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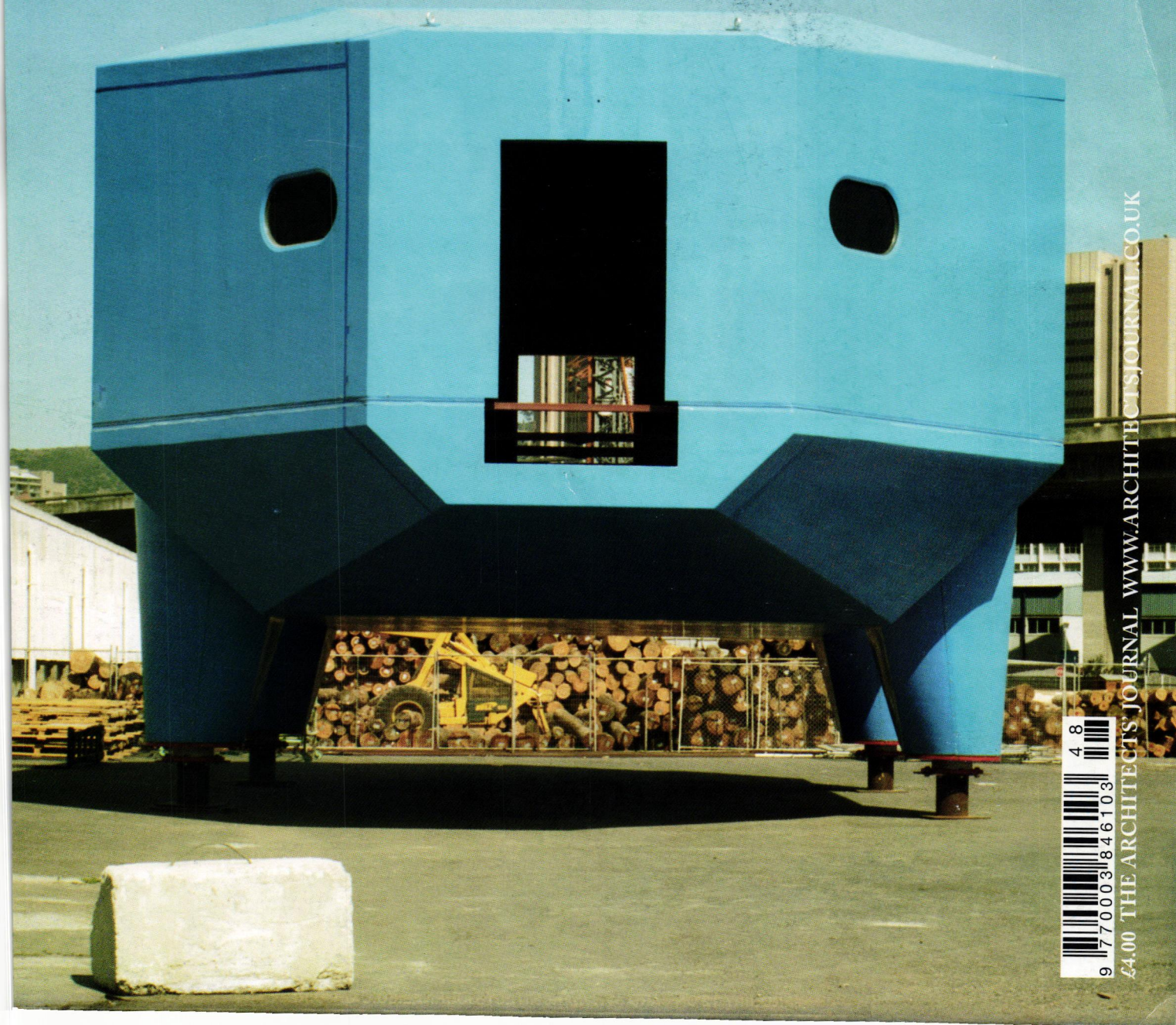

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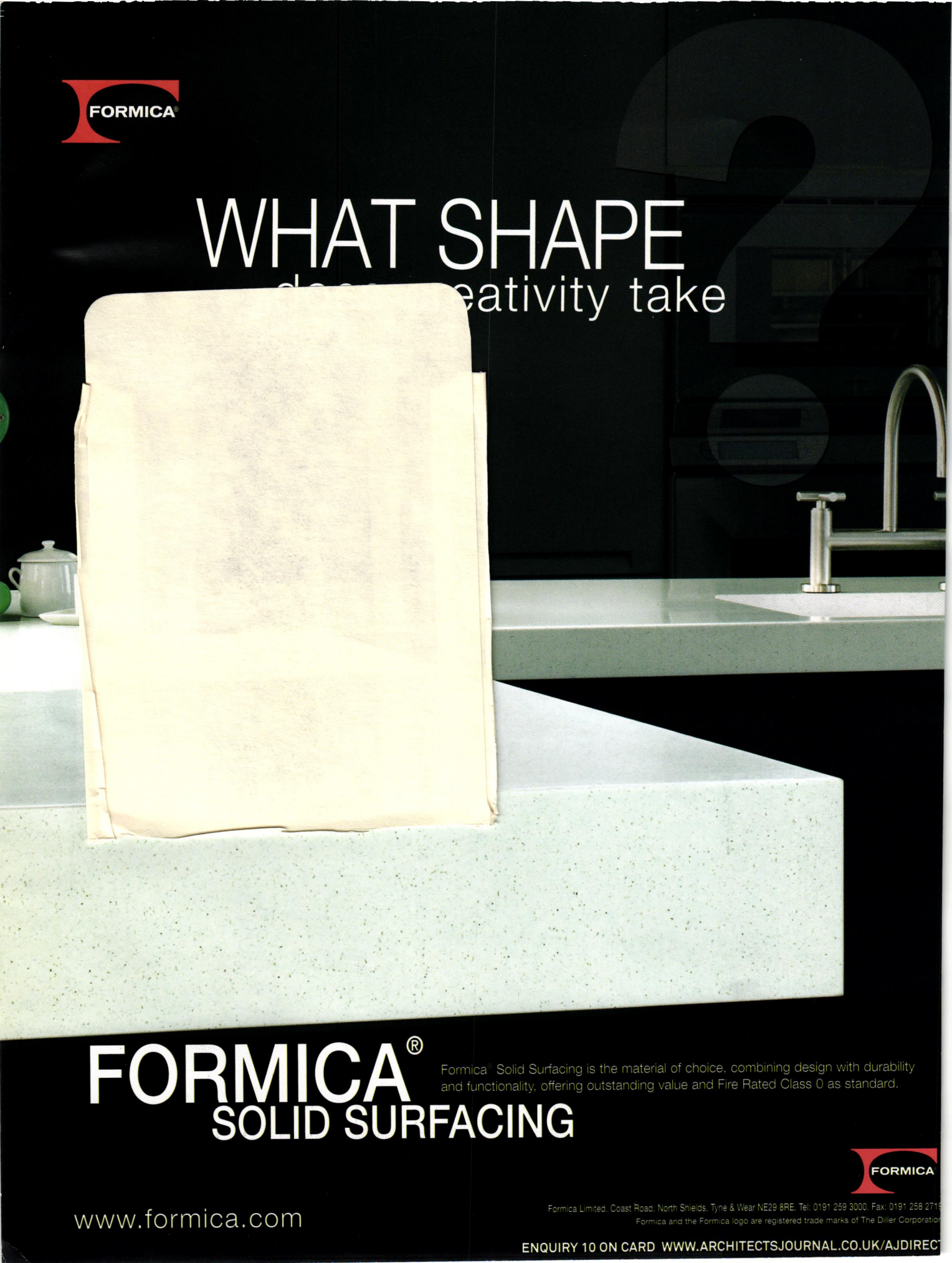
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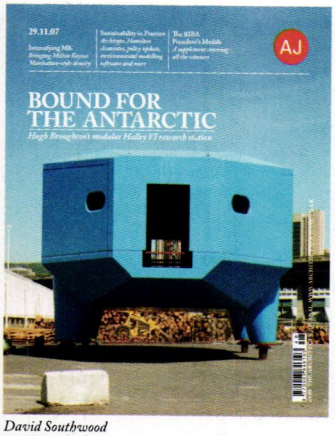

David Southwood

Amandine Kastler

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***Richard Marks**, who photographed Peter Märkli and Florian Beigel on pages 82-83, is an associate at DRDH Architects*

***Lucy Musgrave**, who discusses collaborative masterplanning on page 18, is co-director of consultancy group General Public Agency*

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***Alex Wiltshire**, who writes about video games and architecture on page 85, is deputy editor of video game magazine Edge*

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This week online

Read the full transcript of Peter Märkli's conversation with Florian Beigel (*pages 82-83*) at WWW.ARCHITECTSJOURNAL.CO.UK

CABE reveals 'urban wasteland' fears for Thames Gateway p.7

National Trust throws Giant's Causeway scheme a lifeline p.14

Diane Haigh, head of architecture at CABE, takes AJ readers' questions p.16

DOMINIK GIGLER

3XN BOSS SLAMS MEDDLING MUSEUM

Kim Nielsen, head of Danish practice 3XN, has launched a withering attack on the National Museum of Liverpool (NML) weeks after being dropped from the £50 million flagship scheme.

Nielsen, whose practice was replaced on the controversial waterfront project by executive architect AEW a fortnight ago (News, AJ 15.11.07), accused museum chiefs of constantly meddling with the design.

Speaking exclusively to the AJ, he said: 'How can the architect perform when the client, against the advice of the architect, makes significant changes in the design agreed to by all parties?'

The Dane's salvo comes at the same time as rumours that NML may have to reapply for planning permission for the 'changes' to the design, including the planned replacement of the travertine stone facade with Jura limestone.

In a leaked letter shown to the AJ, a senior officer at Liverpool City Council admitted the authority's planners had not been told of any alterations to the proposed materials on the project.

The document reads: 'The issue of the proposed change of materials was drawn to my notice on the [19 November].

'There has been no discussion of this with planning officers prior to this. A planning application will be needed to change the materials.'

However, the museum said it would only resubmit plans if asked to do so. A spokesman for NML said: 'We will, of course, submit a revised application if we are required to do so but, as yet, we have not received notification'. *Richard Waite*

Read how Nielsen feels about his experience at the NML on page 19

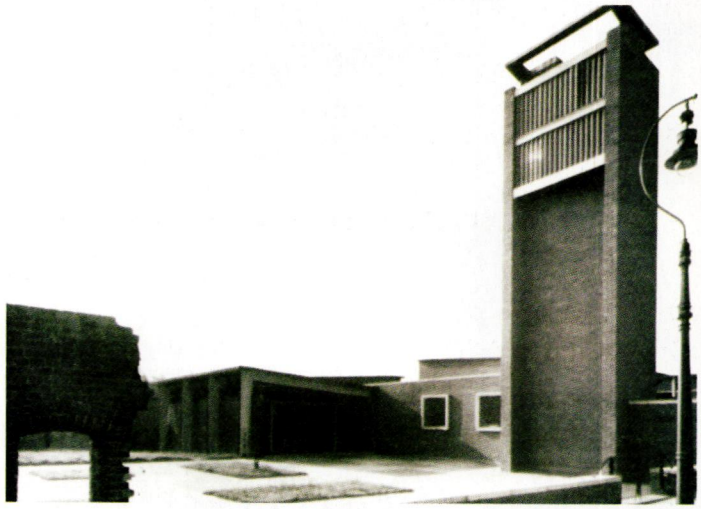
RAZED GOLDFINGER TO BE 'REBUILT'

A developer who illegally razed part of a listed Erno Goldfinger-designed school in west London has been ordered to 'exactly rebuild' the bulldozed building.

Rajiv Laxman, sole director of developer Abrus, was also slapped with an £11,000 bill in costs and fines after he flattened the former caretaker's cottage at the Grade II-listed Brandlehow School in Putney, built in 1952.

The prosecution was brought by Wandsworth Borough Council, acting on reports from local residents early this year that – even though he had been refused listed building consent – Laxman had demolished most of the small, wing-roofed house.

A spokesman for the Twentieth Century Society said: 'Although the original historic building has been irretrievably lost... the [society] is pleased by this result, as the costs to the developer will act as a more effective deterrent than the fine imposed.'

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CABE WARNS OF THAMES GATEWAY 'WASTELAND'

Watchdog says improved design is vital to avoid regeneration disaster

The Thames Gateway is in danger of becoming a 'wasteland of badly-designed housing and public spaces' CABE has said.

CABE delivered the warning at the Thames Gateway Forum held today (29 November), before launching its design pact for the region which calls for a 'step change' in design quality.

The criticism comes after the Commons' Public Accounts Committee (PAC) said the project was at risk of becoming a 'public spending calamity'.

Developed alongside the Thames Gateway Strategic Partnership, CABE's pact points the finger at all the organisations involved in the scheme's delivery, and calls on Communities and Local Government (CLG) to provide funding 'only on the condition of good design criteria'.

CABE also suggests that Regional Development Agencies need to look at issues such as transport and infrastructure, not just land use. It also urges local authorities, English Partnerships, and other public-sector landowners to ensure that no land in public ownership is sold without a binding masterplan.

Long-term Thames Gateway critic, Conservative MP for North East Bedfordshire Alistair Burt said: 'Right from Richard Rogers' report in 2005, concerns have been highlighted as design quality risks being sacrificed at the expense of quality.

However, the London Thames Gateway Development Corporation believes CABE's input is unnecessary.

A spokesman said: 'If CABE feels it has something to add then that can be positive, but we are committed to stringent master-planning.' *Richard Vaughan*

LONDON GREEN GRID UNVEILED

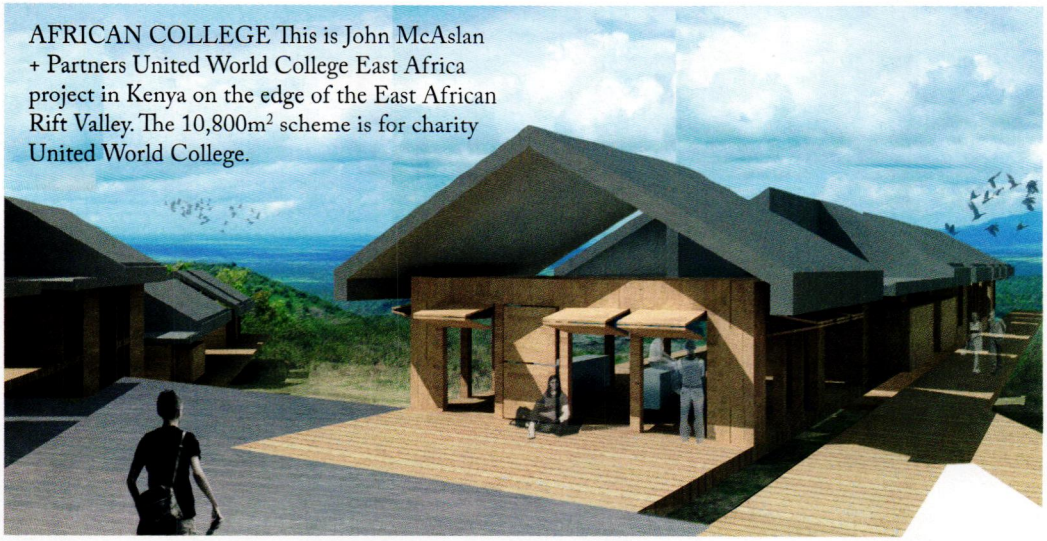
The mayor of London has published his East London Green Grid strategy, the first stage of a proposal to create a network of open spaces in the region.

Speaking at the Thames Gateway Forum held yesterday (28 November), Ken Livingstone outlined his plans to 'embed' an infrastructure of green spaces in east London, to ensure that newly created communities in the area have access to 'high-quality' communal spaces.

'The 2012 Games is acting as a catalyst for the regeneration of London as a whole and East London in particular,' the mayor said.

The Green Grid plan forms part of the wider Parklands plan also unveiled by Communities and Local Government at the Thames Gateway Forum.

For more news from the Thames Gateway Forum visit WWW.ARCHITECTSJOURNAL.CO.UK



AFRICAN COLLEGE This is John McAslan + Partners United World College East Africa project in Kenya on the edge of the East African Rift Valley. The 10,800m^2 scheme is for charity United World College.

THIS WEEK ON THE WEB

MAYOR U-TURN ON POTTERS FIELD THREAT

The Mayor of London has reneged on his threat to submit a compulsory purchase order on the remainder of the Potters Fields site on the South Bank. Ken Livingstone had set a limit of 30 days for landowner Southwark Council to build on the site. The month is up, but the Mayor office claims to be in negotiations with Southwark to find a solution.

GREEN RATING CALL

The UK Green Building Council (UKGBC) has called for a mandatory rating against the Code for Sustainable Homes for all new homes. The UKGBC believes the wording of the new Housing and Regeneration Bill should be altered to ensure that future house buyers are aware whether their house has a rating or not.

LEGAL ROW OVER VAUX

Tesco has launched a second High Court challenge against Sunderland Council's plans for the former Vaux Brewery site. The firm wants to build a store on the site and has issued legal proceedings against a council development plan which forbids any large-scale retail development on the site until 2012. The council, which wants to build a scheme by CZWG on the plot, has the support of the secretary of state and the planning inspector (AJ 08.11.07).

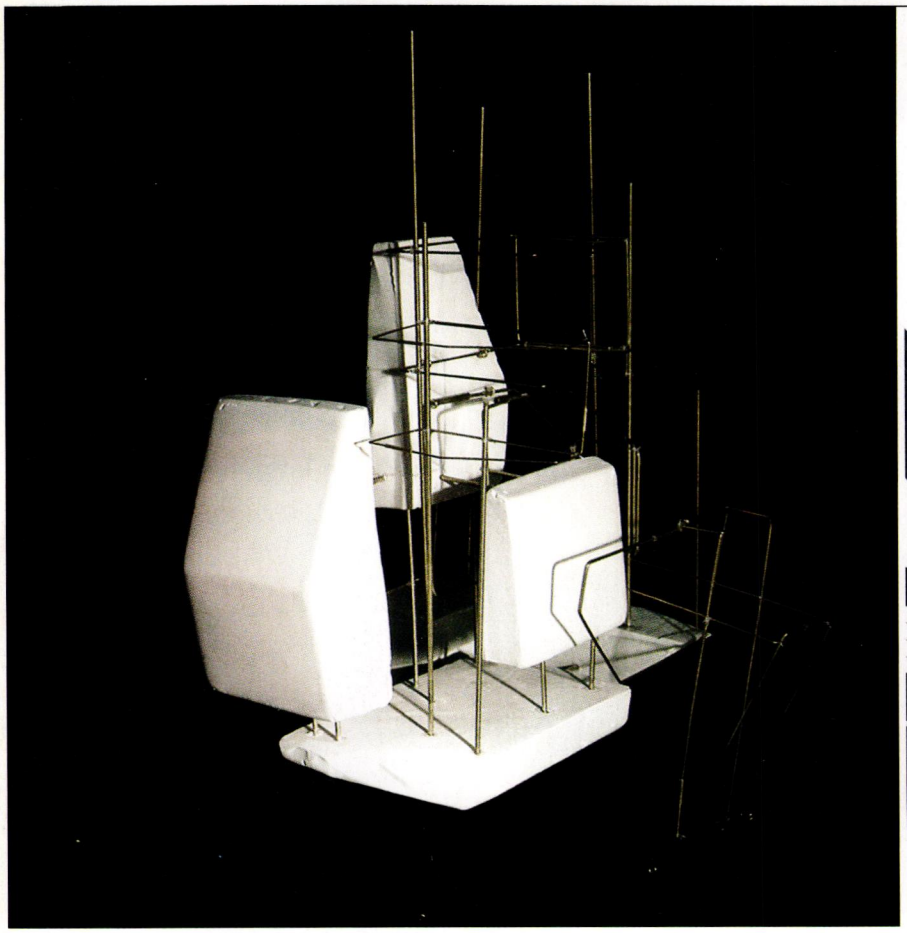
LEEDS PLAN ON HOLD

The slowdown in the Leeds' property market has been blamed for George Wimpey City's decision to mothball Assael Architecture's high-rise Green Bank apartment scheme in the city. The riverside development would have featured a 120m-tall tower and six smaller blocks. The developer said it would review the future of the scheme next spring.

Read all these stories and more at WWW.ARCHITECTSJOURNAL.CO.UK

RMJM COMPLETES CHINA LIBRARY

RMJM has completed its 46,000m² student library and administration building in Shenzhen University Town, south China. More than 6,000m² of office space is housed in the 'dragon's head' at the entrance to the competition-winning scheme (*on the left of the image*). The library, which will hold 1.5 million books, sits across the water (*on the right of the image*), below the building's 480m-long undulating roof. *Richard Waite*



PRESIDENT'S MEDALS WINNERS

London architecture schools scored a triple whammy at the 2007 RIBA President's Medals ceremony last night (28 November).

The medals, which recognise the best student work in RIBA-accredited schools in the UK and abroad, went to students from the Bartlett, the Architectural Association and the University of Westminster.

Steve Westcott of the Bartlett, tutored by Yeoryia Manolopoulou and Niall McLaughlin, won the Silver Medal for Part 2 work with his Greenwich Perceptual Observatory project. Amandine Kastler from the AA, taught by Oliver Domeisen and Frances Hiromi Mikuriya, won the Bronze Medal for the best Part 1 work with her Cabinet of Curiosities project. Joanna Rapp of the University of Westminster, taught by Richard Difford, received the Dissertation Medal for her work on Giovanni Battista Piranesi.

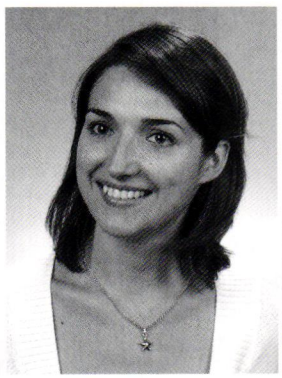
The judges for the design medals were academic and practitioner Peter Salter, Charlie Sutherland of Sutherland Hussey, and Swiss engineer Jürg Conzett, with David Gloster of the RIBA as non-voting chair.

Peter Blundell Jones of the University of Sheffield chaired the dissertation judges, who were Nicholas Temple of Lincoln School of Architecture, Iain Boyd Whyte from VARIE (Visual Arts Institute Edinburgh), and Diana Periton of the Mackintosh School of Architecture. *Ruth Slavid*

See this week's 40-page supplement for all winning and commended entries

Above left
Steve Westcott's Greenwich Perpetual Observatory
Above right
Amandine Kastler's Cabinet of Curiosities

Right (from left to right)
Steve Westcott, Joanna Rapp and Amandine Kastler



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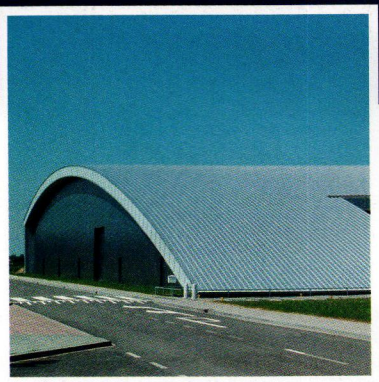

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LEARNING DIFFICULTIES

SOUND - A look at the potentially disruptive noise levels of foam insulated composite panels

RAIN NOISE TESTING FOR METAL ROOFS

Acoustic insulation is becoming increasingly important, particularly in buildings which require reduction of external noise or reduced intrusion from impact noise caused by rain. Buildings used for education, such as schools and university lecture theatres, as well as other large buildings, very often have metal roofs. Metal roofs are used in these buildings because they are lightweight, easy to install and easy to maintain. However, the nature of the activities which take place within these buildings means that noise reduction is a particular concern.

The performance of typical foam insulated cladding panels will provide a significantly lower sound reduction and therefore lesser acoustic performance than a typical built-up system, illustrated by the test results below.

Acoustic performance is measured by assessing the decibel (dB) sound reduction over a frequency weighted to the human ear – 100Hz to 5000Hz (5KHz). The average of this sound reduction is called the SRi, or Sound Reduction Index.

An 80mm foam core composite panel with 0.5mm outer and 0.4mm inner steel faces has an approximate SRi of 25dB.
A single sheet of 0.7mm trapezoidal profile steel has an approximate SRi of 24dB. The SRi of a standard built-up roof system is 45dB (based on Euroclad Elite System 2.25, a typical built-up roof system achieving 0.25W/m2K U value). In the case of sound reduction the greater the dB figure, the better the sound reduction and therefore the larger decrease in noise.

The decibel difference in this case is 20dB, however bear in mind that a 3dB difference equates to a doubling of power and a 10dB difference is required to double the subjective volume. A 1dB difference over a broad frequency range is noticeable to most people, while a 0.2dB difference can affect the subjective impression of a sound.

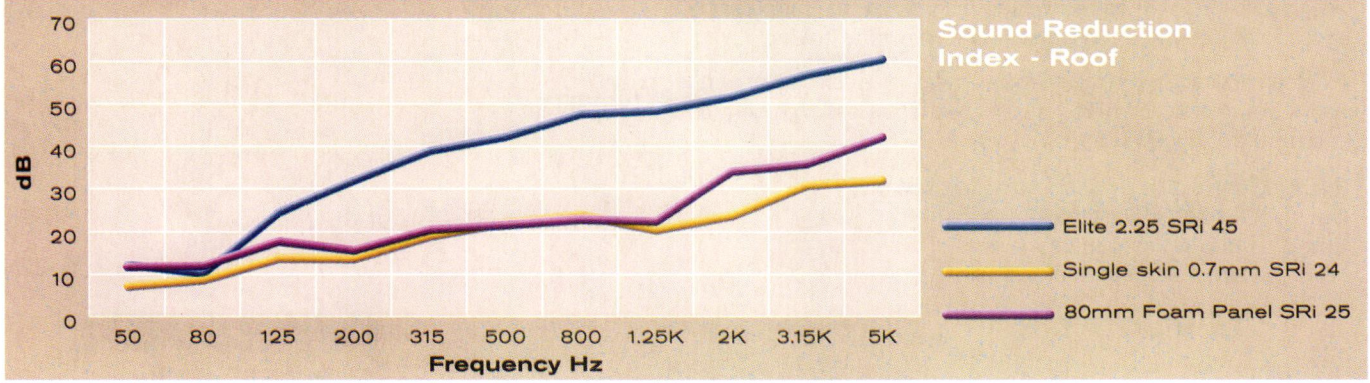
The insulation used within metal constructions needs to deal with both external noise sources, such as traffic and aeroplanes, as well as impact noise created by rain. In some situations the potential sound pressure levels created by rain falling on a roof can be in excess of 70dB (similar to street traffic). Historically, there has been very little information available to help specifiers to choose the most effective sound insulation solutions for metal cladding.

With this in mind, Euroclad and Rockwool commissioned the BRE to carry out sound intensity measurements of rain noise on a variety of roof constructions, using ISO/CD 140-18 (ISO TC43/SC2 N 0751) and BSEN ISO 15186-1:2003. The tests compared a built-up profiled metal roofing system against a foam cored composite metal roofing system.

Test 1 used a built-up system which comprised; Euroclad liner, Eurobar rail and bracket spacer system, Rockwool cladding roll and Euroclad outer profiled sheet. Test 2 used a composite panel with a trapezoidal external profile, PIR insulation foam and a trapezoidal liner.
A rig was created to simulate heavy rainfall and the Reverberant Sound Pressure Level (RSPL) beneath each construction was measured.

RSPL is the sound in an enclosed space which results from repeated reflections at the boundaries – a big consideration in a large, empty space like a school assembly hall or gymnasium. Lower reverberant sound pressure levels represent improved acoustic performance. Test 1 using Euroclad's profiled metal roofing and Rockwool insulation achieved a significantly lower RSPL in gymnasiums than the equivalent PIR composite panel (65dB compared to 77dB).

Acoustic Technical Document



Source: Acoustic testing by Corus UK, Swinden Technology Centre, 2006.

Project: St Augustines School
Practice: CTM Architects
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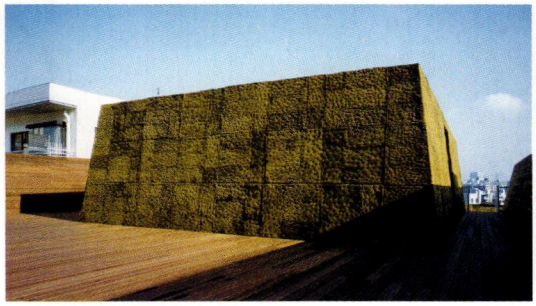
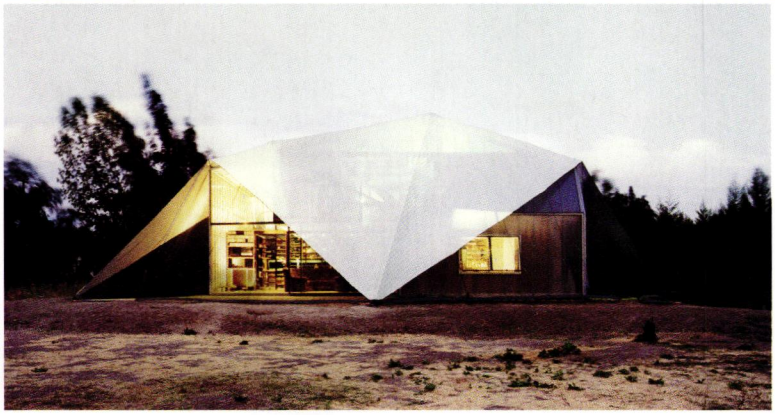
Right Ecosistema Urbano Arquitectos' EcoBoulevard in Vallecas, Madrid, Spain.
Below Taketo Shimohigoshi's vegetation installation at the FLEG Daikanyama showroom in Tokoyo, Japan.
Bottom FAR: Frohn & Rojas' Wall House in Santiago, Chile.





ARCHITECTURAL REVIEW AWARD WINNERS NAMED

There are three winners of this year's Architectural Review Awards for Emerging Architecture.

The trio are: Japan's Taketo Shimohigoshi, Spain's Ecosistema Urbano Arquitectos and Germany-, Chile- and Mexico-based FAR: Frohn & Rojas. They will all receive an equal share of the £15,000 prize money, at a ceremony tonight (29 November) at the RIBA headquarters in central London.

The awards recognise projects with 'a commitment to improving human life'.

HENEGHAN PENG COULD WIN REPRIEVE AT GIANT'S CAUSEWAY

Heneghan Peng's beleaguered Giant Causeway visitor centre project has been thrown a lifeline by the National Trust (NT).

In September, the AJ reported that the £21 million scheme had been shelved after the Northern Irish government pulled funding and threw its weight behind a cheaper, privately funded visitor facility on a neighbouring site (AJ 13.09.07).

But now, the NT – which owns the famous Causeway stones – has formed a joint venture with Moyle Council – which owns the site of the proposed project – to push through a new scheme in a move that could see the revival of Heneghan Peng's designs.

A NT spokesman said that the joint venture had the backing of the province's Department of Enterprise, Trade and Industry (DETI) and confirmed that Dublin-based Heneghan Peng was back in the running.

The spokesman said: 'Their scheme meets the various criteria and yes, this is a lifeline for Heneghan Peng.'

However, Heneghan Peng founder, Shih-Fu Peng said he was not holding his breath.

He said: 'It's a soap opera and mired in politics. We've been told to stay low and not to say anything.

'We wanted to have this project designed three years ago.

'Now it will cost 10 times as much and we don't even know what it will look like.'

Max Thompson

Should CABE concentrate on new housing or whizzy City towers? How do design review members remain objective? And is there a place for Classical architecture today? Your questions are put to *Diane Haigh*, in her first interview since taking over as CABE's director of architecture and design review

Diane Haigh, pictured at the CABE offices in central London

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Opinion 3XN boss *Kim Nielsen* gives his side of the story after being dropped from the New Museum of Liverpool

Looking back on the process, I am convinced that the unfortunate affair of our practice's involvement on the New Museum of Liverpool project can be summed up by one question: What is the architect supposed to do when a client will not respect his architectural responsibility? To expand on this, how can the architect perform his expertise, i.e. giving advice on the design of the building, if the client adopts a practice of micro-management, insisting on signing off all drawings themselves? How can the architect perform when the client, against the advice of the architect, makes significant changes in the design agreed to by all parties? How can team spirit be established if advisors, project managers and contractors are replaced several times, and the parties are not allowed to interact and cooperate as professionals?

On 29 October 2007, my co-partners Kim Christiansen, Bo Boje Larsen and I were summoned to a meeting with our client on the New Museum of Liverpool project, National Museums Liverpool (NML), supposedly represented by the board of trustees. According to the agenda, we were supposed to discuss some details in the design warranties, progress on the site, and the way forward. On our arrival, however, we were met not by the trustees but by the director of NML, the financial director, and the museum's solicitors. We were informed that 3XN was to be taken off the project with immediate effect. We were given no explanation and were asked to immediately hand over drawings and documents – even the keys to the locks on the building site.

For us, this instance ended a period of frustration, as we had tried to share our own concerns with the museum management for quite some time. However, we had understood that neither party would speak with the press. We were therefore surprised when, on 12 November 2007, a journalist contacted me enquiring about the termination of our services. He had been informed by a NML spokesperson that NML had 'contracted the Manchester-based architect, AEW', our sub-advisor, to 'deliver the detailed design for the Museum of Liverpool'.

NML was quoted as saying that this arrangement represented 'the best value for money, ensuring that the project remains on schedule and to budget', thus implying that 3XN could not be trusted to ensure the same. This left us with no choice other than to issue a press release stating that throughout the entire process, we had done our utmost to ensure that all architectural solutions were kept within the economic framework.

Failure to observe the professional design responsibilities of a complicated building project on a highly sensitive site not only puts far too much pressure on the client management, it also endangers the synergy normally created by the mutual exchange of skills and knowledge that ensures a successful outcome.

I am hopeful that we will overcome the present situation, and that we can all work together in finalising the Museum of Liverpool project, not least for the sake of the city of Liverpool, which deserves nothing but the best building on the old pier.

Kim Nielsen is principal of 3XN

See National Museums Liverpool's viewpoint on the letters page, p22

Opinion A more collaborative approach to masterplanning will result in better buildings, believes *Lucy Musgrave*

Sunand Prasad, in his RIBA presidential address, said the knowledge base of the RIBA's members is its greatest asset, and that this should be built upon and shared (AJ 22.11.07). He wants to ensure that the RIBA will work hard to achieve its mission to create the optimal conditions for architecture.

Prasad also said that there is an absence of a shared knowledge base in the UK on urbanism and masterplanning. This is essential for spatial masterplanning.

There is an increasing feeling that shortlists for the Lea Valley and Thames Gateway are being flooded by masterplanners from abroad. So is there a crisis of confidence in British masterplanning, and if so why?

Other European countries have highly developed fields of urban design, with skilled designers working for local authorities, and a field of urbanism with its own professional bodies. We do not have this in the UK.

Up until the 1980s, the UK had an extremely strong tradition of 'architect-planners'. London County Council (LCC), individual boroughs, and many county >>

3XN's design for the New Museum of Liverpool

councils had large in-house teams of architects responsible for spatial planning. Quangos acted as commissioning bodies providing collective forms of knowledge that would be shared. There were problems with these structures, but there was also a particular strength. In the dynamic days of the LCC, younger practitioners were invited into the system to test, to build a bank of knowledge and to give the professional framework energy through collaboration and innovation.

Does the make-up and culture of the Thames Gateway Development Corporation, the regional development agencies, the ODA, compare? Are we feeding a knowledge base by inviting the best to collaborate and reinvigorate British urbanism? I fear not. Collective knowledge is now largely held within large, commercial, multi-disciplinary firms where it is protected as a competitive advantage.

The UK planning system has turned into a negotiated system. Detailed spatial elements of a plan are rarely given any degree of fix. The debate and drivers are not around design, but planning targets and profit margins.

But in Britain a new way of working is emerging – a younger generation of practitioners in small and medium-sized practices where the approach is grounded in the reality of place. This is not cute New Urbanism, it is a practice evolving to adapt to complex, convoluted processes of negotiation. It requires an ability to collaborate, and is founded on sharing ideas and practice.

It requires a particular set of skills that mean architects/urbanists develop a way of working in a variety of capacities alongside the planning and development process.

In realising Prasad's vision 'to create the optimal conditions for architecture', a knowledge base should be built that restores the sharing of methods and practice in masterplanning and urbanism. It should place centre-stage the particularly British approach to research-led practice. Let's demand more rigour in the brief-setting of our quangos. The result will be a more confident plan-led approach and will result in better architecture.

Lucy Musgrave is co-director of consultancy group General Public Agency

Email comment@architectsjournal.co.uk

Opinion The '70s were dull times for UK architecture, but creativity was flourishing overseas, writes *Peter Davey*

One of the aspects of the '70s that last week's contributors mentioned little was the sheer boredom of the decade (*See the Critics, AJ 22.11.07*). Most of us who entered the profession in the '60s had been inspired by the heroic period of the Modern Movement, heroes like Corb and Mies were still alive – you could meet them. But by the early '70s, idealism had largely burned out, and we were overwhelmed by a wave of bureaucracy and big business. Archigram, the Whole Earth Catalog and their continental cousins, all once seen as hopeful, seemed to have lost their way in a trackless morass of cheap print and paper.

Many young architects were involved in system building. System-built housing, schools and health buildings of the '70s are ludicrously inefficient by modern environmental standards, often leaky, massively underspecified, and now usually tired and dilapidated. The oil crisis ensured that everything had to be built as cheaply as possible, yet governments still retained the vestiges of post-war commitment to creating a good society and much was still being built as fast as possible. System building trapped young architects. They had little opportunity to show creativity because detailing and much else were laid down by the systems. And, before the advent of computers, you could be stuck for months, if not years, on tiling layouts or door and window schedules for increasingly dull buildings. In Britain, the economy and architecture seemed to be set on an ever steeper downward spiral.

Yet, mostly from overseas, there were some signs that hope needn't be abandoned. When the Pompidou Centre opened in 1977, Archigram appeared to have had real results at last in a huge flexible chunk of the middle of traditional Paris. Another interpretation of flexibility was Herman Hertzberger's Centraal Beheer in Appeldoorn, the Netherlands, where a large office volume was full of small intimate places, plants, birdsong and laughter.

For me, the most moving building of the decade was far from flexible. Louis Kahn's Kimbell Art Museum in the cultural desert between Fort Worth and Dallas in Texas is a moving poem in mass and light, comparable in nobility to anything in the whole history of architecture. That such a building could emerge at such a time and place was a sign that architecture was alive. Kahn's work, and the increasingly assured and powerful late-'70s output of younger architects like Stirling (some of the time), Foster, Cullinan, Rogers, MacCormac and Hopkins showed that architecture need not be boring. The '70s had not killed architecture.

Nowadays when architectural values are threatened by PFI, PPP and the rest, we should remember that the '70s showed that architecture can survive even in the least propitious circumstances.

Peter Davey is former editor of the Architectural Review

Are you doing your bit?

Look! Not wanting to be over dramatic or anything, but the sands of time are running away. We all have an obligation to act more sustainably.

Kingspan Insulation has been acting on this obligation for a number of years now and was the first insulation manufacturer to publish an independently certified Ecoprofile for one of its product ranges and then to publish an independent review of the societal, economic and environmental sustainability of its manufacturing operations at is main UK site.

But... time moves on and Kingspan's philosophy is to not rest upon its laurels. Kingspan's work on sustainability is not about collecting badges, it is about demonstrating progress, and to this end Kingspan's ecoprofiling and sustainability review processes are revisited annually.

Kingspan Insulation has now published an updated version of its Ecoprofile for the Therma range of rigid urethane insulation products. The Ecoprofile, independently certified by BRE, shows an improvement in the environmental impact of the Therma range.

Kingspan Insulation has also published the results of the latest review of the societal, economic and environmental sustainability of its largest manufacturing facility at Pembridge, Herefordshire. This review process, carried out annually by Arup using the SPeAR tool, includes a statement of progress made by Kingspan and a list of commitments that Kingspan's sustainability team is actively working on.

Kingspan Insulation has made a start – HAVE YOU? Perhaps your first decision could be to only use materials from manufacturers that can demonstrate to you what they are doing about the holistic sustainability of their products.

Copies of the latest ARUP Sustainability Appraisal with Kingspan Insulation's improvement action plan or Kingspan's latest Ecoprofile are available from Kingspan Insulation on:

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Letters

Please address letters to: The Editor, *The Architects' Journal*, Greater London House, Hampstead Road, London NW1 7EJ, fax 020 7391 3435, or email kaye.alexander@emap.com to arrive by 10am on the Monday before publication. The AJ reserves the right to edit letters.

STONY DECISION

Further to Richard Waite's article about the new Museum of Liverpool (News, AJ 15.11.07), I write to clarify some elements in the piece.

Firstly, the decision to move from travertine to Jura – a finer-grained natural limestone – was based on quality and performance, not cost. In fact the cost of each stone was very similar. What we found is that the travertine panel which we have been testing on site for the last two years does not stand up to the environmental demands of the waterfront location.

Furthermore, a travertine stone facade does not meet our specification for the removal of graffiti. We are building a museum of supreme quality which will look pristine for the next 100 years – the move to the Jura will protect that intention.

Secondly, Kim Nielsen's statement that 'all architectural solutions were kept within the economic framework' is true only because the client and the wider team have spent considerable time and effort undertaking extensive value engineering to keep the scheme on budget.

Thirdly, it is not true that we as the client want 'significant architectural changes'. The form of the building remains unchanged, with the exception of some amendments of detail required to bring 3XN's designs up to UK building standards.
Sharon Granville, executive director, Museum of Liverpool

WHITHER CABE?

You have noted in recent editions of the AJ, that the views of CABE have been ignored by various local planning authorities. Similarly, English Heritage's comments have also been ignored. So what is the purpose of either organisation, if their comments carry no weight with the planning authorities?

If CABE's comments can be so easily cast aside, then what is the purpose of CABE?

In Bedford, a very sensitive and prominent site on the waterfront is proposed to be developed by a partnership of the Bedford Borough Council and MCD Developments. I do not like the style of the proposed Neo-Classical scheme, Riverside Square, and just look at the mass, the poor proportions and pure height of the building. Yet the public has not been asked to vote on the design.

CABE's design review panel stated: 'We do not think the architecture has responded to, or reinforced, the character of Bedford. [We] recommend that this development is not given planning permission... a fundamental rethink is required.'

But CABE's comments were summarily dismissed by the planning officer, and this building has now received planning approval. If CABE's comments can be so easily cast aside, then what is the purpose of CABE?

Is the planning system working? We in Bedford are becoming increasingly frustrated with the lack of aesthetic appreciation. Are we alone?
Graham Wright, Bedford

THINK LIVELY

Like everybody else, I enjoy a good rant, and Alan Dunlop's tirade against Edinburgh World Heritage was a vivid one (Comment, AJ 22.11.07). But we can't take it seriously, if only for factual reasons.

He states that Edinburgh World Heritage is a self-selected group. Wrong. We are appointed by Nolan rules (established by the Committee on Standards in Public Life), and our activities bear little relation to his tirade.
Charles McKean, chairman, Edinburgh World Heritage

IN THE FAMILY

Regarding your review of the AA exhibition 'Forms of Inquiry' (AJ 25.10.07), I was relieved that the press has hit on something that students and professors experience daily here at the AA. The inward-looking course you describe is further apparent in the public display and lecture programme, but more so in the manner in which academic percipience is mediated.

I hope that in the future you will find more opportunity to report on pertinent matter-related issues rather than clouded nepotism. Graphic display removed from commerciality is a means for implementation, and rarely relevant to education.
Name withheld

WATCH THIS SPACE

A number of new projects seek to bring density to Milton Keynes, creating new zones of development in Modernism's Garden City. *Richard Vaughan* investigates

The walk from Milton Keynes train station to the 'Centre', the Buckinghamshire new town's enclosed shopping centre, is the same distance as from London's Marble Arch to Tottenham Court Road. The difference between these two ambles is people: the latter has more than 10,000 per square kilometre, the former has just 728.

It may seem rather trite to compare London with Milton Keynes; however, it is simple but integral things like lack of human interaction that is forcing Milton Keynes, now entering its fourth decade, to change.

In 1967, Milton Keynes was designated under the New Towns Act of 1946. Two years later, Llewellyn-Davies, Weeks, Forestier-Walker and Bor drew up a masterplan that amalgamated three towns and 13 villages to form a city of 250,000 people. In keeping with the New Towns Act, densities were strictly regulated and encouraged a maximum residential density of 17 dwellings per hectare.

Perhaps this goal was too successful – statistics from the 2001 Census show that central Milton Keynes has a staggeringly low residential density of 5.3 people per hectare, due to its predominantly commercial tenants. It's so desolate that, in 2003, then deputy prime minister John Prescott designated the town as a target growth area as part of his Sustainable Communities Plan.

Three years later, in 2006, English Partnerships employed masterplanner EDAW to draw up Vision 2031, which set out proposals to increase the population of the town from its current 224,000 to 380,000 by 2031 by increasing density and expanding east and west. As a resident for the last 13 years Andrew Jones, EDAW director of operations, knows all too well how revered and iconic >>

BEN SPECK

Right Numerous new projects are under construction across Milton Keynes, from the centre out into the east and west expansion areas

Milton Keynes and its grid system are. But in his eyes, too much commitment to that ideal is strangling growth.

'We tried to strike the right balance in keeping points of the original plan while making it more sustainable,' he says. 'One of the key changes is making it easier for people to use public transport. We want to connect the isolated estates with transportation systems, and provide self-sustainable larger estates with their own shops, cafés and bars.'

Other local agencies support this plan. Architecture MK (AMK), founded by Milton Keynes Council to oversee the design and implementation of proposed buildings, backs EDAW. AMK head Andrew Armes adds: 'We are trying to get people into the middle of the city – at the moment trying to build at higher densities in the suburbs is heresy.

'Developments like Glenn Howells Architects' Hub well exceed the town's five-storey height limit but will introduce more bars and cafés. At the moment, after 9.30pm when the shops shut, there's nothing there.'

The Hub is a mixed-use residential scheme with restaurants and bars at ground level. Developed by Crest Nicholson, it will provide 500 one- and two-bedroom flats over a 0.4ha site. The 14-storey project well exceeds the town's former five-storey limit.

The Hub will be followed by even denser projects such as the 650-unit West End One – designed by Rick Mather Architects with Alison Brookes Architects and HTA, for registered social landlord Places for People. The scheme, which entered planning this month, will front on to Witan Gate, adjacent to Howells' development. The 3ha site will also provide a new public realm, shared surface streets and even a new school.

'The grid system lends itself perfectly to higher densities, and Milton Keynes could look like a mini-Manhattan,' says Howells. 'Right now it isn't edgy enough, but by creating Manhattan-style density with bars and cafés you can stimulate this.

'We looked at the environment thinking, "The higher the better". The vertical scale of

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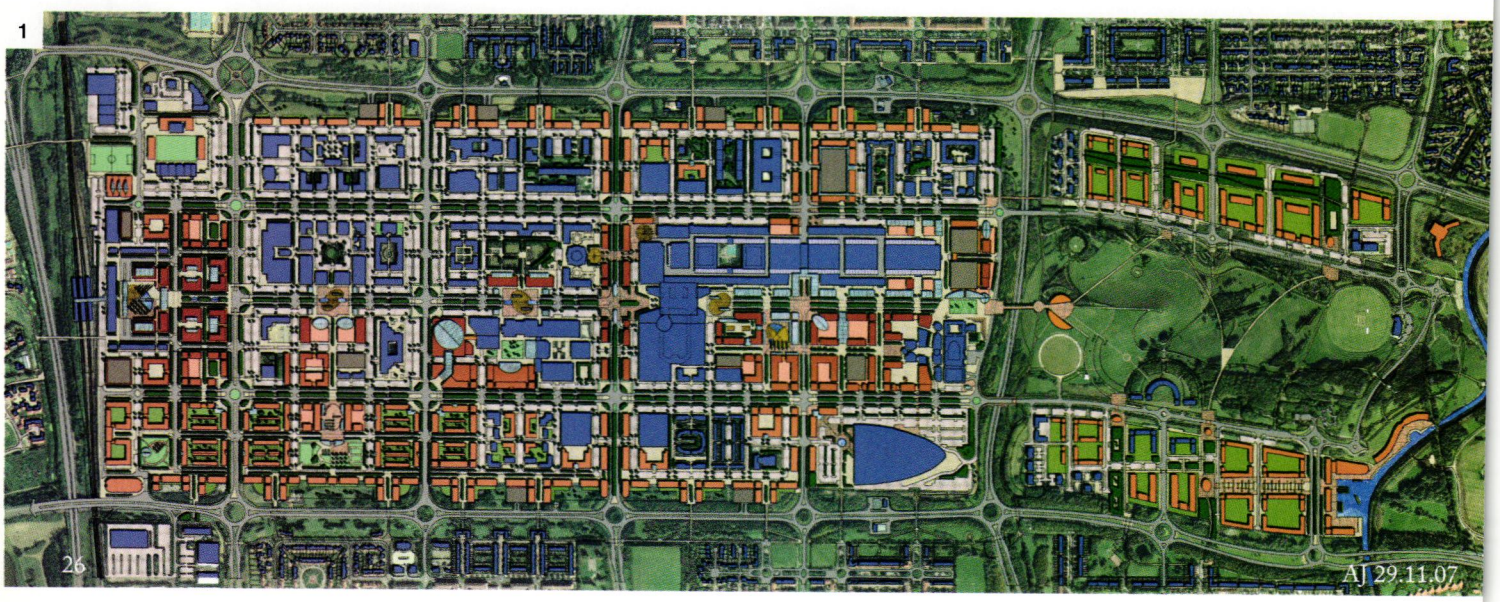

the buildings acts as an antidote to the yawning horizontal.'

But this attitude is not shared by all – pressure groups like Urban Eden have an agenda to 'promote the sustainable extension of the original masterplan for Milton Keynes', according to their mission statement. Urban Eden's goals include the extension of the grid street pattern and the conservation of boulevards.

Urban Eden director Ken Baker, who works for local practice David Lock Associates, is adamant these new developments will fail. 'There is a consensus at the moment that if you question change then you are against it. We just want people to be >>

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1 EDAW's Vision 2031 masterplan for Milton Keynes was originally designed in 2003 and mainly addresses the central area of the city

2 West End One, by Rick Mather Architects with Alison Brookes Architects and HTA. Completing in 2010; 650 homes, mixed-use with a school

3 The Hub, by Glenn Howells Architects for Crest Nicholson. Completing in February 2008; five buildings, 408 flats and 5,400m^2 retail

4 Campbell Park (phase 1), by HTA and Maccreanor Lavington Architects for Taylor Wimpey. Completing in 2010; 280 flats and townhouses, plus retail space

5 Renny Lodge, by Sheppard Robson for Crest Nicholson. Completing in April 2008; 68 homes in the eastern expansion area, part of English Partnerships' Design for Manufacture programme

6 Wolverton Park, by HTA for Places for People. Completing in 2009; 223 flats in a regeneration area located north-west of the city centre

5

6

aware of the dangers of change and what it means for the future,' he says.

'There is a new urban agenda at the moment, about increasing density and doing away with openness. The Hub is a perfect example – it will be singularly unsuccessful.'

This is a sentiment echoed by Derek Walker, chief architect and planner of the city in 1969. He says: 'The legislation to increase density in Milton Keynes doesn't sit well with me at all – we designed Milton Keynes for 250,000 people at low density. When you try and increase that density you have to mess around with the infrastructure.'

Milton Keynes' 1 x 1km square grid system was intended to be used by buses at speeds of 30 to 40mph with stops just 500m from each house. However, widespread car ownership meant that highways soon became dominated by high-speed traffic, making buses difficult to operate, and leading to many housing estates becoming isolated cul-de-sacs.

EDAW's Vision 2031 aims to reconnect these housing estates by increasing density and developing housing along the grid roads.

Milton Keynes needs to change, but will do so at the risk of losing its Modernist ideals

'The grid roads work against the growth and evolution of the town. Look at Birmingham – the ring road is strangling the growth of the city, it becomes constrained and overheated. Now they are looking at breaking up the ring road,' says EDAW director of operations Andrew Jones.

But many, including Liberal Democrat council leader Isobel McCall, claim that people love the grid. It's a debate that has taken the battle to intensify Milton Keynes from the centre out into the suburbs of the Garden City. The town is now expanding to the east and west to meet its target of 70,000 new homes by 2031, but the expansion areas do not follow the grid pattern.

'We didn't want Vision 2031 to simply look at the centre. We had to turn our attention to the suburbs,' explains Jones. The expansion areas are particularly controversial for proposing 'city streets' that include bus routes within 400m of every house.

AMK's Andrew Armes says the expansion areas have to be different from other Milton Keynes housing estates if they are to succeed, and that the organic growth of the grid road into the expansion areas will not work.

'We want these areas to operate as separate entities – not just another housing estate,' says Armes. 'The last 15 years have been crap, nothing but developer housing. We want to integrate it with mixed-use developments where houses change over time.

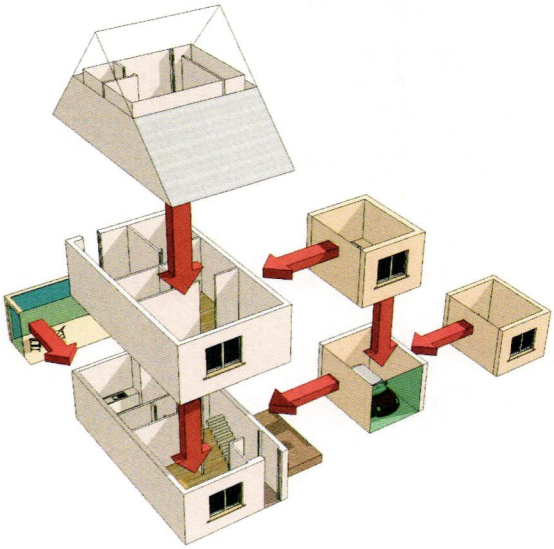
'Look at Camden High Street in London – Victorian houses with front and back gardens, which were amenable to be developed into houses with shops on the front. That's what we want in Milton Keynes.'

But this is the dilemma Milton Keynes faces. It was never meant to be like somewhere else. It was an 'invented' town, and although it needs to change, it runs the risk of losing its Modernist ideals. It may be the butt of many jokes and is often synonymous with its 'concrete cows', but its grid system it is fundamentally different to the rest of the UK.

Ken Baker believes the reaction from the public is, 'Give us our grid roads,' and feels the council has lost its way. 'Milton Keynes is distinctly different, but there is an attitude to make it like everywhere else – that is not what Milton Keynes is about,' he says.

Ben Derbyshire, managing director of HTA, is currently working on the Campbell Park development, part of West End One, as well as the Wolverton regeneration to the north of central Milton Keynes. He believes the town can still keep its identity.

'The centre needs more buildings, and it needs more tall buildings,' he says. 'But we're very keen on Milton Keynes, it offers a great deal of opportunities. And I don't buy into this absurd idea that the grid squares should be made into high streets – Milton Keynes is a town with grid squares; we have to make the most of it.' ■



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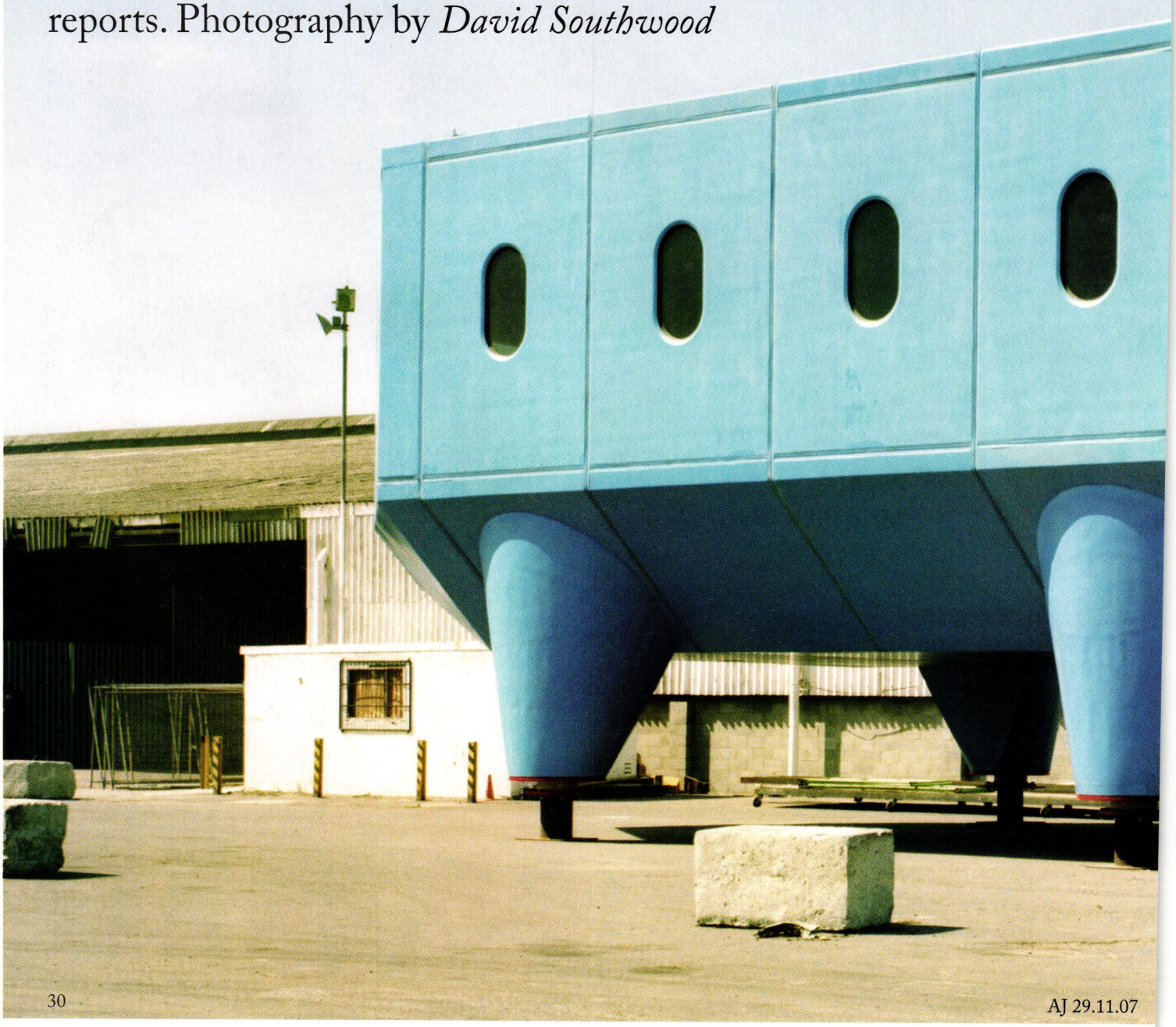
7 PRP's feasability studies for Tattenhoe Park; masterplan authored by PRP and Alan Baxter. Estimated completion 2012

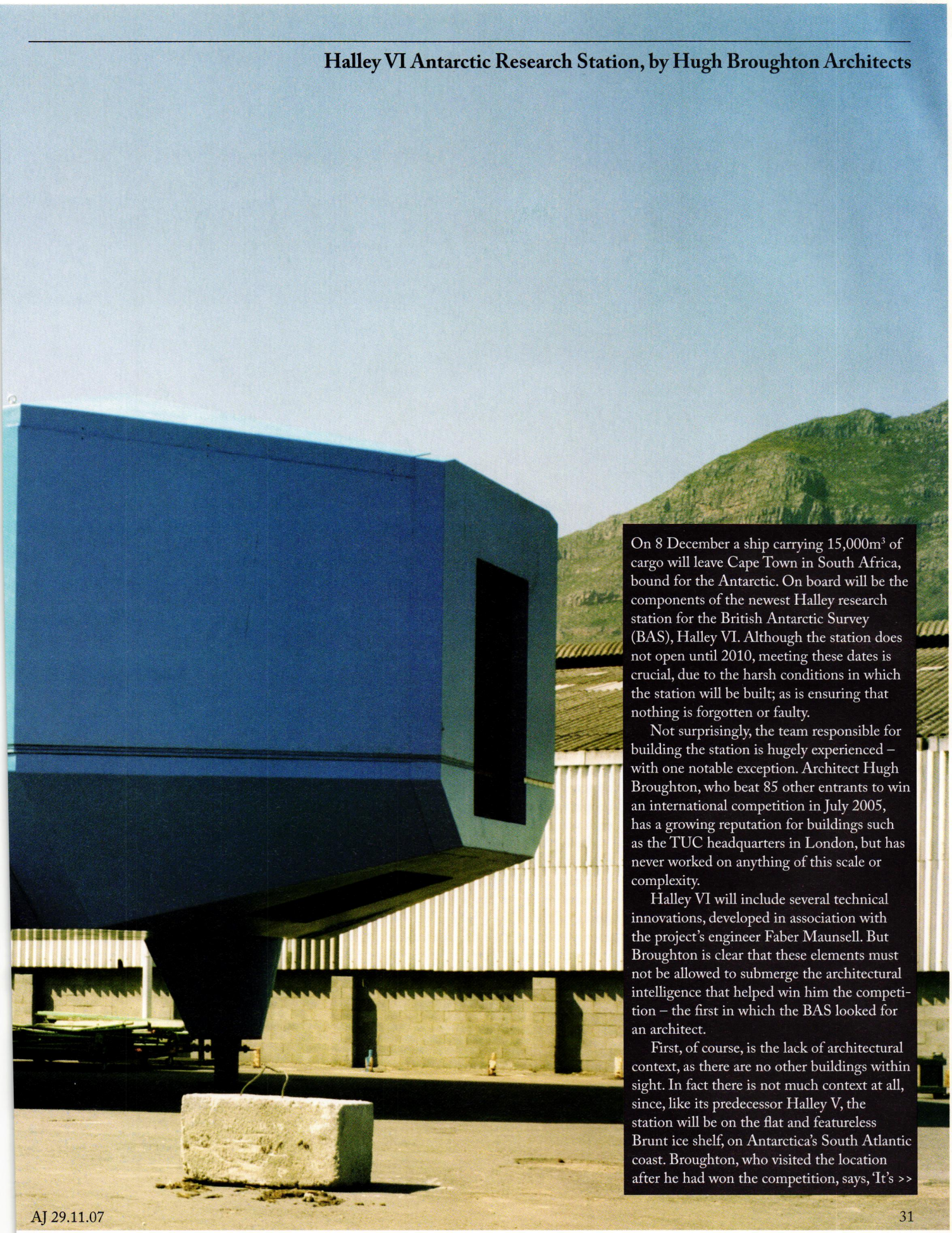
8 Oxley Woods, by Rogers Stirk Harbour + Partners for Taylor Wimpey. Completed in summer 2007 as part of English Partnerships' Design for Manufacture programme; 145 homes over 3ha

RICHARD BRYANT/ARCAID

COLD CAPSULE

Built in South Africa, Hugh Broughton's Halley VI Research Station will be a refuge in one of the harshest environments in the world. *Ruth Slavid* reports. Photography by *David Southwood*



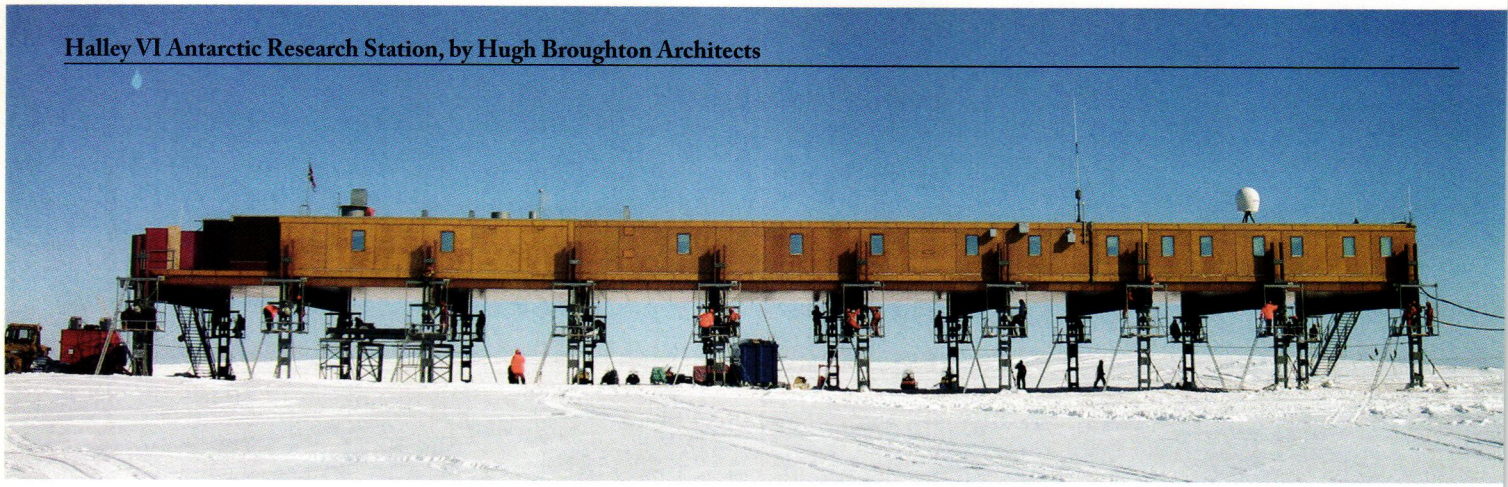


On 8 December a ship carrying 15,000m^3 of cargo will leave Cape Town in South Africa, bound for the Antarctic. On board will be the components of the newest Halley research station for the British Antarctic Survey (BAS), Halley VI. Although the station does not open until 2010, meeting these dates is crucial, due to the harsh conditions in which the station will be built; as is ensuring that nothing is forgotten or faulty.

Not surprisingly, the team responsible for building the station is hugely experienced – with one notable exception. Architect Hugh Broughton, who beat 85 other entrants to win an international competition in July 2005, has a growing reputation for buildings such as the TUC headquarters in London, but has never worked on anything of this scale or complexity.

Halley VI will include several technical innovations, developed in association with the project's engineer Faber Maunsell. But Broughton is clear that these elements must not be allowed to submerge the architectural intelligence that helped win him the competition – the first in which the BAS looked for an architect.

First, of course, is the lack of architectural context, as there are no other buildings within sight. In fact there is not much context at all, since, like its predecessor Halley V, the station will be on the flat and featureless Brunt ice shelf, on Antarctica's South Atlantic coast. Broughton, who visited the location after he had won the competition, says, 'It's >>



Above The existing station, Halley V, needs to be jacked up by 40 people every summer to keep it above the snow line

how you would imagine John Pawson or Donald Judd would design a landscape.'

The previous reaction to this awe-inspiring, cold and frequently dark landscape has been to endeavour to create an air of cosiness within buildings that are built to be merely utilitarian. Photographs of the interior of Halley V show something like a cross between a students' union and an old people's home – complete with sensible armchairs and brownish walls.

The BAS has paid attention to this issue, surveying former residents over several years to find their requirements. This survey formed part of the competition brief. 'One of the key reasons that we won,' said Broughton, 'was because of the interior design.'

LOCATION

Since construction in the Antarctic is difficult and expensive, it seems sensible to make buildings there last for as long as possible. Yet this will be the sixth station in the Halley series – and the first was only built in 1956.

But it is not through carelessness that five stations have become redundant in just over five decades. While Halley's location near to the coast is good for servicing and for science – lying within the auroral zone which is ideal for geo-space research – it's a challenging place for a building. The 150m-thick ice shelf moves at 400m a year towards the sea, with seaward sections breaking off occasionally. In a few years' time – and nobody can calculate exactly when – the ice on which Halley V is sitting will break off and the station will be lost.

Additionally, the area sees 1m of snow build-up per year (compared with only 300mm at the South Pole). In an attempt to deal with this, both Halley III and IV were designed as tunnels to survive being buried. However, they did not last long before the movement of the ice sheet crushed them.

Halley V is on stilts to keep it above the snow – an effective, if cumbersome solution. Due to the movement of the ice, steelworkers spend three months each year cutting off the legs, realigning, and finally rejoining them. Then, to keep it above the next year's snow build-up, 40 people spend several days jacking up the station. In contrast, with Broughton's design a bulldozer driver and two other people will spend just two to three weeks each year jacking up the legs.

Halley VI is both modular and mobile, so more facilities can be added easily. With the exception of one central, social module coloured red, the other seven blue units are similar in form. The modules were kept light enough to move inland as the ice shelf shifts (between 70 and 80 tonnes for the blue units and 140 for the red). The design life is projected at 20 years – at least twice that of any previous station.

The science modules are separated from the rest by a bridge, both to force scientists outdoors (supposedly good for their mental health) and for fireproofing: if there is a fire, these two should remain untouched and could house staff during the emergency.

The modules are arranged in a continuous line, with their sides facing the prevailing wind from the east to minimise snow build-up. This arrangement could be both institutional and disorientating, but Broughton has made each module unique inside. He hired colour consultant Angela Wright to help select colours 'to lift the spirits', and each module has a distinct palette.

There are four pairs of bedrooms in every living module, each sleeping one person in the winter and two in the summer. WCs and a shower are at one end, with a social space at the other. Bedroom walls are of Fermacell, a sound-absorbent material. Broughton is working with electrical company Philips to develop an alarm clock that features an embedded lamp to help regulate residents' circadian rhythms.

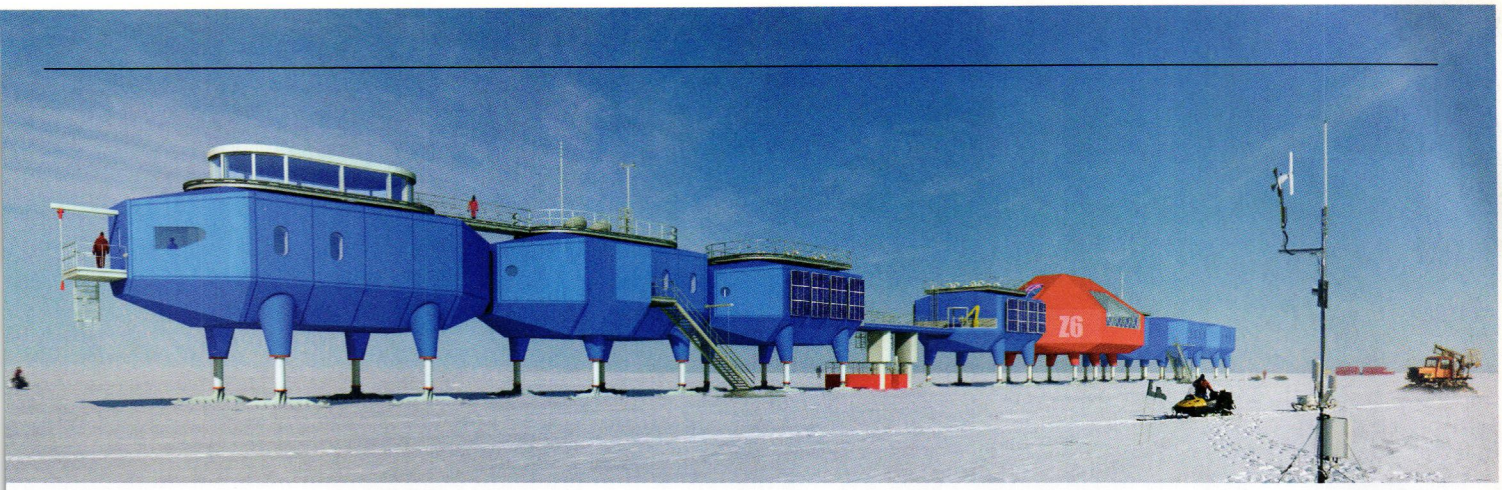
The large red module is open plan, and has a dining room and a bar. Upstairs is a large observation window. Broughton's plan also includes a space for hydroponic cultivation of plants, one of the top items on the 'wish list' of the residents.

The process of location and relocation affects the dimensions. Modules must be tall enough for a bulldozer to drive underneath, and the width of the skis has to be greater than the width of two bulldozers side by side.

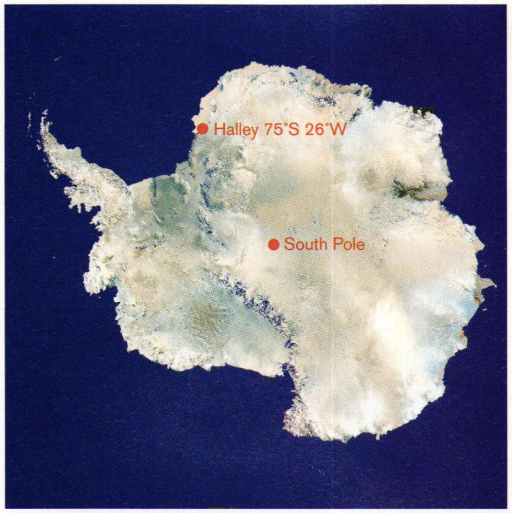
STRUCTURE

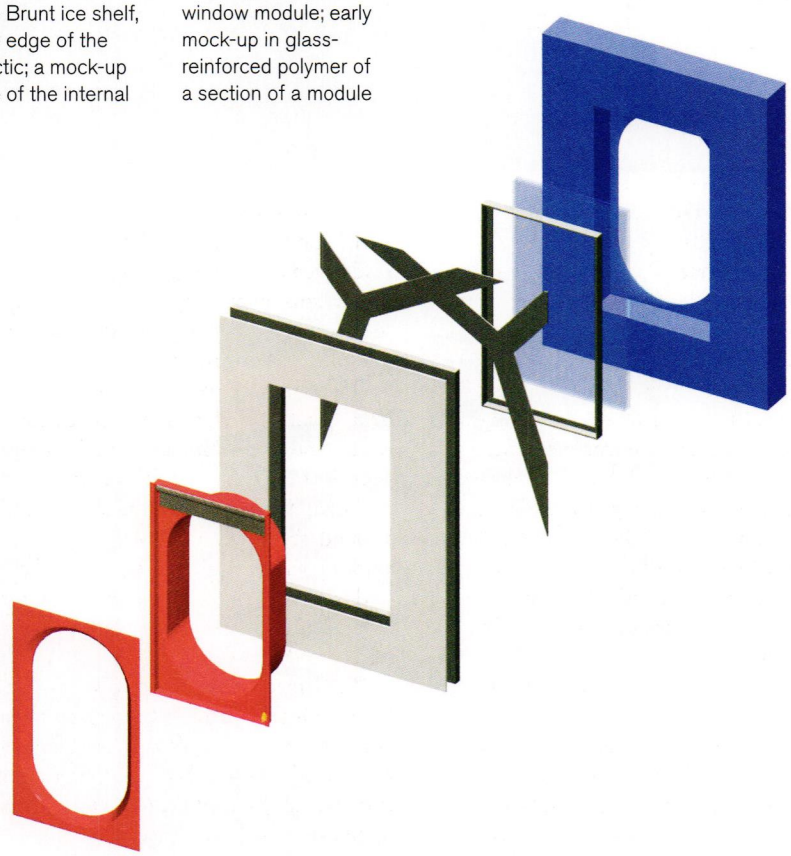
Each module consists of an elevated steel space frame on four hydraulically operated steel legs. The team used a special grade of steel to withstand temperatures that fall as low as -60°C. Extensive bracing is needed to resist the very high winds.

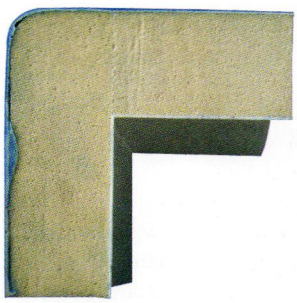
Originally the plan was to clad the modules with timber SIPs (structural >>

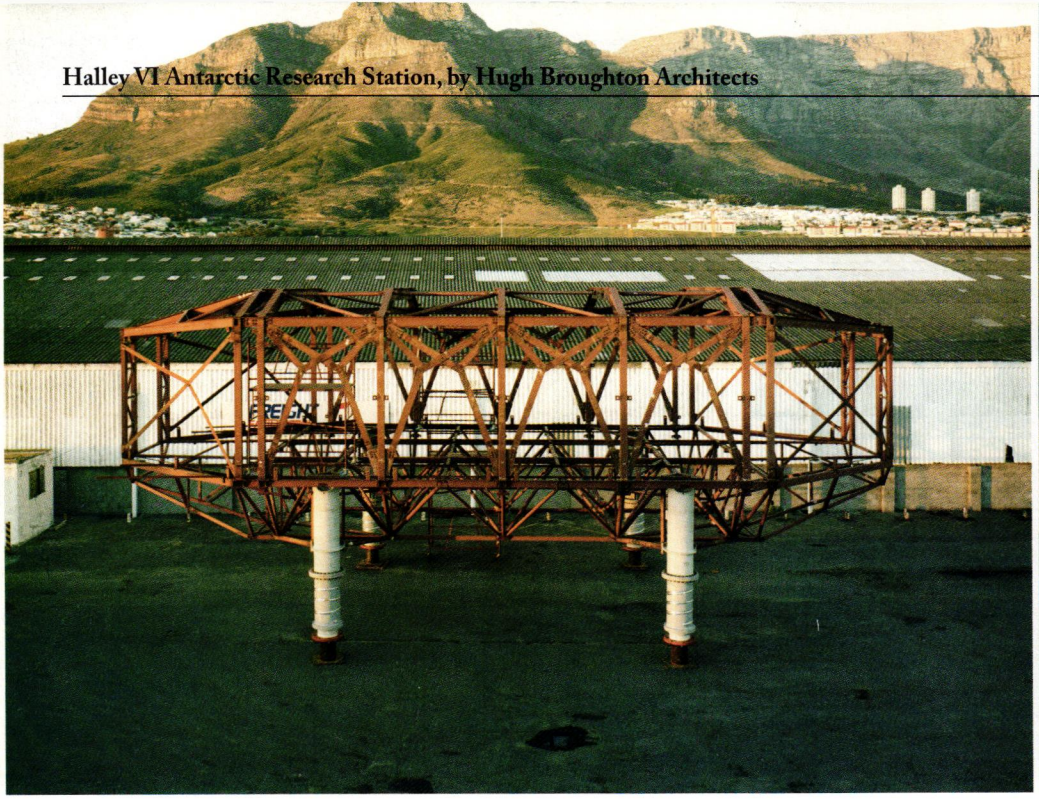


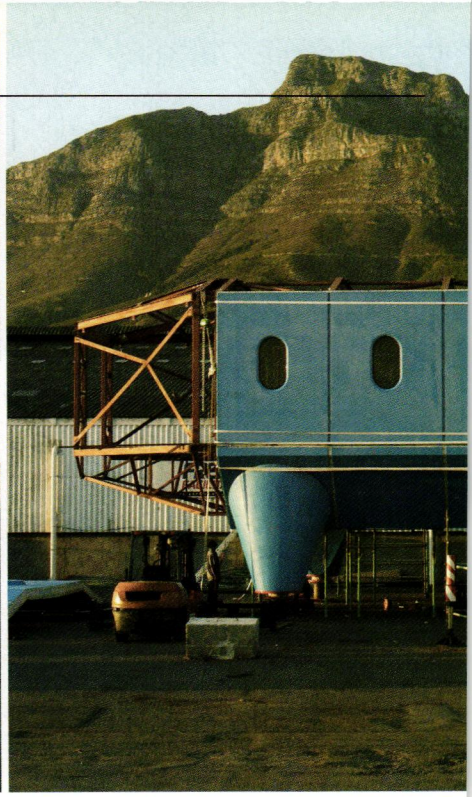
Clockwise from top Visualisation of Halley VI; the new station is on the Brunt ice shelf, on the edge of the Antarctic; a mock-up of one of the internal modular rooms; exploded view of a heavily insulated window module; early mock-up in glass-reinforced polymer of a section of a module

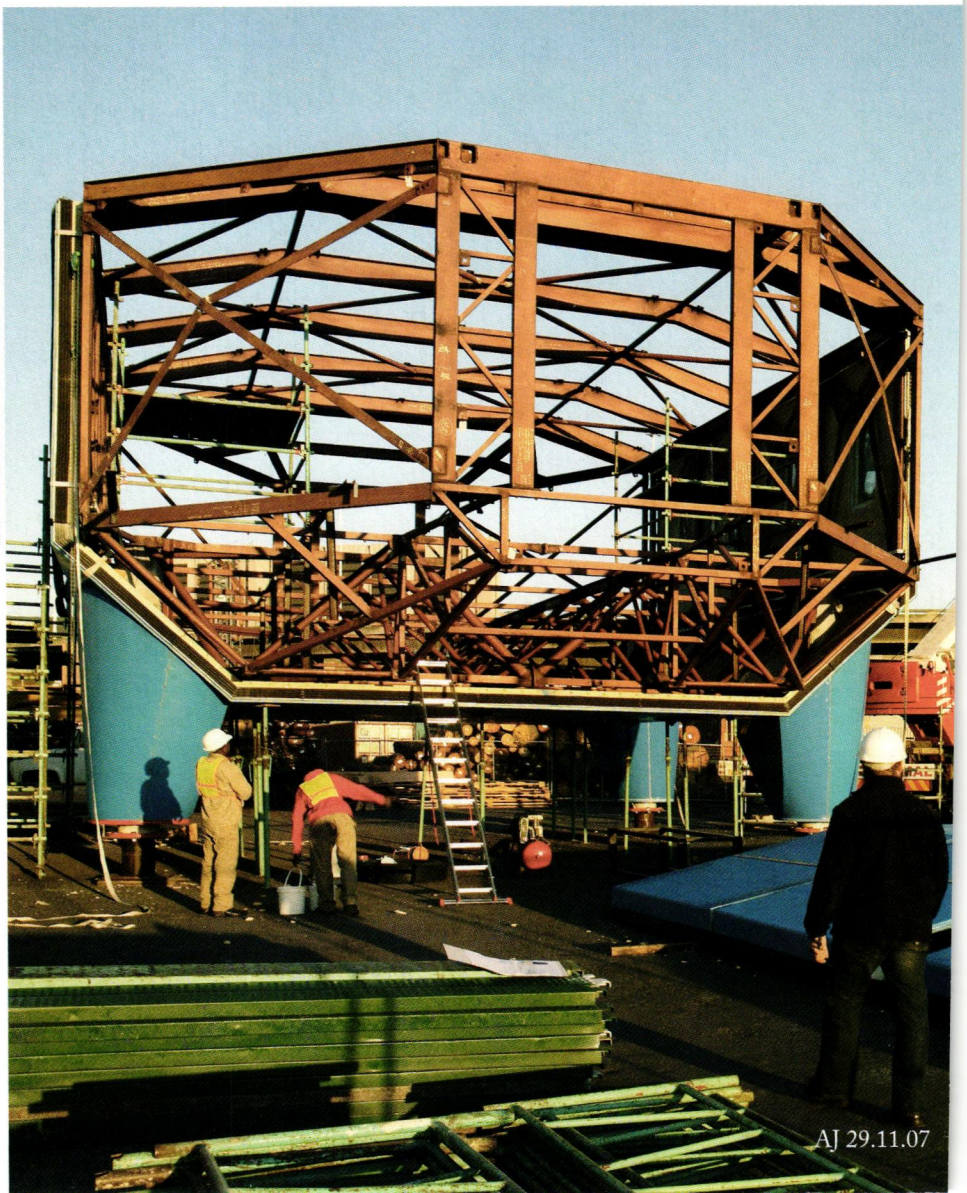




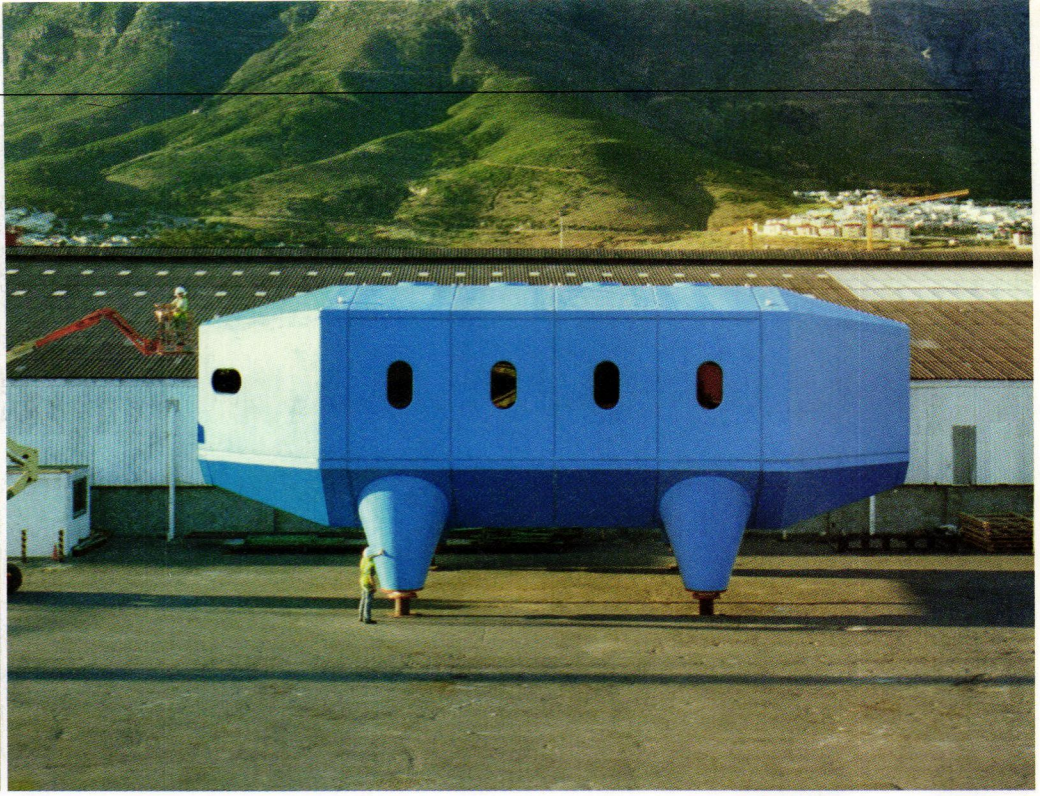


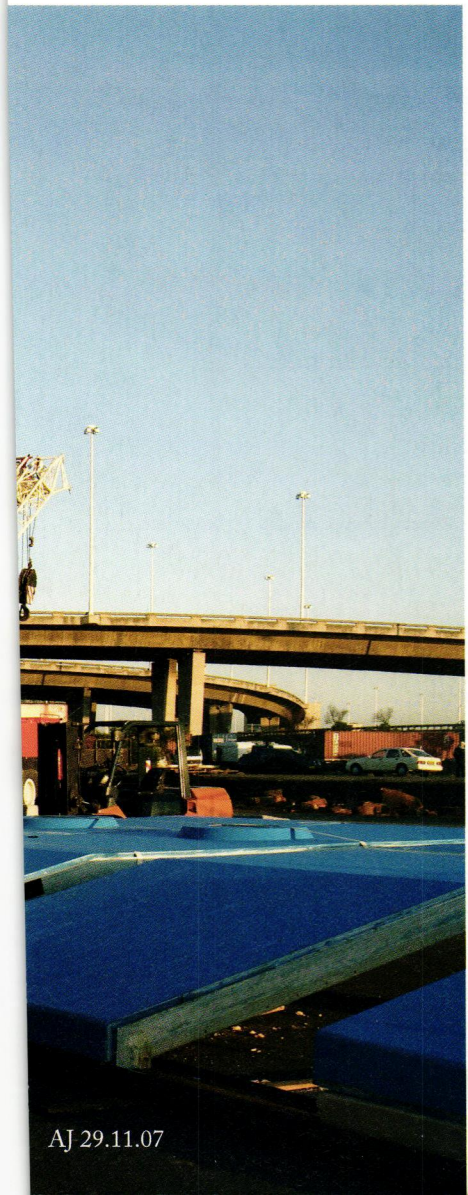






Clockwise from top left
Completed steel frame on the dockside in Cape Town, South Africa; application of cladding; completed assembly of the module, ready for demounting and shipping; trial assembly prior to shipping helped the design team iron out a number of difficulties; one of the 'skis' on which the module will travel once firmly on ice





Broughton's design is both modular and mobile, enabling the station to relocate inland as the ice shelf shifts

insulated panels), using aluminium overcladding – a tried-and-tested method for Antarctic stations. At a design review, however, the French Antarctic team (which completed the New Concordia station on the Antarctic Plateau in 2004) suggested Broughton consider a glass-reinforced polymer (GRP) system that it had used.

The lower GRP layer would eliminate the need for a vapour barrier, while the outer layer could be painted in the factory, removing the need for a separate finishing process. GRP has good fire performance, and is used in cryogenic experiments down to -250°C.

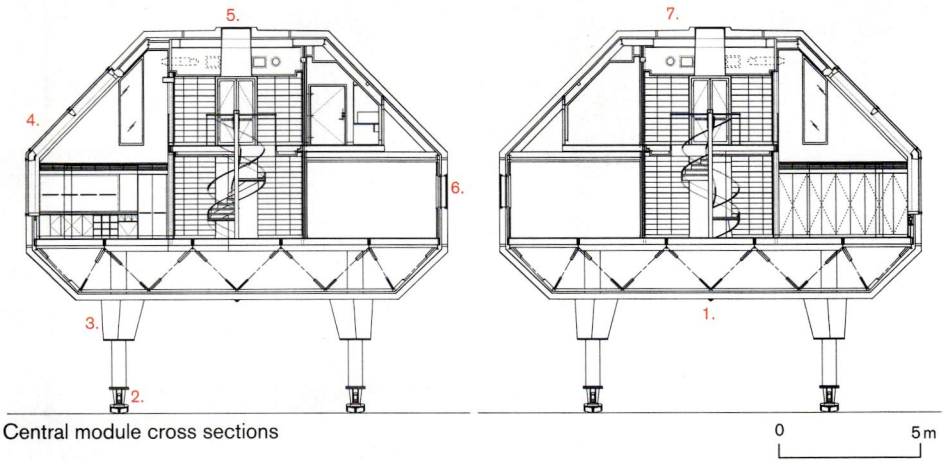
Flexible silicone connectors, like the connectors between train carriages, link the modules. Trelleborg, the Swedish firm that supplied the connectors, also provides them for trains that operate in the Arctic. In this case, the connectors have to withstand 150mm of movement up and down.

DELIVERY

The contractor, Morrison Falklands, was appointed on a Design and Build contract in September 2006, having previously held an enabling contract with the BAS for 15 months. The firm has extensive experience in the South Atlantic, having rebuilt bases for the BAS at Bird Island, South Georgia and at Signy in the South Shetlands, as well as building a base at Rothera on the Antarctic mainland. While these projects were all valued at less than £5 million, Halley's budget is £22.5 million.

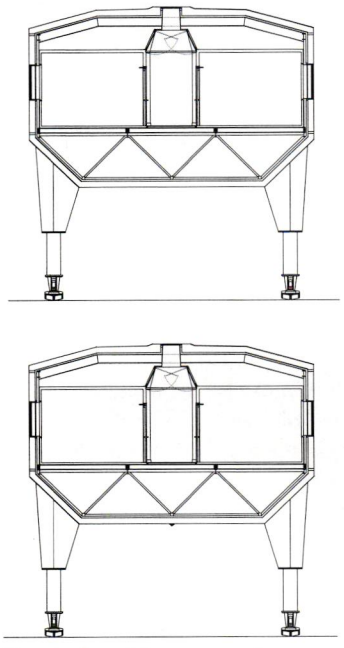
The modular design allowed much construction to take place outside Antarctica. Most of the work has been completed in South Africa, including the structural steelwork and the cladding. Fortunately, one of the most qualified GRP manufacturers, who had worked on South Africa's sub-Antarctic base at Marion Island, was based in South Africa as well. Broughton believes this experience was crucial because it meant that the company understood that 'when the ship sails, your stuff has to be on it'. These firms – the GRP specialist, a steel fabricator and the project manager – formed a consortium called the Antarctic Marine and Climate Centre.

Although some elements of the fabrication ran later than planned, Broughton remains 'absolutely confident' that he will hit his deadline. The cargo ship is due to arrive in the Antarctic just before Christmas. Units will be assembled over 10 weeks next to Halley V. >>

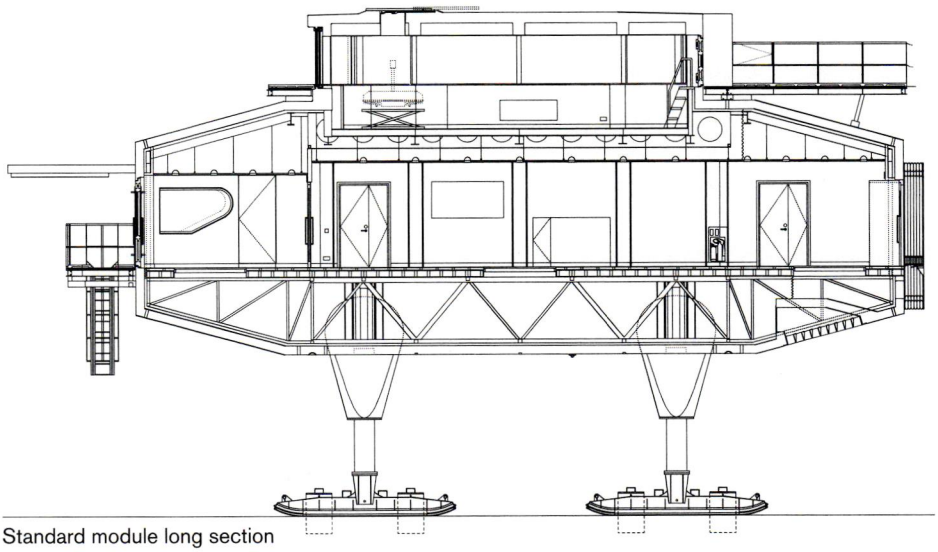


1. Strobe/sounder
2. Skis with flexible connection
3. GRP cladding to legs
4. Kalwall glazing system
5. Rooflight
6. Fixed window
7. GRP cladding panels

Central module cross sections



Standard module cross sections



Standard module long section

Fit-out and M&E work will take place during the Antarctic's next summer, in December 2008, after which the modules will move 15km inland to their new site. The team will undertake final work the year after and hand over the station to the BAS in January 2010.

ENVIRONMENT AND RESOURCES

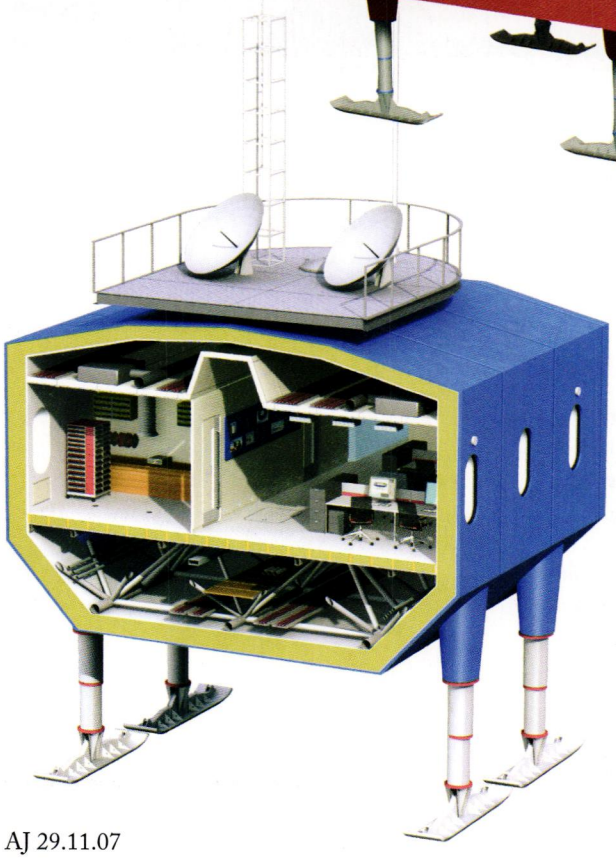
Fuel is difficult to transport to the Antarctic. As a result, Broughton says, this will be the most environmentally sustainable and friendly facility that the BAS has built. Solar thermal panels will supplement waste heat collected from CHP generator engines. A vacuum drainage system, coupled with low-water-use equipment, should keep consumption of water down, and hence energy, since all water has to be melted from snow.

Despite all the work put into the project before transport, there may still be problems with landing and putting the station together. But once in place, Halley VI should be a handsome addition to the scientific community in the Antarctic. This station, visually striking enough to have already appeared on a British Antarctic Territory postage stamp, should delight all visitors. And if it assists in the pursuit of fundamentally understanding climate change, then its significance should affect many more than the tiny numbers of people who will actually see it. ■

Client British Antarctic Survey
Architect Hugh Broughton Architects
Main contractor Morrison Construction
Engineer Faber Maunsell
Subcontractors and suppliers *Envelope co-ordinator* Antarctic Marine and Climate Centre; *cladding fabricator* MMS Technology; *steel fabricator* Petrel Engineering; *hydraulics* Titan, *prefabricated rooms* Servaccomm; *floor cassettes* Framework CDM; *flexible connectors* Trelleborg; *fire suppression* Marioff; *fire alarms* ADT; *lighting* Philips
Annual CO_2 emissions Not calculated, but Halley VI will use 110 litres/m^2/year of fuel, a 26 per cent reduction from Halley V

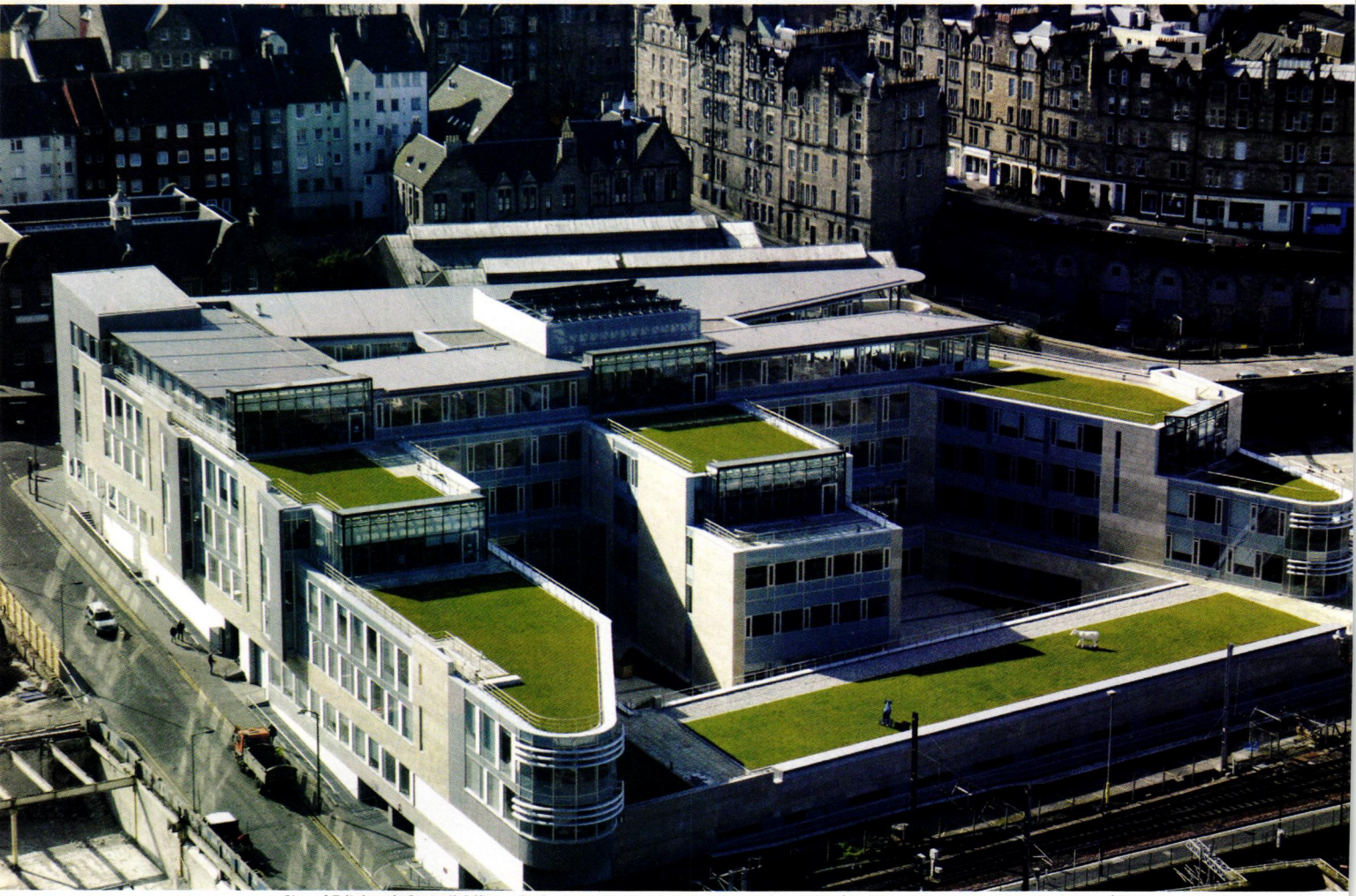
Above left The dowdy common room on the current Halley V station

Above right Visualisation of a bedroom on the new research station



Left Sectional model of a scientific module, showing the services running above and below the workspace

Above Longitudinal section through the central social module, with spaces for group meetings and quieter actvities



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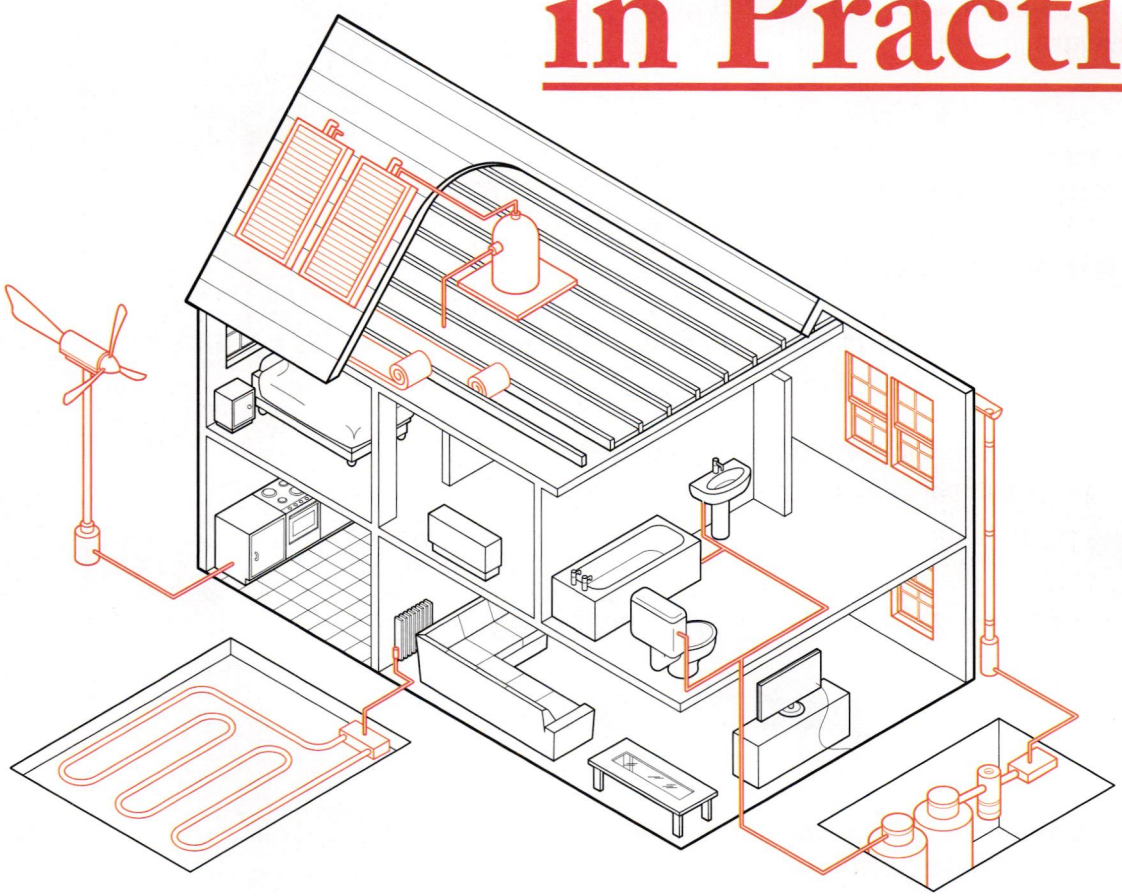


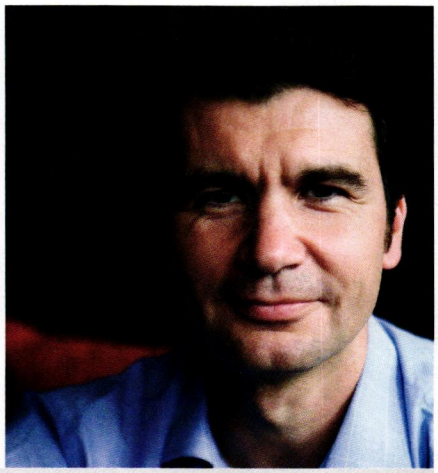
ILLUSTRATION BY KELTIECOCHRANE.COM

This is the first in the AJ's Sustainability in Practice series, which will provide regular information and advice on best practice in sustainable design, including briefings on government policy, the latest groundbreaking projects, working details and new products. This inaugural issue coincides with the AJ's annual conference on sustainability, which will be held on 5 December in London. See www.ajsustainabledesign.co.uk to register

INTERVIEW

ON LEADING THE UK-GBC

Paul King took the reins of the UK Green Building Council (UK-GBC) in June 2007, five months after it was founded. He talks to *Hattie Hartman* about the trials of the first year, working with bigwigs, and his plans for the organisation



What might be the impact of the government's various new sustainability policies?
I think we need to see more action in terms of delivery of the zero-carbon goals. We need a programme that looks at buildings, products, skills and training, energy supply, and public awareness agendas all in concert.

The 2016 goal [for all new homes to be zero-carbon] is do-able, but it's tight and happening at a time when the government is asking for much bigger housing delivery numbers as well. There's a lot of pressure on getting this right.

How will this affect architects?
Volume housebuilders are realising that the way to do this is to fundamentally rethink how homes need to be designed. I'm seeing more opportunities for architects to get involved in mainstream housing. Developers like Crest Nicholson and Barratt are working with architects and engineers to figure out what houses built to the Code for Sustainable Homes might look like.

One of the things that the code needs is support from the planning system. We need policies that focus people on carbon reduction and what should be happening at a local level that can compliment national standards.

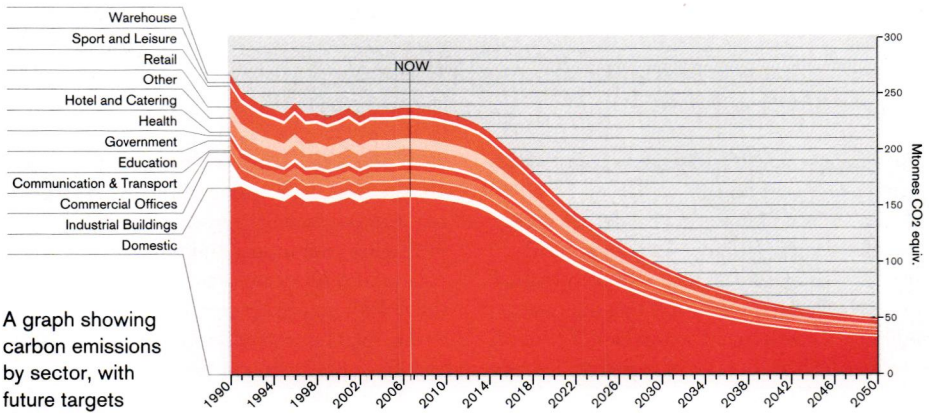
We believe the forthcoming Public Policy Statement on climate change should urge local authorities to be much more proactive in developing lower carbon strategies with developers. I hope we can build on things like the Merton Rule (*see page 43*) to encourage the growth of a decent renewables industry.

And what about the contribution of non-domestic buildings?
Since the 2016 goal was announced, the UK-GBC has been thinking about a timetable of similar targets for non-domestic buildings. Non-domestic poses additional challenges when it comes to meeting energy needs through renewables – particularly in buildings with high energy use which are located in built-up areas, where you only have so much roof and facade.

We've established a UK-GBC task group to think about the implications of zero-carbon homes for mixed-use and non-domestic buildings. Having produced a significant amount of evidence from our members, we are beginning to discuss time frame and costs. The draft report was reviewed on 12 November, and will be finalised in the next few weeks. Then we'll figure out where to go in terms of implementation.

What are your thoughts on the BRE Environmental Assessment Method (BREEAM) vs the Leadership in Energy and Environmental Design (LEED) debate and the way forward in the UK?
I think you shouldn't reinvent the wheel if you don't have to. We have ended up asking our members what they think of BREEAM – especially given how the LEED rating system has developed and grown. The important thing is transparency, and confidence from the industry that BREEAM is the right methodology.

The US Green Building Council was established at the right time, though there is still a gap between the number of >>



A graph showing carbon emissions by sector, with future targets

POLICY UPDATE

KEEPING UP WITH POLICY

While the government's ambitions to ensure a greener future are clear, the associated policies and legislation may be less so. Here we outline the main points of the major new legislature as a guide to how architects may be affected

ENERGY PERFORMANCE OF BUILDINGS DIRECTIVE

The Energy Performance of Buildings Directive as implemented in England and Wales has four principle provisions. The first stipulates minimum requirements for the energy performance of all new buildings, and the second for large existing buildings subject to major renovation (these provisions are starting to bed down into the day-to-day life of the construction industry). The third requires inspection for air-conditioning systems and boilers for all major buildings, which will not impact until January 2009 when all buildings with air conditioning systems over 250kW will have to be inspected. The fourth requires Energy Performance Certificates (EPC) for most new buildings based on an assessment of their construction and services (also known as asset rating).

EPCs have begun to be phased in, albeit in a somewhat tentative way, starting with larger homes (currently those with three or more bedrooms) as a mandatory component of Home Information Packs. A timetable for including smaller homes is yet to be announced but will presumably mesh with the timetable published for the wider introduction of EPCs: by 6 April 2008, construction for all dwellings and non-domestic buildings over 10,000m^2; by 1 July 2008 for all non-domestic buildings over 2,500m^2; and by 1 October for the sale or rent of all remaining dwellings and all non-domestic buildings.

Apart from providing a rating based on the construction and servicing of the building, a certificate will include a range of cost-effective measures to improve the building's energy performance. These should become essential information for any building alterations or refurbishment. Many designers may wish to become assessors in their own right, so they fully understand the principles behind the assessment process and can control the process and produce an updated certificate on completion of a project.

Bill Gething is partner at Feilden Clegg Bradley Studios, which is a founder member of the UK-GBC

ON LEADING THE UK-GBC Continued from page 41

projects registered for LEED and those assessed. That is something the UK-GBC is looking at now.

The other issue is compulsion. We're starting to get some forward-looking clients like Marks and Spencer who are saying we have to specify these standards. BREEAM has been around for a long time, but it has only been in the last couple of years that market demands have really kicked in. If you look at a graph on the take-up of BREEAM now, it is a fairly steep trajectory.

A lot of anecdotal feedback suggests that LEED sets levels lower than BREEAM, therefore it's easier to achieve higher levels. But then you have a whole debate about whether it's better to have broader take-up of a lower standard or to have a lower take-up of a high standard.

Do you have specific objectives for the UK-GBC's one-year mark?

When I started I asked colleagues what our success criteria would be. They responded with a wide range: influencing governmental policy, bringing the industry together, and building a broad membership base. We need to raise the bar. It's kind of a case of, 'Ask not what the UK-GBC can do for you, but what you can do for the UK-GBC.' The space between government policy and industry activity has proven to be fertile ground for the US – many parts of the industry are up for a radical agenda.

How should task forces work in this system?

We are working towards a fully transparent constitution by which any member can join governing committees and the board through elections. A lot of the actual work will be done through task groups, which are available to any member. Far and away the most active task force has been non-domestic buildings.

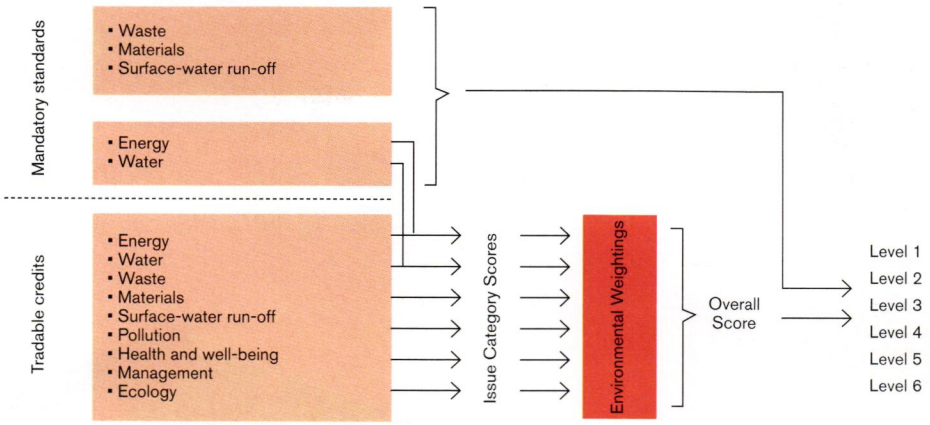
In terms of incentives: the low-hanging fruit would be to equalise VAT on new build

CODE FOR SUSTAINABLE HOMES

Launched on 13 December 2006, the Code for Sustainable Homes sets out a national standard for residential construction and will replace BREEAM's EcoHomes rating system. Homes are assessed holistically over nine categories: energy and CO_2 usage; water usage; materials; surface-water run-off; waste; pollution; health and well-being; management; and ecology.

The code is based on a six-tiered rating system, with code level 1 the lowest and 6 the highest. Ratings are achieved both through meeting goals within each category, and with specific measurements of carbon emissions and water usage determining ranking (a level 6 implies zero -carbon goals have been met). Buildings are analysed by a code assessor both speculatively before construction and after completion (*see diagram, above right*).

In July the government considered making it mandatory to consider all new housing against the ranking system under the Code for Sustainable Homes. As of 16 November these plans are set to go ahead, with implementation beginning in April 2008, though the date has yet to be finalised. *Jaffer Kolb*



Above The Code for Sustainable Homes' ranking system – level 6 denotes zero-carbon status

ZERO-CARBON

There is a widely held belief that there are currently two definitions as to what constitutes zero carbon; the Treasury has one version and the Department for Communities and Local Government (DCLG) has another.

But John Alker of the UK-GBC says: 'For all intents and purposes there is only one, and that is as laid down by the DCLG in its Code for Sustainable Homes'.

Under the DCLG code, to attain Level 6 status (that is to be defined as zero carbon), in addition to achieving Standard Assessment Procedure (SAP) 2005, homes must be built so that 'net carbon dioxide emissions resulting from all energy used in the dwelling are zero or better'.

In the latest budget the Treasury promised to exempt zero-carbon homes from stamp duty, but it did so before the technical guide for the DCLG's code had been published.

The original code allowed for off-site renewables; however, the Treasury made a U-turn and demanded that all renewable energy should be self-generated, and not from the National Grid.
Max Thompson

MERTON RULE

The much-talked about Merton Rule is a local planning policy which demands that 10 per cent of all energy in major new developments comes from on-site renewable sources, to reduce carbon emissions.

London's Merton Borough Council pioneered the rules, hence the name, and became the first authority to formally adopt these energy targets by incorporating them into its Unitary Development Plan. The move followed the publication of Planning Policy Statement 22 (PPS 22) of the Planning Guidance on Renewable Energy by then deputy prime minister John Prescott in 2004.

In Merton, only schemes providing more than 1,000m² of commercial space or, in the case of residential developments, 10 new homes, are subject to the rules. Over 50 other councils have followed suit and concern has arisen about the need to adopt a uniform national standard.

However, in recent months debate has raged about whether the rule would be amended or even scrapped. Those calling for its abolition appear to have lost. Yet housing minister Yvette Cooper did suggest there could be more flexibility in future for authorities in terms of the amount of renewables demanded, and whether off-site production could be taken into account. *Richard Waite*

and refurbishment, or to offer stamp duty and council tax rebates. In the longer term, the only way it can be cracked is to change the commodity that people are trading.

What's been your biggest surprise since joining the UK-GBC?
Some of the big guys who are easy to take pot-shots at are actually up for this. I think we will see more leadership from the industry. The pain and stress right now is actually a very positive energy that is making a lot of things happen much faster. The fact that industry is capable of responding has to make you feel optimistic. ■ **www.ukgbc.org**

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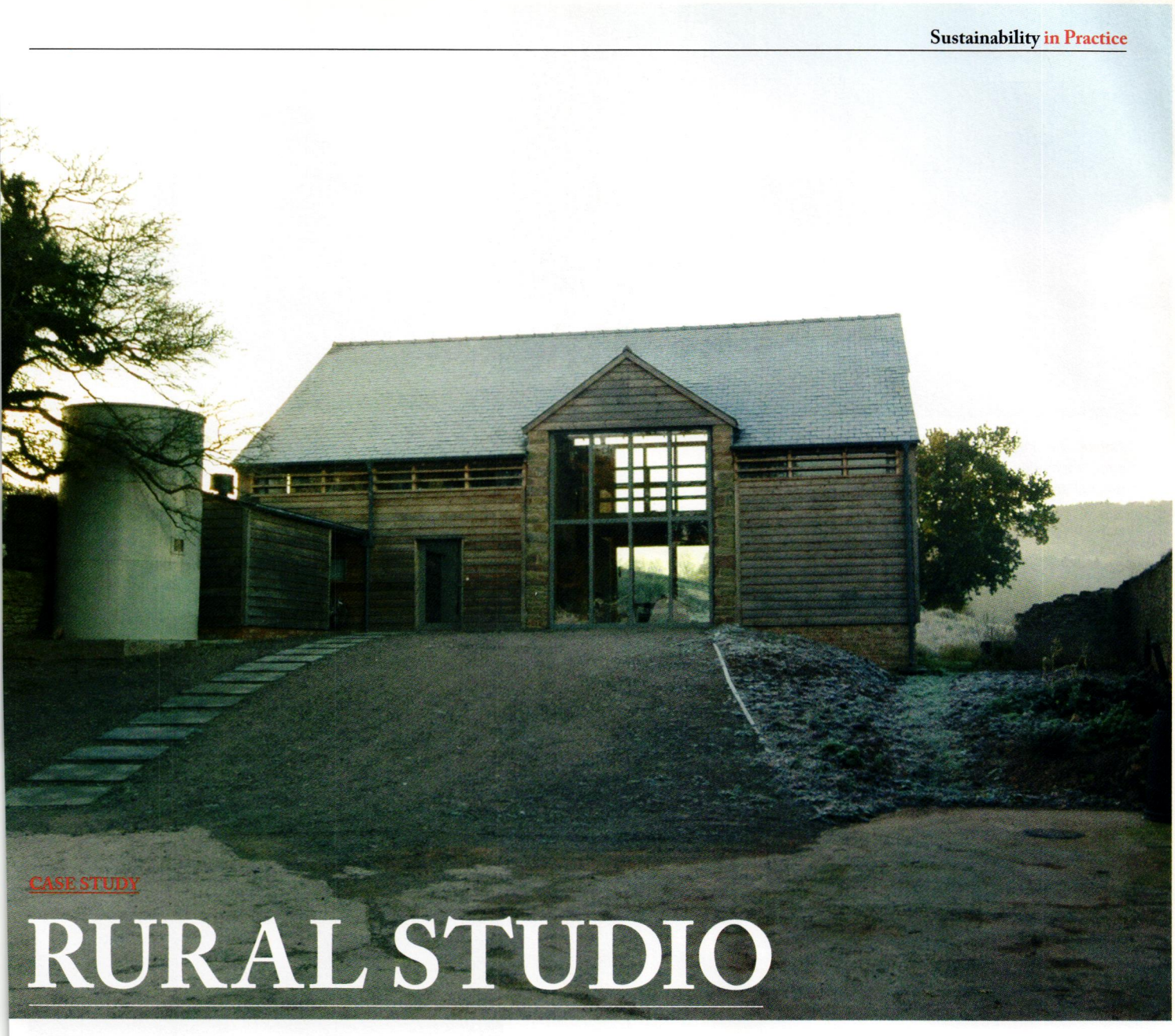
*The Carbon Calculator is a software tool developed by the Edinburgh Centre for Carbon Management which allows designers to calculate the carbon effects of using different building materials in building elements. wood for good is a promotional campaign sponsored by the Swedish Forest Industries Federation, the Forestry Commission and the Confederation of Forest Industries. All members are committed to sustainable forest management. In each of the members' countries credible third party certification schemes are now operating and increased areas of forest are being certified.



CASE STUDY

RURAL STUDIO

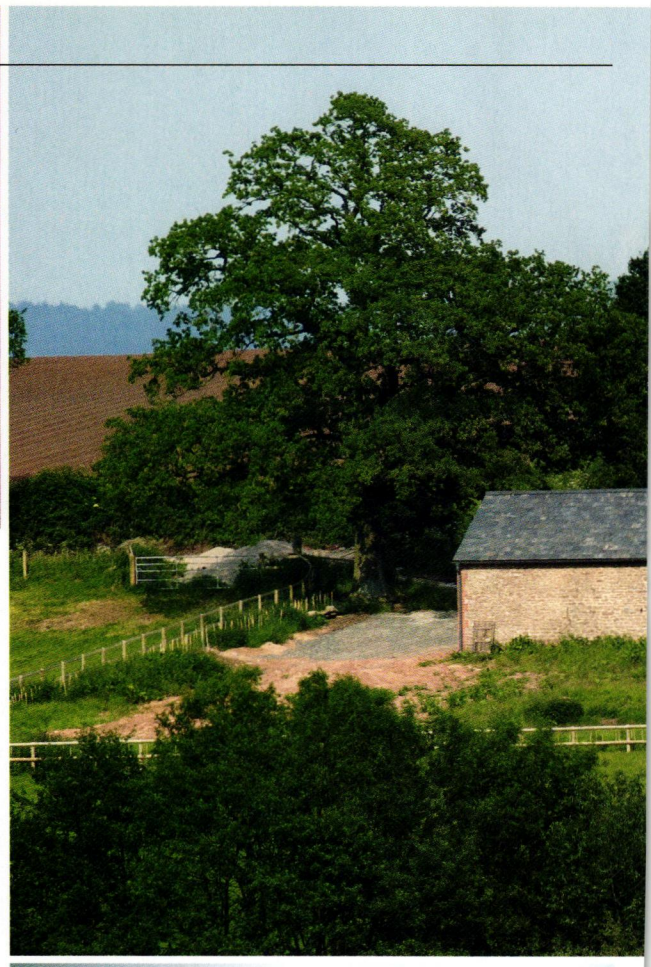
Architype's new Herefordshire offices show the firm practising what it preaches on sustainability, writes *Oliver Lowenstein*. Photography by *Leigh Simpson*

The 'deep' green sustainable architectural community is relatively invisible, but surfaces increasingly frequently in these frenetic days for environmentalism. The RIBA's Sustainability Award this year went to one of these practices, Architype – one of the earliest and most committed sustainable architects. Its recent conversion of a Herefordshire stone ruin barn into its new West studio offices is an example of a green design approach along with an attempt at a sustainable lifestyle.

The barn at Upper Twyford Farm sits in the folds of a farming landscape near Hereford, and was nearly totally derelict when Architype head Jonathan Hines first visited the remaining standing walls seven years ago. Since then, the practice has restored it, transforming the ruin into a light-filled working studio. Architype's landlord is the Duchy of Cornwall, and the success of the project has been instrumental in moving the regional Duchy office towards more sustainable practices.

Architype, which began life in south London in 1984 and employs 30 people, opened its satellite West office in 1995 to tackle work in rural areas. In a sense, Architype winning the RIBA's award is a signal to consider rural culture more seriously as a credible architectural issue, as well as recognition of a practice that is passionate and excited about the countryside.

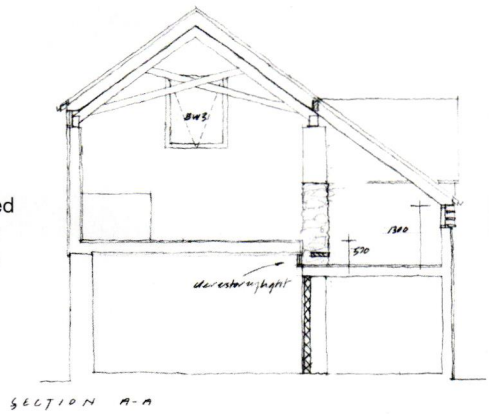
Viewed from half a mile away, the barn is a restrained presence amid the rolling fields. Up close, its regionalist Modernist >>

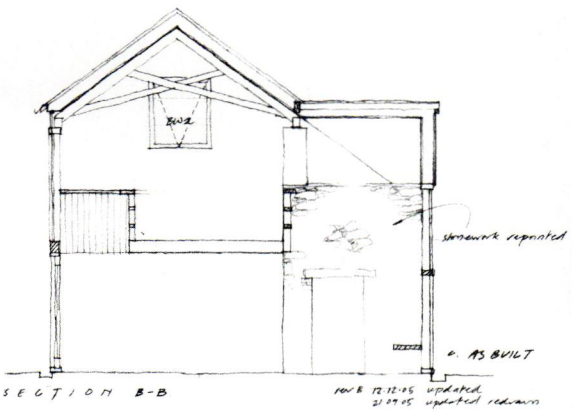


Above The bright interior includes the original stonework

Below right The derelict barn

Right Architype added a second storey – an open-plan office with vaulted ceilings





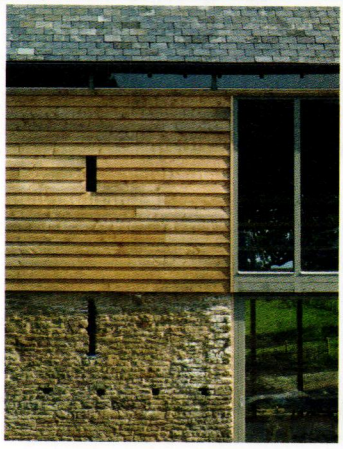
ARCHITYPE

The barn is very much rooted in the land; a restrained presence amid the rolling fields

sensibility is much clearer; part of a traceable tradition from Aalto to Zumthor, so central in the aesthetic backdrop of many in the green architectural universe. For a critical architectural visitor, this restraint could well be interpreted as conservative, and a more radical intervention in the land can easily be imagined.

Realisation of anything more radical, however, would have been complicated given the client, and the two-tier design approach emerged only after protracted negotiations with the planners, moving from an all-stone proposal to a timber-frame second floor. Using Douglas Fir from Duchy woodlands in Cornwall, a scissor-truss system rises up from the lower-floor stone-walls. Chestnut flooring has been used from the Duchy's nearby Aconbury woods, visible from the studio's large windows. These windows, along with clerestory strip windows below the tiled roof overhang, provide natural lighting for both the upper floor and the open ground floor.

A series of low-energy light fittings supplement the natural light; these were developed by Architype's in-house 'Renaissance Man', Nick Grant (Hines' description), and local craftsperson Colin Chetwood. Such hybrids – lighting technology fused with a craft approach – were a



Above Upper Twyford Barn highlights the sustainability agenda in a rural setting

Far right Large windows and clerestories negate the need for excessive interior lighting

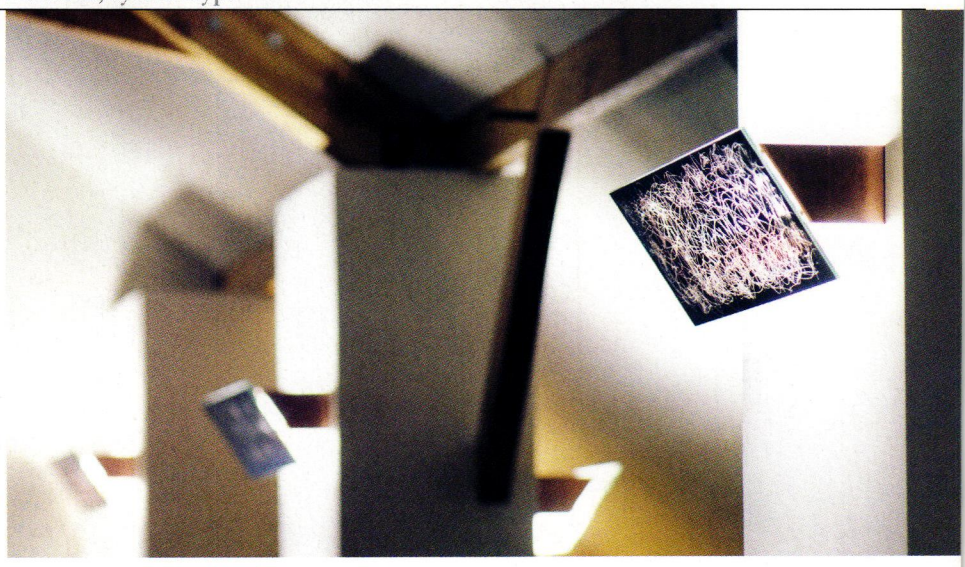
Right Elements of the new extension echo the pre-existing structure

starting point, which could be taken considerably further, given the Architype ethos. This approach is equally evident in the stone-work left expressed on the ground floor.

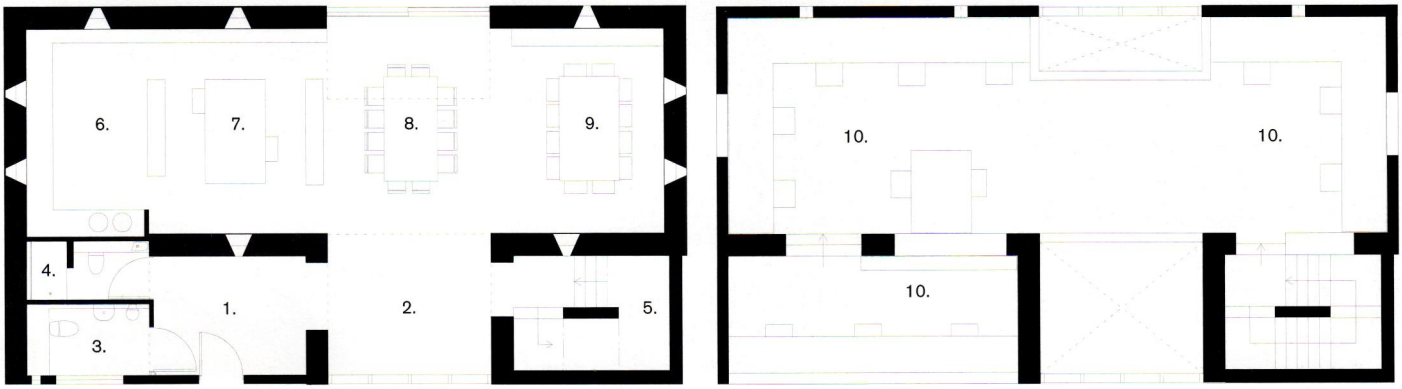
Both Hines and Meadowcroft repeatedly emphasise the work-friendly feel of the £420,000 barn. For Meadowcroft, the project 'is warm, rather than cold and contemporary'. He recalls German landscape architect Peter Latz's evocative words, 'it's about the genius of the place, rather than the genius of the office,' and adds, 'it's a very old building, and we need to allow it to be itself'.

This doesn't stop the practice using some quite funky mechanical kit. A biomass boiler, fuelled by woodchip sourced from local sawmills, links into an emerging West Country biofuels network. The toilets are also a departure – Architype claims they are the first in Britain to use the Ifo airflush system. Grant, whose speciality is water systems, developed the system for both the urinal and the WC, and also designed an adapted reed bed system.

Architype's new office feels very much rooted in the land; a meadow has been planted, vegetables grow, an orchard is planned and meals are sourced from a local organic café. The studio is seen, they say, as very much contributing to and integrating >>



1. Entrance lobby
2. Atrium
3. Toilet
4. Shower
5. Stairs
6. Kitchen
7. Administration
8. Social space/lunch
9. Meeting space
10. Studio space



Top left The site sports a biomass boiler fuelled by wood chips, visible though a small window in the tank

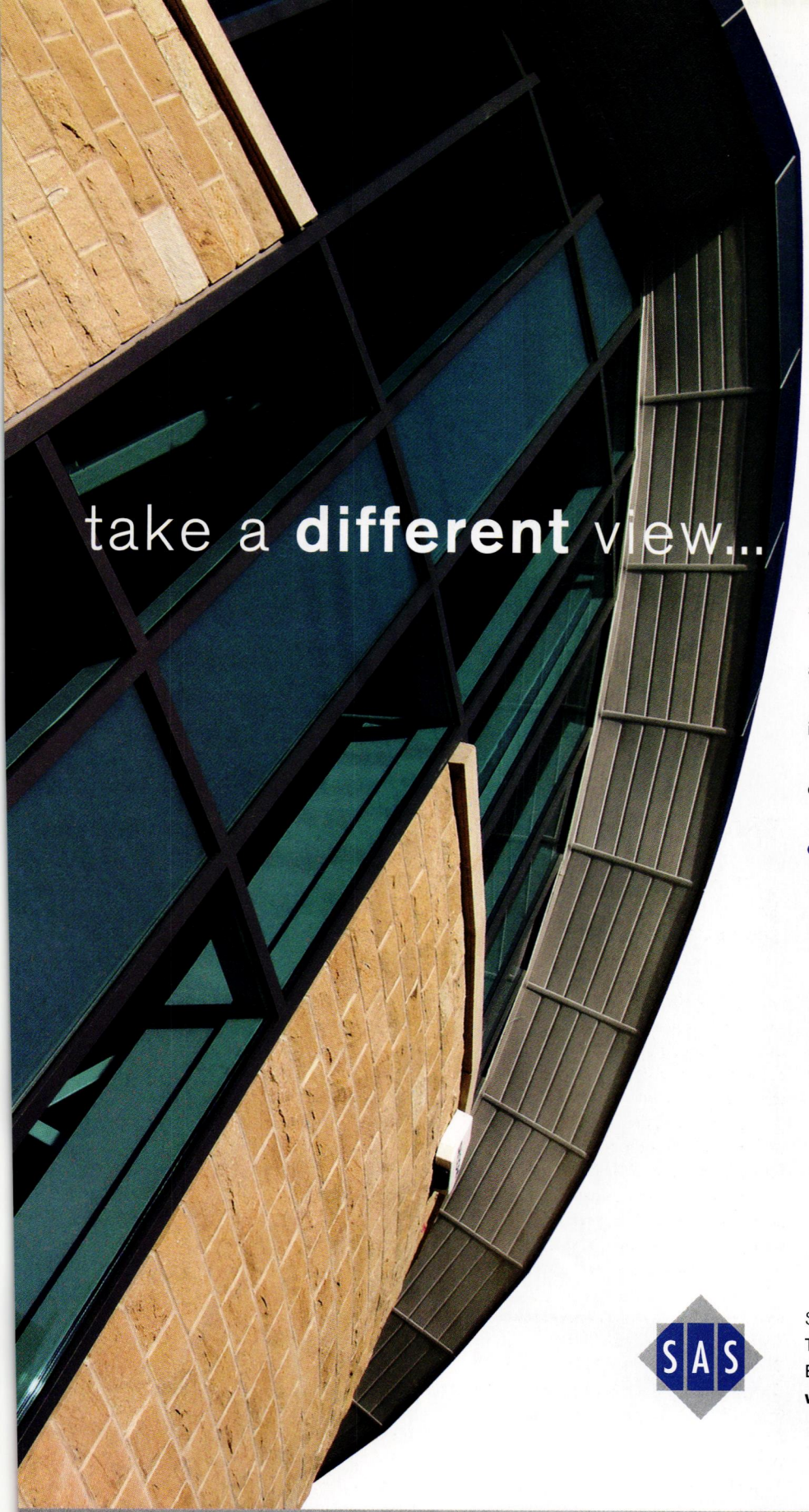
Top right Custom low-energy light fixtures were designed by Architype's Nick Grant with local craftsperson Colin Chetwood

with the local economy. Within this there are weak spots, for instance, transport – despite professed encouragement very few bikes were evident on my visit, while the parking area was full with cars.

Nevertheless, the barn sets a countryside exemplar that is only too relevant to any rural future agenda, and it will be interesting to see if Architype can push this further – if only to avoid the kind of dystopian agri-industrial future some are planning, such as multi-storey cowsheds. A low-tech, craft-based and nature-empathic approach is at odds with much of architectural culture, which seems to so actively dislike natural environments and natural systems, and invariably plumps for apparently sophisticated and expensive techno-fixes. By contrast, Architype's rural West studio presents a future closer to the natural world. ■

Oliver Lowenstein runs the green cultural review magazine *Fourth Door Review*
www.fourthdoor.co.uk

Tender date September 2004
Start on site date April 2005
Gross external floor area 383m²
Form of contract JCT minor works
Cost £448,000
Client Duchy of Cornwall
Architect Architype
Structural engineer MBCE Engineering
Planning supervisor Architype
Contractor Mike Whitfield Construction
Selected subcontractors and suppliers
Timber Duchy of Cornwall; *airflush WC system/ reed beds* Elemental Solutions; *woodchip boiler systems* Midlands Wood Fuel; *insulation* Warmcell; *lime* Ty-Mawr Lime; *electrical sub-contractor* Inti; *slate roofing* Martin Wortmann; *windows* Hajom Fonster
Annual CO_2 emissions 22.5kg/m²



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CASE STUDY

CORPORATE GREEN

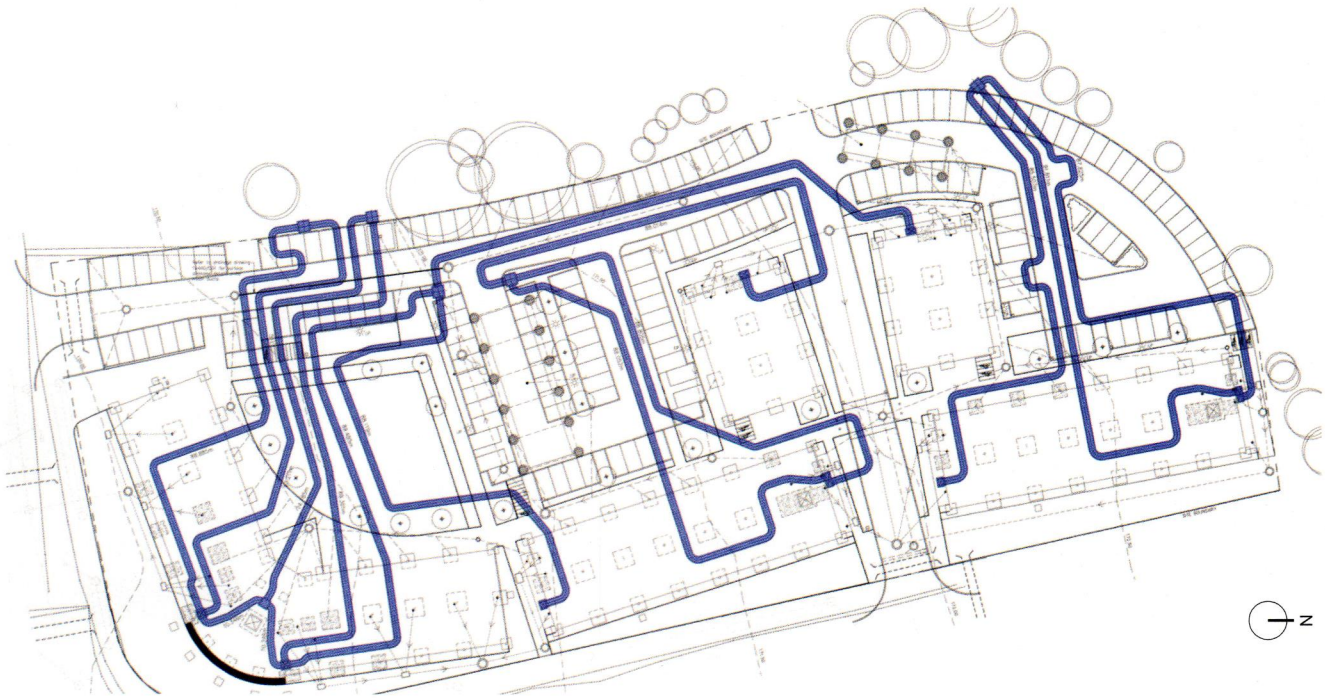
Hamilton Associates has designed an office park with a Roman-style ventilation system. It's remarkably innovative, finds *Hattie Hartman*

A speculative office park on a greenfield site is not where you'd expect to find a radical approach to heating and cooling. Indeed, the first phase of the Easter Group's 35-hectare Business and Technology Park at Butterfield, Luton, by Hamilton Associates may look like no more than conventional corporate architecture, but its predicted annual CO_2 emissions are a respectable at 27.5kg/m^2.

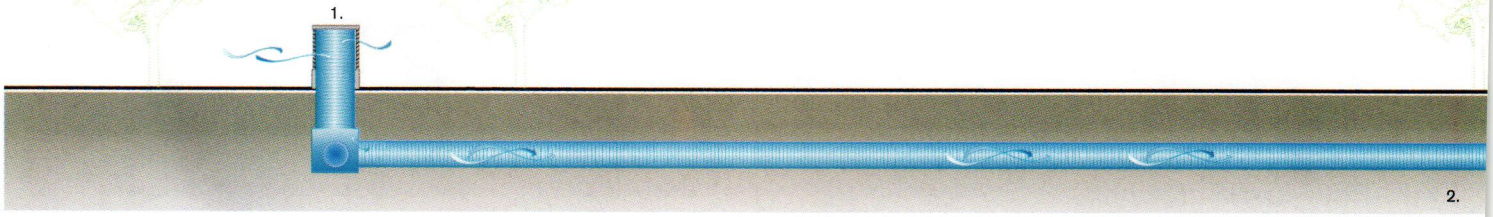
This low figure is the result of an intelligent combination of off-the-shelf materials, a carefully considered natural ventilation strategy, and an innovative system that includes up to 80m runs of underground concrete pipes which replace conventional air conditioning. Paul Hartley of Hamilton Associates insists this system is nothing new. 'The technology is very mundane,' he says. 'It's basically what the Romans were doing 2,000 years ago.'

Phase 1 of the scheme, entitled The Village, was completed in August and comprises approximately 1,700m^2 of office space in five buildings. It has since achieved a BREEAM 'Excellent' rating. The environmental agenda for the site was led by the client and its service engineer, Atelier Ten, who spent a year researching and costing various options for the site, which included photovoltaics, wind turbines and a CHP plant. In the end, capital intensive renewables were ditched in favour of a concrete structure for thermal mass, and natural ventilation.

The decision to naturally ventilate the offices was controversial and was taken before sustainability became a hot topic. 'This was a brave move for Easter Group two to three years ago,' Hartley explains. The biggest hurdle was overcoming commercial suspicion of >>



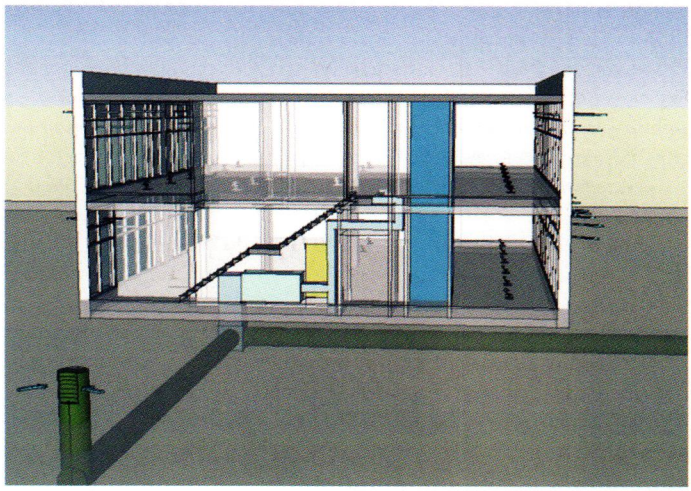
1. Fresh air intake
2. Earthduct min. 70m length / 900mm diameter
3. Ventilation via floor grilles
4. Pressurised floor void
5. Exposed concrete slab
6. Adjustable internal blinds



Top Site plan; a network of underground ducts delivers pre-conditioned air to the offices

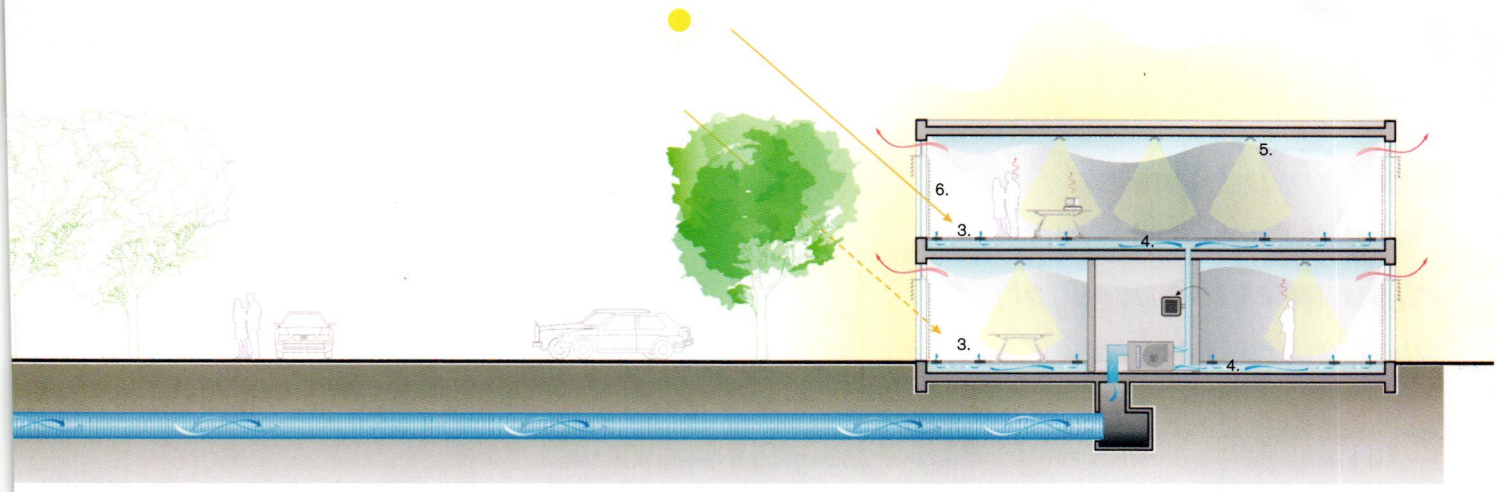
Above Section of environmental strategy showing air-intake shafts, underground ducts, pressurised floor voids, and operable windows

Right Air is pulled into the plant rooms from concrete ducts and delivered to the offices



non-air-conditioned buildings. Atelier Ten wanted to counter the frequent tendency of tenants to fit out naturally ventilated buildings with air-conditioning after the first hot summer. To promote their vision, Easter Group hosted breakfast meetings for letting agents, where Atelier Ten explained the strategy.

The buildings have a concrete structural frame with exposed concrete ceilings for thermal mass. The width of the buildings was kept at 13.5m to ensure good cross-ventilation. Operable windows were installed along the top sections of the aluminium curtain wall system and feature automated sensors that open them at night to draw cool air across the underside of the slabs.



The windows also have blinds which are automated on the south and east facades to control solar gain.

The most unusual aspect of the project is the use of external concrete earth ducts, which Bellew refers to as 'de-coupled or non-room based' thermal mass. 'We have a lot of experience with thermal mass – exposed slabs would not have been enough to control peak summer temperatures,' explains Bellew. 'Earth duct and earth tunnel installations are very common in Germany, and it seemed to me that there was no reason why they shouldn't be applied here.' Bellew first learned of the systems from Stuttgart-based engineer Thomas Auer of Transsolar, who is a fellow teacher at the Yale School of Architecture.

On the Butterfield site, the team located a system of 900mm-diameter ducts at 1.2m below ground, where the earth maintains a relatively constant temperature throughout the year. Fans in the two-storey stacked plant rooms located on the ends of the buildings pull in fresh air from free-standing ventilation shafts located in the car park. The air is then distributed into occupied spaces through floor diffusers from below-floor plenums.

In summer, cool air from the concrete ducts is introduced at night until the building reaches its target temperature of 20°C, eliminating the need for mechanical cooling. In winter, air in the ducts is warmed by the >>

Top left Air intake shafts with aluminium louvres are located in the car parks

Top right Aerial view of Phase 1, which completed in August

Above right 900mm diameter concrete ducts are located 1.2m below ground

Cool air introduced from the concrete ducts eliminates the need for mechanical cooling

earth, which can be 12-16°C warmer than outside, before passing over auxiliary heaters and being distributed into the interior.

Design simulations by Atelier Ten estimate that the energy consumption of the buildings will be about 80 per cent less than comparable air-conditioned offices. Other sustainable aspects of the scheme include the use of recycled aggregate in the concrete and low-energy light fittings on automated sensors throughout. Surface water was a major issue, as no outflow of water from the site was permitted, so careful site engineering by Waterman Burrows Crocker – using a series of open ditches, attenuation ponds, and rills and swales – was a key aspect of the masterplan.

Four out of the five Phase 1 buildings are now occupied and the fifth is committed. Phase 2 will break ground in mid-2008 with a combination of concrete ducts and ground-source heat pumps because space constraints and ground conditions limit the applicability of a concrete duct system.

The Easter Group is already funding a post-occupancy study at the University of Brighton to monitor occupant comfort and energy performance – a signal of the developer's commitment to the strategy. Despite its uninspiring architecture, this project is noteworthy because it has taken its environmental agenda seriously, from initial site planning to post-occupancy. It is proof that green buildings are no longer one-off demonstration projects but are becoming part of the mainstream. ■

Above The curtain walling incorporates windows operated by automatic sensors to optimise natural ventilation. Blinds on the south and east facades are also automatically operated to control solar gain

Tender date May 2005
Start on site February 2006
Contract duration 54 weeks
Gross external floor area 6,500m²
Cost £1,345/m²
Form of contract JCT 98 with contractor's design – Hamiltons novated
Client Easter Group
Architect Hamilton Associates
Structural engineer Price & Myers
Services engineer Atelier Ten
Quantity surveyor Davis Langdon, Tweeds
Planning supervisor Gardiner & Theobald
Contractor Verry Construction
Selected subcontractors and suppliers
Groundwork/concrete frame Modebest; *Stone render* Stoneguard; *M&E services* Aqua Group; *asphalt roofing* Voland Roofing; *raised-access flooring* Bathgate Flooring; *ironmongery* Allgood
Target annual CO_2 emissions 27.5kg/m²

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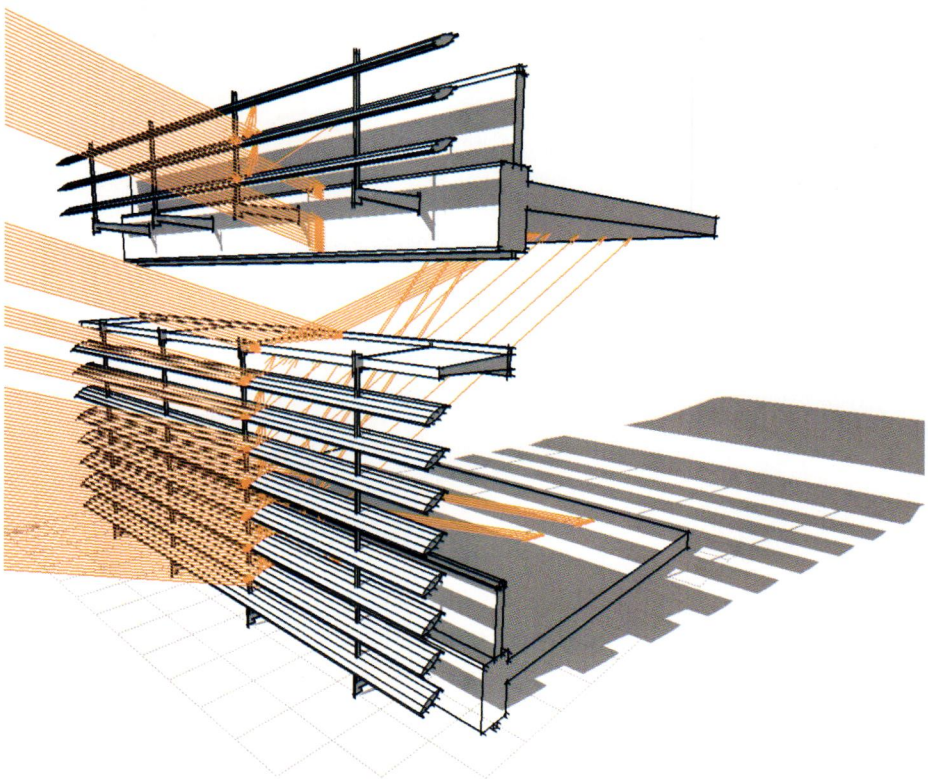
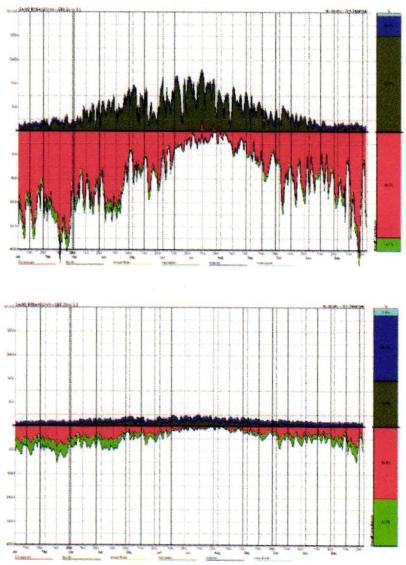
SOFTWARE

THERMAL MODELLING

Software companies now offer programmes to calculate everything from solar gain to thermal mass – packages that will change design, says *Hattie Hartman*





Left Solar angles at different seasons can be inputted to optimise solar-shading devices

Above Graphical analysis shows various energy loads (red represents conduction) – different inputs of materials and infrastructure yield

ECOTECT

Developed by architects, Ecotect is a more intuitive programme than IES Virtual Environment. It uses a visual 3D model to disaggregate each building into 'zones', automatically calculating the heat-flow paths between adjacent areas, and plugging them into the SBEM or SAP software to determine compliance with building regulations. The building can then be analysed on a graph to identify the source of the largest energy loads: solar radiation, conduction, etc. Architects can use this information to test alternatives and reduce these loads.

The graphs are structured so that architects who are not experts in thermal simulation modelling can understand the implications and the trade-offs. For example, if conduction is a major source of heat gain, the external envelope needs to be changed. 'Ecotect is not doing anything special,' says its developer Andrew Marsh. 'It's just displaying the information in a way that architects can play with and understand.' The emphasis is on what Marsh refers to as 'relative accuracy' so that the programme works quickly without long delays for number crunching. Once the basic building parameters are established, it can be exported to Energy Plus or IES for more sophisticated analysis.

Ecotect is intuitive and quick, once you understand it. Online tutorials geared toward different levels of proficiency make learning as user-friendly as possible. **www.ecotect.com**

To make the jump from worthy intentions to realised project, would-be energy efficient designers need a more in-depth approach from the start of the design process.

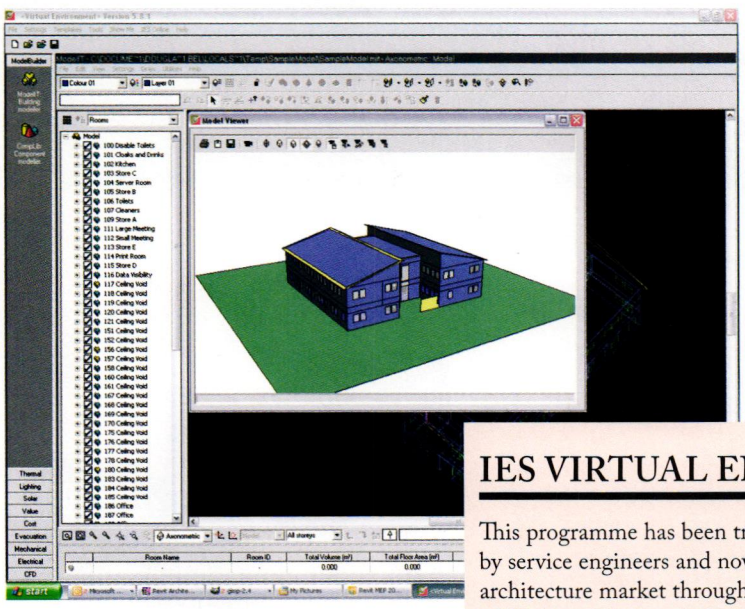
Software companies have begun to pick up on this, and environmental modelling programmes are now available to help design in sustainability. The two most widely used are IES Virtual Environment and Ecotect. These programmes quantify many aspects of sustainable building design and, unlike previous thermal analysis tools that only measure energy use, can be used to determine how to increase efficiency.

This new software gives architects the chance to reduce energy use as a part of the design process, rather than relying on the services engineer. Unfortunately, the programmes have been slow to gain popularity due to their complexity. David Hunter from Bristol-based Stride Treglown – which runs monthly CPD workshops on sustainability for its Bristol-based staff of 150 – says: 'We have not fully adopted any of these programmes because they are not user friendly; they require a level of specialisation.' But this should soon change due to a number of factors.

The first is the increasing integration of the software: these programmes will import 3D files from CAD for analysis. California-based Green Building Studio developed files that work between Autodesk, AutoCAD and Microstation. Another factor in the increasing need for architects to comply with building regulations – professionals need to check compliance with as few mouse clicks as possible. Finally, architects increasingly wish to address these issues at concept stage, before massing and orientation have been finalised.

The latter desire is shared by architects and engineers alike. 'By week three or four, 70 per cent of the design decisions that impact performance have been made,' explains Ecotect founder Andrew Marsh. David Strong, chief executive of Inbuilt, adds: 'Post-engineering a building late in the design phases means missing out on the key opportunities to reduce energy loads.' While these programmes address many of the issues, the very latest software will link between even more components to enable holistic analysis.

EVAtool, originally devised by Grimshaw for the Eden Project, has been further developed by David Kirkland, who has since left the office and started his own company. Kirkland says: 'EVAtool is about designing a working process which will deliver a sustainable building.' At present, the software is undergoing beta-testing by several larger firms (who are, at present, anonymous), but it is promising. This is a radically different proposition from the current process of designing a building and then validating its energy performance.



IES VIRTUAL ENVIRONMENT

This programme has been traditionally used by service engineers and now caters for the architecture market through a recent affiliation with Autodesk. A model can be directly imported from Revit Architecture and energy-performance data can be obtained by entering preliminary information in four categories: building type (with individual room assignments); construction materials; type of mechanical system; and location. The resulting data is displayed in tables of numbers rather than graphically, making interpretation more difficult than in Ecotect.

However, once familiar with the software architects can obtain detailed environmental information about a building at an early stage and test different alternatives. IES is in the process of developing a more visually intuitive interface. Its outputs are based on more precise simulations than Ecotect, but this may not be necessary at concept phase.

www.iesve.com

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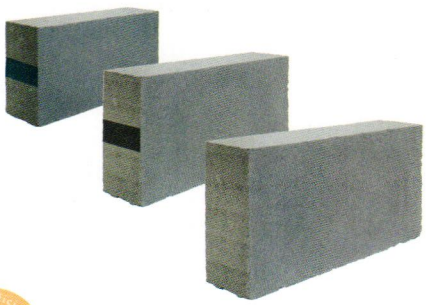

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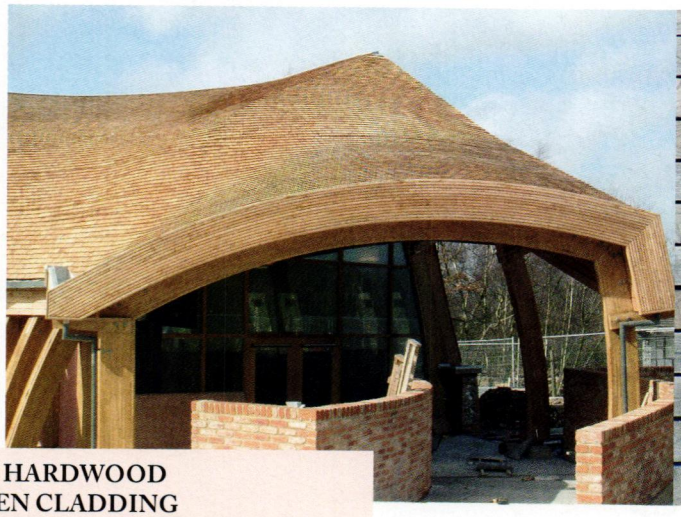
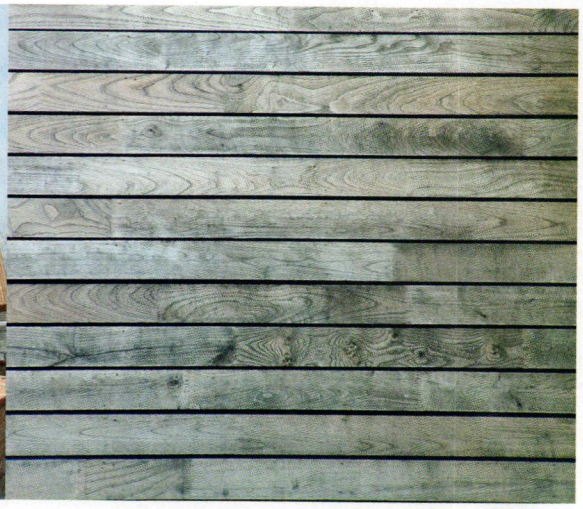
PRODUCTS

SPECIFYING GREEN

From cladding material to lightbulbs and toilets – products are changing to reflect demand for greener buildings. Here, the AJ team presents some of its favourite sustainable products



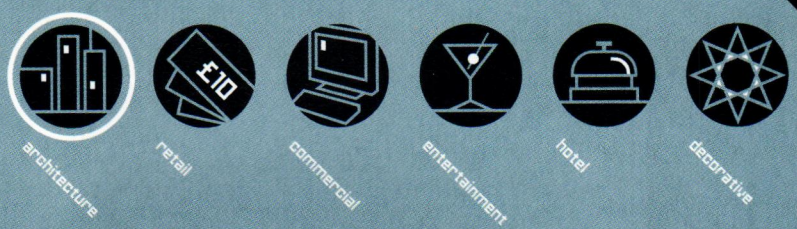


COPPICED HARDWOOD RAINSCREEN CLADDING

The availability of cheap timber imports has led to the decline of the market for coppiced hardwoods. Inwood Developments has responded by pioneering the use of finger-jointing technology to process short lengths of coppiced hardwoods, including sweet chestnut and oak, into high-grade, stable timber products for internal and external use. Timber is sawn from logs from existing UK coppices, which are cut on a 25-30-year cycle to allow re-growth. Rainscreens are specially dried and treated, with low movement potential. **www.in-wood.co.uk**

KLH SOLID CROSS-LAMINATED TIMBER

Cross-laminated timber is produced from cross-wise stacked strips from the trunk edge of Austrian spruce trees. The manufacturer uses timber with a moisture content of 12 per cent to eliminate the risk of fungal or insect attack, and the individual layers of wood are glued using the solvent and formaldehyde. The product transfers loads from all sides, and is often used for structural application, but can be produced in a high-quality finish for interiors. **www.klh.at**



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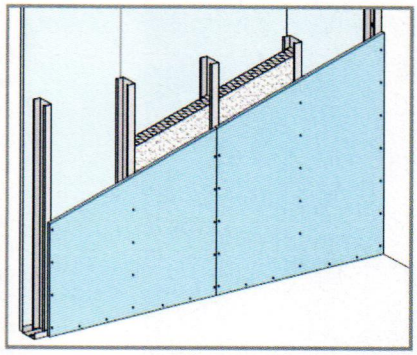
This range of masonry wall ties helps improve the energy efficiency of buildings by removing thermal bridges created by standard stainless-steel wall ties. The Teplo Tie is made of a composite material based on basalt fibre, which is resistant to corrosion and alkali. It is stronger, lighter and 20 times less thermally conductive than stainless steel. The lack of thermal bridging improves the U-value of masonry walls by up to 10 per cent according to calculations developed in conjunction with the BRE. Relative performance increases with cavity depth, and the ties can be used in cavities up to 300mm.



MICRONAL PCM SMARTBOARD

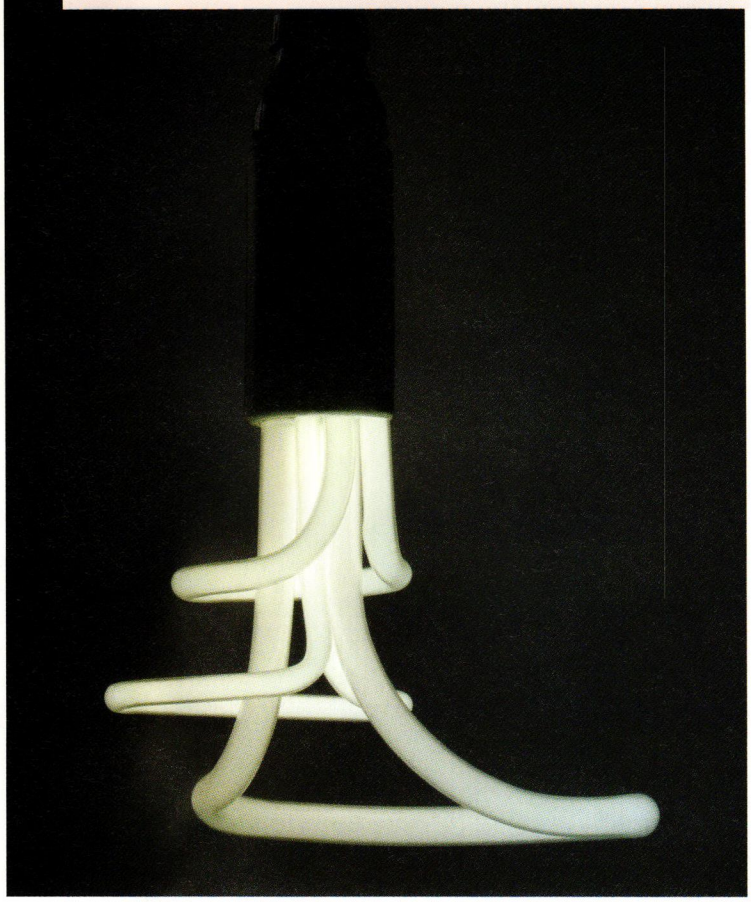
Micronal PCM (Phase Change Materials) SmartBoard is a gypsum wall board that regulates internal temperature where applied. Panels contain polymer spheres that store wax at their core. On heating, the wax in the reservoir capsules melts, absorbing heat. When the temperature decreases, the wax solidifies and emits heat. The ready-to-use SmartBoard is only 15mm thick but, with each unit containing approximately 3kg or Micronal PCM, its net insulating capacity corresponds to that of a brick wall of 120mm thick. **www.micronal.de**

ISONAT

Isonat is made from hemp and recycled cotton fibres, held together with a minimal amount of thermoplastic binder in batts. Unlike most lightweight synthetic fibre insulations, Isonat does not compress, reducing the need to add additional layers in order to maintain a specified thickness. The complex non-woven structure of the batts reduces heat loss through convection. The inherent flexibility and high density increases durability and creates a non-slumping and tight fitting unit. Isonat is treated with a fire retardant and conforms to Building Regulation requirements. **www.naturalinsulations.co.uk**

PLUMEN LOW-ENERGY LIGHTBULBS

Compact fluorescent lightbulbs are now accepted as the mainstream low-energy alternative to tungsten lamps, but are usually only available in three standard formats. The Plumen low-energy lightbulb breaks this mould, forming the piping of the compact fluorescent bulb into new shapes. The products are centrepieces rather than utility fittings requiring a shade. The bulb is still in prototype stage, though Hulger, the London-based company behind the project, is currently in discussion with bulb manufacturers to create a mass-produced series. **www.plumen.com**



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Branching into the mains-powered LED industry, EcoLED produces a range of products including dimmable, emergency and elevator lighting. In comparison to traditional lighting, LEDs reduce power consumption by 80-95 per cent, have a minimum maintenance-free lifespan of 10 years, and operate at a temperature of 55°C (as opposed to the typical 300-400°C), thereby reducing heat pollution and saving energy expended on air conditioning. **www.ecoledlighting.com**

TWYFORD GALERIE FLUSHWISE WC

Reportedly, the 45 million domestic WCs in the UK use a staggering two billion litres of water each day. Twyford Bathrooms' dual-flush Galerie Flushwise WC uses 4 or 2.6 litres, 30 per cent less than current legislation demands (6 or 4 litres). By contrast, some older WCs use up to 13 litres. In order to address this problem, Galerie Flushwise has made retrofitting easy and the simple design is unobtrusive and fits in easily. The footprint and installation features comply with normal requirements and the product meets all UK and European standards. **www.twyfordbathrooms.com**

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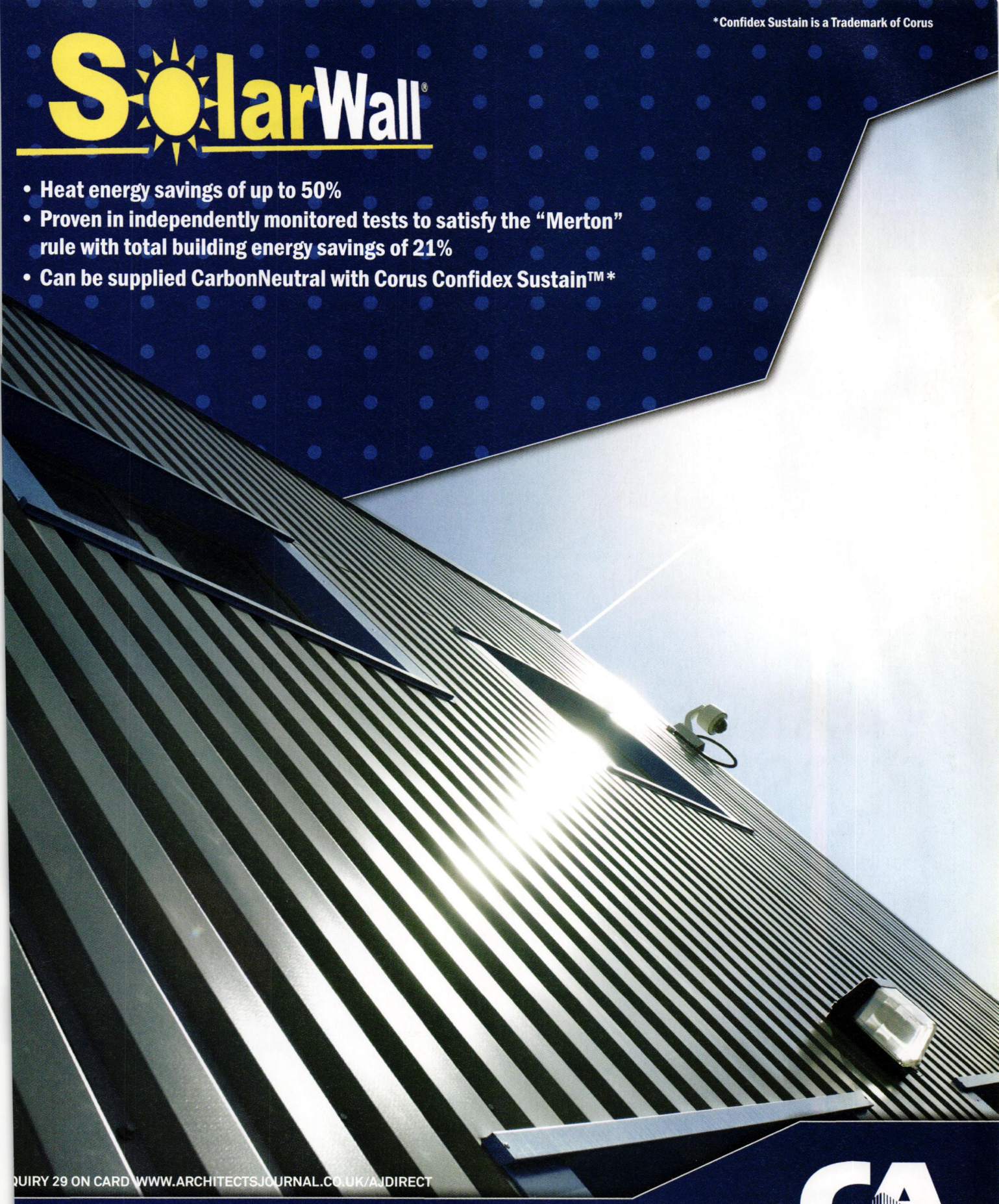

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REVIT DESIGN AWARDS

Autodesk

INTRODUCTION

The Architects' Journal is delighted to present the winning schemes in the inaugural Revit Design Awards. Software is now central to the way architects, designers, builders and structural engineers test ideas before translating them into reality. So it is fitting that Autodesk – the creator of Revit design software – has launched these awards to identify, reward and publicise examples of excellence in the field of computer-generated design.

Run in conjunction with the newly created online UK Revit User Group, the awards are intended to recognise creative, innovative application of the Revit Architecture (formerly Revit Building) and Revit Structure programmes across six categories.

These are: Best Residential Scheme over 500m^2; Best Non-Residential Scheme under 2,500m^2; Best Non-Residential Scheme over 2,500m^2; Best Structural Design (schemes using Revit Structure); Best Conceptual Project; and Best Student Project.

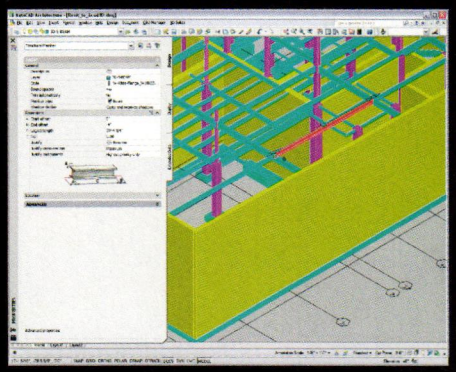
Entrants were judged on their use of Revit programmes from conceptual design stage to project completion with special attention to detailing, decision-making and presentation. Pete Baxter, Autodesk Building Solutions Northern Europe sales director, said: 'Our interest is demonstrating use of the tool in relation to process change. We're searching for comprehensive use of Revit.'

The judges selected a winner and runner-up in each category. They also picked the best overall project or scheme. This was no easy task given the high standards displayed by all entrants to the Revit Design Awards.

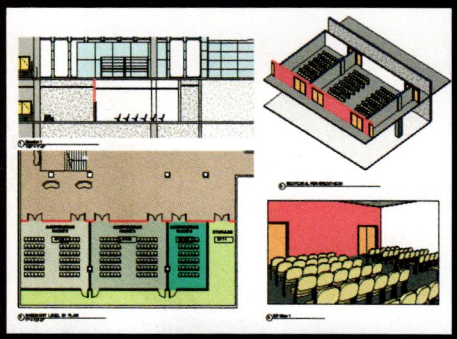
The judges were:

- Pete Baxter, Autodesk AEC sales director, Northern Europe;
- Simon Gillis, Autodesk; and
- Ruth Slavid, The Architects' Journal.

Feature written by Clive Walker



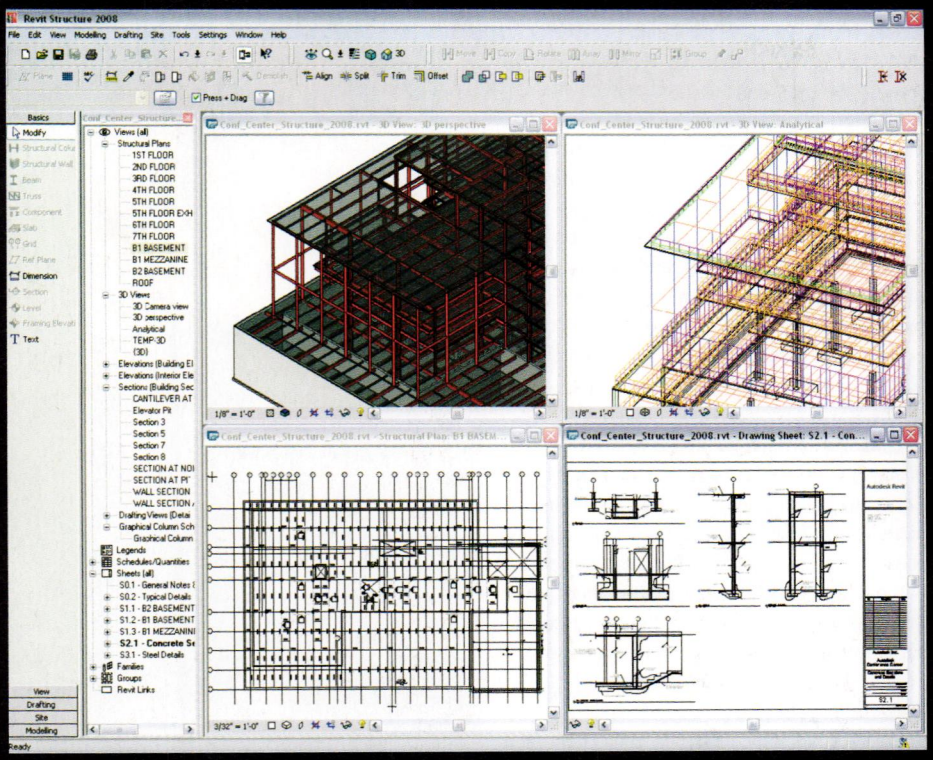
Above Services design can be included



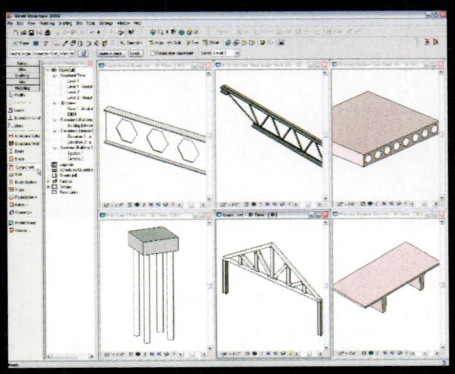
Front cover The overall winning scheme, 5 Churchill Place in Canary Wharf, London

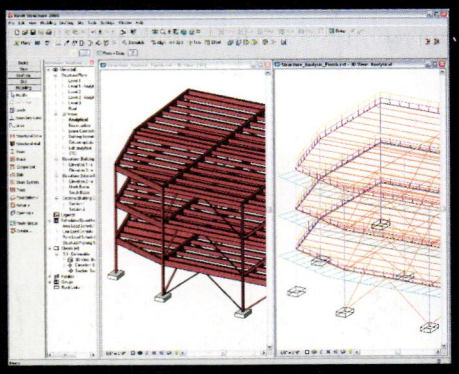
Above Revit can easily generate plans, elevations and axonometrics; in this case a conference centre

Right Visualisations can be created easily from Revit files



Above Revit models can be easily positioned on Google Earth





Above Structural analysis and parametric components

ABOUT REVIT

Revit, by Autodesk, comprises three versions: Revit Architecture, aimed at architects and designers; Revit Structure, for structural engineers; and Revit MEP, used by mechanical, electrical and plumbing engineers.
In a nutshell, the programme is a single-file database that can be shared among multiple users.

In all three versions, plans, sections, elevations and schedules are all interconnected. That means that if one user changes one view, the other views are instantly updated. In this way, drawings and schedules that are in production are always fully co-ordinated among users.

Concepts are created in 3D. So a deciding factor for the panel of this year's Revit User Design Awards was the quality of walls, floors, roofs, structures and even windows presented in a 3D format. Small-scale views can be composed using a combination of 3D and 2D drawings and by draughting in work created in other CAD forms. **www.autodesk.co.uk**
Pete Baxter, Autodesk

Non-residential under 2,500m²
Winner
Project EcoDepot, York, North Yorkshire
Architect Hadyn Scarborough, Carillion

There is something very seductive about designing with cutting-edge technology and building with ancient materials. EcoDepot exemplifies this marriage. This super-insulated building, housing York City Council's Neighbourhood Services Directorate, was taken from concept to project completion and handover using Revit. Designed to be affordable and sustainable, the project maximises use of low-embodied-energy materials that have been sourced locally, specifically straw-bale cladding panels. Renewable technologies feature strongly, including wind turbines, grey-water harvesting and solar-thermal systems.

Revit was used to generate all drawn information, including plans, elevations, sections, details, schedules, rendered visuals, isometrics and shaded elevations. This comprehensive use of Revit's capabilities, particularly the detailing tools, makes clear how the building is formed using non-standard materials. 'There's a spatial co-ordination challenge in doing this,' said Pete Baxter. 'Haydn Scarborough has used Revit effectively to articulate to the construction team how everything can be co-ordinated on site.'

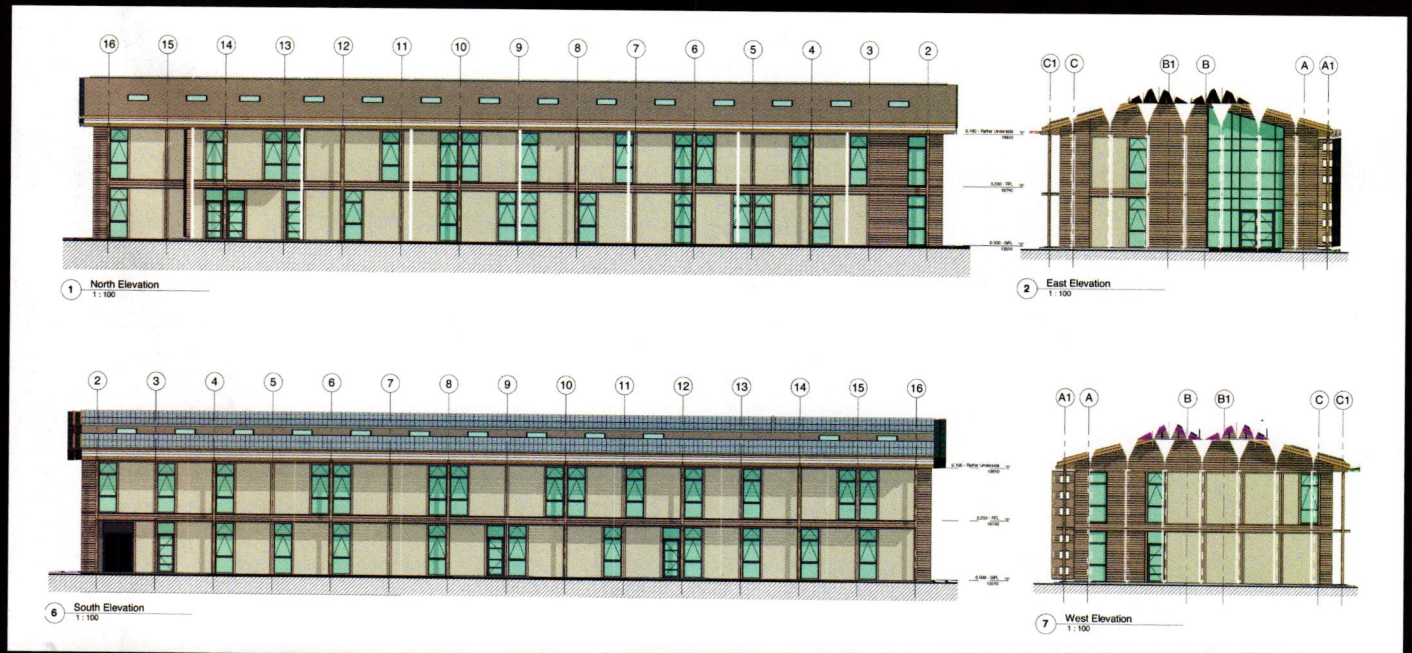
Painstaking attention to sectional perspectives lifts this project above other entrants in this category, though a shortage of elevational detail detracts from the scheme's overall quality.

Sweeping cedar-wood boarding, tastefully incorporated both externally and internally, attracted special praise from the judges. 'Revit has been used effectively to explore the co-ordination of different components,' said Simon Gillis. 'It demonstrates an interesting and different way of conveying information.'

EcoDepot aims to be an exemplar of sustainable design, construction and operation. This objective, declared the panel, is nimbly expressed in Haydn Scarborough's presentation. Revit is used proficiently to show the composition of the building and how its individual sections knit together to form the final product. 'From the perspective of understanding the product, I think it shows the range of tools available through Revit,' said Pete Baxter. There's a strapping confidence to this high-tech design, which exercises a bold and intelligent mix of renewable energy technologies. 'A striking example of modern sustainability in action,' concluded Ruth Slavid. 'Definitely a winner.'

Above The super-insulated building uses traditional, rustic materials – all designed in Revit

Below Elevations are a little light on detail



'An interesting and different way of conveying information'

Ruth Slavid

'Versatile and comprehensive exploration of Revit'

Pete Baxter

'Innovation that can be practically applied'

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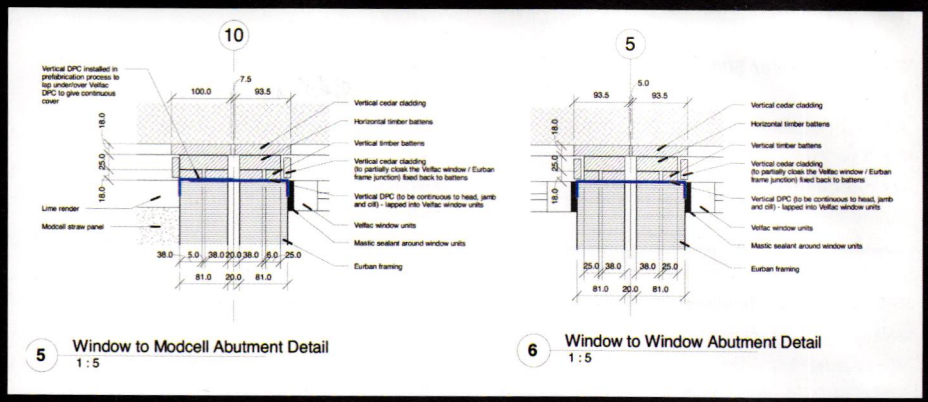
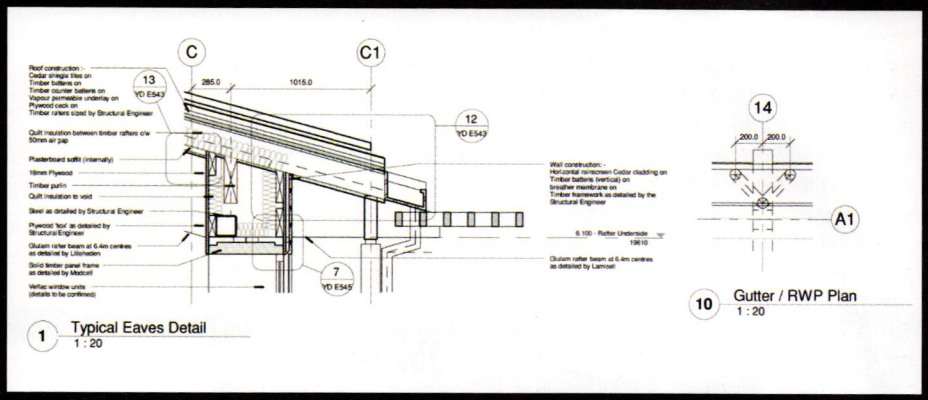
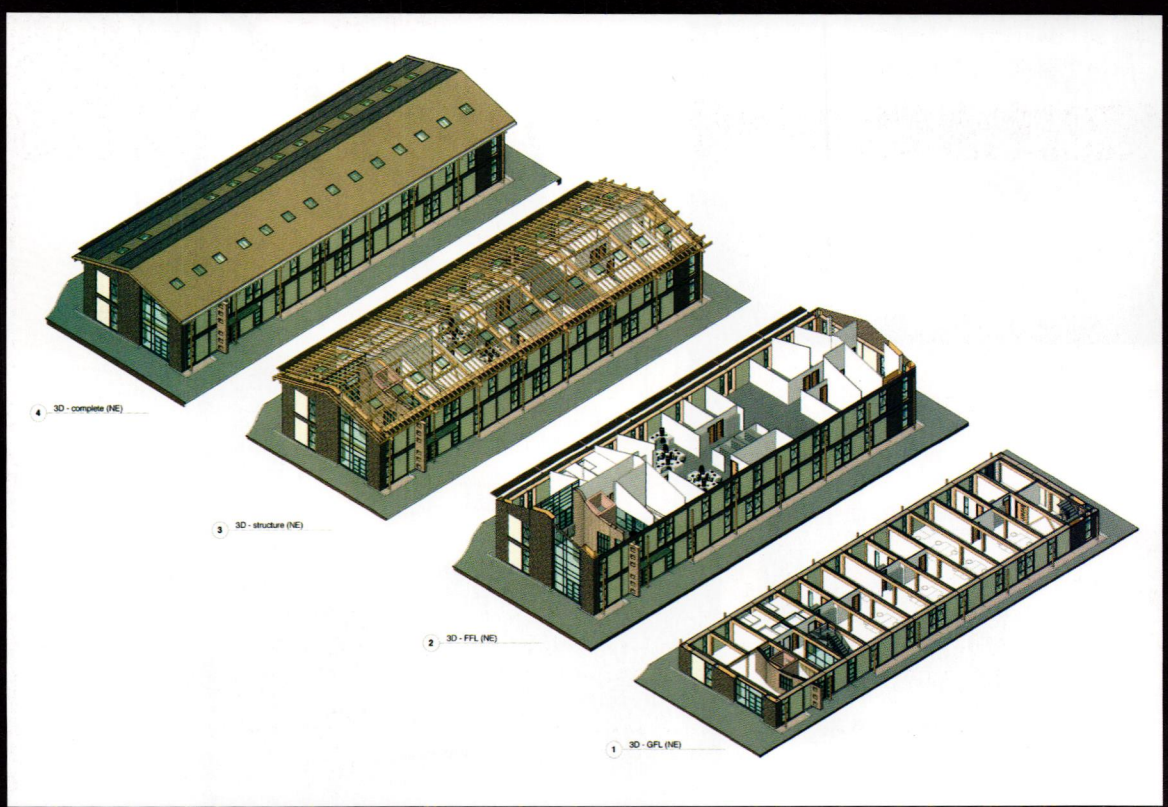






Above Details were drawn in Revit

Left The presentation gives a good understanding of how the elements of the building knit together

Residential over 500m²
Winner
Project Proposed new residence for MKB Group
Architect Sara Elliott, Empowered Space Architects

This vast private residence innovatively blends sweeping glass elevations with judicious use of dry-packed-stone feature walls, timber panelling and crisp white rendering. The effect is a clean modern design demonstrating that luxury and taste are not mutually exclusive – as suggested by much modern housing. Earmarked for the exclusive Hyde Park district of Johannesburg, South Africa, this two-storey structure is one of only a few non-UK based projects to be submitted for the Revit Awards. It is also distinguished as the only one-off house design in this category – the other entries being multiple-occupancy.

In a rare burst of instantaneous approval, the judging panel declared this design to be 'beautifully detailed' with a 'seductively minimalist' feel to it. 'There's a lot of detail built into this model which explores the many different aspects making up this scheme,' said Ruth Slavid. By carefully using Revit's perspective section tool to slice the 3D model, for example at the basement fireplace, the design demonstrates clearly and concisely how available space is fully utilised. 'There is a thorough understanding of this building's structural make-up,' added Simon Gillis.

Highly detailed section drawings demonstrate Revit has been pushed to its full capability – a crucial factor not always evident in other entries to this category. The final product has an integrity that shines through, said the judges. 'It's a very comprehensive use of the tool,' concluded Pete Baxter. 'What is especially good is the extensive information that has been weaved into this design. This is an excellent presentation.'

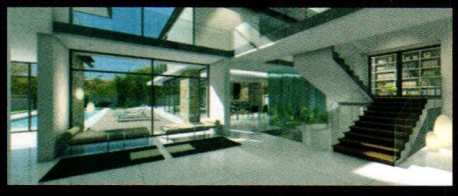
'A good exploration of the scheme'

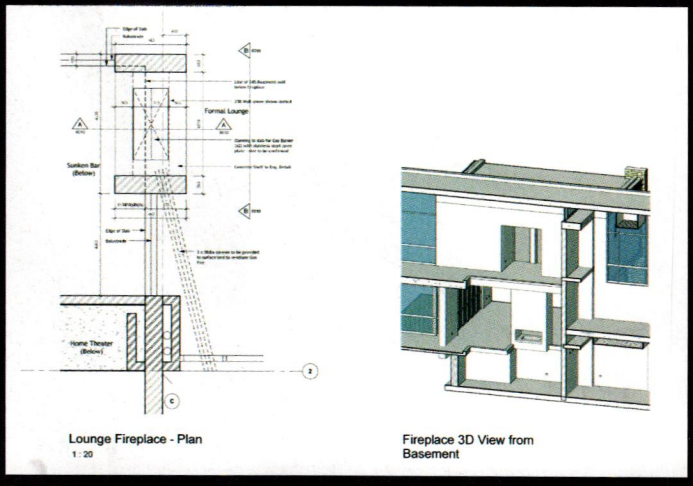
Ruth Slavid

'A very comprehensive use of the tool'

Pete Baxter

Right and below Detailed modelling and sectional drawings make it possible to understand exactly how the building will work





Above The building blends glass and render with more traditional dry-packed stone

'An interesting and different way of conveying information'

Ruth Slavid

'Versatile and comprehensive exploration of Revit'

Pete Baxter

'Innovation that can be practically applied'

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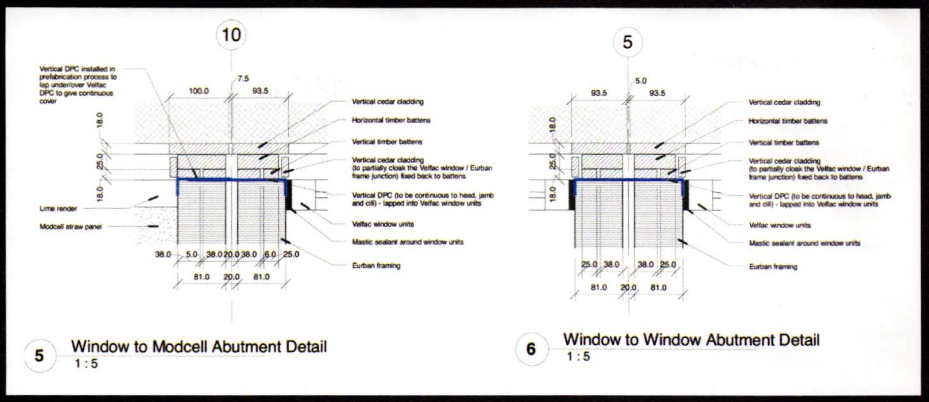

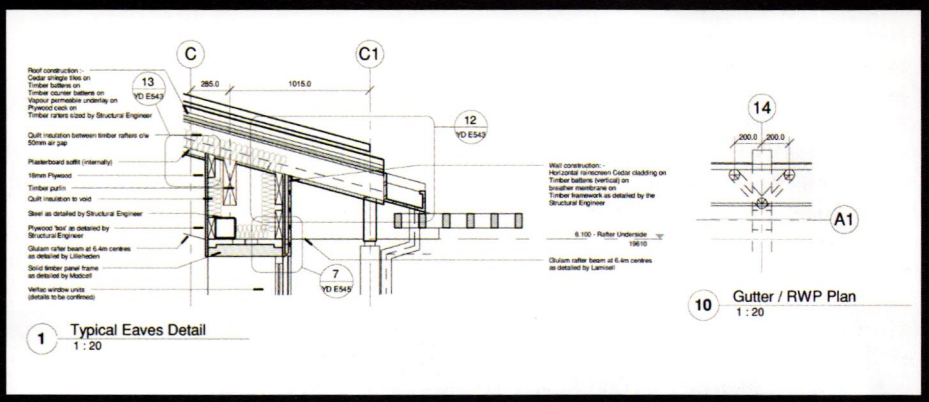

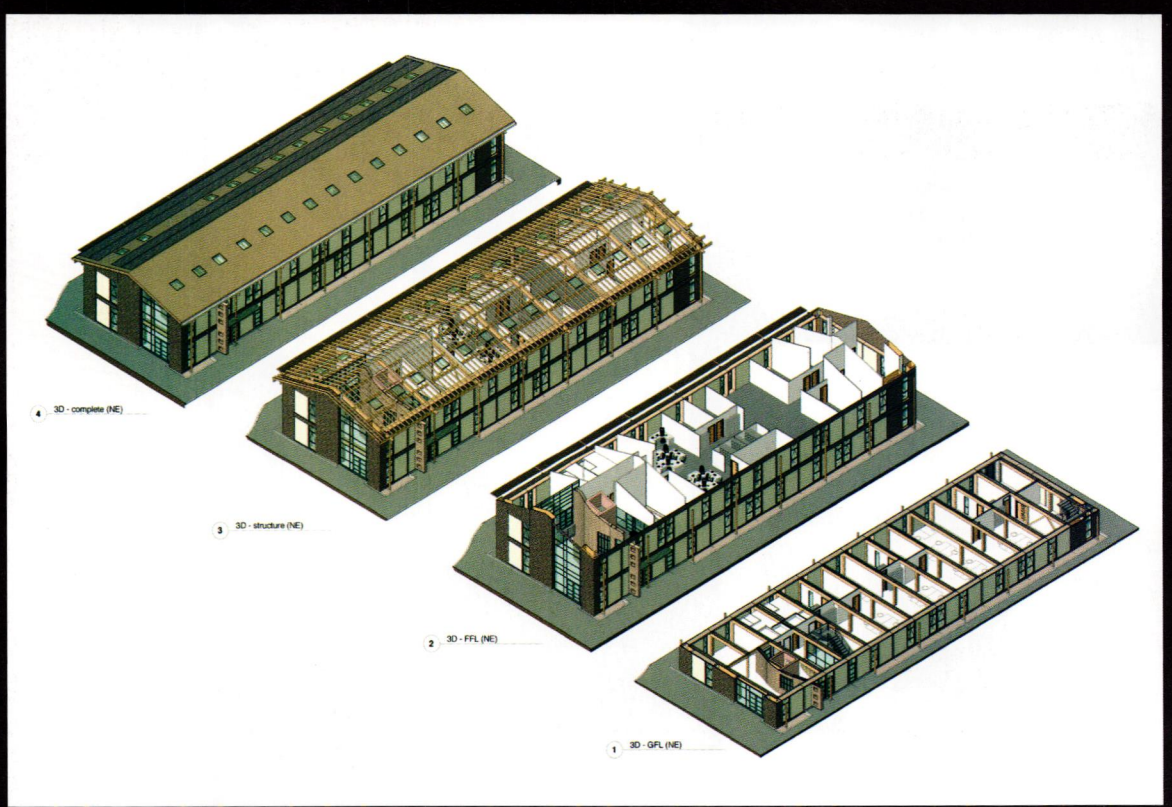

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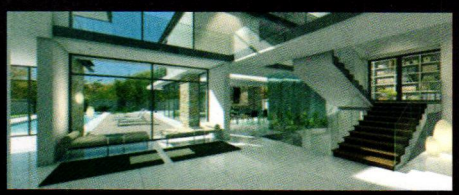
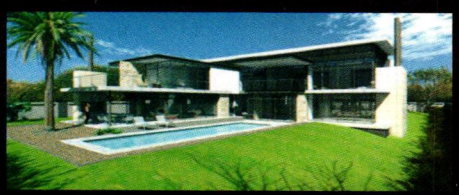
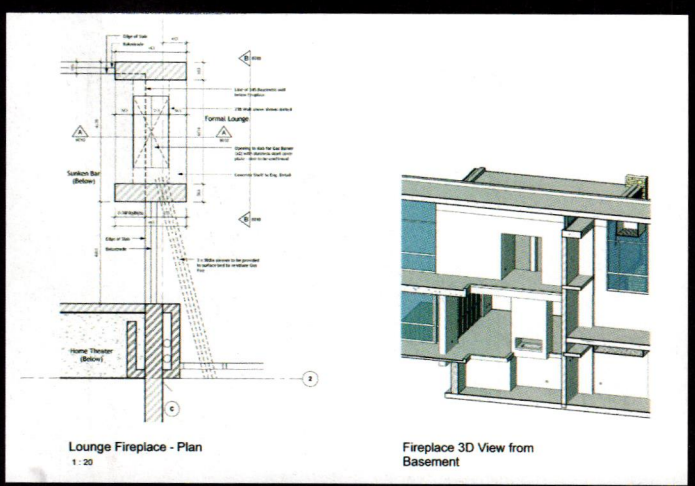






Lounge Fireplace - Plan
1 : 20

Fireplace 3D View from Basement

Above The building blends glass and render with more traditional dry-packed stone

Conceptual
Winner
Project Sheffield Festival Centre
Architect Andrew Dobson, Purcell Miller Tritton

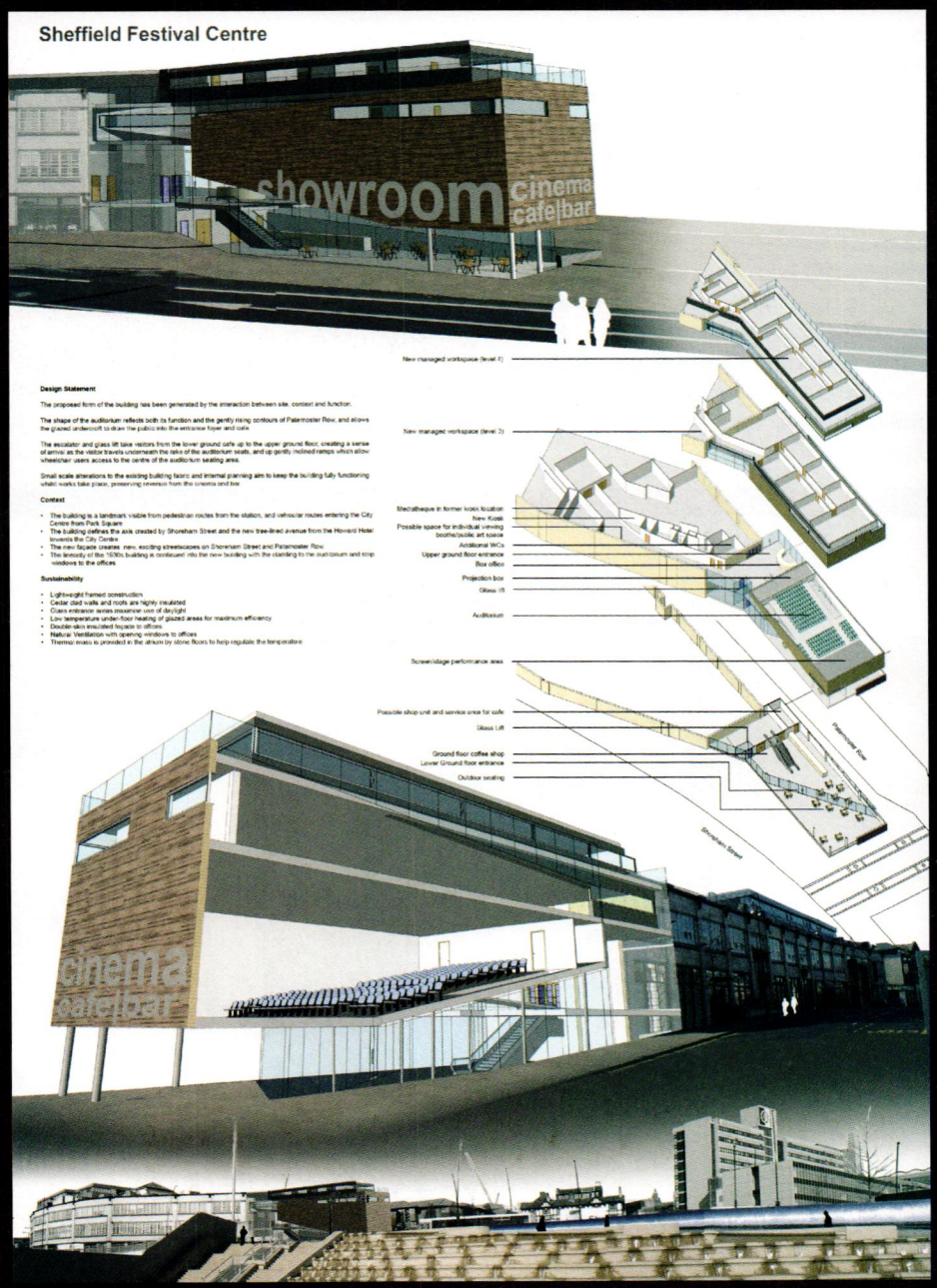
Designing a quirky and architecturally exciting 21st-century extension to an existing 1930s Art Deco building is no mean feat. The challenge is to deliver architectural flair within tight functional and contextual boundaries – something Andrew Dobson demonstrates with aplomb. His proposal for Sheffield's Showroom Cinema and Workstation displays an acrobatic application of Revit from axonometric plans and sections to 3D views.

The true nature and character of Dobson's thinking is laid bare in this modelling. The new facade creates a stimulating addition to the streetscape leading towards Sheffield city centre. In response to its architecturally sensitive context, the linearity of the 1930s building is continued into the new structure with cladding to the auditorium and strip windows to offices.

The shape of the auditorium, its functions and its place within the immediate urban landscape are exhibited with some 'very competent' modelling, said Pete Baxter. 'Dobson exploits Revit's horizontal and vertical section tools,' adds Baxter. 'It has not been taken through to maximum design but you would not necessarily expect that at this stage.'

With 3D modelling there is always a dilemma about cross-sectional representations. 'What and where you cut away is very much the architect's own decision and here it has been done very intelligently,' added Ruth Slavid. 'We really get a feeling for what kind of building is being proposed.'

Sheffield Festival Centre



'This has been done very intelligently'

Ruth Slavid

'Great imagery portraying real character'

Pete Baxter

Non-Residential over 2,500m²
Winner
Project 5 Churchill Place, Canary Wharf, London
Architect Miles Walker, HOK

OVERALL WINNER

From the soaring elegance of its 3D curtain walling to the innovative perspective views, 5 Churchill Place more than fulfils the judges' criteria for breadth and versatility of design, making it the undisputed best overall entry in this year's Revit User Design Awards.

It demonstrates a thorough use of the software, exhibiting a level of complexity that is head and shoulders above the other candidates. All the shortlisted schemes are approached from angles out of the ordinary. But HOK demonstrates a cogent understanding of Revit as a working process. The project team has evidently adapted quickly to Revit technology and its new ways of working, said Ruth Slavid. 'That requires investment in time and resource and it seems to be working very well,' she says.

The understated but subtly distinctive composition of the scheme stretches the versatility of Revit with outstanding results. HOK's 12-storey addition to Canary Wharf – earmarked as the European hub for a US financial institution – pays homage to the generic form of Docklands' commercial architecture. But this project, comprising 28,000m² of floor space, has been approached from angles slightly out of the ordinary. Each elevation of glass, granite and metal is unique, and this is neatly illustrated in the sophisticated 3D perspectives on show here.

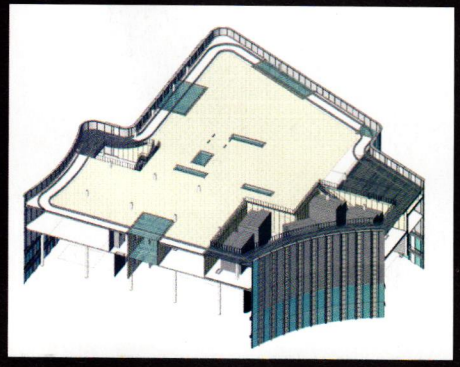
HOK and WSP, the structural engineers, regularly shared respective Revit models during the design process. For example, the Revit architectural model was used as background information for the Revit structural concrete, steelwork and analysis models, which in turn were linked into the architects' modelling. This effective collaboration between disciplines won high praise from judges.

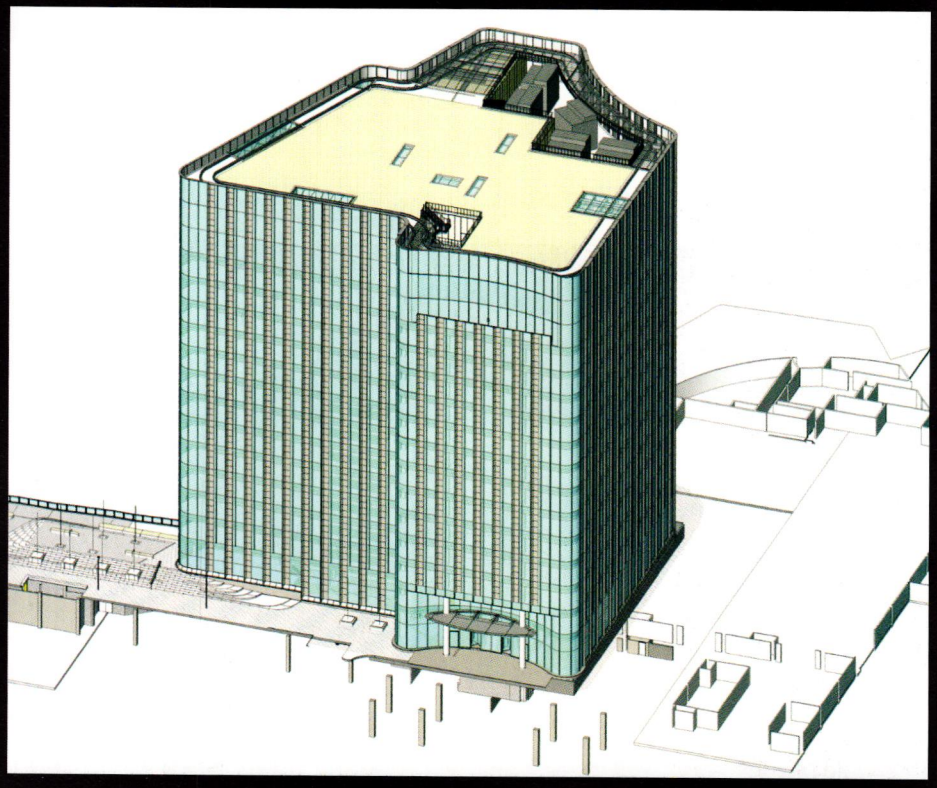
From concept to detailed design, 5 Churchill Place exercises an adventurous application of Revit. 'It blows other schemes out of the water,' said Simon Gillis.

The design also won the Non-Residential over 2,500m² category, in which entries were exceptionally high. But what inspired the judging panel in this case was the conscious decision to employ Revit at every stage of the design process. In fact, HOK used Revit's parametric design tool to deliver all 250 construction drawings required for this project. 'This is a holistic approach,' said Simon Gillis. 'It shows a thorough commitment to detail all the way through. From a technical point of view, the curtain walling in particular achieves its aim.'

Slick collaboration of disciplines – design, structural engineering and services engineering – is a further winning feature of this entry. A high degree of understanding and communication was achieved by the eight-strong design team working seamlessly together on Revit modelling. 'HOK is demonstrating how they worked together as people as well as showing the end result. It's an incredibly thorough piece of design communication,' concluded Ruth Slavid. The final product is a classy, self-assured piece of architecture where 3D modelling is harnessed with dexterity to explain complex detailing.

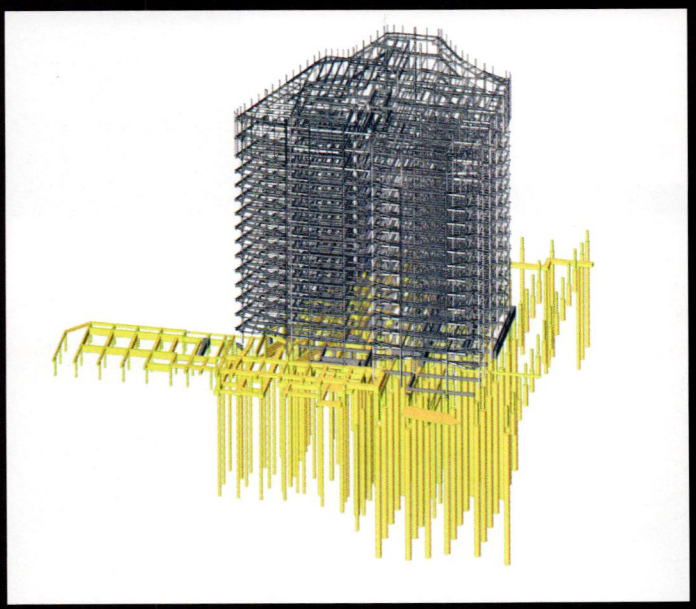
Below and right
Every elevation of the building is different





Above Visualisation of the building interior

Right Steelwork design, both above and below ground, was generated from the Revit building model



'The potential of Revit is truly exhibited in 5 Churchill Place'

Pete Baxter

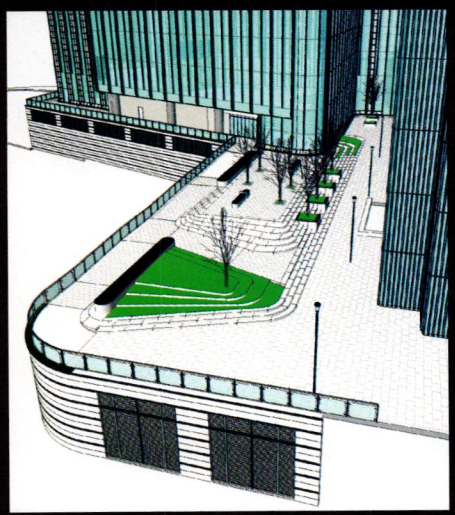
'Effective grasp of Revit and effective collaboration of disciplines – that's impressive'

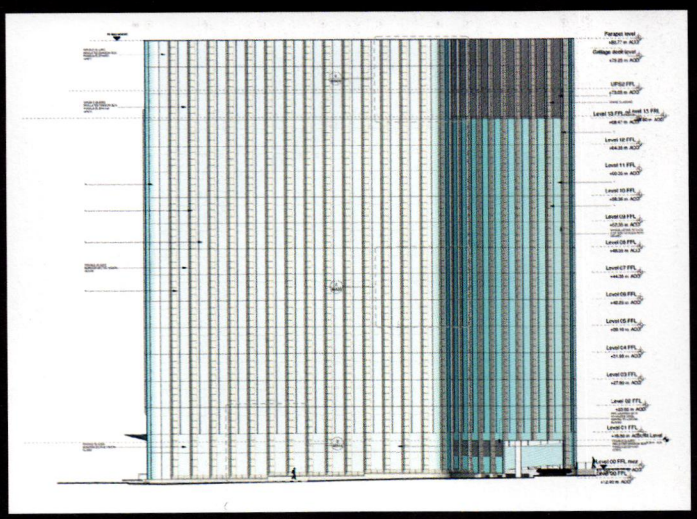
Ruth Slavid

'HOK truly understands the potential of Revit'

Pete Baxter

Right and far right The thoroughness and attention to detail impressed the judges



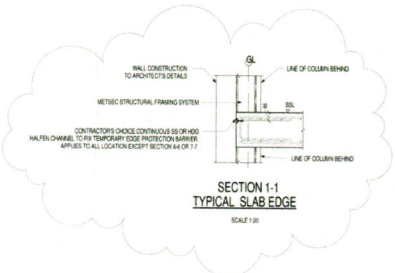


Structural
Winner
Project Forth Valley Acute Hospital
Architect Michael Boyd, WSP

What fascinated the panel about this bold design is the aesthetically satisfying geometric structure. 'It's truly fantastic.' said Ruth Slavid. Other schemes in this category demonstrated competent use of Revit but to a basic level only. WSP, on the other hand, exhibited innovative application. The models, said the panel, are a true digital prototype enabling comprehensive testing of all aspects of the building.

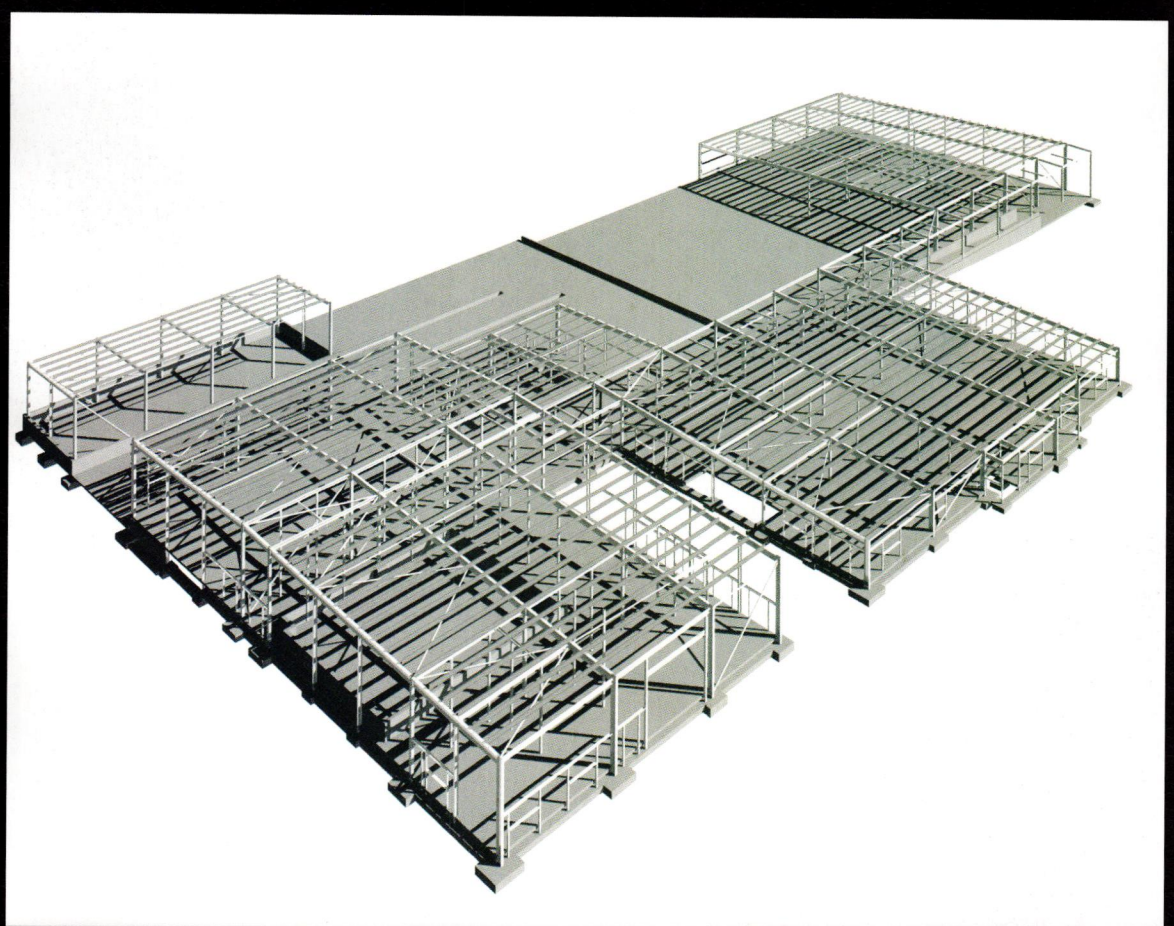
Forth Valley Acute Hospital is a 100,000m^2 healthcare project in Lambert, Scotland. Revit came into its own when modelling magnetic fields around the hospital's MRI units, said project architect Michael Boyd. 'This was essential to ascertain if the magnetic field from these units would interfere with robots working in the basement tunnel below,' he added. Elsewhere, WSP modelled rock and existing ground levels, then cut sections through each gridline to create a visual guide for gauging the depths of foundations. 'We split the project into 18 zones and gave each one its own workset giving us flexibility with views and schedules,' added Boyd.

The end product is a very complex scheme, demonstrating effective design collaboration between WSP and the project's Revit-based architect, Keppie Design. 'This project encapsulates a lot of the methodologies that Autodesk tries to promote,' said Pete Baxter. 'WSP has produced various different analyses within the structural frame. By using Revit's structural analysis tools, WSP has analysed loading or simulated the behaviour of the building in different wind-loading conditions. It's an impressive demonstration of Revit's potential.'



Above right Structural design of one element of the building

Right A Revit-generated detail

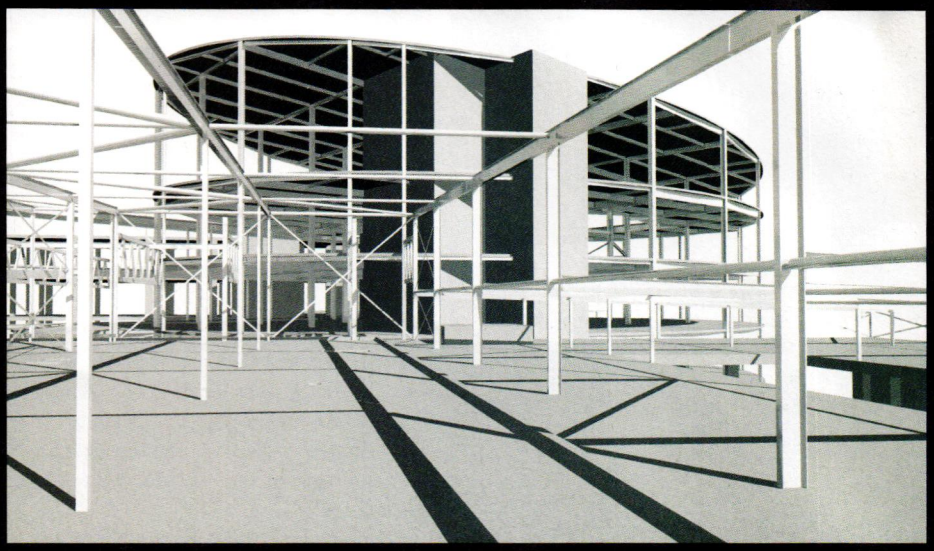


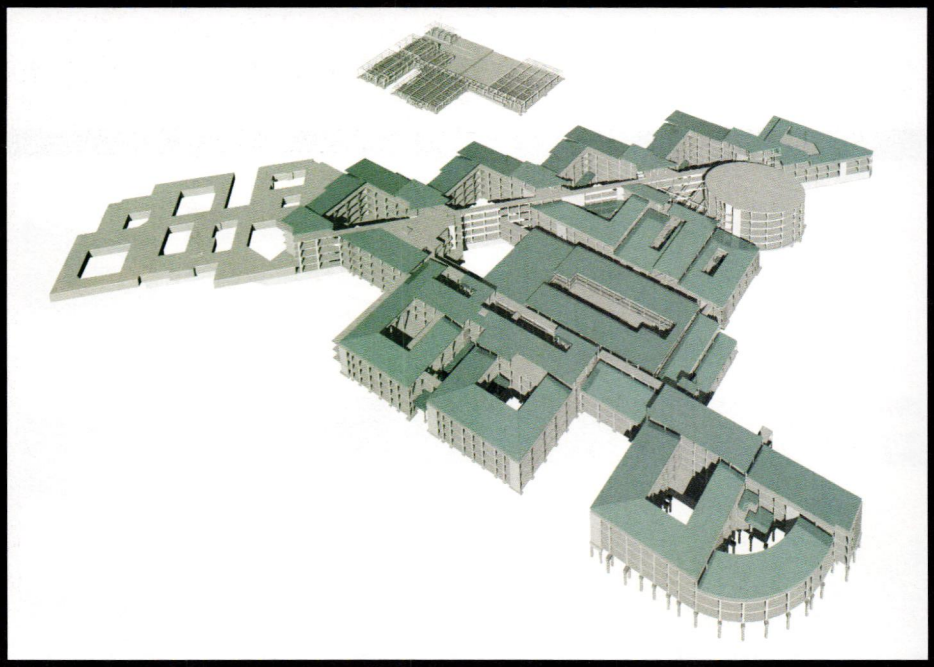
'Informed decision-making at every stage'

Simon Gillis

'Fantastic'

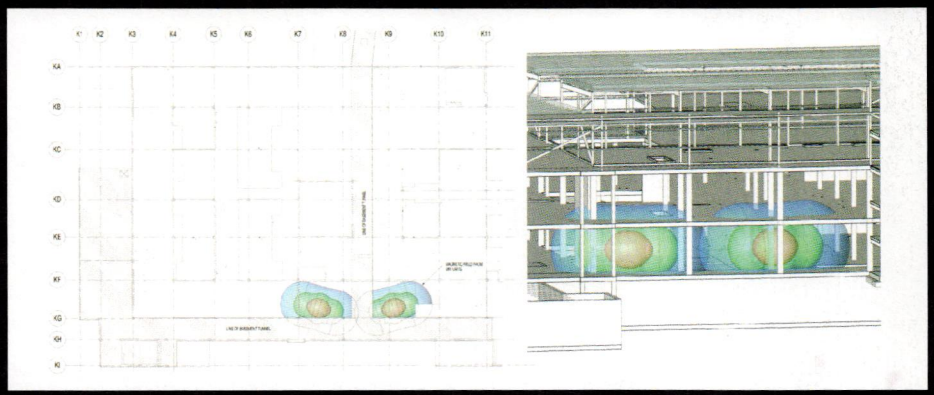
Ruth Slavid





Above Steelwork converging on a key circular element

Above and right
Modelling of magnetic fields around the MRI scanners was essential to ensure efficient operation of basement robots



'A lot of very good work – well done'

Pete Baxter

'Nice vignettes, good detailing, penetrating diagrams'

Ruth Slavid

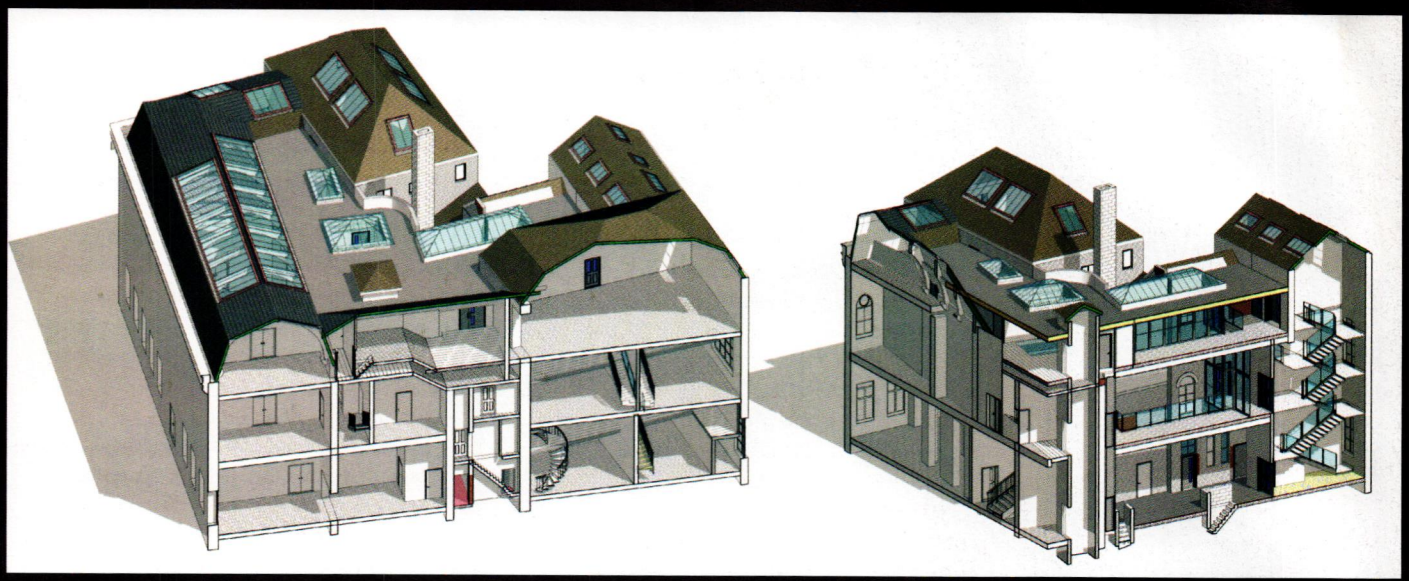
Student Project
Winner
Project Celtic Woodland Workshop
Architect Bill Pier, NC Architects

The first thing to say about Bill Pier's winning entry is that it's stripped down to one single 2 x 3m presentation board – contrasting sharply with the extensive, sometimes exuberant, visuals submitted in other categories. What we get here is a simple coloured contour map punctured by 'appealing' Revit-generated 3D vignettes demonstrating skilful use of shading and colour, plus hand sketches and vertical and horizontal perspectives.

In the wrong hands this simplistic but risky approach could produce a cluttered, bewildering mess. But Pier's attempt to showcase this proposed children's Celtic craft and activity centre in its rural context works astonishingly well. 'A winning factor was the conciseness of this presentation. It's a case of giving everything on one page and it works,' said Simon Gillis.

And it's not just the judging panel that thought so. This project was awarded a First Class mark by both university and external examiners.

Revit was used from day one to test design ideas and specific details. 'It was quick to produce a model of an idea and test whether it would work within the scheme,' says Pier. The panel was especially impressed by a clear relationship between exploded cross-section drawings and the aerial diagrams of the building within its Celtic woodland setting. 'The presentation drawings are elegant, showing skilful composite plans and sections,' said Ruth Slavid. 'Appealing vignettes show column to ground connection details and the lightness of the building's overall frame. This is something I like.'



Above and below
A complex project and process of construction are made clear by an intelligent use of Revit

'There is a crisp language to this design'

Ruth Slavid

'Instant impact. It clearly validates the design brief'

Simon Ellis

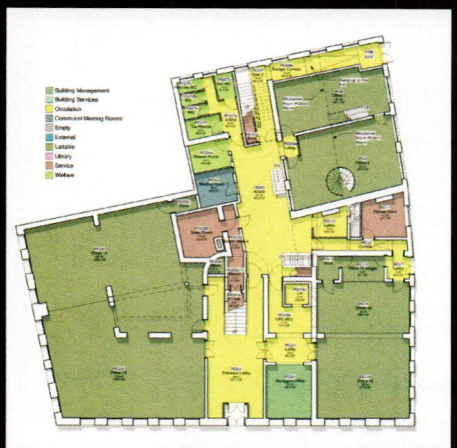
Non-residential under 2,500m²
Highly commended
Project The Wedgwood Institute, Burslem, Stoke-on-Trent
Architect Andrew Dobson, Purcell Miller Tritton

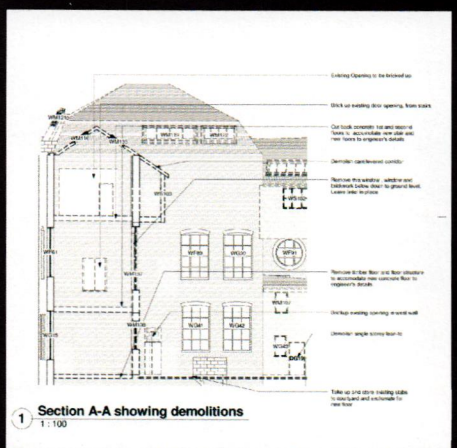
By using 3D modelling, Purcell Miller Tritton's Andrew Dobson rationalises the internal layout of this potentially controversial conversion, enabling both the client and Building Control to visualise the impact this scheme will have when completed.

The project to convert this Grade II*-listed structure involves enclosing a central courtyard in order to create a top-lit atrium. Additional features include protected circulation space, lift access to each floor and a series of internal ramps providing level access to offices.

'The implications of this concept are instantly understood in these renderings,' said Simon Gillis. 'It clearly validates the design brief.'

The idea of this model as a living scheme shines through. By tagging components with demolition and installation detail, a composite map of the entire design process is revealed. The structural impact of a proposed lift core, for example, is efficiently demonstrated using Revit. 'The whole process is captured,' said Pete Baxter.





1 Section A-A showing demolitions
1 : 100

'A very effective use of design communication'

Simon Gillis

'Displays robust understanding of Revit'

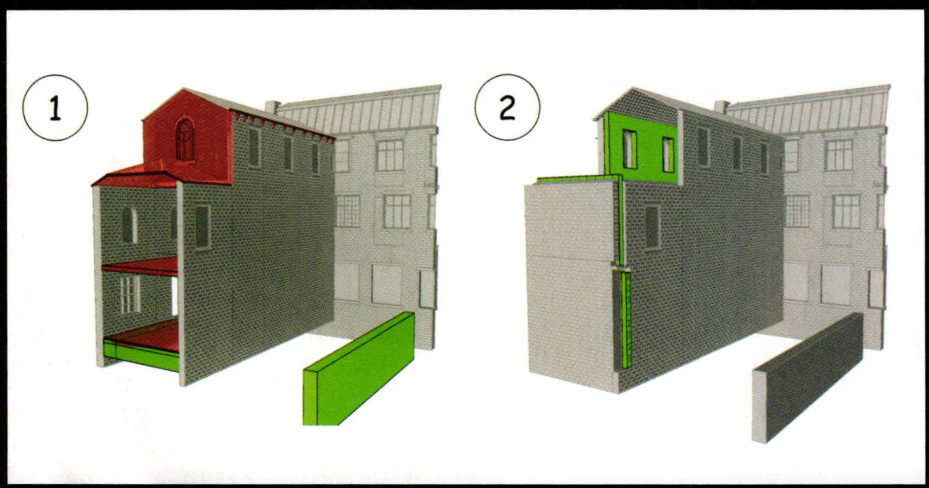
Ruth Slavid

Residential – Above 500m²
Highly commended
Project Croft Mill
Architect James Savage, DB Architects

By approaching Croft Mill from the aspect of functionality, Savage exhibits a confident appreciation of Revit's phasing and design options.

This conversion of an existing structure into luxury apartments was noted for its thorough scheduling. A timetable for demolition, construction and renovation stages, for example, is skilfully showcased using green and red block colouring. Moreover, importing information from an existing building demonstrates acute understanding of Revit. 'You can see the end result and the stages to get there – that's very useful,' said Ruth Slavid. 'It's all about visualising and experiencing a building before it becomes reality. That's where Revit works best here.'

Savage again demonstrates dexterous use of coloured elevations in Manor Croft – his second submission to this category. Although not a winner this time, the panel was impressed by the way colour articulates the building's contextual impact. 'Perspective views, taken from different vantage points, explore the visual impact of this 72-bed care home – a critical factor in accessing the scale and effect of a design,' – Pete Baxter.



Above and below Colour-coding helps the viewer understand the phasing of this conversion of an existing structure to luxury apartments

'This works very well'

Simon Gillis

'Effective use of Revit to make informed decisions'

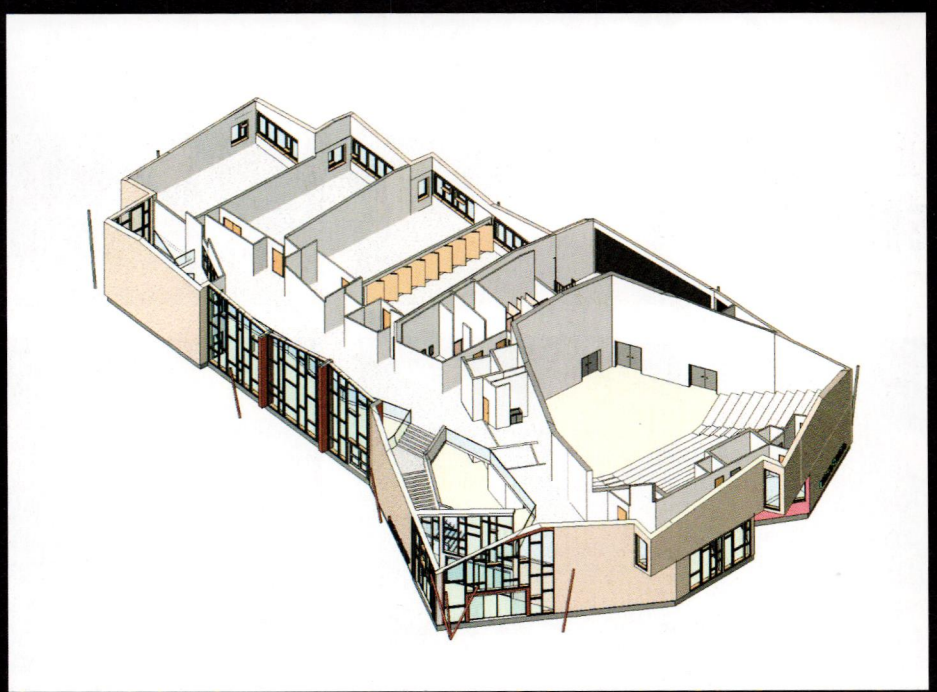
Ruth Slavid

Non-Residential – Above 2,500m²
Highly commended
Project Lecture Theatre and Performance Space, Royal Holloway University, London
Architect Rachel Gadd, Stride Treglown

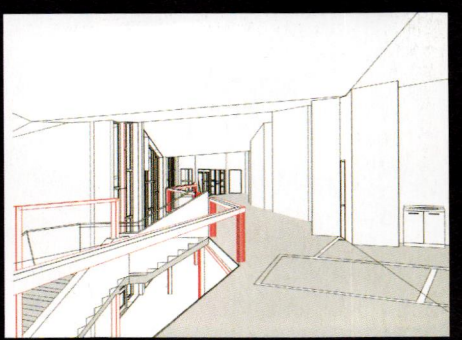
The non-linear 3D form of this structure instantly won the enthusiasm of judges. Characterised by an undulating, armadillo-like copper roof and glass elevations – a counterpoint to the neighbouring Grade I-listed Founder's Building opposite – the scheme demonstrates a muscular grasp of Revit.

Accommodation comprises a 400-seat auditorium, eight 50-seat seminar rooms and a naturally lit foyer and reception. Gadd has adroitly created internal views of key spaces, using these to explain light, colour, textures and materials. Illuminating why Revit was her software of choice, Gadd says: 'It was the only one available to produce the architectural statement we required.' Although this submission lacks detailed designs, it remains a complex scheme presented as a series of robust internal and external 3D perspectives. 'Nice elevations, succinct descriptions, interesting layout,' concluded Ruth Slavid.

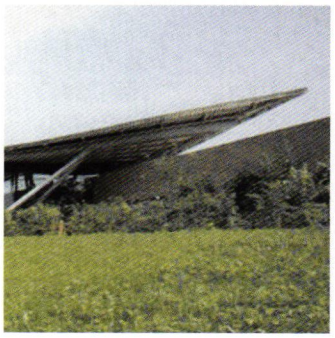
Below and below right Cleverly created views make it possible to understand the form and appearance of the internal spaces



Above An undulating copper roof and glazed elevations are made clear in this visualisation







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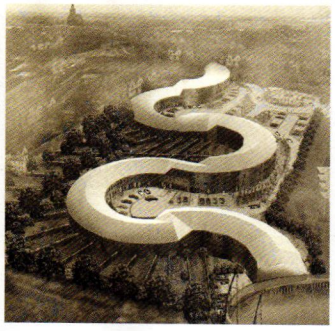

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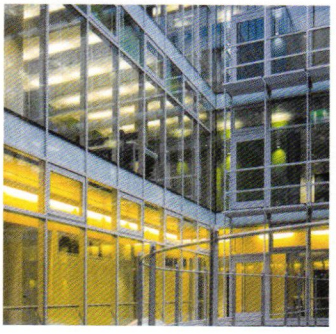



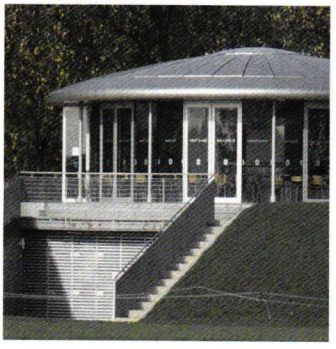
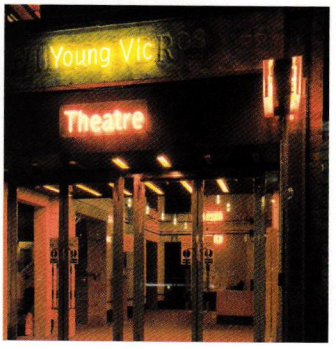

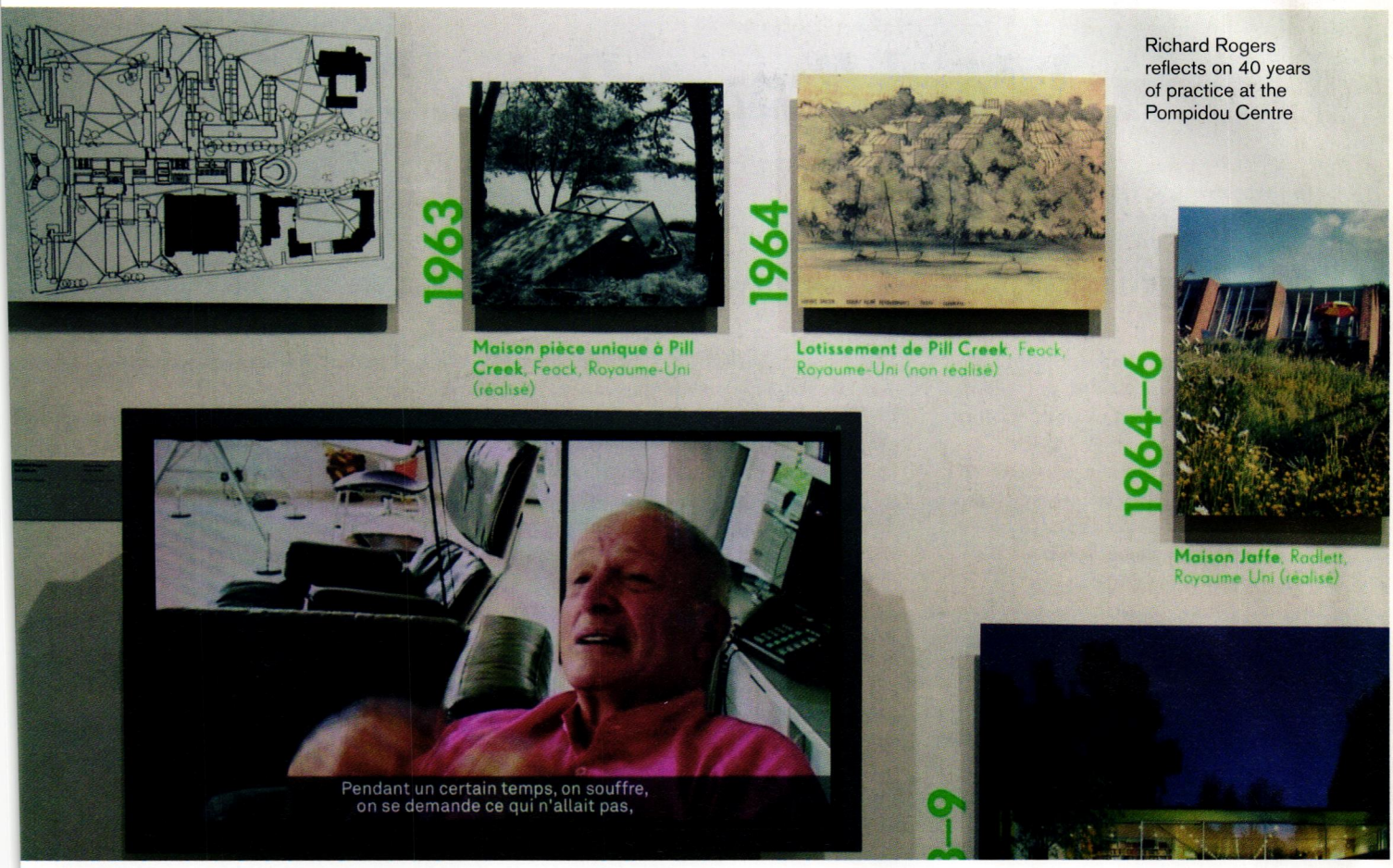

EXHIBITION

The City of Richard Rogers

Christine Murray visits Paris for the launch of the Richard Rogers retrospective

Richard Rogers + Architects, Pompidou Centre, Paris, France, 21 November 2007 to 3 March 2008. www.centrepompidou.fr

A retrospective often feels like a celebration, especially when it's also a birthday party. The Pompidou opened its doors 30 years ago, and its position in the history of Richard Rogers' practice is reflected in this new exhibition.

There is a moment of disorientation when you step into the Richard Rogers + Architects show, but designer Ab Rogers (also Richard's son) assures me this is intentional.

'When you arrive in a city you decide what road to take,' says Ab, a handful of hours before the opening party. 'We wanted to create a world of Richard's architecture in which people could get lost, and this is very much based on an elevated city plan.'

Populated by large-scale models of projects such as the Lloyds building, the Millennium Dome (now the O_2 Centre) and Madrid's Barajas Airport, Ab's retrospective city consists of colour-coded 'avenues' of hot pink, electric blue and green tables, arranged in 'urban blocks' loosely defined by themes such as 'Transparent', 'Legible', 'Green' or 'Urban'. The avenues converge at a giant pink sofa, referred to as the 'piazza', where visitors are supposed to meet, relax and debate. On the periphery, a 30m timeline provides a pictorial journey through 40 years of practice.

I confess to Ab that, for a city plan, the avenues seem too wide, the models too far apart, and he admits that the exhibition design was originally more dense: 'It was expanded due to health and safety issues.' The 'piazza' was also originally conceived as a vibrant coffee bar, but due to the complications of selling food, this was abandoned. >>

INTERVIEW

When Märkli met Beigel...

The morning after Swiss architect Peter Märkli's lecture at the Tate Modern last week, he sat down with Florian Beigel, head of the Architecture Research Unit at the London Metropolitan University, for an hour-long chat. The Critics listened in

Florian Beigel In your talk last night (22 November), you spoke about how the human being had to be at the centre of architecture. How do you teach this to students?
Peter Märkli I don't know if you can teach it. If you have no background in society, you can do beauty – but without a deeper context, which is the human being. You can't do a building for a building's sake.
FB When you say human being, I think you're saying a deeper understanding of the human condition?
PM Yes, you have to have it. Otherwise you can't produce beauty, and beauty is radical. Beauty is not what you eat on a Sunday afternoon when you have some sweets; it is the most radical thing I know. I'm provoked, in a positive sense, if I see works that are beautiful.
FB I like this radical beauty that looks at the everyday and a not-so beautiful condition.
PM But we can't write a political pamphlet about beauty, we can only do a building. If you build a house with beauty, then people look at it and think life can be like that. I did all these houses in not very beautiful areas and people were provoked because the houses are strange, they speak about something other than egoism. I'm not interested in a lot of new art works, because they speak out about the badness of the world.
FB Last night, you often mentioned the 2,500 years of architectural history in Europe. People from other cultures might say, 'Yes, but can you understand architecture that comes from another historical background?' I think architecture can speak to different cultures, but how? Does the meeting of cultures happen through this idea of the human condition?
PM That's only one way. The other is through architectural grammar. The architectural grammar of the East is the same. I can read a mosque, that's not a problem.
FB You can read a mosque, but can you read a Korean courtyard house?
PM I think so, but my work and my education, my feelings – I am situated in the Occidental culture.
FB But you're not limited to this.
PM But that's normal. European culture has always been influenced by other cities because of transport. If they wanted to escape from Paris, they could go to Egypt. They made translations – they brought textiles to Persia. Then all the ornamentals were Persian, but the textiles were French. Venice was influenced by

The exhibition restores Galerie Sud's relationship to the street

CHRISTINE MURRAY

Richard Rogers continued from page 81

Designed for a general audience, plans and technical details are limited, but the models are beautifully made and displayed. In many ways, however, it is the Pompidou itself that steals the show. For years, its street-level Galerie Sud has been a dreary, uninspiring space, but in preparing for the exhibition, the Rogers team unblocked the windows and removed all internal walls, revealing a naked space with a two-way relationship to the street. Although the lurid pink 'piazza' demands attention, it is at the windows, with their view on to a pedestrian avenue and a public square that the exhibit's city plan truly completes.

CHRISTINE MURRAY INTERVIEWS ROGERS AT THE OPENING PARTY

Are you pleased with the retrospective?
Yes, it's very good. You know, I didn't design

Florian Beigel (left) and Peter Märkli (right) in conversation at The Zetter restaurant, London

RICHARD MARKS

Asia, but the structure of the houses was German because the builders came from the mainland.

FB You used this word 'translation' often in your talk last night, and I was left wondering, what is 'translation', is it a kind of abstraction?

PM I think translation begins when you look intensely at something and are impressed by it. At first, you're very dependent on it. That's why we have some architects who only make copies. With work and an understanding of the materials you become more free. You learn to say that thing in another way and it becomes yours; then it looks fresh and new. I know wonderful houses built on posts in the Philippines, but I won't build a house like that.

FB But you understand it, emotionally

PM Yes, and I think even if you look at a mosque and you don't know the architectural grammar, you will say, 'Oh, it's nice.' You have an emotional intelligence – something everybody has. It's like a codex, a general code.

FB Recently someone in an article called you a 'baukünstler' (building-artist). Do you like this description?

PM Not of my person, but I think of architecture, in German, as 'baukunst'.

FB As 'building-art'?

PM It's much too wide a description, but all I want to do is 'baukunst', otherwise I'm not interested. That's clear. I won't do a house, if I cannot do 'baukunst'.

Resume: Beauty can be radical, says Märkli. Beigel likes the idea

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it, Ab did. Obviously it was done together, but basically it's Ab who's had to sweat all the way through. I'm really delighted. It was part of our concept to make it enjoyable.

Yes, there's a tremendous sense of play.

It's the same as the Pompidou, it's about fun. When we put in the competition for the Pompidou, we said: 'A place for all people, all ages, all creeds.' This exhibition continues that concept; a cross between New York's Times Square (a fun palace) and The British Museum (culture). This concept also appears in the buildings; Barajas Airport, for example, is very much about enjoying yourself, the spirit of travel, the spirit of culture, the spirit of everything else.

In your speech at the opening, you called for the renaissance of the city. Can you expand on that?

For a long time the city was difficult to live in and if you had any money you moved out. Now we realise it's no good moving people out of the city; that makes them completely unsustainable. Social inclusion and good design are absolutely interwound. If you want sustainability you have to live in sufficient density for public transport, to walk, to go by bicycle, and also a mix of live, work and leisure. All those things come in a compact city, and those are the studies I'm involved in. I chaired the Urban Task Force for the government, and now I work with [London Mayor] Ken Livingstone as his chief advisor, advising on public space and the Thames Gateway, which will be a city the size of Leeds.

Was the Urban Task Force as successful as you'd hoped?

I think in architecture it's gone, on one level, way beyond what I expected. It's taken up the idea of the compact city, densification… Having said that, I wrote over a year ago on what hasn't been done. London still has three of the poorest boroughs in Western Europe, so there are serious problems, such as the distribution of wealth, that we need to address.

What's your opinion of the emergent London today?

As I remind people, when we were building Lloyds in 1980 we were discussing whether the future business capital of Europe would be Frankfurt. Now I've got nothing against Frankfurt, but today it just doesn't sound possible. London is so dominant, and it's a fantastic economic renaissance for Britain, which was going downhill very fast. It's definitely better to be wealthy, but America is wealthy and it has the worst cities. It's all about a civil society. The most important thing we said in the Urban Task Force was that you must only build on all previously used land, and to not expand; put a belt around the city and bounce everything back in. Densification gives security. The best CCTV cameras are nowhere near as good as eyes. ■

Resume: The Pompidou is the host and star of the Richard Rogers show

Critic's Choice
The British Library's new show uncovers rare gems, says Andrew Mead

When books and exhibitions explore the early years of Modernism, they tend to focus on a few key cities: Paris, Moscow, Vienna, Berlin. So it's instructive to see a new show at the British Library, 'Breaking the Rules: The Printed Face of the European Avant Garde 1900-1937', because it takes such a broad view of the period. Those familiar cities are there, but so are Bucharest, Belgrade, Kracow, Copenhagen and others, with exhibits that include manifestos, pamphlets, deluxe artist's books and a host of 'little magazines': some, like the Czechoslovakian *Telehor*, which had only one (rather beautiful) issue; others, like the Bucharest-based review *Contimpuranal* (The Contemporary), which ran for a decade. And alongside such central figures as the Futurist Filippo Marinetti, with his innovative treatment of words on a page (*pictured below*), and the painter/photographer Laszlo Moholy-Nagy, are some now obscure artists who were equally committed to experiment – for instance, the group that congregated at the wonderfully named Fantastic Tavern in Tbilisi.

Despite some odd omissions (no copy of Amédée Ozenfant and Le Corbusier's L'Esprit Nouveau), this show really does shed new light on the subject. If only it was bathed in a little more light itself. Of course such items have to be treated with care, but too many of them are lost in gloom and don't have the visual impact they should. You only have to visit Tate Britain and see how Turner's watercolours are currently displayed to know this needn't be the case (**www.bl.uk**).

BOOK

CMK-makers pat themselves on the back in this 'original' story, says Richard Vaughan

The Story of the Original CMK. Edited by Marion Hill. Living Archive, 2007. 144pp. £20.00

The Story of the Original CMK (Central Milton Keynes) brings together first-hand accounts and an impressive collection of images detailing how the famous Garden City came in to being. But beyond publisher Living Archive's notable picture-sourcing skills, it is difficult to see this book as anything more than a back-slapping exercise.

Described as 'a unique set of reminiscences... told by the people who shaped the initial ideas of Central Milton Keynes', it quotes the memories and discussions that took place in the early stages of the delivery of CMK. But, strangely, they are laid on the page as pieces of poetry. It reads like an 'Ode to Ourselves' as they congratulate one another on a job well done:

'The vision of Milton Keynes
Was driven by architects,
Primarily there was Fred Roche and Derek Walker,
Two very individualist and very forceful thinkers,
And Stuart Mosscrop...
They were a very powerful visionary team
Aided by Jock Campbell...
Fred and Jock are the prime reason,
That Milton Keynes
Has got the quality it's got.'

It is hardly Yeats, but the stories are even more difficult to stomach considering that CMK is now going through such sweeping changes (*see feature on Milton Keynes on pages 24-29*). The town has a population density of just 5.3 people per hectare, and although Milton Keynes was never designed for more than 250,000 people, it is difficult now to imagine how they thought it could ever be sustained.

Today a new vision is in place and a great deal of work and money is being spent undoing the work the people in this book sing about. There is no doubt that Milton Keynes is by far the most successful of all the designated new towns, but not half as successful as this book makes out.

Resume: Roses are red, violets are blue, I built the CMK, they're trying to undo

The Shopping Building, aka the 'Centre', under construction in 1976

BOOK

Video games are architecture's final frontier, says Alex Wiltshire

Space Time Play – Computer Games, Architecture and Urbanism: The Next Level. Edited by Friedrich von Borries, Steffen P Walz, and Matthias Böttger. Birkhäuser Press 2007. www.spacetimeplay.com

Often likened to cinema, video games' closest relation is actually architecture, and not simply because they traditionally involve spatial challenges. In defining play as 'the free space of movement within a more rigid structure', game designers Katie Saleen and Eric Zimmerman suggest that one of humanity's most innate behaviours is architectonic in nature.

The video-game industry stubbornly resists this relationship, so any attempt to codify it is welcome. *Space Time Play*, edited by Fredrich von Borries, Steffan P Walz and Matthias Böttger, offers few conclusions to this sprawling field of enquiry, but with its sheer variety and scope, it's a valuable resource nonetheless. Comprising a vast series of essays and game reviews written by architects, game designers and related academics including Kas Oosterhuis, Henry Jenkins and Richard Bartle, the book attempts to cover every aspect of the crossover of video games with architectural theory, practice and urban design.

The reviews are the least consistent part of *Space Time Play*. The high points include a pithy deconstruction of the much-mythologised Sim City (look, it's a game, not a simulation), and Super Mario 64, in which the game is the environment. The less said about the clunky 'Civilization' entry the better.

One of the great strengths of *Space Time Play*, however, is that it engages many of the questions its articles throw up: a review of Pac-Man is placed next to a piece on the use of mazes in games, while a review of classic space-trading game Elite (a galaxy of planets and societies crammed into 22 kilobytes of programming code) is positioned next to a piece on game design based on procedurally generated situations.

As the book moves to discuss Massively Multiplayer Online (MMO) games such as World of Warcraft, and location-based games such as Perplex City and Pacmanhattan, *Space Time Play* shows how socially connected games have become. These new incarnations are almost cities themselves: shifting communities of thousands or millions of people delineated and structured by game design. Here, boundaries between games and the rest of life are blurred. It's in this 'possibility space' that architects and planners could influence, enriching the physical world of the game spaces themselves. *Space Time Play* is an inspiring introduction on how this might be done.

Resume: Kissing cousins of architecture and video games in a tender book-long embrace

5 THINGS TO DO THIS WEEK

1 *Nina Saunders: Autumn Flowers*

Delight in Saunders' transformation of the Pallant House's 18th-century stairwell using William Morris textiles

Opens 29 November at Pallant House, Chichester PO19

2 *A-Z of Architecture*

Benchpress Taschen's weighty *A-Z of Modern Architecture*, a two-part encyclopaedia edited by Peter Gössel

The A-Z of Modern Architecture, Taschen 2007. 1072pp. £160

3 *Sikkens Colour Workshop*

Learn about how colour is perceived at this interactive BIDA/CPD-certified workshop. To book a space, email info@cube.org.uk

4 December, 9.30 to 4.30pm at CUBE, Manchester M1

4 *Zaha Hadid: Dune Formations*

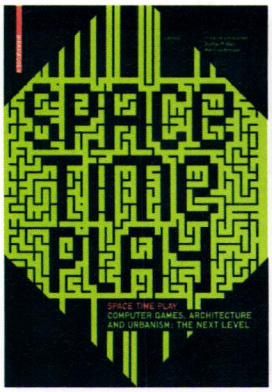
Fly to Miami to attend the opening of Zaha Hadid's Dune Formations, an installation for Art Basel, 6-9 December

Opening party 5 December, 89 Northeast 27th Street, Miami, Florida

5 *Collaborators: UK Design for Performance 2003-2007*

Contemplate the human scale of stage and set design at the V&A's newly opened exhibition on designing for theatre, featuring models aplenty (*pictured below*)

Until 18 November 2008, V&A South Kensington, London SW7



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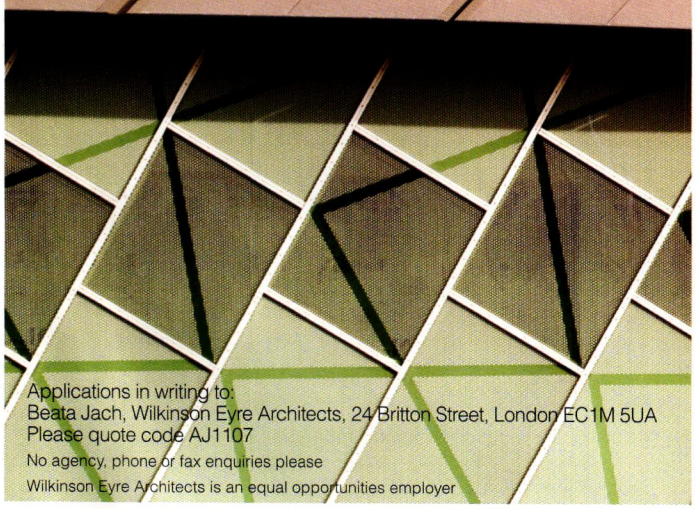

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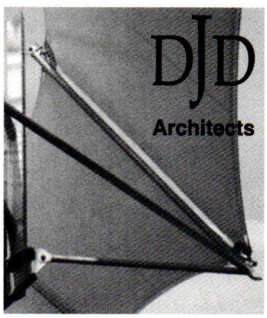

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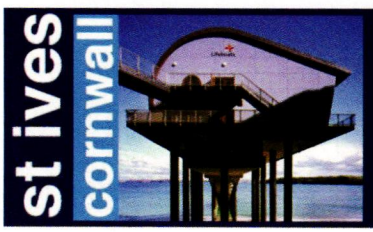

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