporary design and a commitment to the importance of people and the civic realm.

Born Ursula Meyer in Germany, she grew up in Berlin before moving to England with her family in 1938. At the age of 16, she enrolled at the Regent Street Polytechnic – at the time a particularly lively focus of design – joining a group of students that included Trevor Dannatt and Alan Irvine as well as her future husband. Peter Moro, another German émigré, was one of her teachers. Ursula then went on to work with Jane Drew and Maxwell Fry.

Ursula and Gordon married in 1950 and almost immediately received their first design commission: the Sports Pavilion for the South Bank exhibition of the 1951 Festival of Britain. Their proposal consisted of five canopied enclosures, each highlighting a particular sport, aligned with a river walk across the Thames. The pavilion attracted attention and became a popular destination.

The Bowyers' practice thrived, designing civic buildings that included work at the British Museum, exhibitions, housing and houses. They also attracted international clients including IBM and Max Factor. Projects for hairdresser Vidal Sassoon, first in Mayfair in 1963 and a few years later in Manchester, were widely published. Subsequently they were commissioned to design and oversee the construction of new salons for Sassoon in New York and San Francisco.

In 1950, the couple bought a Georgian house overlooking Greenwich Park, which remained their family home for 74 years, their children Caroline and Martin growing up there. The house and its splendid walled garden also became the focus of community activities. Both Ursula and Gordon were energetically engaged in civic and cultural activities. Together with colleagues in Greenwich and Blackheath, they advocated for contemporary architecture and were instrumental in advancing public appreciation of design in south-east London.

Ursula was an energetic supporter of the Greenwich Society, and her quiet determination and commitment were fundamental to the building of an active community of people with interests in architecture, the civic realm, landscape design and urban development, which continues to shape development today.

She played important roles in the expansion and reuse of the Royal Naval College, which now houses the University of Greenwich and Trinity School of Music. She also worked tirelessly with local communities and government agencies, advising on development and serving as surveyor of the fabric for a local diocese.

In 2010, Ursula was awarded an honorary doctorate of design by the University of Greenwich – recognition both of her role as an arduous campaigner for the preservation and improvement of the Maritime Greenwich World Heritage Site, and her significance as a modernist architect. ●

Brian Carter is professor of architecture at the School of Architecture and Planning, University at Buffalo

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**Paris Exposition Internationale des Arts Décoratifs et Industriels Modernes, 1925**

This year marks the centenary of the Paris Exposition Internationale des Arts Décoratifs et Industriels Modernes. In spite of the 'international' character of the Exposition, French exhibits occupied two thirds of the site. Unlike previous international fairs, the emphasis was not on industrial and technological advancements, but on the role the decorative arts industries could play in providing a 'shop window' for French goods on the international market. The exhibition also provided a showcase for Paris itself, with the general plan utilising existing vistas to 'draw' the city into the exhibition and emphasise its beauty and grandeur.

A predominant style characterised the majority of the buildings, a style that was to have a huge impact on European and American architecture of the following decade and was defined by its contemporaries as 'jazz-modern', 'zig-zag' or 'moderne' – what we now call Art Deco. The 1925 exhibition did not mark the 'birth' of this style but presented it for the first time as the language of modernity on the world stage. ●

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