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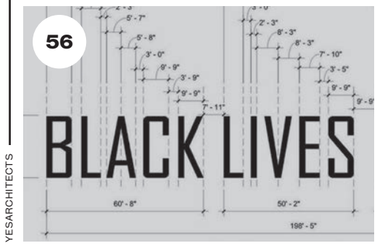

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As business and leisure open up again, what are your most pressing issues: climate, diversity, simply more work? letters.ribaj@riba.org

1: Buildings

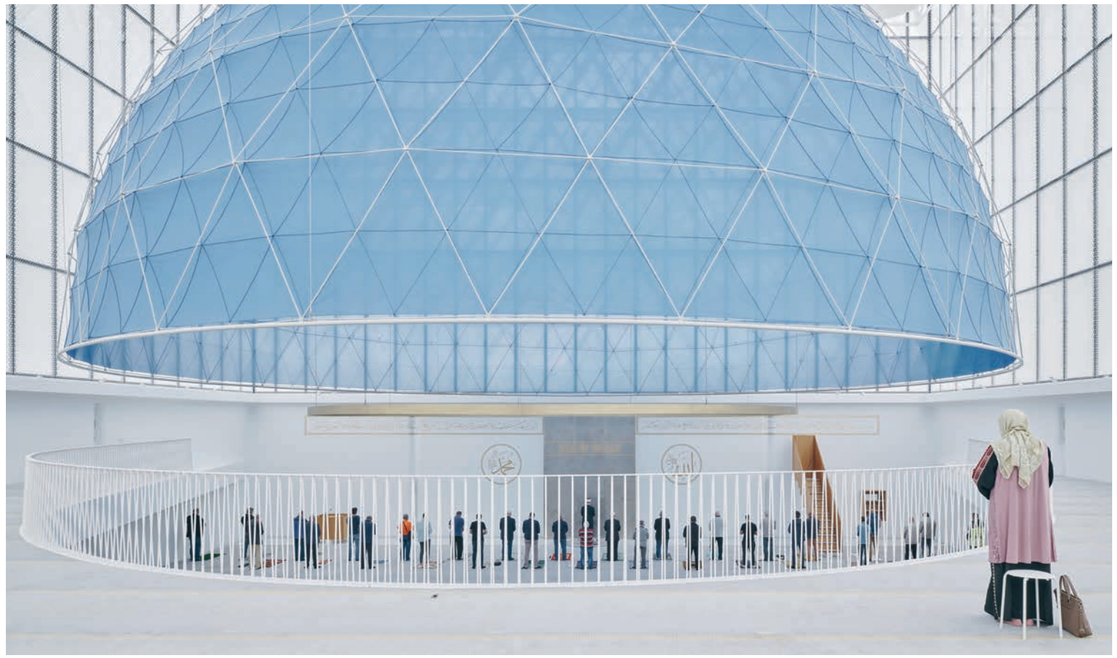
ISLAMIC RELIGIOUS AND CULTURAL CENTRE, LJUBLJANA, SLOVENIA
BEVK PEROVIC ARHITEKTI
Read the full story: ribaj.com/ljubljanamosque

The idea for an Islamic centre in Slovenia had been brewing for almost half a century before it came to life in early 2020. The Islamic Religious and Cultural Centre has been designed by acclaimed Ljubljana-based practice Bevk Perović Arhitekti and is an extraordinary architectural accomplishment, not only in a local context but also in the global architectural and even social milieus.

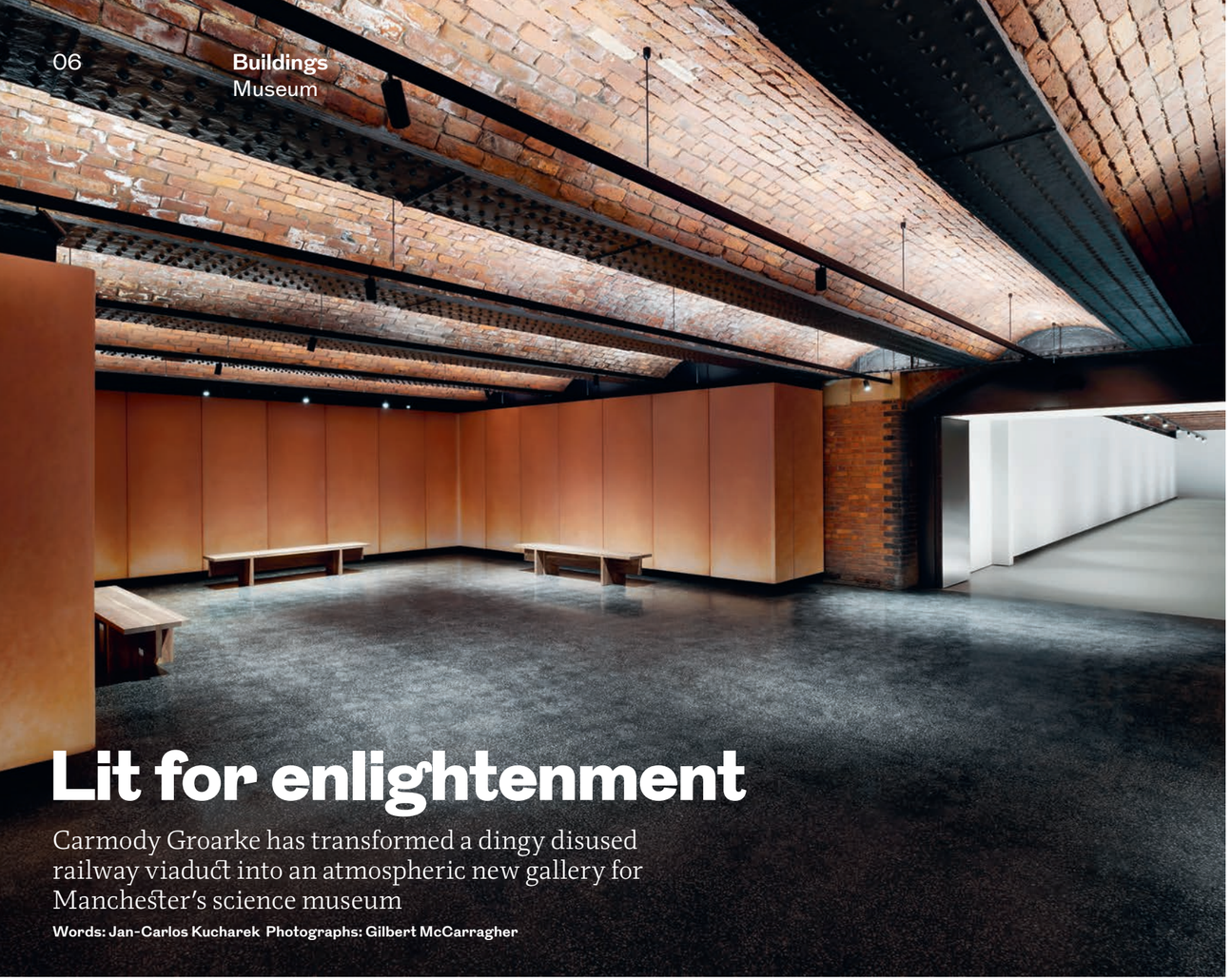
Unusually the architect was able to design the entire plot area, since it was was not strictly defined by city planning and conservation. Bevk Perović's competition-winning design was able to respond to the site as if it were a tabula rasa, referencing the railway and nearby industrial objects. These design intentions reveal themselves in the site's composition as a scattering of displaced separate volumes: a religious school and library building, a cultural hub and office and a residential building for the community's employees, and a standalone minaret with the mosque as the gravitational centre. Their arrangement creates an open space around a slightly elevated courtyard which will, over time, fuse with the city.

The facade of the mosque is monolithic, the welded steel grille finish imparting a simplicity and purity. The cupola is hidden inside the mosque. It is suspended from the ceiling, using a specially refined construction which is covered in translucent blue textile and also carries a thin circular light within, creating a grandiose, chandelier-like composition.

Textile has a long and rich history in Islam; here it works as an allegory of the blue sky and of the fragility of our world. Bevk explains: 'We are interested in the relationship between the compact and the fragile.'
Andrej Strehovec



DAVID SCHREYER



Lit for enlightenment

Carmody Groarke has transformed a dingy disused railway viaduct into an atmospheric new gallery for Manchester's science museum

Words: Jan-Carlos Kucharek Photographs: Gilbert McCarragher

Above Terracotta-coloured, tactile fibreglass panels in the foyer mask the slowly weeping brick walls behind.
Left The backlit panels draw visitors into the new gallery from the Pineapple Line's exposed undercroft.
Right A pigeon grey concrete floor finish benignly offsets the colour and complexity of the flat arched, cast iron structure supporting the museum's New Warehouse space above.

The senses of touch and smell have had a hard rap over the last year, but by way of a partial but prescient redress, Carmody Groarke's intervention at Manchester Museum of Science and Industry actively engages with both haptic and olfactory qualities. Its 725m² Special Exhibitions Gallery, constructed courtesy of a £3.8 million DCMS grant, allows the museum to run world-class temporary exhibitions alongside its permanent installations and is the first part of an ongoing restoration and upgrade masterplan.

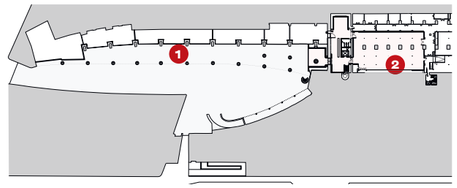
The new gallery sits beneath the disused viaduct of the old 'Pineapple Line' railway, which ran directly into the 1880s-built New Warehouse – now part of the museum campus. The architect has transformed the line's formerly a guano-infested Lower Yard into the new foyer and gallery and connected it to the New Warehouse and rest of the museum above. Architect Andy Groarke explains that, faced with the uncompromising muscularity of the viaduct's low brick arches and heavy composite cast-iron superstructure, the practice chose not to compete but to counterpoint it with lightness, while remaining in conversation with the space's raw tactility. His mention of fibreglass for the backlit panels lining the foyer instantly transports me back to my childhood and the heady pungency of my father's garage, where he mixed tins of Isopon P38 in anticipation of some car bodywork fix. Despite considering possible 'off-gassing', the museum's curators were convinced by Carmody Groarke's argument for its use in this context.

'We thought a translucent material would be fascinating and with fibreglass you can see the quality of the fibres in the coloured resin,' says Groarke. 'It has an unexpected texture – a 'tooth' – and bears the maker's marks within its surface.' With its physical lightness counterpointing the structure around – 'it's backlit and terracotta-coloured but really doesn't look like a brick' – the panels' 'cast' nature evokes more subtle associations with its surroundings. Above them, the run of the Pineapple Line's platforms and rails are 'impressed' into the viaduct's soffit like a Rachel Whiteread writ large.

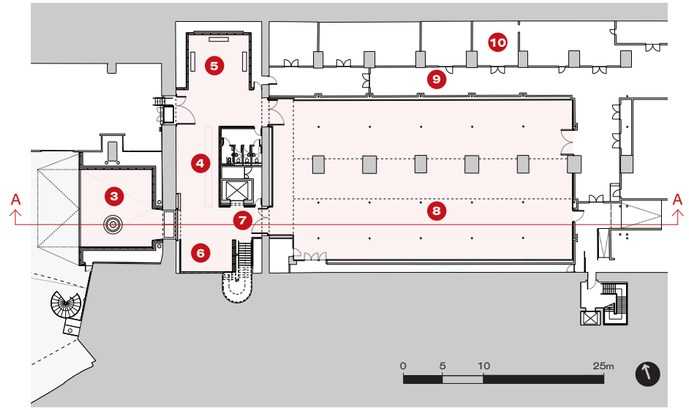
But those tactile cast panels are more than purely aesthetic. Groarke explains that they are also part of the building's conservation management strategy; fixed as they are slightly in front of the undercroft's brick walls, which, half underground, can be prone to 'weeping'. It means that not only can the situation be monitored, but, if necessary, the new structure can be disassembled to allow access. In this regard, they are not hermetic, but a visual foil to the normal process of moisture infiltration going on behind them.

The delicate differentiation continues as much in spatial as in material ways. As the main foyer environment is specific but only moderately conditioned, so the gallery itself is generic but highly conditioned. International gallery standards demanded a hermetic box set inside the line of the existing masonry, and the firm ran with on-the-face-of-it, go-to approaches, specifying the 4-5m tall gallery walls in Fermacell which allows for easy installation of exhibits and attendant repair. Where it diverged from standard, says

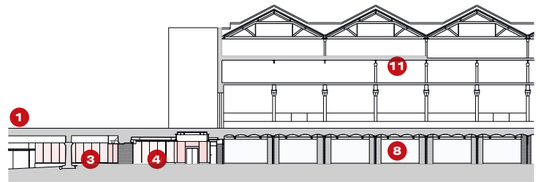
Site plan

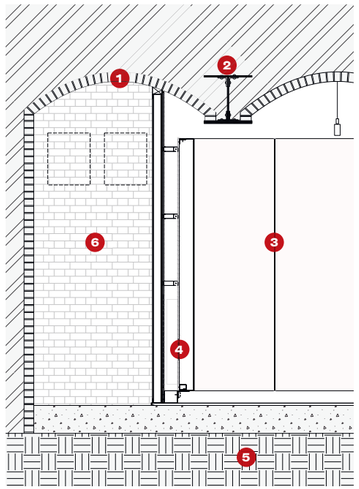


Plan



1 Pineapple Line viaduct
2 Special Exhibitions Gallery
3 Lower Yard entrance from below viaduct
4 Foyer
5 Gathering space
6 Retail
7 Stairs and lift up to New Warehouse
8 Conditioned gallery space
9 Buffer zone
10 Storage/back of house
11 New Warehouse





Section through foyer wall

1 Low brick arch
2 Cast iron beam
3 Fibreglass cast panel face
4 Stainless steel fixings back to floor to soffit studs
5 Cement screed on concrete slab
6 Maintenance gap between existing masonry wall and panel

Above The entrance area of the new gallery draws you in and intrigues with strange materiality.
Right The foyer – minimal materials for trompe l'loeil effects.

Groarke, was in the work the firm did with environmental consultant Skelly & Couch, which aimed to mitigate the gallery's energy demands: 'On the back face of the Fermacell panels we applied a hygroscopic clay product, hygroscopic clay board, which is breathable and absorbs swings in temperature and humidity in a passive way.' In effect, the clay acts as a sponge-like buffer between the existing fabric and the highly conditioned internal environment of the exhibition space, reducing energy demand. 'We felt a sense of duty to give the client scope to turn things off as well as on. If a certain show demands intense conditioning, that can be facilitated; but otherwise, the gallery's materials should be left, as much as they are able, to do their job passively,' adds Groarke.

Leaving things to their own devices seems to be what's going on outside too, where, as much as possible, the viaduct has been left as found, with 'the experience of standing on these damp, dark spaces fundamental to understanding the history of the warehouses'. But the act of drawing the backlit fibreglass panels out into the exterior realm has reaped dual rewards. Not only does it signpost the new gallery space to visitors as part of the wider campus masterplan, but in removing ancillary lighting furniture, they practice has also dispensed with all the roosts and pigeon spikes – another passive approach that has bigger knock-on benefits.

Creating new connections both to itself and, in reconciling the level changes, with the developing St John's and Castlefield neighbourhoods around it, the gallery's inaugural show will soon be able to welcome visitors to its environmentally stabilised, clay-coloured cave, to illuminate the past and offer new light at the end of what has seemed a very long lockdown tunnel.

Rising above the noise

The ingenuity of architects Emily Greeves and Bernd Schmutz unlocks a challenging traffic-bound site in south-west London

Words: Chris Foges Photographs: David Grandorge, Bernd Schmutz

DAVID GRANDORGE

Drive into London on the A3 and just after Roehampton the six-lane highway narrows abruptly to two. Traffic crawls nose-to-tail before coming to a stop at the junction with the South Circular in a cloud of exhaust fumes. Glance to your left and you might notice Suffolk Hall, a large Edwardian apartment building and, adjoining it, a new block of flats. Its faceted facade of red and white brick and steeply pitched roof are recognisable as contemporary interpretations of its neighbour's character. Perhaps the building's form might also betray hints of a struggle to overcome the constraints of the site. What is not so apparent, from the driver's seat, is that the main problem this building has to solve is you.

The block replaces a drive-through carwash on a deep, narrow site that runs between West Hill (the A3) and the equally car-clogged Upper Richmond Road – the A205 – to the north. It was designed by Emily Greeves and Bernd Schmutz, former colleagues at Caruso St John Architects who now have their own practices – she in London, he in Berlin. 'We tried several very different housing types to see how eight or nine flats could be organised in a way that deals with traffic noise,' says Schmutz. 'In the end we chose a plan with a simple logic, and organised the building as two wings wrapped around three sides of a central courtyard.'

Next, the architects manipulated the building's form in response to neighbours on either side. Dual-pitched roofs to both wings fall to the centre of the plot. On the west side these are gabled to mirror those of adjacent houses. To the east the hipped roof leans away from Suffolk Hall both as a deliberate show of deference and to observe rights to light. There the eaves height drops by a storey so that the third and fourth floors are wholly within the roof volume. 'We found the idea of a big roof visually interesting,' says Greeves, 'but it was also the most efficient way of organising the site – a spatial necessity.'

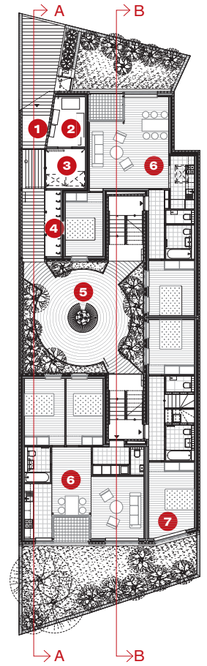
The design of the street facades was not motivated by a duty to be contextual, says Greeves. 'We were more interested in the potential of older architectural idioms to be springs for new ideas.' Above a red brick ground floor, the upper storeys are faced in creamy masonry and articulated by deep bands of pale precast concrete. These sloping sills lend a calming discipline to the elevations. 'The scheme works hard to fit in a lot of different flat types – there's very little slack,' says Greeves. 'Adding horizontal emphasis was important in uniting the composition.'

From a gated entrance on the Upper Richmond Road, a long passageway leads to the central courtyard. Largely hidden from the street, this light and lively patio is something of a revelation. At only 65m^2 it has the feel of an outdoor room: protective and intimate. It is surprisingly tranquil, given the close presence of the road, and with planted beds around the edge and a bench in the centre makes a pleasant place to pass the time. 'We thought of the courtyard like a green foyer to the flats,' says Schmutz. 'It's a gentler, more dignified way to enter than a door on the street.'

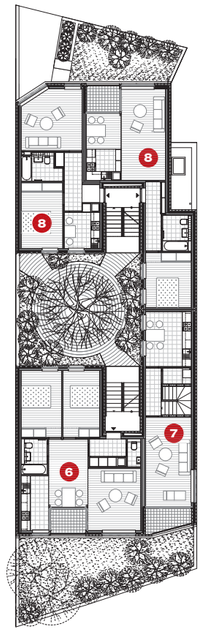
DAVID GRANDORGE

Opposite and below The building's rear elevation faces West Hill, also known as the A3. Its steeply pitched roof leans away from adjacent Suffolk Hall.
Bottom Location plan. The plot extends between West Hill and Upper Richmond Road to the north.

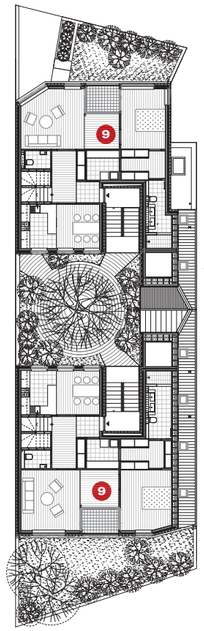
Ground floor plan



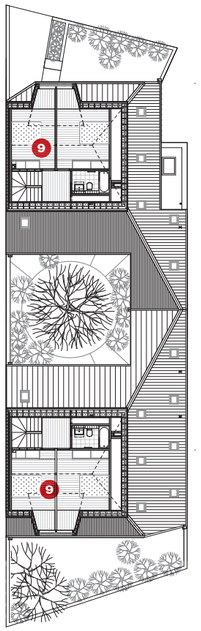
First floor plan



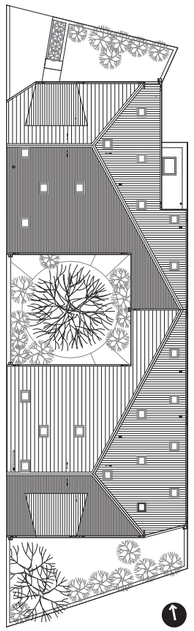
Second floor plan



Third floor plan



Roof plan



1 Entrance passage
2 Plant
3 Bin store
4 Cycle store
5 Courtyard
6 Two-bed flat
7 Two-bed duplex
8 One-bed flat
9 Three-bed duplex

Materially the facades are in deliberate contrast to the outside. A cladding of overlapping off-white fibre-cement panels makes a nod to the white glazed brick lightwells of earlier London housing. It was also influenced by Greeves' longstanding interest in Neylan & Ungless's Setchell Estate in Bermondsey, where two-storey houses are arranged around tiny courtyards clad in a pinkish profiled metal. 'We wanted to give our courtyard an interior quality,' says Schmutz, 'so a thin lining material, almost like a fabric, is used to suggest a certain delicacy.'

At just 8m, the window-to-window distance between flats is barely a third of what is usually required. Fortunately Wandsworth's planners were open to the argument that privacy can be provided in different ways. Greeves and Schmutz wanted to avoid angled windows that would compromise direct views on to the courtyard, and instead hit on the idea of dividing each window into three panes: one of clear glass, one obscured, and the third with a one-way mirror coating. It's

DAVID GRANDORGE

Left Common stair in the south wing, viewed from the entrance to the courtyard.

pretty effective, with the additional benefit of a kaleidoscopic play of reflections that enlivens the space.

All eight flats are accessed via two open staircases in the north and south wings. They range in size from 50 to 133m^2 and, due to the variety of sizes and irregularity of the plan, each is unique. 'One of the fundamental considerations was how to make comfortable housing in that very challenging situation,' says Greeves. 'We felt we had to give each of the flats a proper aspect to the courtyard as an escape from the street.'

The desire to create a feeling of shelter also informed the design of the inset private terraces enjoyed by all but one of the flats. Glazed patios that project into the living area also bring daylight deep into the flats, and divide open-plan spaces into groups of loosely interconnected rooms. 'Some flats are quite compact but we have tried hard to make plans that feel generous,' says Schmutz. 'The internal terraces make each adjacent space feel larger.'

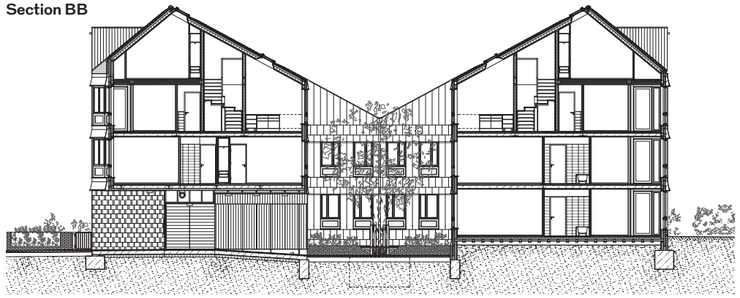
Characterful spaces produced by the geometry of the roofs also contribute to the quality of the flats, as do courtyard views, though these are not everything the architects had hoped. To improve privacy and provide a focal point, Greeves and Schmutz proposed a cluster of mature silver birches in the centre of the space, but the contractor has substituted a skinny sapling.

Trees do grow, of course, but other deviations from the designers' intent can't be so easily remedied. Anticipating that the architects would not be novated, Schmutz produced a full technical description for the tender package. Even so, the catalogue of construction errors runs from lowered ceiling heights and misaligned eaves to damaged finishes.

With so much creative energy invested in the project, the architects' deep disappointment is understandable, but I left the building feeling buoyed by its powerful demonstration of the way that architectural ingenuity can unlock challenging sites. The latest London Plan substantially reduces the target for developing small sites, in part because they are so difficult, but it is hard to see how the required number of new homes can be provided otherwise. We will need much more of the intelligence and sensitivity shown by Greeves and Schmutz at West Hill. ●

Section AA

Section BB



DAVID GRANDORGE

BERND SCHMUTZ

Above North-section sections through common stairs and entrance passage.
Far left Metalwork in the common stairs was inspired by Neave Brown's Alexandra Road estate as well as the work of Giancarlo de Carlo and Jože Plečnik.
Left Inset glazed patio.

Credits
Architects Bernd Schmutz Architekten and Emily Greeves Architects
Technical design and construction consultancy Bernd Schmutz Architekten
Client Pelmex
Project manager RFDM
Structural engineer Elliott Wood
Services engineer Con-serv

A folding balcony overlooks woodland that drops into the valley to the south of the building.

Right The track leading to the Art Barn enters a 100-acre broadleaf wood cloaking the north bank of the River Teign and arrives at the building's gabled east facade.

Surprise outing

A rustic barn in the Devon woods suddenly unfurls to reveal a sculptor's studio and gallery in Thomas Randall-Page's intriguing and detailed design

Words: Chris Foges Photographs: Jim Stephenson

There is no postcode or street address for the Art Barn, an archive and private gallery constructed within a Dartmoor farm building for the sculptor Peter Randall-Page. I am sent a Google Maps pin which guides me to a narrow lane in open country. There to meet me is Thomas Randall-Page, Peter's son and the architect of this unusual and delightful art space.

The barn is at the end of a rough track which runs across fields and into a wood that drops sharply into the Teign Valley. On the way, I learn the background to the project. Peter has lived and worked in this part of Devon for more than 30 years. Ten years ago, seeking a permanent home for his archive and a place to show work to clients and collectors, he acquired a dilapidated 250m² cow shed and entrusted its conversion to Thomas, who was then working at Heatherwick Studio but who has established his own practice during the course of this long project.

The artist's brief was concise, asking that the building retain its agricultural character, and appear as a sealed box when uninhabited, but open up to admit lots of daylight and connect the interior to the landscape when in use.

As the track bends, the building comes into view: the east-facing gable end of a generic modern barn with a gently pitched roof, clad in vertical cedar planks. A group of large stone sculptures in front of a pair of industrial-scale sliding timber doors offers the only hint to what lies within. On the south side, a skirt of galvanised steel visible below the timber cladding and a set of metal concertina shutters offer evidence of the building's remaking, but only subtle clues to what lies inside. 'Part of the fun is the slow reveal', says the architect. 'Visitors approach not knowing what they're going to get, and then the shutters open and they get everything at once.'

There's a lot to take in. Spaces are arranged across three levels, with stone and steel stairs running between them. Low-ceilinged, intimate nooks open onto a lofty white-walled volume flooded with toplight. Slatted shutters cast shadows over walls and floors. There are carefully composed views within the building – between spaces, and of the way that sculptures touch the ground – and far beyond it to the woods and winding valley below. Local, inexpensive or agricultural materials – waste stone, galvanized steel and wood – are deployed in combinations of rough and smooth, light and heavy, and elevated by the attention lavished on every junction and detail.

The profusion of bespoke elements is a result of the evolution of the design over almost a decade – 'slow architecture', Peter calls it – but the main moves were quickly established in a weekend of sketching and model-making following Thomas' initial site visit.

The original structure had been extended twice, on its south and north sides,

establishing a tripartite arrangement onto which the programmatic mix of the Art Barn neatly mapped, with the building divided into three environmental zones, differently adapted for the storage, display and studio spaces.

On the north side, a lean-to shelter now contains a long, narrow store for drawings and maquettes. As the barn is off-grid, a stable climate is provided by heavy insulation, airtightness and sensor-controlled dehumidifiers powered by photovoltaic panels.

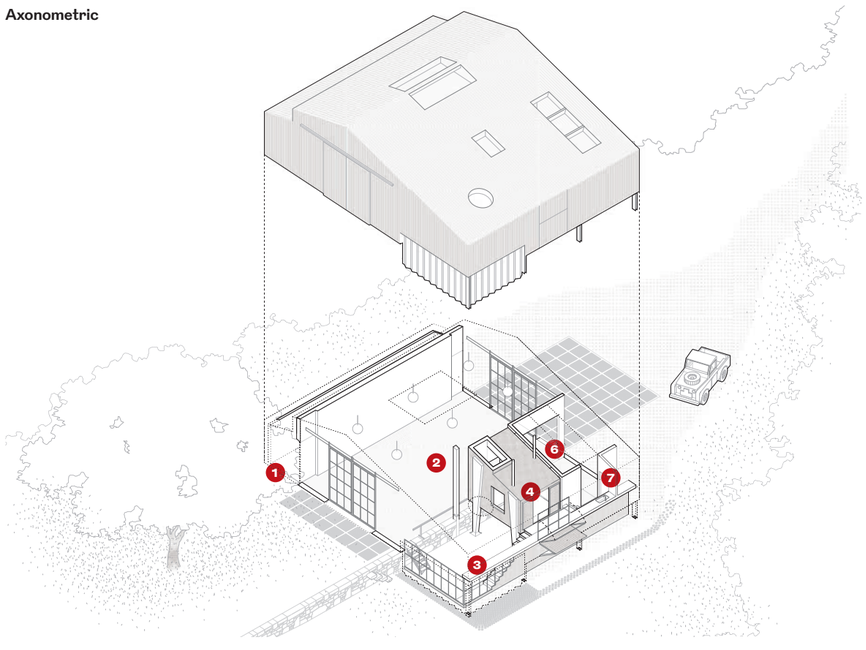
The soaring central space has become an uninsulated, unheated sculpture gallery. At each end, sliding timber shutters protect delicate glass and steel doors large enough to admit a mobile gantry crane. These openings frame views of distant hills, and with both doors open, woodland scents waft through the gallery. Outside, granite patios extend the exhibition space into the landscape.

The barn's southern extension has been more radically remodelled. At one end, a curtained doorway leads to a kitchen and composting toilet. Below them, a new basement provides secure storage for valuable bronzes. In the south west corner of the extension, where the earth floor stepped down by about half a metre, further excavation has created a more emphatic half-level drop between the gallery and a wood-floored entrance hall. A Dartmoor granite retaining wall makes a distinctive demarcation between the lower and upper levels, and extends through a large window into the landscape, joining terraces that correspond to the interior.

Creating additional headroom also allowed Thomas to squeeze in a curious-looking cabin that stands on four tapering timber legs. Warmly wrapped in dark cork and heated by a wood-burning stove, it makes a cosy workspace. Known as the Winter Studio, this timber-lined room-within-a-room makes a conscious allusion to Antonello da Messina's St Jerome in His Study, and has an animal-like character that suggests some continuity with the building's past life.

The stairs that rise to the studio are characteristic of the richly inventive details found throughout the building. At the base, six polished stone steps terminate the low granite wall that rings the entrance hall. It was constructed by Peter's team of masons who achieved tight joints between pieces of rugged natural stone by painstaking trial and adjustment. Above, a lightweight galvanised steel flight hangs from a bespoke

Axonometric



IN NUMBERS

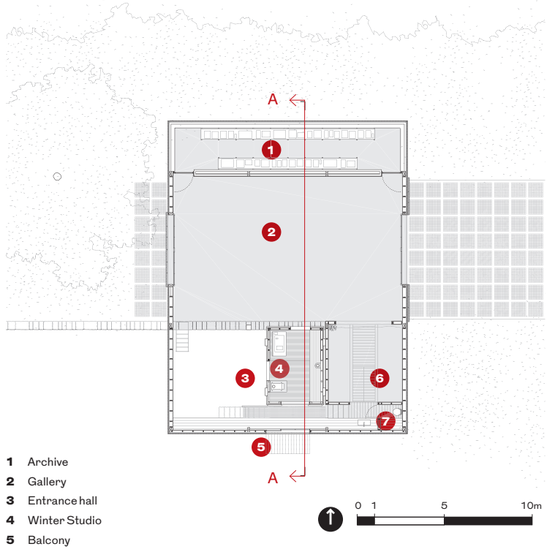
250m²
gia

0kgCO₂/m²
annual emissions

£800/m²
construction cost

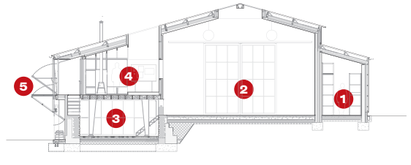
Left The cork-clad Winter Studio overlooks the toplit gallery.
Right A retaining wall running from inside to out was constructed from granite spoil from the disused Blackenstone Quarry, also used to build Lutyens' nearby Castle Drogo.
Below right Stone and steel stairs ascend to the Winter Studio.

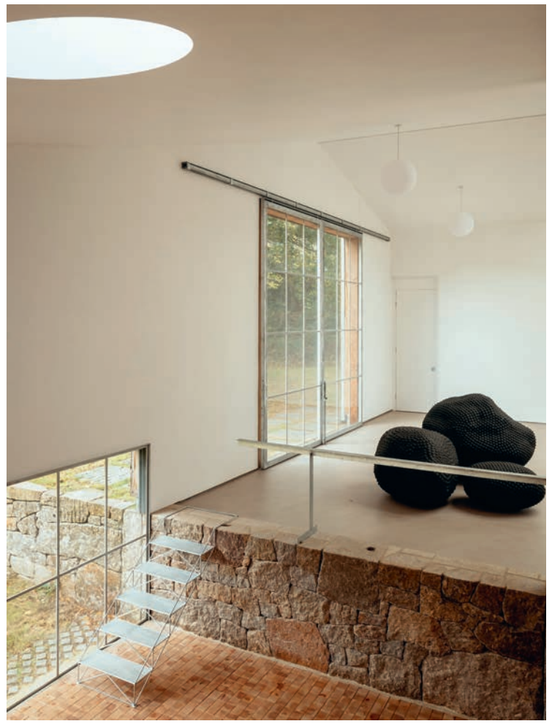
Ground floor plan

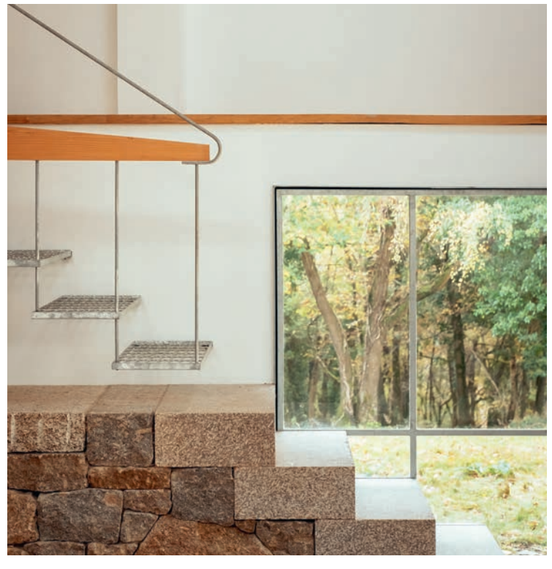


1 Archive
2 Gallery
3 Entrance hall
4 Winter Studio
5 Balcony
6 Store
7 Kitchen and toilet

Section AA







bracket. Both were fabricated by a local company whose normal fare is farm gates and livestock pens. It also made slender window frames, chunky door handles and bolts, a space-frame stair and other items.

From here other intriguing marriages of materials are visible: the legs of the Winter Studio sit on flared granite 'hooves' – roughly scored with a grinder in a nod to the stone-cutter's art – and a Douglas fir column supporting the roof is neatly notched into a granite post.

At the top of the stairs, another custom-made component exemplifies Thomas' interest in the dramatic potential of moving parts in buildings. With a gentle push, a section of cedar cladding folds sharply in the middle to form a balcony overlooking the valley, operated by a hidden assembly of cables and counterweights.

Figuring out the mechanism was just one of many absorbing mini-projects made possible by the unhurried pace of the barn conversion. But why has that taken so long? It was partly a consequence of fitting work for a family member around other commitments, says Thomas. Economy too: with the architect acting as main contractor and a member of Peter's studio team, PJ Dove, as project manager, and making components instead of buying them, the building was delivered for just £200,000. Perhaps just as important, father and son have enjoyed the journey. 'It's been such a luxury to have time for thinking, talking and drawing', says Thomas, 'and I do like buildings where the ratio of thinking-time-per-square-metre is high.'

Even with the constraints of an existing structure and a tight budget, the relaxed brief and deadline might easily have led to a building overburdened with ideas. Instead, the architect has used that freedom to hone and refine the project's language and logics, drawing apparently contradictory qualities into harmonious tension: the building is both ordinary and precious, serious and playful, simple and sophisticated, Art and Barn.

Credits
Architect Thomas Randall-Page
Client Peter Randall-Page
Structural engineer Spencer House
M&E consultant Richard Power
Stonework Jeremy Greaves Stonework
Steelwork Earp Engineering

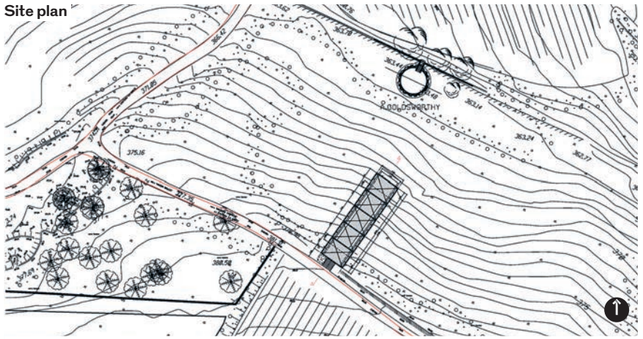
Above A 24kW stove placed in a seating area below the Winter Studio is fed with logs from the surrounding woodland.
Left Windows in the Winter Studio overlook the entrance and gallery, while daylight is supplied by a rooflight and sliding doors onto the building's folding balcony.

RSHP leaps out

Richard Rogers treats his cantilever with characteristic style in his final project, but the gallery poses some timely questions as well

Words: Eleanor Young Photographs: James Reeve

Site plan



IN NUMBERS

Undisclosed
cost

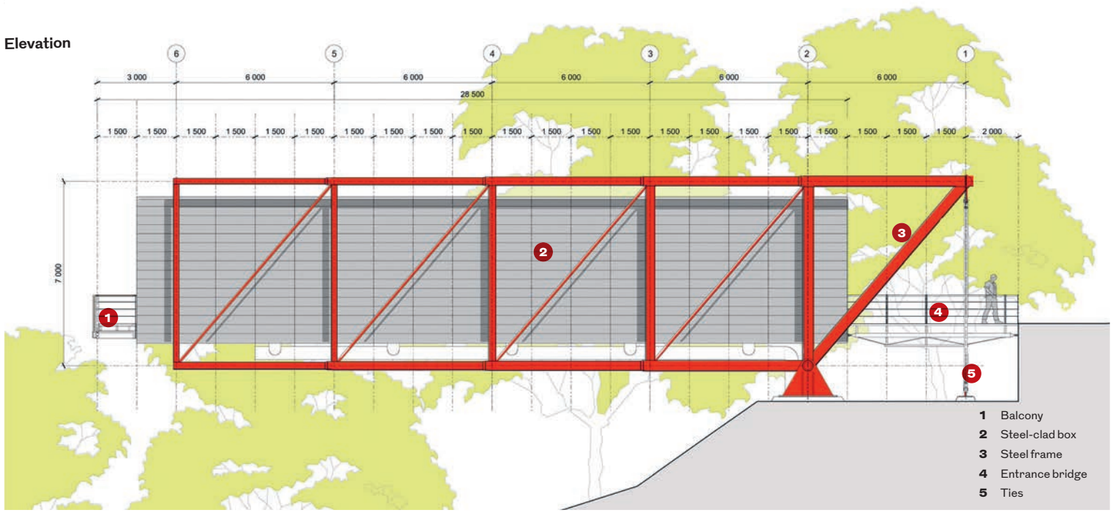
120m²
gross internal floor area

27m
cantilever

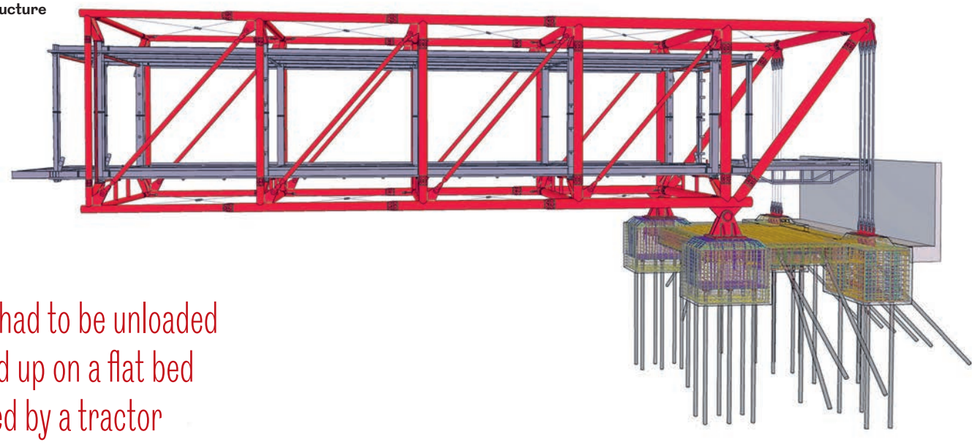
18m
drop

Right Steel sections taper towards the end of the cantilever. Hand-tightened bolts are hidden in the layer of holes.
Below right A total of eight ties keep the cantilevered gallery anchored to its concrete foundations.

Elevation



Axonometric of structure

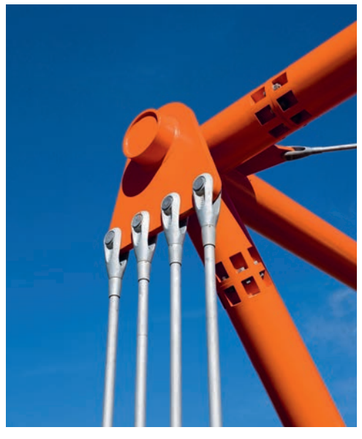


Everything had to be unloaded and dragged up on a flat bed trailer, pulled by a tractor

Taking a walk around a hotelier friend's estate in Provence, Richard Rogers found a site for a drawing gallery, 40 minutes walk from the main buildings, where the Roman road rose up to the edge of a ridge. The gap in the trees would be a good spot for a look out – over the estate towards the Luberon Mountains. That was in 2011, then three years ago the friend and sometime client, Paddy McKillen, came back to Rogers Stirk Harbour and Partners, ready to add a Rogers building to his collection at the Château La Coste.

You need to know Château La Coste (and McKillen) to understand the building. Around half an hour from both Marseille and Aix-en-Provence, it is a vineyard and hotel with a live architecture and landscape experience, and high class food and drink to match the work of international starchitects. There the Tadao Ando Arts Centre, a gallery dug into the terroir by Renzo Piano Building Workshop and a wine cellar clad in mirrored red metal by Jean Nouvel. You can sleep in one of Jean Prouvé's demountable houses, adapted with pods by RSHP. McKillen himself has a track record in redeveloping luxury hotels and RSHP has collaborated with him on projects at Berkeley Hotel in London's Knightsbridge since 2006, where it is currently working on a major overhaul.

This drawings gallery had a very open brief. Of course it had to be conditioned so it could display precious drawings, but its size was decided with McKillen sitting in Rogers' London home; it was agreed that a domestic scale worked – twice the length of the living room (so a total of 24m) and about the same



JAMES REEVE

STÉPHANE ABOUDARAM

width (5m). And the budget? It was never mentioned, says RSHP associate partner Stephen Spence.

Rogers' effortless sketches show the simple form shooting off into space. The photos show the same dramatic 27m cantilever in among, and above, the trees. This building has been labelled by the practice as Rogers' last project before he retired from RSHP. Digging into the work behind bringing this building to realisation seems almost disloyal to the idea of it. But the whole building, and the cantilever in particular, was hard won.

Spence describes the sketch form cantilevering off the ridge. Like many simple ideas it wasn't simple in execution. Initial thoughts were that it could simply be craned in as a single unit, but the access wasn't good enough. Single lengths of steel were too long to get to the site. Everything had to be unloaded and dragged up on a flat bed trailer, pulled by a tractor. So what where the options for the frame? Could short steels for the exoskeleton be welded together? The architect wanted to avoid the quality issues of on site welding so that was no go. So the 6-8m lengths of steel had to be bolted. For Spence this is perhaps the most memorable detail of the project. Fearing the clunky, overbearing, bolts and the plates would dominate the building, RSHP inset the bolts in the steels and hand tightened them, rather than using a bolt gun. This keeps a simple look on a small building.

The real grunt work through 2020, in the heat of summer, was invisible to the design team who were grounded in London by the pandemic. There was a trip in January 2020 to Portuguese-based steel fabricator Bysteel to see the mock up in factory, and a flying visit when restrictions were relaxed in August, before the installation of the eight tension cables that anchor the form into deep but tiny foundations. It is clear to Spence that it might never have happened at all during Covid if it were not for specialist engineer Michael Hasson, who translated the drawings, in detail, into a Tekla model that was issued to Bysteel. While the architects couldn't get to site fortnightly to check progress, this model meant many issues were already resolved.

Within the orange steel frame sits another box (Rogers liked the box in a box notion, says Spence). Made of timber insulated panels and clad with naturally finished satin steel it has a certain shine to it with the green of tree reflections in the summer. You enter across a lightweight bridge (along with all the services, slung underneath).

Inside, the gallery is a single volume. And a single window. At the moment the exhibition is all view, the focal point from the moment you enter, of the Luberon Mountains ahead. As you are drawn out to the shaded terrace at the end, you can spy the cluster of buildings at the centre of Château La Coste.

There are fundamental questions to ask about this gallery and its forest location begs the first. Why was it built? And why here? Its clarity points to its minimal functionality – a single volume with not a loo in sight and even the plant room hived off into another volume. A wild wee don't seem to fit with the luxury image, even for those on foot who are taking the art and architecture tour. (The observation deck being developed nearby by the Norman Foster Foundation looks an equally unlikely candidate for a loo stop.)

This building is only tangentially about function, it is an object for show, rather like the Tracey Emin and Ai Wei Wei installations also on the estate. It is part of encouraging visitors to spend longer, to spread out from the centre, to come back another time. Was a mass of steel needed to do this, could it have at least been a gesture with lower embodied carbon? Perhaps, but not as it was conceived, timber wasn't a possible structural substitute given summer wild fires.

As a folly, it is hard to justify in a time of climate crisis. But as we debate even the possibility of foreign holidays in our second pandemic summer, I do think rather dreamily of hiking round the estate and seeing all these pieces under a warm French sun. ●

Right A single volume gallery space turns the view towards the Luberon Mountains.
Below The box structure projects to give shade and a protected eyrie over the trees.

JAMES REEVE (2)

Credits
Architect Rogers Stirk Harbour + Partners
Local architect Demaria Architecture
Client Château La Coste/Paddy Mc Killen
Structural engineer Lang Engineering Consultancy
Project manager Rainey + Best
Steel Works Bysteel
Building enclosure Setanta Construction
Specialist engineering Hasson Engineering Solutions
Local engineer ATES
Internal fit out SCEA Château La Coste, IDME France, ACM France

We're all in this together

John McAslan & Partners has given professionals from all parts of the health economy a serene and elegant place to collaborate at Lancaster University

Words: Ged Couser Photographs: Hufton+Crow

The Health Innovation One (HIO) building at Lancaster University is all about fostering collaboration. That hasn't started yet, thanks to the pandemic. When I visited, most of its inhabitants were delighted locals filing through the ground floor to receive their Covid-19 vaccinations, which is wholly appropriate given that building's primary purpose is to improve preventative healthcare.

Designed by John McAslan & Partners, the £41 million HIO is a focal point where stakeholders from the wider health economy – academics, industry, health and care providers, the voluntary sector and local authorities – can come together to improve health, in line with the aims of the UK's industrial strategy and the NHS long-term plan. It is the first piece of an 11ha health innovation campus also masterplanned by McAslan. As the university already has a well-developed

Left and below The massing of the 8000m² building is intended to reduce its visual impact on the landscape.

campus it is expanding to the north west onto a greenfield site surrounded by open countryside.

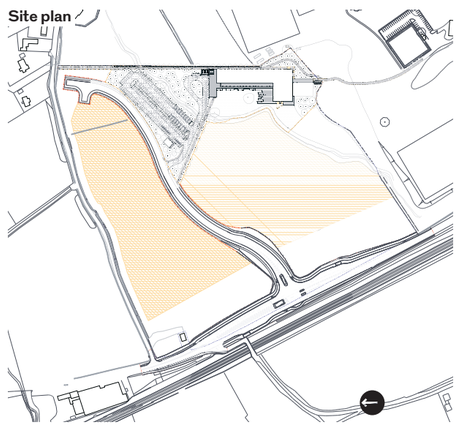
The pavilion-like HIO relates very successfully to its gently undulating landscape setting. Straddling a storey-height step in the terrain, it is a five-storey block of reception, social and teaching spaces set into the earth bank, so that it appears embedded into its site. Two fingers of office and teaching space extend north and south, with the larger – a four-storey block – on lower ground. Along with a stepped section, this move minimises HIO's visual impact, which was particularly important because of a listed building on a nearby hill.

The L-shaped plan embraces a mature oak tree next to the main entrance, surrounded by hard landscaping. McAslan's landscape architect has embedded the building in the terrain with a planting strategy aimed at biodiversity, but there are missed opportunities on the building itself. At first-floor level there is an expanse

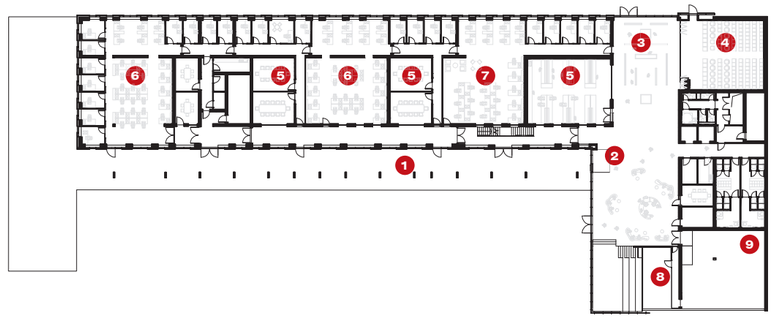
Credits
Architect John McAslan & Partners
Structural engineer WYG
Services engineer WYG
Project manager Identity consult
Planning consultant SDA Consulting

Suppliers
Curtain walling Metal Technology
GRC panels Telling Norskreen
Rooflight Lareine Engineering
Acoustic rafts Ecophon
Timber panels UK Acoustic Systems
Ceramic flooring Solus Ceramics
Carpet tiles Forbo

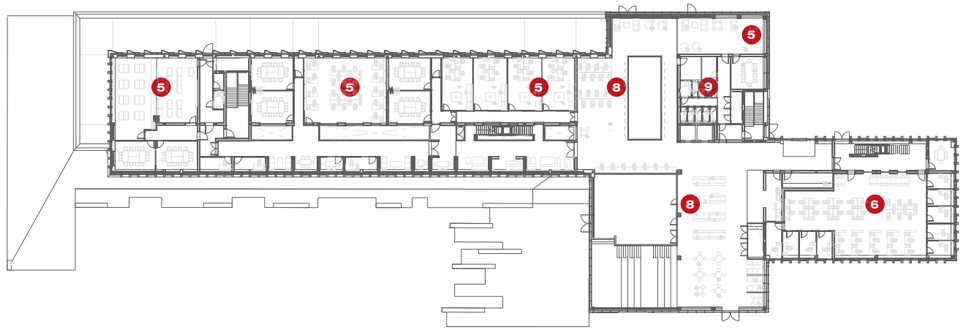
Site plan



Ground floor plan

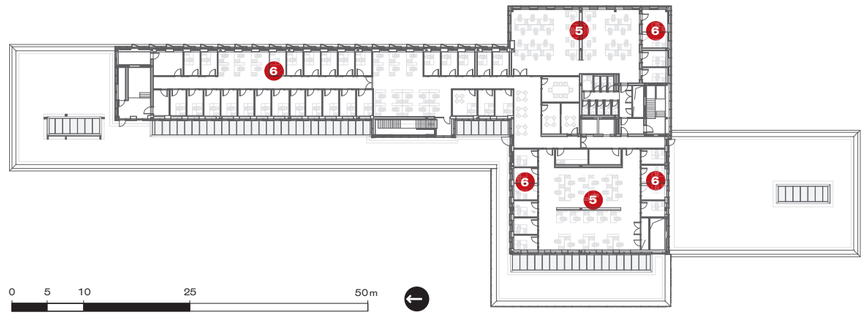


First floor plan



Second floor plan

Third floor plan



1 Colonnade
2 Main entrance
3 Café
4 Lecture theatre
5 Teaching
6 Workplace/research
7 Business
8 Shared space
9 Ancillary space

0 5 10 25 50m

The planting strategy aims at biodiversity, but there are missed opportunities on the building itself

of flat roof that would have been perfect for planting, or perhaps even made an accessible terrace offering spectacular views of the landscape.

Facades are composed with a very restricted palette of materials including white concrete and bronze anodised aluminium panels. With machine-cut patterns derived from tree foliage they are effective in helping the building to fit into its context. Where the perforated panels are placed over glazing for shade, the patterns of light streaming through and playing on the white surfaces within are very beautiful.

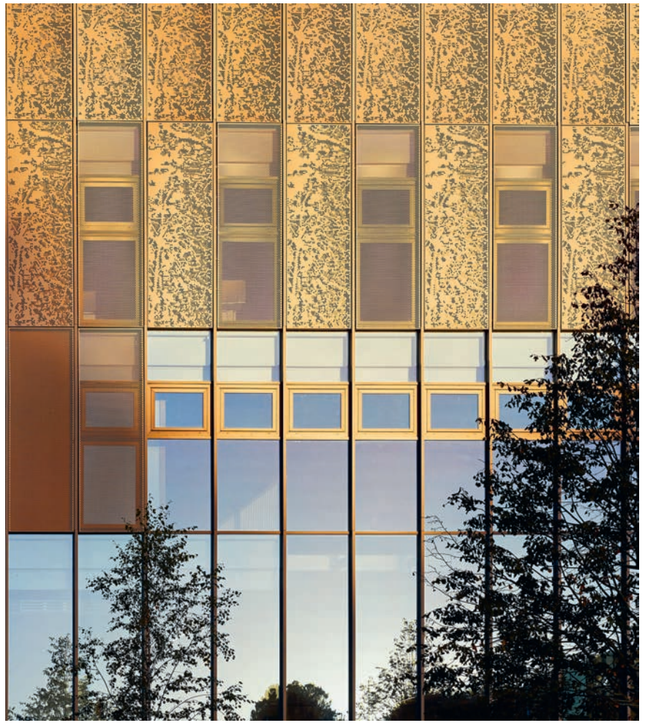
A colonnade along the main elevation helps to establish a collegiate or even civic quality, and leads the visitor from the car park at the north end of the building to the main entrance in the glazed north facade of the five-storey block. Inside, a café and lecture theatre have views of woods and hills to the east. To the right, within a multi-functional teaching space, is a 'Hellerup' stair – a broad timber flight doubling as auditorium seating – which is duplicated in concrete on the earth bank that rises on the other side of the curtain wall.

As well as teaching space, offices and shared workspaces, the building has various meeting rooms and event spaces designed to promote collaboration, including a dedicated innovation lab and business lounge. The distribution of these spaces throughout the building should be effective in encouraging interactions and lending a sense of life. While promoting integrated working, HIO is also the new home for Lancaster University's medical school and division of health research, so has state-of-the-art teaching facilities, including a simulated hospital ward within a clinical skills centre, and a well-equipped anatomy suite.

The plan is simple and elegant, with the circulation radiating from a central triple-height space. The workspaces are all enclosed from the general circulation, which is probably a consequence of the number and variety of independent groups and organisations using the building, but it does create a relatively introverted atmosphere. There are also a large number of single-person offices, notably on the third floor, where they are arranged on a long double-loaded corridor. These are difficult to get away from in the healthcare sector, largely due to cultural traditions of space ownership, and are always a challenge to deal

Above and below
Timber-lined meeting areas align the top-lit principal circulation route.
Right Filigree aluminium panelling drawn over the curtain-walled facade to the main reception area is intended to create a sense of ceremony on arrival.

The patterns of light streaming through perforated panels and playing on the white surfaces within are very beautiful



Above and right
Facades are composed of concrete panels interspersed with perforated anodised aluminium ventilation panels. 'The warm hues and natural tones of the materials play well with the changing quality of light throughout the day and the seasons, discretely animating the facades', suggests the architect.

with as a large number of small rooms is generally circulation-hungry. At HOI, however, the social and collaboration spaces threaded throughout the plan more than compensate for that.

On the first and second floors the main wing is split into three sections, with workspaces and meeting rooms on the east side and open plan collaboration spaces on the west, separated by a full-height void with bridges linking across. It's a neat and readily understandable organisation reminiscent of Hodder & Partners' Stirling Prize-winning Salford University Centenary Building. The small timber-lined meeting spaces aligning the central corridor are particularly successful; their floor-to-ceiling glazing gives incredible views out.

Throughout, the interior spaces are considered and elegant. The restricted approach to materiality evidenced in the envelope continues within, where exposed precast concrete soffits and slatted oak wall panelling are the order of the day, working particularly well with the bronze anodised aluminium visible through the windows. Double- and triple-height spaces accommodating the various breakout, flexible teaching and cafeteria spaces all have fabulous landscape views, although perhaps more could have been done to physically connect those spaces to the outside.

The building is BREEAM Excellent, as you might expect, given its focus on health and wellbeing. It's mostly naturally ventilated, with perforated anodised panels facing up very well-crafted ventilators. In fact, it's a very well-made building all round, and the simplicity and elegance of its construction has a calming effect. An abundance of daylight helps too; long strips of roof glazing provide fantastic top light to the social and circulation spaces.

As pandemic restrictions mean that the building is not yet operating as planned, understanding how it might work in practice requires some speculation. But the quality of HIO's spaces and fine landscaped setting were self-evident, and I have every confidence that a collaborative, innovative approach to healthcare teaching, research and delivery will thrive in the building, which is a triumph. ●

Ged Couser leads the architect profession group in BDP's Manchester studio. @gedcouser

Eye Line 2021: call for entries

Don't waste your lockdown fantasies and imaginings: enter our drawing competition and join an illustrious canon

Proving that the pandemic need not be a bar to your creativity, Eye Line 2021, RIBAJ's annual, international, free-to-enter competition showcasing the best drawing and rendering skills, is now open for entries. As ever, we ask for images in two categories – student and practitioner – that brilliantly communicate architecture, in any medium or combination of media. And this year we are looking for work that communicates the agit-prop of resistance to the sense of atomisation that we have all experienced over the last year.

We are looking for images of all kinds, from hand-drawn concept sketches to technically proficient and layered renders. For us, 'drawing' includes any method by which the power of an architectural idea is communicated. This includes depictions of existing buildings as well as works of the imagination.

Practitioners and students enter in different categories.

- Student category: images made by those in architectural education or who are submitting images made before final qualification.
- Practitioner category: images made by those fully qualified and working in practice, whether for real-life projects or to explore ideas and experiences.

National safety guidance permitting, the intention is to exhibit winners and commendations at the RIBA following a winners' event there and will publish them in print and online. Our colleagues at the RIBA's Drawings and Archives Collection, based in the Victoria and Albert Museum, will inspect our winners for potential inclusion in the collections.

Last year's practitioner winner was LA-based architect Albert Orozco for his stunning 'Platform for Imagined Ruins', a render that effortlessly played upon scale, reality and mythology. And student winner was Arinjoy Sen from the Bartlett School with a beautiful and beguiling series of renders that took the Kashmiri craft of carpet weaving to graphically investigate past histories and future potential. Commendations in all media touched on lockdown, the British and Portuguese landscape, improving classicism – and Bergamo.

Every year we are gratified by the originality, wit and talent represented in the Eye Line entries: a truly international, free-to-enter award conducted online. Practitioners and students – show us your best drawings and join a prestigious cohort of past winners and runners-up.

Above The sublimation of Kashmiri carpet weaving and Mughal painting created the spatial studies that clinched last year's Student 1st prize In Eye Line for the Bartlett's Arinjoy Sen.

EYE LINE RULES

We seek the best 2D representations of a building design or concept through visual means. They may be hand or digitally drawn, incorporating collage or any combination or overlay of methods. Video and straight photography excluded.

Enter in either the student or practitioner category. The RIBA Journal reserves the right to reallocate to a different category if deemed necessary.

Maximum of three images per entry, which can be from different projects, or all from the same project.

Joint entries on which more than one person has worked are permissible.

All entries must be uploaded via the link below. We cannot accept physical works. Images must be at 300dpi, file size maximum 25Mb.

The work must have been produced within the three years up to the closing date of Monday 7 June 2021, and 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 work.
Name of organisation where author works or studies.
Email, postal address and phone number.
Dimensions of the original work as presented (or as you would wish it to be presented) in mm.
Date it was completed.

Key dates

Deadline: Monday 7 June 2021, 14:00
Judging: end June.
Winners and commendations announced: August 2021 issue of RIBAJ and online.
Exhibition (provisional): August/September

eye line

2: Intelligence

Places, planning & community

Pooja Agrawal

IVAN JONES

Pooja Agrawal takes up the role of chief executive of Public Practice in June. She talks about the successes and ambitions of the organisation she co-founded and its impact on local authorities and the profession

What is Public Practice?

It's a social enterprise offering one-year placements in local authorities to built environment professionals. The intention is not to recreate the borough architect; it's to build the capacity for design thinking in local government. In three years we have placed 176 associates with 46 authorities, and now recruit a new cohort every six months. Over 90 per cent of associates stay in the public sector beyond the end of the placement.

You are joining as CEO but were also involved in the foundation of the organisation. How did that come about?

Working as an architect I was frustrated that key decisions about the built environment are made before you get your brief, and I joined the Greater London Authority five years ago. There, we developed the idea of Public Practice. When it was set up under the leadership of Finn Williams I joined the board, but have been working elsewhere, most recently at Homes England.

Do you detect a growing interest among architects in working in the public sector?

Absolutely. The number of applicants to Public Practice grows significantly in every round, and more people are applying directly to local authorities. Many architects have a sense of social purpose but can't pursue it in practice; my peer group was keenly aware that young architects who couldn't afford to rent a flat were designing posh lofts that remain empty for years. We also have associates who want to improve the places where they grew up. When I studied architecture the public sector was not on my radar. Now students see architects in those roles, and think of local government as a valid career option.

What are your plans for the organisation?

We are well established in the South East; the next step is to grow nationally. In the near term, we have just launched the call for applications for placements starting in October; details are at publicpractice.org.uk.

Where are the greatest opportunities to improve local government with design thinking?

Local authorities are moving into recovery mode and thinking about the future of high streets and town centres. Other areas of focus include community engagement in planning, and how to hit net-zero carbon by 2030. The relationship between health inequality and housing shows that design should be part of the solution to major social problems. In any major national story – Covid, Grenfell, Black Lives Matter – the built environment is integral. Architects in local government have the exciting responsibility to ensure that spatial aspects of social issues are addressed at political level.

ONLY ON RIBAJ.COM

The shift in the share of work from London to the South East, the Midlands, and then the North is quite clear in commercial sector work... and residential work is flowing out of London, with the North picking up a larger share

Brian Green explains how construction could affect Red Wall voting: ribaj.com/redwallvotes

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

Conservation & heritage

Design, construction & technology

What we did this weekend

Steve McCloy and Bongani Muchemwa are so serious about making design fun that they do it in their spare time

Words: Eleanor Young Portrait: Ivan Jones

Bongani Muchemwa and Steve McCloy with the bamboo-framed bike they designed – and which McCloy cycled down to the Thames shoot.

How do you start up in practice? How do you define what you are interested in, your value to the world, your (horrible phrase) USP? And what part does your own background have in that? For Steve McCloy and Bongani Muchemwa it was finding each other on the first day of university at Leeds Met that started it all off. Both boys had arrived in the UK in their teens from Africa (McCloy from Kenya and Muchemwa Zimbabwe) and were navigating a new world. 'We were fresh to what the UK and Europe was about,' says Muchemwa.

They are still fresh in the sense of being very open to conversation and ideas, telling stories, speculating on next steps for their fledgling practice McCloy + Muchemwa and whether they can make it happen while they both still have jobs elsewhere. But it is worth following them through the journey.

By their third year at Leeds they were pushing boundaries with their projects. Now they knew that they wanted to be where the action was – 'one of those fancy London schools' as seen in the Bartlett Designs book in Waterstones, or in the work of President's Medal winning students from Westminster.

Before that though they needed a year out to get to know the ropes. Muchemwa landed a plum year out at Rogers Stirk Harbour and Partners, he was 'over the moon' to be accepted and become part of the cosmopolitan office of his hero – 'everyone was as foreign as I felt'. Though first there was trial by River Café as he was taken to the restaurant by RSHP founding partner Mike Davies on the first day. 'My immigrant, working class roots showed up,' he laughs. 'Duck was ordered and I asked for ketchup.'

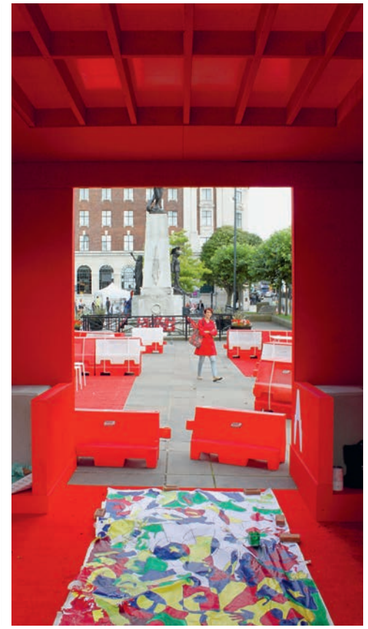
McCloy's first class degree was going to waste until finally in the November of his year off he found himself having to choose between a job in rural Norfolk and working on Harbin Opera House with MAD Architects in Beijing. He chose China.

So there they were, McCloy and Muchemwa sharing a flat in London. In fact sharing a bedroom for two years thanks to prohibitive London prices. McCloy became one of CJ Lim's 'drawing soldiers', studying in his unit at the Bartlett, Muchemwa absorbed himself in Westminster's traditions.

AHMM and CZWG gave them their grounding in practice, enough project work for part 3 and time to build relationships as future collaborators (McCloy + Muchemwa's recent competition scheme for Brick by Brick in Croydon was working with CZWG). They both appreciated working for reasonable practices with reasonable work hours – how else could they have developed their own experiments? 'We got home at six and could do stuff then, or at the weekend,' says McCloy.

Through the conversation they reveal how amazed they are by the generosity of the network around them. Their first built project came via tutors in Leeds in the shape of a quick turnaround competition, a pavilion for the reopening of Leeds Art Gallery. But did it need to be a pavilion? McCloy and Muchemwa thought it could be more and turned it into three little covered spaces using the red of road barriers – and plenty of the barriers themselves – to create Redscape. Being able to play around with ideas and costs meant

They are amazed by the generosity of the network around them



MCCLOY + MUCHEMWA WITH DLA ARCHITECTURE

Top and above An early project, Redscape, a landscape and pavilions for the reopening of Leeds Art Gallery, using hired road barriers.

They don't say things – they sing them out, then dance on the table

MCCLOY + MUCHEMWA

they were able to put half the pavilion budget into activities, red bean bags, hula hoops and red toy buckets, all of which had an afterlife in the gallery. Hiring the barriers meant less waste too. And the red crocs they bought for the opening? They were just fun.

If you pull together McCloy + Muchemwa's public projects and their drawings you see a colourful, inventive, high energy, cartoonish approach. Their benches at the Royal Docks in London were supported – and defined – by donated orange buoys. They don't say things – they sing them out, then dance on the table. And you want to be part of the party. But scrolling back to an early house project you can see a different sort design, where pavilions with delicate sylvan columns become part of the landscape. Perhaps what they are really about is not just fun and brightness, but a desire to take things apart and put them together quite unexpectedly.

Since Redscape they can count 75 bids. Increasingly they are working with others on larger projects, with Office Sian on its Leabridge Library bid, with Office S&M, with Freehaus, and potentially with some Stirling winners who approached them on one bid. It feels like a big friendly world of frameworks and exciting networks, but Muchemwa is aware they are in a Catch 22 of not having had delivery experience – which makes it hard for people to believe that they can do things. In fact, as you dig deeper into the conversation and the idea of public service and talk of capital allocations, issues like self-funding projects and consultation come to the fore.

It is here that the influence of conversations with the Greater London Authority, and a place on Croydon's BAME-led housing competition shortlist, surface. Muchemwa thinks 2020 could cause a culture shift: 'It is good that you don't necessarily have to know the right people, and operate in their social milieu… I don't necessarily think it is a race thing, more a class thing.'

In that way these two Africa-born architects are a pair, Muchemwa goes as far as describing them as a 'multi-ethnic Siamese architect'. And perhaps one day they might start capitalising on their roots, instigating projects in Africa, not just the UK. 'It is our secret plan to work in Africa,' says McCloy. Whether it can be done in weekends, and when to leap from their salaries at Hugh Broughton Architects and Burwell Architects, are another question. But now, both with Part 3s under their belts, this is the time to watch McCloy and Muchemwa. ●

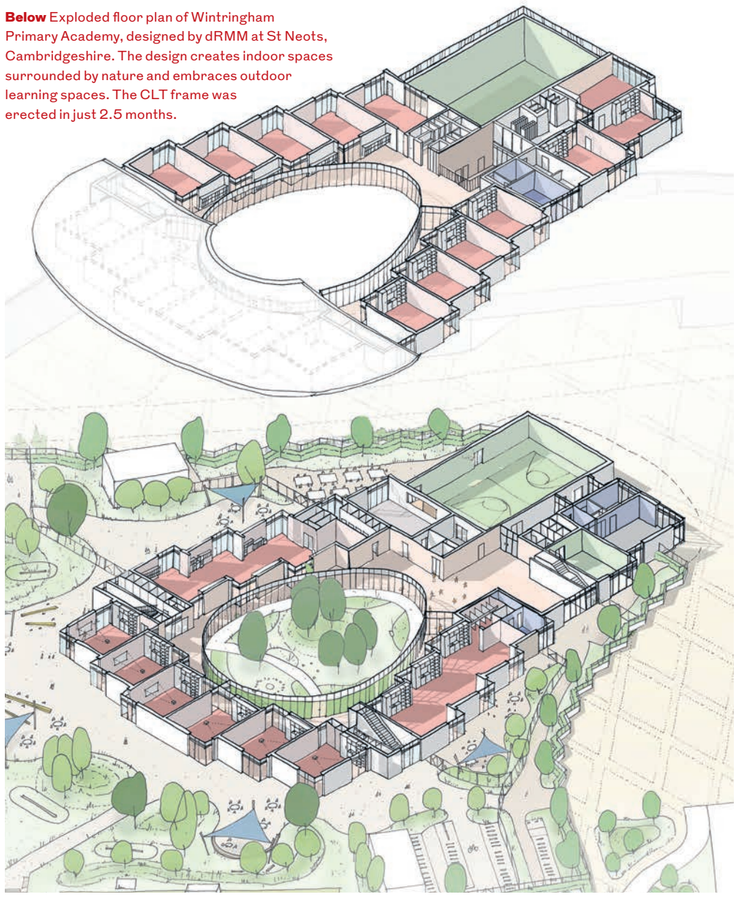
Above McCloy + Muchemwa love plastic ('it's our guilt') so were delighted to be able to use these buoys for an NLA bench 'The Buoys Are Back in Town'. And to fix them so simply they can be re-used in the future.
Below Designs for Leabridge Library, a bid done in collaboration between McCloy + Muchemwa and Office Sian.

OFFICE SIAN AND MCCLOY + MUCHEMWA

Sustainable Architecture | Design, construction & technology | Business, clients & services

What the School Rebuilding Programme means for architects

Crawford Wright of the Department for Education explains what it wants from the £1 billion programme, and outlines its new sustainability standards



Below Exploded floor plan of Wintringham Primary Academy, designed by dRMM at St Neots, Cambridgeshire. The design creates indoor spaces surrounded by nature and embraces outdoor learning spaces. The CLT frame was erected in just 2.5 months.

DRMM

Pamela Buxton

The government's 10-year School Rebuilding Programme (SRP), which begins this year with a £1 billion rebuilding and refurbishment of 50 schools, is to embrace new sustainability standards. As these new requirements are codified we speak to the Department for Education's head of architecture and design: schools and colleges, Crawford Wright.

All new school buildings in England must be net carbon zero in operation as part of the S21 output specification being introduced in the new contractors' framework for schools in November. Ahead of that, early tranches of the SRP are already piloting the climate change elements of S21. Other changes include a greater emphasis on ventilation, outdoor learning spaces and use of landscape as part of climate change mitigation.

Wright calls the net carbon zero in operation requirement a 'big uplift': 'Anything that the Department for Education will be delivering will be net zero in operation. It's a massive change that we're really pleased with,' he says, adding that it is in line with its policy of prioritising a fabric-first design approach.

Bolder ambitions

The S21 specification will apply to all DfE delivered school projects and the MMC framework specification will be upgraded to match. New standards are also being developed for the further education sector.

While money for the new programme is still being negotiated with the Treasury, it will come with 'an appropriate level of funding to meet these requirements,' says Wright.

Below Designed by Architype, Harris Academy Sutton was the first Passivhaus secondary school in the UK.

JACK HOBHOUSE / ARCHITYPE

Not that architects should expect any kind of bonanza. 'They're economical buildings. Creativity is needed to get the best out of limited budgets, but that's where the architect's job comes in,' says Wright, who feels that not enough attention is given to all the 'amazing' design work being done at public sector schools. 'If we can standardise what we know works more, we can get even better at producing good schools.

Wright heads a 30-strong design team of mainly qualified architects. He is proud of its achievements in the 70 years since the first Building Bulletins were produced. Extensive post occupancy (POE) research over the last few years has informed the new specification, and the team is also working on pilot studies for Passivhaus and biophilic designs.

'We already know that schools that are well-planned, well-ventilated and with good access to outdoor facilities work best,' says Wright, adding that POE studies show poor performance tends to result from deviations from the brief, or poor contracting work.

Embodied carbon targets, although not part of S21, are also on the radar. These will be informed by the on-going GenZero research project for carbon zero secondary school buildings. For this, Lyall Bills & Young Architects has designed a prototype for a CLT, offsite-manufactured secondary school to RIBA Stage 4, and Wright is hoping this can be developed further, starting with manufacture of the timber cassettes.

'Creativity is needed to get the best out of limited budgets, but that's where the architect's job comes in'

'Our hope is that by 2025, we'd have a design spec for schools that will address the embodied carbon issue,' says Wright.

Climate conscious design

S21 will also embody an emphasis on green infrastructure, biodiversity, and use of landscape to help deal with climate change as well as outdoor learning spaces – in secondary as well as primary schools. Even where the SRP project is for just one part of the site, a full-site approach will be required.

There will also be relatively small changes to BB103 area guidelines. These will include an increase in minimum circulation widths from 1.8m to 2.4m. Although introduced to allow better cross-ventilation, this will have other knock-on benefits, particularly for social distancing requirements introduced during the Covid-19 pandemic,

HLM

Above Abbey Farm primary school in north Swindon, a project designed by HLM with Reds10, is being delivered through the Modern Methods of Construction framework. Part of a mixed-use scheme by Redrow, it will be mostly be constructed off site and will open in September 2022.

which have been especially difficult for schools without generous circulation areas. The outcome of changes to BB100 for fire safety in schools (which is out for consultation) will also be mandated in S21.

If implemented, the new zero carbon requirements will have 'a meaningful impact on environmental outcomes' says Philip Watson, director of HLM Architects which is working on a number of MMC school projects.

'As far as public procurement goes, the DfE was already blazing a trail in relation to adopting innovation in MMC. Now it looks like they're planning on setting targets for reducing energy in use and embodied carbon too, which is great to see,' he says.

Encouraging signs

Both the integration of carbon zero targets, and the presumption in favour of MMC were welcomed by Paul Monaghan, co-founder of AHMM, which won the Stirling Prize in 2015 for Burntwood School. It is teaming up with a number of contractors targeting school rebuilding projects.

'There has been a lot of progress in the construction industry refining different off-site methodologies, which offers great opportunities for innovation. On the whole, all this is very encouraging and should put good design, with all its facets, back on the school building agenda,' he says.

Net zero carbon in operation is a 'really welcome, if overdue', requirement in the government specifications, believes Ben Marston, a director at Jestico+Whiles, which is working on a zero carbon school prototype with one of the contractors on the framework.

'Anecdotally, many schools built recently have been using more energy than design models predicted, and in some cases more than the buildings they replaced, so it will be essential that the requirements are accompanied by post-occupancy evaluation to enable continuous learning. It is also essential that embodied carbon is part of the assessment. As buildings become more efficient, this is an increasingly important consideration.'

While he welcomed the SRP, he does not expect it to be a particularly rich source of work for architects compared to earlier school building programmes.

'But they are very good projects for our young architects to learn how to be an architect: they go quite quickly from design to site; and renewing schools, creating the best possible learning spaces for future generations, carries an important social agenda whatever the architectural rewards.'

SCHOOL REBUILDING PROGRAMME

What is it? It is a 10-year rebuilding and refurbishment programme for schools and sixth form colleges in England. These include primary and secondary schools, academies, city technology colleges and free-schools. The first phase, worth £1 billion, begins this year.

Who's eligible? Schools don't apply, with projects instead being chosen by the Department for Education. Priority will be given to those constructed after the war using Laingspan or Intergrid systems – which are identified as having potential structural weaknesses and so are not deemed suitable for retention – and those that are considered to be in the poorest condition according to data from the Condition Data Collection (CDC), a block-by-block survey of schools carried out between 2017-19.

How can architects get involved? By teaming up with contractors on the two frameworks. These are the Construction Framework of contractors, which is divided into value band and region and is currently under review, and the modern methods of construction (MMC1) framework, which was announced in January 2020. The programme is divided into two lots according to size – projects with floor areas from 750m^2 to 6000m^2 and those with floor areas exceeding 6000m^2 . There will be a presumption in favour of MMC as part of the SRP.

Timing: The first tranche of 50 school projects has been announced. Of these, 22 are for Laingspan or Intergrid buildings and the remaining 28 were chosen by CDC data. The first tranche includes projects at three SEN schools and one alternative provision school.

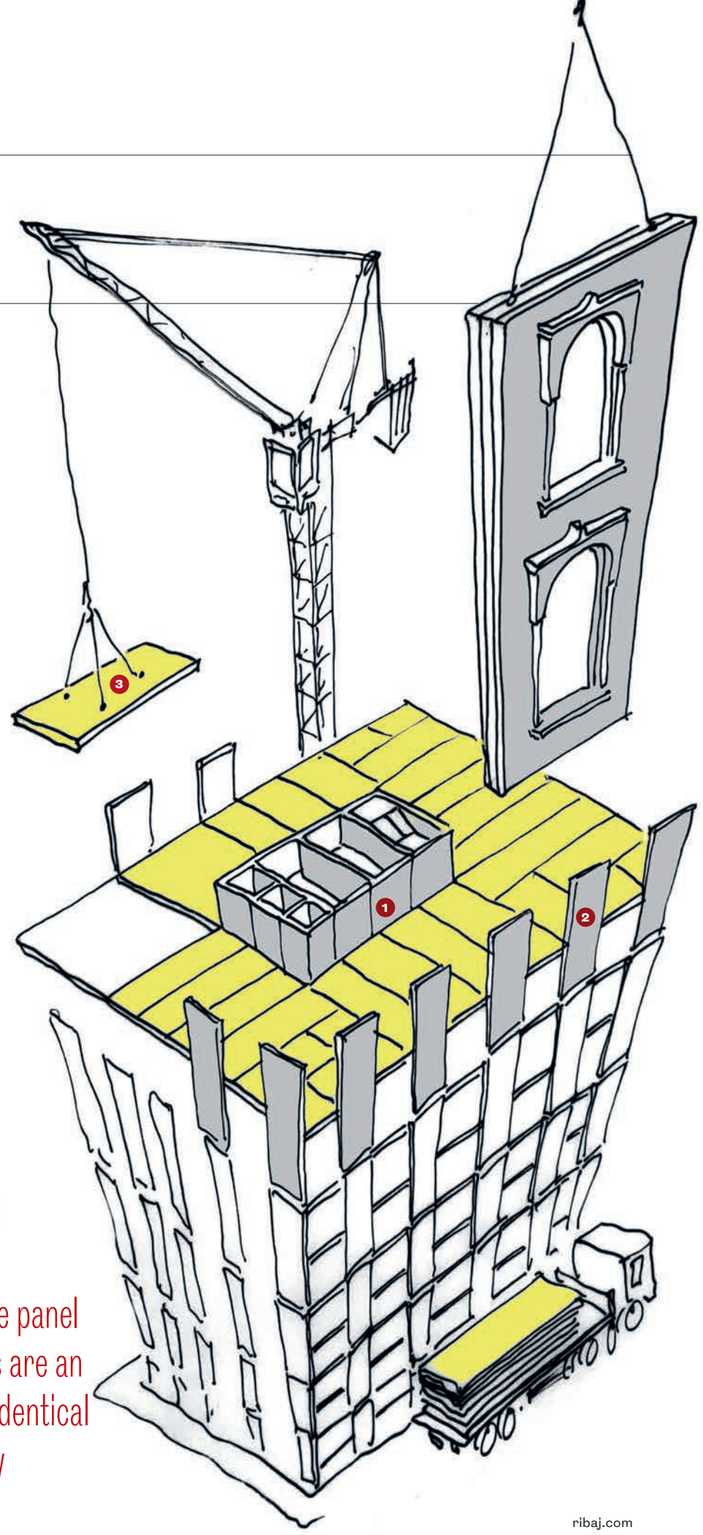
Further details: www.gov.uk/government/publications/school-rebuilding-programme/school-rebuilding-programme

Sustainable Architecture

Design, construction & technology

Carbon-friendly compromise for structures

Fire and loadings limit structural timber in towers but concrete is carbon heavy. How about a bit of each?



CLT and precast concrete panel systems are an almost identical typology

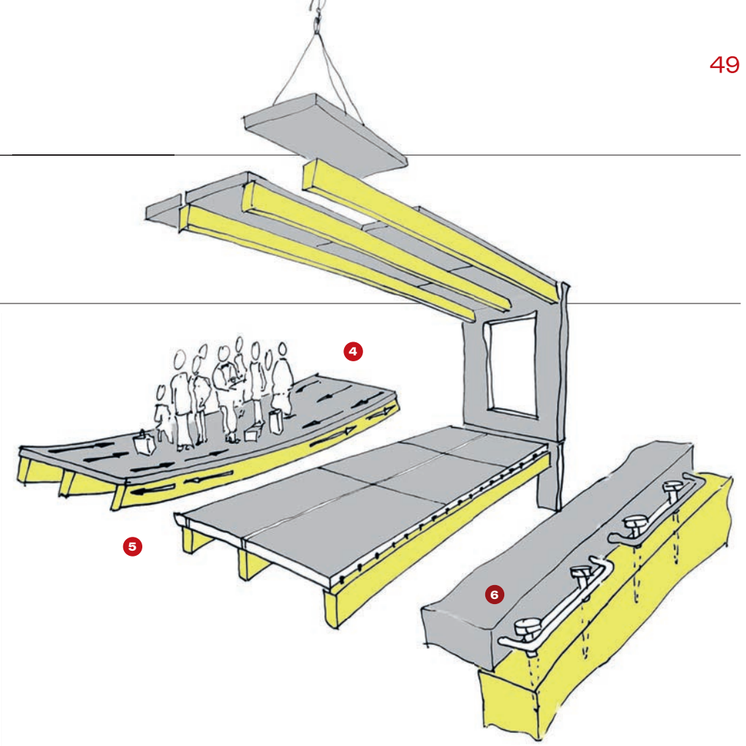
Steve Webb

You want to be responsible with embodied carbon so you're pushing for a timber frame, but your design team isn't sure.

There has always been a dichotomy between lightweight structures and concrete. Concrete fans say we need high thermal mass in buildings to stop overheating (although they often then isolate all the concrete from the internal spaces with dot and dab plasterboard). Even though we are surrounded by a ticking time bomb of decaying, practically unrepairable 60-year-old concrete structures (Hammersmith flyover for example), and hundreds of thousands of mainly perfectly fine wooden Victorian houses of double that age, durability is an argument often made against timber and in favour of concrete.

Fire has become a bigger issue than ever before. Specific regulations resulting from the Grenfell tragedy – incidentally a concrete and aluminium building – have had severe repercussions on timber designs, prohibiting the use of timber in facades taller than 18m and soon 11m. Taller residential buildings are considered out of range for timber structures because of the relative softness of timber in compression and for wind stability. But if we ditch timber and carry on building in concrete, brick and steel, the carbon footprint of the industry will roar on unabated.

So what's the answer?



A bit of both

How about a hybrid? Steel framed timber hybrid buildings like PLP and AL_A's Sky Central are becoming common for commercial spaces, but what else can we do?

CLT and precast concrete panel systems are an almost identical typology, both being flat prefabricated panel systems, delivered to site on the back of trucks and lifted into place with a crane. What if we address the issues of fire, load capacity and thermal mass by using a precast concrete insulated sandwich in the walls for the facades and the core (1 and 2), while using CLT for the floors (3)?

Consider a 10-storey tower 30m by 20m in plan, with a 3m storey height and 25% glazing. The wall area is 2,250m² while the floor area is 6,000m². Assuming a 100+80mm precast wall, the concrete CO_2 might be about 145t. The floors' CO_2 would be -720t net – that is, it includes sequestered carbon – so we'd be 575t in the black. By comparison, a total concrete structure would be 325t in the red. The hybrid building would weigh about 30% of the concrete equivalent, so foundations could be far lighter too. It would have an honest, fully load bearing traviated facade, and with a fancy concrete finish (like Níall McLaughlin's Tapestry building, for example), there's no need for bricks!

Pull together

KLH's Nic Clark thinks that combination might work well: 'Combining precast and cross laminated timber panels provides an elegant solution and has so many obvious synergies – reducing mass, sequestration of carbon and overcoming the new fire regulations regarding external wall construction. The issue would be finding ways for companies to work together to make a joint offer to the market. The technical knowledge is there; we now need to find companies with that collaborative behaviour.'

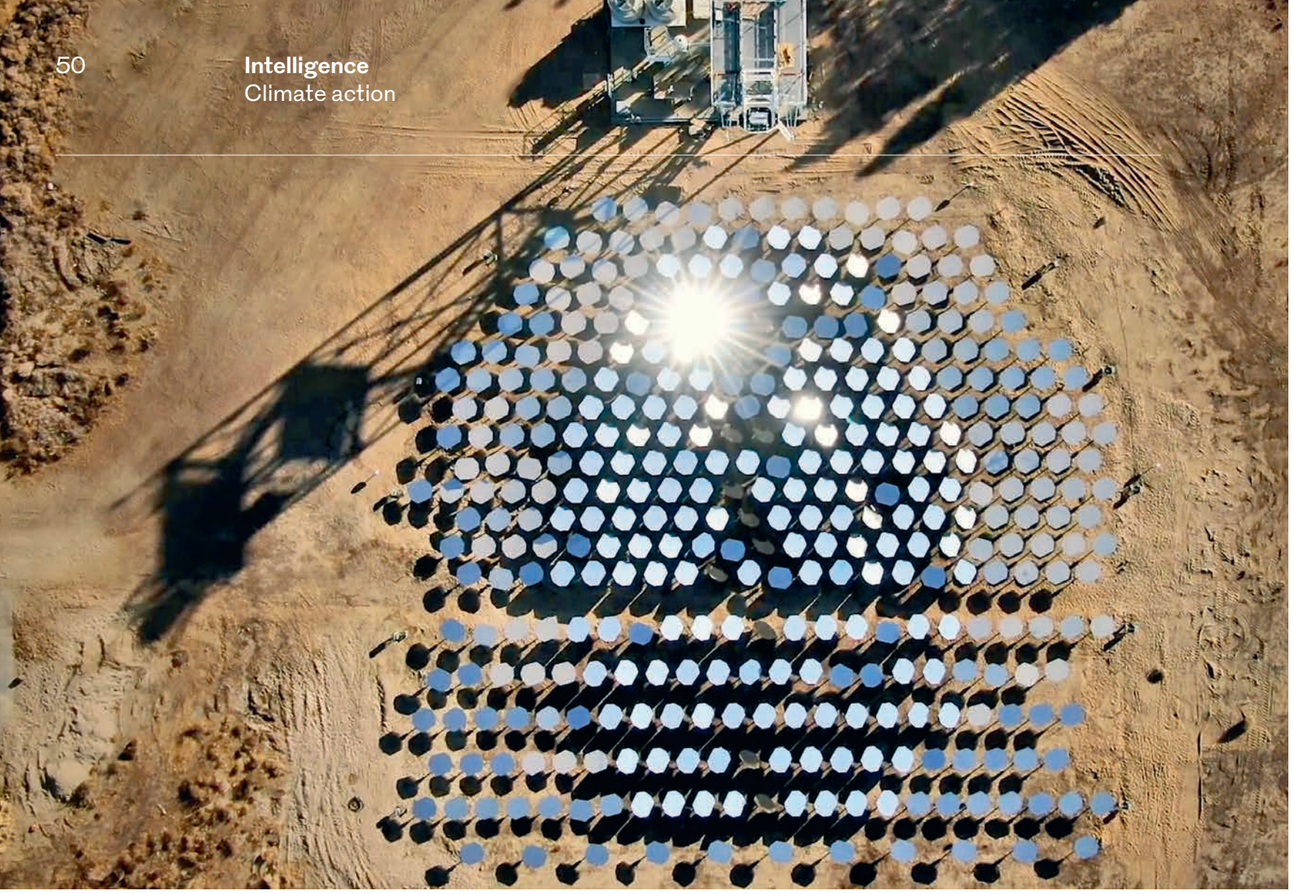
Techrete already markets such facades. All that's needed now is for them to work together as a single entity, to avoid typical sub-contractor disputes arising from difficult co-ordination and limited use of a crane.

The combination works well because we are using concrete for what it's good at – compression – and timber for what its good at – tension. Composite timber and concrete floors adopt a similar approach: concrete on top (4) in compression and timber underneath in tension (5). It is still rare to see buildings built in this way, but it is an established form of construction. Using timber joists and a concrete precast floor not only results in an interesting soffit but exposes the higher mass material to the warmer air in the top of the room helping to reduce peak air temperatures. A timber concrete composite floor with a 90mm slab and a 250mm joist would replace a 300mm flat slab, once again saving a considerable amount of carbon. The concrete can be precast planks or a composite metal floor. In either case the composite connection between the two materials is achieved with coach screws (6) driven into the tops of the beams and cast into the concrete. High strength LVLs like Baubuche are ideal for this form of construction.

So next time you have the timber verses concrete argument, why not go halves?

Steve Webb is co-founder of Webb Yates Engineers

1 Precast concrete insulated sandwich in the walls for the cores
2 Precast concrete insulated sandwich in the walls for the facades
3 CLT for the floors
4 Composite timber and concrete floors
5 Timber underneath in tension
6 Coach screws screwed into the tops of the beams and cast into the concrete



HELIOGEN

Sustainable Architecture

Design, construction & technology

Green technology shifts to embodied carbon

From AI-powered solar concentrators and hydrogen/plasma kilns to CO_2 storage reservoirs, heavy industries are scaling up their efforts to slash emissions from energy intensive construction materials

Stephen Cousins

The government's repeated refusal to block a planning application for a new coal mine in West Cumbria was condemned by many environmentalists and climate scientists as hypocritical given its previous commitment to create a green, industrial revolution and rapidly cut greenhouse gas emissions.

Support for the facility, which is intended to produce coking coal for use in steel production, seems unthinkable in the midst of a climate emergency (it has now finally been called for a planning inquiry), but is perhaps indicative of the difficulties associated with decarbonising heavy industrial processes.

Bill Gates calls this the '75% problem', how do we cut the three quarters of global emissions mostly generated through large-scale industrial and agricultural processes, which lie at the heart of many of the products we enjoy in modern life? Steel, concrete, glass and aluminium are all highly energy intensive to produce and difficult to address using traditional renewables.

Architects and engineers are, of course, in a strong position to cut embodied carbon in buildings through more intelligent design and specification choices, for example by designing more efficient structures that require less material, but the world's reliance on high-impact construction materials also demands more fundamental changes to production.

Fortunately, a number of innovative technologies, and souped-up existing ones, are being developed. The race is on to see which will be ready to deliver at scale as the climate clock ticks down.

'There are a number of promising technologies on the horizon,' says Stephen Richardson of the World Green Building Council. 'But with investment cycles in heavy industry in the order of 20 to 30 years, whatever companies invest in now is still going to be in use in 2050. So we need to use every lever we possibly can to persuade them to do it right this time.'

At source

The steel and cement sectors each generate around seven per cent of global CO_2 emissions, according to the International Energy Agency, a figure that must fall precipitously, even as demand for their outputs increases.

These industries are considered tough to abate, largely because they rely on fossil fuels to generate the high temperature heat needed for certain processes. For example, blast furnaces used to produce iron for steel making operate at temperatures above 1,500°C.

Getting the same heat from electricity, which can come from renewables, especially at large scale, is currently impractical and costly (cement kilns would require a complete redesign), and limited supplies of sustainable biomass exclude it as a substitute.

Many are pinning their hopes on green hydrogen which can be burnt to create high temperatures with no pollution, creating water as the only byproduct. Joe Jack Williams, an associate and researcher at architect FCB Studios which is a longstanding proponent of sustainable building, says: 'There's been an awful lot of talk about hydrogen, it produces great high grade heat and the real benefit is that you can generate it when you've got a surfeit of green energy that you can't store elsewhere, for example from UK wind farms. Industrial uses are where it should be used and I can see that coming forward.'

TATA STEEL / JOHN DE KONIN

Above The cast house of a pilot plant at Tata Steel in the Netherlands using the HIsarna process, which has seen steel produced with 20% fewer carbon emissions.
Opposite Heliogen concentrates solar energy onto a target to generate temperatures of up to 1,500°C, enough to power heavy industry.

Hydrogen-powered plants in Sweden are expected to produce the first market-ready zero carbon steel in Europe some time in the mid-2020s. A £17 million pilot plant and storage facility, operated by steel maker SSAB, iron ore producer LKAB and energy company Vattenfall, is already up and running in northern Sweden, using hydrogen instead of coal as the 'reducing agent' to remove the oxygen from iron ore.

Another 800MW plant is being built by H2 Green Steel in the region, which is home to Europe's largest iron ore mines, with a targeted annual production capacity of 2.5 million tons by 2026.

Not wanting to be left behind, a £6 million project in the UK is investigating how a combination of hydrogen and plasma technology could significantly cut emissions in cement and lime production, two highly polluting processes in concrete manufacturing. The Fuel Switching Project, run by the Mineral Products Association and funded by the Department for Business, Energy and Industrial Strategy, is due to begin trials in summer 2021 at sites operated by Tarmac and Hanson Cement.

> Many are pinning their hopes on green hydrogen, which can be burnt to create high temperatures with no pollution

And a feasibility study has shown that electrical energy delivered by plasma torch could boost the combustion of biomass to generate higher temperatures and alongside green hydrogen could deliver net zero fuel for a cement kiln.

'The research is valuable to the government because it has to make some really big decisions about whether the UK goes down the hydrogen route or the electrification route, or if we do a bit of both,' says Richard Leese, director of MPA Cement. 'If fully deployed it would save about 0.6% of UK CO_2, equivalent to about 266,000 households.'

Souped-up solar

For decades, the solar industry has been trying to produce the scintillating temperatures needed by heavy industry and now a project – backed by the world's richest man, Bill Gates – appears to have made it work.

Heliogen sounds like something from the plot of a James Bond film. Artificial intelligence automatically controls a giant array of mirrors to align to reflect sunlight onto a target to generate burning hot temperatures of up to 1,500°C.

That's hot enough to fry a spy or, more

usefully, power cement or steel making. It can be harnessed to split molecules to make green hydrogen. Heliogen is planning initial commercial deployments, but given Britain's penchant for cloudy weather don't expect to see it here any time soon.

Other metals benefiting from solar energy include aluminium. In a world first the Mohammed bin Rashid's UAE solar park has started powering its production, which is being supplied to German car maker BMW.

Eliminating fossil fuel is one thing, but emissions from chemical reactions inherent to many production processes are often even tougher to address. For example, the CO_2 produced by the calcination reaction needed to produce clinker, the active ingredient in cement, accounts for around two-thirds of direct emissions in the sector.

Options on the table include a fundamental shift away from conventional production processes and using different raw materials or binding agents. Many industries are backing the development of Carbon Capture Usage and Storage (CCUS) technologies that suck CO_2 directly from the air at source then store it, usually underground.

Tata Steel estimates that a combined approach, using a pilot technology it developed to remove certain pre-processing steps, and CCUS, could cut CO_2 in production by 80%.

'Even if we look at fast and rapid decarbonisation, CCUS technologies will be required and used by the steel industry to rapidly decarbonise emissions to air,' says Barry Rust, marketing manager for energy & sustainability at Tata Steel. 'Ideally, "carbon usage" would go into developing products that are infinitely recyclable so you've got a closed loop for the carbon.'

Scaling ambition

But despite billions of dollars of investment in CCUS and high profile backing from international governments, most technologies remain unproven at a commercial scale.

Norway is about to launch the first full-scale carbon capture and storage project, named Longship, which will initially capture CO_2 emissions from the Norcem Heidelberg cement plant in Brevik near Oslo. In the UK, Hanson Cement is a partner in the HyNet North West consortium, which aims to create an exemplar low carbon industrial cluster involving carbon capture and storage, with CO_2 piped to permanent storage in depleted gas reservoirs in Liverpool Bay.

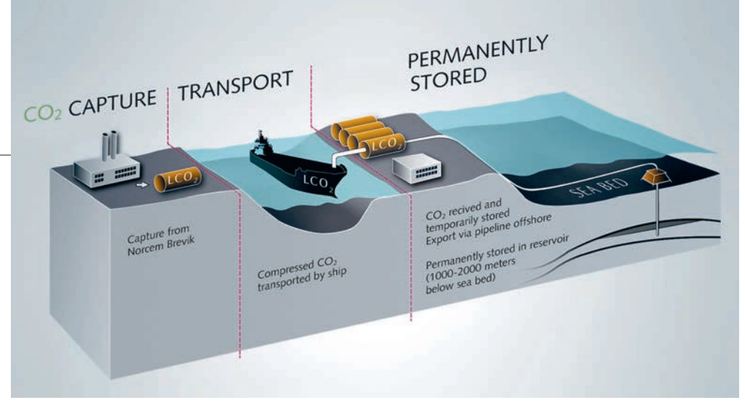
Wider investment and strong backing by the government is needed to make CCUS a strategic priority, says Leese: 'We need a business model to help finance it and a plan for the infrastructure, it's no good capturing CO_2 in a cement plant if you've got nowhere to put it. Similar to the grid electricity system, you need a grid to transport and store it.'

Technological innovations in heavy industry will be critical to achieving net zero, but also important are the design decisions architects and engineers can make today to reduce the impact of energy intensive materials and find alternatives that work.

Studies have shown that buildings are often overspecified because engineers choose standard sized steels and don't have a mindset to reduce the amount of material going in. Alongside cement replacements like geopolymers and alkali activated materials, concrete mixes can significantly increase the amount of recycled cementitious materials, depending on the application.

'Most engineers are quite happy to put 20-30% fly ash into a concrete mix as a like for like replacement for cement,' explains Pat Hermon, technical lead on sustainable products at BRE. 'People who think about it more carefully can achieve up to 70% direct replacement. It requires more work at the design stage, but often produces a stronger concrete.'

Such agile thinking will be key in the years ahead – one of a number of demand side signals needed to drive manufacturers and wider supply chains to innovate to head off a climate catastrophe.



NORCEM

Above Norcem's plans for cement carbon capture at its Brevik plant in Norway.
Below The plant aims to deliver an annual 400,000 tonne reduction in CO_2 emissions.

It's no good capturing CO_2 in a cement plant if you've got nowhere to put it

Inclusive environments

Health, safety & wellbeing

Future Architects draw on personal experience

Urgent issues of the day are taken on in this year's RIBAJ/Future Architects writing competition

Eleanor Young

This year's RIBAJ/Future Architects writing competition drew over 100 entries from future architects studying and working across the UK and internationally. Most impressive though was the breadth of subjects – from profiles of innovators and architects to energised engagement with, and analysis of, much loved places and deeply personal pieces that explored identity, race and disability.

Personal experience was key to much of the best of the writing and clearly the upheavals of 2020 have allowed future architects to connect powerfully to issues of the day.

The judges were Shawn Adams of PoOR Collective and HTA, a RIBAJ Rising Star and New Architecture Writers alumnus; Wajiha Afsar of Atkins Global who was commended in 2020's Future Architects writing competition; Lucy Watson, Financial Times commissioning editor, and Eleanor Young, acting editor of RIBA Journal, who chaired the panel.

The winner is Sarah Maafi, studying for her Part 2 at TU Munich, for 'Racism is a choice' which you can read overleaf. The judges were unanimous. 'It is a powerful take on racism, passionate and with a good structure,' said Afsar. 'It makes the issues accessible and relatable.' Adams noted a good use of quotes and statistics paired with a personal aspect. 'It is really strong and measured,' concluded Watson. Maafi wins £400 and the title of RIBAJ/Future Architects writer of 2021.

Commended

Four further entrants were commended, each winning £150.

Eilidh Allan, a Part 1 at Frank Reynolds Architects, focused on home and rent inequalities, including that of race, and took Grenfell Tower as her starting point. It was 'bold and direct' said Watson; a 'powerful, thoughtful call to action' added Adams.

Addressing privilege while focusing on architecture practice was a piece by Part 2 Shemol Rahman. 'With a neat, incisive way the writer uses personality to shape an argument,' said Watson. 'And it is a little bit poetic.' While fees, data collection and education may not sound the most promising read, 'Preparing for Re-entry' sandwiches them convincingly between the Mars landing and personal perseverance. Adams called it 'bold, engaging and coherent with lots of personality'.

Harry Tindale, who is at Hugh Broughton Architects as a Part 1, started with the outlandish ideas of Archigram's Nottingham Shopping Viaduct and spun them into a valuable lesson for a city in retail flux. 'It shows that a theoretical knowledge can be applied in meaningful ways to existing places,' said Watson, while Afsar enjoyed being lured in through the introduction and the fact that it ended with a question.

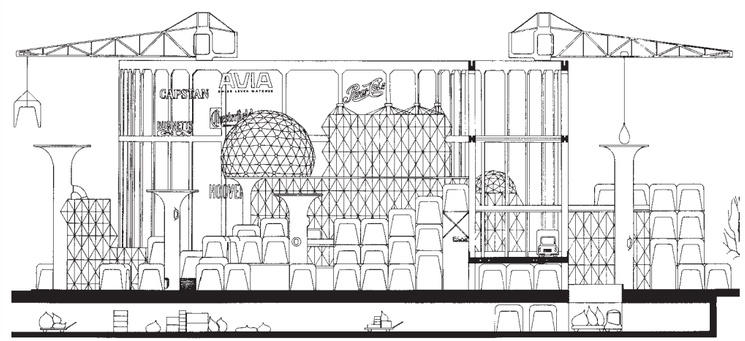
Jordan Whitewood-Neal, a Part 2 student at the University of Brighton, was commended for 'an interesting and engaging read exploring disability with a bit of emotion,' said Afsar. Taking the example of the Architectural Association buildings, Whitewood-Neal shows the uneasy relationship between its avant garde design teaching and the way its buildings' domestic qualities are undermined by exclusionary characteristics. Adams felt it was 'powerful to flag up these issues; it is an area of diversity we often overlook'.

Shortlisted

The winner and commended articles were selected from a strong shortlist: Henry Aldridge, University of Cambridge, Part 1, on the redevelopment of north London's Oriental City and the colonialism embedded in those changes; Edward Humphries, Portsmouth University, Part 1, profiling Israel doctor turned architect Neri Oxman and biologically inspired work at MIT; Richard Mayhew, Newcastle University, Part 2, on the commercialisation of Newcastle Civic Centre; Wadzanai Chanel Mhuka, University of East London, Part 2; for a tragi-comic breakup letter to concrete in the age of climate action; and Shivani Tipari, Part 1, for a fresh argument for biophilia bringing together Winnie the Pooh and children's pandemic experience. ●

This competition and RIBA Future Architects Network support, inspire and give a voice to students, pre-qualification and early career architects as they move from study to practice. Read more entries at ribaj.com/future-writers

Below Harry Tindale analysed Nottingham's shopping centre using Archigram's Shopping Viaduct drawing.



PETER COOK, DAVID GREENE, ARCHIGRAM ARCHIVES

Ending racism is a choice

Architects know racism is out there, but how hard do they really try to stop it? RIBAJ/Future Architects winner Sarah Maafi demands more than an easy fix

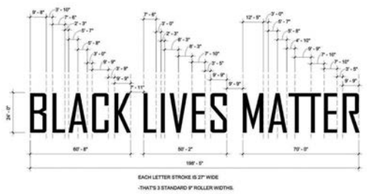
I can't even begin to describe how I felt when the news of George Floyd's agonising death went around the world, and the Black Lives Matter movement started gaining traction. It felt like the first time in my life that the whole of society was acknowledging that racism exists and how devastating it is. That week I was in emotional turmoil, as I felt horror at the news, a strange relief that the word on racism was finally out, and apprehension at how people would react. I cried in secret, only confiding in my partner at home. It was as if all the memories of racist experiences in my life had come knocking at the door at once. I steeled myself for work, putting on my usual professional performance.

I remember sitting on the edge of my seat at work, wondering when somebody would say something about the news. Like so many architects described as BAME (for want of a better word), I felt I needed to talk about racism but had learnt to put my feelings aside in order not to make my white colleagues feel uncomfortable. I was used to placing my emotional discomfort second, for the sake of not being seen as difficult. While it may have been a normal week for them, for me it felt like the air was thick and tense.

Opening the conversation

It took several days for the first email to appear. Finally, one of the senior staff had broken the silence. They asked for ideas on anti-racist action in the office. As a junior staff member, I hesitated. Would it be safe to speak up? I finally hit reply all and asked my colleagues to fill in the racism survey in the Architects' Journal. It was a safe choice, anonymised and backed by a recognised industry media outlet. It wasn't everything I wanted to talk about, but it was a start.

Unsurprisingly, the survey confirmed the difference in experience that I had had that week. It found that BAME respondents more frequently observe racism in architecture than white respondents. Hearing an obvious



Above BLM street mural.

YESARCHITECTS

slur, for instance, is what they expect discrimination to be, but it is more covert than that. Like so many BAME people, on the occasions where I can muster the strength to tell white friends or colleagues about racist experiences in my life, they are usually taken aback, seemingly surprised that racism exists and how pervasive it is. It's not that they don't see it because it doesn't happen to them. They can choose not to see it, because they don't need to.

There is awareness of diversity in our industry, but too often, it is merely looking for an easy fix. Architects mean well when they try to please clients by pasting a diverse entourage into their reports and images. However, disregarding the much more important driver of diversity – whether the render or the report was actually made by a BAME person – means the industry is missing the core of the problem, for the sake of putting on a show.

I sometimes feel like the characters in those renders. I have on several occasions seen my image or that of other BAME staff used in promotional materials for offices I worked in. However, when those staff are yet again not the ones named or quoted, but just shown as a backdrop without a voice, it feels like that is what I really want to talk about but do not dare, for fear I will be perceived to be criticising my own ranks. If I could ask my white friends and colleagues to change just one thing, I would ask them to learn to see from my point of view, and use their position of safety to speak up about the small injustices that form the thin end of the wedge.

> If I could ask my white friends and colleagues to change just one thing, I'd say learn to see from my point of view

Think differently: act differently

For an occupation that relies so heavily on what we perceive, not being seen is a frequent issue. For example, many practices only have photos of their most senior staff online. When there are fewer and fewer BAME students at every step of the Part 1, Part 2 and Part 3 qualifications, I wonder which is the proverbial chicken or the egg. Is it really true that there are not enough senior BAME architects, and that is why we don't see them? Or is it that young BAME students feel alienated when they look at how these practices choose to present themselves, and all they see are white partners or directors?

All practices have a choice of how they want to be seen. Some argue that if 13% of designers are BAME as are 13% of the population, it means everything is just fine. However, most architectural jobs are concentrated in cities like London, where 40% of the population identify as BAME. We therefore have a long way to go.

When people claim there are not enough BAME designers to showcase, I want to wave and shout, 'But we are here!' For example, when I won a coveted student design award, I received a book with interviews with 108 architects as a gift. I felt such a twinge of disappointment when I opened it at home and realised that the vast majority were white men, compounding the sting of racism with that of sexism. It was like the publishers just forgot that they had a choice.

I exercise that choice every day. I choose to read media bustling with diverse designers because I want to experience their work, learn from them and be inspired by them. Do the same today. Check the books in your practice library, the social media you choose to follow, the events you attend or organise. Are you seeing BAME designers and are you amplifying and championing them? If not, it is time to pass the microphone, give credit, and open your eyes and ears.

Sarah Maafi is a Part 2 student at TU Munich

3: Culture

Rasmus Hjortshøj Fondazione Prada, Milan, 2018

With a firm called COAST, photographer architect Rasmus Hjortshøj eschews more specific architectural fascinations. The subject of his PhD study is the coastal landscape of his native Denmark – notably Jutland, where North Sea winds add gnawing inhospitability to its cold, jagged rawness. While Danes might see it as one of the country's last 'natural' landscapes, Hjortshøj asserts that it too is a form of artifice – and, with its coastal structures and 'fake' sand dunes to hold back the sea, no less man-made. But far from despairing, he argues that it is a way of revealing the latent, crucial, co-dependencies of the natural and urban landscapes.

Perhaps there's a sense of that – and an edge – here too in his view of the Fondazione Prada seen from the post-industrial hinterlands of Milan's Porta Romana station. Here, OMA's Torre seems to puncture Hjortshøj's anaemic sky and funnel it down to bleach out the city. Only the vivid green of the goods yard, becoming a simulacrum of nature, stands out from it and the sky's horizon of concrete.

This site of rewilding, adds Hjortshøj, is itself on the verge of disappearance – the subject of a competition won last month by Outcomist, a team led by Diller, Scofidio + Renfro, to bring its 20ha back to good use. But what kind of park? And what may be lost in the process? There's an Anthropocene rub to philosopher Bruno Latour's hope in his essay 'Love your Monsters', where he argues for concepts of nature and humanity to no longer be seen as oppositional. 'He reminds us about Dr Frankenstein's creation,' Hjortshøj tells me, 'and how it wasn't a monster until he abandoned it.' **Jan-Carlos Kucharek**

Off Grid 2030

If all goes to plan, we'll be living better and more sustainably in 2030. Show us how you imagine it and win £2500, courtesy of Norbord SterlingOSB Zero

ZOOEY BRAUN PHOTOGRAPHY

Werner Sobek's 'Triple Zero' B10 Aktivhaus prototype for the Stuttgart Institute of Sustainability built on the edge of the 1927 Weissenhof Estate. Zero energy use, zero emissions, zero waste.

Since the RIBA launched the 2030 Climate Challenge in 2019, Covid-19 and its lockdowns have forced shifts in ways of living and working – and outlook – in directions none would have imagined at the beginning of 2020. And with that enforced recalibration have come new ways of thinking, not just about our environment and the quality of our public realm, but how we live, work and learn at home, with the current limitations it presents and the potential liberations it points to.

With Off Grid 2030, RIBAJ and Norbord are asking you to imagine what shape that future might have. How might we want to occupy our homes? How might spaces change to reflect new but rapidly establishing patterns of home working and learning? Might these spaces be reconfigurable? Might they fold and open out to sunlight and fresh air if desired? Part of this year's competition brief is to visualise how these spatial aspects might manifest, using SterlingOSB Zero board as the building block of the design.

The RIBA's 2030 Climate Challenge, meanwhile, sets architects onerous targets. These include net zero whole life carbon and domestic operational energy use of <35 kWh/m²/y, or Passivhaus 11. The 2030 Climate Challenge demands use of heat pumps and no reliance on fossil fuels. Any residual carbon emissions should be offset to contribute to UK renewable energy projects that help decarbonise the national grid. There should be a target of embodied carbon of 300kgCO_2e/m² and water use of <75l/person/day.

We ask you to imagine a home where Norbord's net carbon negative SterlingOSB Zero board will, with super-insulation and on-site renewables, be part of a design that meets those ambitions. Designed for our new reality – zero energy use, zero emissions, zero waste – this is a tall order! But big challenges need big thinking. Show us what you can do, and win £2500 for your climate change-busting concept house! ●

THE BRIEF

In this ideas competition, we are asking entrants to design a single-family or muli-generational family home of no more than 200m² GIA. This may be one or more storeys in height. Terraces or courtyards may be addition to this. While the building will be made up of a palette of different sustainable materials, we would like to see Norbord SterlingOSB Zero being used as an integral part of the overall material strategy. SterlingOSB Zero used externally should be protected with a proposed cladding material and/or insulation. Entrants should bear in mind the nature of SterlingOSB Zero and to ensure propositions best utilise its material capabilities. Entrants' designs will consider the RIBA's 2030 Climate Challenge.

JUDGING

Judges will look for imaginative uses of SterlingOSB Zero, as part of a proposal meeting the stipulated criteria. Propositions should consider sustainability, structural and thermal aspects that will help make an environmental exemplar of the design. While other materials will be an integral part of the new proposition, the design should, in the main, employ SterlingOSB Zero. The winning proposal will be the one that, in the minds of the judges, generates a solution that is spatially powerful, visually exciting, and best embodies the aspirations of the RIBA 2030 Climate Challenge.

DEADLINE

14:00 UK time on Monday June 21 2021.

ENTRY FORM

Please email entries to **ribaj.com/offgrid**

SUBMISSION

Entries must include the following and be laid out on no more than two A3 sheets, supplied electronically as pdfs:

- An explanation of no more than 500 words, describing the building design, stating where Norbord SterlingOSB Zero board has been used and any passive or active methodologies employed to make it fit for the 2030 Climate Challenge.
- Plans and sections showing structure, build-up and material composition.
- Axonometric or any other images.

NOTES

- The judges' decision is final
- First prize is £2,500. Three commended prizes of £250. Shortlisted entries will be notified in writing, with winners announced in September.
- No correspondence will be entered into by the organisers or judges regarding entries and final decisions.

ENQUIRIES

ribaj.offgrid@riba.org

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'Warehouses are measured in loading bays and square feet, not a sense of place'

STEPHANIE WUNDERLICH

Let's beef up the supply chain

The enormous logistical underworld that brings our goods is drab and invisible. Could architects deliver warehouses we can be proud of?

I had a big box left on my doorstep yesterday. Like many of us over the last year, my most frequent visitors have been delivery drivers. Fragments of their journeys – and those of their goods – have been exposed through the year. The uncertain living in the gig economy for those who zip around our streets, the piled up warehousing of Brexit preparations, the fresh Scottish seafood turning foul waiting in lorry parks for border delays, the towers of containers stuck on the Ever Given in the Suez Canal.

The logistics of delivery are stamped across the country alongside traffic arteries. Motorways and A roads are punctuated by the truck stops that sustain lorry drivers after 10 hours on the road, the priciest parking and showers reserved for service stations in prime position in reach of major ports. Even bigger than these mega lorry parks are the distribution centres and warehouses they are heading towards.

As we drive past at 70 miles per hour, the big shiny buildings are just boxes. So what that their massing is broken into bays, or that the application of stripes to the super smooth cladding panels sometimes slightly fools our eye into believing the building is smaller and the sky is bigger? These structures, and the parks they sit in, are measured in loading bays and thousands of square feet, not a sense of place.

Figures from Jones Lang LaSalle show that in the turbulent rebalancing this lockdown year between online commerce and real live shops there has been an increase in demand for warehousing. Glenigan reports over £10 billion of new projects in this sector getting consent in 2020. Knight Frank predicts over 7 million ft² of new warehousing will be needed in the next three years.

They come with the promise of local jobs and work for engineers, and sometimes architects, specifying the structure and the skin, and where the offices and loos fit between shelves. They help ensure the high end are Breeam excellent, with bike racks and biodiversity strategies, they work on the masterplans. The high tech priests of 'shed' architecture are nowhere to be seen, they are off designing towers in China. No, this is the work of specialist architects, building from Warrington to Wigan and Wakefield. Revit drawings come with articulated lorries parked at the gates. They develop sites with hints of their old uses, like Exeter's Marsh Barton or Kingswood Lakeside in Staffordshire, or with sheer business ambition like Segro Logistics Park East Midlands Gateway near Derby.

Not in the country, not in the city, these logistics parks are liminal infrastructures, divorced from our experience. But they are on our doorstep, that is the point. Segro boasts that its East Midlands Gateway has one million people within 30 minutes' drive.

Could logistics parks be something we are proud of, like the warehouses of the industrial revolution? As the Amazon Prime lorries line up on the slip road we have to ask why are we not paying more attention to these essential and problematic chunks of our modern world. ●

ISTOCK PETINOVS

Left Ready to load.

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'The whole house was built to the exact millimetre. It required maximum precision from everyone. But now I am very happy'

Czech 3D visualiser Norbert Walter on his perfect new house: ribaj.com/znojmohouse

PORTRAIT STEPHANIE WUNDERLICH

Words and worse

The more Will Wiles thinks about 'palace intrigue', the more significant he finds the way architecture lends its language to suspicious manoeuvrings

The word 'palace' derives from the Palatine Hill in Rome, site of the emperor's mansions. While the garden setting of Harry and Meghan's interview with Oprah Winfrey was not obviously palatial, it was somewhat palatine, with vine-tangled columns and Mediterranean sunshine. What the press, foreign and domestic, agreed, was that it was rich in 'palace intrigue'.

During the inescapable rumpus which surrounded the interview, that cliché bounced around in my head. Cliché is, generally, a substitute for thought, a worn-out expression that doesn't require any new brain activity. The words 'palace' and 'intrigue' are locked together so often that one now adds very little to the other. But let's give 'palace intrigue' some attention. Behind the staleness of familiarity, there is still something, well, intriguing, about it – a suggestion of teetering thrones, scheming regents, grand viziers with ambitions of their own. It is naturally fascinating because it is grounded in secrecy, a world of private agendas hidden away from the rest of us. That secrecy is spatial, contained within architecture built to enable it. The palace provides the intrigue.

Around the time of the interview, my household was obtaining its RDA of palace intrigue from The Great, season one of which has just concluded on Channel Four. This heavily fictionalised rendition of the rise to power of Catherine the Great falls roughly midway between Game of Thrones and The Crown in terms of realism, all conducted in the numbingly vast but also stifling environment of the 18th-century Russian court. The baroque megastructure of the Bourbon palace of Caserta in southern Italy stands in for Tsarskoye Selo, providing flashes of Piranesian grandeur. But a lot of the intriguing is done on the hoof, obeying the West Wing principle that if your show has to be dialogue-heavy, it's best that the characters walk and talk as much as possible, to prevent things getting too static. So we also spend a good deal of time going up and down the Long Gallery of Hatfield House.

This ambulatory mode of intrigue has advantages. It is harder to discreetly overhear a conversation that is on the move. 'Walls have ears', another intriguingly architectural figure of speech, might have originated in the Louvre of Catherine de Medici, where discussions in certain rooms were audible from others, possibly by design. Architecturally facilitated eavesdropping – but then the very term 'eavesdropping' is architectural, describing a spy pressed into the strip of ground sheltered by overhanging eaves, the eaves-drop, to hear what is said within a house.

Walls have ears, halls less so. In his fascinating architectural history Corridors, professor Roger Luckhurst points to Blenheim Palace as having the first identified corridor in English architecture. They were an organisational revolution, allowing longer, grander facades, simplifying spatial organisation and opening up new and impressive internal vistas. They pierced the 'cluttered manoeuvring through successive rooms', allowing rapid, direct communication and clear hierarchies. It embodied early modernity: rational, and autocratic.

The corridor might have enabled rulership, and had advantages for plotters, but it is it intriguing? Less so, I would suggest, than the enfilade and the succession of rooms, with its miniature power-plays of admission and exclusion – the awful regime hilariously depicted in the 1996 Patrice Leconte film Ridicule, where characters are kept waiting for a royal audience, in a room away from power, playing savage little games with each other. Royal cultures globally have developed surprisingly similar spaces for this careful mediation between the public world of the kingdom and the private, powerful world of the king. Jeroen Duindam's book Dynasties: A Global History of Power 1300-1800 contains numerous floor plans of palaces from China to Cameroon, each showing this careful separation and organisation of 'inner' and 'outer' via systems of courts, chambers, antechambers and so on. This is often a reflection of cosmology, and the separation of the holy and worldly, sacred and profane; but at heart it is also a spectacularly enlarged version of the normal home, with its public face and private core. So palace intrigue is domestic drama by another name. Alan Bennett once said that all families have a secret, and that secret is that they are not like other families. Perhaps the secret of all royal families is the fact that they are like other families. ●

Will Wiles is a writer. Read him here and on ribaj.com

HATFIELD HOUSE

Above The grand walking and talking spaces of Hatfield House.

MASQUE OFF

In 'The Masque of the Red Death', Edgar Allan Poe twists the corridor and the enfilade together to depict the depravity of wicked Prince Prospero. The rooms in which the prince parties while his subjects die of plague are an enfilade, but a zig-zagging and kinked one; they are flanked by corridors, and it is from those corridors that the only light is cast, through windows of coloured glass. Now that's intriguing.

Anne Holtop – the Dutchman in Bahrain.

Dutch architect Anne Holtrop's projects involve casting, cutting and splashing on site – using the atmospheric backdrop of Bahrain, where he now lives, as part of the alchemy

Words: Isabelle Priest Portrait: Camille Zakharia

Earthy mix

Anne Holtrop does not think the coronavirus vaccination programme will be the world's saviour. The Dutch architect lives in the Persian Gulf island of Bahrain, where around 700,000 of its 1.6 million inhabitants have already been vaccinated; Holtrop has had his second dose. Yet despite this, cases are higher than ever. Towards the middle of April, Worldometer was showing new infections as 'at peak and rising' with a three-day moving average of 1,038 new cases per day, outstripping the previous peak of around 800. Holtrop has fully spent the past year here because of this, which is unusual as the solid heat of summer means those than can tend to adjourn elsewhere for the season.

Following 18 years in Amsterdam, Holtrop moved to Bahrain in 2014 after winning the competition to design the country's pavilion for the Milan Expo. During that project he met his now wife Noura Al Sayeh Holtrop, a Palestinian who was involved in commissioning the pavilion on behalf of Bahrain's Ministry of Culture. 'Bahrain draws people longer than they think they will stay here,' he explains. He is still happy living there; the island's material context is a source of inspiration for him. It is earthy: mud, clay and heat. Every job he gets in the region is an experiment with those things, each developing on the last. It all takes place in his open-air courtyard studio protected by huge awnings.

'The studio is partly computers and partly workshop,' he says. 'Bahrain never has rain so you just have to protect against sun, dust and humidity. You need to work with materials that are resistant to those – stone, minerals, sand. Materials are defined by the conditions of the place. There is almost nothing available on this island, yet constraints are also liberating. In that sense coronavirus didn't make a strong difference – we are used to limitations.'

In the 'trophy room' of the Siyadi Pearl Museum, which Studio Anne Holtrop is currently designing, the lime-layered plastered walls will be coated with silver leaf which will quickly acquire a golden patina because of the salt, humidity and pollution. 'It's about the relationship between construction of architecture and the sourcing of materials – the process and defining ways of making,' Holtrop continues. That's why the local material context, including the weather and atmosphere, is so crucial. The studio's work is lots of hands-on prototyping, testing, pushing and making. When you receive a sheet of images of a project from the studio, the first eight pages will be process, only the last two will show the finished scheme. You can picture the sample patches of silver leafed plaster models being tested under different conditions in the yard.

Last time I was in contact with Holtrop was in 2016, discussing the Waterline museum near Utrecht at what he describes as the tail-end of his 'Dutch period' (RIBA Journal Oct 2016). There the context was explored by drawing, using the topography of the existing fort landscape to extrude and excavate a curving flowing sequence of spaces as a building. Working primarily on paper was how he started, but still based on the fabric environment. His first project was Trail House, an installation that traced a path on the plot to form a mock house. He called it 'a possible architecture'.

Unless you happen to have found and followed him on Instagram, Holtrop may not be a familiar name. He has enjoyed being out of the way and under the radar in both the Netherlands and Bahrain. I'm speaking to him now because his studio is about to complete the Green Corner Building, a remarkable concrete and aluminium cast archive, library and restoration workshop in Muharraq, Bahrain, for

ANNE HOLTROP (3)

HENRYBOURNE

Sheikh Ebrahim Center for Culture and Research. He is simultaneously picking up attention from the press releases that fashion house Maison Margiela is sending out about the stores he has redesigned for it around the world. The doors to its revamped Bruton Street shop in London – Holtrop's first project in the UK – have just opened after a long lockdown. His studio was commissioned for the job by creative consultant Dennis Freedman, who came across 2G's monograph of Holtrop at Palais de Tokyo in Paris.

Something I have been worried about before in relation to Holtrop's work is that from afar, it is so specific and deviated from the norm that it could appear pretentious. Yet there is none of that when we speak. Holtrop has steadfast approaches and opinions, and says things like he 'has never liked architecture of the perfect rectangle and prefers buildings based on crumpled paper'. But he's chatty, gentle and likeable, and what's clear from the conversation is that it's his really strong foundations, his expertise, experience, knowledge and enquiry, that are coming through in the work, rather than some aloof agenda. He is defined more by doing than by research and writing. He understands more in retrospect, with not so many design thoughts and ambitions beforehand.

'The process is to look and observe and to try to understand,' he says. 'Then it is about investing new layers on top.' How does he know when to stop? When he doesn't know what the next step is.

Holtrop's methods and views are informed by a lengthy education. When he was young, he wanted to be an artist rather than an architect. Because he liked building things, his father encouraged him into architecture instead, but as he had not studied the appropriate subjects at school, he had to do a degree in engineering first. That took four years and was followed by six more in architecture at Amsterdam's Academy of Architecture. 'When I graduated I thought: finally I can be an artist,' he adds. And rather than work in practice afterwards, he went to work for Krijn de Koning, an artist who was looking for an assistant with architectural knowledge, and became involved in his large architectural artwork installations. It was a route that gave him autonomy. He could define what architecture was himself – he didn't have to worry about clients.

After doing that for five years, he struck out alone. This why his first project was an installation and why his references are all artists; the splash, dribble, cut of Richard Serra or the way his studio's proposal for a new art institute in Saudi Arabia made from cast glass sited in an excavated escarpment like the land art work of Michael Heizer. Holtrop is effectively engineer-architect-artist and that explains why his work is able to stand out. The engineering aspect particularly gives him a deeper intuition of possibilities – even if he can no longer fully calculate the structures. This moves proposals beyond others, between disciplines. The goal is to make things and intervene in the possibility of making, not only design. At the Green Corner Building, hulks of on-site cast concrete are stacked vertically and horizontally like a long narrow house of cards, with huge glass panels spaced between. What look like honed rock walls inside are huge sliding cast aluminium panels on runners designed to close off spaces for atmospheric protection of the stored paperworks. Aluminium doesn't sound as if it would be local to Bahrain but in anticipation of the end of oil, in the 1970s the government built a smelter and there are countless workshops in the souk market, making everything from aluminium kitchens to windows.

Above left and right
House of cards exterior and honed rock interior at Green Corner Building.
Below left and bottom right
Craning the concrete panels into place and the aluminium panel casting at Green Corner Building.
Opposite left
Model of the Art Institute proposal for Riyadh.
Opposite right
Kit of columns, walls and textures at Maison Margiela, Bruton Street, London.

ANNE HOLTROP (2)

The Green Corner Building's concrete panels were cast in formwork in the Netherlands, based on negatives from the site, and were a step on from the smaller sibling Qaisariya Souq which completed last year and shares the house of cards resemblance. The studio also has an idea for a scheme comprising many small pieces of concrete joined together to form a roof that drops down to the ground, doubling as its walls. These are typical traits for Holtrop, who likes to leave aspects of a project open so that they can respond physically to the site.

The method has its challenges, although Holtrop says the essence of projects is always there in the drawings. Together with Italian engineer Mario Monotti, he has found ways to structurally define the unpredictable. He encourages this thinking in his teaching at ETH Zurich, Sandberg Instituut and Accademia di Architettura di Mendrisio, where he wants students to base their work on what they feel like doing that morning. From a process perspective, it sounds long-winded. Do clients not want more concrete plans so to speak?

Apparently, no. Holtrop's clients also really like architecture for its making aspect. For them it's not speculation and business. At Maison Margiela the output is essentially a kit of parts – gypsum walls and columns cast in textile sacks – which gives a new loose identity to the brand. Explaining how he persuades clients to embark on this journey of discovery, Holtrop refers to the Waterline museum. That was a competition specifically aimed at young architects. He thinks that if the jury had made its decision on the basis of a short interview he wouldn't have got the job. Instead, he had an hour to discuss his written proposal. The client was still nervous, however, and consequently commissioned him initially only for the preliminary designs, which could then be handed over to a design & build contractor ('the worst kind of contract'). However, the work he did brought trust and after each stage he was hired for the next one, ultimately overseeing the whole project – with little difference between what was drawn and what got built.

> He is defined more by doing than by research and writing

Now Holtrop is more established with his buildings becoming part of Bahrain's popular culture. People pose in front of them for photoshoots and to post on social media. The studio is getting more interest and commissions in the region, as well as job applications from Lebanon, Syria, Saudi Arabia and Morocco. 'These make me feel like I am part of here,' Holtrop adds. He's mastered the sensitivities to the material of the place. The distance has allowed him to invent himself and reflect critically. He has a private house project going on outside Milan and will be applying the same inquisitiveness there. After such a long period scorching in the heat, it's intriguing to think how he might respond to the constantly changing weather, wateriness and greenness of his home country and other conditions elsewhere – so let's hope he's wrong about the vaccine not being a panacea.

Late encore for unsung splendours

Edmund Harris' intriguing cataloguing of Less Eminent Victorians is an engaging, enlightening and diverting investigation, finds Hugh Pearman

Above An explosion of polychromy at Lower Shuckburgh by John Croft. Why did the elusive Croft not do more strange and wonderful work like Shuckburgh?
Opposite top The distinctly strange tower and spire of St Marks Tunbridge Wells by Roumieu.
Opposite Crossness pumping station in East London by Driver is a virtuoso use of his trademark ironwork

Why wait for a traditional publishing channel, argues architectural conservation specialist and historian Edmund Harris, when you can just get on and publish online for yourself? To say that 'Less Eminent Victorians' is a blog about overlooked architects is true, but it is very far indeed from being 'just' a blog. Harris has previously worked for SAVE, the Victorian Society, the Diocese of London and the Built Heritage Consultancy and is now Care of Churches Officer for the Diocese of Canterbury. He knows his stuff.

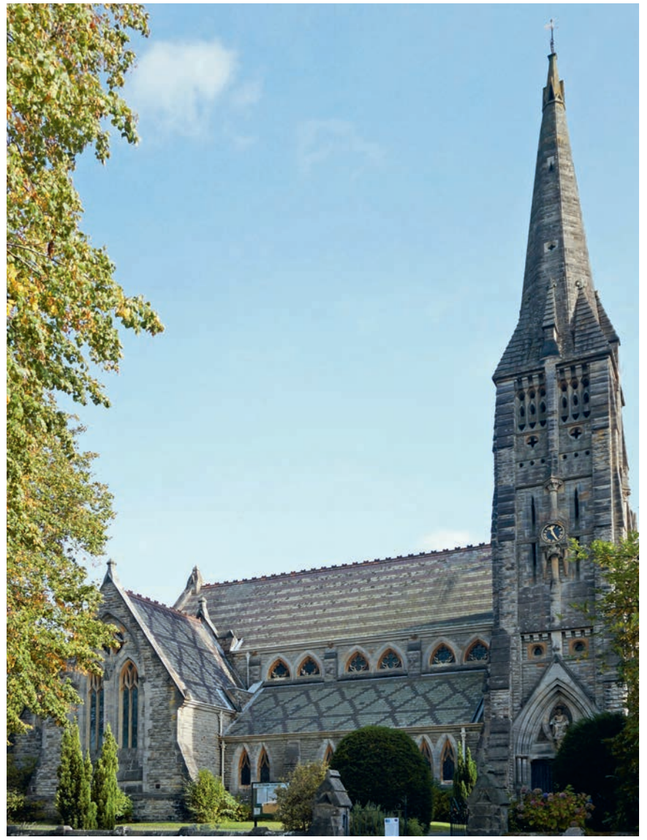
I have been following Less Eminent Victorians since Harris began his self-appointed task in the summer of 2020 with the intriguing William Eden Nesfield (1835-88), a one-time partner of Richard Norman Shaw. Harris has already written 28 wide-ranging accounts, and goes back to fill the gaps in his earlier pieces when he learns more. So the blog is already the length of a decent book, and amounts to a work of detection, searching for 'missing persons'.

At a time when he says there is still scholarship to be done even on some of the Victorian big names – the likes of Street, Teulon, even Sir George Gilbert 'Great' Scott – what hope is there for all the fascinating less lauded talents – 'who, though not household names, each made a distinctive, highly individual contribution to this rich legacy?' he asks. Well, he's made a decent start here.

He has a commendable weakness for those architects that another of his hard-to-categorise heroes, H S Goodhart-Rendel, memorably described as 'rogue'. The ones who step confidently outside the mainstream. The instalments tend to get longer and more detailed as time goes on – you can tell that this is someone well versed in the business of writing reports and appraisals professionally.

What you get here is an insight into a live process, and this, as much as the format, makes reading it different to reading a finished book. Harris sometimes admits he has 'run out of road' on some of the architects who have piqued his interest. Why, for instance, did an obviously talented architect such as John Croft, who he bills as 'the most mysterious rogue of all' not build more? A glance at his photos of Croft's church of John the Baptist in Lower Shuckburgh, Warwickshire, is enough to hook you, as is his description: 'Built in 1863-1864, it is among the most outlandish and bizarrely original churches that Victorian England produced, which is saying a lot. Here is romanticism writ as large as it can be, for this is architecture intended to appeal primarily to the emotions and the senses. It is a sumptuous, mind-bogglingly varied feast of colours, textures and forms.'

Perhaps Croft's tastes, like those of another of Harris's subjects, the better known 'rogue' R L Roumieu, were just too eccentric (check out his remarkably unusual tower and spire on St Mark's, Broadwater Down, Tunbridge Wells). But as he



EDMUND HARRIS – LESSEMINENTVICTORIANS.COM (3)

writes of Edward Lushington Blackburne (1803-88): 'There are some Victorian architects whose neglect is genuinely inexplicable and it usually comes down to sheer bad luck – the destruction of major works, the absence of a scholar prepared to take on the task of providing an authoritative account of a life's work. Do I think that Blackburne is a neglected genius? No – it would be silly to make that sort of claim for him. I doubt bringing him to light will fundamentally change our understanding of Victorian architecture. But he deserved to be written up.'

Harris reveals that the external examiners for his Cambridge dissertation on Joseph Peacock were Timothy Brittain-Catlin and the late Gavin Stamp. After Harris had talked himself to a standstill, 'Gavin turned to me and said, "We couldn't help wondering whether Peacock wasn't actually all that good an architect". This was a shock and it caught me rather off guard. It still rings in my ears.'

I'm inclined to think that if Harris says someone is worth the attention, he's probably right. And he's entertaining with it. He drops little apercus into his writing – such as this, from an account of the amateur architecture of the Welsh Marches: 'I have long fancied that one of the principal drivers of architectural development in Victorian England was boredom.'

He has a commendable weakness for those architects memorably described as 'rogue'

He will ramble off down by-ways – what Victorian clients got up to, other architects from the same family, Welsh sheep-breeding, French wind-turbines, Carthusian monasteries, that kind of thing – so you sometimes need to concentrate quite hard in order not to lose the thread. These digressions are fascinating however, and perhaps unintentionally echo the way many of his subjects work, which is often to do with overload, packing in the effects. It's rich. Good to dip into, perhaps too much to read all 28 at one sitting.

It's not all about churches and country houses. There's the architect of London's lost Queen's Hall, Thomas Edward Knightley (1823-1905). Or Charles Henry Driver (1832-1900), a great user of finely-detailed cast iron in pumping stations (including two of the grandest, East London's Abbey Mills and Crossness) many inventive railway stations in an impressive range of styles and sizes, pier and aquarium buildings, street lamps... he was a thoroughly versatile Victorian architect who certainly does, along with his colleagues in the blog, deserve to be rather more eminent. All in all, this is a site to lose yourself in. ●

lesseminentvictorians.com/

Principal designer is the way forward

Architects' broad knowledge make us ideal for the role of ensuring building safety, says Alan Jones

Throughout my presidency, I have referred to architects as being deep generalists; of having a deep specialist knowledge of design and delivering places and spaces, together with a broader understanding of the industry and an appreciation of the importance of connected disciplines. Our broad education and experience are both demanding to initially gain, and then to retain and supplement with new skills and understanding.

The world has tended to travel in the opposite direction, fracturing the industry with greater levels of specialism, each knowing more and more about less and less, with few having a true overview. We have and need our specialist architects, but at the centre of each of us is the generalist rounded core that allows us to see and act upon interrelationships, risks and opportunities, meeting regulations and going much further than sheer construction to the art of designing and constructing well. When on song, thinking, theorising, and constructing are all working together.

It is that rounded core that many believe makes architects the perfect fit for the redefined role of principal designer for buildings, as set out in the draft Building Safety Bill. For many years, we referred to the architect as being the conductor of the orchestra, and more recently lamented that we were no longer seen as the natural occupants of that position. The redefined principal designer role can bring architects back to the podium, taking responsibility and adding value – knowing and working together with engineers, cost consultants, fire-safety experts and other specialists.

Health and safety has been a point of debate and dispute across our industry, and there have been hopes to move 'H&S' from post-decision 'slips and trips' form-filling to being truly integral with design and construction. A combination of the Building Safety Bill, the creation of a new Building Safety Regulator and an urgency within the Health and Safety Executive is creating a new landscape in which the lead designer of a project is the principal designer. And for many projects that means the architect – be that as an individual or as a company. It is not a role to run away from – though more can be done to help architects better understand the duties of the coordinating role and how it can be proportionate in terms of risk, responsibility and value. No longer does it deal with bolted-on health and safety, but rather with integral 'design risk management', with the golden thread of considering design and construction of a project by the lead/principal designer, evolving from the peripheral activity that has beleaguered this important facet of our industry.

Post Grenfell, and considering the work led by Judith Hackitt, the interrelationship of materials, structure, function, life safety, occupation and maintenance is now better appreciated and is being articulated in legislation. For many years architects in practice have considered those same matters alongside the climate emergency, carbon footprint, theory and long-term delight as essential aspects of a successful project. In his introduction to Constructing Architecture, Andrea Deplazes explains this close connection as: 'designing and constructing are the same thing'.

No longer does the role deal with bolted-on health and safety, but rather integral 'design risk management'

The draft Building Safety Bill effectively requires the lead designer to be the principal designer, be they the engineer on a bridge or the architect of a building. Hence it is time for our profession, our future architects and the schools of architecture that create them to fully grasp this role and all it requires: a knowledge and understanding of the totality of designing and constructing architecture. It is what makes us deep generalists and essential to the successful delivery of projects. Our clients will also understand the need to appoint architects at the start of a project that offer the principal designer role, as they will be best placed to coordinate the design process and its realisation, from inception, through construction to safe occupation and use. Principal designer is the way forward. ●

@AlanJonesFRIBA

PORTRAIT STEPHANIE WUNDERLICH

COMPETENCE TESTS

The RIBA is seeking member feedback on the specific areas in which it plans to test the competence of UK chartered members. As detailed in The Way Ahead, the first three mandatory competences will be health and life safety, climate literacy and ethical practice. Search 'mandatory competences' on architecture.com to find out more about the proposals and share your views

Owner of the pioneering Aram Store, which showcased new work and exciting ideas, whose legendary knack for retail included the licence to produce Eileen Gray's furniture

Zeev Aram 1931–2021

Zeev Aram was a man of great stamina and enthusiasm, whose warm voice and laugh filled the floors of his famous London design store. It is often said that the Aram Store is more like a museum than a showroom, and every day Mr Aram – as he was known to all who worked with him – would walk around his unparalleled collection of design classics and contemporary furniture, a master curator making minute adjustments to displays, introducing a new piece of art, checking the freshness of flowers.

Born in Transylvania, he was sent to a kibbutz in Mandatory Palestine, leaving at 15 to work with architect Hans Zelig before serving in the Israeli navy for seven years. In 1957 he met an English woman, Elizabeth Bunzl, and returned to London with her, marrying the following year. Both attended the Central School of Art, and Mr Aram graduated in furniture and interior design in 1960.

After working in the offices of Ernő Goldfinger, Basil Spence and Andrew Renton, he opened his first showroom on the King's Road in 1964. Its modern furniture, designed by the likes of Marcel Breuer and Le Corbusier, was initially dismissed as cold and clinical by a British public more used to reproduction antiques. The reaction didn't deter him, and he used his shop window to gradually build a following.

Upstairs he ran a successful design practice, Zeev Aram & Associates, but it was a knack for retail and knowing what his customers would want next that made the store his primary legacy. In 1973 rising rents saw him relocate to a former warehouse in Covent Garden, which he turned into a temple of modern design.

Recognising talent early was his pride and passion. Every year between 1988 and 1994, the showroom was given over graduates selected from summer shows up and down the country, launching the careers of designers including a young Jasper Morrison and a shy Thomas Heatherwick.

In 2002, the showroom expanded to an adjacent building, and Mr Aram had his prominent shop window back. The graduate shows got their own home in The Aram Gallery, an entire floor dedicated to showing experimental work by emerging designers. When I became the non-commercial gallery's curator in 2015, it already had a mythic quality. The stamp of Mr Aram's approval was as good as any graduate prize.

The gallery's purpose was to promote understanding of design, and to showcase new work and exciting ideas. What constituted new and exciting was a source of hot debate: it was hard to impress someone who had seen it all. Occasionally Mr Aram would deem something impressive enough to add to his own collection. Whether he was buying for himself or shaping the store's inventory, he was ahead of the curve in realising the potential in a product or designer. Most notably he persuaded the ageing Eileen Gray to grant him the licence to produce her furniture, and bold designs such as her E1027 adjustable table are now rightly celebrated as modernist icons.

Mr Aram regularly brought friends and family to Drury Lane for a quick tour and a long lunch; with Liz he had four children – Ruth, who sadly died in 2018, and Daniel, Debby and Karen, who survive him, along with 10 grandchildren. His charm and good nature made everyone feel at home in the store and gallery he worked so hard to perfect. Today the idea of a destination store is nothing new, but in the early 2000s there would have been nothing like it. There still isn't a place quite like the Aram Store. Or a person quite like Zeev Aram.

By Riya Patel

IN MEMORIAM

Leslie Albert Cutmore
Elected 1955, Reading

Terence George Harvie
Elected 1962, Somerset

Thomas Keith John Eland
Elected 1971, County Durham

Alfred Gyasie Sampson
Elected 1975, London

George Alfred Deeth
Elected 1987, Warwickshire

Ian Charles Bampton
Elected 1957, Ashford

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

Exchange

Problems aren't pretty
I was prompted to write after reading the excellent letter from Helena Harry (RIBAJ April 2021).

Your magazine is well presented, the buildings are new and beautiful, the people and ads are new and beautiful, but whether the content relates to activities of the average architect beavering away in his garret or up to his knees in mud on a building site I am not sure.

Have I missed something or are the technicalities of day to day building construction no longer the concern of the average architect?

I would have thought that after the Grenfell fire and the associated cladding and indemnity insurance issues, this magazine would be full of practical ideas and technical details showing ways to correct these defects.

On sustainability, we keep seeing examples of highly insulated timber clad dwellings without overhanging roofs and where vertical boarding extends almost to ground level, well within splashing distance of the end grain of the boarding. These are perversions of sustainability: they will rot. Our towns and villages are full of old timber buildings – usually with stone bases and projecting floors and roofs. There's no need to re-invent the wheel, it just needs refining.

What about concrete? Why is there no technical debate with details on how to construct foundations, floors and walls without it? Why no technical exchange on how to reduce the use of steel in buildings – say with load-bearing masonry as of old? And why no debate on the rising use of stone which is just dug out of the ground?

Then there's ventilation; we are supposed to make green airtight buildings, but Covid-19 demands fresh air with cross ventilation. How do we square this circle?

So many problems and all you show is pretty pictures. Come on young architects – bring us some solutions!

Peter Ashworth, Northumberland

The climate emergency, low carbon materials, fallout from Grenfell and inclusion are very much on our agenda, as I hope you can see in this issue, alongside the celebration of inspirational architecture – Editor

Inspection cover
The article on remote site inspections (RIBAJ, April 2021) was timely after a year of remote working, and while I agree that video conferencing platforms work well for informal inspections, the piece misses how digital tools can be used in formal cases too, particularly as the industry's technological needs evolve rapidly.

The digitisation of formal quality inspections offers the largest scope for productivity improvements for contractors. You discuss using existing tools to support existing processes; I'd like to address using new tools.

Formal digital inspections follow quality assurance procedures while absorbing and coexisting with video applications. Driven by a contractual or compliance obligation (for example, safety checks on fire doors), they are the only way to manage the quality of a project. As such inspections become more common, complete remote support provided by experts will become the norm. The technology is available – cloud-based software or field BIM tools – it just needs the industry to adopt it.

So my question is: how deep is the construction industry prepared to go in the digitisation process and when will it be ready for a full conversion?

Tom Boland, global head of digitalisation, Zutec

Deeper reflection
I am surprised by the use of this photograph on p11 of RIBAJ, December 2020. It shows low level glazing acting as a mirror of the natural landscape, a formula likely to confuse birds and lead to impacts. How it 'embodies the sustainable philosophy of the architect' escapes me. I thought RIBAJ had begun to promote sustainability in all its dimensions – including biodiversity.

Brian Edwards, author of Rough Guide to Sustainability published by RIBA Books

ZOOEY BRAUN

Tweetback

ON FUTURE WINNERS
Delighted for @RIBAJ Future Winners, including Freehaus Design. But note that 9 of the 10 winners (5 pairs) are men! What does this say to women architects – current, aspiring, future?
ftwork, @ftwork_org

Finally got round to reading the @nimtim_arch piece in the @RIBAJ. Inspiring stuff.
Paul Testa, @ArchTesta

CELEBRATING HORNSEY LIBRARY
Excited to see #hornseylibrary on the cover of @RIBAJ this month. Credit to my amazing planners and conservation officer for all the specialist advice and input in getting this refurb just right!
Dean Hermitage @HermitageDean

This is a lovely article on the beautiful refurbishment of a lovely library. Very cheering!
Pippa Goldfinger @PippaGoldfinger

Great piece about the restoration of my lovely local #Library – and best of all, it reopens on Monday
Karen Brookfield @KarenBrookf21

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OLIVER PERROTT / RIBA COLLECTIONS

Chiat/Day offices
Los Angeles, 1991

The unexpected facade of this office building in Venice, Los Angeles, completed in 1991, is said to have been created in a moment of pure serendipity. The architect, Frank Gehry, needed to demonstrate to his client how a third structure could unite the two disparate elements of his design – one a white, ship-like block peppered with openings, the other a copper-clad forest of rectangular columns and diagonal beams. He reached across his desk for a maquette of a theatre and library in the shape of a pair of binoculars – by his friends the sculptors Claes Oldenburg and Coosje van Bruggen – and the audacious design was complete. The design's eclectic combination of artistic and architectural styles sets the building apart even in a city very familiar with Gehry's work. The binoculars themselves are not merely decorative but contain conference rooms in each lens with the eyepieces functioning as skylights. The building was designed for Chiat/Day, one of the USA's leading advertising agencies in late 20th century, which decamped after just five years when the novel hot desking concept it was designed around didn't work for it. Fittingly, it now houses the search engine Google. ●

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The future's bright.

We're excited to see a new generation of architects emerging and proud to be working with some already.

Will Gamble Architects
Photography: Johan Dehlin

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Luxury floor to ceiling glass

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