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This issue we consider, in various ways, what context means when designing a building. In the case of the new £140m Macallan distillery and visitor centre by Rogers Stirk Harbour (P20), it is the landscape of Speyside and the man-made interventions that help shape it. When it comes to the Nucleus archive centre for the British nuclear industry outside Wick in Caithness by Reiach and Hall (P14), it’s the same contextual stimulus – but very different surroundings. For Niall McLaughlin, his Sultan Nazrin Shah Centre at Worcester College Oxford (P26) is all about the tradition of the pavilion in the park – and also the need to respond to the challenge set by earlier architects, notably Richard MacCormac’s early 1980s Sainsbury building. Do we struggle to detect the context for Zaha Hadid Architects’ Morpheus resort in Macau, China (P32)? Not at all: it fits right into its cityscape of similarly sized towers and slabs, standing out by virtue of taking inspiration from Chinese jade carving. Or that’s the story, anyway. Take a look, be as sceptical as you like: the point is that architecture craves context, will always find a way to respond to it, and will create it if it does not exist. •

Below Macallan distillery and visitor centre, p20.
Craft works

Tertiary education dominates this year, but all these diverse projects share a return to solidity and craft

Words: Hugh Pearman

A City of London media headquarters – Bloomberg, by Foster + Partners. A Cornish art gallery, the Tate St Ives, by Jamie Fobert Architects with Evans & Shalev. A north-west Cambridge community centre and nursery, Storey’s Field, by MUMA. An Oxford college lecture theatre, the Sultan Nazrin Shah Centre, by Niall McLaughlin Architects. Student housing at Roehampton by Henley Halebrown. New buildings at Bushey Cemetery in Hertfordshire, by Waugh Thistleton Architects. These are the six contenders for this year’s Stirling Prize, the winner to be announced on Wednesday October 10. Let nobody say that all new architecture is the same, as these examples represent a real diversity of approach.

Linking them all however is a return to solidity and craft, along with the fact that these are all ground-hugging buildings. The tallest, Foster’s Bloomberg, though very large, rises to a mere 10 storeys, lower than the mid 1950s block it replaced, and is clad in a load-bearing skin of Derbyshire sand-
All new architecture is not the same: here is a real diversity of approach

stone and bronze. In contrast the multi-purpose hall/theatre of MUMA’s Storey’s Field punches through the original masterplan height limit of this new extension to Cambridge – but only as high as some of the chapels and dining halls of the university city, while its largely single-storey nursery school alongside plays the part of the cloister. It is in beautifully detailed brick and timber.

Over in Oxford, Niall McLaughlin’s classically tinged Sultan Nazrin Shah Centre at Worcester College – named after its principal donor, an alumnus who is deputy king of Malaysia – is a stone and oak pavilion in the verdant grounds of the college, notable for its nearby Sainsbury building, an early work by the late Richard MacCormac.

If this all seems a bit elitist, then Roehampton University’s Chadwick Hall by Henley Halebrown provides balance. This nicely judged arrangement of student residences in dark brick and concrete addresses its landscape setting while taking cues from a listed Georgian neighbour. Although the budget was modest, this is a high-class example of a building type that in the wrong hands – all too often, unfortunately – can turn out to be ghastly.

It would have been a real surprise if the new Tate St Ives by Jamie Fobert Architects, working with its original architect Evans & Shalev, hadn’t made it to the Stirling short-
Apart from much else, the project shows what good architects can achieve on the most challenging of sites.

Waugh Thistleton’s highly sensitive work at Bushey Cemetery for the Jewish community uses the language of unadorned rammed earth, neatly detailed timber and rusted steel to provide an evocative and peaceful complex of six modest buildings that respond to the processional nature of their tradition and are demonstrably of the earth itself.

In other years there has been an emphasis on housing or schools or cultural buildings but this year it’s tertiary education. As RIBA President and chair of judging Ben Derbyshire comments, it is all about investing in quality architecture. ‘It doesn’t go unnoticed that half of the buildings were commissioned by UK universities,’ he notes, ‘suggesting that parts of the higher education sector value the importance of improving the quality of their buildings and estates.’ Not just for college-learning either, but for the local community as Storey’s Field demonstrates.

As always, one notices certain buildings that didn’t make the Stirling shortlist – we’re denied, for instance, a Foster-Rogers City of London head-to-head because Rogers’ Leadenhall Building, aka the Cheesegrater, is not shortlisted as Foster’s Bloomberg HQ is. Only guessing, but that could be down to the difference between spec offices and a bespoke HQ – in the latter case, the architect just gets to do more inside, especially in this case on the very generous budget that Foster had to play with.

Oxbridge has the coffers and the long-term outlook to come up with the architectural goods time after time and so it proves again, though there are certainly bigger-money projects to be found, prime among them Bloomberg. One can sometimes be surprised by the Stirling shortlist but the fact that five out of the six buildings here have previously been published in the RIBA Journal (and we have no connection with or prior knowledge of the judging process) suggests that there’s a degree of unanimity this year as to what represents excellence in architecture. These are, as Derbyshire says, ‘Six buildings of real integrity and purpose.’ Which will win?
Hailing from Ecuador, educated as an architect in Monterrey, Mexico, and undertaking extended internships in Chicago and Finland, 30-year-old photographer Lorena Darquea is truly a woman of the world. But in the cyclical nature of things, it was a return to her homeland, after an inspiring photography module at Helsinki University, that proved to be her making. With a dearth of professional architectural photographers there, Darquea found that her shots of Alvar Aalto’s work served as the perfect calling card for Quito’s small quorum of up-and-coming practices.

In Mexico as in Ecuador, they all seem to become friends. To photograph this private house by Mexican firm AM30 Taller de Arquitectura & Stephane Arriola, Guadalajara-based Darquea went to hang out with them for the weekend, capturing the building in its rural isolation over the course of her stay. She chose the building for this page, she says, ‘because of its beautiful forest situation and for how well it has been made. Here in Mexico there’s still an incredibly strong artisanal culture and craftsmen turn materials well in their hands.’ Darquea was particularly struck by the masonry; rough-hewn local stone skilfully tessellated together to form its striking bonded walls.

Asked if she missed the South American sun during her Nordic studies, she reminds me that Quito, at nearly 3000m altitude, is a curious equatorial capital: ‘It’s actually quite cloudy and cool – a bit like Helsinki; I find the Mexican climate far more shocking.’ Perhaps that is why she waited for the harsh sun to sink behind the hillside before she rose for air, to catch the shadow-less house on the cusp of twilight, its scorched stones waiting for the balm of the evening. ‘I learned to love Aalto’s love of the subtle qualities of light,’ she tells me; and here, 10,000km from Finland, she’s sticking to her story. •
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Tucked away near the decommissioning Dounreay power station is Reiach and Hall’s Nucleus archive centre. The simple facade belies an unusual combination of demands

Words: Hugh Pearman  Photographs: Broad Daylight

When Thomas Telford, engineer, architect and planner of genius, laid out the grid-pattern Pulteneytown in 1808 overlooking the harbour he had also designed at Wick in Caithness, the dominant industry was herring fishing. Later it was slate and other stone, still produced today. Naturally there is whisky, the Pulteney distillery being the northernmost on the mainland. But the largest employer in the area is the nuclear power industry in the shape of the historically accident-prone nearby Dounreay nuclear power and research station. Employment is gradually tailing off as it is very slowly dismantled but there is a legacy apart from the slightly radioactive beach there. This is the Nucleus archive centre, designed by Reiach and Hall.

This is up on the edge of Wick Airport a mile or so north of the town. It is destined to hold the complete archive of the UK’s nuclear
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industry which at present is scattered in 17 different places, usually the power stations and research establishments. This is important not just for the sake of historical interest but as a practical record of what was done and where, which will be vital to know for long into the future. The information is especially sensitive, requiring total security as well as conservation-grade storage conditions.

Take all that and then add open public access, because the building also contains the non-sensitive county archives of Caithness along with meeting and search rooms, and you have a curious hybrid of a building type.

At first glance, as you drive up, it could almost be (and this is deliberate) another blank regional airport terminal or shed, set behind a security fence. Then the approach road curls round and brings you in at the razor-sharp apex of what turns out to be a triangular building. The vertical strakes of the aluminium cladding become free-standing, enclosing and acting as a windbreak to an entrance courtyard complete with shallow
Three courtyards have triangular pools inspired by the ‘lochans’ of the peaty Caithness Flow Country

A long corridor leads past offices towards the archives.

The mood changes as you enter the vaults of the nuclear archive.

pond. Behind this is the glass-walled entrance to Nucleus, the reception boasting a curious display of ancient manuscripts and modern – though recently historic – examples of nuclear nick-nacks: fuel rod casings, models of ships used to transport the material.

Archives are basically boring to look at, if fascinating to use and these – in parts of the building made of precast concrete sections – are no exception. Once you’ve cleared security and been accompanied through the building’s numerous series of checkpoints, you finally arrive in a place filled with rolling shelving, some of which has boxes of files on it. Files are files, they don’t look like anything much and there aren’t very many of them there yet: it will take years to sift through all the scattered archives and make the final selection for permanent storage.

Reiach and Hall’s Neil Gillespie, faced with an initial brief for just a windowless box, took this as a challenge. The archive vaults – one long and subdivided, one short, both top-notch for energy-conscious climate control – spring from the base of the building, protected by a return wing of back-of-house activities. He added the public areas and Caithness archive search in the visually delicate steel-framed nosecone of the building – what he calls the ‘crumple zone’ – and made pleasant single-storey offices – mostly for document processing – down one side.

To generate the plan, he took the angle between the ancient field boundaries here and due north. He then made two courtyards with triangular pools like the entrance court – inspired by the ‘lochans’ of the peaty Caithness Flow Country, and floored in reddish Caithness stone – to bring light into the centre of the plan. That light is mediated by an integrated artwork of translucent coloured panels by artist Steven Aalders, set inside the courtyard glazing.

And that’s about it, really. An open/closed, dark/light, public/private, distinctly odd and historically necessary building at the far end of the mainland. Its arrowhead form recalls weapons ancient and modern. It’s a kind of useful folly.
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Licensed to thrill
It’s a curious building that to ordinary members of the public, who have never heard of Richard Rogers or RSHP, combines Teletubby La-la-land architecture on the outside with the menacing darkness and subterranean drama of Christopher Nolan’s Bat Cave on the inside. The two images hardly go together. Add a layer of popular culture to perception of the Macallan brand – James Bond’s penchant for the drink and that scene from Skyfall where a tot of the fine smooth scotch is used as a target on top of actress Bérénice Marlohe’s head – and you end up with a staggering blend of references, as well as architecturally considerably confused.

But roll up the tartan and put away the tweed, because Rogers Stirk Harbour + Partners’ new £140 million distillery and visitor centre for premium whisky maker Macallan is a beguiling building designed to impress and overwhelm. Is it a giant rectangular meadow-topped magic carpet rippling over the crest of the hillside like a stingray along the ocean floor? Or a Soviet bunker semi-attempting to hide from view, rolling up over

La-la-land on the outside and Bat Cave within, RHSP’s new distillery and visitor centre for Macallan leaves the nose empty but the eyes popping

Words: Isabelle Priest Photographs: Joas Souza

Left: The glulam roof has 1,800 single beams, 2,500 different elements and 380,000 components, very few the same.

Below: A narrowing avenue connects the new building with the original Easter Elchies House. The entrance is a cave-like hole in the hillside at the end.
The distillery was seen as an opportunity to enhance the magnetism of the brand

the hill from the banks of the gushing, boulder river Spey which gives this whisky area north of the Cairngorms one of its principal ingredients.

Whatever the simile – and these are just from asking whoever happened to be around – grabbing public attention is the aim of this building. And, with its thrilling architectural mix of slow reveal and intensity, it is difficult not to come away fascinated by it as a building, by Macallan, and sans bottle of 12-year-old £60 first fill sherry-cask whisky in hand as a souvenir.

‘Over the past 20 years as the scotch market has become premiumised, Macallan has been constrained by the amount of liquid it was able to produce,’ explains Macallan’s engineering manager George McKenzie. ‘For the last five years we have not been able to increase volume of sales … but with some fairly clever sales and marketing, we have ridden the crest to take Macallan out with the luxury brands and beyond.’

The intentions for the new building, therefore, were twofold. First, to increase production to meet a seemingly insatiable global demand (90% of Macallan is exported), and second, to use the resulting distillery as an opportunity to enhance the magnetism and lustre of the brand.

‘We are now marketing ourselves alongside the likes of Bentley,’ continues McKenzie. ‘That allows us to command some really high prices, so the board wanted a home to reflect that status – a place for visitors, aficionados, entertaining overseas distributors and high net worth individuals.’

After investigating the option of building a basic distillery with a high-quality visitor centre attached (which would have cost £55 million), Macallan put the project out to competition, inviting 15 architects to submit expressions of interest. The brief was relatively open: it had to produce 15 million litres of whisky per year with the possibility of expanding to 20-25 million litres, the drink had to retain its character, and it had to be a world-class building and visitor attraction.

Fourteen practices replied, and over a year, these were whittled down to five, and then to two – RSHP and Herzog & de Meuron. In this area of great landscape value, where Macallan has become accustomed to burying and hiding to appease influential local landowners, an underground building seemed most appropriate. In contrast to Macallan’s previous visitor centre, which was more of a shop and a tour, RSHP’s approach was to combine both elements – distillery and visitor centre – in one building, the former in full view of the latter as a celebration of the modern distilling process.

‘It was very difficult to put a self-standing building in the landscape,’ explains architect Graham Stirk, ‘so it became a landscape building.’

Dug down 10m into a slope on the site of a former barley field, the 220m-long undulating row of five ‘mini Ben Rinneses’ burst through the slope on this side of the valley covered in wild flower meadow – parched at this moment. Numbers one to four are raised as external expressions of the circular distilling cells inside while five, slightly taller than the rest at 17m, signifies the entrance and visitor hub. Around this floating island shafts of earth have been excavated to connect the building to features in the landscape – the 17th century Easter Elchies House, where Macallan’s story began, two new concrete chimneys (one for the CO₂ by-product, the other for steam) cut adrift from the main body of the building at the end of polished concrete retaining walls, and the service road behind, sunk into the hill at the point of the building to make it disappear. Driving round the bend, following the rhythm of the roof between the pine trees to the entrance, the complexity of the building becomes apparent through the glazed curtain wall, enormous gable end

Above New ‘humps’ can be added to the building to enable Macallan to increase its whisky production by 5 million litres.
warehouses rising like majestic terracotta soldiers behind.

Through the deep, cave-like threshold you are transported from light, air and grassy nature into a below-ground experience of darkness, polished surfaces, moon doors and atmospheric coloured lighting thrown across walls, building guts, stills and pipes. Ahead the reception is recessed into a giant freestanding open top cylinder containing a core for entertainment including a tasting bar, two VIP drinking lounges and a cellar, which sits like an enormous barrel below the exposed double parabolic glulam grid roof. To the left, a wall of whisky introduces Macallan’s 194-year history in bottles, alongside the ‘jewel box’ – a interactive exhibition space. To the right is a boutique arranged in glass cabinets like a museum and a view through a glazed separation wall into the mechanical underbelly of the distillery behind.

The typical tour begins upstairs. Under the vault of the roof, within the distillery itself, the full workings are on display, with grille floors showing the plethora of equipment underneath. You are hit by the intense heat and loud whirring of the machinery. Sparkling stainless steel and copper stills are arranged as a series of circular modules, one under each dome, of which three are in use, each producing 5m litres of spirit a year. The technology is Victorian in its appearance and its arrangement classical and temple-like in form. This module format means the building can, as per the brief, cleverly increase production in future by building more humps on, and indeed Macallan is already anticipating moving into the spare fourth pod in 2023.

Yet as McKenzie explains, ‘No engineer would dream of building a distillery in a circular fashion; normally the process would be separated into parts from one room to another for risk of explosion.’ The process is the same as before, using Macallan’s ‘curiously small stills’ – just in a configuration that enhances the theatricality of the experience.

And throughout, this sensationalising the image of the process through its architecture has been prioritised over displaying the raw genuine engineering of a distillery, because this is largely where the building ends. In the colour-lit cellar, for example,
Buildings
Distillery

Section A-A

First floor plan

Ground floor plan

IN NUMBERS

£140m
building cost

220m
length

1,200m²
roof

£400,000
cost of fire testing a
separation panel at BRE

1 Entrance avenue connecting to Easter Elchies House
2 Reception
3 Wall of Whisky and the Jewel Box
4 Shop
5 VIP buyers room
6 Restaurant
7 Cellar
8 Cellar viewing box
9 Underbelly of stills pod (not accessible to the public)
10 Service yard
11 Boiler room and chimney
12 Exhibition area
13 Tasting bar
14 Lingerie bar
15 Shutter-ceiling VIP drinking lounges
16 Whisky vault with moon opening into cellar below
17 Distillery room with circular pod stills arrangement
18 Distillery operating room
19 Opening in floor for stills replacement

The RIBA Journal August 2018
casks line the curved walls while a highly polished floor and ceiling give the illusion of an infinitely vertical space. It’s a marvel for entertaining high-paying guests with elaborate dinners, but far from the tightly packed, racked, creaky looming warehouses storing the bulk of Macallan’s stock behind. And trapped behind glass, at no point on the tour do you get to sniff the amazing aroma of scotch maturing in its barrel. That moment you’ve been waiting for never happens, leaving the experience a bit lacking compared with, say, visiting a winemaker’s cellar in Bordeaux, or a port distillery in Vila Nova de Gaia. Likewise, the filling station, blending and bottling all take place elsewhere so the visit is not comprehensive either.

Don’t get me wrong, Macallan’s new visitor centre and distillery is as crisply cut as a Savile Row suit – finished with an elegance that disguises the effort of its making. But what this means is some of the most interesting parts of the scheme – like the those warehouses which are being built at a rate of 6,000m² per year, the boiler room which took three people three years to design, and service yard with its 9m concrete retaining wall, crossing pipes and stairs – are the ones you don’t actually get to see. These parts, purely engineered, reveal the elsewhere indulgent showmanship of the architecture, although note that RSHP had to overcome hard challenges to achieve it, particularly around energy use and fire (the building is more similar to a petrochemical plant than a winery).

The drama and glamour nevertheless earn their own praise. Here we come back to Bond and the badass architecture of Batman, as well as Macallan’s public face. RSHP’s building is the biggest ‘clever marketing’ device I’ve ever seen. With it, Macallan has left the other 41 Speyside distilleries behind and propelled itself even further into the hyper luxury world of Virgin Galactica spaceports, McLaren engineering centres and Rolex visitor hubs. Drunk on luxury, the building is part of a wider, often British architecture, that has become less pop and more suave, smooth and rich, like the maturing whisky here and the heads of practices that lead this type of work.

Taking in the curves and contours of the landscape, this architecture hijacks land art – those hills, excavations – for the purposes of commercialisation to create buildings designed to be seen from the cockpit of an aeroplane or the back seat of a helicopter – as no doubt aspirational visitors would prefer to arrive. Floating in this elite super realm above the ubiquity of brick, these architects are transforming an ecological movement to bring luxe to landscape that crashes into bling. Buildings like this don’t come around often and their critique must work on a different level too. I don’t feel like I’ve been to a whisky distillery. It was a distinctly unScottish experience. But the building is dramatic, disorienting, entertaining and leaves a lingering sensation of excitement and awe on the palate. From that point of view, and Macallan’s, the building cannot be considered anything but a resounding success.

At no point do you get the amazing aroma of scotch maturing in the barrel
In praise of shadows

Niall McLaughlin’s contribution to Worcester College Oxford proves worthy of its privileged milieu

Words: Eleanor Young Photographs: Nick Kane
Opened door leaves fold into slim, deep pillars, making the auditorium a remarkable flow of spaces.
The curving crown of the Sultan Nazrin Shah Centre is a theatrical gesture in the luscious grounds of Oxford’s Worcester College. Here the spiral-mown grass is untouched by the hot summer drought and the Sultan Nazrin Shah Centre exudes a similar feeling. A lecture theatre, seminar rooms, dance studio and break-out space in Clipsham limestone, with high ceilings, curvaceously simple oak furniture, light and dark; the pressures under which other projects operate seem happily distant. Over the last 70 years particularly, the privileged milieu of Oxbridge has allowed many architects to build compelling architecture that will outlast much contemporary output. They are also rare examples, in our time, of buildings driven by lasting values, in this case of a college which has stewardship of them for the next century or more.

The college’s neoclassical main entrance opens up into a set piece of communal spaces primarily designed by George Clarke with Nicholas Hawksmoor, the dining hall on one side, the chapel on the other and the traditional form of the quad dropping away on its far side to the marshy edge of Oxford. The water is now contained in a curving lake and the edge of the city pushed out beyond the train station. Architect Niall McLaughlin saw the chance to echo this composition on

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**IN NUMBERS**

- £8,897m construction cost
- £9,372/m² construction cost (ex demolition)
- 846m² gross internal floor area

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**Above** Slender timber columns reach up beyond the dappled light of the pergola. Grids and vanishing points all seem to take you somewhere beyond the cool interior.

**Right** Orthogonal plan meets curving cut-out. Light from above and the sides illuminates indirectly.
the more fractured north side of the college. Here grand architectural gestures gave way to a cricket field and small-scale student rooms, hiding in a canopy of trees. There was, however, an entrance gate, opening directly into the delicate brick terraces of the Oxford suburb of Jericho – topped whimsically by bedrooms designed by MacCormac Jamieson Prichard, like the Sainsbury building alongside. Could these be two sides of a three-sided ‘quad’ onto the cricket pitch and the new centre bringing order by making a third side? Taking down a few trees and drawing the lake into angled pools spanned by a bridge started this process, but it is the enclosure of the new Sultan Nazrin Shah Centre that brings it all into focus.

The centre also provides a powerful edge to the cricket ground, facing off the cricket pavilion, even as it draws the college’s serpentine lake softly into itself. There is something gently gawky about this large scale building in this setting, like an awkward teenager. It is taller than it might be, one storey elongated by the need to contain its own area of flood water underneath. But more significantly the long eyes of the lecture theatre

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**Site plan**

1. Sultan Nazrin Shah Centre
2. Sainsbury building
3. Worcester College’s new quad
4. Worcester College’s historic quad
5. Lake

---

**Left** Read face on, from the cricket pitch, the openness of the facade onto the seminar rooms and loggia is very apparent.

**Below** Seen obliquely it looks more solid, and the stepping profile chimes with that of the student rooms of MacCormac Jamieson Prichard’s Sainsbury Centre.
clerestory windows look out rather dolefully. Where many would have designed a black box with a solid wall, this building has deep limestone reveals onto tall thin windows. McLaughlin plays close attention to windows; they are often unusually bold. ‘I am extremely aware of directions of regard,’ he says. But as in many of his buildings the top-lights are not about the ‘regard’ of any person, they are unreachable. Instead they are about setting up an ethereal and beautiful light.

One could say that inside this whole building is about light. But it would be more accurate to say it is about shade, or the interplay of light and shade. You enter into subdued light, a forest path of timber columns and layers of canopy formed by the cross-cutting layers of timber grids in the ceiling. Seminar rooms and the dance studio sit as stone-clad pavilions in their own right. A deep pergola over 10 steps into the sports field awaits a leggy cloak of wisteria so it can join the circulation of shadiness and more softly frame the green of the view. But it is the auditorium you are drawn to, like a clearing with light streaming in. The deep reveals of the clerestory become columns into which the 30 doors fold, making the whole centre remarkable as it drops down to the stage with the pale oak benches and the radiating floor tiles. The ribs of the GRC ceiling fan out and up towards the clerestory – McLaughlin thinks of them as spreading branches. From the side-lit stage, as if standing by a canopy-supporting trunk, you have a perfect view as the controls smoothly shut the blinds and doors, closing the lecture theatre down into a more typical – and far more ordinary – black box for AV mode.

Left Oak benches are subtly curved for comfort. Writing flaps fold down from the back of each bench with the elegance of tiny bureaux.

Right The GRC ceiling fans out from above the stage to clerestory windows over the doors.

1 Green room
2 Stage
3 Auditorium
4 Seminar room
5 Loggia
6 E-hub
7 Plant
8 Kitchen
9 Studio
10 Cricket field
11 Lake
12 Sainsbury building
It is the theatre you are drawn to, like a forest clearing with the light streaming in.

The loose conglomeration of spaces in the centre has a rare openness and flow. Full-height glass at the ends of the closest things to corridors draw in significant trees, and the informal work space, or e-hub, is enveloped by more trees and planting alongside its cool slice of calm.

If this seems too whimsical and theatrical a reading, the centre can also be seen as a geometric and rational design. As McLaughlin sketches out the plan a square emerges, the lecture theatre knocking a corner out of this pure geometry with its clashing form, making a flipped Aalto diagram. The rake of the lecture theatre is sunk into the space under the building that primarily functions as a void for holding flood waters. The smaller spaces mark out the edges of the building in neat rectangles; even the dance studio terminates with the strong geometry of a proscenium arch as it pushes out over the water.

Mediating between the geometry of the plan and the flow of the experience is the high ceiling – a plane often sidelined, but regularly celebrated in McLaughlin’s work. Here, at 3.67m high, it is imbued with extra depth by a double-layered oak grid, reminiscent of the layers of traditional Japanese ceilings. There are no harsh shadows here but an accumulation of darker layers – occasionally sharply reversed, for example in the toilets where a rooflight above the basin spills filtered light onto sparkling hands.

This building abounds with references – Schinkel, Louisiana, Aalto. But here, notwithstanding a design and build contract, it stands for something more; a chance to build for centuries to come.
Outer strength

A giant exoskeleton takes Zaha Hadid Architects’ goal of form and structure in a single envelope another step further in Macau

Words: Pamela Buxton

But it was important that the 42-storey Morpheus had its own architectural identity, says project director Viviana Muscettola, and the assertive exoskeleton certainly provides that. ‘The client’s goal was to create something unique and specific to Macau,’ she says, adding that ZHA built its own parametric 3D tools and scripts to realise the exoskeleton structural axis and exo-cladding surfaces. Engineer BuroHappold also made parametric tools to analyse and design the structure.

Conceptually, the architects envisaged the 780-bed hotel as a 160m-high extrusion of the 52m by 99m site footprint, rather than splitting it into more customary tower and podium components (although Morpheus connects to the adjacent City of Dreams podium). Designed as two linked towers, each with their own cores and vertical circulation, this building nonetheless appears as one fluid element that has been ‘carved’ to form three irregular voids through the building linking the north and south facades, which are mirror images of each other. Inspired by China’s tradition of jade carving, these ‘urban windows’ maximise daylight and views out either way from the centre of the tower while creating a distinctive overall design both inside and out.

The lower floors contain a spectacular 40m high atrium. Both of the bridges across the central voids contain restaurants, bars and guest lounge areas with the swooping external structure visible all around. On the top is a swimming pool, created where the exoskeleton folds down over the top of the building to form a sheltered sunken terrace.

The decision to employ an exoskeleton for the building envelope to realise both structural integrity and sculptural form was taken...
very early on, according to BuroHappold Engineering associate director Tim Kelly.

‘An exoskeleton was absolutely the right and efficient structural response to create that form,’ he says. ‘It’s doing a structural job. Clearly it takes the vertical load from gravity but because of its triangulation, it also resists lateral loads such as earthquakes and typhoon winds.’

For ZHA, its use was a continuation of the practice’s ongoing research into the integration of form and structure into one envelope. Along with Morpheus’s reinforced concrete cores, this aluminium-clad exoskeleton forms a dual stability system. It is connected to the internal floor and beam structure via stub connections penetrating the curtain wall. The exoskeleton stands 1.3m proud of a 43,388m² glass facade, freeing up the interior from the constraints of columns and supporting walls and providing additional screening from the sun. In addition, where visible, the external lattice lends an expressive quality to the interior spaces.

For the exoskeleton concept, the design team created a bespoke Grasshopper script to take the geometric model into structural analysis, testing thousands of iterations of its geometry against performance requirements and constraints including potential movement and settlement to determine the optimum member design and arrangement.

This was an immense task; the exoskeleton has 1200 exo nodes and 1300 bolted steel connections along the members. The exoskeleton can be divided into three main area types: the zones of rectangles on the flat sides of the building; the single curved areas at the four corners, and the double-curved free-form area of triangular openings and glazing around the central voids – the most complex and making up 21% of the grid. While the diagrid is denser and more intricate towards

**Section detail**

1. Main restaurant
2. Private dining area
3. Private club
4. WCs
5. Kitchen
6. Main atrium
7. Restaurant, level 21
8. Upper atrium
9. External pool deck
10. Guest rooms
11. Exhibition space
the base of the tower, it is more dispersed with lighter members at the top.

The structure followed a number of core rules – all nodes were horizontally aligned to the floor edge beam; all stubs were horizontal and perpendicular to the glazing reference surface; and all members were planar and single-curved. Connections were bolted unless in the freeform area, when they were welded.

Due to the extreme complexity, BuroHappold rather than the steel fabricators designed exoskeleton steel connections, described by the design team as ‘the most analytically and geometrically challenging’ large-scale steel-work connections ever built. These, and their associated plates, had to be contained within the cladding zone defined by ZHA. This feat was achieved using Rhinoceros and Grasshopper tools with various analysis software.

All steel was produced locally by a ship building company and fireproofed with epoxy intumescent paint. Once installed, the exoskeleton was clad in 57,000m² of off-white aluminium panels, designed to absorb the difference between the axis of the structural members and the glazing. While the front and back of the cladding is parallel to the glazing, the other two sides follow the axis of the structure. Lighting is integrated.

The facade consists of 24,577 panels, typically of Saint Gobain Coolite ST136 solar control, high performance glass, but in a variety of types including flat, single and double curved, and single and double glazed, according to their positioning. Aluminium frames were used for the flat and facettted areas with steel in the freeform areas to give more slender profiles and cleaner connections. In this particularly complex area, the triangular facets were isolated from the exoskeleton to avoid imposing stress on the glazing and formed into large composite panels each weighing up to 20 tonnes.

Morpheus has been a tour-de-force of co-ordination, not only through the parametric design phase but through construction, which involved four different facade contractors and complex co-ordination of sequencing and temporary structures.

Muscettola hopes that Morpheus demonstrates new possibilities for architectural form: ‘We hope it’ll make the construction industry aware of possibilities that 10, even five years ago, weren’t even thought of.’
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Julia Park

Head of housing research at Levitt Bernstein and an author of the 2009 HAPPI report on housing the older generation, Julia Park has co-authored a new state of the nation book, Age-Friendly Housing. In the intervening nine years, how far have we come?

Didn’t the HAPPI report set the bar for housing design? Or do we still have a lot to learn?

There have been four HAPPI reports but only the 2009 one focused on design; so in a way this book is the latest word on housing for the older generation in the UK. We’ve really moved on – when we wrote the first report all the exemplars we referenced were in Europe.

Yes; but what interests me most is that it’s finally more embedded with client developers. Housing for older people is a relatively new concept. Really, sheltered housing started in the 1970s with housing associations; the private sector joined in the 1980s. The later Extra Care Housing initiative raised quality a bit; but the HAPPI report was a real wake-up call to designers.

Interesting concept, terrible name. The bigger issue is whether people want to live in the same home all their lives, given a lifetime’s changing needs. An age-friendly home is less spatially didactic and appeals to all generations with open-plan living, more light etc. It shouldn’t be either/or. I can’t see baby boomers – wealthier, more discerning and more vocal – settling for second-rate.

That’s hard – there’s a huge range of aspirations depending on age – but 93% of older people still choose to live in their own homes. So when the time comes for assisted housing, I’d like to see plenty of options – which means choosing how and where we live and with whom. So I like Barnet’s New Ground 25-unit co-housing for older women by PTE Architects, where the residents played a big role in the design. There’s huge potential for self-organised groups to come together and build.

It’s difficult. The Planning Use Classes don’t help, with C2 ‘Institutional’ and C3 ‘Housing’ subjecting all to demands that don’t apply to older living. That’s mainly housing contributions but goes down to details like having to provide bike parking. More nuanced planning classification is needed. Financial incentives to encourage elderly to free up homes for families would help, but Help to Buy is getting the funds instead.

Integration not segregation! The needs of older people should be part of larger developments. Genuine inter-generational mixed tenure is important to older people who wish to stay connected with their families and wider neighbourhoods. Who wouldn’t?

Did housing for older people finally embed as a concept with architects?

So is housing for older people finally embedded as a concept with architects?

And what about lifetime homes?

You showcase a lot of age-friendly housing in the book. Any favourites?

How do you incentivise this?

Your big idea for age-friendly housing?

2: Intelligence
Insurers fill the fire regs gap

Construction sites are by nature vulnerable to fire, and repair costs can be astronomical. Do we need more from regulation?

Jan-Carlos Kucharek

Construction site fires, it seems, are alarmingly common. Just nine days before the terrible blaze that swept through the whole of Charles Rennie Mackintosh’s Glasgow School of Art site – only four years after the west wing was gutted in a previous one – the luxury Mandarin Oriental Hotel site in London’s fashionable Knightsbridge was severely damaged weeks away from the completion of ‘the most extensive restoration in its 115-year history.’ A Category A early modern masterpiece and £60 million Edwardian refurbishment, both up in smoke, with the only comfort to be drawn from either that no lives were lost in the fires.

But if alarm bells weren’t ringing then, they probably are now for those involved on the restorations, with the likely cost for restoring the Mackintosh reportedly rising to as much as £100 million and still no conclusions drawn from either fire as to how they started. The two events have put construction site fire safety, liability and premiums into sharp focus – for insurers and clients as well as contractors.

The Regulatory Reform (Fire Safety) Order 2005 (FSO) applying in England and Wales (similar legislation in Scotland and N Ireland is slightly different but has the same intent) sets out the law on general fire safety, including for construction and refurbishment sites. This requires a Responsible Person to carry out and keep up to date a fire risk assessment on construction sites. ‘In general, that’s the employer (the contractor),’ explains Howard Passey, principal consultant at the Fire Protection Association. ‘But under CDM Regulations 2015, the designer and the client will also carry a degree of responsibility.’ That means everything from an understanding of material selection and installation methods to having a ‘duty to warn’ contractors if they become aware of unsafe practices on site. ‘These could be hot works being done without a permit, surreptitious smoking or combustible materials being left carelessly on site,’ explains Passey. His advice seems to be that site monitoring is an important aspect of general fire safety; and that a client might be able to contract out the task – but not the liability.

Legality and best practice

Passey advises that architects wishing to get up on the issue should look beyond Approved Document B and CDM 2015 to HSG168 (Fire Safety in Construction) and the FPA’s ‘Fire Prevention on Construction Sites’ (2015). These outline more onerous conditions that could be read as best practice rather than a legal requirement. Passey points out that, as recent events have shown, a construction site is far more vulnerable than a finished building, adding: ‘On site the situation changes from day-to-day; compartmentation may be compromised by works or escape routes needing to be changed; during construction the site is in constant flux.’ With no ongoing approval process either, Passey says it’s crucial for contractors to police themselves to maintain a ‘suitable and sufficient’ Fire Risk Assessment.

Does that generally happen? Despite possible visits by Health & Safety or fire safety enforcement officers, he seems less sure. ‘My experience suggests there’s a will not to cut corners but given the need to meet programme and cost targets, it seems that in reality not everything’s done the way it should be.’

Stewart Kidd, managing director of the Loss Prevention Consultancy, who has worked with construction insurers on the Shard and at Heathrow Terminal 2, and gave evidence to the inquiry after the Windsor Castle fire, is less guarded in his views,
especially on the Mackintosh. ‘It’s a complex legal question; the reality is that the contractors would have addressed only the basic legal requirements if it met the CDM 2015 regulations and followed general guidance in HSG168, which relate to means of escape rather than asset safety.’ But for the man who authored Historic Environment Scotland’s ‘Guide for Practitioners No 7 Fire Safety Management in Traditional Buildings’, this doesn’t go far enough. In England, ‘Approved Document B is a code of practice, not a legal requirement,’ he explains. ‘In the reconstruction of heritage buildings where a fire suppression system is planned, I’d insist on the early installation of this and would have thought it was an obvious measure here.’ Part of that is informed by the likely limited efficacy of smoke detection systems on site. ‘If a building is not yet sealed, then dust and wind effects render them virtually useless.’

Safeguards in the contract
The Mack’s claim is still in its infancy but Kidd would be surprised if the construction’s insurers did not insist on the FPA’s Joint Code of Practice for Fire Prevention on Construction Sites being enshrined in the construction contract as a warranty. Developed in conjunction with the Association of British Insurers for projects of more than £2.5 million, it by default contains far more onerous asset safety provisions on the part of the contractor. ‘Section 9.1 of the Code demands that fire safety measures be brought forward as soon as viable on sites – and that would include sprinklers,’ he says. If not, Kidd says, insurers are left to foot all the rebuilding costs unless they can prove the contractors failed to meet the ‘standard endorsements’ for fire safety on site. This, he elucidates, ‘is a minimum requirement for: a fire safety plan, training of staff, safe storage of flammables, wet risers, hose reels, early installation of fire compartments, regular removal of waste and the control of hot works – which would necessitate permits and supervisory visits of hot works areas an hour after they have completed.’ But the Joint Code of Practice, it seems, does have teeth and is a form of health and safety enforcement order by stealth. Insurers might not have the HSE’s legal clout, notes the FPA’s Passey, ‘but if they have concerns over a site being managed safely with respect to fire issues they have the right to withdraw cover. That has big implications for contractors as work stops which could put them into delay.’

Sprinklers by storey
‘It’s obvious that you can dry things out far better than you can bring them back from the ashes,’ says Business Sprinkler Alliance chairman Iain Cox; a claim that the insurance industry, according to Kidd, would readily agree with. Cox explains that temporary sprinkler systems are generally installed in multi-storey all-timber buildings because until they are suitably clad they’re vulnerable to fire, the system moving up with the floors as they are constructed. But Cox still thinks there’s a lot of disinformation in the industry regarding sprinklers’ vulnerability on sites, that might make contractors baulk at the idea. ‘Fire attacks at the weakest point – usually when compartmentation is compromised on site; but apart from knocking a sprinkler head directly off with site works, there’s a sixteen million to one chance of a temporary one failing,’ Cox assures. He certainly has a vested interest, but the view is that sprinklers should form part of the construction rather than the final installation. It’s a view borne out by both past and current examples: Cox recounts the story of Nottingham University’s £20 million ‘carbon neutral’ Laboratory for Sustainable Chemistry site, which burned down in 2014 as it neared completion. ‘They rebuilt it to the same design and then it won a sustainability award. But tell me, what’s sustainable about having to build the same building twice?’

‘There’s a will not to cut corners but programme and cost targets mean not everything’s done the way it should be’
Counselling in councils

This year’s creative directors of Guerrilla Tactics are transforming public procurement. What’s their secret?

Helen Castle

Much lip service has been paid in recent years to the need for architects to resume leadership of the design and construction industry, but few, if any, have implemented a clear strategy. Pooja Agrawal and Finn Williams of Public Practice are the exception. Still in their 30s, they co-founded Public Practice in September 2017, a not-for-profit social enterprise that is placing a new generation of planners in local authorities that need extra expertise.

Public Practice arranges year-long placements in councils, bolstered with kind of support that Agrawal and Williams wish they themselves had received. ‘Associates’ start with an intensive induction week and are given mentors, opportunities to write and talk about their work publicly, and peer-to-peer support from their cohort. Research takes 10% of their time, giving them space to develop new models of public practice in collaboration with local authorities, academic institutions and experts in the field.

**Working with the system**

They are a formidable duo – both studied architecture and worked in practice before entering the public sector. They are notable for choosing to work within the system rather than reject it. ‘We have come to the point where architects have designed themselves out of positions of influence by appearing to be above the system,’ says Agrawal. ‘By failing to engage with the complex technical, political and economic realities that come with the designing of buildings, a new breed of consultants and sub professions has been created: project managers, landscape architects, executive architects, employer’s agents, interior architects and quantity surveyors; with separate consultants for planning, town-scape, sustainability and access. Each role is important, but none has the agency on their own to be transformative. So the profession is increasingly marginalised, has lost leadership in the vision and delivery of projects, and can seem disconnected from everyday reality.’

Williams adds: ‘We wouldn’t say every architect should work in the public sector to deliver social impact. But decent affordable housing, and good social infrastructure or public realm that is genuinely inclusive, relies on a progressive and proactive public sector – we can’t expect the private sector to do this on its own. We face a massive imbalance of power now between local authorities and developers with their consultant teams. Many officers are doing heroic work – but too often it’s in spite of the system they work within, rather than because of it. As a profession, we can complain about the system and attempt to bypass it, or we can try to engage constructively with it, lobbying from the inside.’

For Agrawal, part of the issue is the vast chasm between architects and planners.

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*Below* Agrawal worked on Blackhorse Road in Walthamstow, London, when at We Made That. It won the Mayor’s Prize at the New London Awards in 2015.

RIBA Guerrilla Tactics is on 13 and 14 November. More information and tickets at [architecture.com/whats-on/guerrilla-tactics-2018](architecture.com/whats-on/guerrilla-tactics-2018)
We can complain about the system or we can try to engage constructively with it.

‘From day one in education, architects and planners are taught separately and there is really no question of collaboration. Neither profession understands each others’ constraints, which breeds a culture of “us and them”.’ As deputy team leader of place making at Croydon Council from 2008 to 2013, Williams experienced first-hand how constructive a collaborative approach could be on both sides, with planning officers and architects forming alliances to challenge briefs and raise the quality of development. Croydon also offered Williams, a recent Part 2 graduate, the opportunity to commission some of the most talented practices in the UK – including Assemble, Duggan Morris, East, Erect Architecture, and We Made That – to design public buildings and public realm projects.

**Idea made reality**

The ideas behind Public Practice began when Williams moved to the GLA. It became clear that the culture and leadership in support of innovative planning and placemaking at Croydon was an exception. Responding to the Farrell Review call for evidence, he wrote a position paper outlining a new programme to help build local authorities’ capacity for proactive planning. Terry Farrell’s support helped to turn an idea into a project.

In 2016, the London mayor’s Design Advisory Group identified the need for a new way to bring built environment expertise into the public sector. However, this remained a side project until Agrawal joined the GLA. Fresh from the private sector, she was acutely aware of the difficulties of bridging the processes and approaches of the two sectors, whether it was planning, property or procurement. Under the new mayoral administration, she and Williams started to design Public Practice together with authorities inside and outside London, developing a business plan and securing cross-sectoral support and the mayor’s backing. Public Practice was established as an independent social enterprise in September 2017, with Williams as CEO while Agrawal divides her time between Public Practice and the GLA. Partnerships with British Land, Future Cities Catapult, Historic England, Kakusivc Carson Architects, L&Q, Local Government Association, the mayor of London, Peabody and The Berkeley Group, as well as authorities across London and the south east, demonstrated a commitment for rebuilding the agency of public planning.

For the first intake in October 2017, Public Practice received over 200 applications for placements in authorities. Around half were architects seeking an alternative role. Now 17 associates have placements in councils.

Agrawal and Williams are creative directors of the Guerrilla Tactics conference in November and intend to demystify planning, property and procurement, encouraging architects to actively engage with these aspects of practice. Williams mentions a developer who described the planning process as being like a series of curtains: ‘You don’t know what will be behind each curtain, or how many there are. It is a matter of step-by-step unveiling.’ This will be tackled at the conference through a live enactment of a planning committee, revealing the inner workings of the planning process. A workshop on procurement will also cover the process of bidding for work by looking at it from the client’s side of the table. As Agrawal says, architects should recognise the opportunities that working the system offer for creativity as well as pragmatism: ‘Architects should see the system as part of the creative process – we have the skills of problem-solving, working with constraints, re-imagining rules and communicating this creativity. It is time to engage with the system, and expand our practice.’

Helen Castle is publishing director of RIBA Services
The battle for quality in design

Architects must often fight to maintain quality on everyday homes, especially on design and build contracts

Sarah Wigglesworth

An optimistic spirit drives those of us working in public housing. It’s especially needed when working on small projects, where clients, planners and contractors are less invested because they have bigger fish to fry. In these circumstances the architect acts as the guardian of quality, the one agency interested in building with care. Yet D&B contracts secure almost no authority for the architect, and we often have to fall back on small tactical manoeuvres when the strategic powers offered by the planning system and client support let us down.

Building within cost yardsticks is particularly challenging in London, as the story of Umpire View, our recently completed housing scheme in Harrow, illustrates. Its context is classic Metroland, where, in the early 20th century, fields were covered by semis that are still a dream home for many people. Its ubiquitous nature undervalues this environment, but take away the accretions of time – the tacky extensions, DIY alterations and concreted front gardens, and underneath there’s a simple formula: a basic brick structure with added ornamentation. It’s familiar and offers scope for endless reinvention.

We were appointed to carry out detailed design after an outline planning permission had been achieved through a long-drawn-out public enquiry. The development fringes a large open space formerly belonging to the Church of England. This became the focus of a simple landscape proposal, a village green for the surrounding homes and a park for the wider community. Thinking about the details of everyday life, we made sure that kitchens overlooked this green space, and paired adjacent entrances, providing them with simple bench seats that allow neighbours to sit together outside, take off muddy boots and dump their shopping on the way in.

Our aim as a practice has always been to celebrate the ordinary by lifting it beyond the banal. We contextualise our work by observing local characteristics and, by making small adjustments, we aim to put a contemporary spin on the vernacular. So here we developed a repeating module of house types (book-ended by apartment buildings) to provide visual unity to the development, with a range of unit sizes and tenures that cater for a variety of local needs.

On our basic brick backdrop we incorporated simple gestures that would lift the development beyond the conventional and create a sense of place. Our client felt that half-timbering would be an unimaginative pastiche. Instead we suggested a projecting brick pattern on the gables, an unfussy and low-cost decorative feature that animates the facades through the play of light and shadow as the sun tracks around the site. The green and yellow doors were inspired by the flash of a woodpecker that brought joy on an early site visit. Despite the contractor’s scepticism (the site manager nicknamed them the ‘burglar steps’), we detailed projecting brick sills which were carried out in accordance with our drawings. Here our luck ran out.

We fought a long and painful battle with the contractor when they demanded that we change our approved planning drawings to include cheaper uPVC windows. uPVC is harmful to the environment, and when we repeatedly refused to carry out this instruction we were threatened with removal from the project. Fortunately the planning department stood their ground and rejected the cheaper substitution. Later on, and overriding our objections (on environmental grounds) and our drawings, timber bargeboards, soffits and trims were replaced in plastic by the contractor because they were both cheaper and more familiar to them. No amount of appeals, to contractor, client or planners, held sway. We can only hope that greater awareness of plastic’s harmful impact will bring about regulatory change that restricts its use.

As architects we are often marginalised when cost information is withheld because it forms an essential component of the design brief. This happened at Umpire View – an uncomfortable and infantalising situation that goes against collaborative working that is at the heart of our ethos. While given freedom to select a facing brick within a price bracket, we are left asking: how can architects make a sound decision on specification without the full information? And why are we not trusted with relevant information – so that we are effectively working blindfold? Unless the client shares the design vision, champions quality and supports the architect, the end product will inevitably be compromised.

The architect’s struggle to bring lasting value through design quality is a permanent battle. It needn’t beat us, but it takes determination, persistence and a few simple tricks to overcome the structural problems that restrict the architect’s powers, and – in the words of Yvonne Farrell of Grafton Architects – to ‘lift something over the threshold, from being something that is okay to being something of value’.

Sarah Wigglesworth is founder of Sarah Wigglesworth Architects
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Rent for a life long home

Our housing model no longer suits our lifestyles and renting could fit better

Euan Durston

Just as the notion of a ‘Job for Life’ seems like a throwback to the last century, should the design ideals behind ‘Lifetime Homes’ now be jettisoned?

A recent report by the Resolution Foundation found that up to a third of young people are likely to live in private rented accommodation all their lives. By the age of 30, 40% of millennials are still living in rented housing and 1.8 million families with children are now renting privately. It has been predicted elsewhere that 7.2 million households will live in rented accommodation by 2025. The press reporting of these statistics universally couches them in negative terms. But why?

An Englishman’s home is his castle
In the UK an emotional attachment to the concept of ‘home’ is deep rooted in our national psyche. The ‘Home for Life’ model, with property passing down through generations, has driven our obsession with home-ownership.

Both owner-occupied housing, and council housing at its best, have provided genuinely mixed communities with security of tenure, while private landlords are seen as a poor alternative. But the quid-pro-quo for security is lack of flexibility and choice based on an outdated model.

Our traditional standard type, typically the 3-bed, 5-person home, is based on the ‘model’ 2-parent, 2.4-child family. Lifestyles have changed but policies and standards are based on how we used to live.

In volume housebuilding innovation is stifled. Value and quality expectations are driven by location and budget. Construction methods and external materials are determined by their acceptability to mortgage lenders rather than driven by design ambition. The architect’s role is reduced to site layout and external envelope.

Flexibility to move is limited by economic circumstance for owners and local authority restrictions for public sector renters. The lack of viable options for down-sizers leads to ‘over-occupancy’ and the ham-fisted ‘bedroom tax’, exacerbated by the erosion of council stock through Right-to-Buy.

Design standards such as Lifetime Homes attempt to respond, assuming most of us will have to adapt our homes as needs change.

Lifestyle choice or a lifetime home?
How might housing design in the Build-to-Rent sector evolve if we could embrace renting as a positive choice based on both needs and aspirations?

Generation Rent will have the freedom to move as their needs or financial circumstances change, or simply because another provider has a better offer. The build-to-rent sector’s key offer is more choice based on a wider range of homes reflecting how we actually want to live, from sharing to extended families.

Realising the value of good design
The ‘choice’ scenario has already transformed the student housing market. With quality accommodation, a wider ‘lifestyle offer’, and communal facilities, it minimises voids and loss of income. For long-term investors such as pension funds, costs in use and lifetime maintenance costs are critical and reward greater up-front investment in design.

These changes will promote a move away from a ‘general needs’ approach based on ‘designing down’ to hit unit area and cost targets. Instead value judgements about design quality will be the critical measure of success.

At Weston Williamson we have embraced a more diverse range of housing types tailored more specifically to the needs of modern households. Our competition-winning entry for Pocket Living proposed a model flat based on two people sharing a home, and looked at how this could then be further adapted in use. Our proposal for purpose-built housing for ‘baby boomer’ retirees doesn’t just have fewer bedrooms but instead embodies a level of lifestyle and design aspiration.

We are looking forward to the day when, instead of ‘one size fits all’, we can all have ‘the one that fits like a glove’.

Euan Durston is a senior associate at Weston Williamson + Partners

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Four architects from the future walk into a bar. The first orders a craft ale, the second a glass of wine made from the finest terrestrial grapes, the third a red juice thinned with white liquor, and the fourth iced poppy seed tea made from alpine spring water. The bartender teeters for a moment on the precipice of an enquiry into the bizarre orders before surrendering and deftly supplying as close an approximation as is in stock. As anyone who has ever been in a pub with an architect will tell you, it is an easily recognisable breed and while our four had never met before – all being from alternative futures – they recognised their shared profession immediately.

The ale and wine drinkers quickly found commonalities in their respective futures. Both were living in a world characterised by the aftermath of an environmental crisis. Both chortled at the cute naivety of the old institutions’ fascination with the changing role of the architect: ha! If they only knew how recognisable things were to become. They compared stories of their grandparents who’d been born into a world falling apart. As the two compared notes on their respective world leaders’ focus on disaster remediation rather than prevention, the wine-drinker gesticulated with a swilling glass and the ale-drinker was reminded of a poignant detail in the wine-drinker’s order. The wine-drinker was surprised to need to explain to the ale-drinker that wine made from terrestrial grapes were far superior to those from low orbit hydroponic vineyards. It quickly transpired that while the need to reduce energy and resource use had forced the ale-drinker’s grandparents’ generation to live within planetary limits, the terrestrial-wine-drinker’s grandparents’ generation had pursued expansion into space above all else.

The two inevitably turned to comparing professional roles. In the ale-drinker’s world, every architect will be an engineer, employing their seamlessly integrated technical knowledge to create architecture by reconfiguring stores of durable carbon. In the wine-drinker’s world, architects will nest human habitats within a re-terraforming earth. Universal basic income will be established as space production divorces income from labour, giving everyone recourse to an architect’s services, but materials will be so strictly regulated that the architect’s role will be more akin to spatial therapy.

As the ale-drinker and wine-drinker mindfully sipped their beverages and compared their future lives, the red-juice-white-liquor-drinker and poppy-seed-tea-drinker’s voices crescendoed until the ale-drinker and wine-drinker had no choice but to listen. They were arguing over who had it better. The juice-drinker claimed that being from a future that considered architecture the height of luxury afforded fabulous privilege. Architects will be few but will have extraordinary lives conceiving lavish structures. The tea-drinker on the other hand described a future where architects will be plentiful and so too clients. Here everyone will be rich enough to afford architects’ generous fees and build a plenitude of fantastic edifices.

The wine-drinker queried whether off-planet production featured in either of these futures but apparently both scenarios were confined to earth. The ale-drinker enquired as to how the juice-drinker and tea-drinker’s forebears had responded to environmental collapse. The juice-drinker frowned just a fraction before asserting that of course the 20th century ideal of access to opportunity and resources for all was never going to work within a finite system but that the natural order of things prevented environmental collapse as widening inequality enforced miniscule energy and resource use by the masses. There was a brief but excruciating silence. The tea-drinker looked blankly around with a bravado poised to cover ignorance before suddenly – erroneously – realising the prank and exploding into a hearty laugh. Apparently, the future this tea-drinker hailed from had averted climate change and achieved a land of equal, abundant opportunity inconceivable to the others.

In part to restore relations, the juice-drinker offered to buy the future architects another round. The bartender was quietly cleaning a glass around the corner of the curved bar such that the juice-drinker was forced to move into a position where a reflection of the party suddenly presented itself. The tall glass that had held the red juice thinned with white liquor crashed to the floor. There in the mirror were the ale-drinker and wine-drinker speaking animatedly to nobody. The juice-drinker’s head swept back and forth in the hopes of quashing the anomaly, but it persisted. The juice-drinker called the others over to corroborate that the missing reflection could mean only one thing: the tea-drinker was not from a future where climate change had been averted, where everyone was rich, or where architects were plentiful and so too were clients, the tea-drinker’s world was a mere figment of the imagination.

“I say this to everyone that comes in here,” said the bartender, “but no-one listens to me.”

Maria Smith is a director at Interrobang architecture and engineering and Webb Yates Engineers, and is co-chief curator of the Oslo Architecture Triennale 2019.
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How to help people look forward to work

Creating workplaces that promote wellbeing and so raise productivity remains a hot topic. A RIBA Journal/Knauf seminar probed the next step for architects.

Words: Josephine Smit

Make the workplace healthier and more pleasant and workers will feel better – and they might just be more productive for their employer. This is the argument that lies behind much of the present interest in health and wellbeing in office design. The contention has been founded on research into projects, notably the sustainable refurbishment of 500 Collins Street in Melbourne, Australia, where spruced up spaces with improved HVAC and lighting were found to reduce workers’ incidence of colds and flu by more than 20% and prompt contented administrators to up their typing speeds by a pretty impressive 9%.

Such highly seductive arguments have helped add weight to certification schemes like the WELL standard, with its 10 concepts of the healthy building. These manifest architecturally as large windows, green walls or planting, and a focus on indoor air quality and lighting. But beyond that, designing the healthy office becomes harder to pin down, particularly as anything from a demanding boss to a World Cup loss can influence how we feel when we’re at our desk on a Monday morning.

What can architects do to help?
A better understanding of the actions architects could be taking was the theme of a seminar earlier this month on health and

Above From left: Michel Mossessian (Mossessian Architecture), Ben Allen (Studio Ben Allen), Marcella Ucci (UCL) and Ben Channon (Assael Architecture).

Spruced up spaces reduced colds and flu by more than 20% and raised typing speeds by 9%
wellbeing in the workplace. The seminar, hosted by RIBAJ in partnership with Knauf and chaired by the founding director of Surface-to-Air, Holly Porter, brought together architects and one of the field’s key scientists before an invited audience at the Knauf showroom in Clerkenwell, London. The panel’s scientific expert, Dr Marcella Ucci, senior lecturer in environmental and healthy buildings at UCL, pointed to research architects could use for guidance. ‘The evidence is growing,’ she said. ‘We have a lot more evidence now in areas like lighting, in understanding circadian rhythms, for example. But you can’t say that adding a green wall will deliver X in productivity or health and wellbeing.’

Get people moving
Another area where science has the potential to provide more detailed guidance is active design. Ucci is co-investigator in the active buildings research project, which is developing a model of physical activity in offices to help designers create workplaces that will encourage people to move around more.

The research has included looking at the location of refreshment points in offices, and gives an indication of the complexity of human factors. ‘You would have thought it would be beneficial to have a greater distance from desk to refreshment point to encourage workers to walk more,’ she explained, ‘but in fact that didn’t turn out to be the case. It was counter-intuitive.’

Apps and simple monitoring devices are taking the understanding of air quality out of the research laboratory and into the home and workplace. ‘Foobot tells when you should open the window,’ reads the marketing strapline of an app being marketed for £179. Technology might inform the building user, but Ucci advised against over-reliance on it to manage indoor air quality and comfort. ‘A building management system can have an optimized design to open and close windows, but we know in reality that’s not going to happen. There is a need for a robust design. Technology is the enabler, not the solution.’

Specifying products and materials that are free from volatile organic compounds proved one of the most challenging aspects of the first workplace project in Europe to be certified to the WELL standard, the fit-out of consulting engineer Cundall’s office at One Carter Lane, in London. As a result, Studio Ben Allen designed furniture specifically for the project, although manufacturers are now providing more information and security on compliance, added practice founder Ben Allen. The lesson from both Ucci and Allen was that architects must be prepared to interrogate everything, from what workers want in a new office to evidence emerging from health and wellbeing studies. ‘It’s important for architects to ask what we want buildings to do,’ stressed Allen.

Offices that soothe
With its pot plants and bespoke desks, One Carter Lane showed how many elements of a design, no matter how small, can influence health and wellbeing. Panelist Ben Channon, senior architect at Assael Architecture, outlined how that applies to mental health and wellbeing, citing the example of his practice’s design for Quebec Way, a mixed-use development in east London's Canada Water. ‘Hit and miss brick panels allow users to interact with the fabric of the building and experience moments of joy,’ he explained. ‘There’s a question of how we, as architects, can add value through wellbeing.’

This is an approach that Mossessian has advocated the concept of what he calls spaces of immobility, where ‘you can have stress, fear and annoyance’ he said. ‘They’re designed for you to hate everybody else,’ he said emphatically. By contrast, Mossessian’s King’s Cross buildings have voids, balconies and public realm – all space that could be considered unproductive by some clients – to allow for stillness and contemplation. They will also deliver long term value, Mossessian argued: ‘If you can do three things in the same space, a building can adapt over time.’

Such approaches are, however, far from the industry norm, as Ben Allen pointed out. ‘The office environment is an increasingly alien place, where floorplates are getting bigger. Our workplaces are designed as if we’re children, with office chairs designed so that we never stand up. We’ve built a counter-intuitive culture, when as designers we should have more common sense.’

Seminar chair Holly Porter had opened the debate with a question for the panel: ‘Should architects be making a commitment, along the lines of the Hippocratic Oath?’ The debate seemed to provide a strong affirmative response.

For information on future Space in Architecture events www.ribaj.com/space-in-architecture

Top left
Mossessian on the search for spaces of immobility, where ‘you can have the capacity to stay still and not consume’

Left
Holly Porter (Surface to Air) with the other panel members and chair.

Some buildings are designed for you to hate everybody else

exploring, including at twin buildings at King’s Cross. Some city buildings can ‘create stress, fear and annoyance’ he said. ‘They’re designed for you to hate everybody else,’ he said emphatically. By contrast, Mossessian has advocated the concept of what he calls spaces of immobility, where, ‘you can have the capacity to stay still and not consume.’

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Pure joy

Five years on, Eye Line is growing in all sorts of ways

It’s the time when we open up our pages to architectural drawing, pure and simple. Once again we are in fruitful partnership with AVR London. From an entry of 1,000 images from all over the world, roughly one-third practitioners to two-thirds students, we declare the winners of Eye Line 2018.

We always say that we’re interested only in the skill and talent of the image-making and do not judge the architectural merits of the schemes they depict. At times I have to remind our judges gently of this. But who am I fooling? Is it possible to have a sublimely good drawing of a really bad, misconceived architectural concept? I’d like to think not. Even the fantasy worlds of students have to have their own logic. With drawing as with writing, Coleridge’s rule applies: we the viewers have to be willing to suspend our disbelief. And so we let ourselves be drawn into the drawings. This is why my self-imposed job of seeing and sifting all the images as they come in is the most enjoyable chore I can imagine.

Eye Line has grown enormously since we started it in 2013. It’s grown in the number, calibre and geographical spread of entries; in the number of practitioners taking part, in the dissemination of the results (this year with exhibitions at the RIBA in London and Liverpool, and the chance to be in the RIBA Drawings Collection); in the interest of sponsors and the huge contribution of our judges. These include not only architects at the top of their game (thanks this year to Emma Gibb from Foster + Partners, Christina Seilern of Studio Seilern, Chris Wilkinson of Wilkinson Eyre, last year’s winner Matthew Kernan, now working with Hall McKnight, and Joe Robson, architect proprietor of AVR London), but often also practising artists – Deanna Petherbridge this time.

A win is no bad indicator of career development. Emma Gibb, second in the first Eye Line with her beautifully hand-drawn work from the Scott Sutherland School, is now an associate partner at Foster + Partners; while Tom Noonan, our first overall winner with his Bartlett diploma project, is an associate at Hawkins\Brown, a practice that similarly prizes good visual communication. Drawing, basically. It all comes back to that and that’s why we showcase the best in Eye Line.

Seeing and sifting all the images as they come in is the most enjoyable chore I can imagine.

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Never have I seen the architecture room so full of engaged general visitors

Pamela Buxton at the Royal Academy: ribaj.com/RAsummershow

What it meant by transcendence? It is almost impossible to articulate. The experience of being outside oneself, when intellectual reasoning, emotional feeling and physical sensation collide.

Michèle Woodger considers what makes a successful chapel: ribaj.com/chapels

Left Nine-year-old Lev Griffin submitted this fantasia on Fallingwater to Eye Line.

Hugh Pearman
Editor

Five years on, Eye Line is growing in all sorts of ways

Nine-year-old Lev Griffin submitted this fantasia on Fallingwater to Eye Line.
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Rebirth in Bethlehem

Palestinian architects are making a cultural asset in the brutal shadow of the Wall

Picking your way around the barbed wire, you find a little allotment of herbs and vegetables, a sight more inspiring than any graffiti.

It is impossible to visit Bethlehem without encountering the wall. An 8m high horizon of concrete, the Israeli ‘separation barrier’ marches relentlessly along the edge of the city, winding back and forth in mysterious loops, punctuated by huge cylindrical watchtowers.

At one point it performs a curious backflip to encircle Rachel’s Tomb, a humble domed structure considered sacred to Jews, Christians and Muslims for 2,000 years, but now only accessible to Israelis. Elsewhere the concrete barrier goes out of its way to annex strategic swaths of prime real estate. It encircles a once popular Palestinian hotel at the top of a hill, which has now been converted into a base for the Israeli Defence Force.

Despite being declared illegal by a United Nations resolution in 2003, the wall continues on its brutal way, intent on completing its 440-mile journey through the West Bank. Its route is marked by an advanced guard of razor wire, which is being rolled out across the Cremisan valley on the edge of Bethlehem, severing a 19th century monastery from the town. Regardless of outrages from local Catholic priests, their vineyards and olive groves will soon become part of Israel, hidden from Palestinians behind the barricade.

This act of architectural violence is now a morbid tourist attraction. Since Banksy paid a visit to Bethlehem in 2005 and declared the wall to be ‘the ultimate activity holiday destination for graffiti writers’, it has been a magnet for street art. His trademark stencils have been joined by a plethora of other political cartoons and slogans. This canvas of protest can be admired from the rooms of Banksy’s Walled Off Hotel, Bethlehem’s answer to the Waldorf, which opened last year boasting ‘the worst view of any hotel in the world’.

Few tourists stray beyond this enclave, but if you follow the wall for a few hundred metres, you encounter a sight far more inspiring than any graffiti. Picking your way around the barbed wire, you come across neat rows of vegetables and herbs forming a little allotment. They were planted by Munther Bandak, who recently returned to Bethlehem from the US to breathe new life into the furniture factory his father built here in the 1950s.

While Bandak was away, the wall was built through his land, resulting in the loss of several acres. But thanks to local architects Elias and Yousef Anastas, the old factory is being reborn as the Wonder Cabinet (left), where artists will rub shoulders with carpenters and welders, with a gallery and cinema as well as a café, supplied by the allotment.

‘We want to make the kind of social and cultural platform that Bethlehem is lacking,’ says Elias Anastas, showing me around the factory floor, as a colleague balances on a fork-lift truck, hanging a banner for the opening party that night. Stacks of steel chair frames are piled in one corner, awaiting powder-coating in a long red oven, while others are busy setting up a pizza oven and a sound system.

The Anastas brothers have been using the Bandak factory since 2011, when they established Local Industries, a branch of their practice that focuses on making furniture with local artisans. Once a bustling provider of furniture for schools across Palestine and Jordan, the factory had been suffocated by the political situation. Once a bustling provider of furniture for schools across Palestine and Jordan, the factory had been suffocated by the political situation. By creating space for other designers and makers here, they hope to kickstart a new wave of production.

‘We’re trying to reassess the value of local Palestinian labour,’ says Anastas, ‘without freezing it in a traditional role, or mindlessly imposing alien standards. The Bandak factory was always a place for artisans from different fields, and it’s a spirit we’re trying to revive.’ It is a fledgling shoot of optimism, sprouting against the odds in the shadow of the wall.

Oliver Wainwright is architecture critic at the Guardian. Read him here every other month and at ribaj.com
I have reported previously how RIBA is working with the Ministry of Housing and Local Government on improving housing design quality. While quality may be improving in some metropolitan areas, equipped with design standards, review panels and powers of mayoral call-in, in most suburban and rural districts there are few tools capable of influencing the speculative homebuilder. So the endlessly undifferentiated carpet of standard product that everyone, including now the Prime Minister, abhors, is rolled out across the nation. No use blaming the housebuilders. If we want something else, we have to do something about it.

When I visited housing secretary James Brokenshire, he endorsed the government’s desire to see improved design quality. I invited him to visit some RIBA-award-winning housing schemes to see what good looks like. We have an opportunity to articulate the characteristics of place that might provide a more attractive alternative to the retail land model. If government is in the mood for some interventionist disruptions of this seemingly inexorable process, I offer nine principles:

Placemaking A sense of place demands a mix of scale and uses that responds to access and transport infrastructure. A classic example is Bedford Park in west London by Norman Shaw, where scale builds up towards Turnham Green and Chiswick Common, and the structure of streets leads away from these focal points in a branching pattern.

A landscape of layers Roads and pathways around homes should respond sensitively to the landscape. Connectivity to context is critical to the economic and social sustainability of new neighbourhoods.

Domestic scale Frank Lloyd Wright, George Bernard Shaw, Parker and Unwin understood that elements of two-storey homes can be used to ensure that more substantial built form has accessible human scale.

Consistent materials One weakness of the housebuilder model is the ineffectual overuse of ‘character areas’. The best suburban neighbourhoods convey a sense of unified vernacular using local materials and craftsmanship.

Group composition Generic simplicity and repetition of familiar typologies should be ameliorated with combinations of types, and occasional specials, carefully composed for spatial and picturesque effect.

Iconography of home Symbols of warmth, protection, privacy, safety and retreat: the arch, the hearth, the doorstep, the porch, the garden gate, the chimney breast. The best of recent schemes deploy these signifiers without resorting to pastiche.

A verdant setting We should allow the natural world to dominate, deploying every opportunity for plants, shrubs and trees as part of the composition, at a practical level (for example as boundaries) and poetically in the composition of open space.

Occasional extravagance Self-expression is occasionally indulged, providing a punctuation of unique features, special adaptations such as gateposts, gauged arches, twisted chimneys, oriel windows, turrets, balconies, arcades and roof terraces. Larger houses and apartment blocks should control and conclude vistas and create an interplay of deliberate symmetry or asymmetry.

Environmental sustainability As RIBA argues, meeting Building Regulations is simply not enough. The cost of applying standards is more than compensated for by the additional value to be achieved and sustained from places with individuality and locally inspired character.

Many are concerned that the revised NPPF, when it is published, will fail to make specific requirements for the definition of quality. Unless we do, and local planning authorities are equipped with an appropriate armoury, the uniformed army of identical invaders will continue to overwhelm us.
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Rebel with a cause

A contemporary of Ravilious and Bawden, Enid Marx’s long and diverse career grew from persistence and a love of colour and pattern

Pamela Buxton

1922 was a particularly good intake for the Royal College of Art. New students included Eric Ravilious, Edward Bawden and Enid Marx, part of what tutor Paul Nash described as ‘an outbreak of talent’. While the work of Ravilious and Bawden is now well known, less celebrated is that of Marx, a formidable character who designed everything from printed and woven textiles to book covers and stamps in a career spanning more than 50 years.

Her story is told in Enid Marx: Print, Pattern and Popular Art, a highly enjoyable new exhibition at the House of Illustration. Known as Marco to her friends, Marx (1902-98) was born in London to parents from German émigré families. At the RCA her fresh style, which drew on both modern and traditional references, was not always appreciated and she was refused entry to the printing school, although Ravilious smuggled her in after hours to catch up on what she’d missed. She went on to fail her painting diploma. But she refused to be thwarted. Later, when her employers at a furnishings design company refused to give her the dye recipes in case she became a competitor, she simply memorized them.

Her great talent was her ‘brilliant’ and ‘intuitive’ pattern design, according to exhibition co-curator Alan Powers. The architecture and art historian is also author of the accompanying book, Enid Marx: The Pleasures of Pattern. He describes her as obsessed with pattern and the rhythms it could form.

‘She could visualise a pattern unit on its own and in her mind see how it could repeat,’ he says, adding that when multiplied, it had a dynamism that flowed through the whole.

The exhibition, which conjures up a vivid picture of a redoubtable figure and her highly engaging work, is certainly a feast of pattern, whether for printed or woven textiles or for print, with plenty of examples of her block-printed designs from the 1920s and 1930s. We learn how she ‘wanted to reach out to the whole population to share her own pleasure in pattern, stripe and colours, in animals, birds and plants’. There are examples of work from Marx’s 60-year relationship with publisher Chatto & Windus, for whom she designed many book covers and logos from 1929 onwards. Alongside are some of her illustrations for her own books, including Bulgy the Barrage Balloon (1941) and Slithery Sam (1947), a book about a snail.

The exhibition showcases her work for London Underground in the 1930s with her designs for seating upholstery – her first experience of designing woven patterns. Ever practical, she also worked for the post-war Utility Furniture Scheme on furnishings that could overcome the imperfections of the low-budget materials, advocating cheeringly colourful designs as the most appropriate approach after the blackouts and shortages of the war years. Thirty went into manufacture.

She taught extensively after the end of the war until the mid 1960s while continuing her diverse design work. The show explores her great passion for English folk art; she co-wrote two books on the subject whose innocence and vitality influenced her own, increasingly decorative designs.

Marx always saw herself as something of rebel, says Powers, adding that while she could be a bit of a troublemaker, it was always in a good cause. Perhaps it was this spirit that helped to keep her working into advanced years long after her greatest successes.

Nearly a century after Marx began her career in design, this exhibition is a good way to spread the word about a remarkable woman whose work retains a bright appeal today.
One of my earliest memories of architecture is of a cascade of dark offices, roughed up by green roof gardens, a childhood landmark on a roundabout in Basingstoke. Gateway House was one of the many muscular buildings designed in the great days of Arup Associates. With its brooding layers Gun Wharf at Chatham was another. Perhaps the most famous are those of Broadgate in the City of London, where Arup Associates recently reworked the central Circus.

These seem to have little to do with the energetic, conviction-led, networked Jo Wright whom I meet at the firm’s Blackfriars Pier on the Thames. But she runs what has now been rebranded as Arup (you know them, you’ve worked with them, on every sort of engineering and more). Or Arup architecture if you want to locate them within the 15,000 staff. The name change is a signal of a culture shift in the practice – which is what Wright was hired to achieve when she left Feilden Clegg Bradley Studios in 2014 to become Arup’s group leader for architecture in the UK, India, Middle East and Africa. And it is an excuse to talk about expansion: the plan is to double the size of the 250-architect practice in the next two years.

In the shade of the pier, the acid yellow of Wright’s glass necklace radiates the sort of sharp optimism that enabled her to take on such a brief. Since the days of Philip Dowson in the sixties (he is said to have safeguarded Arup Associates’ reputation by ditching drawings of its less good designs), and great buildings stamped with the skills of Peter Foggo, Rab Bennetts and Steve Tompkins, Arup Associates struggled with clear leadership. In more recent years young practice FLACQ was flown in to boost the director level and Nille Juul-Sørensen appointed as global leader of architecture. Now just two of four FLACQ directors remain, along with the eye-catching Nine Elms ‘sky pool’ spanning between two buildings which they brought with them to Arup Associates.

‘Arup Associates’ recent history has been of interference and neglect by engineers,’ says Wright candidly. We have known each other since 2005 when I visited her crafted, considered, highly disciplined and sustainable offices for the National Trust in Swindon, the Heelis Building. She advised for many years on what went into the RIBA Journal intelligence section and has been a sounding board on many subjects, pairing clarity and analysis with a wry laugh at difficulties. But she would speak as plainly to others.

Over the last few years she has been investigating what works and doesn’t in the practice. ‘The leadership was tortured,’ she says. ‘There was no sense of common purpose. It was endless internecine battles for power, competing – including for projects – and talking each other down.’

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Why take it on? At times it has looked like an impossible task. ‘I have asked myself why do they think I can sort this out? Why do I think I can sort it out? It’s a complete dog’s dinner.’ But when she accepted the job she needed to get out of FCB Studios where she had been for two decades. And working at
Arup Associates’ recent history has been one of interference and neglect by engineers.
the project of Arup Associates, without let up, has proved to her that it was not just in that relatively small world that she can make practice work better.

A year into the job she was deep into the complexity of characters and the structure. Back in 2015 an internal staff survey showed just 34% in Arup Associates thought there was trust and respect among the leadership. Now the architect-directors sit together, a visible symbol of unity, and when the survey comes round again in 2019 Wright has high hopes for significantly improved figures. ‘I think it’s telling that the last three senior promotees hugged me on hearing their news,’ she confides warmly.

You won’t be surprised that the directors running those factional studios and the four who now come together at Arup’s offices in Fitzrovia are a different bunch. Some of the previous generation are gone. And Wright has grasped the opportunity to recruit. Conversations come easily with seconds in command feeling constrained at personality-led practices. Wright won’t paint a rosy picture of Arup but likes to show that here will be space to stretch your own capabilities. This summer Nick Jackson joins her from Eric Parry Architects as director, which has caused its own ripples. Now when she loses senior staff, they are likely to be off to seed architect teams in Arup offices such as Melbourne and Madrid.

The number of architects in Arup’s international offices signals a change in attitude across the wider world of Arup. When Wright arrived there was resistance among Arup colleagues to cosying up to their own architects, particularly among structural engineers. They feared that any favouritism could derail other practice collaborations. Her own internal advocacy will no doubt have played a part in turning the tide. Growth for architecture is, in large part, predicated on working with the wider Arup organisation and now other professions heading international offices are asking for architects to be part of the mix.

The newly defined scope of Arup architecture has also played a part. It is not trying to muscle in on collaborations with other architects but is focusing on transport, sport and science and industry (technical buildings such as manufacturing, labs, data centres). ‘We are good at complicated bits,’ Wright says, citing a model modular nuclear reactor they collaborated on with others in Arup, and Rolls Royce. If the architecture team don’t know then they will know someone who does. ‘You have the relationships when you want to make things work.’ In this multidisciplinary environment she sees architects as having a particularly important role. In the Middle East the multidisciplinary Arup team is designing a number of typologies for a new city in China. She feels the practice is now on the right path and perhaps – with some of the right sort of projects, including interventions on a campus for a blue chip client in west London – will soon be back to winning design awards. ‘It will be about five years from now,’ she hopefully predicts.

Below Broadgate Circus, designed as part of the wider Broadgate in the 1980s. The travertine centrepiece and spaces were reworked in 2015.

Right ‘We are good at complicated bits,’ says Jo Wright. One recent ‘technical’ building is the £900 million Jaguar Land Rover factory near Wolverhampton.

Europe and America have their own directors but Wright’s London office establishes the culture across the globe. In her other areas beyond the UK and the Middle East – Africa and India – the local cost base means fewer opportunities but Arup is architect for a dramatic building for the Hindu Heritage Experience in Mangarh, Uttar Pradesh. In the UK possibilities for expansion are being considered – it might make sense to have architects in the Solihull office given involvement in the HS2 Interchange Station.

Could Arup’s architecture return to the classic Arup Associates form? Or even start to reflect Wright’s own design strengths? The project sizes are significant (£140 million lumps) so change of any sort, especially in design, will show very slowly; and there are limited chances to hit the design jackpot. ‘There are times when I’ve thought I will never win an award again,’ says Wright – she can seem a long way from projects. ‘I do miss the intimate knowledge of projects where I can see the finely articulated detail.’ This still matters to her, as attested by her stint as a regional RIBA chair of judges this year. She wants to get things right and that means involvement at all levels, including a Sunday at her drawing board at home with a felt tip sketching out typologies for a new city in China. She feels the practice is now on the right path and perhaps – with some of the right sort of projects, including interventions on a campus for a blue chip client in west London – will soon be back to winning design awards. ‘It will be about five years from now,’ she hopefully predicts.
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RIBA Appointments
Warwickshire-born, and brought up in Stratford-upon-Avon, Peter White studied architecture in Birmingham and after a short spell in private practice, was employed by the City of Birmingham architects’ department. Here he developed his fascination with the canals that permeate the city, but at the time – the 1960s – they were sadly neglected and mainly seen as dumping grounds. The old canal buildings, many dating back to the 18th century, were seen as obstacles to development. Peter took a different view: he believed that, sympathetically treated, they could become attractive amenities.

When plans were being mooted to demolish old cottages at the top of the Farmers Bridge locks in the heart of the city, Peter persuaded the authorities that restoration was a better, and cheaper, option. The result was the James Brindley Walk scheme, which soon proved popular. It was the starting point for a process that now sees the canal network transformed into a lively area of shops, restaurants and offices. Thanks to the success of that scheme, Sir Frank Price, chairman of British Waterways Board, invited Peter to take on a brand new role as architect/planner. He was, as he often pointed out, the first architect to be employed on the canals since Thomas Telford.

Peter's first job was to change attitudes. At the time there was a policy of painting anything belonging to the Board in their house colours of blue and yellow – always privately referred to by Peter as the Billy Smart Circus theme. He drew up new guidelines: keeping crisp black and white for structures such as lock balance beams and providing a range of subtle colours for buildings. It was not always easy persuading people that renovation of an attractive old building was a better choice than building an ugly new one. But gradually he began to win through. He produced a loose leaf set of instructions, the Waterways Environment Handbook, that gave details on how best to treat even the most basic structure with sympathy. He was always conscious of the historic nature of the system, and travelling with Peter was an education. He had a great eye for the meaningful detail, and always had pencil and paper at hand to sketch anything he thought worth recording.

Peter certainly saw his main role as being a conservationist, but he did appreciate that change was inevitable. The needs of a system almost entirely devoted to leisure were bound to be different from those of an 18th century transport route. He saw an important part of his job as trying to ensure that what was added worked in sympathy with the older structures. In the Environment Handbook he provided drawings of ways in which important areas, such as Gloucester Docks, could be developed. Although Peter often had a hard time persuading colleagues to see things as he did, he also led by example, designing many new buildings himself. An outstanding instance can be seen in the Harbour Master's Office at Limehouse Basin, where the Regent's Canal joins the Thames.

Peter suffered two heart attacks and in 1991 was forced to retire at the early age of just 50. In his retirement, he took up painting, often turning to his beloved canals for inspiration. With typical good humour, he called his first exhibition, held shortly after heart surgery – Art Attack. Peter's legacy can be seen in the way in which so many towns and cities have now embraced their canals instead of ignoring them. But it is not only the grand schemes that reflect his influence, it is also felt in the sense of 'rightness' that so many people experience as they travel the canals for pleasure.

Peter is survived by his wife Paula, children Katey and Oliver, and two grandchildren. •

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More than 40 years before Grenfell, fatal fire lessons went unheeded

Hugh Pearman

‘It is the responsibility of every RIBA member, however he (sic) is employed in the design of buildings, to try to ensure that disasters like Summerland cannot recur.’ So wrote David Barclay, secretary to the RIBA’s Practice Board, in July 1974. That month saw a comprehensive special supplement, ‘Anatomy of a Disaster’ in the RIBAJ devoted to what was then the worst peacetime fire in the British Isles since 1929. Fifty died in the Summerland fire, 80 were seriously injured.

The conflagration took place on 2 August 1973 in this ambitious entertainment complex in Douglas, Isle of Man, commissioned in 1965 and opened in May 1971. It was a strange building, influenced by the geodesic structure of Buckminster Fuller’s American Pavilion at Expo 67 in Montreal. Its architect was James Philipps Lomas from Man with leisure specialist Gillinson Barnett and Partners of Leeds as associates. Summerland was shoe-horned onto an awkward site between a cliff and a road, and was very large, with a huge internal volume.

The idea was to create a Mediterranean-type internal environment so as to allow the Isle of Man’s seaside-resort tourist trade to compete against the new competition of overseas package holidays and cruises. Some 3,000 people were in it on the night of the fire.

In its upper levels it was a spaceframe structure clad in the same transparent acrylic panels, Oroglas, that Fuller had used in Montreal – there, the acrylic skin was to take fire and burn away in 1976. But even worse, the lower levels of Summerland were clad in another flammable material, ‘Colour Galbestos’, which was steel sheeting covered with bitumen-saturated asbestos felt and faced with polyester resin. Behind this was an internal wall of combustible plastic-coated fibreboard called Decalin. The fire began in a mini-golf kiosk outside where some boys were smoking. The burning kiosk fell against the wall, which ignited and transmitted the fire to the internal wall. There was little fire-stopping and by the time the fire burst through inside there was little anyone could do. The fire then met the Oroglas which burnt fiercely, dropping molten burning plastic to the floor below.

Some of the (insufficient) fire escape routes were found to be locked. Fire alarms did not work. Panic ensued as people fled for the main entrance. The building was gutted in less than half an hour.

A commission of inquiry set up in November 1973, three months after the fire, produced its 30,000 word report in May 1974. One thing stands out: the building had got waivers from the Isle of Man’s fire regulations which stated ‘the external walls of any building shall be non-combustible throughout and have a fire resistance of two hours.’ The report noted that ‘neither Oroglas nor Colour Galbestos complies with these rules’.

There was much else – changes to the design, substitution of materials, lack of communication – it all sounds so familiar to our ears today in the light of the Grenfell disaster. At Summerland, controversially nobody was officially blamed. The tragedy was deemed to be the result of a series of human errors.

‘Read, learn and do not forget: those Summerland victims need not have died,’ RIBAJ told its readers.
RIBA Journal editor Hugh Pearman often says that the annual Eye Line drawing competition ‘frees architectural drawing from the tyranny of the crit’. These words come to mind especially now, with the end of year student shows all around us. This is acknowledged in 2018 with Eye Line’s separate student category. This year’s zingy summer shows showed an abundance of creativity and inventive ideas – on paper, as models or film and even virtual reality. The link between illustration and academia first came to the fore at the Bauhaus under Walter Gropius and today’s illustration styles often echo this. Peter Cook, Neil Spiller and Neil Denari are renowned for showcasing the architectural drawing as both a conceptual and critical tool.

My research at the University of Bath CASA centre involved detailed study of architect and illustrator Joseph Gandy. ‘The English Piranesi’, Gandy’s 18th century architectural fantasias for Soane are famous, and are still the inspiration for illustrative work today. Gandy’s own architectural practice never took off because, according to contemporaries like the artist Constable, he was ‘rude to any gentleman or nobleman who found fault with his designs ... he would not alter his drawings to please a client’. In other words they were unbuildables.

What ties Gandy’s work to our Eye Line winners, and the fantastical summer show work, is their skill in communicating the story of architecture and critiquing the status quo. Though often unbuildable, they hold the desires of the client or society from which they are borne. It is fitting then that this year Eye Line’s winning drawings may sit with Gandy’s in the diverse and wonderful RIBA Drawings Collection.

Students’ dabblings with virtual reality mean we might soon be able to wander through not just unbuildable spaces, but their datasets too – wind, sunlight, rights of light, heat loss, patterns of flow and wear. VR is increasingly used in diagramming, and to encode data and articulate the digital world in 3D. Much interesting academic research is being done too. Perhaps this will help convince the powers that be that the seemingly unbuildable can be realised. •
Eye Line 2018

Proposition and fantasy flourish equally in newly separate practitioner and student categories

Words: Jan-Carlos Kucharek

Perhaps, due to the sheer volume and range of entries for Eye Line (this year over 350), a schism was inevitable. Communication of the core architectural concept is the intent of both practitioner and student; but while one is governed by the pragmatism of the real world, the others are free to indulge whim and fantasy. RIBAJ editor Hugh Pearman, having to reconcile parallel positions to judge the entries, felt the fairest approach was to recognise and embrace these non-convergent natures. So for the first time in the competition’s six year life, the other judges – artist Deanna Petherbridge, Foster + Partners’ Emma Gibb, Studio Seilern’s Christina Seilern, Wilkinson Eyre’s Chris Wilkinson and 2017 Eye Line winner Matthew Kernan, now of Hall McKnight – judged their ‘conscious uncoupling’ as two separate categories.

This relieved the pressure to accommodate the limitations of one against the boundlessness of the other; and perhaps the distinction allowed the previous hegemony of computer renders to yield, at least for now, to the power of the hand drawn image. It was also due to the choice of judges. Both Seilern and Wilkinson as practitioners were adamant that any winning drawing put forward a proposition or demonstrated an understanding of the construction process. Conversely, Petherbridge and Gibb were more concerned with the multivalency of the drawing – its ability to communicate a sense, a feeling; that ineffable quality that adds two more dimensions to the two-dimensional image. And as if checks to both, Pearman and Kernan took the middle ground, leading to animated discussions about entrants in both categories.

And this year, Eye Line required a consistent level of excellence across a set of images. This, contentiously, meant some much-lauded images fell by the wayside; one such was ‘Somewhere Around Here’ (below); the depiction of banal suburbia by Carolyn Kirschner of Atomik Architecture as ‘an act of protest, immortalising and aggrandising normalcy’. Petherbridge read its deadened hyper-reality as ‘curiously dystopian’ but ‘compositionally sophisticated, observed and witty’. But Seilern, while appreciating its artistry, saw nothing propositional in it. In its polarised glaring white heat of a summer’s day or by the light of its full moon, this, and other strong images, ultimately fell between Eye Line’s cracks.
Practitioner: First winner
Tszwai So/Spheron Architects
An Echo in Time

Young architect Tszwai So again fills RIBA Journal column inches since being nominated as a Rising Star in 2016 – this time with his competition proposal for a Pan-European Memorial for all victims of Totalitarianism in the 20th Century, for Jean Rey Square in central Brussels. In his act of architectural atonement, So apparently decided to absent himself from the process altogether, using some of the 40,000 hand-written letters from the victims of such oppression as the building blocks of his architecture. And just as the idea goes from concept to detail and resolution, so too do the graphic techniques employed reflecting that gradual process of concretising.

So used smeared charcoal to register his initial impressions not only of the site, but of his idea, ‘I saw myself as nothing more than a messenger carrying a suitcase full of letters between the victims…and scattering them over the square,’ he explains.

In the other two images of ‘An Echo in Time’, the development of the idea involves the input of the office and the digital rendering software; as this is honed, so is the concept; the Schindler’s List ‘Girl in Red’ becoming the dramatic protagonist moving the concept forward. It was the second image, ‘Ripples of Letters’, that first drew the jury in – a plan view capturing the solemn stillness of the memorial against the movement of the people, the nuance and detail of this focal image particularly appreciated by Kernan and Gibb. Wilkinson remarked on the progression of the idea, noting: ‘The beautiful individual images are strengthened as a set.’ Petherbridge was struck by ‘the sense of loneliness conveyed on a conceptual level at the beginning that’s explicitly explored in the sequence.’ Together, all the judges acknowledged the triptych as a highly considered mnemonic cartography of both idea and process – and a worthy winner.

I saw myself as nothing more than a messenger carrying a suitcase full of letters between the victims... and scattering them over the square
The loneliness conveyed on a conceptual level at the beginning is explicitly explored in the sequence of images.
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A sense of the leaden, soaked air, the transparency, vegetation and the volume itself, all alluded to but not quite resolved
Practitioner: Second winner
Rory Chisholm/Insall Architects
Temperate House, Kew Gardens

Donald Insall Associates has just completed the restoration of the 1899 grade I listed Temperate House at Kew, allowing the world’s largest Victorian glass house to be reopened to the public; and Part 2 architectural assistant Rory Chisholm found himself fascinated by Decimus Burton’s ingenious high-level glazing actuators – so much so he set pen and brush to paper to record them. In the moisture soaked bleeding of the two, Chisholm’s sketch enthralled the judges. Gibb commented that ‘it may look like it’s been done quickly but he seems to have captured the both the volume and the nature of the space – you can feel the movement of heat and water.’ Petherbridge was struck by its understated delicacy and proficiency, despite the fact it’s unfinished: ‘yet there’s still a sense of the leaden, soaked air, the transparency, vegetation and the volume itself, all alluded to but not quite resolved.’ Pearman declared himself ‘keener the more I look at it; its languid feel’.

Wilkinson however, needed more convincing. While admitting that it showed ‘skill and immediacy’, his view was that the drawing ‘stopped too soon – I wanted it to be as much about the arched volume as the detail.’ All however conceded that in its incompletion, Chisholm’s sketch expressed some intangible aspect of Decimus Burton’s architecture that would have been virtually impossible in the polished digital render. ‘For some, with his conscious decision to not take it further, the drawing might be a flawed thing,’ remarked Petherbridge, ‘but I think of all of the ones we’ve seen today it opens up the question of what a drawing can be.’
In his portrayal of a house that the practice has under construction in London’s Whitechapel, architect Alan Power used the medium of oil on canvas in his study of ‘how the fall of natural light affects the volumetric impression of the space’. Power visualised a late afternoon in early summer ‘when the sun has almost disappeared but where the sense of light remains vivid’. In this way, he felt, ‘the tones and colours are pushed towards a sense of geometric abstraction.’

His considered, measured study of the qualities of this possible space, won enthusiastic support from the judges. Petherbridge in particular enjoyed its ‘consciously distorted qualities of light and shade’. Wilkinson considered its effect better than any CGI, noting: ‘It’s amazing as a painting. The author has abstracted the image to direct the viewer to what he wants them to concentrate on.’

In its reduction of light and shade to oblique planes of flattened white and pastel shades, it was felt that, the reality gap allowed a form of delicious artifice to make itself evident. ‘In a way the veracity of the architectural space has been subsumed into something else,’ concluded Petherbridge. ‘The painter’s resolution of the shadows has created an aesthetic logic all of its own.’
Liam’s done the opposite of architecture, but in doing so has thrown light on the nature of inhabitation.
Student: First winner
Jacob Hoeppner/University of Stuttgart
Museum for Mies: Mies with Stirling I, II & III

Stuttgart is the charged territory for Jacob Hoeppner’s investigations into the contemporary architectural condition – home to both the 1927 modernist Weissenhof Siedlung and James Stirling’s 1984 Neue Saatsgallerie, considered by many the apotheosis of European postmodernism. ‘While reduction is regarded as the method of modern architecture, fragmentation is associated with postmodernism,’ argues Hoeppner. In his triptych themed on the creation of a museum to Mies, he starts a new discussion, framing modernism in a post-modern language.

Wilkinson instantly gravitated towards the drawings, intrigued by the appropriation of their Stirling ‘worm’s eye’ views, countering Gibb’s conjecture that they were ‘pure architecture’ by asserting that in this competition you can never be ‘too architectural.’ Gibb conceded that as a set the images ‘would look great on your wall.’ In its specific singling out of a time and place, Wilkinson read the group as ‘complex and ironic, despite the use of traditional techniques of architectural representation’.

Pearman praised the skill of representation, with its ‘recognisable techniques communicating, on the face of it, a real building.’ Of its hybrid language, Petherbridge was more circumspect, feeling ‘With its shifted grids there’s something “wobbly” about them, but they’re a set of images that intrigue – like an architectural “in-joke.” But, she added, it was one that any architect would be party to.

Kernan declared himself ‘very impressed’ with the collective effect of Hoeppner’s postmodern multilingualism. ‘He is a worthy winner, and his winning champions the art of pure architectural drawing to students.’
Opposite left Mies with Stirling I.

Opposite right Mies with Stirling II.

Right Mies with Stirling III.
Acknowledged but then overlooked in the initial trawl through the entrants, Lucinda Anis’ studies of the Cliffs’ Coptic Zaballeen Community, in the end reasserted themselves with the judges to win her a worthy second place in the student category.

Subject to struggles of land ownership, Anis’ drawings seem to make no distinction between the buildings of the community and the landscape they are part of. In the different forms of representation, the three drawings, the result of surveys and intense observation, while proposing nothing on paper, nevertheless seem to become highly propositional as studies in their own right; each seeming to sublimate built form with territory.

Wilkinson was impressed with the skill of various techniques, their analytical nature combined with formal beauty — and the clear dexterity with which Anis moved between them. Seilern was struck by the drawings’ emotional component: ‘The drawings seem to refer to a city in decay, each using distinct techniques that allude to this.’

Anis said the work sought to ‘depict a beautiful, organic topography that itself experiences transition, disintegration and renewal and Pearman agreed: ‘In pen, pencil and watercolour we’re presented with palpable sense of a Coptic landscape and its occupation. With genuine skill she’s communicating the mood of the place; it’s blinding sunlight and deep shade.’

Below Conversation with the Cliff, hand-drawn in ink, computer manipulation.
The drawings seem to refer to a city in decay, each using distinct techniques that allude to this
Student: Third winner
Chris Hamill/University of Cambridge
Armagh Gaol/Building Skill Training College

The traditional, drawings-based approach of Cambridge's output has paid dividends this year with two Eye Line winners. Here, Chris Hamill tries to deal proactively with the airbrushing of Northern Ireland's Troubles. He puts the former Armagh Women's prison, set to be turned into a luxury hotel spa, to more effective use as a building skills training college; and here the medium conveys the message. Hamill was inspired by John Soane's apprentices, who learnt to observe the act of building by drawing perspectives of the master's designs in construction. In Hamill's skilled cut perspective sections, it is the process of building, not the finished article, that stars. Seilern was impressed by 'the core understanding of the techniques of construction that were integral to the creation of the image.' Gibb, meanwhile, was taken by how Hamill had 'immersed himself in the compositions; in their beautiful treatment of light'. Pearman was enamoured with its historic associations, its 'Soanic didacticism'. For Wilkinson, Hamill's use of mixed media, Photoshop and pen line-work made the construction of the drawing as adept as his proposed construction methodology for the gaol. 'What the project might lack in originality, it makes up for in pure skill.'
**Student: Commended**  
**Caroline Barnard/Kingston University**  
**The Storage House**

Caroline Barnard’s proposal to ‘occupy’ the self-storage centres that proliferate on our city edges beguiled and amused the judges, her work showing an irony that they didn’t fail to pick up on. In addition to its prosaic function the self-storage is now complemented by an array of community functions and new public space. Petherbridge was an instant fan taken by the image ‘of the two beer cans that rucks the symmetry of the whole thing…taking something so banal and ennobling it is somehow intriguing’. Seilern was less convinced of its propositional nature but Wilkinson enjoyed the texture and grain of the images and felt they should be commended. Behind the simple graphite representation lay something more complex, argued Barnard: ‘The Storage House responds to its domestic context at civic scale, playfully dancing between the two.’

**Student: Commended**  
**George Allen/Royal College of Art**  
**Theatre Royal, Drury Lane**

Carried out in the weekends over three months, using three Rotring pen line weights, and inspired by the frivolity of Heath Robinson’s work, this long section through the Theatre Royal, Drury Lane is nothing less than a labour of love by Part I assistant George Allen. The drawing, he says, ‘depicts a calamitous opening night of Pan the Musical’, marked by a rampaging elephant, a capsizing ship and various instances of drunkenness, thievery and infidelity.’ While Petherbridge struggled with its ‘contradictory, mechanistic mode of working; its banality’, she found herself in the minority. Gibb thought ‘it gave a real sense of place and occasion. It’s very dramatic and he’s put real effort into each and every character.’ Seilern enjoyed its comedic references to cartoonist Jean-Jacques Sempé and Wilkinson praised ‘its obsessive, pictorial nature.’ Pearman commended the evidence shown here for the possibility for architects to move into the realms of illustration. Nobody could dispute Gibb’s assertion that ‘the more you zoom into it, the more you realise that each and every person he portrays has an imagined life.’
In 1956 the RIBA hosted an exhibition celebrating the architecture of Australia. The images displayed demonstrated the important role that modern architecture played in the post-war development of the continent. Many of these were retained by the RIBA and now form part of the Photographs Collection.

The Pfitzenmaier Beach House in Queensland was one of a number of housing projects exhibited. The house was designed in 1953 by Edwin Hayes of the Brisbane-based partnership Hayes and Scott. He was commissioned by hotelier Ethne Pfitzenmaier, a friend of his parents, to build a seafront holiday home.

The resulting building, described by Hayes’ partner Campbell Scott as ‘a whim and fancy, a structural delight’, was instrumental in the creation of Australia’s new domestic modernism. Its striking features included a butterfly roof, a cantilevered balcony with white louvres, and central breezeway to ventilate the main house and adjoining studio.

The house won many accolades but financial pressures necessitated its sale just three years after completion and it was sadly demolished to make way for a larger development.

Justine Sambrook
Versatile Acoustic Spray Range

Project: Winter Gardens, Weston-Super-Mare
Architect: View Architects, Bristol
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