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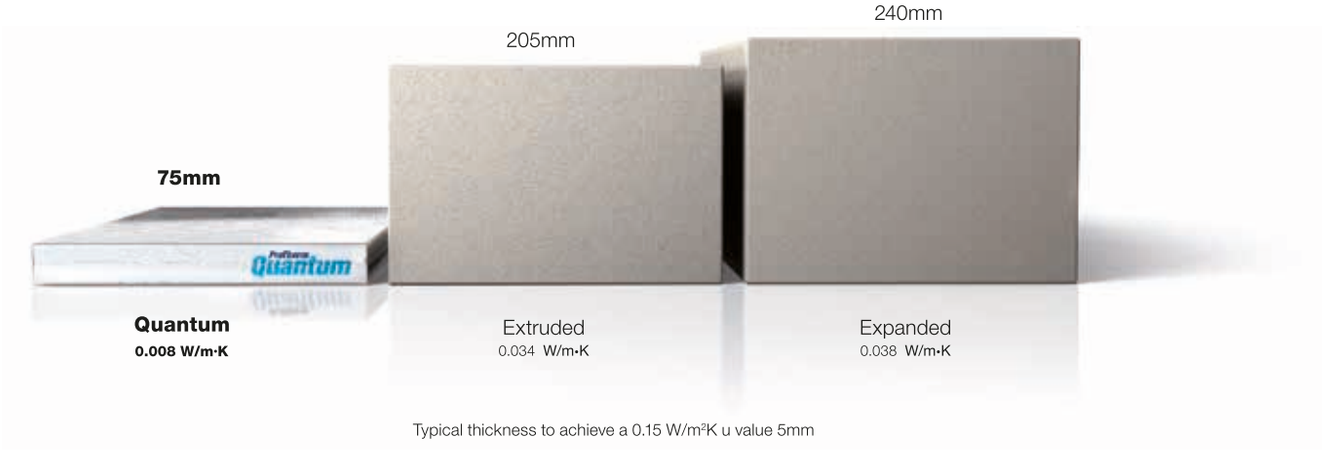

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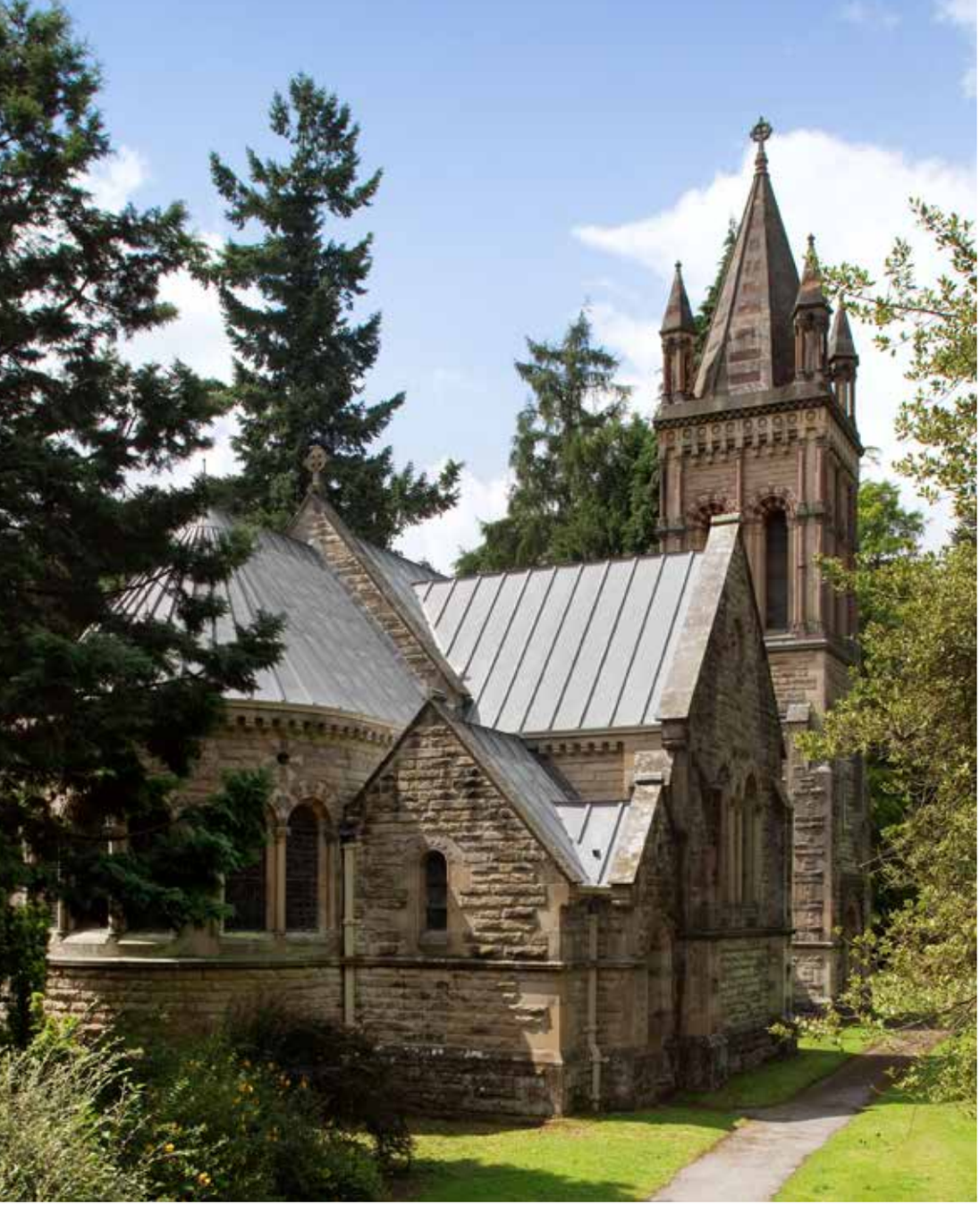

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1: Buildings

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As soon as I had the Shard in mind it inspired a lot of trains of thought…I wanted to create a contemporary hymn to the tower

William Doyle of East India Youth tunes in to Musicity: ribaj.com/musicity

The chamber music hall at David Chipperfield's Carmen Würth Forum, page 22.

DENNIS GILBERT

Stepping out

Hamish & Lyons' playful extension to a traditional house is a light modern confection of glass hovering over water beside a jungle. Welcome to Maidenhead

Words: Eleanor Young Photographs: James Brittain

Below The two elevated pavilions almost demand you dangle your legs.

Below right A glass bridge means Stepping Stones can be entered directly from the house, but if you want to go under the bridge to the lake, just duck into the brick pit.

Entirely transparent, the garden/living room offers no hint of privacy

You can leap from one stepping stone to another, wind in between a nascent jungle of tree ferns and yew balls, step out across a glass bridge or duck down into a brick pit below it. Each is a delight and that's before you consider ascending, dripping, from the lake up the cantilevered steps. And then you reach Stepping Stones, an addition to a sub-Lutyens house in the village of Hurley near Maidenhead designed by architect Hamish & Lyons.

This elevated living space captures the joyful precarious lightness of balancing over the water with its sparingly engineered steel columns, an underside of tapering horizontal fins and thinnest of thin roof profiles. Light pours over the delicate ties in the rooflights that crack open the pitched roof. Onto the water the corners slide right open. But at the same time here is shelter with a deep plan and overshooting eaves. Visiting on a day of

I longed for a downpour which would layer an exhilarating rain curtain to enjoy from under the eaves

mizzle I longed for a downpour which would layer an exhilarating rain curtain to enjoy from under the eaves. The building is certainly used to wet: during concept design the site was flooded, hence the columns keeping the floor above water level (and why there is no basement parking, as originally planned).

Taking on the original large but rather enclosed house, the family wanted living space with an outdoor connection, a better den for its five lively boys (each of whom has some level of ADHD) and somewhere for guests to stay. Located in both a conservation area and green belt, they were relying on an existing double garage, two storey annexe and small garden room, to justify the area (and massing) of any new building to the planners. Drawing up in the gravel turning circle shared by the cluster of houses around it, Stepping Stones comes into view with something of the presence of an out-of-place double garage, cars parked in front. Apart from the use of red brick there seems scant reference or indeed relationship to the existing buildings. The transparency also surprises, the top glazing shows a made up bed, the glass bridge is entirely transparent.

But these are the only off notes and any hint of disquiet falls away as you move alongside, into or under the building. The large garden with its mature trees and new lake unfolds, and the scale of the 150m^2 Stepping Stones seems entirely natural. It is split into two buildings, guest suite cum den at the far end and living space closer to the house; each have mezzanines inhabited by double beds. Douglas fir ply lines walls hiding TVs, cupboards and loos. The guest suite has kitchen and dining table but the living space's spattering of furniture – juke box, pool table, sofas, aquarium – suggest this is a space waiting to be lived in; that the family hasn't yet quite worked out what the spaces are for. With the eldest sons now teenagers you can imagine sociable weekends and big parties (though the shower room and toilet top lit through

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150m²
area

JCT ICD
form of contract

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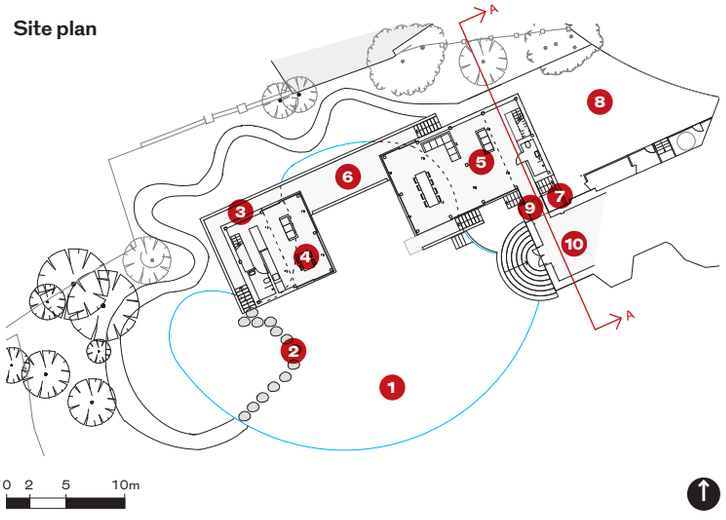
the bedroom floor requires a certain amount of discretion not obviously compatible with teenage parties).

The architecture itself offers its own suggestions for inhabitation, mostly looking out, dangling your legs over the solid iroko deck, leaning against the flitched Y-shaped columns or resting your forearms on the broad balustrade, held sparely by occasional steels, LEDs tracked underneath. There is a therapeutic calmness and discipline to the architecture; the underside of those roofs are also iroko clad, the black steel fins (hidden T-sections) disappearing into them. Care has gone into everything from the base of the timber columns to ensuring that the layers of opening tracks for the glazing match from side to side for symmetry. A traditional contract and a family firm of contractors helped with this.

This was Hamish & Lyons' first project, – it started five years ago – and the practice was lucky enough to find a client who has given it the time and budget to make a remarkable building.

Nick Lyons first came to architecture as a teenager, bowled over by the spaces of a friend's modernist home in Wilmslow in Cheshire. 'It gives me shivers down my spine thinking of designing a home for someone,' he says now. Stepping Stones is likely to inspire others, just as he was inspired. ●

Site plan

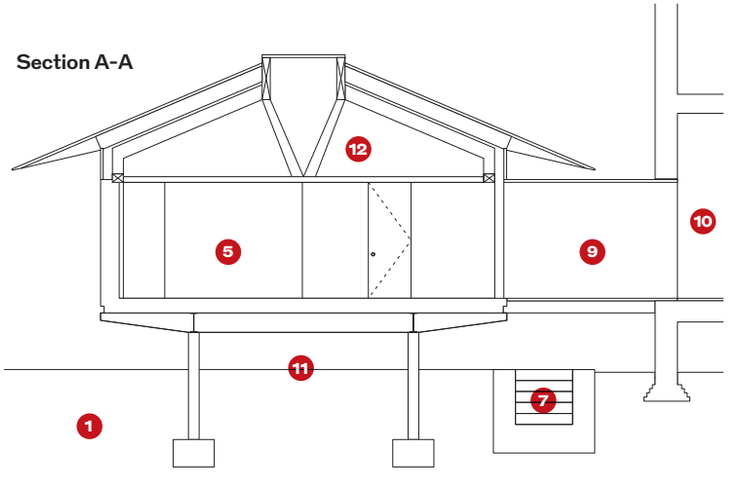


Above Stepping Stones from above, perching over a circular lake, the house alongside.

Below You can just spy the supports for the building underneath the monolithic brick base and behind the cantilevered stairs.

1 Lake
2 Stepping stones
3 Covered walkway
4 Outdoor den/guest house
5 Garden/living room
6 Bridge
7 Brick pit
8 Drive
9 Glass bridge link
10 Existing house
11 Undercroft
12 Mezzanine

Section A-A



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National Gallery of Ireland

Photograph Marie-Louise Halpenny
Words Jan-Carlos Kucharek

While working for a fashion photographer in New York for 10 years, Dublin photographer Marie-Louise Halpenny saw the Twin Towers come down. Her easy Irish conversational manner, accent softened from years abroad, trails away over the phone to silence. 'You realise the power of people when they actually come together,' she says after a moment. A longer pause and I sense a need to change the subject; but maybe she's holding the thought in her mind for the rest of our chat; the vulnerability of people in the spaces around them, and their amazing ability to affect it.

She became aware of this when accompanying her boss to Dhaka to shoot Louis Kahn's National Assembly Building of Bangladesh for a book; standing by the tripod in the midst of the public milling around her – its huge curved, open, concrete halls, sunlight striking their and its faces. Kahn brought her to the nuanced realisation of the added dimension that space assumes when acted on by light and humanity.

That revelation remained with her at the National Gallery of Ireland, where, despite the urge with a digital camera to take a thousand shots, she stood quietly and waited in the cool light for the precise composition to reveal itself over time. Subject and frame established, it took the arrival of the tall young lad, back blocking the view to the Old Master, in his wall-coloured cap and jacket, to make her throw the shutter.

Humans are here, yes; but the human component is not pre-requisite. The light however is. 'I've taken photos with it as an empty site, some with construction workers in the frame; some just of their tools,' she tells me. 'Caught in the right light, they are all just as alive.'

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Searching for a place

Hugh Pearman invited photographer Sarah Lee and architect Joe Morris to assess London's mighty King's Cross regeneration district

'Woss dis?' says a piping voice from somewhere down at my knee level. It's a tiny nappy-wearing toddler holding up a pair of loafers, one in each hand. I recognise these shoes. They belong to photographer Sarah Lee. She's removed them and paddled into the fountains with her Leica, the better to capture the deliriously happy children dashing to and fro in the programmed jets of water. We're sitting among the parents in Granary Square, the heart of the King's Cross development. It's a fine late summer day in early September. We've come to see if this new London district – conceived in a different form some 30 years ago but designed and built by a development consortium led by Argent from 2006 onwards, after five years of consultation – is working as a real place yet. The children at least are in no doubt about it.

Joe Morris and I rescue Lee's loafers from the fascinated child and the three of us

Left The masterplan for the 27ha King's Cross site, now filling up.

Below Flat out on the stepped descent from Granary Square to the Regent's Canal.

Right The fountains in Granary Square become a local beach.

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continue our tour of the new 27ha postal district of N1C, as the King's Cross regeneration area is classified. It is about 60 per cent built now, with an end date of 2021. Part of the purpose of this dérive is to call in on the new Duggan Morris building half way up the site, just behind Central St Martins' art school. In two shades of pink, with delicately textured aluminium cladding panels and balustrades, it's a spec office block with a difference, containing a 7m high, 12m wide lobby with an Everyman cinema, spin-gym and restaurant and some rather fine landscaped roof terraces. Clearly a cut above the spec-office norm, it's regarded by Argent as an attractor-building to the 'cultural quarter' of the site around Central St Martins. A bland building for the Aga Khan University by Fumihiko Maki is going up alongside.

But the idea of bringing Lee and Morris together is to assess the placeness of this place as a whole rather than as a bundle of individual buildings. A lot of Lee's work is for the Guardian, based in a 2008 Dixon Jones

Above Gasholder Park by Bell Phillips with Niall McLaughlin apartments behind.

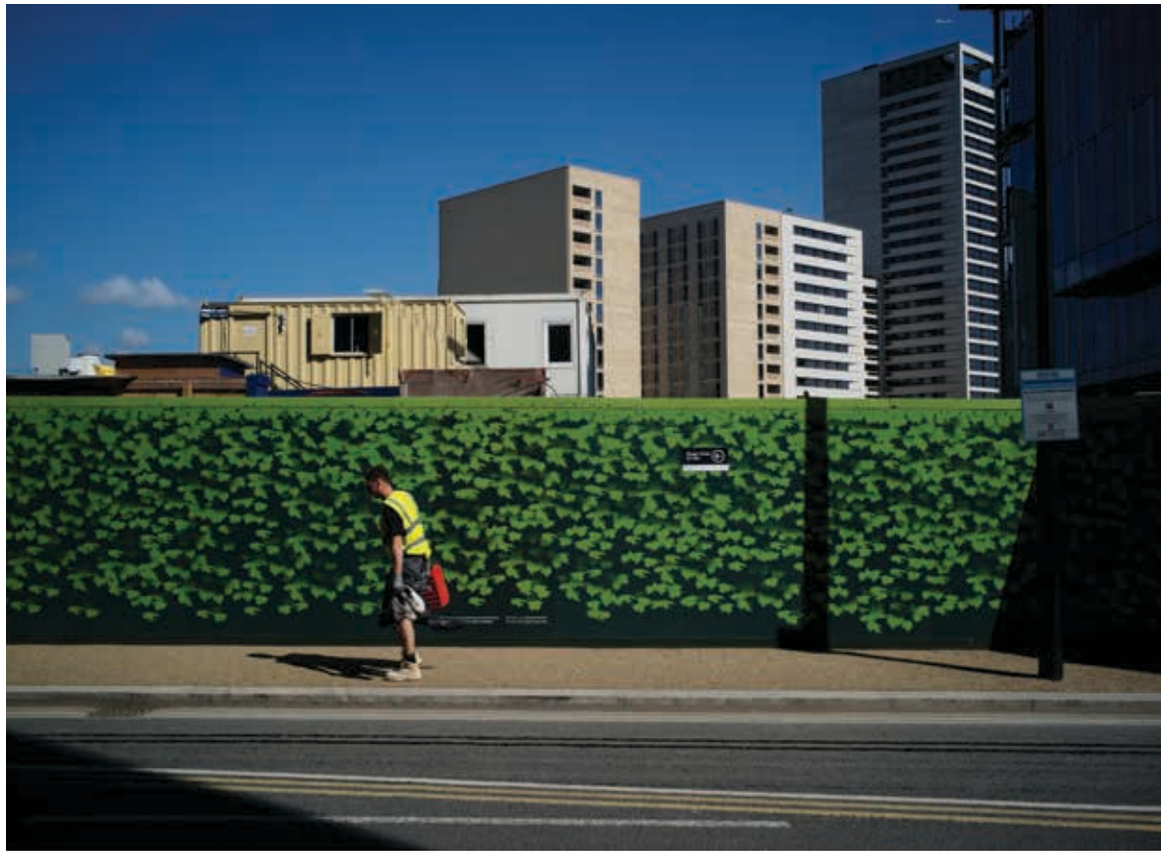
Left Joe Morris explains the virtues of Thomas Heatherwick's Coal Drops Yard retail project.

Lined with restaurants and cafés, it's a pan-European kind of space

building overlooking the site, which also contains the King's Place concert hall/art gallery complex. So she's familiar with the locale and she reckons that Granary Square is working democratically as it should: on a warm day like today, local families come here with their picnics, children in swimwear. The parents sit on the enormous Ian McChesney granite benches which, despite their subtle curvature, are also broad enough to use as tables, while the children frolic in the fountains. It's a beach scene, really, but there's another waterfront nearby where the Regent's canal winds past. Here, on the Astroturf-covered broad steps leading down from Granary Square and in the gardens to the east, you find the office workers on their lunch hours.

South of that, in the wedge of land between King's Cross and St Pancras stations, you get the urban set piece of Pancras Square, recently completed with a very muscular Corten office building by Eric Parry, joining understated neighbours by Demetri Porphyrios, Allies & Morrison (these two responsible for the overall masterplan of the site) Bennetts Associates and, at the southern end, a black-columned Rossi-influenced showpiece by David Chipperfield. The long triangular space they enclose, descending in broad terraces from north to south, is lined with restaurants and cafés and seems to be efficiently absorbing a lot of the population spilling out from the two big railway stations. It's a pan-European kind of space.

Morris is an informed guide. We meet at 'Gasholder Park' the green space surrounded by a hall-of-stainless-steel-mirrors arcade in



Above Work in progress: the north end of the site takes shape.

Left Hoardings as art: detail of 'No 700 Reflectors' by Rana Begum.

Right In the roof gardens of the 'Pink Building' by Duggan Morris.

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Thinking space: a Central St Martins student heads for the Granary Building by Lewis Cubitt, refurbished by Stanton Williams.

Below Happy in the adventure playground, with the Duggan Morris Pink Building behind.

one of the reassembled listed gasholders. Bell Phillips did that, Wilkinson Eyre has made cylindrical bocks of apartments in the others. Thumbs-up from Lee: 'Everyone loves the gasholders'. From there we move via the decorative moulded concrete of a Niall McLaughlin apartment block (something of a Louis Sullivan echo there, Morris notes) alongside the railway lines out of St Pancras up to the development edges, where finished townscape gives way to hoardings and temporary artworks. That brings us to the back of 'Coal Drops Yard' where the roofs of two ranges of listed buildings are being turned into tagliatelle by Thomas Heatherwick. He's a bit of an Aunt Sally after the Garden Bridge debacle, but Morris is clear that this is clever stuff from Heatherwick – by pulling the roofs together in this startling way he makes a great deal more commercial floorspace and creates a covered area at the centre of this upmarket speciality shopping centre.

There is plenty still to build, such as the forthcoming Google HQ by Bjarke Ingels Group/Heatherwick/BDP) along with much more housing of various kinds towards the northern half of the site. Throughout this redevelopment, many very good architects, designers and artists are involved, as is the Argent way. Not that the end result is in any way inevitable – in different political and financial times, for instance, it could pretty much all have become social housing such as you get a lot of all around the site. The aim is a mixed-use city quarter – getting Central St Martins into the Granary buildings early on was a key move there – but of course the 'public' aspect of all this is, as with so many large developments, somewhat illusory: private security guards patrol the site and you need permission to take professional photography there. However, it is no gated community, its roads link to the city around. I'll be interested to see how the non-railway edges of the site eventually turn out – to what extent it will diffuse into its urban surroundings rather than presenting an abrupt scale change. How much SLOAP (Space Left Over After Planning) there will be. Given land values in London, probably not much.

We mooch along the canal, past the shops, through the enormous preserved covered arcade to the east of Central St. Martins, hither and thither. At the end of it all, I can say this: I've been following the evolution of this place since its inception and it is working out pretty well. It's a purposeful place with a variety of open spaces and very good landscaping throughout. Easily comparable in urban terms, say, to the reconstruction of the Potsdamer Platz area of Berlin, but with sizeable and interesting industrial remnants in the mix. There are glitch moments, and – despite a respectable proportion of the housing being affordable social-rented - the southern end has a distinctly affluent sheen to it. But overall, yes, I can report that, to paraphrase Gertrude Stein, there is a 'there' there.

Parents sit on the enormous Ian McChesney granite benches while the children frolic in the fountains. It's a beach scene, really

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Good in parts

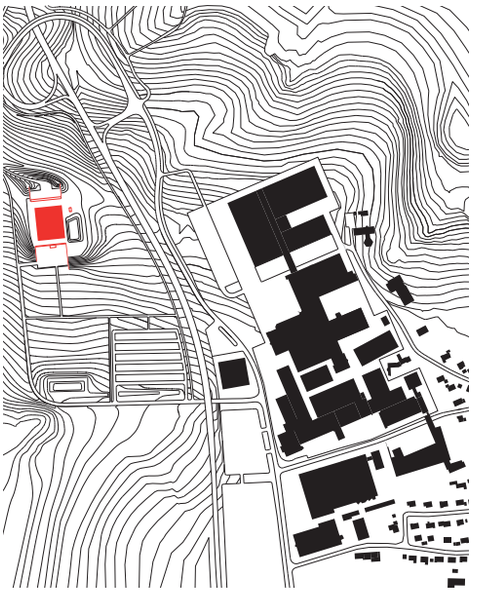
David Chipperfield Architects' Carmen Würth Forum is a bit of a curate's egg, at once extravagant and prudent, indulgent and banal. But don't blame the architect

Words: Jan-Carlos Kucharek Images: Simon Menges/Dennis Gilbert

The Carmen Würth Forum looking south west: a temple to music set in an Arcadian landscape?

There's a reason why David Chipperfield Architect's Carmen Würth Forum outside the little town Künzelsau in Baden-Württemberg looks like a very classy parts distribution centre – but you won't get it from any of the photographs here. Certainly not from the north, south or west, showing the events and chamber music hall rising from its concrete base in splendid isolation against the backdrop of an Arcadian landscape. But look east and it's a different story, as the Forum is subsumed into the huge industrial complex of the Würth family's construction products' distribution business. So if, as DCA's Berlin office partner Martin Reichert remarks, the Forum's primary design driver was the nuanced sublimity of Mies; the secondary, its financing, is intrinsically bound up with the contents of the industrial warehouses in the middle distance.

The Würth company started as a one-man band in 1945 selling construction screws. It went on to become an €11 billion turnover business with over 400 subsidiaries, employing over 70,000 people. Its rural factory complex is testimony to both chronological and cultural expansion. The original 1968 HQ shed building is now dwarfed by a huge campus development of office and industrial blocks designed by noted Bauhaus architect Sep Ruf and a couple of local firms, punctuating the heart of the complex with the commissioned angular metal musings of Danish sculptor Robert Jacobsen. Würth



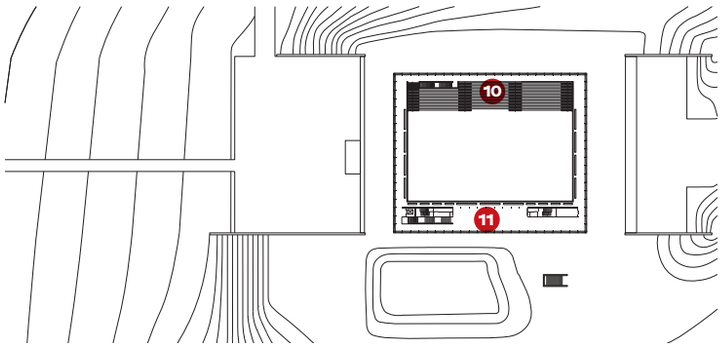
Above The site plan identifies the Forum (shown in red) as distinct from, but part of, the larger industrial complex.

If its primary design driver was the nuanced sublimity of Mies; the financing is bound up with the warehouses

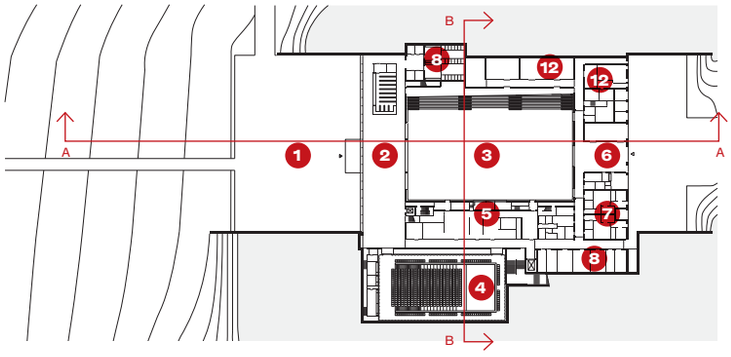
The stripped back, reconstituted stone plaza leading to the entrance foyer contrasts with the landscape around.

DENNIS GILBERT

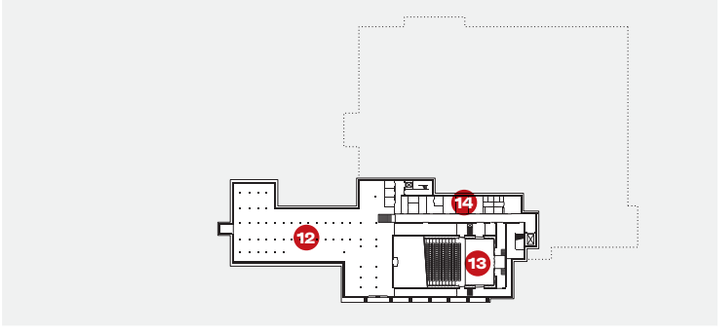
Upper 'Tribune' plan



Ground level plan



Basement level plan

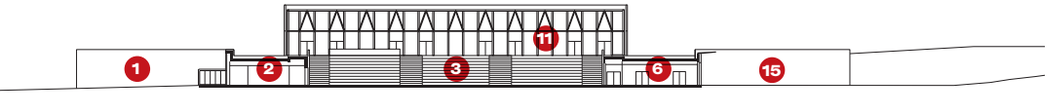


0 10 25 50m

Right The Forum looking north east, its plaza defined by high, crafted concrete walls of stained striations.

1 Entrance plaza
2 Lobby and cloaks
3 Events hall lower level
4 Chamber music hall entrance and upper level
5 Kitchen/catering areas
6 Deliveries
7 Changing rooms
8 WCs
9 Storage
10 Spectator seating
11 Gallery level
12 Technical services
13 Stage of chamber music hall
14 Artist dressing rooms
15 Retaining wall

Section A-A



Section B-B

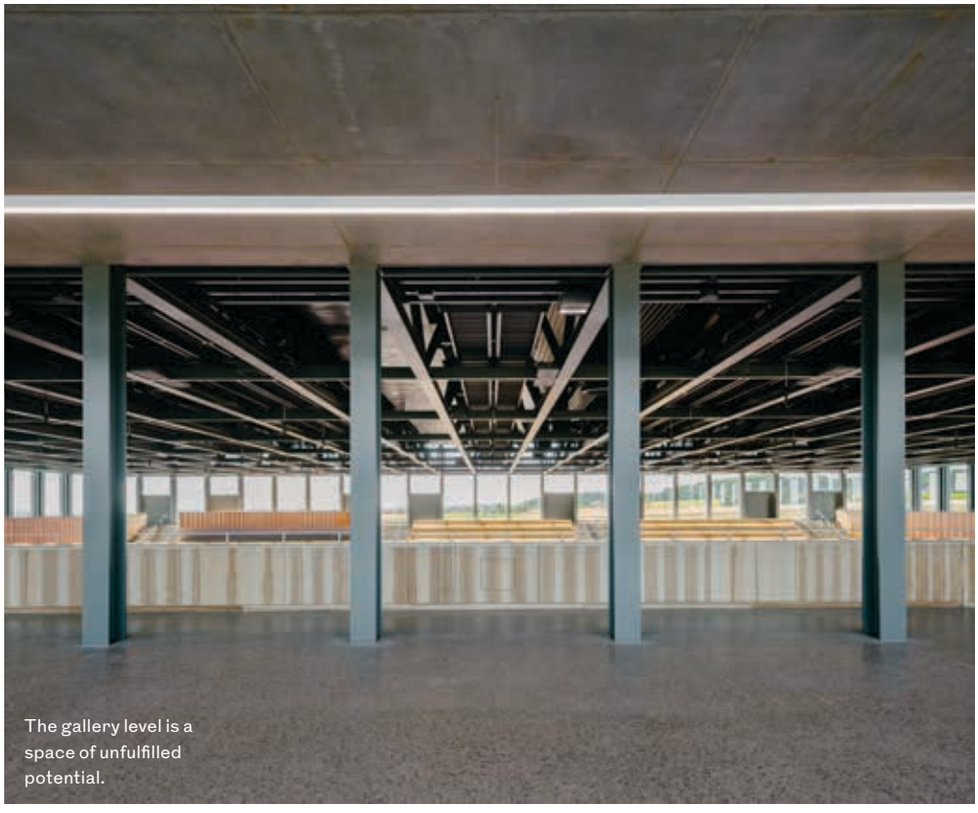
0 10 25 50m

embodies this area's economic wellbeing, palpably so; my taxi driver's son works there along with 2,000 other locals – and he excitedly points out Würth's private airport as we drive alongside. But, in building this similarly bucolic palace of culture, it also aims to endow it with cultural wealth.

But it's not all work, work, work. It turns out that 82-year old former boss Reinhold Würth has for decades been an avid art patron and his on-site public gallery, housing some of his 17,000-strong collection, is by no means an anomaly. The family has 12 – the one in nearby Schwäbisch-Hall was designed by Henning Larsen, who was shortlisted for the 2006 competition to build the Forum in honour of the 80th birthday of Reinhold's disability campaigning, philanthropic wife Carmen. Cutting through a gamut of madcap proposals, the winner was David Chipperfield, with his minimalist chamber music and event hall; the former hidden beneath a grassy knoll, the latter a steel and glass temple rising up alongside it.

In fact, the resulting building is more minimal than originally intended. The idea was to build Würth's 13th gallery slightly east

There's a high level of external sophistication on a temple that, internally, seems best characterised by its purposelessness



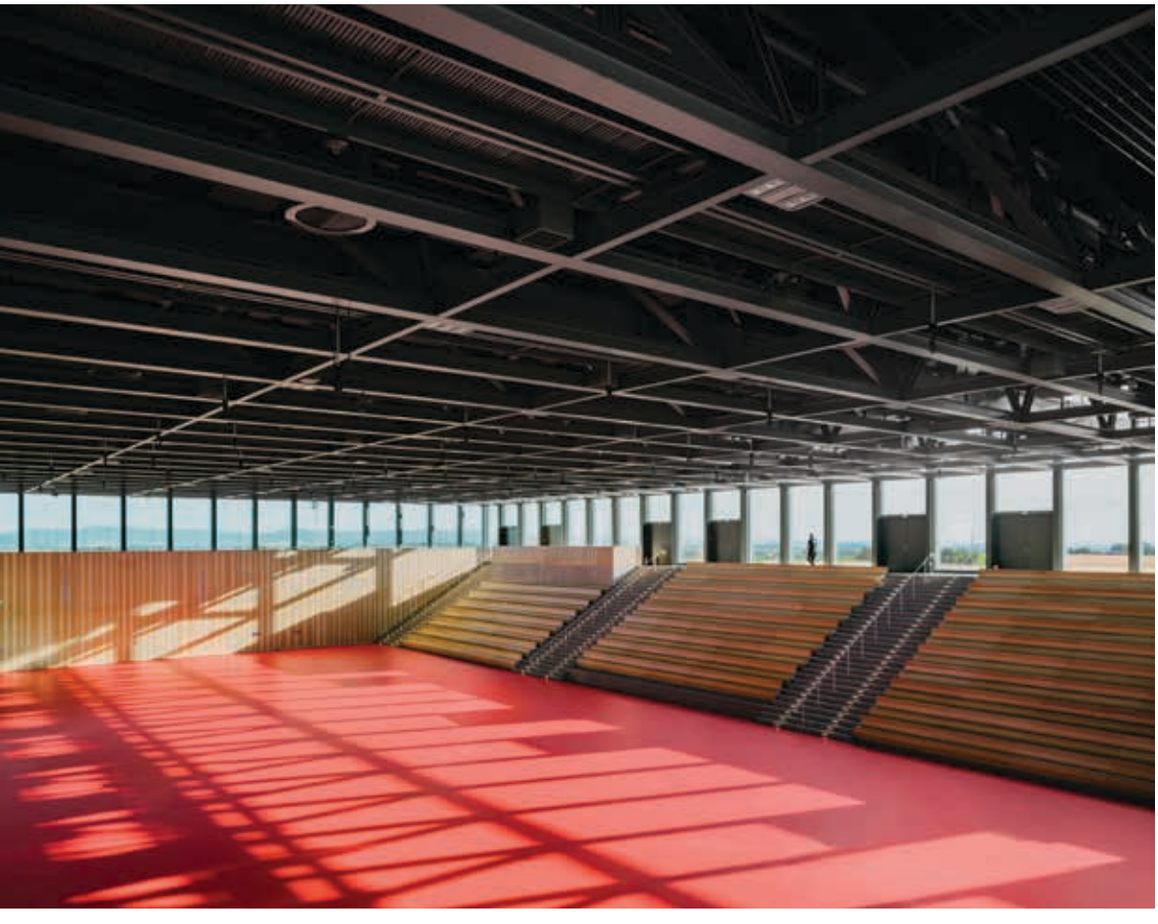
The gallery level is a space of unfulfilled potential.

SIMON MENGES (3)

of the new reception plaza area, but the 2008 global recession put paid to that. As well as affecting the design's scale, the final version yielded 11,000m² from a €60 million budget, with a programme that, sans gallery and library, was much simpler than the one Reinhold sketched on his restaurant napkin back in 2005 when the idea first occurred to him.

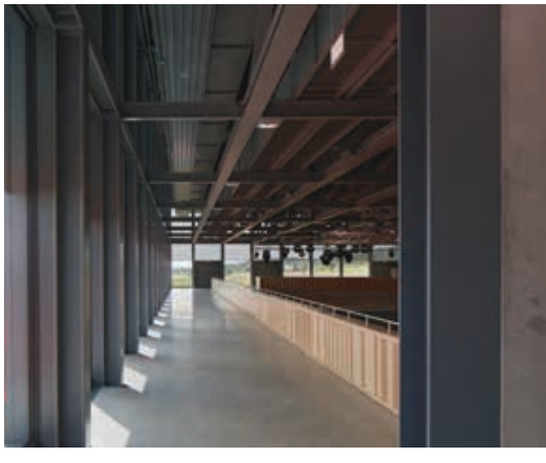
But while the realised Forum might be an orthogonal palimpsest, it's markedly more clean and crisp – at least from the outside. To hunker the building into the landscape, 60,000m³ of earth was moved – most of it to make space for the 2,500-capacity events hall that leads directly off the slender, projecting, lobby space that greets the visitor at the end of the forum's stark, stone entrance plaza. A move into this main volume reveals a 2800m³, 13.5m high space that, says DCA's Reichert, seems influenced as much by the Berlin Neue Nationalgalerie by Mies (that's being stripped out and refurbished) as it is by the company's utilitarian warehouses.

Tall, regimental steel columns run at 2.7m centres all the way around the perimeter, connected by deep steel trusses spanning the full

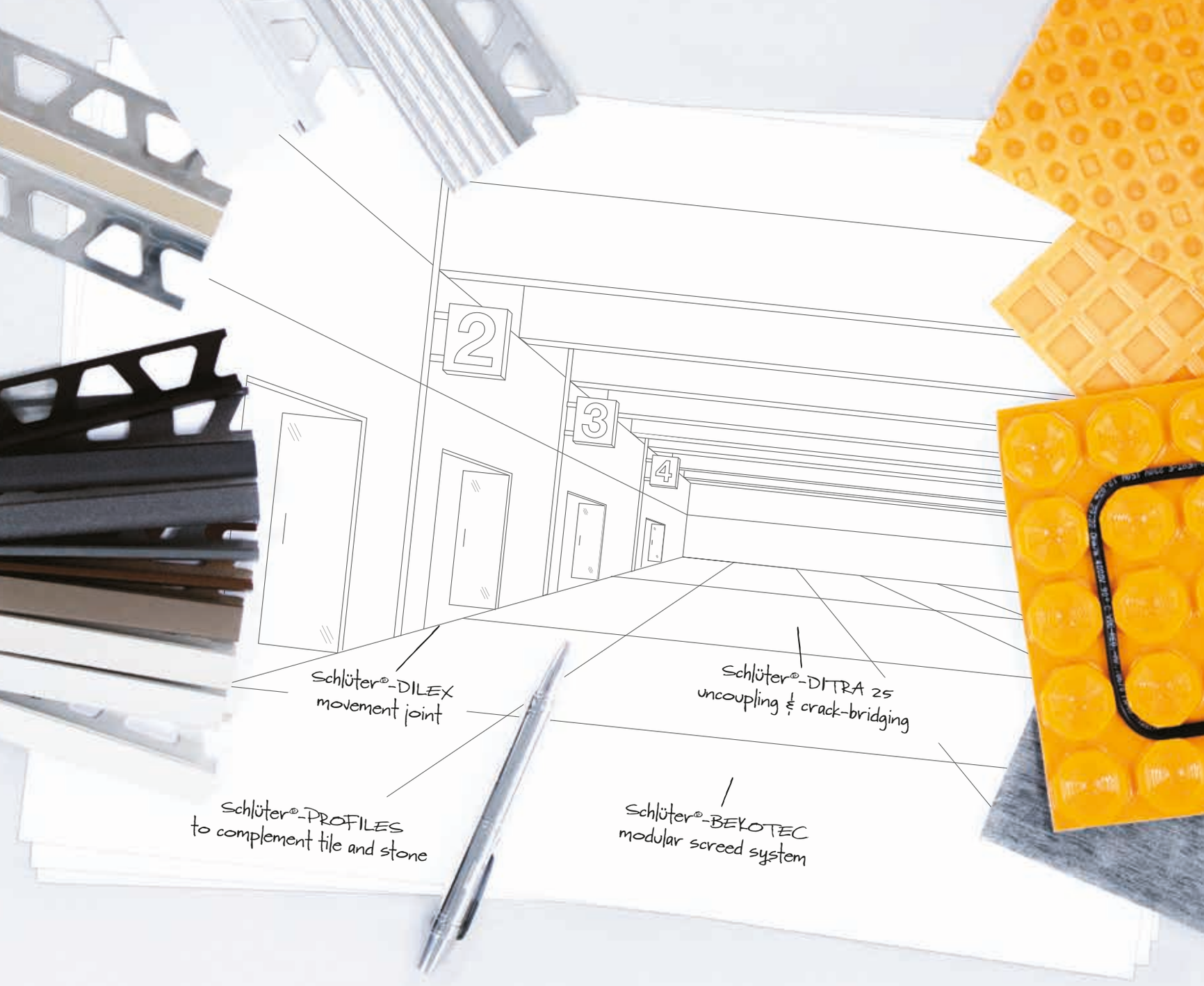


Left Bleacher seating suggests a directionality to the space that is neither explained nor justified.

Below Steel columns at 2.7m centres generate the stoic rhythm of the events hall facade.



DENNIS GILBERT



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DENNIS GILBERT

width. All the services run in this truss zone too, everything painted black as if to concoct an abstracted topsy-turvy industrial landscape of its own. And running between this and the upper 'Tribune' level are the enormous panels of glass, each one subtly slanting the depth of the columns' reveal, creating a 'killing me softly' saw-tooth effect all around this glazed elevation. This is to avoid reflection – not visually as you might assume, but to manage internal acoustics. Outside the glass, a shutter system in apparently eye-wateringly expensive fine stainless steel offers a tatami-like, oriental shading, silently sliding up and down over throughout the day, tracking the sun's passage. The considered restraint of these details and their initial inexplicability adds a high level of external sophistication to a temple that, internally, seems best characterised by its purposelessness.

This was manifested on my visit with a rather lost-looking show on Mars exploration scattered about the main hall floor, marking involvement of some son of Künzelsau in a future NASA space mission. I am told that the kitchens hidden below the upper hall level on the east side recently catered for up to 2,500 people; but that doesn't explain why the formed ash bleacher seating set on the west side's concrete steps sweeps dramatically down to hall level, only to face their blank timber walls. This intimation of specific activity without follow-through leaves the space feeling curiously unresolved and – well, I'll say it, unheimlich.

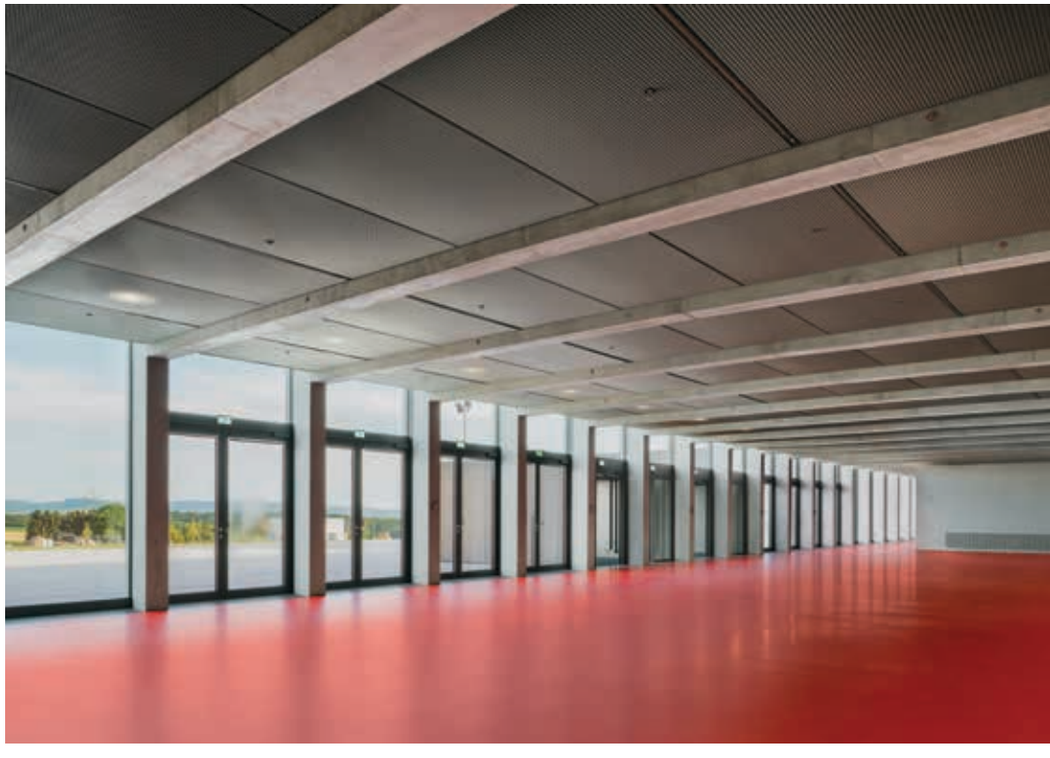
It turns out, speaking to DCA's Martin Reichert, that Reinhold the businessman wanted his value for money. It was to be not only a homage to his wife, but an additional facility for the complex for company meetings, a pop concert or an entertainment venue for hire. This wish for undesignated, effectively unprogrammed space was only realised during design development, Reichert conceding that 'the Forum was commissioned without the client having decided what it would be exactly', leading to decisions far stranger than the Mars event programme. DCA argued in vain for dedicated bar/social spaces that could have created common space between the halls and avoided the lacklustre pop-up café currently on the east side upper level. Further thought might also have seen this lead onto the grassy south terrace and its stunning views over the valley to medieval Waldenburg. As it stands, the only way it's enjoyed is via an underwhelming exit on the east and west sides and a walk round to the front. It's an epic reveal in the end – but an unsatisfying, confusing one.

Fortunately, the smaller, more intimate Reinhold Würth Hall is less unsettling. Specially designed for chamber music events, it is accessed by turning right in the lobby and following the lurid corporate red polyurethane floor to its door. The subterranean hall, holding nearly 600 people in sumptuous, Chipperfield-designed seats of plush red leather, has a honed specificity that offsets the ambivalence one might have about the main space. Here, steely, daylit interiors make way for a darker marquetry box lined in huge veneered panels of rich dark French maple, their almost identical Rorschach patterns running its 40m length and 20m width. German acoustician Müller-BBM was responsible for the subtle slant of the timber walls, a delicate effect that rewards a closer look during a concert.

Apparently only four French maple trees were felled to line Chipperfield's musical box. That includes the ceiling, each joist of which is inset with a simple, continuous strip of LED lighting that sheds a low, flat, Japanese light

Top left Fine steel mesh shutters silently glide up and down in front of the glass, dealing with solar gain.

Below The sizeable entrance lobby eschews Chipperfield's usual materiality for a corporate red polyurethane floor.



SIMON MENGES

Collectively then, this acoustic acropolis seems in equal measure both profligate and parsimonious

The French maple-lined chamber music hall almost overwhelms with its material richness.

SIMON MENGES

on all that material richness. The contrast between the two is intriguing. With low velocity air feeds, you can hear a pin drop and, seats running all the way round on the upper level, there's an accompanying democratising air to the spatial layout. Generating a visual landscape of itself, it must be a lovely, focusing space in which to listen to music.

Collectively then, this acoustic acropolis seems in equal measure both profligate and parsimonious. It's a decadent vanity project but is also expected to pay its way; it is a temple to high art but also a practical assembly point for the workforce; it cossets visitors in the rich materiality of its spaces but provides nothing by way of dedicated social spaces in which to indulge them with hospitality. This, of course, is the fault not of the architecture, but the programme DCA had to work with; what's interesting here is that these polarities cannot help but manifest themselves spatially. For lack of a social space connecting the two halls, and the abject refusal to open out to the south, this as much the home of the Stoics as it is a Temple to Apollo; but I imagine that's as Reinhold wants it. Here, as in other aspects of his business life, he's a canny decision-maker. DCA's rich, restrained architectural language is perhaps the perfect way for him to mark his desire in monumentality; one cloaked in asceticism, the work ethic and post-recession fiscal prudence. As an extension of the company that he built goes, it's spot on; his Carmen Würth Forum seems in every way like a chip off the old block. ●

DENNIS GILBERT

Above The skewed glass walls of the Forum's south terrace facade draw the eye to the industrial complex beyond.

IN NUMBERS

€60m
total cost

11,000m²
total area

10,000m²
external space

2,500
hall capacity

Credits
Client Adolf Würth GmbH & Co
Architect David Chipperfield Architects Berlin
Project management Drees & Sommer AG
Site supervision Kraft + Kraft Architekten
Structural engineer RPB Rückert
Services engineer ZB Zimmermann und Becker ibb Burrer & Deuring Ingenieurbüro
Building physics Müller-BBM
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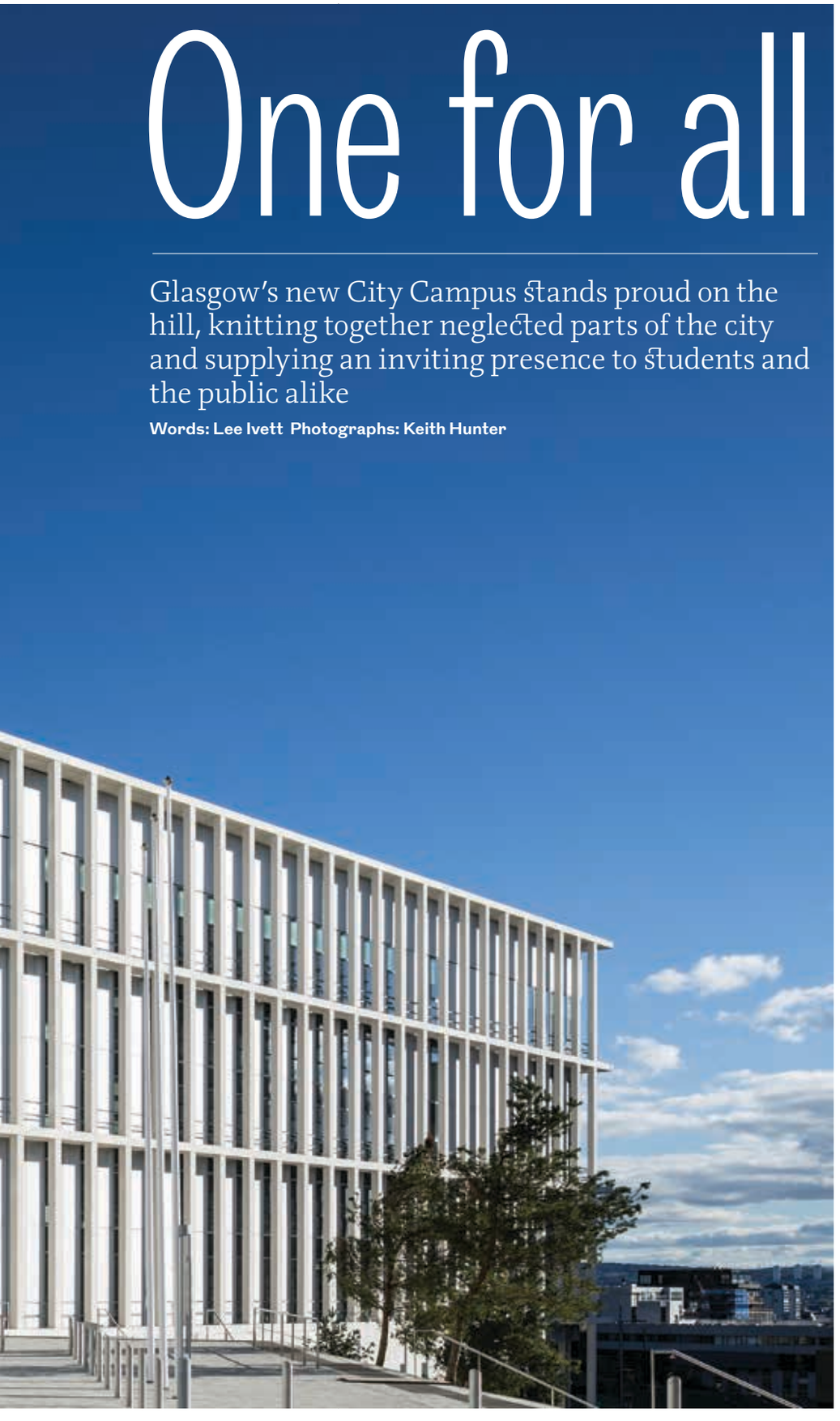
GLASGOW COLLEGE

One for all

Glasgow's new City Campus stands proud on the hill, knitting together neglected parts of the city and supplying an inviting presence to students and the public alike

Words: Lee Ivett Photographs: Keith Hunter

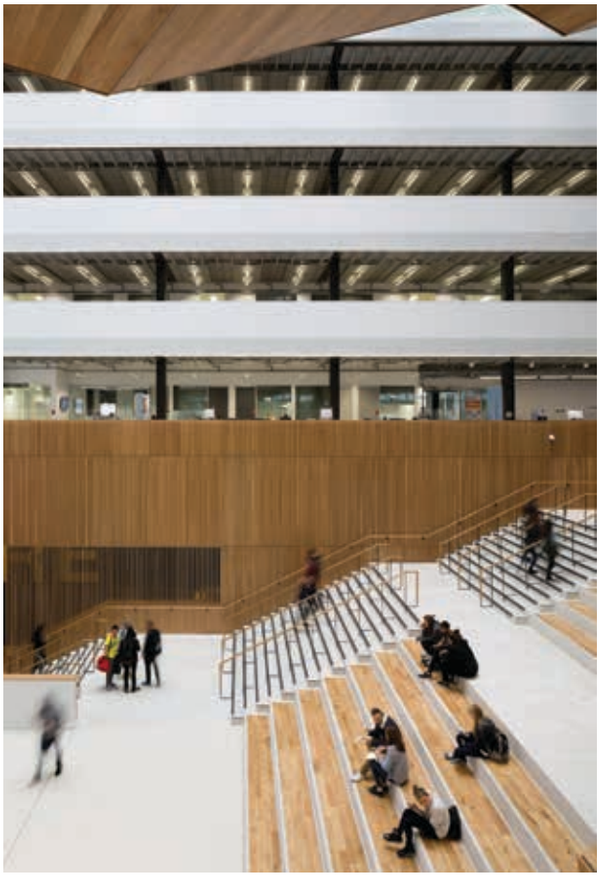


Left The principal elevation stands confidently over Glasgow

Below Entrance atrium brings the public and pupils into the body of the building.

Glasgow's new City Campus has an undeniable presence, communicating its scale and mass as an object in the city with confidence and pride, and facing off against its other 'schools on a hill', the School of Art and the University. On a tour of the building with architects Stuart Watters of Michael Laird, and Andrew Stupart and Neil Gillespie, both of Reiach and Hall, a sense of civic and the desire to create an educational beacon with no less a presence than those other esteemed educational institutions here was a consistent theme and talking point.

With an area of over 60,000m², the impetus for a new building of such scale is a series of college mergers and estate consolidation in Glasgow's further education sector. City of Glasgow College was formed in 2010 through the merger of the Central, Metropolitan and Nautical Colleges into a single institution. This second phase of the City Campus creates a super college, bringing accommodation from 11 separate buildings and six major faculties from across the city to two new



IN NUMBERS

60,000m²
gross internal floor area

£162m
total project cost

27,000
number of students

central campuses, Riverside and Campus.

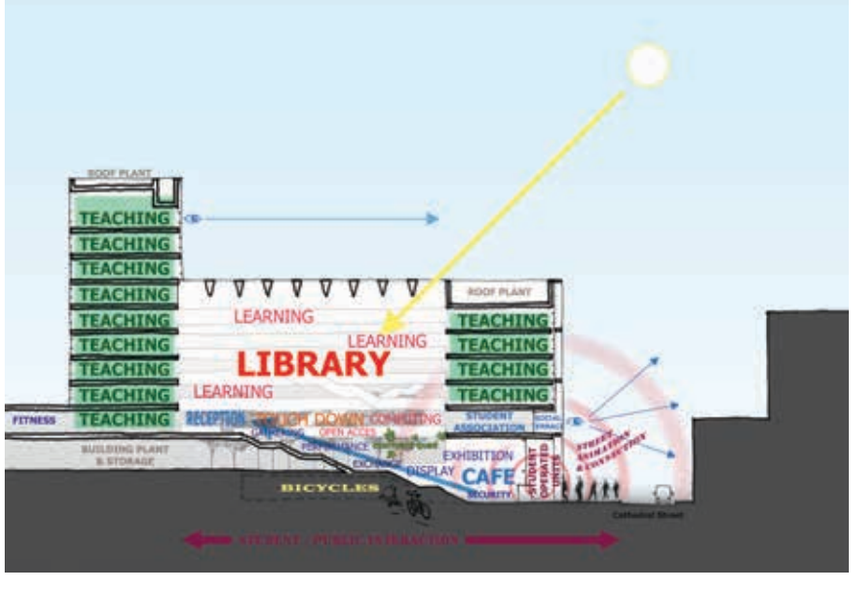
I was initially sceptical about the strategy and the perceived necessity for consolidation into one building – concerned that like other attempts to unite multiple educational establishments on one 'super campus' this project would result in derelict sites and empty buildings; creating new life and activity in one part of a city at the expense of others. It is perhaps a credit to the architecture of some of those previous buildings that my concerns are unfounded. Two modernist classics vacated by the college, the College of Building and Printing and the Charles Oakley Building designed by Peter Williams of Wylie Shanks Underwood, will be turned into a new hotel and student accommodation, thanks to robust and inherently flexible designs. They and the new City of Glasgow College are bringing new life and repair to a fragmented and disconnected part of the city centre's northern edge.

The college is positioned on a hill where the grid of Glasgow's Merchant City is terminated by the medieval Cathedral St as at it runs east from the city centre; its relationship to the adjacent community of the Townhead estate is critical and transformative in terms of the site's social context. The building's strategic diagram creates a clearly defined public route that acts as a continuation of Montrose St, connecting the post-war social housing of Townhead back to the city centre. This relationship works in terms of both connectivity and edge and also form and mass. On the west side of the city campus the principal elevation is pinched to create space between it and the adjacent tower block, while the introduction of a tower within the composition of the new building responds to the form and mass of the adjacent residential tower; making the new building respectful to its surroundings where less skilled designers might have chosen to turn their back.

In section the building negotiates a steep and sudden gradient through two civic stairs, one external and the other internal. These act as the main routes into the building and form places of public circulation and social gathering; bringing the city into the heart of the scheme. What appears externally as an imposing civic mass is

Top right The view north from Montrose Street.

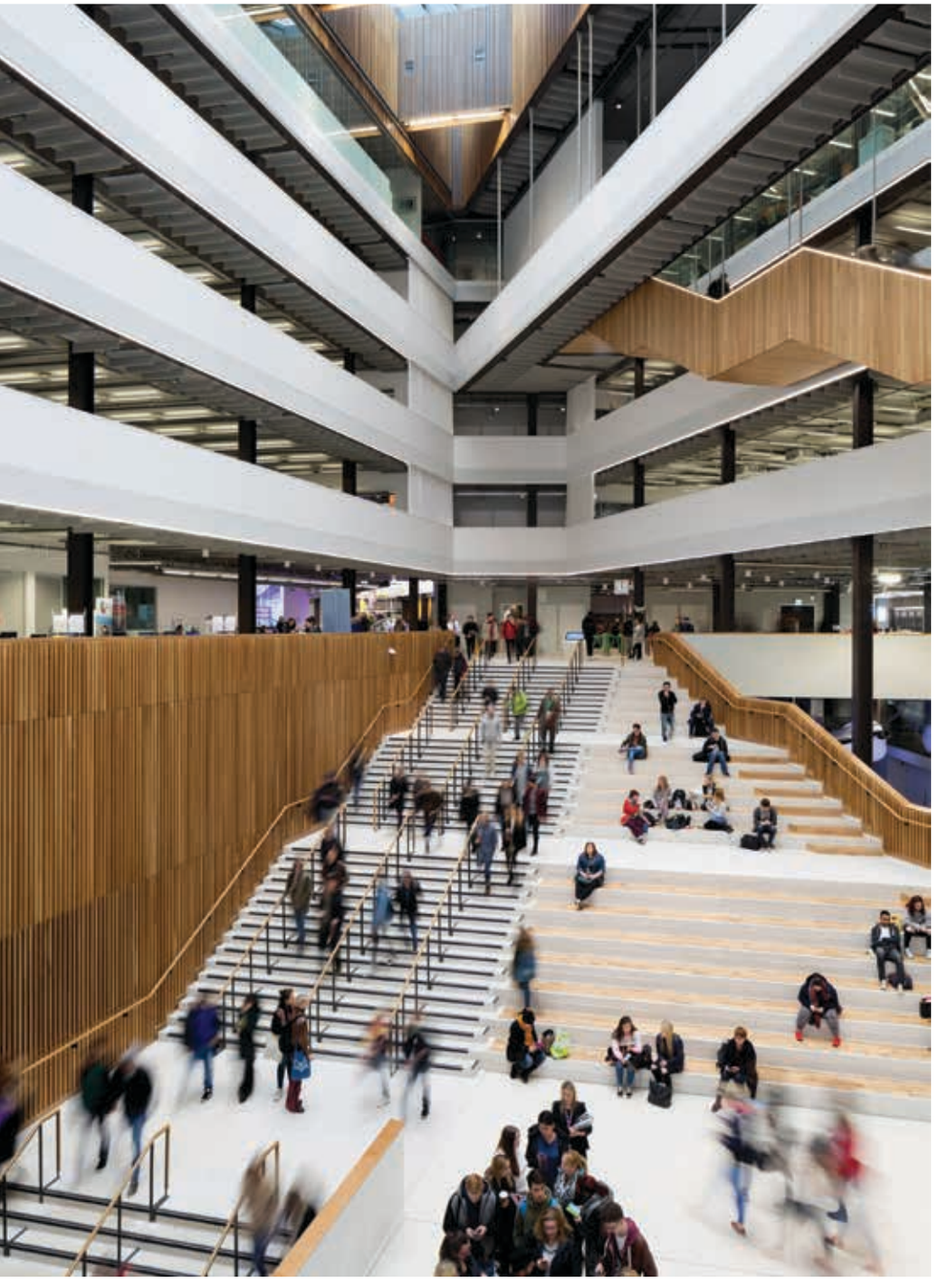
Below Concept diagram responding to street, programme, sunlight and topography.



Bottom left A seven storey entrance atrium acts as civic threshold, circulation and public space.

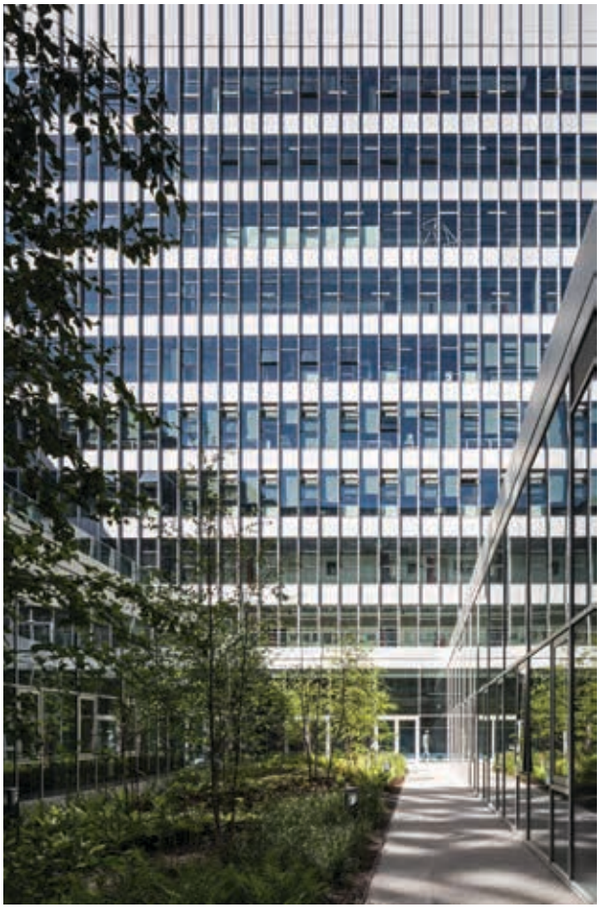
Below The tower as seen from the external layered courtyard.

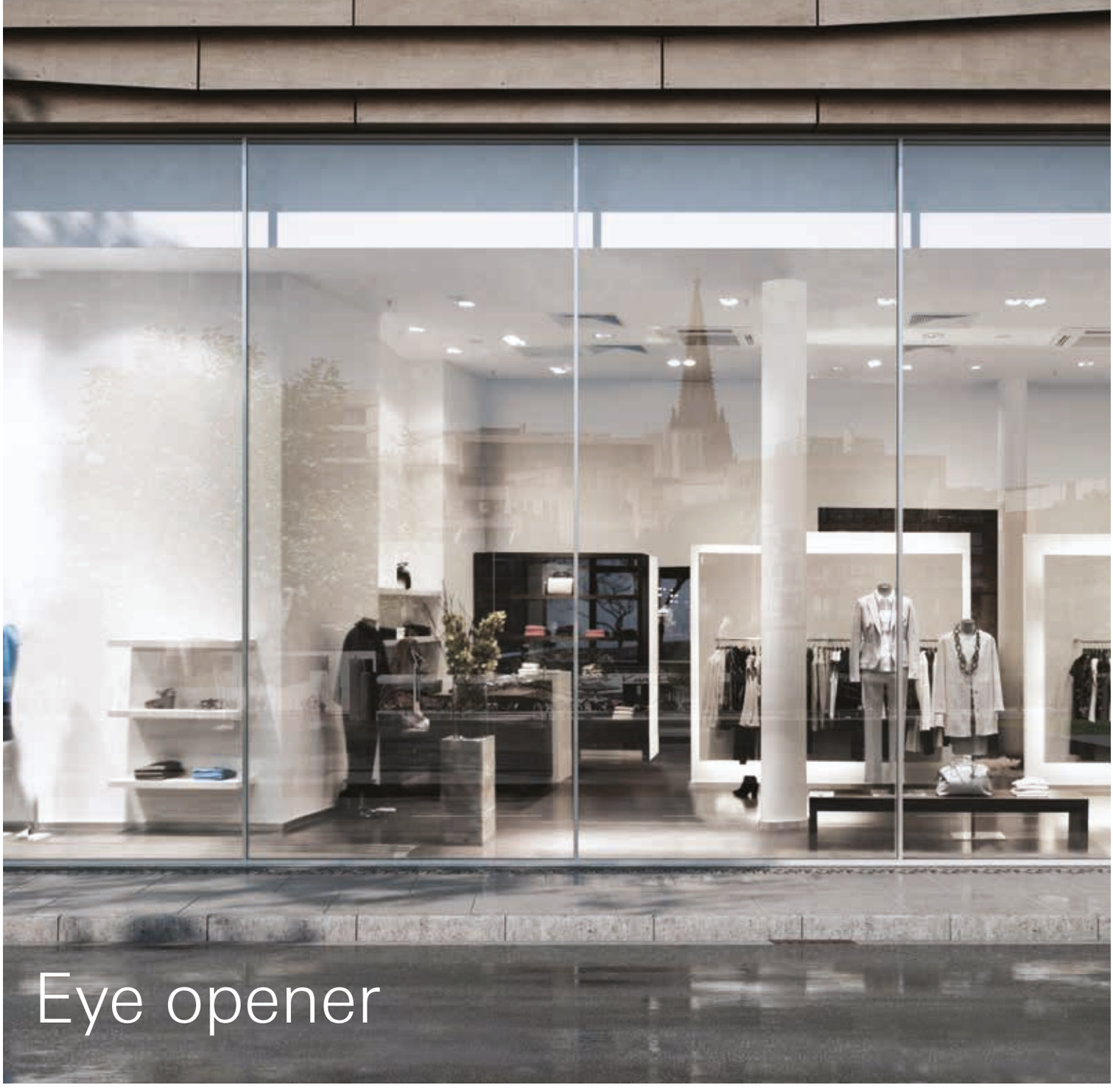
There's a considered sense of restraint but not of missed opportunity



organised internally as two large voids that arrange the plan as a figure of eight, with an additional wing that moves away from the atrium towards the north. One of these spaces takes the form of an internal seven storey atrium described by the architect team as 'a grand room', while the other is articulated as an open multi-layered courtyard. Separating these two voids and connecting the different teaching spaces and faculties is the library. Its prominence owing to its position within the plan, and its articulation as a distinct visible and accessible element, works well. Consistent generosity of space, light and material quality is bestowed on the entire internal configuration and composition of classrooms, workshops, offices and circulation but it never feels indulgent. There's a considered sense of restraint but not of missed opportunity.

This ethos is also manifest through the design of the building's external fabric. Uncompromising rigour and restraint of the gridded facades to the west and south elevations translate the concept of civic scale that is articulated through internal courtyards into an architectural language that is appropriate to the status and ambition of the college. Glasgow has a fine tradition of rigorous, rhythmically repetitive buildings expressed as elegant and finely proportioned columnar facades





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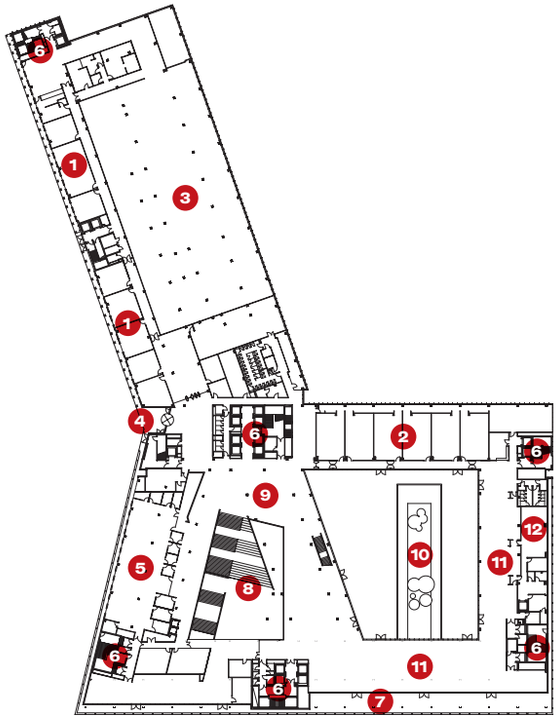
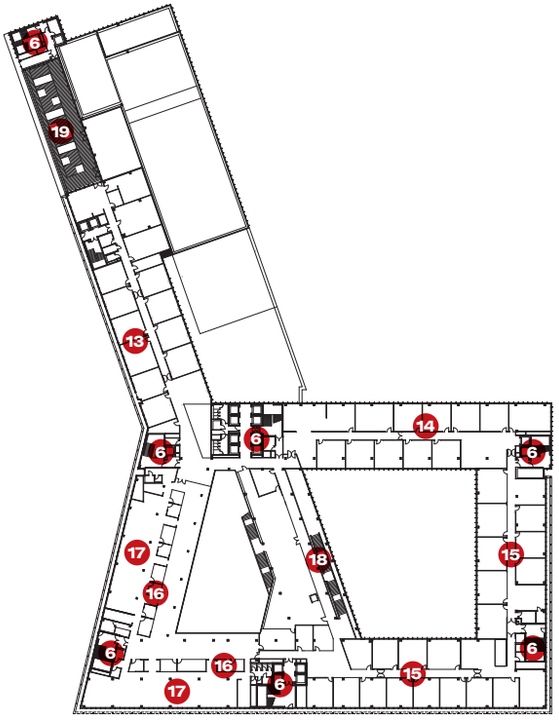
11 Refectory
12 Kitchen
13 Community care and social scences
14 Business enterprise teaching spaces
15 Pooled teaching spaces
16 Meeting rooms
17 Teaching staff
18 Library
19 External terrace and garden

Second floor plan

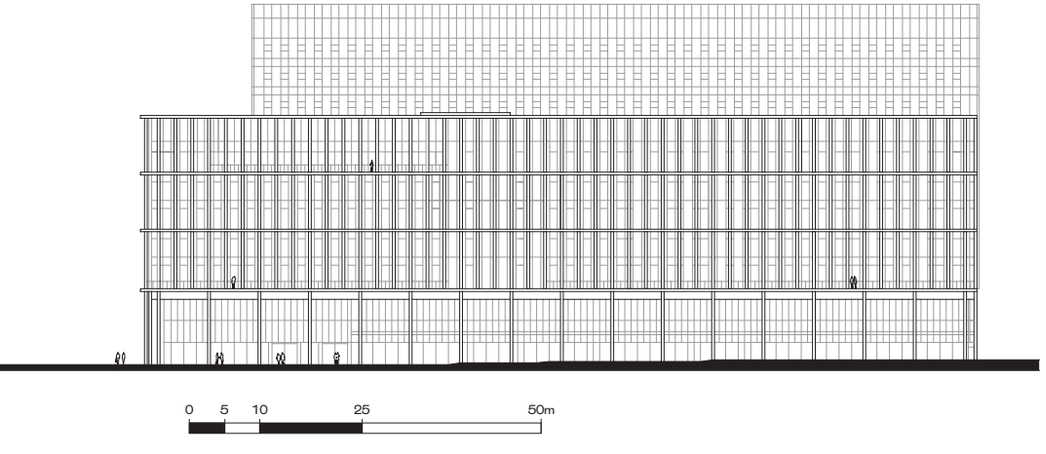


Fourth floor plan



Right Location plan.

Below South elevation to cathedral street.



and string courses. Here the architects have referenced Glasgow buildings such as the John Honeyman's Ca'd'oro and the Egyptian Halls by Alexander Greek Thomson, with a contemporary interpretation of neo-classicism that can also be found in the recent work of David Chipperfield and Peter Märkli.

Where the campus directly addresses the city the two principal elevations are layered with a gridded facade of 400mm wide white concrete columns placed in front of an annodised metal cladding system – all organised on a 1.2m grid that not only sets out the facade but also informs the spatial and structural planning of the entire building. A cast zig zag relief on the columns, intended to help water run-off , becomes a motif that is repeated throughout the building to inform the design of balustrades and the application of the annodised cladding. It is this depth of thinking and consideration, from the scale of the city down to your finger, that sets the building apart; the architecture continues to reveal itself the closer you get – especially when viewed against the incoherent dross put on the southern edge of Cathedral Street in recent years by the University of Strathclyde.

'Contextually there is no singular material on Cathedral Street,' says Reiach and Hall's Gillespie. 'It's a real mix, from stone, to brick, to zinc to glass. In a sense we wanted a palette that literally and metaphorically rose above this material clamour on the street. The idea of an acropolis, a high city, really appealed. The architectural language tended to the classical so white seemed right.

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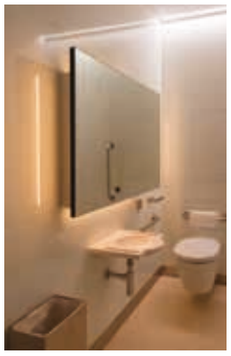

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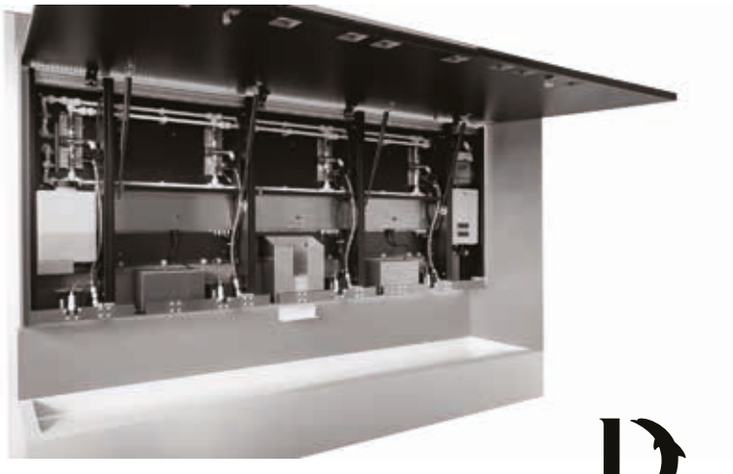

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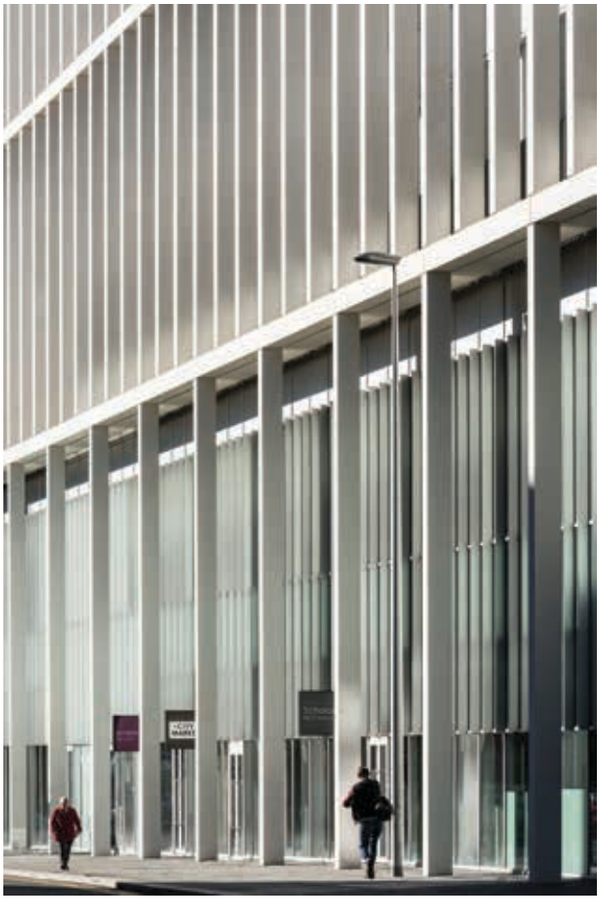
Right A layered gridded facade creates a civic language to address and activate Cathedral Street.

Below Adaptable live teaching space for construction skills.

Bottom Sport Scotland standard indoor sports hall and training facilities.

The building is like a further education version of the Crystal Maze, with a different world behind every door



'We also thought that the atmosphere, expression should be bright, optimistic,' he adds. 'It should catch the light. The spirit of the brief was confident and ambitious we felt the building should somehow project these qualities.'

Gillespie says the project essentially covers a set of complex briefs that could have been the basis for designing several different building typologies. There is an innovative multi discipline construction hall, industry standard hair and beauty salons, state of the art computer suites, catering kitchens, a restaurant, business school, community, care and social science provision and Sports Scotland standard sports facilities. A full aircraft cabin facilitates cabin crew training and a suite of media facilities provides Scotland's second largest tv broadcasting studio and an industry standard radio production facility. The building is like a further education version of the Crystal Maze, with a different world at the end of each corridor and behind every door.

This is a public building in every sense. Its strategic architectural moves, its civic presence and its role as an educational institution all invite the public into the body of the building. It also offers a day to day engagement with the public in the way it delivers its teaching. This approach has inspired the development of a diverse and active street frontage to Cathedral Street, which was

The brief could articulate aspirations and ambitions above and beyond the purely pragmatic and measurable

desperately needed in this part of the city. A publicly accessible licensed restaurant, hair salon, beauty studio, and a butcher, fishmonger and bakery line the ground floor of Cathedral Street elevation, creating a permeable social, cultural and commercial edge that enhances both the experience of students and the life of the city.

As the architects' design statement says: 'The building is conceived as a place of exchange where the whole city and its citizens are invited in. It is expressed as an open and democratic building. From the outset the design aimed to alert the city to this critical institution through its elevated location, its scale and its presence within the city fabric.'

Although PFI and design and build face constant – and not unfair – criticism, this project demonstrates that great architecture can be achieved regardless of the procurement or delivery model when there is a good client, a good brief, a good site and a good architect. The architects I spoke to were extremely enthusiastic about the quality of the brief and the role of the client throughout the procurement process and emphasised how critical this was to inspire excellent design.

'The brief was compiled by vice principal Janis Carson and the project sponsor – Iain Marley, project director, and Peter Jennett, property director – in dialogue with all the staff and department leads within the college,' explains Gillespie. 'Henry McKeown and Stewart Davie of JM Architects were technical advisors and influential in determining the conversation. The brief was not only well constructed and thorough but could also articulate aspirations and ambitions above and beyond the purely pragmatic and measurable.'

This project undoubtedly exceeds the pragmatic and measurable. The new campus gives the children of Glasgow's working class and our city's marginalised communities a voice, providing them with a place of respect, knowledge, dignity and enlightenment that places them as being no less important within society than anyone else seeking to further themselves.

City of Glasgow College is good architecture where it is most desperately needed and where it can play a critical role; the advancement of all people of all abilities wherever they be from for the betterment of themselves and for society. ●

Lee Ivett is founding director of Baxendale Studio

Above Teaching spaces benefit from a generosity of natural light and space.

Right Industry standard TV and radio studios including Scotland's second largest broadcast studio.

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Time well used

Snøhetta's new arts academy had a protracted procurement that in many ways has proved a benefit

Words: Jan-Carlos Kucharek Photographs: Hufton+Crow

Below left The massive first floor project room, looking west. Originally designed as an open space, it is now an enclosed winter garden.

Below The new arts academy is enlivening the eastern expansion of the city.

Snøhetta won an international competition for the National Academy of the Arts in Bergen, Norway, in 2005 but the realisation of its £93 million design took 12 years of delays and rethinks. On the shore of Store Lungegårdsvann lake in the shadow of the mountains, its highly reflective, insulated aluminium facade now animates the city's new eastern fringe.

Here on Norway's west coast, winter temperatures average a mere -10°C – inland they may drop to -40°C – but it allowed sustainable methods to be used in a building that demands large amounts of light and conditioning. Even with screen printing, welding, sawing and gluing going on at the academy, Snøhetta developed an air handling approach that deals with paint, resins, solvents and sawdust using Passivhaus techniques.

Astrid Renata Van Veen, project leader and senior architect on the 15,000m^2 project, thinks the 12-year gestation allowed the firm not only to look at more pragmatic approaches, but for technology to develop. By post-recession 2010, the competition entry's decadent, wing-like 'open roof' sailing down to the shore had become an enclosed agora, while 2,500m^2 was cut from the brief. 'But time's been on our side,' says Van Veen. 'The compactness made the design more sustainable, and brought social interaction between departments closer together. That's made it better all round.'

While this internal restructuring might have transformed the project, it's the highly reflective, 50% recycled raw aluminium alloy 5083 shifted cassette facade that steals the show. Van Veen says the 950 H111

Left Highly insulated aluminium cladding gives a U-value of 0.04; triple-glazed glass one of 0.6.

Right Workshops, which must stay dust and contaminant free, need a high level of air exchange.

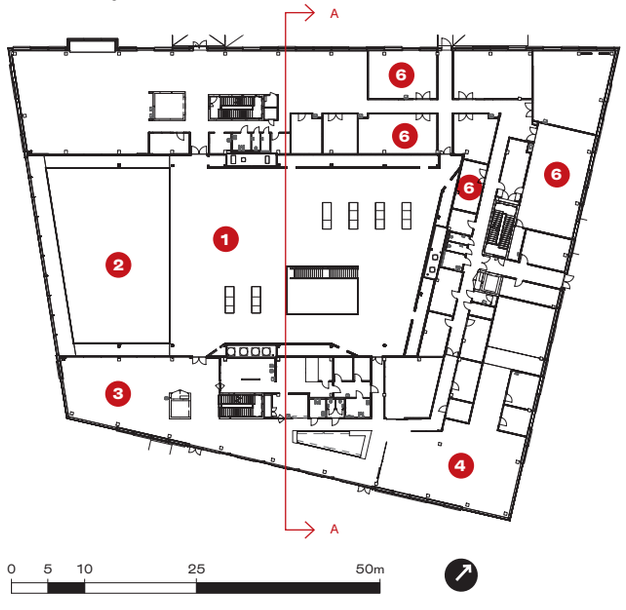
aluminium folded rain screen cladding panels, which stagger 100, 150 or 200mm from the insulation line, generate a layered, staccato effect that picks up the soft Bergen light differently every day. With folds each set at the same angle, it creates further facade modulation by varying the size of the shadow gap between cassettes. But the 0.04 U-value is created via 250mm of Rockwool and 500mm aluminium sandwich panel behind it.

The facade's solid to void ratio was, says Van Veen, a Venn diagram of energy performance; the need to create daylit studios, and solid walls for art production, resulting in the windows on the side and rear elevations. But the real statement is on the south west, where a 27m by 14m triple-glazed opening gives views out over the lake and inside to the 23m high, 19,000m^3 entrance lobby and 'project space', a roof-lit volume that is the focus of the complex.

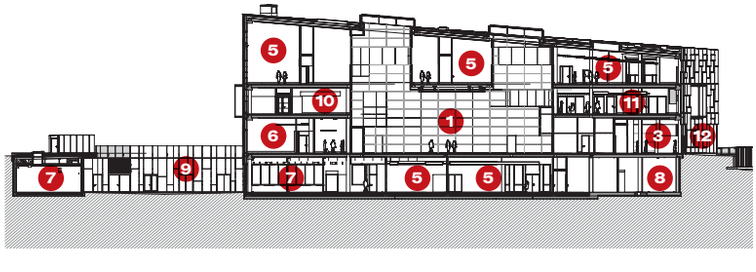
Climate control of this space is an intrinsic part of the heating, cooling and air handling strategy. The key to its environmental sustainability was treating the built volume as if it were an iteration of the original 'open roof' idea. 'It would have involved massive heating and cooling to keep a room this size at a constant 21°C throughout the year,' explains Ramboll services engineer and HVAC manager Frode Holthe, 'so the decision was made to treat it as an open space.' For a concrete structure using thermal mass principles, this means the climate line for the building proper runs around the perimeter of the Project Room, so that the space, with its picture window, acts as a form of winter garden, with underfloor heating and tempered but not conditioned air. 'We wanted to keep the energy commitment here as low as possible, so we allow the temperature in this space to have a wide range of 15-25°C, with outlet louvres on the south west facade and roof for natural cooling,' he adds.

The engineers could then start optimising energy use inside. 'Norwegian codes demand higher rates of air exchange for this typology. Arts buildings use noxious processes, so we needed to ensure proper air filtration.' Holthe says. 'There are 11 different air handling units and 35 exhaust systems dealing with high demand areas such as kiln rooms and welding workshops, and intermittent demand, as in the main auditorium and kitchen areas.

First floor plan



Section A-A



1 Project Room
2 Entrance lobby below
3 Café
4 Library
5 Open student workspace
6 Dedicated art space
7 Workshops
8 Plant
9 Courtyard
10 Graphics studios
11 Admin area
12 Terrace

Right The Project Room: a winter garden to the city treated as an external space enclosed by insulated 'climate' walls.

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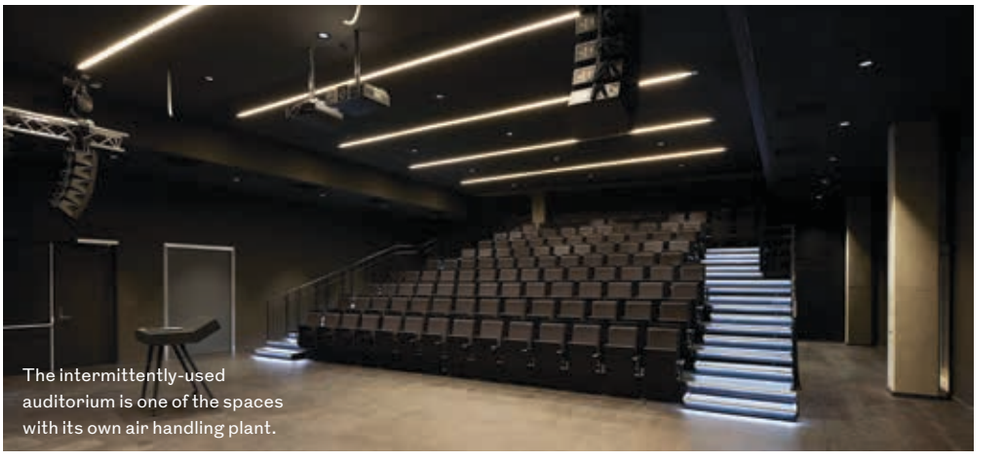
'There's low specific fan power (SFP) for all the air handling units, with fresh air fed to them via a concrete culvert that pre-heats or pre-cools the air depending on the season,' he adds. The BMS system regulates air supply in each room, minimising differentials in air flow between spaces to avoid pressurisation and noise issues. The BMS monitors not only air supply rates but CO_2 levels too. Holthe says all air handling must be fitted with heat exchangers delivering at least 80% heat recovery.

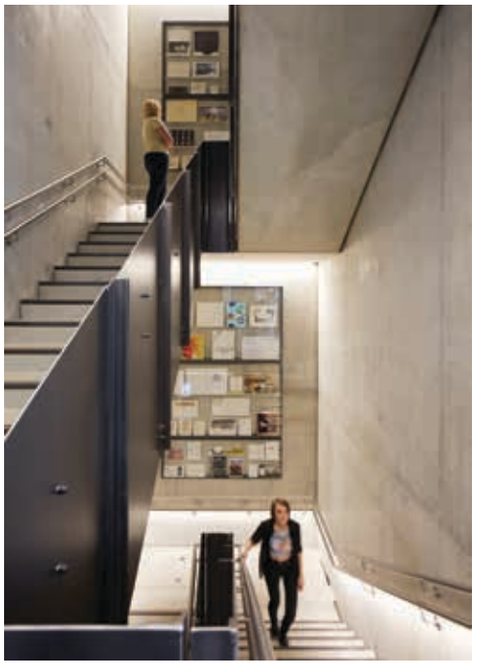
There's a similar bespoke approach adopted to heat and cool the building. Warmth is delivered via geothermal heat pump combined with district heating. The heat pump is supplied by nine 200m deep, 140mm diameter vertical boreholes. A mixture of ethanol/water circulates between these and the heat pump evaporator in a closed loop system. This is expected to deliver 85% of the total heating demand to a building which is so well insulated that if the outside temperature exceeds 9°C, it requires no additional heating. On the coldest days it was decided to augment this with district heating, raising delivery from the heat pump from 50°C to 60°C. 'To raise temperatures by 10°C using heat pump technology only would be an onerous technical and economic consideration,' says Ramboll senior heat pump specialist Tor Lystad, adding that the real challenge is meeting the cooling load for this effectively Passivhaus design.

Most of the 100kW process cooling load – largely generated from computer use in the building – is dealt with using boreholes and a roof-mounted dry cooler as a heat sink, cooling water to 14°C and returning it at 18°C. The high design temperature in the process cooling circuit is mostly free cooling. 'In the summer, comfort cooling (air conditioning) increases cooling load by 280kW, so we have installed ammonia refrigeration plant to deal with peak demand,' Lystad explains. To cool the lower demand spaces, water is circulated to and from the batteries at a lower 10°C, with return at 18°C. He adds that relatively little comfort cooling is needed compared to 24/7 process cooling (and necessary mechanical refrigeration for places like server rooms). As a result design temperatures for the comfort cooling circuit is lower to avoid having to install huge cooling batteries. But there are cooling batteries in each air conditioning system, where cooling water exchanges heat with air. During peak cooling demand, the heat pump operates in refrigeration mode, sending most of the heat to outdoor air via a dry cooler. An ammonia refrigeration plant also gets rid of the condenser heat via a dry cooler. In heating mode, return hot water from the process cooling passes first through the dry cooler and then to the borehole. If the ground temperature exceeds 10°C all hot water is sent through the ammonia refrigeration plant, the heat pump operates in refrigeration mode, and no more heat is sent to the boreholes.

Lystad explains that it's a complex interrelationship and connection of systems all monitored and controlled by the central BMS. But it means that with heating, cooling and air handling, the strategy has been to let the Passivhaus plant deal with normal energy requirements, with higher energy demand systems only kicking in at peak demand times. The efficiencies manifested in this approach only came about through the technological advances between design and realisation; benefits that the first cohort of students may begin to feel in Bergen's long, light summer days. ●



The intermittently-used auditorium is one of the spaces with its own air handling plant.



Left With exposed concrete cores and floors, thermal mass principles are employed in the structure.

Client Stattsbygg
Architect Snøhetta Oslo
Engineer Ramboll
Project manager Atkins Norge
Site manager Fylkesnes
Main contractor Veidekke

By night the solid/glass relationship of the Passivhaus envelope becomes clear.

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MacEwen: it's time to enter

Does your building benefit a wider society? Enter our sought-after MacEwen Award and give it a profile to match

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Below left Last year's MacEwen winner was The Point in Tadley by Ayre Chamberlain Gaunt.

We seem to have hit a chord with our distinctively different MacEwen Award and its slogan of 'Architecture for the Common Good'. We now invite your submissions for its third year. It is free to enter, and the deadline is Monday 6 November.

This is the award that is less concerned about aesthetics (though they remain important), and more to do with ethics – clever, committed projects that benefit most people. Here's another thing that's very good about it: it tends to bring to light projects – urban and rural – that are often small, low-budget, and local, by young architects and other designers, which would otherwise not receive national attention. They rub shoulders with larger projects including excellent new public space, schools designed for wider community use, health buildings, civic centres, theatres and libraries among much else.

We rule nothing out, including large commercial developments, so long as they give something significant to the wider community – not just their direct users. It was significant, for instance, that in the first year of the award we received an entry from the huge King's Cross regeneration district in London, singling out the many community projects and 'meanwhile uses' associated with that development. It was not successful that year but, our interest piqued, we covered it as a whole in RIBAJ September 2017.

So enter! In our first two years we have recognised youth, community, visitor and arts centres, ingenious modular low-cost housing, outward-looking schools, the painstaking restoration of a music hall, a Maggie's cancer support centre, craft workshops, streetscape and park improvements, a highly imaginative food bank/café, good social housing and a pier.

It's great to see well-known architects enter alongside new names, forging an architectural community of the committed. We are very happy to be supported by BDP, a multi-discipline practice with a historically strong and continuing social ethos. Do we all want a better society? Of course we do. The MacEwen Award is there to show everyone how.

MacEwen award

RULES

Projects must be in the UK, Ireland and islands such as Man and the Channel Islands. Projects must have been broadly physically completed within the two years to 1 November 2017, and must not have been entered previously for the MacEwen Award. A phase of a longer-term project is eligible. Anyone may enter a project, but an architect or architecture student must have been involved as part of the design team. The number of awards and commendations given will be at the judges' discretion and will be published in the RIBA Journal and ribaj.com.

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Name, location and description of project (300-500 words) explaining the beneficial social impact of the scheme.
Credit list of consultants and clients.
Maximum of six images, to include photos and drawings.

Deadline for submissions:

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2: Intelligence

External management

Miles Raey Palmer

Miles Reay-Palmer, 28, a mixed-race English Jamaican, is one of 10 recipients of this year's Stephen Lawrence bursary, supporting young black and ethnic minority students through their architectural education. In Black History Month, we ask him what difference the SLCT award makes.

Where are you in your education currently?

I did my degree at Manchester and then three years' work experience. I decided to go to London Metropolitan University for my Diploma. It felt right; London's one of the design hotbeds of the world and I liked Met's course. I was in Assemble's unit there last year, which was great. We were asked to look at the Area Action Plan for the Old Kent Road and deliver our own critique and proposition for it. Their push is very much for community engagement.

How did you hear about the bursary?

Through my involvement with Building Futures, the Stephen Lawrence Charitable Trust (SLCT) mentoring programme, where they place you with an architect who offers guidance through your education. I never knew any architects when I was growing up, so it was great. Harjinder Singh, my mentor, is an SLCT alumni and senior architect at RSHP. We meet up every month or so and next time we'll probably discuss what unit I should enter. The bursary really makes a difference. The amount varies; it's means tested.

Do you feel you have ever experienced discrimination in your education or work?

No, but the fact is that a very small percentage of Part III qualifying architects are non-white, so that speaks for itself. That said, the education is a long one, and maybe we are experiencing a lag in those minorities making it through the system. But you can't just blame the lack of cultural diversity squarely at the profession. There are a lot of socio-economic factors that might explain the Part I/II dropout rate for ethnic minorities.

And how do you think we can promote greater inclusivity then?

That's a hard one! Obviously more black or ethnic role models visibly promoted by the profession would help. A building obviously communicates a lot. It's lovely, but the neoclassical grandeur of the RIBA HQ, with its gold leaf and odd colonial references still gives the notion of a white gentleman's club. Perhaps there needs to be more outreach programmes promoting minority agendas inside; brush the cobwebs away…

Where do you see yourself in 10 years?

I don't know; the dream is obviously to have your own practice. But it might take a few years as an associate or director in a bigger firm to get the necessary experience to do that. Designing housing would be great. I've always admired Aalto's humanism and you'd like to think that the people who design it know first-hand who they are designing it for.

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I was unconsciously incompetent when I was at university, but now I am consciously incompetent: I know what I don't know

RIBAJ Rising Star Alex Scott-Whitby on how to keep youthful belief alive: ribaj.com/youthfulbelief

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

Internal management

Learning never ends

Haworth Tompkins has set itself up as a 'pedagogical practice', aiding learning across its staff. But that doesn't just develop young staff, it benefits the business too

Helen Castle

When Steve Tompkins spoke at RIBA Future Leaders in March, he described practice as 'a chorus of soloists'. This conjures up one of the greatest conundrums for a design studio, how do you give creative individuality enough space while pulling together as a team? Haworth Tompkins has balanced this push-pull dynamic with a practice culture that simultaneously encourages individuals to foster independence, autonomy and responsibility, while embracing collaboration and a strong ethos of shared social values.

When I met founding director Steve Tompkins and managing director Toby Johnson at their studio in Kentish Town, north London, it was to not to discuss their award-winning work for the likes of the Everyman in Liverpool, Chichester Festival or The National, but to find out what makes their practice tick. The studio has been selected as an RIBA Practice Role Model. It is a plaudit that the directors are both shy of, for fear of appearing in any way 'sanctimonious', but also welcome as it espouses the values that they have worked hard to embed in their office. The role models project shines a light on chartered practices that are committed to making 'architecture and the broader construction industry more diverse, accessible and inclusive'. Haworth Tompkins has been assiduous in seeking to open up architecture as a profession. It has adopted an equal opportunities recruitment policy partly informed by the programme set up by an enlightened Young Vic theatre, which was ahead of the game; Tompkins is a trustee of the theatre. The wider staff also work proactively to provide opportunities to those who might not generally consider a career in architecture by offering a work placement scheme for 16-18 year olds in local schools. The practice runs internships in partnership with the Stephen Lawrence Trust and individual staff members volunteer for the Social Mobility Foundation. An alternative route to practice is supported by employing post graduate students from the London School of Architecture.

Spare room to learning environment

Tompkins and Graham Haworth started the office in 1991 from a friend's bedroom in Great Portland Street. Tompkins admits:'we didn't do much for the first few months'. The work was 'serendipitous'. When in 1994 the practice was selected by director Stephen Daldry to remodel the Royal Court Theatre in Sloane Square, it was an office of eight that had completed just one building. Its other most significant early project, Iroko Housing for Coin Street Community Builders, was won via an invited competition from a long list of nine, despite having no track record in social housing. This may all sound too easy for an emerging practice, but from the outset the directors brought an unwavering focus to the understanding of a project's context and client relationships that set them apart from their peers.

By the time Johnson joined in 2005 to support the management of the practice, the studio had a staff of 22. 'Steve and Graham were getting drawn into the day to day, which was holding them back from thinking more creatively,' he says. The practice was transformed by three changes. First were John-

They were able 'to feel one, having a space for working, making models and eating lunch together in the kitchen'

Above Haworth Tompkins celebrated its 25th anniversary in November 2016 with a 'family party' at the Royal Court Theatre.

son's appointment and a studio move from Clerkenwell to north London, which brought the entire practice together on a single floor of a refurbished Victorian warehouse, where they were able 'to feel one, having a space for working, making models and eating lunch together in the kitchen'. The third was an organisational change, which was the most far reaching. The practice's structure shifted from being largely ad hoc, resourcing projects as needed, to that of two teams of 'teaching group size'. This was a good fit with Haworth Tompkins' ethos and the staff make up, where many younger team members were relatively new to practice. The office became an effective 'learning environment'.

The educational model at Haworth Tompkins is non-hierarchical. The studio's catch phrase is 'a good idea is a good idea'; input is valued whether it comes from a Part 1 or senior director. Tompkins explains: 'No one stands on ceremony. It's a two-way conversation. Everyone is invested in making amazing buildings, in honing and tuning.' The directors also see themselves as part of the constant learning process. All staff in the practice have an internal or external mentor who is not their immediate manager. There is, however, no doubt that the directors have a firm hand on the tiller. As Tompkins says, it is their job 'to hold the trajectory of the wider creative project'. This is where the directors' experience of working in the performance arts and social housing, with clients like the Young Vic and Peabody, come into play. Before anything is translated into architectural plans, the practice leaders ensure a significant amount of time is spent with clients on strategic development. This deep knowledge and emphasis on upstream thinking is just as important for cultural organisations, where funding of a project is going to result in significant capital expenditure, as it is for complex urban regeneration projects, where there are multiple stakeholders and factors outside design to consider.

Right Haworth Tompkins' 1999 remodelling of the Royal Court improved and updated the Victorian auditorium and expanded the front of house facilities with a new bar and restaurant.

Above Haworth Tompkins' refurbishment of the Liverpool Everyman Theatre won it the Stirling Prize.

Below The Dyson Building for the Royal College of Art provides a 'creative factory' for printmaking and photography at the college's Battersea c ampus.

For more information about RIBA Practice Role Models go to architecture.com/practicerolemodels

Practice sightlines

From its fifth-floor studio, Haworth Tompkins has views across London on every side. These are not the dreaming spire vistas that students on placements might previously have sought in the seclusion of academia. The office provides a setting that connects Part 1 and 2 students firmly to the everyday reality of practice. Tompkins and Johnson admit that financial instability in architecture, riding the various economic cycles, is a way of life. An 'awareness of instability' helps to ward off 'complacency' and keep the practice 'nimble and responsible'. The staff are 'mutually supportive' and pastoral care is provided through the in-house mentoring system. An external consultant also offers individual support for those running their first and second jobs. The practice maintains its agility and momentum through self-critique, constructive reflection and established internal processes: directors and associates meet every week; quarterly 'think tanks' enable the practice leaders to 'step back and see where the stretch marks are, identifying areas where they are struggling or thriving'. Reviews and weekly meetings are informed by business planning reviews every three years, which sets targets in terms of sectors and scales of projects its aims to reach. There are monthly studio and bi-weekly group meetings, in addition to weekly project design and delivery reviews and individual performance reviews. Furthermore, tracking tools are used to make informed decisions on the setting of resources and fees – not to scrutinise or micromanage individuals' timekeeping.

Digital and analogue

The practice has the same impetus in its adoption of new technologies. Haworth Tompkins is now in its fifth year of BIM implementation. It has embraced the opportunities that BIM has enabled: to work within a 3D environment and with VR, co-ordinate with other consultants and to design energy and daylight more effectively. In the studio, 3D modelling is combined with analogue processes, which is what Tompkins says gives its buildings their distinct flavour. The repetitive discipline of hand sketching often enables architecture to be 'more considered and less hastily conceived'. In the early design stages, an importance is placed on drawing, whether by hand or on screen to enable 'free thinking to evolve' and 'retain openness'. While valuing the longstanding benefits of the analogue, as studio heads, the directors remain keen to learn and 'to do things they have never done before'. What is their next challenge? Their first foray into offsite with a prefabricated modular auditorium for the London Theatre Company at London Bridge, opening this autumn, which requires a 'different mindset and interface', and yet another learning opportunity. ●

Helen Castle is RIBA head of professional programmes and consultant editor of Architectural Design (AD).

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Brabazon, Concorde... Filton Airfield's next incarnation is to provide a new centre for this fractured edge of Bristol

YTL

Below The airfield from above, Brabazon hangars to left (south). They sit near the peak of the slope which falls away 27m to the west and 15m to the east.

Eleanor Young

We never drive at more than 20mph but still it feels like a test track scene from Top Gear. With weeds. Wide open expanses of concrete, with rubble from trial pits forming cairns here and there. This is Filton Airfield in South Gloucestershire, where Concorde and countless other airplanes were developed, including the Bristol Brabazon which had its maiden flight here in 1949, a record breaking aeroplane in its time. Lying on the north west edge of Bristol, the 142ha site spans from the Airbus and Rolls Royce complexes in the east to the M5 and hills along the Severn Estuary to the west. A total of 2,675 homes are to be built here.

Barra Mac Ruairí drives between fences and up to and around the listed Spitfire hangar before nipping into the engine testing section. We have already come through what will be the first phase housing and an innovation area for aerospace businesses. 'It is a lot to run at,' says Mac Ruairí. He is chief operating officer or YTL Land and Property, the Malaysian-owned company that bought this site from BAE in 2015. In Malaysia YTL is a developer and contractor, among other things. In the UK it owns utility Wessex Water and a number of high end hotels. Mac Ruairí wants to use YTL's breadth of experience to develop and – uniquely in a construction environment of endless chains of subcontracting – build out the site. The plan is for YTL to be its own contractor. 'I don't want a separation between the development and the construction process,' he says. Borrowing staff and experience from Wessex Water means the infrastructure here will have plenty of visible water and much care taken over sustainable urban drainage.

I don't want a separation between the development and construction process

Mac Ruairí's credentials for making exciting things happen are good. At the now-defunct Yorkshire Forward regional development agency he was head of Renaissance Towns and Cities, which had Will Alsop draw up some apparently crazy ideas such as a lake in the centre of Bradford. Mac Ruairí made this idea reality with the brilliant Centenary Square which changed the city centre very successfully, despite coinciding with the run on Northern Rock and the beginning of the recession. In Bristol he spent three years pushing forward the new Arena and Temple Quarter as strategic director of place appointed by architect-mayor George Ferguson. Trained as an architect and a planner, and growing up in Urban Splash, Mac Ruairí considers himself an urbanist. 'I want to bring city skills to this very large project,' he says.

'Place' and 'city' are something the town of Filton feels badly in need of. Cut up by arterial routes and bounded by motorways, its houses cower defensively from the traffic, some of it generated by the sprawling out of town shopping centre at Cribbs Causeway which borders the site. YTL's office is a large undistinguished building on a business park next to the shopping centre. As I arrive the word 'roundabouts' is audible in the half empty office. Like many hard to unlock regeneration sites, the infrastructure embedded in the site has cut it off from its surroundings for a long time; you can't have side roads criss-crossing an airfield. But the masterplan

CONCEPT PLAN

A thread of connectivity follows the runway through the site with a park, paths and roads. From the top right (east): The employment area is most excitingly pitched as innovation hub but its mix inevitably depends on discussions with tenants – so far only some small studies have been done. A town centre is planned between the Brabazon hangars and the Spitfire hangar, with a rail station and MetroBus stop, shops and higher density homes – all joined by a landscape designed by Grant Associates. They spread out into houses on what Mac Ruairí is imagining as 'quiet streets'. At the easterly end of the site the feel is more village-like.

tries to open it up, so schools and a series of parks will be accessible to people in the local area. The intention is not to just add to suburbia but to have the density and excitement of a piece of urban planning and create a new local centre. It will also be a place of pilgrimage for those who grew up with images of Concorde on their bedroom wall, like Mac Ruairí.

YTL inherited outline planning consent from BAE. When Mac Ruairí came on board earlier this year it had gone a step beyond that to a new outline drawn up by Allies and Morrison. The practice understood that the site's stretching emptiness was part of its character and, trying to draw on its history, has traced the shape of the runway as a spine of green spaces and routes through the old airfield. An anchor point is the three huge Brabazon hangars with their 23m high folding doors. The largest is 125m wide, dimensions that trick the eye so that scale is almost impossible read – 'Really? That tiny thing is a door?' Gantries designed by aircraft engineers snake over huge moveable cranes. At over 3km long, the site takes you from Bristol's Templemeads Station to the harbourside. 'The challenge is to make it seem habitable,' says Allies and Morrison partner Simon Gathercole. It follows that the phased build out, still to be confirmed, is likely to start at the edges and work in.

So what makes it possible for this piece of South Gloucestershire to become a new centre? Yes, there is ambition, but a lot of that is driven by the site's connectivity. It already has a railway line running through it and is to get a new station connecting to Bristol Templemeads. The city's expanding MetroBus service will also call here. It is close to the M5 and M4 and to fast train connections to London, the Midlands and Wales via Bristol Parkway Station, and will connect to larger cycle networks. Preparing for the more distant future – and building a bit of excitement as it goes – YTL has been encouraging driverless car trials here. And, right on the doorstep, is the legacy of the airfield – a high level engineering and aerospace industry. All that is before you mention the shopping centre and the ever expanding University of the West of England. Add in a distillation of the alternative culture of Bristol that Gathercole knows well from growing up there, of food growing, homeworking and of making, and it is a rich mix.

This is a 20-year project but there is a still a sense of urgency. 'Residential construction starts in 61 weeks,' declares a prominent sign in YTL's office. Next to it a large 1:25 model of a house. Mac Ruairí, working with Allies and Morrison and Studio Hive (which has experience drawn from Urban Splash and Skanska's high quality but shortlived housing arm), has made housing design a priority. He sees a bit of Koolhaas' SMLXL here in the ascending scales from room to site: 'Quality lies in space in the first instance, you have to have rooms that work, space not just for a double bed but also your clothes, space to put your bin. Then you have to build it so you don't hear your neighbour upstairs and so your utility bills are low and beyond architecture to the space and how the community works.'

For Allies and Morrison accommodating one to two cars per household while avoiding an urban fabric dominated by them is one of the big challenges. 'It is a condition that more and more people are having to design for,' says Gathercole. And this of course feeds into the relationship between house

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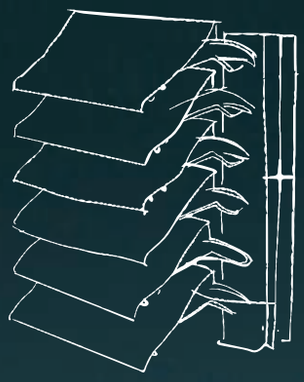

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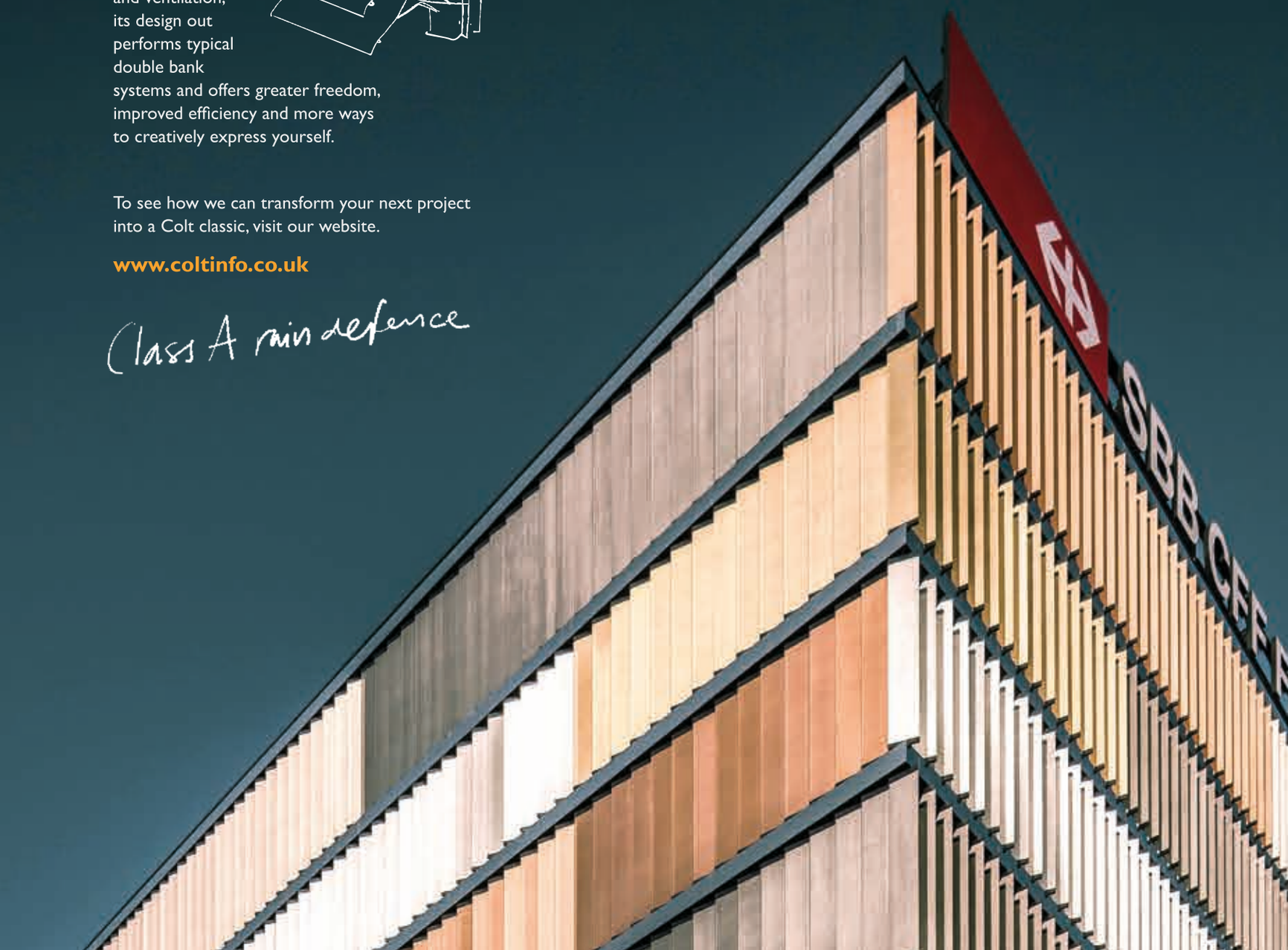

ALLIES & MORRISON

Left The Spitfire hangar with the three Brabazon hangars across the runway beyond.

Below How Allies and Morrison imagined the public gardens at the centre of the Filton Airfield scheme with the Brabazon hangars behind.

and street and how house types relate. This first phase of 200 homes is a test bed for the rest of the development, a chance to see what people will like and buy. It will be influenced by the international knowledge of both YTL and Allies and Morrison. 'It won't be radically different, but certainly from what is built in Britain to the extent something like [Stirling-winning] Accordia in Cambridge was radical,' says Gathercole. But YTL is concentrating on what it will achieve rather than a critique of the housing market. It doesn't need to expand its brief any further: getting Filton Airfield off the ground is a big enough job already. ●

Hear more about Filton Airfield at the RIBA Smart Practice Conference 2017: New Opportunities. Simon Gathercole will present the scheme and discuss it with the developer Jason Collard, managing director, Studio HIVE: architecture.com/whats-on/smart-practice-conference-new-opportunities

Why tomorrow's surveyors will only use 3D scanning

Scan to BIM is the future; and with it 3D laser scanning is leaving traditional surveying behind

Below Rendered 3D BIM Model from scanned Point Cloud data

As the government presses ahead with its commitment to Level 3 BIM for the Digital Build Britain programme, the benefits of 3D laser scanning and modelling are coming into sharp relief.

The 41% increase in BIM adoption by construction professionals from 2010 to 2015 demonstrates architects' enthusiasm for the technique, and its effectiveness in helping model construction projects.

Accuracy

3D laser scanning eliminates human error by using point cloud data to capture as much detail as possible. Hundreds of thousands of points are captured each second in each direction, which produces a dense and expansive collection of individual measurements known as a 'point cloud'.

How much detail is captured depends on scanner settings, which can vary from two-minute to one-hour scans, capturing a higher density of points, greater clarity and detail. The extraordinary accuracy achievable by 3D laser scanning surpasses that of traditional surveying, can reach sub 1mm precision if required. The more detail collected, the more informative the 2D drawing or 3D model.

> The accuracy achievable by 3D laser scanning can reach sub 1mm precision

Cutting costs

Due to the speed and convenience of scanning, costs are remarkably cost effective compared to traditional methods of surveying. These lower costs for a measured survey are far more noticeable on larger or more detailed projects, where scale and detail can become problematic using traditional methods.

The convenience with which information can be retrieved from the point cloud data plays an important part in reducing design time on a building, which in turn cuts the project length and potentially the overall cost to the client. This is particularly useful to architects, structural and mechanical and electrical engineers, who benefit greatly from the superior visualisation of BIM models compared to traditional drawings.

Convenience

The variable levels of detail to which the instruments can be set using 3D scanning allows for the most suitable scan to be used in each situation. Should additional information be required there is no need for return visits to site as the whole property is contained within one point cloud file. Information can be extracted from any point in the building to produce additional drawings. As well as cutting time on site this results in less disturbance to occupants.

Co-operation

The BIM models are collaborative, and the model can be used at any point by the project team. For example, once the base model is created and 2D drawings produced, a 3D model can also help the quantity surveyor to assess project costs – while giving architects and structural engineers information on design, rights of lights analysis, mechanical and electrical 3D drawings and underground drainage and services, and a host of other data.

BIM and 3D scanning are speeding precision and efficiency in construction. An increasingly crucial part of architecture and design today, it is the industry standard of the future.

When creating drawings or models of high level detail, visual access may not be possible using terrestrial surveying methods, but aerial surveying techniques via drones / UAVs (unmanned aerial vehicles) are now being used with high levels of accuracy. This will be discussed in further detail next month. ●

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Procurement & contracts

Contract consistency

A critical judgement will see a fundamental change in the interpretation of contracts

Alistair McGrigor

In an eagerly awaited decision, the Supreme Court in August found a contractor liable to comply with a fitness for purpose type obligation contained in a technical schedule, despite obligations elsewhere in the contract to exercise reasonable skill and care and to comply with an international standard. The decision will have significant ramifications for the interpretation of construction contracts which incorporate numerous technical schedules and specifications in their terms.

The decision comes after over three years' litigation, during which the contractor was found liable by the high court, not liable on appeal and finally liable by the Supreme Court.

MT Hojgaard (MTH) was engaged by E.ON Climate & Renewables (E.ON) to design, fabricate and install foundation structures for 60 offshore wind turbines in the Solway Firth. Shortly after completion, connections in the foundation structures failed. The parties agreed a €26 million scheme of remedial works. Litigation began to determine who should bear that cost.

The key issue lay in just two paragraphs in the technical requirements (TR) section of an employer's requirements schedule to the contract, which required that the design of the foundations 'shall ensure a lifetime of 20 years in every aspect without planned replacement'. But there were numerous other less onerous obligations such as a requirement to exercise reasonable skill and care and to comply with J101, an international standard for the design of offshore wind turbines.

Compliance with J101 was intended to give a service life of 20 years, and MTH reasonably relied on it in preparing its design. Unknown at the time, J101 contained a significant error which meant compliance with it did not provide a design life of 20 years.

The Supreme Court ruled that the TR paragraphs were not inconsistent with the balance of the contract, referring to previous decisions where contractors had accepted obligations to achieve certain performance criteria while agreeing to implement a certain design or specification. No inherent inconsistency arises where the performance criteria proves impossible to achieve if the agreed design or specification is to be adhered to.

The Supreme Court noted that the requirement to comply with J101 was expressed as a minimum requirement and that MTH was obliged to identify any areas where a more rigorous design was needed. It noted that where a contract imposes inconsistent standards, the more rigorous one must prevail.

The Supreme Court also disagreed that the TR paragraphs were insufficiently prominent to support the more onerous fitness for purpose obligation alleged by E.ON. It was particularly unimpressed by an argument that paragraphs such as these 'tucked away' in a technical schedule should not be interpreted as imposing additional onerous obligations above those in the primary contract. The technical schedule, given contractual force by the parties, should be taken at face value.

This decision will significantly affect the interpretation of construction contracts, which routinely incorporate numerous schedules and technical documentation, often with inadequate harmonisation of the intended legal standards of design and workmanship.

It also demonstrates courts' increasing emphasis on the literal meaning of contract provisions. Interpretations which depend on a reading down of parts of a contract will face an uphill battle. More than ever, parties will be taken to mean what they say in the contract.

Architects should consider making clear in their appointment conditions whether and how any technical schedules are to affect overall obligations as to design. They may wish, for example, to include paramountcy provisions which state that nothing in any schedule to the appointment is to impose a design obligation of a greater standard than reasonable skill and care. ●

Alistair McGrigor is partner at CMS Cameron McKenna Nabarro Olswang

The court noted that where a contract imposes inconsistent standards, the more rigorous one must prevail

IN PLAIN ENGLISH
QUICQUID PLANTATUR RULE

It's frowned upon for lawyers to use Latin nowadays, but this old rule still has real relevance in a construction context, determining who owns materials once they are fixed to a building.

In many other industries, it is a matter of agreement as to when ownership of the completed goods passes to the client (for example, on delivery of, or payment for, the goods). By contrast, construction is by its nature governed by the 'quicquid plantatur solo, solo cedit' rule ('that which is affixed to the land belongs to the land'). Pursuant to this rule, ownership of goods passes when those goods are fixed to the land (ie incorporated into the building works), regardless of payment.

As a result, if no payment is received for their work, contractors and subcontractors cannot simply repossess it once it has been incorporated within the building, even if the work is readily identifiable and theoretically removable. Retention of title clauses (stating that ownership doesn't pass until payment is made) are defeated by this rule so provide no relief.

External management

Trading places

Even before computers replace humans, BIM will replace the architect

Maria Smith

In the future, we will be the software, and BIM will be the architect. The client will log on to a website, locate the site on the OS map and enter its requirements. The website will check geological records, the land registry, and history archives. It will check for sites of special scientific interest, and for listed structures and unexploded ordnance. It will consult recent data from sensors in the vicinity to check sewer capacity, utilities connections, pollution levels and local weather. It will prompt the client to carry out surveys for any information that may be missing. The client will click on a link to a comparison site and find the highest rated surveyors local to the site. The surveyors will upload the information they find such that the client, and anyone else, can access it.

The website will make a jelly mould of allowable massing based on adjacent properties and their uses. It will consult records of inhabitation such that scarcely used storage rooms and empty flats will have their rights to light diminished: use it or lose it. The client will then choose from a shortlist of typologies based on their requirements and the website will construct a few massing options that maximise the use of the site. A table on the side of the page will consult rental and sales values in the area and calculate likely profit for each option. Minimal back and forth will result in an optimal scheme design.

Next comes the structure. The client will choose from timber, steel, concrete and various clever composites. Another table on the side of the page will calculate embodied carbon and construction time and cost for each option. The client will choose. Next comes building services systems. The design will have already optimised orientation and plan depth. The website will offer up a few predetermined packages based on the design thus far. A table on the side of the page will calculate the whole life energy and financial cost of each option. The client will choose. Finally comes the dressing. The client will arrange various images into a normal distribution and a learning algorithm will propose material and colour palette. A table on the side of the page will calculate the embodied carbon and construction time and cost for each option. The client will choose.

A full cost plan will then be generated and presented as a pie chart allowing the client to click into the various items and make changes until it is satisfied. It will then fix the design and create a public profile for the proposal. Other stakeholders will be invited to view the design via VR goggles, making comments as appropriate. After the requisite period, the client will return to the private page, will rate the various commenters based on how much store they place in their opinion and the computer will aggregate the comments into easy to digest themes. The client will make adjustments as it feels is politic. The design then finalised, a fully co-ordinated set of construction drawings will be generated.

In the future, we will be the software, and BIM will be the architect. We will sit at desks dreaming up typologies, innovating structural systems, conceiving colour and material palettes, and detailing junctions. All information will be open source. We will work whenever we like, wherever we like, on whatever we like. We will earn based on our contribution. If we devise a popular layout, we will receive royalties. If a material palette increases in popularity following our refinement, we will receive bonuses. If a sought-after detail needs resolving, the price for resolving it will increase the longer it sits unresolved, rewarding those that figure out thorny junctions.

We will earn based on our contribution. If we devise a popular layout, we will receive royalties. If a material palette increases in popularity following our refinement, we will receive bonuses

Some of us will become design therapists, sitting with clients and stakeholders and helping them navigate the website interface and understand what they truly want. Some of us will critique the finished buildings, thereby influencing the rankings of the various components and earnings of their communities of creators. Some of us will refine the planning process, which will be forced to transform. Some of us will work on the interface itself, developing new ways of categorising the information, of comparing various features from embodied carbon to association with TV sitcoms of the 1980s. None of us will work as we do now because in the future, we will be the software, and BIM will be the architect. ●

Maria Smith is a director of architecture and engineering at Interrobang

HOLLY EXLEY

Paul Winch Furness. Source D&D London

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3: Culture

Back to Plan A

It is time to revisit ideas for rural settlements

HOLLY EXLEY

Hugh Pearman Editor

The history of architecture throws up some delicious oddities. The very idea that, in 1947, you would have found the cream of the world's modern architects and planners in the streets of the little market town of Bridgwater in Somerset is just too surreal. This – as recounted in an online piece for us by Pamela Buxton – somehow became the venue for the sixth meeting of CIAM, the Congrès Internationaux d'Architecture Moderne.

Down there, among many others, you'd have found Le Corbusier, Jane Drew, Ernö Goldfinger, Jose Lluís Sert, Walter Gropius, Minnette de Silva from Ceylon, Grete Schütte-Lihotzky – designer of the innovative Frankfurt kitchen – and Lotte Stam-Beese, who led the post-war redevelopment of Rotterdam. Our archive images show them perched on PEL stretched-canvas, tubular-steel chairs in a hall, and lined up outside as if for a school photo.

There were various reasons for the choice of venue – new art centre in the town, nearby factory for prefab housing – but the most convincing is that, as in the immediate aftermath of the First World War but especially given the aftermath of the Blitz – ruralism held great attractions. It was a time for fresh thinking and Corb, it seems, reckoned the ideas flowed pretty well. The concluding statement talked of matters not so much functional as emotional and spiritual.

A hugely expanded population, corralled in cities by the existence of green belts, needs to burst out somewhere

This theme is picked up in another online piece for us by Charles Holland, which tackles the idea of Utopia as originally defined by Thomas More. In a 'perfect' society where ostentation is outlawed, what place for architecture? The original garden cities provided one answer: what of today's densified regions such as the Oxford-Cambridge corridor – the subject of an ideas competition from the National Infrastructure commission with the winner declared this month?

Southern England in particular is having to come to terms with the fact that a hugely expanded population, corralled in cities by the existence of green belts, needs to burst out somewhere. Nothing new there – that was why the satellite 'expanded towns' were planned around the time of the Bridgwater congress, and why later Milton Keynes was strategically placed midway between London and Birmingham.

Densification of existing suburban sprawl is one way to provide the necessary building, as is the use of brownfield sites. But CIAM 6 was onto something, as was Frank Lloyd Wright with his lifelong project Broadacre City. The countryside cannot be off-limits – though green belts, rethought perhaps, should remain. Nor should it be just turned over randomly to the mass housebuilders with their formulaic car-dependent responses. It can be stimulated by new railway lines (and can help finance the lines themselves), as Metroland showed, but let's try a more compact and varied response this time, shall we? It's time for some very old-fashioned strategic planning to make more paradisical places.

ONLY ON RIBAJ.COM

In a world where everyone has precisely what they need, the desire to acquire more, through nefarious or any other means, is thoroughly looked down on

Charles Holland goes back to Utopia: ribaj.com/utopicutopia

A statement pledged to work for 'the creation of a physical environment that will satisfy man's emotional and material needs and stimulate his spiritual growth'

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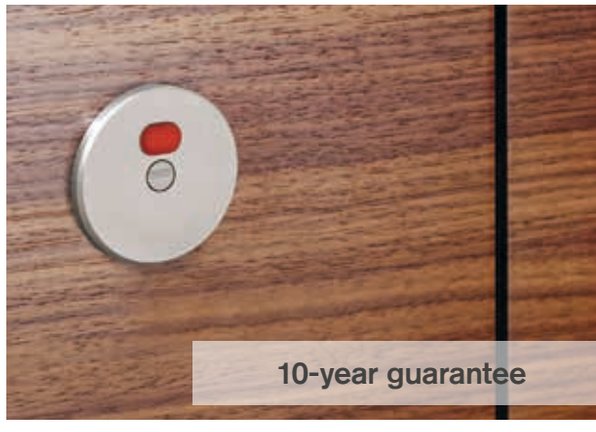

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Power complexes

Small is beautiful for the despotic Kazakh president

Oliver Wainwright

I was the only visitor that morning at the Atameken Ethno-Memorial Complex. The Kazakh capital of Astana feels empty at the best of times, but there's something even more eerie about standing alone in the middle of a model of it all.

The Atameken park is a model within a model, a scale toy town of a city that was itself conceived from scratch as a model capital. When Kazakhstan's president Nursultan Nazarbayev decided to shift 1,000km north from Almaty in the 1990s, he planned his new city – originally with Kisho Kurakawa – as a tool for constructing a new national identity. He invested much faith and cash in the symbolic power of object buildings.

With the later help of Norman Foster, he adorned his new playground with a gigantic pyramid, a yurt-shaped shopping mall and a national library in the form of an all-seeing eye. Foster added his monuments to existing ones such as an observation tower designed as a golden ball nestling at the top of a tree, a presidential palace as a Frankenstein mash-up of the White House and St Paul's Cathedral, and a state oil-and-gas company HQ modelled like a massive triumphal arch, on a steroidal scale that Stalin would envy.

These, and many more curious confections, can be found remade at doll's house scale in the Atameken park, a Lilliputian setting in which their object-ness can be truly appreciated. Only here can you take in the full majesty of the pot-shaped music hall and the egg-shaped national archive, or survey the bird motif inscribed in the pathways of the presidential park.

> The remaking of the country's built heritage in miniature cements the president's absolute control over this sprawling nation

But, beyond showcasing the architectural marvels of Astana, this model village serves to bind the divergent ethnic groups together in Nazarbayev's suffocating embrace. From the jelly mould mausoleum of Domalak Ana, a legendary mother of the Kazakhs, to Almaty's orthodox cathedral, and the Baikonur Cosmodrome, the remaking of the country's built heritage in miniature cements the president's absolute control over this sprawling nation.

In this, Nazarbayev is continuing a rich tradition, following in the footsteps of centuries of despots. At the start of the third century BC, Imperial China's First Emperor, Qin Shi Huang, ordered the construction of copies of the major monuments of the territories he had defeated. The act of duplication embodied the capture and control of not only the enemy's land and property, but its entire history and civilisation.

'Replica palaces, passages and walled pavilions [were] filled with the women, bells, and drums that Qin had taken from them,' wrote Sima Qian in the first century BC.

It is a tradition of imperial control that continues in Beijing in the Chinese Ethnic Culture Park, where the indigenous architecture of the country's 56 ethnic groups has been recreated in a theme park of minority culture. Visitors are invited to wander between the Tujia's stilt-houses and the Hui's cave dwellings, the Li's ship-shaped houses and the Mosuo's wooden cabins. While the park is sold as a celebratory gesture of inclusion, the dominant Han Chinese of the official Communist Party is in fact affirming its absolute control.

So what should we make of Astana's Expo 2017 site, a place where all the participating countries are arranged in a deferential circle around the great glass orb of the Kazakhstan pavilion – the biggest spherical building the world has ever seen? It's the usual tedious jamboree of nations, in this case each selling their take on renewable energy, but the legacy plan for the site is much more telling.

It will play host to an International Financial Center, a free trade zone of sorts, where, just like the Atameken park, Nazarbayev can claim ownership over the global economy by remaking it in miniature.

Oliver Wainwright is architecture critic at the Guardian. Read him here every other month and at ribaj.com

TOP GIZA

'The president of Kazakhstan wants a pyramid,' came the email from Norman Foster to his staff in London. 'Let your imaginations soar.' They soared a little too high even for Nazarbayev's grand plans, coming up with a scheme the size of the Great Pyramid at Giza, over 230m across. The final Palace of Peace stretches to just 62m.

HOLLY EXLEY

Starter for three

Ben Derbyshire launches his presidency with his sights set on diversity, the urban environment, and the global agenda

IVAN JONES

Ben Derbyshire

It is with a huge sense of honour and responsibility that I write my first RIBA Journal column as your president. I am humbled by the talent, passion, ambition, success of my fellow architects, and look forward to my role in championing and supporting our profession.

In the first few weeks of my term, I have represented the RIBA at the political party conferences and announced Neave Brown as recipient of the Royal Gold Medal; I will shortly be chairing the jury for the Stirling Prize, selecting the best new building in the UK. These are exciting times!

It's been a privilege to meet some of you as I have toured the country following my election. What you told me has shaped three priority themes for my presidency: driving quality and performance in the built environment; energising, diversifying and growing RIBA membership; and promoting devolution and the global new urban agenda. I'd love to hear your thoughts on these.

If ever there was a time when change is in the air, this, following the tragic fire at Grenfell Tower, must surely be it. I believe we have an opportunity to deliver long lasting change that will improve policies, standards, regulations, procurement, customs and practices. The RIBA's expert group on fire safety is driving the RIBA's response to Grenfell Tower and I will be doing my part to lead the quality agenda. In February I put it to the London mayoralty that a housing expo would be a good way of demonstrating to the public what is meant by the phrases 'good growth' and 'green growth'. This idea has already found its way into Sadiq Khan's draft housing policy, now out for consultation, and I'd like to see it happen in metropolitan mayoralties nationwide. As a first step towards more universal post occupancy evaluation I have asked the RIBA's Sustainable Futures Group to work on an overlay of the Plan Of Work that would help us engage our clients in the importance of post occupancy data.

Thanks to some great campaigning we have a new, more diverse cohort of members joining RIBA Council

In our practices, in the profession as a whole and in the institute, we cannot purport to deliver to the needs and aspirations of our diverse society while the composition of our workforce fails so dismally to reflect the composition of society at large. The median age of RIBA members is 53 – mostly old, white, men – like me! I want to expand and increase our membership, and I am delighted that thanks to some great campaigning we have a new, more diverse cohort of members joining RIBA Council. The urgency of educational reform in the training of young architects earlier is a big issue for many of the younger members of the profession I have spoken to. I will be working to fly the flag for urgent change to enable earlier, more affordable and more relevant routes to qualification, undeterred by the apparent freeze on progress imposed on us by the Brexit negotiations.

Last year the RIBA commissioned new research on the opportunities and challenges of devolution in England and recommended new devolution deals for housing. I was pleased to see this referred to in the UK government's housing white paper earlier in the year. I want to build on this work looking at how the RIBA can strengthen its support for members to engage politically locally and regionally. I also want to build on Jane Duncan's legacy of championing and developing our global network at the institute, continuing to rejuvenate our relationships with overseas chapters and sister institutes.

As a profession we are known for not being shy about our views so please keep telling me how the RIBA can help you. I will continue to visit practices, branches and regional councils, and of course you can email or tweet me any time.

president@riba.org
@ben_derbyshire

STIRLING WINNER: HEAR IT FIRST

On 31 October we will announce the winner of the 2017 RIBA Stirling Prize at a special event at the Roundhouse in north London. Be the first to hear who has won by attending the event or keeping an eye on our social channels @RIBA
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Polypipe

There's a new and already very successful architect on the block – yet it seems strangely familiar. RIBA Journal introduces you to MICA Architects

Words: Hugh Pearman Portrait: Ivan Jones

New name, same ethos

Meet MICA Architects. Never heard the name? Hardly surprising – this article is its first appearance. But you will very likely be familiar with their old one, Rick Mather Architects. Rick, the urbane, witty garden-making American who became indispensable to universities (Oxford and UEA among them) and arts institutions (Dulwich Picture Gallery, Ashmolean, Virginia Museum of Fine Arts) plus housing and much else, died at 75 in April 2013. Since then the projects he was involved with have mostly completed and the practice has flourished under his younger partners, doubling in size. It's time, say Gavin Miller and Stuart Cade, to let go of Rick's name. But never let go of the Rick ethos.

MICA? It's simply the first two letters of each of their surnames. Miller and Cade are 50 and 42 respectively, so are anyway in the decade many architects choose to establish their own practice after working for others. In this case, they explain – because of Rick's habit of letting younger architects in the firm take command of projects earlier than most – they have long been used to representing the practice anyway. There was a succession plan in place which simply clicked into action. Notoriously they lost one significant American competition win, the Peabody Essex Museum in Salem, Massachusetts, immediately on the news of Rick's death – indeed, even before his funeral, says Miller drily. As far as that museum was concerned, Rick was the firm. How wrong it was. All the other clients stayed loyal.

Miller and Cade steadied the ship, keeping the name, new and larger jobs were won, staff recruited. While Mather's practice famously punched above its weight (coming second in the competition for the British Museum revamp won by Foster), it was sometimes seen as being too small for larger projects, finding itself yoked with other practices (such as BDP at Greenwich's National Maritime Museum). Not any more: the urbanism strand of its work, which came to the fore with the very effective Mather masterplan for London's South Bank as carried out by Allies & Morrison and others, has borne fruit in such large-scale commissions as the Croydon town centre plan including the revitalisation of the Fairfield Halls theatre/

Right Stuart Cade (left) and Gavin Miller in Rick Mather's old office, now a library.

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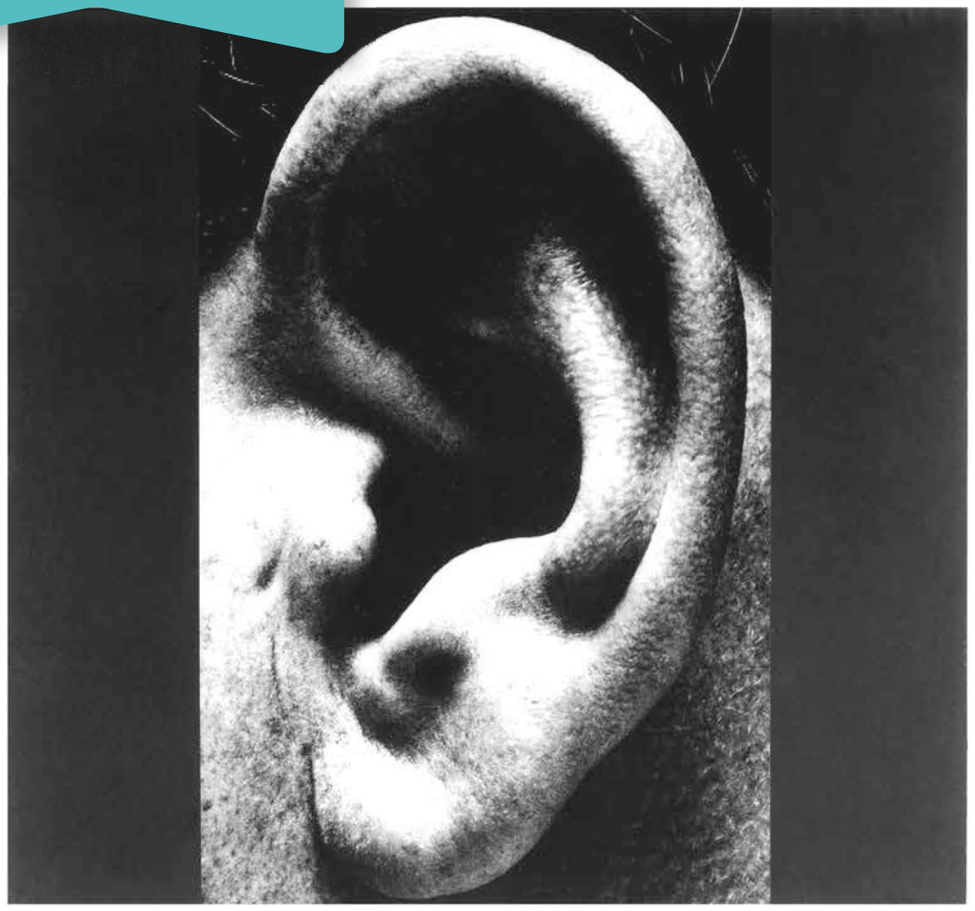

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concert hall/art gallery complex. That's under way right now and will include a lot of new social/affordable housing.

But that is only one project among many, including a continuing series of careful expansions for Oxford colleges , a regeneration masterplan for the city of Lancaster, a new social housing mini-tower to the rear of London's Centre Point which is a classic piece of Matherish efficient planning, and a new medical school complex for King's College London at St Thomas's Hospital in Lambeth. Since Rick's death they have won more than 20 competitions and created dozens of jobs. At present there are 52 people in the parquet-floored former snooker hall above the shops on Camden High Street – originally Montague Burton the tailor – where the practice has been for decades.

Both men arrived when Rick was staffing up to handle the flurry of Lottery-funded projects he had won, helped by the exposure he'd received over the British Museum. Miller joined in 1995 to work on the Maritime Museum, Cade a year later as a part 1 student to help with Dulwich ('I was doing toilet layouts for eight months,' he says. 'They're classically tight. That was always the Rick test: how many toilets do you need? Right –make them as tight as you can to allow maximum space for café, gallery, front of house.' Rick's famous planning efficiency is something the new practice is imbued with, says Miller.

Above Kings College medical school at St Thomas' Hospital, London – Prideaux Extension.

Below Tricky contexts anyone? Hawksmoor influence at Queen's College Oxford reflected in the new sunken library and archive beneath a quad by MICA.

Equally key to the Rick approach was not to over-control his talented staff. 'For our age we did big things,' says Miller, Cade adding: 'He was the lead, but he gave a lot of latitude to people in the office to run projects.' Again, this attitude has continued so that today the two partners are part of a leadership group of 14 people including five associate directors.

We meet and talk in the semi-private space that used to be Rick's office, overlooking the garden terrace behind. These days it's a small library, lined with classic titles but otherwise kept pretty much as it was. Elsewhere in the office are piece of Rick's tubular-steel furniture as inspired by Eileen Gray and the Bauhaus. Some have recently been restored. So there's no erasing of the past going on here, rather an acknowledgment of the patrimony of the place as the practice moves forward.

Left The big picture – regeneration masterplan for Lancaster, night view.

Below Digging down at Lincoln's Inn Great Hall – there will be a library under that terrace.

Bottom Social housing mini-tower between Centre Point and Renzo Piano's colourful Central St Giles, London.

If the large-scale masterplanning and landscape is one of the expansion moves – something the partners see as associated with Rick's aptitude for gardening – they continue to be known as a go-to practice for new buildings in incredibly sensitive historic contexts. Often this means sinking new facilities into the ground. 'We get approached for highly challenging jobs and we do like digging down,' acknowledges Cade. 'It's all about solving difficult problems in tricky contexts,' Miller agrees. In project after project – Keble and Mansfield and Queen's Colleges Oxford, the medical school for King's College London, the library and lecture theatre for Lincoln's Inn college of barristers – there is a lot of excavation before the roof goes on, the terraces,

quads or gardens are put on top and daylight is brought down to the depths through various clever means (Mather was a disciple of Soane in this regard). In Oxford, often there's a specialist institute involved rather than merely expansion of existing functions.

And then there's some important but largely invisible work, such as a series of beautifully-produced feasibility studies for Transport for London which are all about the potential for housing around transport hubs existing and – reviving the Metroland principle – on possible new lines. Add to this the low-energy credentials that the practice has been noted for since the 1980s, and it's a formidable combination of aptitudes to find in one place.

They don't have a motto, but when I ask Miller and Cade about the Mather approach, they come up with a phrase I constantly heard Rick utter: 'Giving something to the street'. He meant that the building should never be an isolated or defensive object, but one that activates the spaces around it. For MICA, this mantra continues to hold good and clearly strikes a chord with its clients. The work will continue to be all about people.

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Kitsch is cool

Pablo Bronstein's RIBA show explores the way pseudo-Georgian architecture flatters our vanity

Pamela Buxton

Pablo Bronstein may have abandoned his Bartlett architecture studies after just three weeks, but architecture has remained central to him as an artist ever since. And now, as the recipient of the latest RIBA Commission, he has turned his attention to one of the most unsung architectural styles around – pseudo-Georgian.

As a child he produced prolific and elaborate drawings of buildings, and much of his work continues to focus on architecture, whether through the medium of drawing or through choreography and performance. Fascinated by pre-modern styles of European architecture and their appropriation and reinvention, he published A Guide to Postmodern Architecture in London (Koenig Books) in 2007. In 2011, he staged architectural interventions throughout the ICA as part of his show Sketches for Regency Living. Last year's Historical Dances in an Antique Setting at Tate Britain used dance and architectural backdrops to experience the imposing Duveen Galleries.

His latest work is the drawing-based exhibition Conservatism, or The Long Reign of Pseudo-Georgian Architecture, opening this month at the RIBA's Architecture Gallery in London.

It's an unwieldy title, and takes some explaining. Through 50 of his own drawings in dialogue with historic drawings from the RIBA's collections, Bronstein aims to explore the proliferation of developer-led, pseudo-Georgian architecture, which he regards as an undocumented exemplar of British vernacular, from the 1970s onwards. He has no interest in grand high-end buildings, but is fascinated by the often mundane application of Georgian style and its embodiment of social aspiration. In particular, he is interested in pseudo-Georgian's ability 'to successfully and economically pander to delusions about our past, and flatter our vanity of wealth and class'.

'I view it as a kind of unconscious post-modernism. It's pattern book architecture, which is very 18th century,' he says.

'It's considered the rubbish against which good architecture shines out. People don't bother mentioning it. As a result of the buildings not being looked at properly, people do all sorts of funny, weird things.'

Yet he has a soft spot for this prolific, workaday style with its budget aspirations for solidity, permanence and tradition, often built for people without a background of home ownership.

Above Cassland Road and Well Street, Hackney, London.

Pablo Bronstein: Conservatism, or The Long Reign of Pseudo-Georgian Architecture, 21 September 2017 – 11 February 2018, Architecture Gallery, 66 Portland Place, London. The exhibition is accompanied by an installation by Apparata in the building entrance.

'I view it as a kind of unconscious post-modernism. It's pattern book architecture, which is very 18th century'

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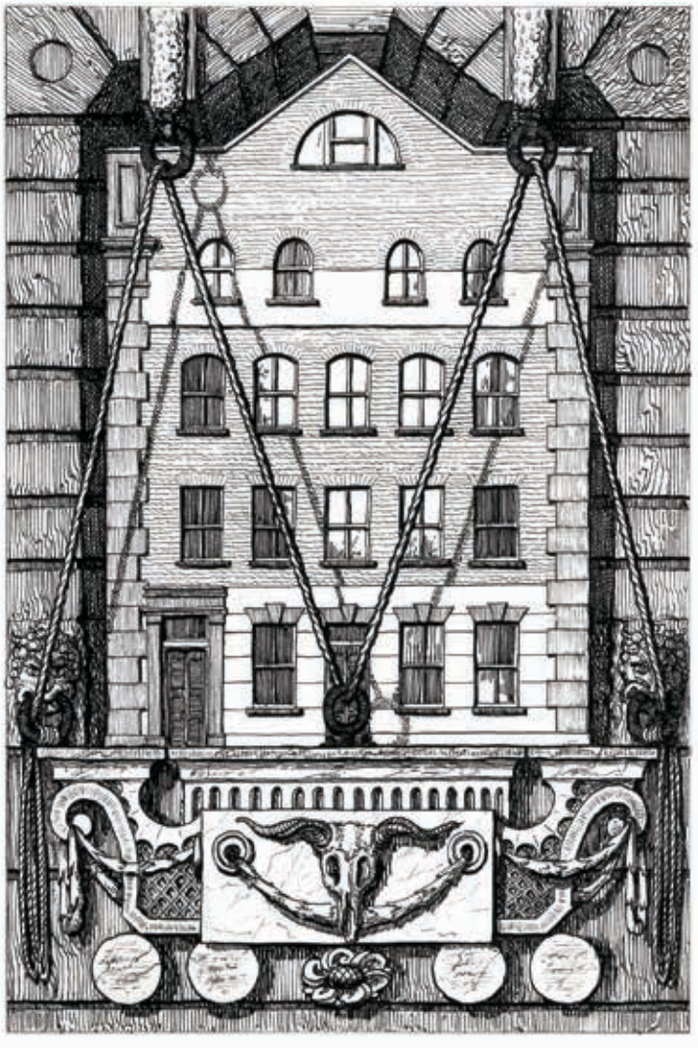
Its success is measured not in terms of architecture awards but by volume of sales, or getting through planning as quickly as possible.

'The buildings are trying but don't know quite what they're doing wrong or right… This isn't me laughing at them. I feel very identified with that kind of building. These are great things to study,' says Bronstein, adding that he likes the downtrodden and ignored. 'For me there's absolutely no moral judgment. The moral judgment is more directed against the people who ignore that kind of stuff.'

His freehand pen and ink drawings capture real buildings that he has noticed around London and puts them in often elaborate framing devices ('generally speaking, the crappier the building, the bigger the frame') augmented with highly dramatic imagined settings.

In the flamboyant drawing of 1-4 Cassland Road and Well Street, he uses the elaborate frontispiece from an 18th century book on rococo ornamentation by Juste Aurèle Meissonier to give a fantastic setting to the modest building, which is offered up by the rococo ornament in a wave-like flourish. Bronstein enjoys the contrast between such a 'peak of excess and over-doneness' and a building 'so impoverished and bereft of architecture that it's almost mind-boggling. I thought it would create a sense of pathos to juxtapose the two.'

Below 1 Haverstock Street, Haverstock Place, Islington, London.



In another drawing, 1 Haverstock Street, Bronstein takes inspiration from Piraensi's designs for fireplaces and wall decorations.

'It is all very tongue-in-cheek, because the dark niche in which the building sits, and the layered decoration, is at odds with the extremely flat and thin facade of the building. The richness and weight of the frame is poking fun at the very opposite nature of the real facade,' he says.

In the exhibition, Bronstein's new drawings are organised by type in an enfilade arrangement with those from the RIBA archives. Rather than seek to make a contrast between high-end Georgian designs and more recent pseudo-Georgian, Bronstein has sought out more comparable original and neo examples that deal with the style as a commodity, such as commercial shop fronts. The show, designed in collaboration with architect Apparata, also includes an archive area that charts the role of pattern books in popularising Georgian style as well as trade magazines that show the huge growth in adoption of pseudo-Georgian style in the 1970s and 80s. Apparata has also designed an installation at the entrance of the RIBA to complement the Bronstein exhibition.

Bronstein has no doubt that he made the right choice in leaving his architecture studies. It would not have suited him, he says, shuddering at the long gestation times involved in making buildings. 'I'm so impatient!' he says. 'It's pretty rare that I like anything I do after six months.'

He has, however, recently completed a lengthy building project of his own restoring a 17th century house on the Kent coast.

After the RIBA exhibition, Bronstein is staging a show about China in Turin in November and is looking forward to several more projects in London, including one at the Soane Museum. He recently unveiled Rose Walk in Edinburgh, a permanent commission for Jupiter Artland consisting of two pavilions, one Chinoiserie in style and the other Gothic, linked by a 25m rose garden. His book Pseudo-Georgian London (Koenig Books) is published to coincide with the RIBA exhibition. ●

'For me there's absolutely no moral judgment. The moral judgment is more directed against the people who ignore that kind of stuff'

SOME OF THE PARTS

Apparata's 3.3m-high Abacus, Capital, Base is the latest in a series of installations by the practice as part of its research into architectural elements. The firm's Nicholas Lobo Brennan says that it – like Bronstein – is interested in 'using the language of classicism as a fertile ground for architectural invention'. The installation sits opposite the RIBA reception desk and will be made from reconstituted pumice – chosen, says Brennan, because it has all the lightness and mineral quality of stone without the weight. The 2m wide column challenges conventional classical entablature by comprising abacus, capital and base with no shaft. Instead, the capital emerges directly from the base before tapering with a curve to almost nothing as it meets the abacus, which swells out again at 90° as it soars to the ceiling.

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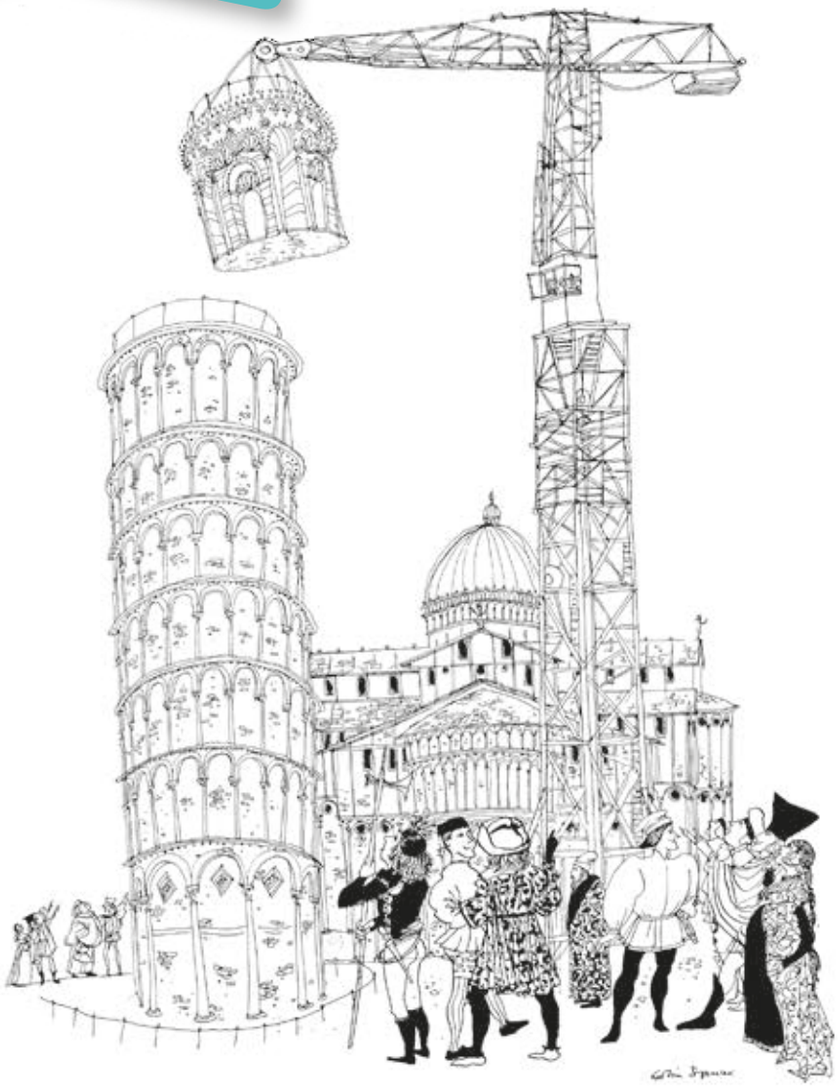

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No tone unturned

Tracking the history, development and application of colour, this absorbing and detailed analysis will change the way you see the world

Morag Myerscough

I thought I knew a bit about colour. But when I started reading this book I realised my knowledge was wanting. The title, Anatomy of Colour, is perfect as it dissects colour with almost mathematical rigour. And for readers who are fascinated by how colour production has developed over the centuries it is an incredible sourcebook; one that is dense and referenced, but which also can be just dipped into in a leisurely way.

In fact, that's perhaps how it should be digested, as reading from start to finish in one go would blow your mind with information. Each colour subject is discussed in such fine detail that, if you read it all, you'll have gained an encyclopaedic knowledge of the subject. But it's just as good as a reference book to discover something that might help with a particular project. It is incredible task for Patrick Baty to have pulled together such insights; as a result, for those who are specifically interested in historical colours it's a must have.

Ultramarine was derived from the stone Lapis Lazuli, while vermilion was produced by combining sulphur and mercury

Below James Brice House, Annapolis, Maryland, colours based on those of 1766-73.

Left David Ramsay Hay's The Laws of Harmonious Colouring adapted to Interior Decorations, 1847.

The book is beautifully laid out and illustrated, and Baty draws on what must be an unrivalled collection of paint samples. In the introduction he mentions that it is impossible to make a book printed CMYK represent pure pigment colours as you can never truly get the depth and richness of the actual pigments. But he points us towards his 'Papers and Paints' shop in west London, where true colour matches can be found.

His introduction is very insightful, where he begins with the observation that few people are actually 'taught about colour'. This is true; when I was a student at Central St Martins School I was only given a one day workshop on the primary and complimentary colour wheel. The subject was never high on the agenda in the mid 80s. Before this book I had no idea how many colour theories – Goetheian for example – that there have been over time, and how beautiful all their individual diagrams are. Baty's book also picks up on the extensiveness of colour research, highlighting 19th century American ornithologist Robert Ridgeway's pioneering studies of colours relating to birds, and then Professor

Albert Munsell's 20th century colour system, developed in the 1930s and identifying the attributes of hue (lightness) value (darkness) and chroma (strength) to colour. All helped lay the foundations of modern colour taxonomy.

But starting from first principles, learning about traditional pigments and the lengths people went to manufacture them is fascinating; the development of this technology is another story in itself. Some of the raw materials were hazardous – lead, arsenic, mercury, etc – and there was clearly more concern for the purity of pigments than there ever was for the people making them.

Early paint colours appear to relate to the materials required to make them and those names have remained constant, particularly for artists' oils and acrylics. Lamp black was made from soot, ivory black from shavings and offcuts of comb-making industry and waste fragments of ivory, blue black from the burning of vine twigs. Ultramarine was, since ancient times, derived from the semi-precious stone Lapis Lazuli, while vermilion was a bright scarlet pigment produced by combining sulphur and mercury to form red mercuric sulphide. Chrome yellow was only synthesised in the late 1790s with developments in scientific know-how. What's interesting is that, although artificial chemicals are used now, Baty argues that the quality of colour pigments is as good, if not better, than those produced from traditional raw materials.

His writing on colour nomenclature particularly struck me as I spent a year tweeting only in colours and describing them. One set of colour tweets was my mood in the morning and then my mood at night. Sometimes I would use a single word to describe them, such as 'black'; and other times I needed more specificity and so use a descriptive word in front of them, such as 'duck blue', 'sunshine yellow' or 'vivid green'. I loved finding that similar and stranger names — donkey brown, lotus pink, Derby blue names were all part of the British Standard Council's 'Dictionary of Colours for Interior Decoration' of 1949.

The evolution of colour systems and paint systems in general is particularly fascinating, and I loved the section on Colour Systems and Standards 1900-1945 in which household paints moved into a completely different naming system. Baty notes in an aside on the moves made by the French Society of Chrysanthemum growers (from the Greek word Chrysous —'golden') to categorise flower colours due to the breeding of new plant types, that it helped push developments in colour categorisation. Introduced into Europe in the 17th century, by the start of the 20th the assortment of flower colours had become so extensive that the Société Française des Chrysanthémistes published its Répertoire des couleurs' (1905). Selected in particularly in connection to fruit, flower and foliage shades, they came to be used as a colour catalogue in many other fields.

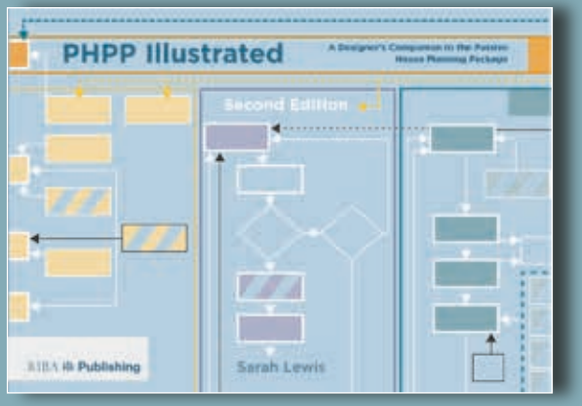
In an extension of the formalised systemisation of colour, House & Garden magazine, for instance, felt it was responsible for the first major commercial attempt to convince British people that colour in the home 'not only delights the eye, but raises the spirits and challenges the imagination'. But this had been set into motion in Britain during the 18th and 19th centuries, where rules specified exactly how rooms should be painted – so much so that French painters of the time held the view that England had developed a distinct aesthetic colour sensibility.

The immense detail Baty goes into on the subject, coupled with beautiful colour plates, makes not only for a compelling read but ultimately argues how colour – manufactured, identified and systemised – actually began to form part of the identity of a country. ●

Morag Myerscough is a designer and founder of Studio Myerscough

The Anatomy of Colour: The story of Heritage Paints and Pigments, Patrick Baty, Thames & Hudson. 352pp, HB £35

Below Part of the Royal Horticultural Society chart for recording plant colours, 1986.



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John Corrigan 1946 – 2017

Charismatic co-founder of Corrigan + Soundy + Kilaiditi Architects, who launched his career with Elephant Lane in Rotherhithe

John Corrigan was a talented architect, generous mentor and an influential figure in his local community. He leaves behind a thriving Windsor practice and a legacy of award-winning buildings throughout Berkshire and London.

Born in 1946, John was brought up in Windsor where he lived and worked for most of his life. From a traditional Irish working-class background, John worked for a local architect doing day release and night school to gain his qualifications. His natural talent and charisma were quickly recognised and he applied to the AA to study architecture. It was at the Architectural Association that John found his spiritual home, lifelong friendships and working partnerships. He founded the AA rugby team with Richard Soundy, with whom he would later set up in practice, and it was on a joint AA/Athens Technical University survey trip to Patmos that he met Irini Kilaiditi, his future wife and professional partner. During his studies he won a third year secondment to the Royal College of Art in the department of industrial design – a tribute to his talent and work.

Between 1974-1976 John worked for James Stirling & Partners, whom he always held in the highest regard. He used to recall that once when the office was flat out, Stirling was sitting in the corner sketching a procession of circus animals – when John enquired what he was doing, Stirling simply replied he was sketching the opening ceremony for the building currently on the drawing boards. During this period, John also returned to the AA as a middle school unit tutor with Leon Krier, describing the place as somewhere that anything could happen, and often did – a melting pot of talent and ideas.

John and Irini Kilaiditi struck out together in practice in the late 1970s, and in 1983 they joined with Richard Soundy (who in the meantime had been a project architect for the Lloyd's building at Richard Rogers and Partners). Together they won a national competition for a large mixed-use scheme at Elephant Lane in Rotherhithe. The three continued their success as Corrigan + Soundy + Kilaiditi Architects, winning a competition in 1984 for the total refurbishment of the Building Centre and the preparation of a long-term strategy entitled 'Building Centre 2000', and a year later landing a third competition win for a development of 32 dwellings at 'Holyoake House' in Surrey Quays.

On the back of this growing success, in 1985 CSK's work was selected for the RIBA '40 Under 40' travelling exhibition and the practice was invited to present a paper at the RIBA in its Architects and their Work series, entitled Dockland Projects and Other Work.

From the outset, the partners developed a multi-faceted architectural practice – carrying out a wide range of commercial, industrial, residential and refurbishment commissions – and continued to thrive and grow over the last few decades. John was at his very best at the front end of the business, building strong client and colleague relationships with charm and openness.

John particularly enjoyed the initial stages of the design process, distilling the complex requirements and constraints of a brief into functional and elegant plans. The practice developed an expertise in the design of contemporary buildings in sensitive locations of historical significance. Cabe exampled its work in 'Buildings in Context', and over the years the practice has won numerous local, regional and national awards.

John and Richard handed over the reins of the practice in 2016 to their long-standing junior partners. John continued to sit on the Berkshire design review panel, and was a member of the south-east regional design panel, reviewing major planning applications in the region.

John is survived by his wife Irini, their son Alexis and their daughter Phaedra, also an architect. He will be greatly missed.

IN MEMORIAM

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ELECTED 1953, BATTLE, EAST SUSSEX

RONALD SIDNEY RIGGS
ELECTED 1964, LONDON

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ELECTED 1976, MACCLESFIELD

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MARK FENTON ELECTED 1950, LONDON

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MultiGen Awards

Solving a problem of our times

It's perhaps a reflection on the complexity of the subject itself, that the judges of the 2017 SterlingOSB 'MultiGen' competition took longer than usual to come to a decision over which proposals should merit prizes. This, it transpires, is because the issues implicit in considering how one might create an environment where a number of generations can co-exist together perhaps run at odds with current societal norms. Students want to kick out, young families want room to grow and, despite increasing care demands, retired couples are still encouraged to aspire to newfound independence, free of familial obligations. But in a world where property prices are rising and homes are increasingly unaffordable, seriously considering how architects can negotiate the compromises in bringing such divergent interests back together again is no mean feat.

It was emotive among the judges too; one waiting to get on the housing ladder, another struggling with life in a micro-flat, another considering moving out of the old family home to let a daughter and her family move in. How to make this kind of living work revealed these vested interests, causing a great amount of debate, and we'd like to think our winners rose to the challenges that multi-generational living brought up.

Our thanks go to sponsor Norbord for helping stimulate this important debate; for in the end our winner seemed to offer a simple solution to this potentially complex problem. Well planned, materially economic, aesthetically pleasing and easily replicable, we felt the design produced a practical and workable response using SterlingOSB that at the same time had elegance and a lightness of touch. It seemed a delicate Chinese paper lamp, offering to shed soft light on how we might start to live in the future.

Jan-Carlos Kucharek
Senior editor, RIBA Journal

In its third year, our collaboration with RIBA continues to inspire the Norbord team and our customers. We would like to thank everyone who has been involved; not least the architectural community which has embraced SterlingOSB so that it is now not only a building staple; it is a trendy, 'designer' board for all sorts of applications in the retail, commercial, hospitality and design sectors, to name a few.

So, once again, we have been thrilled and excited with the quality of the competition entries this year and the potential uses that lie ahead of us; so thank you.

Karl Morris
Managing director, Norbord Europe Ltd

Students want to kick out, young families want room to grow and retired couples are still encouraged to aspire to newfound independence

Produced by the Riba Journal in association with Norbord SterlingOSB

Supplement editor **Tom Ravenscroft**
Design **Richard Krzyzak**
Sub editor **Alysoun Coles**
Cover image **Ed Burgess Architects**

Living in harmony

For this competition we challenged architects to think closely about how society will be living in the decades to come.

The unaffordability of land in the UK's cities is making independent home ownership untenable for many. This can often result in multiple generations of the same family finding themselves living under the same roof, in unsatisfactory ad hoc arrangements.

In response to the rising popularity of the extended family model we asked architects to create unfettered, imaginative proposals that imagine how future generations might be able to live together on a single footprint.

With no set site, the architects were free to propose any new mode of adaption that would make an existing dwelling suitable for multi-generational living. The only constraint was that the addition could only increase the usable area of the family property by up to 35m² and that designers must create an independent unit with separate access.

The entrants did not disappoint, with a variety of well-thought-out proposals that extend out and up from existing houses, along with a selection of entirely new structures that interacted in various ways with existing homes.

Designed for returning young adults, students, middle-aged or elderly individuals, the projects that faired best with the judges were those that tackled the issues at hand while taking best advantage of the intrinsic structural properties of SterlingOSB.

After extensive deliberation the judges narrowed the multiple proposals down to four projects that best exemplified the aims of the competition – these are the schemes featured here.

Choosing a winner from the four proved a difficult task. We asked for blue-sky thinking and that is what we got. This of course meant that we were presented with a wide range of solutions to many different problems.

While all the proposals embraced the need to consider, and implicate, innovative solutions to increasing density, it was Burgess Architects' proposal that stood out as the design that interacted best with the existing building while retaining independence for the resident. Not only did its design embrace the qualities of SterlingOSB, it also has real-life potential to be implemented.

The judges were incredibly impressed by the flexibility of the design which would not only work on the architect's chosen site, but could also be successfully adapted to provide additional independent space for numerous properties around the UK.

The two proposals that were just beaten by Burgess Architects' scheme also thoughtfully created an idea that could be developed on multiple sites. Both Barefoot Architects 'Back Garden City' and Sibylle Metge-Toppin and Claire Chabrol's 'The Possibilities are Endless' looked to increase density through the addition of a structure in the rear gardens of existing buildings. In the end the judges couldn't split these proposals, and in fact concluded that combining elements of both would have created the winning project. As such, both were declared joint runners-up. S+ Architecture's sleek pavilion-like structure was also highly commended.

Overall this was a thought-provoking exercise with the entrants rising to the challenge and seriously considering how we will live in the future. We hope the projects will inspire others to think creatively about increasing density in our cities, and how to plan better for multi-generational living.

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Winner Kit Studio

Burgess Architects

Burgess Architects' Kit Studio is a family of lightweight additions designed to stand alongside an existing property to provide an independent living space as a university returner's first base. Exercising a complete understanding of the spirit of the competition Burgess Architects' scheme creates a cheap, sustainable, medium-term solution for multi-generational adaptions.

Built from a kit of parts – which gives the scheme its name – the structure stands on a driveway alongside a 1930s semi-detached house – although its flexibility means that it has the potential to be adapted for many different sites. With an estimated 4 million similar gap sites in London alone the proposal could greatly increase residential density, making a significant contribution to the housing crisis.

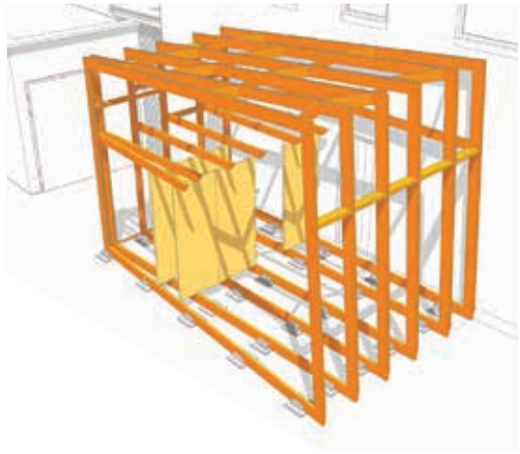
An innovative fulfilment of the brief, the addition balances independence and co-dependence. Direct access from the street gives the resident complete independence, while a connection to the main house allows the shared use of space. This also adds flexibility by allowing it to be used as an additional bedroom or guest apartment during the family's other life stages.

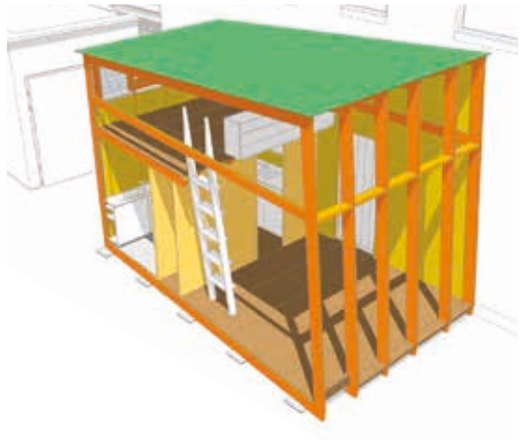
The fully considered design took full advantage of the structural properties of SterlingOSB, and more than any other entry demonstrated a thorough understanding of the material. What's more, the component-based construction and panel-based modules allow the building to be disassembled and rebuilt at the end of the its use.

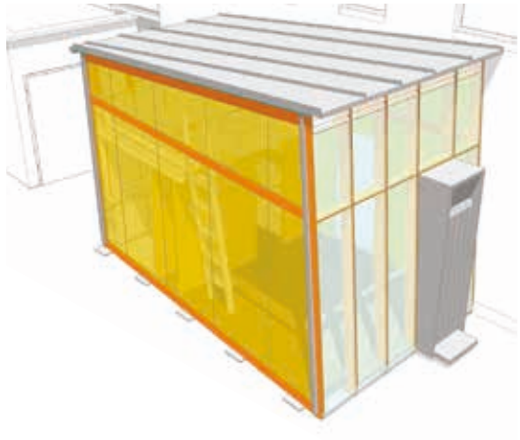
Despite being so small, the space has been well used and the facade is interesting; we liked the fact that it has a street presence

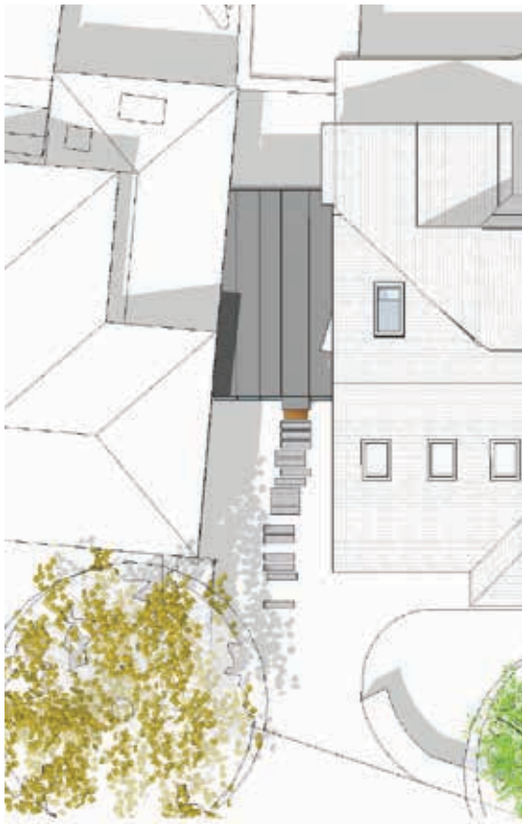
Julia Park

Right Kit Studio is constructed from a kit of SterlingOSB structural elements.









Left The double-height space is directly accessible from the street.
Above The lightweight addition occupies an infill space between semi-detached 1930s houses.
Bottom Kit Studio can be configured to occupy various under-used spaces.

Joint runner-up Back Garden City

Barefoot Architects

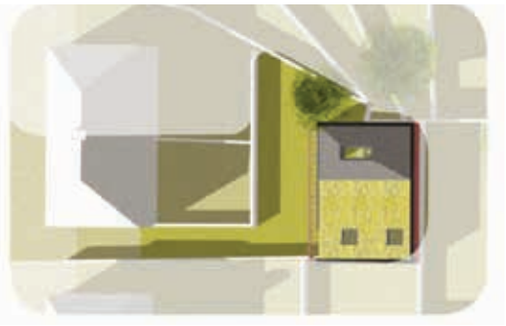
As with the other joint runner-up, this proposal from Barefoot Architects focuses on the under-utilised space in suburban back-gardens – this time specifically in a low-density suburb of Bristol that was built to Garden City principles.

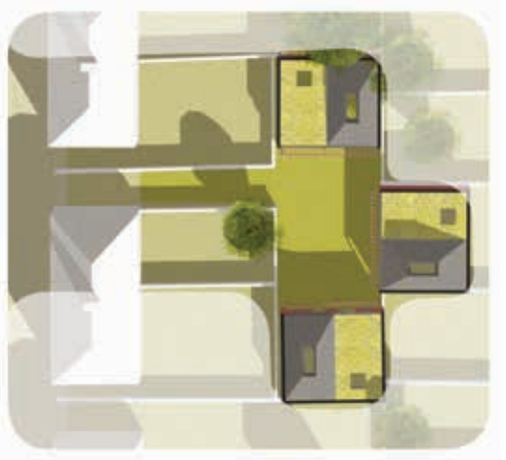
Back Garden City proposes to take advantage of the generous plots given to these post-war houses to create clusters of new single storey homes. Built in the back gardens, these homes would allow family members to live completely independently but still in extremely close proximity to the main house.

Each unit has been designed to be appropriate for the back garden sites, while being practical to build and great places to live, with a focus on the key issues of overlooking and scale. However, the most interesting part of the proposal is the high number of potential configurations that can be created from the separate units. An individual family could create an annex for an elderly parent or a separate dwelling for a young adult living at home; neighbours could develop units with a shared access; or groups of existing residents could collaborate to create clusters of dwellings. These clusters would develop their own micro community feel with a shared outdoor space.

Above A variety of unit configurations are possible in a typical post war suburb.
Right Internally the single storey dwellings are simply arranged.

Right Potential arrangements (from top to bottom): An individual annexe in a rear garden, a starter home built across two gardens and a cohousing cluster.
Bottom A SterlingOSB roof lantern gives the dwelling generous height, volume, air and light.





We were very taken with the concept of the backland grannies but wanted it to go further and feel like a real community

Julia Park

Joint runner-up The Possibilities are Endless

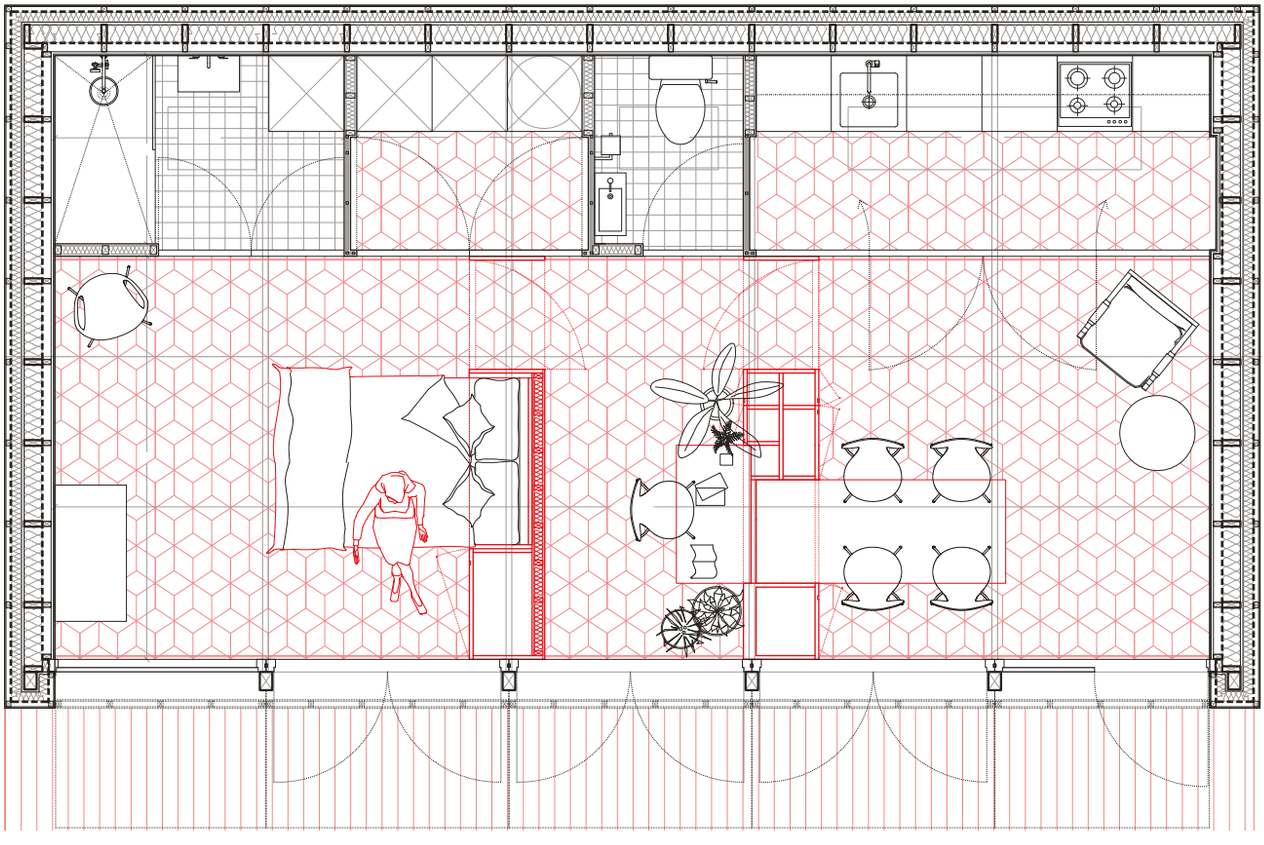
Sibylle Metge-Toppin and Claire Chabrol

To increase density in cities and tackle the problem of multi-generational living, Sibylle Metge-Toppin and Claire Chabrol focused on under-used suburban back gardens. The ambitious scheme claims to be an independent module that is a space for everyone, for everywhere and for every budget. As the title states, the possibilities are endless.

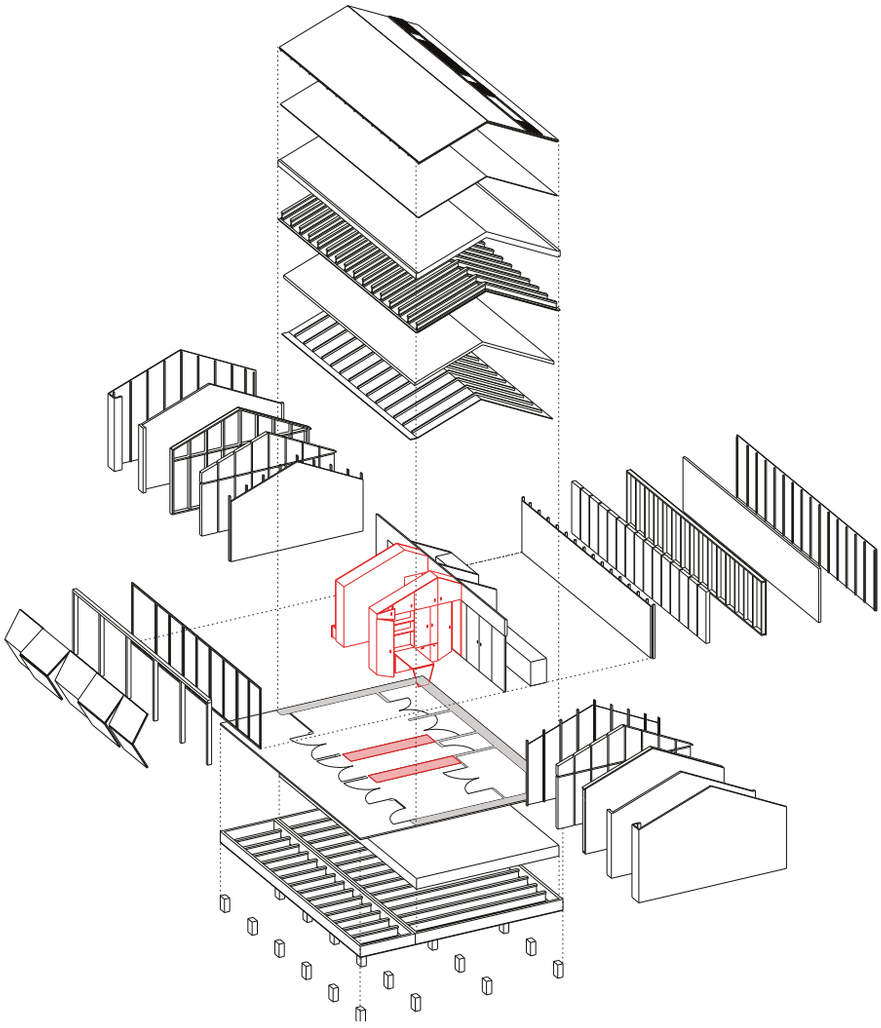
The extremely well thought out proposal uses a simple rectangular form to create a framework that can be easily adapted for various uses as the owner requires. Inside, the block is cleverly arranged with a shower-room, toilet and kitchen aligned along the far wall, allowing a large flexible space to be created along the entire front of the block.

This space can be easily divided through the use of two mobile partition walls that are complete with integrated furniture. Depending on the position of these walls the independent pavilion can be a temporary guest house or a residence for a student, young professional or elderly couple. Of course the partitions can also be placed at either end of the space to create an arrangement that the proposal terms 'party-time'.

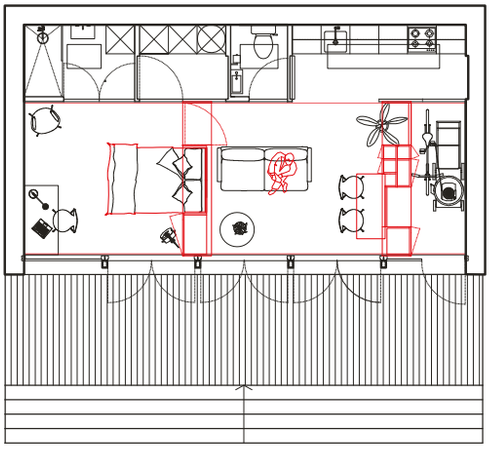
> The provision of additional, overspill space with independent access and simple construction methods meant we all wanted one!
>
> Toby Carr

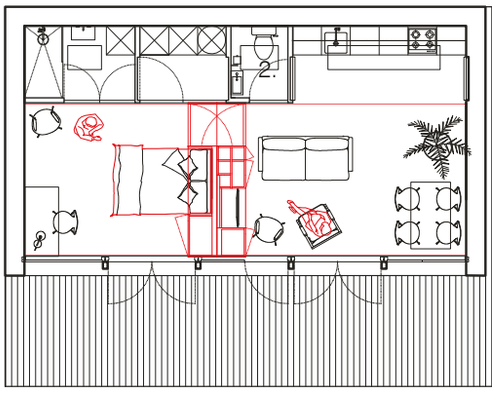


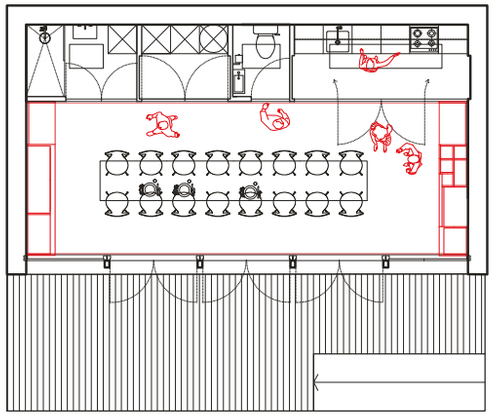
Left Two mobile partition walls (marked in red) divide the pavilion's main space.



Above The flexible space being inhabited by a young couple.
Right Axonometric projection showing how the pavilion is constructed.
Below The pavilion shown (left to right) in its student, young professional and 'party-time' configurations.







Highly commended Devoid Sensation

S+ Architecture

One of the best presented entries, S+ Architecture's Devoid Sensation House, is a modular pavilion. Following a theme demonstrated by many of the submissions, this is a flexible space that can not only be used for many different purposes as a family grows and contracts, but can also be erected in different locations.

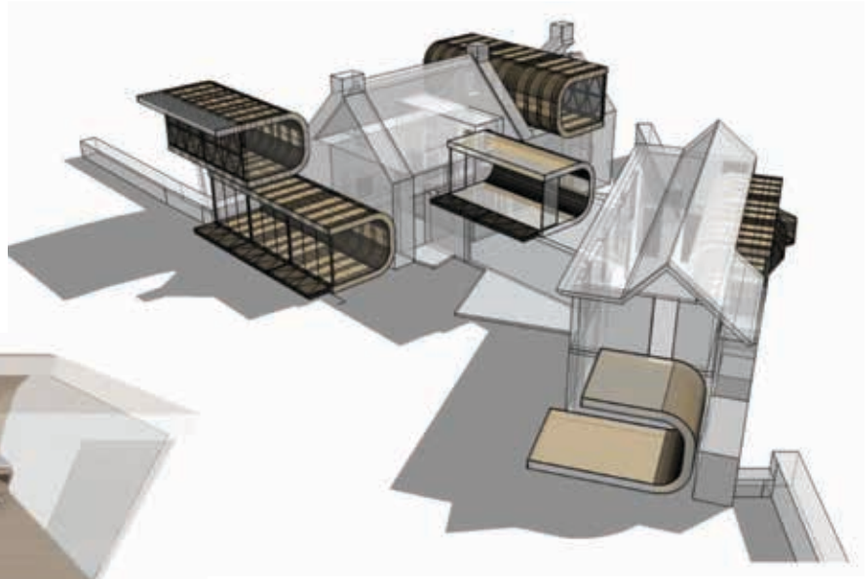
The additions are constructed from a kit of parts CNC'd from SterlingOSB, which could be mass manufactured. These structural OSB elements are assembled to create elegant C-shaped modules that are enclosed by glazing. Combining them can create pavilions of different lengths depending on the required use – in its smallest guise two units are connected to form a 22m² addition.

Internally, moveable built-in furniture allows the space to be easily transformed into many arrangements according to the unit's required function.

Above Multiple configurations of the pavilions standing alongside an existing building.
Right Plan showing three modular units combined .
Below right Potential placements and arrangements of the Devoid Sensation pavilion.
Below Internal arrangement showing the furniture unpacked.

The strong form is a playful response to the brief, dynamic in both character and user interaction

Daniel Kerr



Judges' comments

The competition raised questions about the social implications of multi-generational housing, balancing semi-independent living with the support of a family or community. How can we address the stigma of moving back in with your parents or living at the bottom of your grown-up children's garden? Semi-autonomous solutions with flexible space meet both temporary needs and longer term challenges.

Toby Carr, associate, Sarah Wigglesworth Architects

Multi-general living can strengthen family bonds, reduce isolation and potentially cut care costs. Granny won't last forever, so it's important to build in the flexibility to use the space in other ways and there are plenty of possibilities – a teenage child, lodger, live-close-to friend, home office etc.
The only real downside is that it could make larger scale redevelopment even more difficult. Suburban densities need to be substantially increased and many semis are now nearing the end of their useful lives. If people have invested in granny pads they will be less likely to sell up from choice, and if authorities have to resort to compulsory purchase orders it means more upset people and more compensation to pay out.

Julia Park, head of housing research, Levitt Bernstein

The most interesting entrants looked to wider issues – adding a variety of unit types to a repetitive suburban landscape while addressing specific lifestyles. These entries – an independent starter pad annex for a 'university returner' through the lightweight infill of a 1930s semi-detached streetscape, a 'Back Garden City' that offered the possibility of a community of starter homes, elderly annexes, and (most promising) co-housing clusters at the heart of a typical suburban perimeter block of back-to-back gardens – all triggered an interesting discussion about the pros and cons of the low key, almost covert, revitalisation and densification of the fringes of our towns and cities.

Stephen Proctor, founding director, Proctor and Matthews

So often it is the house that we currently live in that has to be adapted for changing circumstances and accommodating the evolving family unit, whether this is due to financial constraints, lack of alternatives or just wanting to create a home with our mark on it. This competition has given an insight into the vast array of possibilities of off-site modular construction and brings to the fore the need for inventive ideas for our existing housing stock to meet the demands of modern and future living.

Daniel Kerr, director and co-founder, Mawson Kerr

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Santi Giovanni e Paolo, Venice, 1430s

The church of Santi Giovanni e Paolo (known locally as San Zanipolo) is a splendid manifestation of Gothic church architecture in Venice. This differs from Gothic residential architecture, as it is much closer to mainland Italian examples, while for their palazzi the Venetians developed a highly distinctive style that incorporated Byzantine and Islamic models. Completed in the 1430s, San Zanipolo is one of the largest churches in the city, as well as a relatively rare local example of the use of vaulting. Due to the unstable nature of the lagoon's subsoil, most buildings in Venice were design to 'float' on large timber platforms over the upper layer of soft clay. Vaults and domes were therefore rare, as they required a more concentrated load distribution, and their use was confined to religious architecture. As shown in this photograph, vaults were made more secure by timber tie-beams stretched across the nave and aisles, which were often richly decorated as if to conceal their functional purpose. Also due to the instability of the soil, the use of stone was limited to piers, doorways, window frames and decorative details. ●

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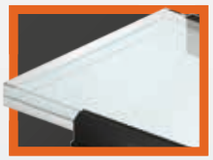

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