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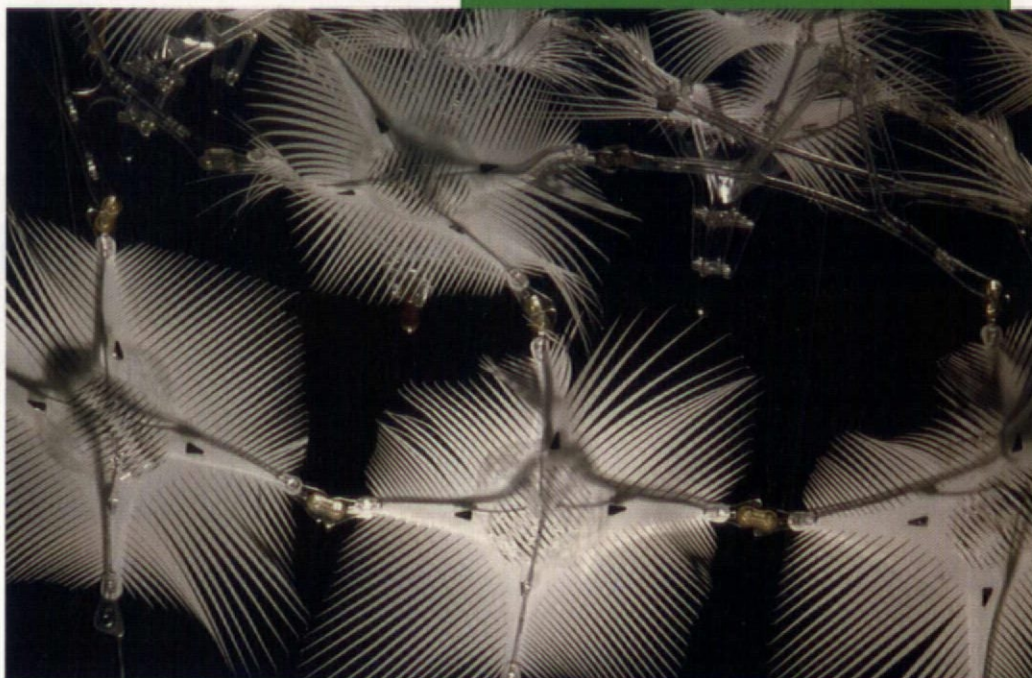
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This week's issue concentrates on architectural projects which exploit advances in digital fabrication, including Orpheus Filter (pictured), developed by Canadian architect Philip Beesley and artist and scientist Diane Willow. This man-made structure gradually accumulates plant matter eventually decaying into a living wall. The featured projects form part of the 'Digital Fabricators' exhibition, which will be at the Architecture Pavilion at Interbuild on 25-29 April.

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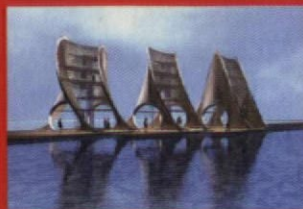
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**“I would like to solemnly remind everyone that Europe’s cultural monuments and landscapes are our common heritage”**

Europa Nostra’s president, the Prince Consort of Denmark, launches a campaign to protect Kosovo’s historic buildings » page 6



Luz Vargas Architects unveils its solution for affordable housing » page 10

**aj** news

# Architects to ‘lose out’ in EH cull

A massive restructure of English Heritage’s planning division will leave architects without access to specialist heritage advice, a major conservation group warned this week.

The Institute of Historic Building Preservation (IHBP) has attacked a secret proposal to abandon EH’s regional network, warning that the move will lead to a severely pared-back service.

The new structure, set for implementation next year, will entail the amalgamation of the nine regions set up in 1999 into four territories, each with a new manager.

The cull will do away with at least five of the existing regional directorships and all 13 of the highly influential assistant regional directors.

The quango’s new leadership – under chief executive Simon Thurley and planning and development director Steve Bee – believes the changes will streamline the organisation, leaving the work of individual conservation officers relatively unaffected.

However, IHBP chair Eddie Booth warned that ‘the work of architects throughout the UK would be affected by the cutbacks’.

‘They say that they want to do less work and do it better,’

he told the AJ. ‘But what will really happen is that informal consultation will go out of the window.’



**Simon Thurley: streamlining English Heritage?**

‘We are very worried because this kind of advice will go, and people will be left unaware of what they need to do on conservation jobs. We think the reforms will lead to a withdrawal from the local market.’

‘The local authorities that are poorly staffed with conservation officers will really suffer from these cutbacks, as will the architects who work with them,’ Booth added.

However, EH dismissed these concerns, saying there would be very little changed on the ground. ‘All we are trying to do is streamline the processes and ensure that they are more efficient,’ Bee said.

‘The changes will enable the new regional directors to get more involved on the ground and start spreading the word about the importance of the built environment.’

‘We do need to provide more clear and consistent advice,’ Bee added. ‘But we have to realise that we have been spreading ourselves too thinly to provide a really good service.’

Ed Dorrell

## Gehry’s Wear bridge plans on backburner

Plans to commission Frank Gehry to design a bridge over the River Wear in Sunderland are facing a major set back, the AJ has learned.

The final decision to sign up the Los Angeles-based architect – which was expected by the end of this month – has been delayed by new plans to carry out a transport and road study in the city.

If the idea, which would have been at the centre of a major regeneration push, does get the go-ahead, it will now not be signed off until the end of the summer.

David Walker, head of operations at the regeneration agency Sunderland Arc, said

the road study would look into the feasibility of a new bridge. ‘We are currently examining options for the best road traffic solutions to lead people into the centre of Sunderland,’ he said.

‘These options include the construction of a new road bridge across the River Wear and how suitable the existing road networks are in relation to future traffic demands on them, once our regeneration plans start on the ground.’

‘Once the results of that are known, a decision will be made on the best river crossing route and where there needs to be an additional road link into Sunderland city centre,’ Walker added.



Urban Splash has placed an order with off-site manufacturer Yorkon for 102 new apartments at its Moho scheme in Manchester’s Castlefield. The scheme – which will be designed by Shed KM – represents the first use of prefabrication in the private residential sector. The project will provide a six-storey residential development, with an element of ground-level commercial space and a private courtyard garden. ➤



“He took Mies’ dictum ‘Less is More’  
beyond what even the master himself had achieved”

Pierre Koenig remembered » page 12



Should we rebuild  
the Skylon?

» page 16



Penoyre & Prasad has won the competition to design a £7million extension to the University of Portsmouth's Frewen Library. The practice saw off competition from 72 submissions at the opening stage before being shortlisted along with Adjaye Associates, Eva Jiricna Architects, architecture plb and MacCormac Jamieson Pritchard. The winning scheme will provide 3,600m<sup>2</sup> of additional library space.

#### ADJAYE TO DESIGN IN DENVER

The Museum of Contemporary Arts in Denver has appointed London-based Adjaye Associates to design its new permanent home. The project – for 1,500 to 2,000m<sup>2</sup> of exhibition space – will aim to ‘support, rather than define, the mission of presenting innovative art’. +

#### ARUP'S SHELL SCHEME ALL SET

John Prescott has given the go-ahead to Arup Associates' 30,000m<sup>2</sup> Shell Centre redevelopment on London's South Bank. The scheme went to appeal after being rejected by Lambeth council last January. +

#### GLA IN SPACE SUMMIT CALL

The Greater London Authority has called for an annual ‘summit’ on the capital's public spaces. The recommendation follows a six-month investigation, which found that much of London's built environment is poorly designed and suffering from neglect. +

#### GRIMSHAW SPA TROUBLE ENDS

Work finally restarted on the site of Grimshaw's troubled Bath Spa project last Tuesday. Bath and North East Somerset District Council has finally reached an agreement with contractor Mowlem over the cost of the repainting exercise. The council is currently ‘in discussion’ over the time frame of the remaining work.

#### PRIESTMAN IN CHINA RUNNING

Priestman Architects has made it to the final three in the Guangdong Museum competition in China. The practice, along with Coop Himmelblau and Rocco Design, will now develop its proposals.

#### UP THE CHAMPIONS SAYS CABE

CABE's second survey of England's planning departments has found an increase of 23 per cent in the number of design champions but little change in the number of design-qualified staff. The survey also highlighted a 4 per cent rise in the number of schemes being refused on design grounds. +

## Amos Partnership and BSA reach £6,500 illegal software settlement

The Amos Partnership has been forced to hand over US\$12,000 (£6,500) to the Business Software Alliance (BSA) after being caught using illegal software.

The London-based practice reached an out-of-court settlement with the alliance, which has been clamping down on software violations by architecture firms, it emerged this week.

The BSA, which represents the world's largest software firms, has been offering rewards of up to £1,000 for information leading to a successful prosecution. Practices that have already reached settlements include Sussex-based Caroe & Partners (AJ 20.11.03).

The BSA's regional manager for Northern Europe, Siobhan Carroll, said that architects and engineers were among the worst offenders, accounting for nearly a third of all prosecutions in 2003.

‘Looking across Europe, architecture and engineering firms are the major offenders,’ Carroll said.

She added that the BSA is keen to help practices comply and will not prosecute when companies illegally using software come forward for advice.

The Amos Partnership, which hit the headlines last August when it replaced Allies and Morrison on its Grosvenor Dock scheme, was brought to book last year following a tip-off from a member of staff.

However, director Malcolm Wright claimed the company was unaware its licences had expired. ‘We were made aware of the unfortunate situation, which we rectified,’ he said.

For help on software compliance visit the BSA's website at [www.justasksam.co.uk](http://www.justasksam.co.uk)

Zoë Blackler

## Ferguson demands ‘institute for urbanism’

RIBA president George Ferguson has put the creation of an ‘institute for urbanism’ at the heart of his term of office.

Speaking at his inaugural presidential lecture last week, Ferguson said he was determined to see the

professions of architecture and planning working closer together.

He argued that the creation of a one-year urbanism foundation course for these professions would lead to a more coherent approach to urban planning.

‘It is urbanism that brings together the built-environment professions and we should do all we can to open our doors to all those involved. There is no time to wait for the education system to produce the goods,’ he said.



# Masterplan confusion as BDP wins in Stockport

BDP has become embroiled in controversy this week after it won a disputed competition to draw up a masterplan for the centre of Stockport.

The practice's Manchester office will redesign the centre of the Cheshire town, despite the existence of an earlier competition-winning masterplan by James Holyoak for part of the site.

Stockport council became locked in a dispute with the Birmingham-based landscape architect at the end of last year after it announced a fresh competition for the town centre that would not include Holyoak's plans (AJ 2.10.03).

In the intervening period Holyoak and the council have exchanged letters from solicitors and have failed to reach an agreement.

But Holyoak said BDP's victory fails to clear up any of the existing problems. 'Recently

Stockport council made it clear that the working area of the consultant for its latest town centre masterplan will exclude my competition site,' he said.

'However, as the town centre contract contained my competition site within its delivery area, this now creates a confusing and uncertain picture. In effect, it seems the council is therefore making a large hole in the centre of its masterplan.'

'The question remains: how is the redevelopment of Stockport's public squares going to be moved forward?' Holyoak added.

It is understood that BDP is determined to push through its proposals and has no intention of adopting Holyoak's plans.

Ed Dorrell

## Bath biennale gets September start

The South West of England is set to get its very own biennale in September, with the launch of the Bath Festival of Architecture.

The 10-day event, organised by CABI commissioner Richard Feilden in collaboration with the Bath Festivals Trust, will feature a series of talks and a lighting design commission.

The biennale, supported by both the Universities of Bath and of the West of England, will also include a summer school for architects, engineers and visual artists that will produce a series of temporary structures for the festival, a major debate, and an exhibition of work by celebrated 18th-century Bath architect John Wood.

The festival will run from 17 to 26 September.

## Kosovo violence is a threat to Europe's historic heritage

A group of European conservationists has warned that the recent violence in Kosovo is threatening some of the continent's most important historic buildings.

Europa Nostra – the federation of non-governmental organisations for the protection of cultural heritage – has launched a campaign against 'the large-scale and deliberate destruction of invaluable cultural heritage' in the area.

The group claims that, between 17 and 19 March, more than 30 Serb Orthodox churches and monasteries were destroyed or damaged, including the 14th-century Church of the Mother of God of Ljeviš in Prizren and the 15th-century Monastery of Devič.

Europa Nostra's president, the Prince Consort of Denmark, has written to NATO to high-

light the problem, calling for the existing peacekeeping force to 'intensify its commitment to preventing further attacks on heritage in Kosovo'.

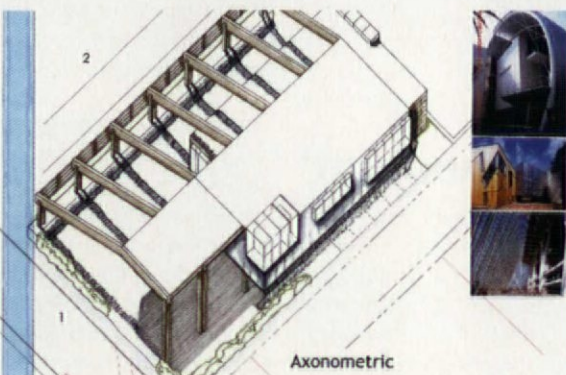
'The cultural heritage in Kosovo has an inestimable value,' the Prince said. 'I would solemnly remind everyone that Europe's monuments and landscapes are our common heritage. We are collectively responsible for them – not only for present and future generations, but also on behalf of those who have bequeathed them to us.'

'We particularly appeal to the large majority of ethnic Albanians in Kosovo, and to the large majority of Serbs, who – we feel certain – respect the religious and cultural heritage of the other group, to raise their voice and to do their utmost to prevent further destructions,' he added.



The Twentieth Century Society has launched a campaign to save the Gateshead car park famous in the 1971 gangster film *Get Carter*. The conservation group is determined to stop the demolition of the Owen Luder-designed, multi-storey Trinity Square car park in favour of a new shopping centre and car park on the same site by Leeds-based DLG Architects. 'The Twentieth Century Society would regret the loss of yet another witness of the great era of British Brutalism,' a spokeswoman said. 'Though not as sculptural as some of Luder's other buildings, the car park is an important work of the period. Over the past years it has been greatly neglected and left to dilapidation. It is paradoxical that the proposed scheme consists of yet another car park and a shopping mall of little architectural quality.'

STUDENT SHOWCASE



Axonometric

Tabitha Caple, studying at the University of Huddersfield, produced this design of a youth centre as a project for the end of year two. The concept involves two boxes placed on top of each other pulling in different directions, a metaphor for the children pulling away from rules and their peers. Finger-shaped glulam pieces represent hands pulling these elements back together, while creating an outdoor space for the children to play in. This allows them to feel unsupervised but still keeps them off the streets.

Student Showcase is sponsored by Students' Union, a website set up by Union in association with The Architects' Journal at [www.students-union.net](http://www.students-union.net). To submit work for publication in Student Showcase, email a publication quality image to [ajstudentshowcase@emap.com](mailto:ajstudentshowcase@emap.com)





Curtain walling: MC grid, faceted and roof glazing

Project: A1 Building, Edinburgh Park

Architect: Allan Murray Architects



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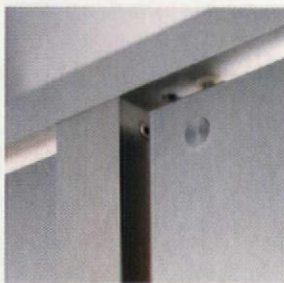
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# New twist on tower block design



Experimental practice Luz Vargas Architects has produced its solution for affordable housing – a tower block design that offers an alternative to the ‘scourge’ of the low-to-medium-rise blocks currently blighting our cities.

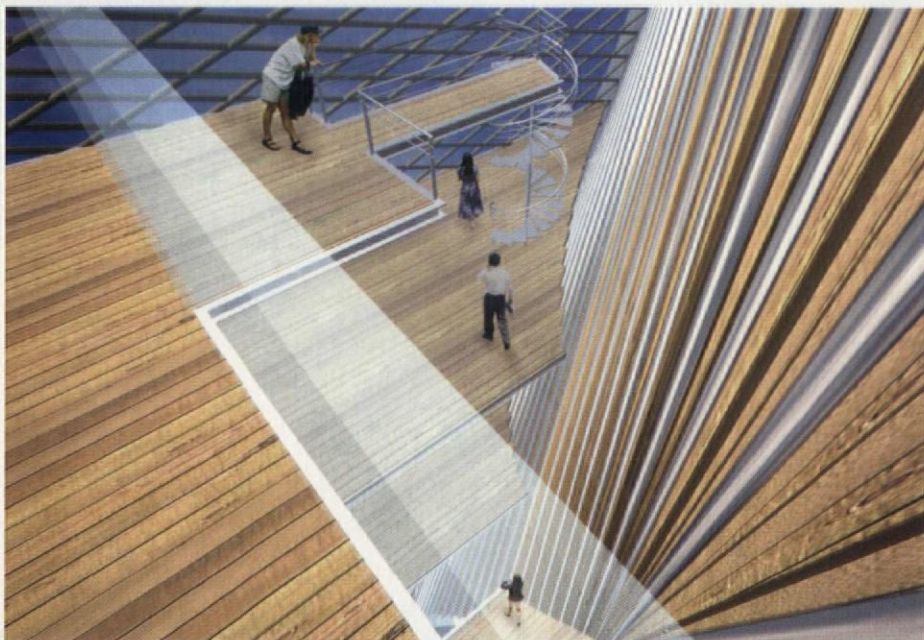
London-based Spanish architect Luz Vargas said ‘Grasping the Void’ aims to move beyond the careless Corbusier copies that have dominated tower design since the ‘30s.

‘Take a look at the average tower block from a distance,’ she said. ‘Whether it is a solid from ground level up or lifted with space underneath, it looks flat, almost two dimensional. The square shape of the building appears flat because it is framed by blank and uninspired squares of empty sky.

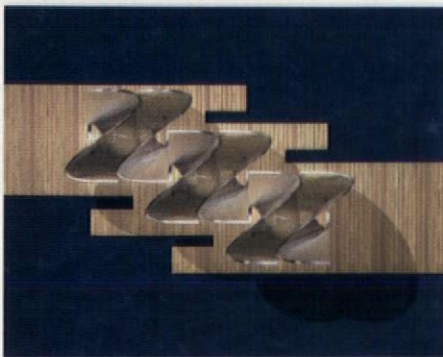
‘Typically, its ground floor areas are wasted and uninviting and there is a sense that the building, despite its bulk, does not relate or give context to the ground on which it stands, the air around it or the people who occupy it.’

Vargas’ solution is a winding, twisting, curvaceous structure that ‘embraces’ the voids between buildings and incorporates them into the design. A dynamic structure and plan form provides private, individual environments and a combination of public and semi-public communal living space for occupants within the skin of the building. The building wraps and winds itself around the void which acts as a visual and social focus for the community. Each block of 10 flats can be built as a stand-alone structure or part of a series of buildings. Materials include steel for the principal structural skeleton, prefabricated timber ribs and pre-cast, pre-stressed concrete floor slabs.

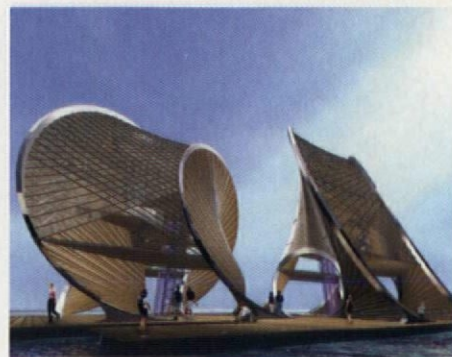
Zoë Blackler



**Viva Luz Vargas!** The blocks wrap and wind around the void, which acts as a focus for the community



The curvaceous design ‘embraces’ the voids between buildings and incorporates them into the design. The blocks can be built individually or as part of a series of buildings





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# Pierre Koenig (1925-2004)

Pierre Koenig, who died on 4 April, was one of a pioneering group of architects who reshaped the face of architecture in southern California after the Second World War but whose influence was felt worldwide, writes David Jenkins.

Born in San Francisco, Koenig moved to Los Angeles as a teenager, something he recalled as a liberating experience – a shift from the fog and damp and closed rooms into the warmth of the sun and the open air. A similar sense of liberation underscores Koenig's approach to architecture – using new materials to new ends, and dissolving boundaries to create houses where inside and outside coalesce.

Koenig's first house, built in 1950 when he was in his third year at USC, established a way of thinking and a means of building that would stay with him throughout his career. Built in steel, against the advice of his tutors, the house proved that the use of prefabricated materials could open up new spatial possibilities in affordable housing. The house brought Koenig to the attention of John Entenza, publisher of *Arts and Architecture* magazine and promoter of the Case Study House Program, which aimed to bring Modernism to a popular audience. Its featured architects represent a roll of honour for the post-war period in California: Richard Neutra, Charles Eames, Raphael Soriano and Craig Ellwood.

Koenig's two Case Study houses – numbered #21 and #22 – were completed in 1959 and '60 respectively. Koenig recalled them as 'champagne houses built on beer budgets'. By the standards of the time they were generous, but one senses everywhere an economy of means rooted in a thorough understanding of the construction process.

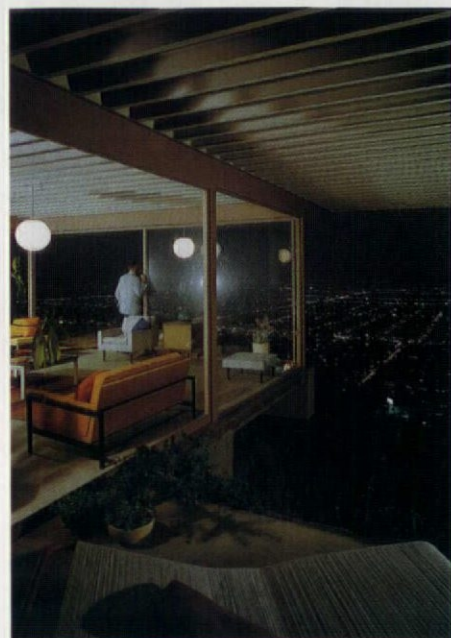
For many, house #21 represents the high point of the Case Study Program but it was house #22 that became truly iconic. Through the medium of Julius Shulman's celebrated photographs it is universally accepted as a kind of shorthand notation for the California good life. Perched on an 'unbuildable site' in the Hollywood Hills, its foundations lie, in Mies' phrase, on 'an architecture of almost nothing'. Reyner Banham characterised Koenig's taut steel and glass vocabulary as 'par excellence an architecture of omission', one that took Mies' dictum 'Less is More' beyond what even the master himself had achieved.

Used as a set for numerous movies and fashion shoots, Case Study House #22 is surely the most photographed Modern house in the world. It was perhaps not surprising that in 1989, when MOCA staged its memorable 'Blueprints for Modern Living' exhibition, Case Study House #22 should form the centrepiece; a full-size mock-up dominated the exhibition.

The MOCA show drew Koenig into the critical limelight once again but he was frus-



Above left: Koenig's designs were rooted in a thorough understanding of the construction process



PHOTOGRAPH BY JULIUS SHULMAN



Above and top right: the iconic Case Study House #22 on an 'unbuildable site' in the Hollywood Hills

trated by those who wanted to focus only on the Case Study period. As he said: 'Actually I have never considered myself out of the period.' Looking back over his career, one sees a gradual process of experimentation and refinement. Like Mies, his career was one of constancy and truth to principles. But there was also a sense of delight and adventure. The houses he designed in the 1980s and '90s are as fresh as those he completed in the 1950s and '60s – all seem to be the product of a young mind, but a mind with a complete mastery of technique.

Koenig wanted also to be recognised as a teacher. For 40 years, from 1964 until shortly before his death, he taught in the School of Architecture at USC. He was first appointed

as assistant director of the Institute of Building Research, assuming the title of director in 1980. There he was responsible for guiding generations of students towards what are now regarded as 'sustainable' strategies for building, demonstrating how orientation and choice of materials and the use of sunlight and natural ventilation can transform a building's environmental performance.

Watching the pendulum swing towards a renewed understanding of social and environmental concerns, one sees Koenig's work as providing a beacon for younger architects, something that would surely have surprised this unfailingly modest man.

David Jenkins is co-author of a Pierre Koenig monograph and partner in Foster and Partners



# A landscape isn't a landscape...



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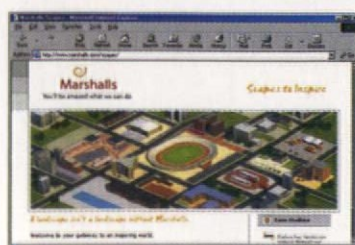


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## who said what

**'We're very good at managing imperfect systems. We rub along'**

Heritage minister Andrew McIntosh on present policies re listed buildings and statutory monuments. *Independent*, 8.4.04

**'No great project was ever completed without bankruptcy. In London, Regent Street went bankrupt. The Tubes, most of them, went bankrupt. Canary Wharf went bankrupt. The whole of North Kensington was built by stealing the savings of rich widows'**

Simon Jenkins. *Evening Standard*, 8.4.04

**'At 82, Wilson is twinkly, thoughtful, jaunty. He is exhausted, but only because he was working until 3am. Architects, like conductors, never retire'**

Fiona Maddocks on Colin St John Wilson. *Evening Standard*, 8.4.04

**'A good client is not necessarily an easy client. A client with a strong character is normally much better.'**

**'You do your job and he does his job. The advantage of having a certain success is that you stop having bad clients because you select them'**

Renzo Piano. *theartnewspaper.com*, 5.4.04

## vital statistics

● The popularity of Channel 4's enormously successful makeover show *Grand Designs* has reached a new high. A repeat of the show last Wednesday pulled in five million viewers, leaving it second that evening only to ITV's *Footballers' Wives*.

● Electricians and footballers are the most overpaid professions in this country, according to executive magazine *Management Today*. Examples cited included electricians on the Channel Tunnel Rail Link, who are earning up to £75,000 a year.

● Yet another house price record has been smashed. Multibillionaire steel boss Lakshmi Mittal has paid £70 million for a 12-bedroom mansion in London's Kensington Palace Gardens.

● The creation of stars has slowed drastically since a high point of 4.7 billion a year ago, a new astronomical study has shown. Researchers – who assessed data from 100,000 galaxies – concluded that old stars are dying more quickly than new ones are being created.



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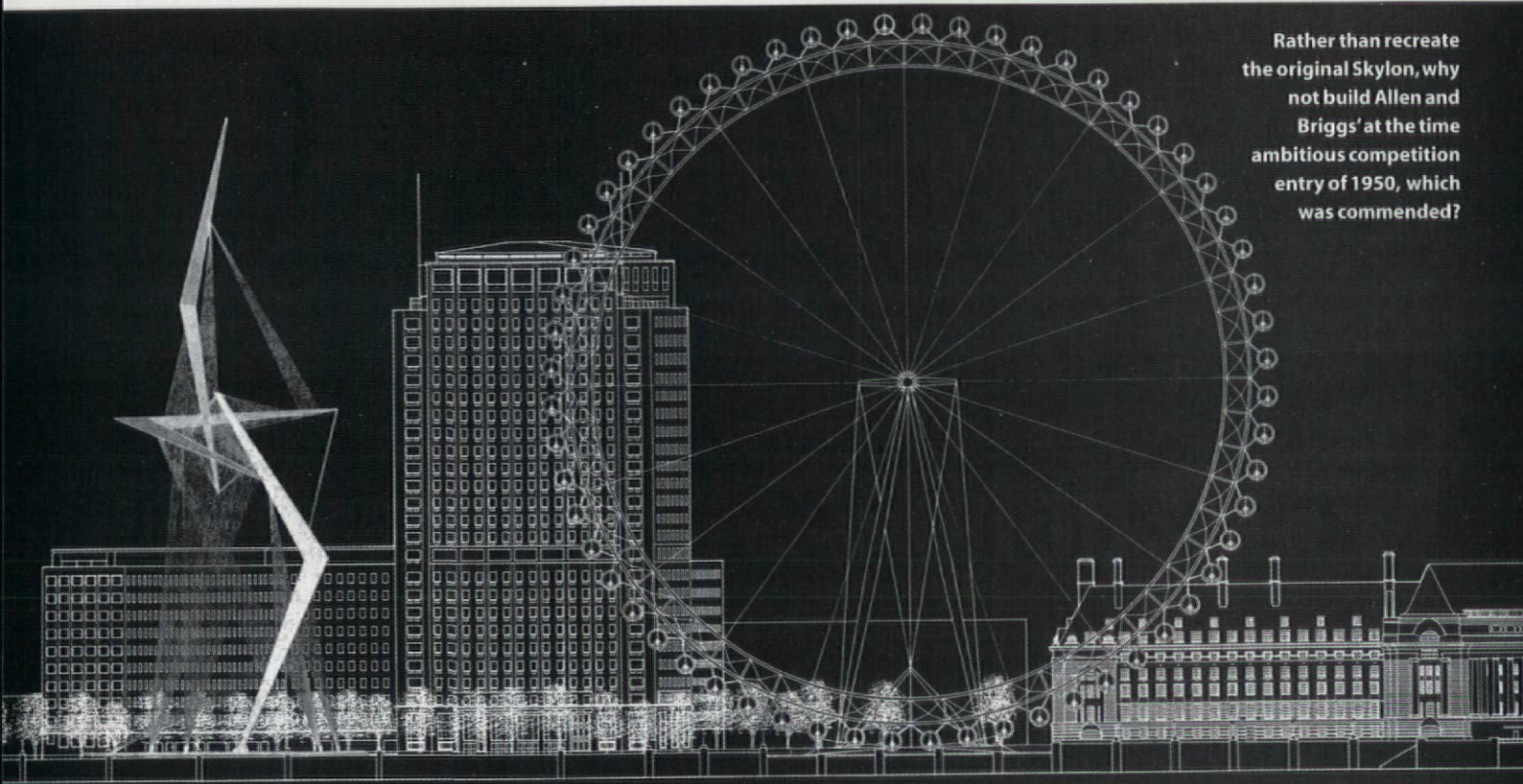
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Rather than recreate the original Skylon, why not build Allen and Briggs' at the time ambitious competition entry of 1950, which was commended?

# The same olde Skylon?

The Millennium festival is widely accepted to have been an embarrassing shadow of the 1951 Festival of Britain. So why are we risking a similar anticlimax by considering a proposal to rebuild the Skylon? Do we need a sham repro-techno-folly? Or is this a case of justified restoration rather than nostalgic replication? **Rob Gregory** reports



Whether or not you believe that the Festival of Britain's South Bank exhibition represented the beginning or end of an architectural era, as an event with more than 8.5 million visitors, its success and popularity are undeniable. However, after a short five-month season, ignoring calls to extend operation for a further year, the returning Conservative government stepped in and tore it all down. Unwilling to become the caretaker of 'empty and deteriorating structures', many critics thought this was perfectly reasonable, judging the festival architecture to be flimsy and weak. However, three structures stood out as exceptional: the incomplete Royal Festival Hall, now the subject of its own emerging conservation battle; Ralph Tubbs' Dome of Discovery, the direct inspiration for Rogers' Millennium Dome; and the gravity-defying, futuristic Skylon, by the duo Powell and Moya.

While the RFH remained to be remodelled by Robert Maxwell, and readers of *Dan Dare* may romantically assume that the Dome of Discovery flew back to the planet from whence it came (rather than being sold back to ICI for scrap), no one knew what happened to the cigar-shaped Skylon. Dan Cruickshank televised his search for it, finding only a two-foot length salvaged by one of the original demolition contractors, and the original inlaid brass ring within which observers stood to view the needle from below. Was the rest really broken down to be made into ashtrays?

Regardless of such speculations, many have suggested recreating the original Powell and Moya Skylon as part of South Bank masterplans – Rogers, Hopkins and Troughton McAslan, to name just three – and today we are facing another proposal by the Royal Academy and Ian Ritchie. But how should it be done? Should we replicate or recreate the original? In conversation with Cruickshank, Jacko Moya modestly stated that given the chance he would have made a number of changes to benefit from technological and material improvements (apparently the internal lights were prone to fusing). Can this debate be resolved? Could a new Skylon become our Eiffel Tower? And if so, will the nostalgic herbivores succeed in their plans to replicate the original, or will a new breed of hungry carnivores be encouraged to produce something new? I spoke to some interested parties, and it seems that the jury is out...

*Rob Gregory is an architect and assistant editor of The Architectural Review*

## HIT

**LEONARD MANASSEH – ARCHITECT ON THE FESTIVAL OF BRITAIN DESIGN TEAM**  
I would be delighted if they choose to rebuild the Skylon – but I am biased. It was a remarkable feat for two young architects, a stroke of real genius. While Phillip Powell often credited the Skylon to be Jacko Moya's creation, Felix Samuely praised the young architects joint achievement, stating that his only involvement was to check the calculations they had made. And they got it right. Any rebuild should be identical.

**SIMON JENKINS – FORMER MILLENNIUM COMMISSIONER**

I am totally in favour of the Skylon but totally against the wheel. The wheel should be moved to Battersea and replaced by the Skylon. The wheel is too big where it is. A pole, spike or spire form is far more appropriate in the urban environment. As for replication, the Skylon is an eternal shape – and while it may be slightly altered, it should be the same.

**STEPHEN BAYLEY – FORMER CREATIVE DIRECTOR OF THE MILLENNIUM DOME**  
The cycles of revival are getting shorter and shorter, so it's no surprise to find the Skylon being resuscitated. There was always something touching about it: a gentle, wistful vision of a technological future in which Britain would play no part. We now think rather differently about Britain's place in world culture. So while I'm instinctively uneasy about repro, with the Skylon there's a delicious ambiguity and absurdity that (sort of) justifies the camp artifice. I'd like to see it happen.

**RICHARD MACCORMAC – ARCHITECT**  
While I agree that it would be wonderful to have a new form of the Skylon, that is not the issue. Quite simply, the original Skylon should never have been lost. The Conservative government tore it down, seeing it as nothing more than a socialist folly. Having worked for Powell and Moya during my year out, the Skylon should have remained as a fitting memorial to two great young architects – a partnership where it was impossible to see exactly who did what. On a city level, I prefer maverick structures like the Skylon. Rather than allowing private office blocks to dominate, more beautiful structures like this should be encouraged.

## MISS

**CECIL BALMOND – ENGINEER**  
The Skylon was wonderful, although surprisingly undervalued at the time – seen almost as a cosmetic object, rather than as the significant piece of engineering that it was. Since then it has rightfully grown in stature, and as a model of engineering it has real value. It is a timeless piece, indeed it was epochal. But nostalgia for its own sake is never worthwhile, and while you can understand the proposed composition of the Skylon – seen as a counterpoint to the wheel – things have moved on. I would prefer to see a competition set for something new. Not purely architecture or engineering – but as a design piece. Today we have new ways to interpret the beautiful resolution of forces.

**CHARLES JENCKS – ARCHITECTURAL CRITIC AND LANDSCAPE ARCHITECT**  
Let them build it – hooray! But if you ask me, there really is no point in reinventing yesterday's science. We now know that the universe is 13.7 billion years big, comprising 23 per cent dark matter, 73 per cent dark energy and only 4 per cent us (all we can see). It is archaic and backward-looking to seek our inspiration from something [the festival] that in itself was 40 years late. No matter what people say, it was half-hearted and based on nautical whimsy, and was not Britain in its finest hour. If people want to spend £1 million on something new we should celebrate what we are now and our future. If you're asking me what we should do, a competition is the answer – where we invite the best from around the world to celebrate a new language of architecture, a nature-based new iconography. Something to celebrate cosmogenesis.

**MARK WHITBY – ENGINEER**  
Today, building edifices seems less relevant than it was, and on this site I think the wheel is enough. The Skylon was a wonderful object of its time, but it doesn't need to be rebuilt. The wheel is an ideal successor to the Skylon – it speaks of now, and of people; providing the most elegant way to get people up into the air. Unfortunately, the sad irony is that replicating the Skylon is just

*Continued on page 18*



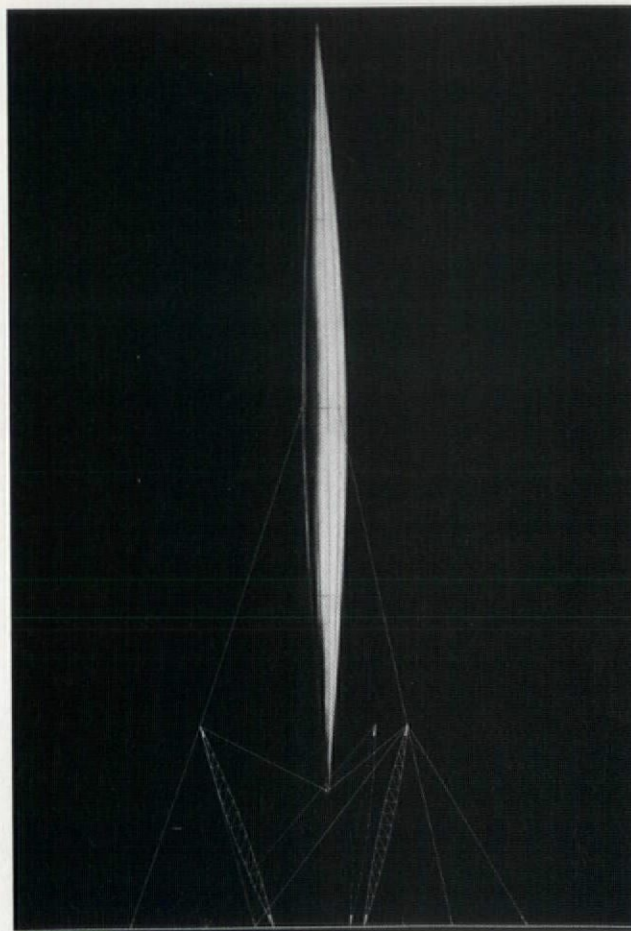
From page 17

the sort of project that the Heritage Lottery Fund may well support, when in my opinion they should support contemporary projects, such as the East of England Development Agency Landmark East proposal to create edifices of the lost city of Dunwich in the sea. Here, heritage and art come together to create wonderful landmarks capable of simultaneously encapsulating today, tomorrow and yesterday.

**ALAN POWERS** – FORMER DIRECTOR OF THE TWENTIETH CENTURY SOCIETY  
I'd love to see a Skylon, but not necessarily in the original position. The South Bank needs more than a gesture. In 1951 there was a holistic approach to the experience of the space that should be recaptured in a new way. Today, for example, the scale of the Hungerford Bridge masts and the London Eye would make the Skylon look too small. The most important thing to do for the future of the South Bank is to demolish the Shell Centre, or at least make it permeable. A reconstructed Skylon needs to be sited where it will look best as part of an ensemble. Maybe near the Millennium Dome, which needs a 'vertical feature'.

**Powell and Moya's winning Skylon from the original 1950 vertical feature design competition (right).**

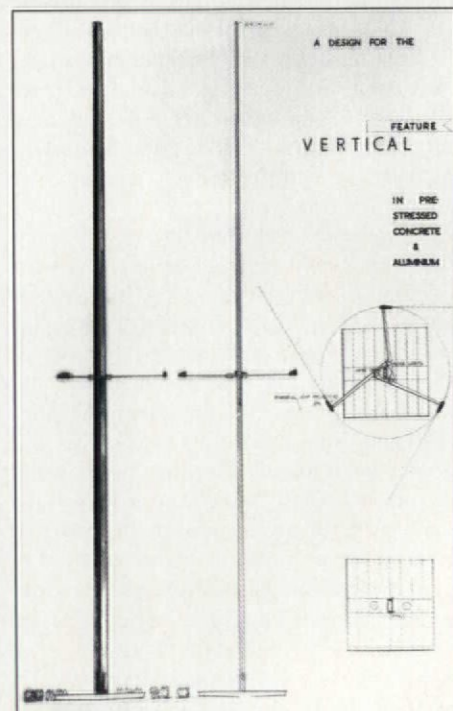
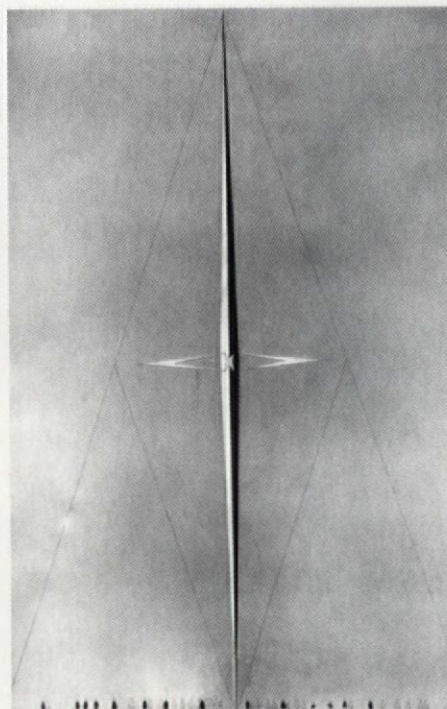
**James S Cousins took second prize (below left) and P A R Dickinson was third (below right)**



## MAYBE

**THOMAS HEATHERWICK** – CREATOR OF THE 56M-HIGH 'B OF THE BANG' LANDMARK

I think on this I will have to sit on the fence. What I would say, however, is to be cautious about the wonder of things past. I would like to study the drawings to see how perfectly it was detailed. I would not like to see it re-detailed by a good-taste practice making a contemporary version of it. What we don't want is a perty modern version. The South Bank can take many things, and perhaps by replicating the Skylon we could encourage more things to be built. The fundamental question, though, is: what is the brief? Is this proposal based on a genuine enthusiasm for the Skylon, or are we looking to recreate the sensation of '51? If there are the funds to rebuild the Skylon specifically, let's do it. However, if not we should encourage something less literal.







## Let's have vision on the South Bank rather than simply reliving the past

Why is it that initiatives to redevelop the South Bank are consistently thwarted or delayed, while the idea of rebuilding the Skylon appears to have a genuine chance of success? By all means let's get an Ian Ritchie building down there. But commissioning him to undertake an exercise in pastiche is a sorry waste of his talents. Ritchie is deemed to be 'the man for the job' on the basis of his triumphant 120m Dublin Spire. But surely what the spire demonstrated was both Ritchie's vision, and his ability to marry sculptural form with modern engineering – neither of which would be called upon with this rather sorry task. As he eloquently demonstrated with his sublime concert platform in Crystal Palace Park – a vandal-resistant, low-maintenance modern-day take on the traditional bandstand – Ritchie would be more than capable of capturing the essential values of that historic icon in a structure more fitting for today.

Plans to rebuild anything different would, of course, lead to endless discussions as to who, what and how and ignite the passions of the disparate bodies who have made it their business to discourage innovative development on that particular stretch of the Thames. At worst, we would end up with another depressing outbreak of community-friendly public art. The appeal of the plan to rebuild Skylon is that it is essentially a single-decision decision. Give the green light, raise the money and proceed. What's more, as with so many very bad ideas, it has the pleasing veneer of moral righteousness, in this instance by being presented as a move to honour the memory of Sir Philip Powell, joint designer of the original Skylon, who died last May.

But is it really a mark of respect to assume that Skylon could withstand the test of time? It was intended to be a temporary structure. And it was. As with anything specifically designed to capture the spirit of the moment, it would – and should – have been rapidly out of date. Captialising on the current wave of interest and nostalgia to find resources for a contemporary structure would be a far more fitting tribute to Skylon's success.

Isabel Allen

### AJ readers invited to put pride back in parks

In your editorial 'We should rationalise our open space...' (AJ 8.4.04), you rightly refer to problems associated with parks and open spaces.

Urban parkland is increasingly under threat of falling into decline because of lack of funding and care. Could a special purpose vehicle (SPV) of park owners, town planners, architects and financiers come to the aid of the urban park?

The challenge is to create, design, build, finance and operate in a section of park a tall, thin building that is appreciated, if not positively admired, by local and national stakeholders. A percentage of the rent from the building, perhaps 20 per cent, would be dedicated in perpetuity to the park. The balance of the rent would then be used to pay for designing, building, financing and operating the building, which would be let to residential, commercial or government tenants in accord with planning permission and demand in the market. In due course more than 20 per cent of the rent may be applied to the parkland after the cost of construction has been paid.

It is essential to success that the financial model works, stakeholders are satisfied with the scheme, the building is designed and built well, and there are rigorous controls to prevent funds being channelled away from the park to other uses. The arrangement, if successful, would provide our urban parks with simple, aesthetically pleasing and firm financial ground on which to flourish.

It would be interesting to hear from your readers who would consider participating in such an SPV. Please contact me at 26A Astwood Mews, London SW7 4DE, tel/fax 020 7370 3563, email nickbeyts@aol.com

Nicholas Beyts, London

### 'Conservative' reform is more radical than Roche

You report (News, AJ 1.4.04) that Chris Roche's latest radical position is to believe that there is a 'conservative' conspiracy at the RIBA to remove registration, which should be resisted. I wonder if he could be tempted to consider that the reverse might be the true radicalism.

In the first hundred years or so of its existence, the RIBA's top strategic priority was to create a system of education, examination, validation and recognition for architecture, open to all, whether they intended to join the institute or not – a great public service. In the 1920s, it arrived at a fork in the road and chose the route of protection of the word 'architect', despite warnings to its leadership that this might in time damage what the RIBA and its charter represented.

It is difficult to detect any benefits to architecture or society from the 70-year history of this limited restriction. And the most recent events border on farce: it is salutary to try the simple litmus test of transposing the ARB episodes to the RIBA – they would be unimaginable. (Ian Salisbury is a pussy cat compared with the radical tear-aways I remember, such as Bryan Jefferson and Rod Hackney – was it their fate to be gagged and harassed?)

So is not the radical option to reconsider a concept adopted, by no means unanimously, in very different circumstances following the First World War? I believe that the profession has now arrived at another choice of route, leading either to increasing stultification or to growing dynamism. The latest two presidents have already embarked on the latter road – their efforts should not be undermined.

Peter Gibbs-Kennet,  
Bisley, Gloucestershire





## The opportunities of NoZone face the future with a flourish

Looking to sea from a beach makes it easier to reflect on my research into the architectural and constructional opportunities offered by NoZone city. Ten days ago, seven of us embarked on this trip, all involved in construction through living in, or working on, fixed/mobile/touring/demolished buildings. Although locals organised the trip brilliantly, only five of us arrived. The missing two, a daring engineer and entrepreneurial architect, found the distractions of the low-life bars they discovered on their stop-off en route more enticing. I await with interest the reports of their detailed enquiry.

As a visitor I can only identify the opportunities offered by the particularities of context. In this city there are no cold bridges; indeed, interiors are undefined. Most accommodation is served by balconies/outside rooms; windows become security screens. This and the low-rise construction allow a free plan; circulation is eradicated; rooms serve off each other to satisfy need and use, not statute. There is minimal planning and building control. No one measures daylight factors here.

Light (its manipulation for shade), views and cross-ventilation are the primary concerns. All the schools are, as Duiker would have them, open-air. Proximity to the equator makes nonsense of the single, fashionably shaped, heavily serviced, glazed tower; an example of commercial orthodoxy meeting climate and failing to respond to opportunity.

My detailed experience was of hotels: the Crown Plaza (international, tired, with revolving restaurant that works); my base the Kapok (international one-off; Ian Fleming's Bond meets Jacques Tati's Hulot) and the Hilton. The last offers a model that I intend to steal: climb up a steep incline glimpsing a stack of folded, shaded glazed elevations (balconies as brise-soleil), arrive on top of the hill, enjoy the promenade to reception, descend to your room and delight in

the view – brilliantly simple. The promenade is Corb at Algiers; the vehicle drop-off is Corb (again) at Poissy. In this case, however, the mountain skyline is unaffected and the entrance copes with real traffic. Pool and car park are correctly located to the rear (hidden from view). Many buildings borrow from genius; few have the talent to steal.

The requirement for vehicular entrance may be obvious but it is rarely executed with conviction or style; cars are segregated and offered the 'tradesman's door'. This is wrong; we still rely on, enjoy and delight in cars. Are we guilty for enjoying heroic visions of cities actually designed for cars? Of course not. The sooner we accept that cars will outlast the problems associated with highway engineering and exhaust fumes, the better. Arriving by car should be designed to be delightful; let's reject worries about that inelegant term 'porte cochère' and respond to the design challenge.

I have learned a great deal from my time here: of heroes (Brian Lara and Dwight Yorke), of the endemic government corruption, and of the architecture of NoZone. The benefits of this alternative urban model, one that allows for a swift response to collective and individual need, was summed up by the hand-painted sign at the petrol station: 'Luck occurs when opportunity meets preparation'. NoZone allows opportunities for cities to flourish, recognising that the alternative is ossification.

The city is Port of Spain, Trinidad, and I came to watch England's cricket team, which took an unassailable two-nil lead in a four-test series. That they are led by Michael Vaughan, who, like four of my party and four-fifths of the population of his city, is a Sheffield Wednesday supporter, only enhanced our enjoyment, providing a further example of the potential for delight when opportunity and preparation are allowed to coincide.

**Claire Russ sees a connection between architecture and the human form – so much so that she founded LIVESpace to create dance pieces for construction projects**

Watching the delicate movements of dancer Ellen van Schuylenburch at London's Palace Theatre in 1996, Claire Russ made a decision. As director of theatre dance company the Claire Russ Ensemble, she would devote a large part of her work to exploring the complex and fascinating relationship between the human body, dance, space and architecture. Her experiences would lead to the formation of LIVESpace, an initiative that creates inaugural dances to celebrate pivotal stages in the construction process, and to projects involving the likes of Alsop Architects and Herzog & de Meuron.

Somewhere in the midst of the ensemble's decade-long European tour, which began in 1990, Russ became intrigued by the link between performance and space, and the engagement between her dancers and the confines of that space. She remembers how 'every theatre stage was a blank canvas which we had to learn to inhabit, to own', and how increasingly the act of not just creating but exploiting that space 'resembled in my mind the architectural act'. In observing von Schuylenburch's solo, Russ realised that dance could not simply be defined as the body in isolation, but that it related to space, to culture, to community and to purpose – just as the individual components of a building were not architecture until those same issues were addressed and placed in context.

As the snippets of theory clarified, Russ set about redefining the notion of dance through interaction with architectural space. She explains: "Dance" is a loaded word, but that doesn't express even half of what it can do. Although not yet built at the time, Peckham Library takes the whole rhetoric of "library" and translates it. In retrospect, we wanted to achieve something very similar.'

It was Christophe Egret of Alsop Architects who gave Russ and LIVESpace the perfect opportunity to communicate those ideas central to 'the dialogue of space'. The practice was working on Queen Mary's School of Medical and Dental Research in east London, which incorporates a glass pavilion containing pod-like structures and amorphous cellular forms. Russ set about choreographing a celebration that would 'dance the architecture'.

'I thought about the key moments in creating a building and talked to Alsop about why foundation stone-laying ceremonies in particular were so boring,' she says noncha-

'The sooner we accept that cars will outlast the problems associated with highway engineering and exhaust fumes, the better'





CHARLES GLOVER

## The rhythm of life

lantly. 'There's never any attempt to ritualise and it seems very tokenistic. I suggested we should make it a dance of ownership – of the art and of the space – that would celebrate the biological forms that pervade the architecture, as well as the local community. We were all very excited about the possibilities.'

The resultant performance, ROCK, took place on the dishevelled Queen Mary's building site in November 2003. Aided by an ensemble of students from the London Con-

temporary Dance School and solo performances by Arthur Pita and Richard Stamp, ROCK fused traditional Gujarati folk and contemporary dance with the blaring beats of a hard, industrial soundtrack. The dancers' mesmerising contortions parodied the shifts of the amorphous Centre of the Cell construction, while the contours of the dancers' bodies celebrated the organic forms all around. Russ' preparation involved wandering around a building site, and she recalls

how 'the functional gestures between the contractors on the building site were fascinating, so wonderfully expressive'.

The ensemble even convinced 'Big Kev', the banksman, to call in the stone as part of the dance. 'He was brilliant,' Russ laughs. 'We had this big burly builder as an elemental part of a sensitive artistic act, improvising his own dance movements. It really was a radical moment in the choreography.'

Delighted with the performance, Queen Mary's School has invited Russ' ensemble to perform at the official opening ceremony. And Russ is keen to work with other architects and clients in creating unconventional inaugurations for key buildings. Spurred on by the success at Queen Mary's, Russ is optimistic that the concept will catch on.

'The human body is the perfect architecture,' she observes, although she acknowledges that expressing such abstract ideas to potentially non arts-savvy clients may have its challenges. Although Russ' arguments are persuasive, her rhetoric can be complex, and at times a whole new train of thought emerges from one of the many tangents to our discussion. The delivery, however, is just right – Russ' intensity is startling, and her words are punctuated by a variety of gestures that emphasise her passion for the LIVEspace project and for architecture. Russ cites Future Systems' entrance to *Comme des Garçons* in New York as a powerful exemplar of the built environment interacting with the physical body. 'It sucks you into the building,' she says. 'There's a sense of physically travelling, of a journey, as you move through the architecture.'

Russ says she would love to be part of a design team, and envisions a process whereby designers work with dancers, film their movements, look for repeated patterns, then create 3D models so that, in a sense, buildings can start to mould to the human form. She looks forward to a time when 'body consultation' becomes 'a staple part of the architectural endeavour'.

And until then? Russ continues to seek out inspirational projects. Working on New Islington Manchester with Urban Splash would be 'fabulous', as would Liverpool's Fourth Grace. 'That deceptive outwards frailty,' she muses. 'That vulnerability. It would be fantastic to explore in the language of dance – the possibilities are endless.'

Cristina Esposito





martin pawley

Q & A

## The search for security means a new approach to building

Somewhere it is written of Buddha that, suspecting the motives of one of his most zealous disciples, he asked what he most desired in the world. 'Wisdom,' replied the aspirant immediately. But this answer did not please the prophet. Grasping his disciple round the neck, Buddha made as if to strangle him. Then, when the pupil was on the brink of suffocation, he asked him the question again. This time the disciple gasped: 'To breathe! To breathe!'

Clearly this drastic method of distinguishing between needs and desires has no place in today's security community, but it was brought to mind by a similarly connected matter that has changed views on the subject of terrorism and counter-terrorism.

To understand the relationship of these two we must, as Buddha did, ram the facts together. On the one hand, we must not ignore the benefit that can come from the removal of obsolete structures by explosions or fires – what in the US used to be called 'the modern way to refinance'; nor forget that even this tried-and-trusted scam has been rendered a tad too risky by the growing emphasis on security.

As if to prove this connection, in Europe a number of planned strategic links between motorway and mass transit networks and ports, airports and major rail stations have been put on hold in the past 12 months. Many of them can now only be completed with the aid of substantial inward investment. Germany may be better placed than most in this regard but nowhere escapes entirely.

If this is the diminished size of the board upon which the game of development must now be played, then minor pieces like architecture face a bleak future. Its pretty pictures – like Buddha's disciple's idea of 'wisdom' – tend to precede the grim discovery that the necessity to breathe comes first. Where there is no publicly funded

infrastructure, there will be no more privately funded architecture either.

Yet there is a ray of hope. Even as the heavy construction market in Europe continues to contract, another market is booming. In a manner that suggests where architects might look with advantage, last month saw a number of ageing security projects dusted down after spending the best part of two years on the back burner. If these £100 million projects now go ahead, then the dramatic mergers of the early 1990s, when the IRA had the City of London firmly in its sights, might yet create an entirely new kind of security industry. It will be a hybrid of three kinds of business: surveillance, intelligence and construction.

Now it promises high-resolution camera coverage and interactive record-searching that will connect subscribers to an almost infinite number of information sources – from the world's military networks to police records in 168 national collections, stock exchanges, TV and film libraries, corporate data banks and newspaper files. More to the point, its construction arm promises an entirely different conception of the value and purpose of secure building design when separated from the old urban architectural constraints.

Buildings for the security industry will have to be designed from the inside out, in the best Modern tradition. They will have to go up fast and anywhere. They have to be reconfigurable practically overnight, and they must be prepared to disappear equally quickly, with no wailing and gnashing of teeth from architect-conservationists to record their passing.

If that sounds like the end of architecture as we know it, it is not. It is merely the end of the hegemony of art-history. As the specialists in the field already know, security architecture is a viable business, not a dying one.

**'Buildings for the security industry will have to be designed from the inside out, in the best Modern tradition. They will have to go up fast'**

**Andrew Scoones**  
Building Centre Trust

**When and where were you born?**  
1959, Shrewsbury.

**What is your favourite building and why?**

Michael Hopkins' Mound Stand, Lord's Cricket Ground. It's fun, elegant and marked the start of a new wave of creative commissioning in sports buildings.

**What is your favourite restaurant/meal?**

Home-cooked risotto ai funghi porcini with family and friends.

**What vehicle(s) do you own?**  
A bicycle for commuting and a Renault Mégane.

**What is your favourite film?**  
*Monsieur Hulot's Holiday.*

**What is your favourite book?**  
Hunter S Thompson's *Fear and Loathing in Las Vegas.*

**What is your favourite 'design classic'?**

The Screwpull Table Model corkscrew: clever mix of new materials and mechanics, excellent purpose.

**What is the worst building you've ever seen and why?**

Self Storage warehouse, Neasden Lane. A shed with misguided pretensions of grandeur.

**Who or what is your biggest architectural influence and why?**

Derek Sugden, for his ability to bring together creative and practical people interested in making good buildings.

**Who is the most talented architect you've worked with?**

Martin Ostermann for his cardboard exhibition structure at the Building Centre 2003.

**If you hadn't been an architect, what would you have been?**

I'm not an architect. I would have been a television producer.

**What would your advice be to architectural students?**

Get to know people who can make things.

**What would your motto be?**  
Mottos are for schools.



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'I chased Paul Niklas of Formica Limited right around London trying to get an interview.'




'I just got pushed out of the way when I tried to get up close.'



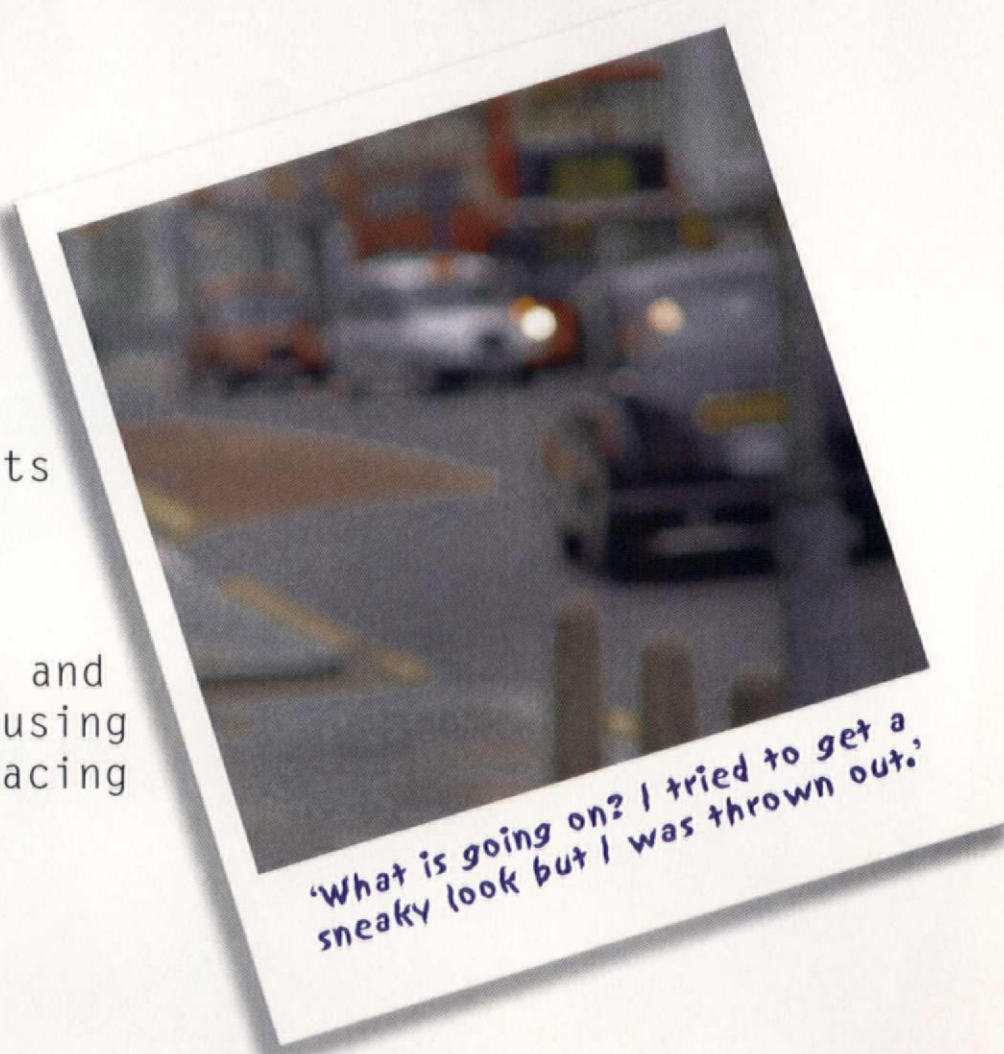
'I eventually lost him in a cab - still n



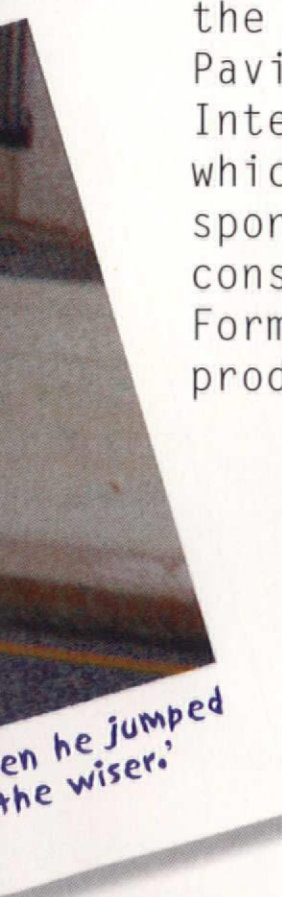
# So! What is going on at Formica®?



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'What is going on? I tried to get a  
sneaky look but I was thrown out.'



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# Interbuild 2004

This year's Interbuild, the largest and most important exhibition for the UK building and construction industry, takes place on 25-29 April at the NEC, Birmingham. Call 0870 429 4558 or visit [www.interbuild.com](http://www.interbuild.com) to register online

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The Architecture Pavilion has been built and designed in association with



Formica worked closely with Will Alsop on designing and providing materials for areas of the pavilion.

April 2004 sees the launch of Formica's new range 'The Collection', which combines dramatic new looks and finishes with the most popular choices from the

existing range. As the only manufacturer of high-pressure laminate in the UK, Formica is working with architects and designers to push the boundaries of laminate use. Digital printing allows designers to create bespoke laminates. The Fabrication Support Unit provides practical help and offers a bespoke construction service for mock-ups and prototypes. Formica's products come in a huge range of colours and designs and are durable, hygienic and easy to maintain, making them ideal for use in commercial, retail, transport, education, sports and domestic settings.

## Architecture Pavilion exhibitors



Ash & Lacy will be displaying its Ashzip standing-seam roofing system, Ashtech wall panel and rainscreen cladding systems, and Ashfab range of bullnoses, feature flashings and rainwater goods. The systems, available in a variety of curved and tapered options, offer a factory-engineered roofing solution without a harsh 'industrial' look. Ash & Lacy will also be unveiling its new halter, which eliminates the need for additional components such as spacer support systems, to achieve U-values as low as 0.16 W/mK, significantly reducing construction time on site. Other products on the stand will include Ashjack over-roof conversion systems, Ashgrid spacer support systems, and fasteners and accessories. The Ashzip standing-seam system is being used on a number of UK projects, including Elmhurst School for Dance in Birmingham and King's School in Wolverhampton.



Aqualux manufactures an extensive range of shower enclosures and bath screens. Having concentrated its product development on the DIY market in the past, Aqualux believes its new range of luxury units is suitable for domestic and commercial applications. It will show its new Energy range of shower enclosures and trays. Finished in white or polished silver, units have a sleek frameless look that incorporates a limescale-resistant glass coating for ease of maintenance. Energy's advanced glass clamping and sealing systems make installation simple, and sliding doors ensure minimal use of bathroom space. Launched to enhance Energy, the lightweight Tufflite range of slimline and flat-top trays will also be shown, alongside the new Walk-In shower enclosure – a large showering area with separate drying section including an integral hardwood foot-board and towel rail.



Kestrel's stand will be dominated by the new high-performance composite Accord range. Made from a combination of PVC and wood products, known as Root-Ex, Kestrel claims the composite has the durability and workability of PVC with the stability and rigidity of wood. Accord sills have a low expansion rate, allowing butt joints – more commonly associated with wood – to be used in place of joint-capping. The thickness can be greatly reduced, allowing slim installations, and with no knots or raised grain. Kestrel Accord does not require the same preparation as an all-wood sill, and can be sawn, nailed and drilled like wood or welded like PVC, with standard equipment. It does not contain harmful formaldehydes and the wood fibre used in its composition is from renewable sources.



Member of Finnforest Corporation



One of the leading specialists in timber-panel and curtain-walling systems, sound-insulation walls, timber and glass mullion stick systems and engineered glulam structures, Merk will be displaying a range of products new to the UK market for use with all set-ups, from simple roof trusses to complex structures. Kerto-LVL has been developed by Finnforest for joist reinforcements and more demanding prefabricated systems, while the Leno Solid timber-panel system for walls, ceilings and roofs satisfies heat, fire and acoustic requirements. Merk Fineline is a highly durable solid timber parquet floor that combines the qualities of end-grain parquet and the interesting appearance of stick parquet flooring. Merk systems have been used on projects around the UK including Sheffield Winter Gardens, and the New Faculty of Education in Cambridge.



Driven by issues of insurance, fire performance, life-cycle costs and ever-more-stringent building requirements, Kingspan Insulated Panels will showcase its Firesafe composite roof panel systems. Kingspan 1200CS has been launched in response to the increasing demand for temperature-controlled environments and helps to create an airtight envelope in line with environmental legislation. At its core is Kingspan's Firesafe PIR, a self-extinguishing alternative to polystyrene that, in the event of fire, forms a protective char that expands, filling the space behind the steel sheet, and reducing the risk of fire ingress. KS 1000 Optimo is a pre-engineered cladding system with hidden joints that conceal fasteners, giving buildings a sleek envelope. Also on show will be the KS1000 TS slate and tile support and Kingzip standing-seam roof systems.



For flexibility in large-scale multi-functional spatial layouts, Dorma will be demonstrating its Huppe Variflex range of movable wall systems. The range combines a choice of panel types and surface finishes with high sound-insulation ratings. Integrated features include stainless-steel inserts, window units, and brushed and waxed sucupira wood. For DDA compliance, use of Dorma's cam-action range results in rapidly decreasing resistance during opening. Visitors can also view the new 100 x 100mm Compact Slide door operator, which is unobtrusive enough for use with large glazed areas. Clean, non-obtrusive glass support is also in evidence with the Manet Concept system. With countersunk single-point fixings, installation is easy. The new roller fitting for sliding doors has a softer design and enhanced pivoting system for reduced pinch hazards.



Union is now part of the Assa Abloy Group, leader in locks and hardware manufacture and distribution in more than 100 countries worldwide. Union's latest integrated modular range of door furniture is the first collection designed specifically for architects. It comprises door levers, roses, backplates and a variety of accessories including escutcheons, pull handles and signage. Also on show at Interbuild will be a new European-style mortice lock case that complements Union's existing range. These products will join Union Artefact, a range that gives architects the opportunity to design bespoke backplates that can be personalised with images and logos. The cylinder systems on show will include the DTEC locking system and high-specification Keso Cylinders, which incorporate a 15-pin keying system for added security.



Arcelor is the largest steel group in the world today. It has a workforce of over 98,000 employees worldwide and a turnover of €25.9 billion (£17.1 billion). Arcelor has grouped its activities in four different sectors: flat carbon steel; long carbon steel; stainless steel; and distribution, transformation and trading. Manufactured to the highest standards, its extensive range for the construction sector offers architects a modern, challenging, strong material with full recyclability. It is also a wonderful source of architectural inspiration, as demonstrated by the imaginative projects from an increasing number of renowned architects. Arcelor sees architects as one of its key markets, and has produced extensive briefing and guidance material for the profession. It has a UK team dedicated to the needs of the UK market.



IHS Technical Indexes is a leading supplier of standards, regulatory, product and supplier information to industries worldwide, including construction and engineering. Its several million pages of industry information are available online or via CD-ROM. A partnership agreement with Emap has allowed IHS to supply online access to AJ-published material. Technical Indexes has also joined with RIBA to form RIBA.ti Construction Information Services (CIS). It provides access to industry information through the web-based divisions of *The Architects' Journal*, *New Civil Engineer* and *Construction News*. Key elements include powerful search software and an organising and storing function for logging favourite documents. Key4architects, also supplied by the RIBA.ti venture, provides detailed information on regulations and technical standards.



To celebrate its 125th anniversary, Keim has been running a competition in conjunction with *The Architects' Journal*. Entries to the 'Streets of Colour' award, launched to offer architects the opportunity to devise a colour scheme and revitalise an area or building of their choice, will be displayed on Keim's stand. The winning proposal will be implemented by the local authority or property owner, using Keim materials, as part of the company's initiative to improve the urban landscape. Keim paints comprise a potassium-silicate binder with inorganic mineral fillers and natural earth-oxide colour pigments. The paint forms a chemical micro-crystalline bond with the substrate becoming an integral part of the surface. This ensures a long-life protective finish, eliminating the need for regular redecoration.



After 20 months of development and early adoption by scores of blue-chip organisations nationwide, spaceoasis from Segment Systems will be unveiled at Interbuild for the first time. The system, designed by Marks Barfield, creator of the British Airways London Eye, concentrates on communal space in public areas. Ranges include meeting pods, information points, receptions, resource hubs, touchdown zones, speakeasy seating and tea points. The system is fully reconfigurable and can be adapted as needs change, responding to a changing work environment. Segment welcomes working with customers to develop a wide range of bespoke pod and screen systems. Segment has created alliances with a number of key suppliers including manufacturers of furniture, lighting, laminates, and graphic displays to ensure that individual design concepts can be delivered.





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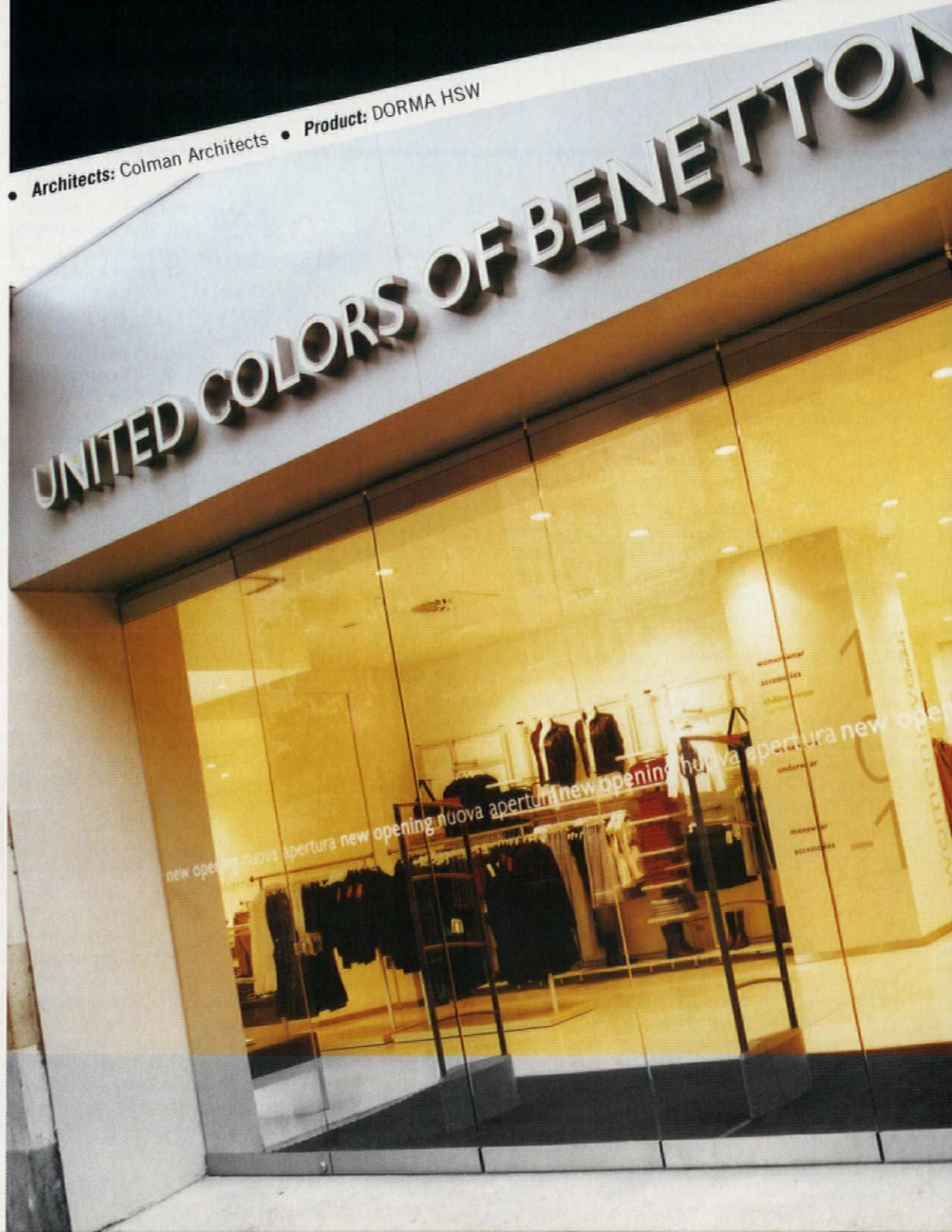
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# Digital Fabricators

An exhibition at the Architecture Pavilion at Interbuild, 'Digital Fabricators' explores the relationship between architecture, manufacturing techniques and digital technology. The curator, Michael Stacey, sets out the key issues below. A selection of the case studies presented in the exhibition are described in detail on the following pages

The landscape of every architect's office has changed over the past 20 years – gone is the gentle squeak of Rotring pen on Mylar or tracing paper to be replaced by the hum of computers and the intense clicking of mice. This change has been embraced by architects and engineers. But two-dimensional drafting still dominates the construction industry and is used primarily for its flexibility and a hoped-for efficiency. The revolutionary potential of three-dimensional modelling is used fitfully and only by a few. This article, like the exhibition, explores the use of digital design to inform the built environment. The emphasis is on experiential and tactile architecture, not the theoretical. The potency of the sketch and three-dimensional models is

beyond doubt. But the communicative potential of digital design, in all stages of the design process from concept to direct communication with the fabricators, is still in its infancy in the construction industry.

The exhibition includes the timeline of the development of digital design and fabrication technology. For example, the introduction of AutoCAD in 1982 had a much swifter impact than the introduction of stereolithography in 1988. The projects illustrate the expanding diversity of digital fabricating techniques, from laser cutting to five-axis routing, and stereolithography to three-dimensional physical printing. The exhibition includes a taxonomy of current

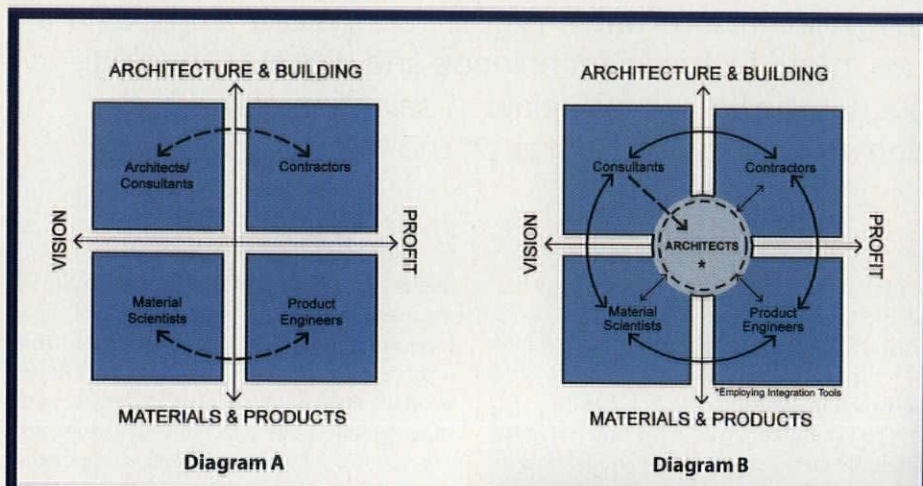
digital fabrication technology. Branko Kolarevic uses the following classifications of digital fabrication: two-dimensional, subtractive, additive and formative. Within each category there is a delta of possibilities, and many of the fundamental issues of tectonics in architecture, the joining of materials and components, remain unchanged by the use of digital fabrication. This is leading to a re-engagement with the means of production by the profession and a rediscovery of craft in architecture.

Some are concerned that rapid prototyping in particular lacks any sense of materiality; however, Ulrika Karlsson of Servo notes

**Digital fabrication allows the architect to be a designer/maker; the set for the opera *The Girl With No Door On Her Mouth* was designed, manufactured and installed by architects Philip Beesley and Derek Rivington**







The digital fabrication and management of electronic information places the architect at the centre of the construction process

## Refabricating Architecture

The use of digital design tools has the potential to position the architect in the centre of the construction process, controlling the flow of information and, critically, the generative geometry.

James Timberlake and Stephen Kieran in their book *Refabricating Architecture* (McGraw Hill, 2004) contrast the current conventions of the construction industry and architectural practice (see diagram A, above left), with limited communication between architect and contractor, and typically no dialogue with manufacturers, material scientists and product engineers. Worse than this, there are many forces in contemporary society, including specialisation and fragmentation, that tend to marginalise the role of the architect. Contrast this with the potential of digital fabrication and electronic information management. Diagram B shows a model of the construction process that is multi-disciplinary and highly interactive, yet it is the architect who provides and controls the vision and physical outcomes on site. To some this is a renaissance of the architect as master builder, to others it offers the

'Twenty years ago it was common for engineers to spend long tedious hours working out the way in which a two-storey building frame worked, longhand, on paper. Sometimes, ideas were incidental to the process. Thankfully, those days are past. The arrival of interactive design software has revolutionised the way we design things... It means that engineering has become more of an art, architecture more of a science, and all design more intuitive'

**Professor Chris Wise**

that the layered topography of the stereo-lithography rapid prototypes of lattice archipelogs has its 'own and unique materiality, which is a direct result of the setting of the resin by exposure to laser light, layer by layer'. Laser cutting uses the nature of the chosen material directly – Philip Beesley and Diane Willow's *Orpheus Filter* is an accretive installation formed from laser-cut acrylic and Mylar film. Thus they are using the very film one used to draw on to create working drawings.

### Parametric design

The combination of parametric design and single project models offers the architect a potent real-time tool to generate options and iterate the design to access the potential within a conceptual approach. Parametrics define the parameters of a particular design and not its shape. This is a powerful new tool in form-finding for architecture. A parametric definition of a circle is  $r^2 = x^2 + y^2$  and the parametric definition of the arch of Waterloo Station as defined by Robert

Aish of Bentley Systems is  $hx = ((29152 + (B+C)^2)0.5)$ . This is not to suggest that practices should all hire mathematicians, which Foster has done, nor that you should enrol for a maths degree. Thankfully, major software companies are developing visual interfaces or 'self-programming' for parametric design. The parametric capability within Bentley's Microstation suite is called 'generative components'.

The Swiss Re office building is a pioneering exemplar of parametric design. It takes the market preconception of an office layout and, through parametrics, transforms it into an optimal design where aesthetics emerge from performance criteria applied to design. Francis Aish, an aerospace engineer by training and now an associate at Foster and Partners, describes this parametric process as 'two and half D' as the parametric qualities of the seven tangential arcs that form the profile were applied to the sectional geometry and related to the circular plan.

One does not need to be the architect for a regional arts centre or major office build-



The 'Digital Fabricators' exhibition is curated by Michael Stacey and the Digital Fabricators Research Group at London Metropolitan University with the Building Centre Trust. The venues are: Interbuild Birmingham 25-29 April, Building Centre London 10 May-26 June, and University of Waterloo, Cambridge Art And Architecture Gallery, Canada, from 4 November 2004-15 January 2005.

architect the possibility of becoming a designer/maker. The architect no longer needs to be remote from the manufacturing process; the digital three-dimensional model can become the building and all of its component parts. This places a significant emphasis on the skills employed and the inter-relationship of 'global' and 'local' modelling techniques.

The terms standard and non-standard are becoming obsolete. The rhetoric of 20th-century architecture was dominated by calls for standardisation and the deployment of mass production. In essence, in the built environment mass production was never successfully mobilised. The manufacturers, almost always, manufactured batches or series. Thus the potential for mass customisation or personal production has been nascent in construction for the past 70 years. James Timberlake and Stephen Kieran credit the introduction of the 'concept' of mass customisation to Dell Computers in 1984, when it started shipping computers built to customers' specifications. The key territory today is not whether a component is standard or non-standard, but whether or not the part can be manufactured and whether it be manufactured affordably.

ing to use parametric design. Urban Future Organization's design for a house conversion in London called Nest-ed House V1.03 ably demonstrates this on a budget of under £60,000. It is also vital to remember that the development of digital design is about the investment in people – Gehry transformed his office by hiring Jim Glymph and Rick Smith. The realisation of Foster projects such as the GLA and Swiss Re is only possible because of the investment in key software skills, in people, by fabricators such as Wagner Biro and Schmidlin.

### Foster versus Gehry

In the use of software there is a strong contrast between the approach of Gehry and Foster. Gehry has adopted an approach inspired by Boeing and uses CATIA (computer aided three-dimensional interactive

applications). Furthermore, it requires the complete supply chain to adopt this single software to ensure continuity and compatibility. Foster's approach on Swiss Re, however, was to seek a robust software that everyone had access to – Excel. The geometry of the project was communicated as an Excel spreadsheet and a method statement on how to 'generate' the geometry. The specialist subcontractors' resultant geometry was then inspected by Foster's design team and any divergence discussed and eliminated. Swiss Re also very excellently demonstrates the interaction of physical models, made by the architects, and their digital models, a flip-flop from the physical

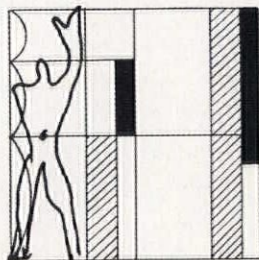
to digital and back again, until all the consequences of the geometry are fully understood. It is salient to note that as soon as true depth is applied to a specific geometry, for example the straight line or ruled geometry of the hyperbolic paraboloid roofs of Richard Rogers Partnership's Antwerp Law Courts, a curvilinear geometry is encountered. This was resolved by the close collaboration of Avtar Lotay, the project architect, and the specialist timber fabricator Merk. On Swiss Re, Foster's design team resolved the geometry to clad it exclusively with flat triangular panels with the exception of the crowning double-curved rooflight at the apex of the tower.

When reviewing the progression from digital representation to digital fabrication, it is easy to overemphasise the importance of technology transfer from the aerospace and automotive industries. This is not to deny the importance of software such as CATIA – however, progress within the construction industry, which includes CIMsteel, should not be overlooked. It is also pertinent to note that CIMsteel was a European initiative, which has now been taken up in North America.

No other industry is willing to undertake the risk of

putting its prototypes on street corners and then standing back for, say, 20 to 30 years to see what happens. The building industry at its best is capable of putting together flexible project teams with disparate skills in the pursuit of common project goals. The use of digital fabrication technology need not be part of a more corporate future – the dialogue with industry should be a two-way process.

The possibilities generated by the direct manufacture of digital designs are both an opportunity and a challenge to the architectural profession. The technology is accessible and cost-effective. The inventive skills and editorial judgement of architects are needed more than ever.



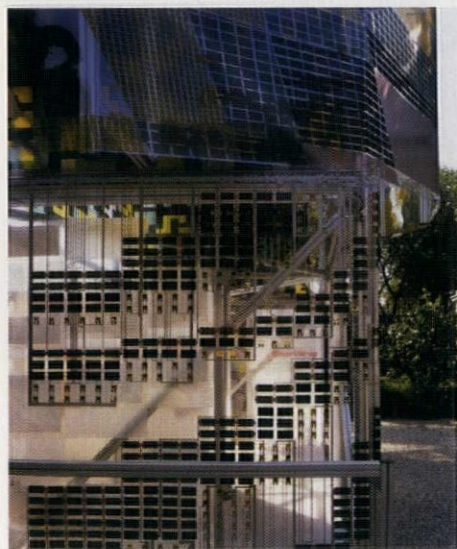
VS.



James Timberlake and Stephen Kieran, authors of *Refabricating Architecture*, suggest that the bar code has replaced Le Corbusier's *Le Modulor* as the new humanism of architecture



# SmartWrap

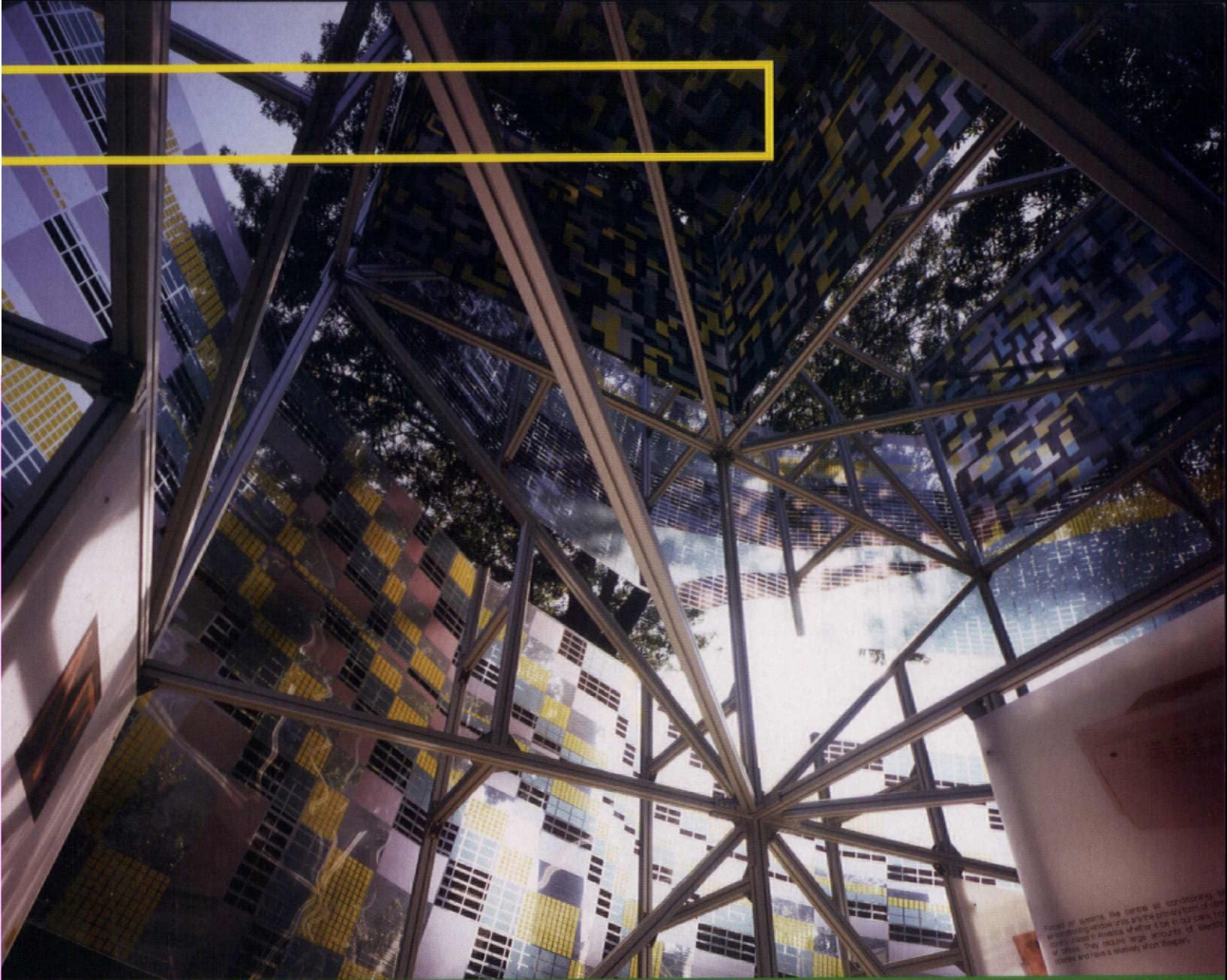


The SmartWrap Pavilion for the Cooper-Hewitt National Design Museum in New York by KieranTimberlake Associates employs new materials and digital design to create a 'a provocation to designers and architects'

The combination of new materials and digital design has a transformative potential, providing building products and architecture tailored specifically to the clients' needs and site requirements. This is the essence of the architecture of mass customisation or personalised production. How can one demonstrate this physically when in essence the product is significantly ahead of current production capabilities? This was the dilemma faced by architects James Timberlake and Stephen Kieran of KieranTimberlake Associates, when asked to design a pavilion for the Cooper-Hewitt National Design Museum in the autumn of 2003. Their response is the SmartWrap Pavilion. The SmartWrap concept will deliver shelter, climate control, lighting, information display and power with a printed and layered polymer composite. The aluminium-framed pavilion is clad in a printed skin based on a combination of polyester and its derivative polyethylene terephthalate (PET), which







was developed with DuPont. The pavilion was designed using a single project model, and all the aluminium extrusions of the frame were barcoded. This coding defined their structural and construction properties. This enabled an automated manufacturing bill of materials to be produced and facilitated the placement of components on site.

The fully developed SmartWrap will incorporate phase-change materials to mimic thermal mass and act as thermal regulators. Phase-change materials can store five to 14 times more heat per volume than naturally occurring latent heat stores such as water, masonry or rock. Lighting and information displays are delivered by organic light-emitting diodes (OLED), which are thin, flexible and self-emissive. The OLEDs were developed with DuPont Displays. Shelter is provided by the PET film, which is colourless and transparent. Entrapped pockets of aerogel, supplied by Aspen Aerogels, provide thermal resistance. This layered

assembly achieves the thermal resistance of an insulated 400mm concrete-block cavity wall at approximately 1/100th of the weight. Noting the major power blackout recently experienced in North America, including New York, it is reassuring to note that SmartWrap also incorporates organic photovoltaic cells to generate electricity.

The museum's exhibitions curator, Matilda McQuaid, stated that the pavilion 'is intended as a kind of provocation to designers and architects'. She also noted that SmartWrap should be available commercially within five to 10 years. The main pavilion is printed with a mass customisable pattern, which represents the proposed layered assembly. A 2.4m<sup>2</sup> panel next to the pavilion demonstrates the working components of SmartWrap. Although this is currently a future product, it demonstrates a highly integrated use of nanotechnology, which can be tailored for specific site conditions and a wide range of building typologies.

#### ARCHITECT

KieranTimberlake Associates: James Timberlake, Stephen Kieran, Christopher Macneal, Karl Wallick, Christopher Johnstone and Richard Seltenrich

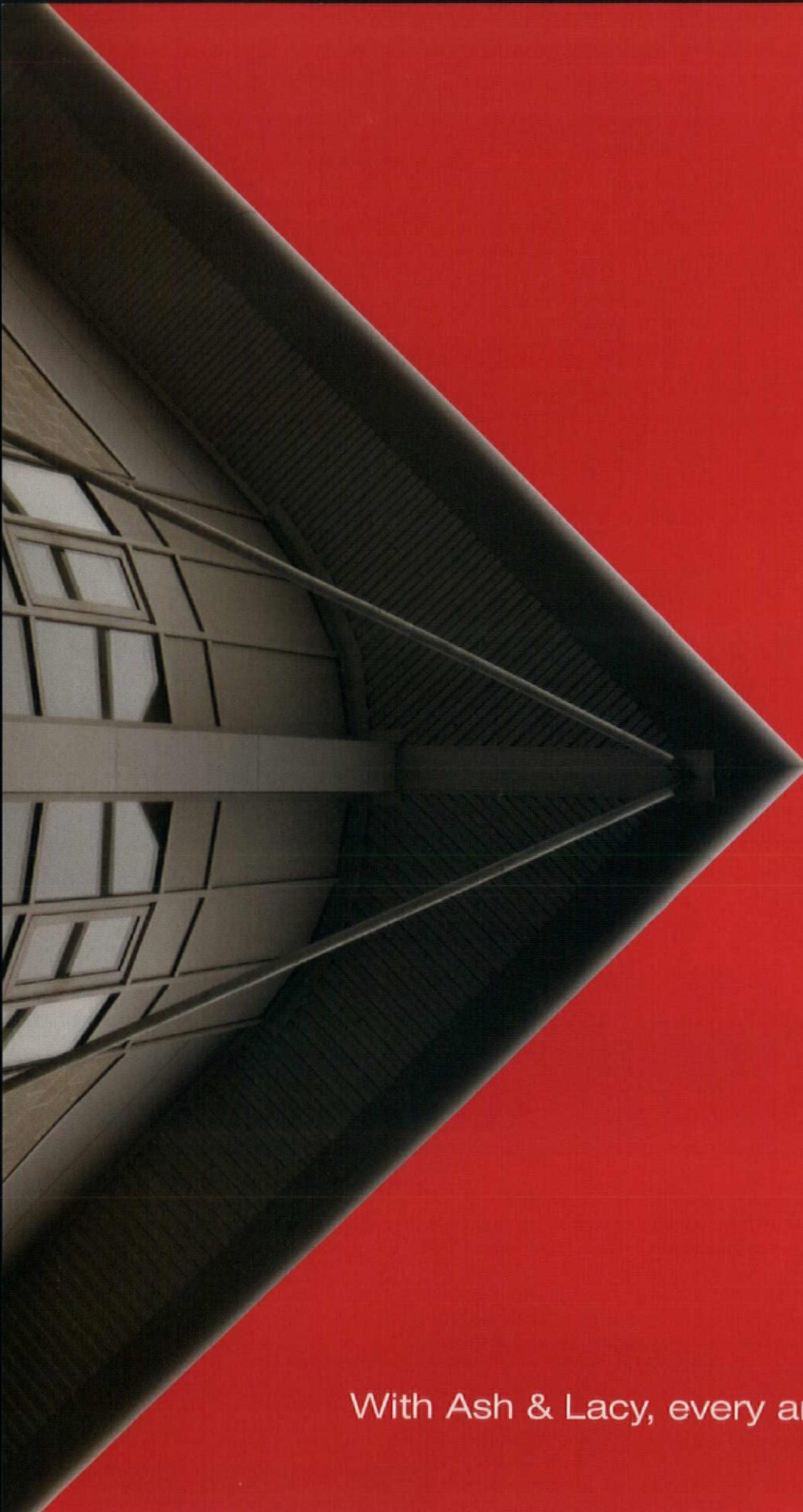
#### ENGINEERS

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#### INDUSTRIAL COLLABORATORS

DuPont, Skanska (US), ILC Dover and Bosch Rexroth





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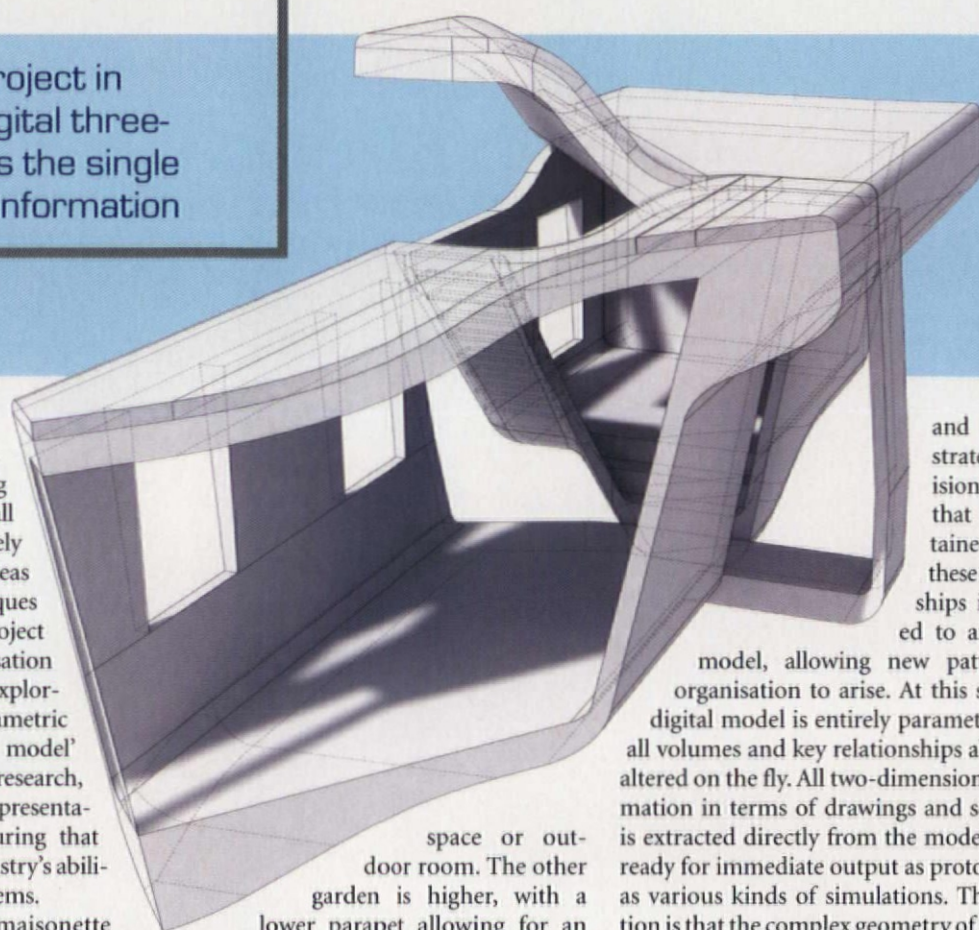


# Nested house

A small residential project in Hackney uses one digital three-dimensional model as the single source of all project information

Urban Future Organization is a transnational networked architectural practice with a growing international reputation. A small group of its members is actively pursuing the integration of its ideas about data-driven design techniques on a live small-scale residential project in Hackney, London. In the realisation of the Nested House V1.03, it is exploring current developments in parametric design and the 'single building model' paradigm, material and structural research, as well as digital techniques of representation, production and manufacturing that have an effect on the building industry's ability to handle complex design problems.

The site is an existing 45m<sup>2</sup> maisonette terrace conversion distributed over three floors in the heart of the De Beauvoir Conservation Area. Due to the conservation area restrictions, the designers deliberately decided to concentrate on the reorganisation of the interior space and its relation to a split-level garden on the roof, offering intimacy and privacy as well as unobstructed views to the City of London. The external treatment only hints at the less orthodox internal arrangement. The roof garden is sited on the two shifted bedroom nests, resulting in one section of the garden being at lower elevation, creating a more intimate and private



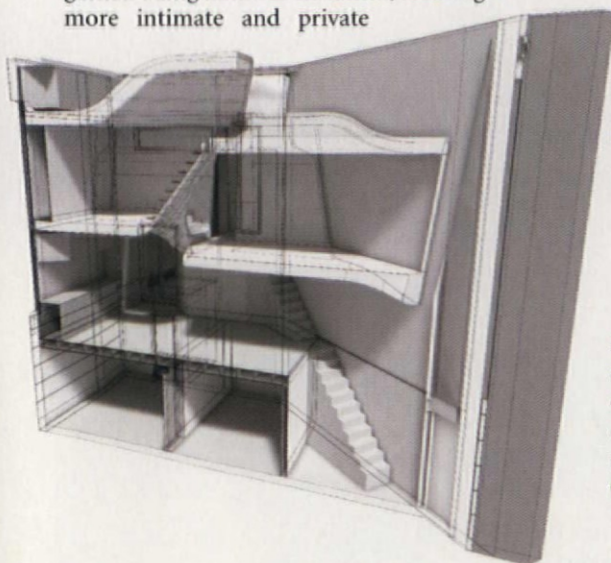
space or outdoor room. The other garden is higher, with a lower parapet allowing for an open view of the skyline of London. The plan and section are as open as possible in order to maximise the vertical connection between the ground floor, first floor, second floor and the third floor's roof garden with its greenery and views.

The digital three-dimensional model is the single source of all the project information, ranging from the early stages of design to the manufacturing and construction of the project. Initially the model was set up as a series of relationships between the different programmes, constrained by the geometry of the property, the maximum allowed pitch of the stairs, and the nominal area requirements for different activities. These relationships have been and still can be manipulated through a series of material, structural

and formal strategic decisions. Data that is contained within these relationships is allowed to affect the

model, allowing new patterns of organisation to arise. At this stage the digital model is entirely parametric, with all volumes and key relationships able to be altered on the fly. All two-dimensional information in terms of drawings and schedules is extracted directly from the model, as it is ready for immediate output as prototypes or as various kinds of simulations. The intention is that the complex geometry of the nests will be manufactured directly from the digital model with an extremely high precision, allowing for the minimal tolerances that are defined by the project constraints.

The group's aim was to develop a higher conceptual consistency in the smaller projects carried out within Urban Future Organization and its collaborations. Through Nested House V1.03, it discovered the tools and techniques for the expedient delivery of highly complex projects on a small scale. The 'single building model' paradigm technology is very much capable of delivering projects with advanced geometries and constraints, and is a valuable asset in assisting with the delivery of highly complex projects with fewer resources than conventional techniques of representation and manufacture would allow for.



**An unorthodox internal arrangement: the complex geometry of the nests will be manufactured directly from the digital model**

## PROJECT TEAM

Urban Future Organization: Artur Ferreira Viveiros, Dirk Anderson, Jonas Lundberg and Steve Hardy

## STRUCTURE

Daniel Bosia

## TECHNICAL CONSULTANTS

Michael Chadwick and Katja Penz

## PROJECT COST

£55,000

## START DATE

Summer 2004



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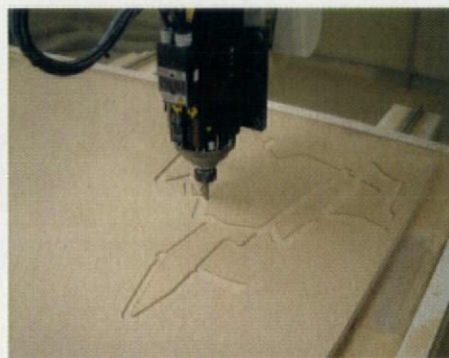
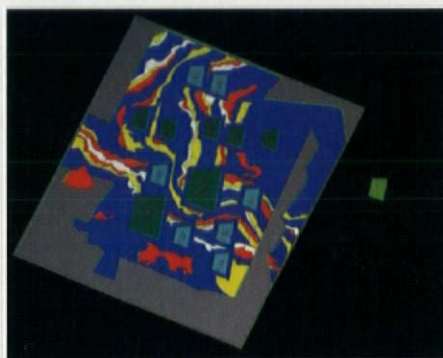
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# Scottish Parliament

The complex precast concrete elements of the Scottish Parliament building would not have been viable without digital fabrication techniques



Above: many elements are curved and contain inlays and contouring with individual patterns. Right: three-dimensional computer models were translated into moulds for the poured concrete



The new Scottish Parliament building by Enric Miralles with RMJM contains a number of precast concrete elements that are highly wrought in terms of form and finish, and could not have been achieved economically without the use of digital fabrication techniques. These elements included the precast vaulted floors and internal walls, the cladding to the debating chamber, press tower and latterly the boundary wall.

It was the complex patterning of this final element that proved the greatest challenge. Many of the elements were curved and contained inlays and contouring with individual patterns. Three-dimensional computer models were produced by RMJM for each

element. These were translated into machine-readable code by the mould makers, Patterns and Moulds, which had purchased a five-axis CNC router to carry out the work.

The router produced a full-size positive form of the patterning on MDF boards, which became the master moulds for the cast rubber mats. These were then placed in the timber moulds into which the concrete was finally poured. The advantage of the rubber mats was that each individual pattern template could be laid inside a standard mould for all of the boundary wall elements. Using rubber could also achieve the curvature required from the original flat MDF surface.

## PROJECT TEAM

Enric Miralles (architect)/RMJM: Kevin Grubb;  
Malling Precast: David Shillito; Patterns and  
Moulds: Gary Lucas



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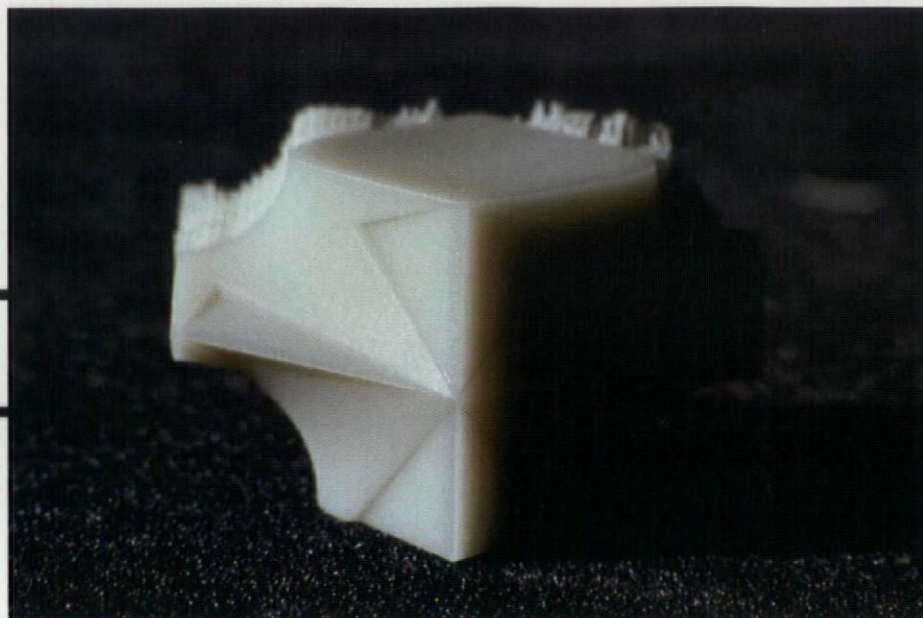
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# The Sagrada Familia

Parametric modelling allowed Australian and Spanish teams to collaborate on the fast-track design and construction of the west transept rose window at Antoni Gaudi's unfinished Sagrada Familia

The recently redesigned west transept rose window ('passion facade') of Antoni Gaudi's unfinished major work and Barcelona icon, the Sagrada Familia church, was designed and completed in a little over 12 months and is a notable example of 'lean construction'. The processes involved include traditional stone masonry, actual employment of the traits discussed in Robin Evans' *The Projective Cast*, and semi-automated construction methods.

It took three months to reach the point where the design team was satisfied with the overall composition for the window. The exterior was fully resolved, while the interior had aspects that had to wait until certain measurements were made on site during construction before being finalised. Again, the use of parametric design technology allowed easy absorption of the new information as it became available, with a minimum of repeated work.

## Prototyping

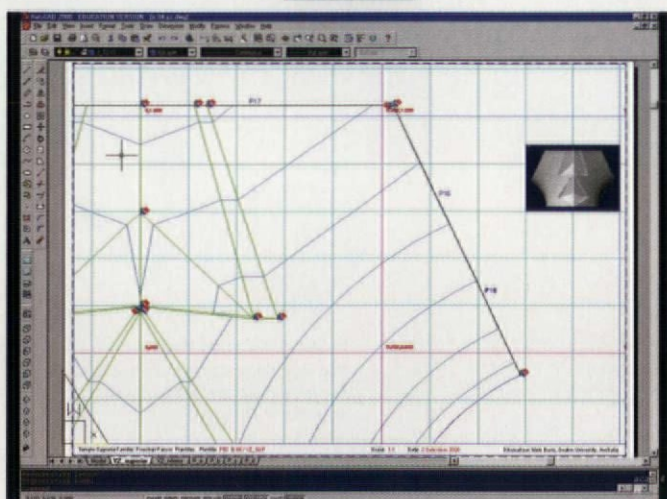
Three-dimensional wax printing was introduced as a means of rapid prototyping in order to overcome the distance between design and construction participants – the university team in Australia, the director and technical office on site and the stonemason in Galicia – and the unfamiliarity of team members with working directly from digital models without traditional gypsum maquettes to hold. This printing produced exquisitely detailed scaled versions of each individual stone in wax. The stonemasons developed their own, even more rapid, means to prototype, building full-scale contoured models in polystyrene sheet.

Six months into the project, while the lower quarter of the window was being constructed on site, the second quarter was still being cut in Galicia, the third quarter was made into templates in Australia to

## Parametrics

Working in the technical office on site, Mark Burry constructed a flexible model of the whole assembly by using parametric shipbuilding software, called CADD55. The model, which contained a total of 3,800

events and took six weeks to build, uses associative geometry to create a hierarchy of relations so that changing the value of a parameter in the model (a length, an angle, an equation constant) would update all associated events in the tree and reconfigure the geometry of all related parts of the window.





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Model of the new west transept rose window (above) and the window as built (right)



guide the stonemasons, and the design of the top quarter was being refined in collaboration between the Sagrada Família design office and the team in Australia. These models were also a product of the digital process, constructed using sectional profiles (or surface contours) generated at regular intervals parallel to a specified Cartesian plane in the Rhinoceros software.

### Template drawings

Nearly 800 full-size DIN A0 templates were mailed from Australia to guide the stonemason. Line colour was used to distinguish surface generatrices (green), template boundaries between adjacent pieces (black), curved surface intersections (orange), etc. The drawings were supported by surface

contours at separations of 10cm, with coordinates at critical nodes linking the orthographic projections of each piece to a common datum.

### Construction

Not only did the parametric software contribute to a flexible design process in which hard-to-attain measurements could be incorporated late in the process, it also contributed centroids and crane-lifting points to hoist the individual stones into position, perfectly orientated. Following the new system, all the A0 template drawings were employed immediately in Lugo without revision, and similarly the pieces were assembled for the first time on site, fitting together without the need for cutting or modification.

#### PROJECT TEAM

Architect coordinator and director: Jordi Bonet, Temple Sagrada Família, Barcelona; project architect: Jordi Fauli, Temple Sagrada Família, Barcelona; design and documentation: Mark Burry and Jane Burry, SIAL, RMIT University, Melbourne, Australia; project management: Ramon Espell; stonemasons: Manuel Malló Malló, Talleres Malló

The investigation of Gaudí's final design models for the Sagrada Família church was supported by a Discovery grant from the Australian Research Council 2000-2002. This work is supported by the Junta Constructora de la Sagrada Família, Barcelona





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# Postagriculture

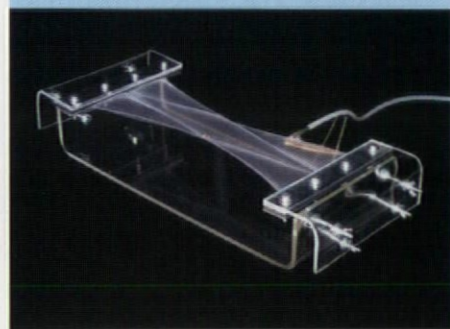
'Postagriculture', by architect Achim Menges, draws on digital technology to develop a flexible organisational model in response to the need for environmentally and socially sustainable food production

Behind the current benign image of agriculture lies a complex organisation of production processes that is powered by an enormous energy consumption, slow to respond to change and dangerously inflexible. In the Netherlands these problems are exacerbated by two factors: firstly, there is higher agricultural productivity per land area than in any other country in Europe; and secondly it is the most densely populated nation in the European Union. This places severe pressure on the Dutch landscape; a necessity for increasingly high agricultural productivity in conjunction with very dense population.

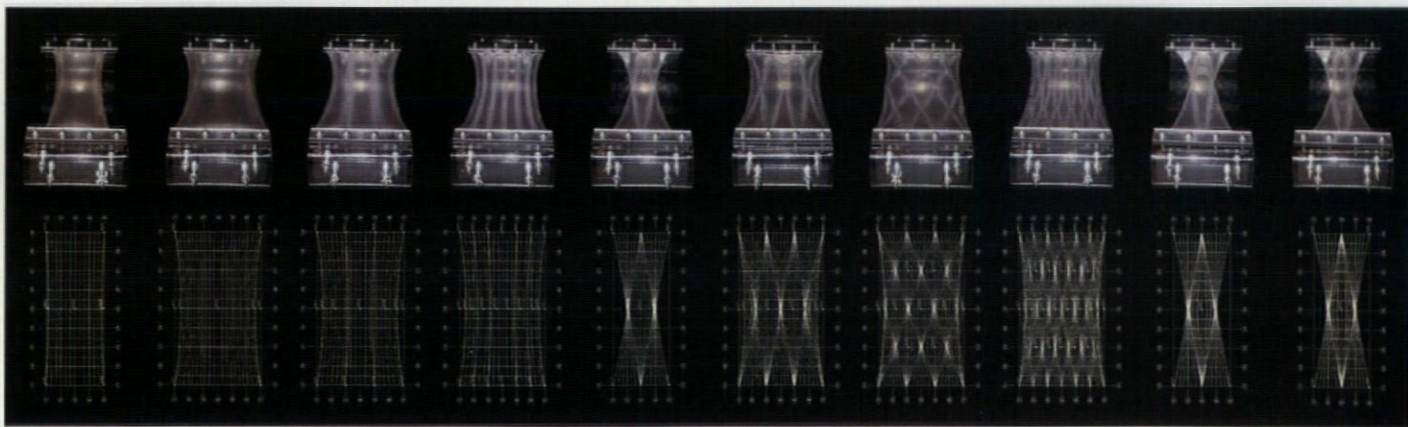
The ambitions of the 'Postagriculture' project, by architect Achim Menges, stem from the recognition of the critical importance of environmentally and socially

sustainable food production. The aim is to develop an inclusive and responsive strategy that will enable a mode of agriculture that is highly integrated, mutable and a vital urban programme.

Interrelated systemic, regional and national investigations of agricultural production and the density of population make it obvious that an alternative strategy has to promote the intensification of already existing agro-production and at the same time provide for public recreation in close proximity to urban areas. Consequently the central aim of the strategy is a local hybridisation of intensified agro-production with public recreation. Therefore an organisational model must be developed that is capable of negotiating different system requirements in an adaptive manner.

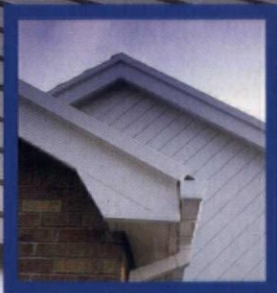


The specific pneumatic component evolved from a feedback process of digital form-finding, physical modelling and digital structural analysis



A progression of images shows the evolution of a specific pneumatic component. Starting with a simple inflated cushion, the designers examined the structural relationship between applied loads, the geometries of pressurised volumes and pre-stressed membranes to determine the form. The finished component benefits from a digital definition of the boundary points using state-of-the-art engineering software and digital form-finding to enable optimal cut patterns for manufacture





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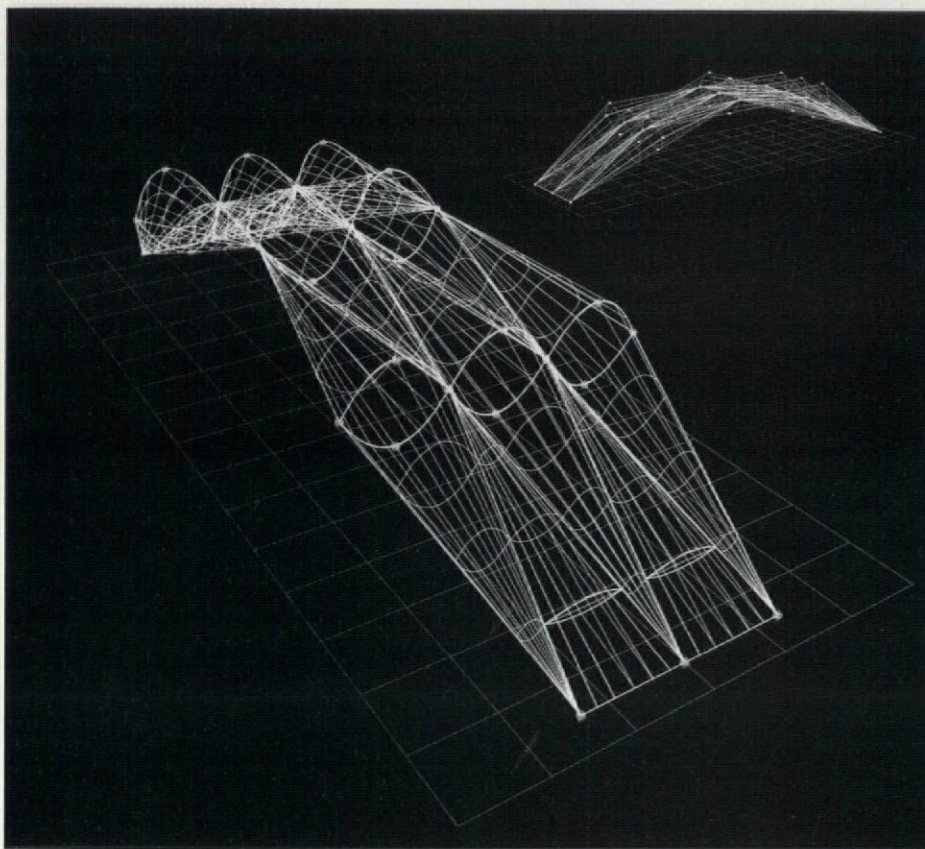
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The single cushion component was multiplied to articulate a prototype of a multi-chamber surface component. Responding to the dynamic relation between structural stability, surface geometry and internal pressure, the boundary definition points are animated to allow for a digital form-finding process that enables the production of a physical model of differential stability through CAM processes

### Condition-based organisation

Through a digital technique based on parametric information of light and climatic requirements of various agricultural and recreational systems, an organisational model was derived that indicates specific intra-systemic condition profiles and differential inter-systemic relations. Within this new model, system specificities emerge as patterns of gradient thresholds and potentially shared conditions. As it is dynamic, the model is an operative tool for evolving programme deployment, organised by differential intensities of light, temperature and smell. Thereby inter-systemic relations are mutable and occupations are time-based. This allows the organisation to respond to differential demand for agricultural products and the changing needs for recreation areas.

The abstract machine of this model operates on a topological base of inter-systemic relations and connections, and is essentially scale-less. It can be employed to test internal developments and changes, and to absorb and reconfigure new information and external expertise at any stage of the project. A continuous feedback loop is established, enabling an intricate dance between analytical and generative modes.

### Deep structure

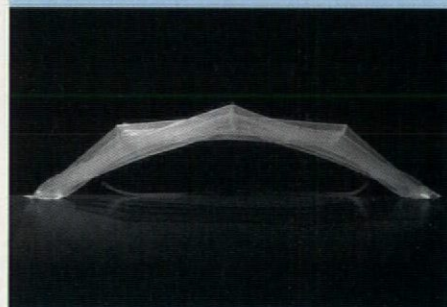
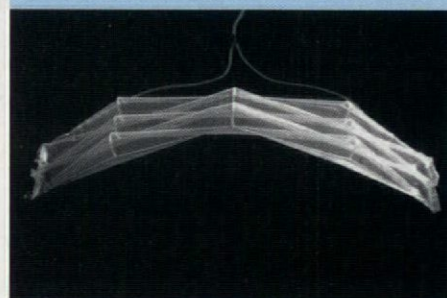
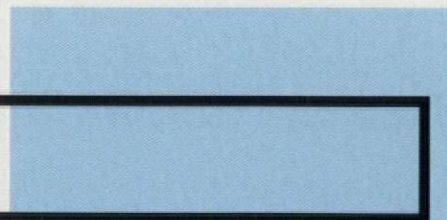
A performative environment necessitates thinking about structure as a condition that generates and differentiates. Rather than a static object, it is helpful to think of structure as a process of structural and material operations. Manipulations within the organisational logic and constraints of the structural system are intrinsically connected to the modulation of microclimatic condi-

tions. In fact, the structural articulation enables the organisational model of differential light and climatic intensities to become operative. Therefore the development and assessment of the structure is not simply limited to its load-bearing capacity but to a whole set of other performance criteria.

Pneumatic structures were explored, as they have great potential for differentiation, and this was achieved by exploiting their non-linear characteristics and differential states of stability. The working methodology was based on feedback between different modalities – a digital definition of the boundary points and the related cut patterns produced in engineering software, physical modelling, digital form-finding and digital structural analysis. This process evolved a specific pneumatic component, which was further developed towards a self-supporting pneumatic surface prototype. Parametric changes of variables – such as the orientation, distribution, density and differential reinforcement of the seams, the depth and the internal pressure of the 'pneus', and the type and treatment of the surface material – were employed to manipulate the proliferation of the surface component in relation to its structural performance and its capacity to modulate light and climatic conditions. The resulting deep structure is a manifold of local geometries within a global system.

### Performative environment

The articulation of the project takes a multitude of site-specific parameters and uses them as generative forces. The site at the seafront in Westland has specific light and climatic conditions, existing local agriculture, recreational networks and infrastructure.







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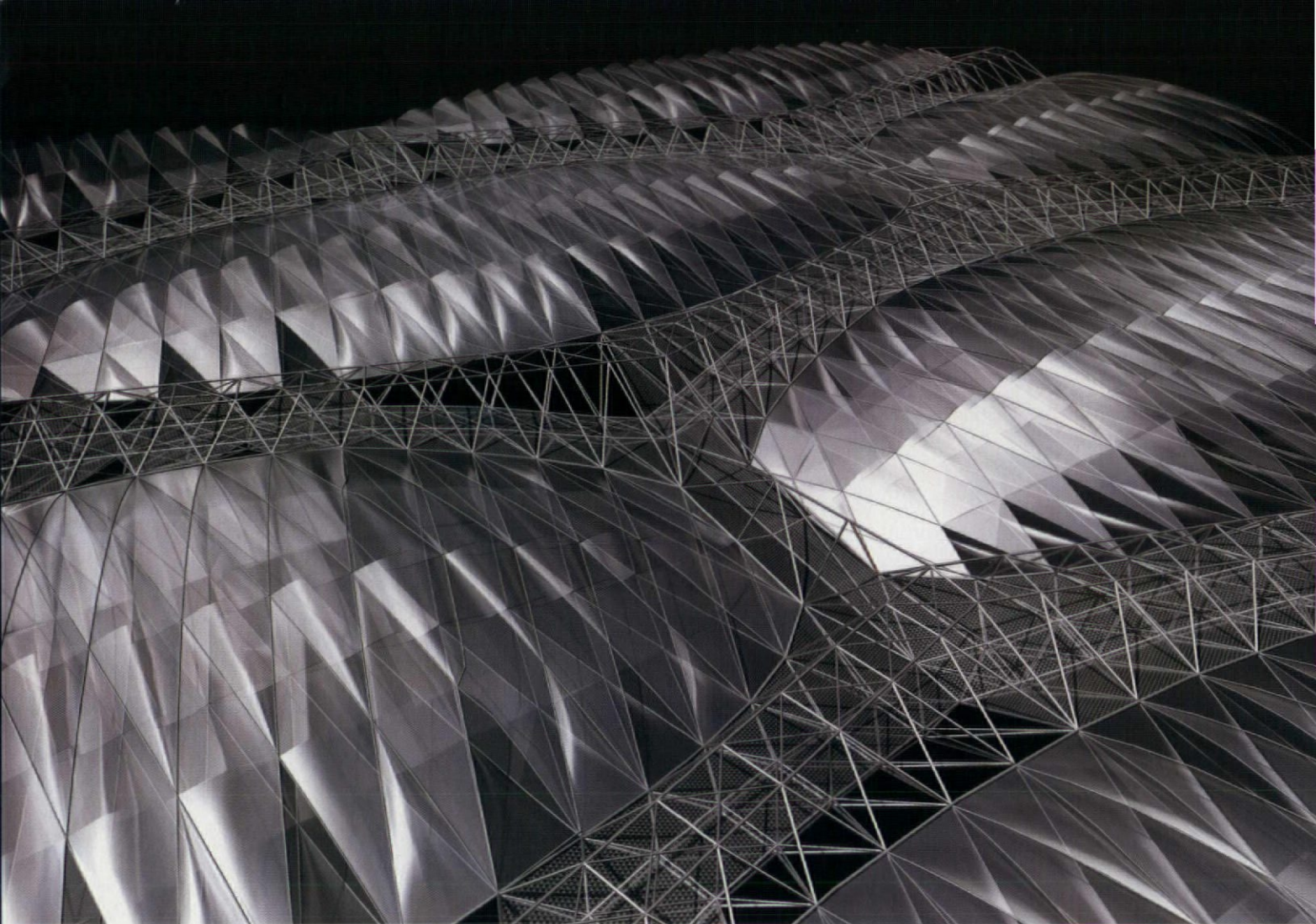


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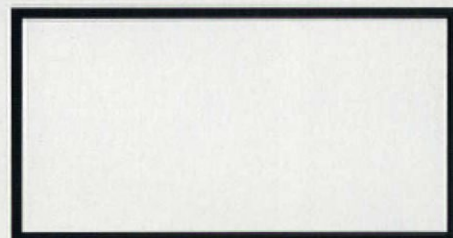




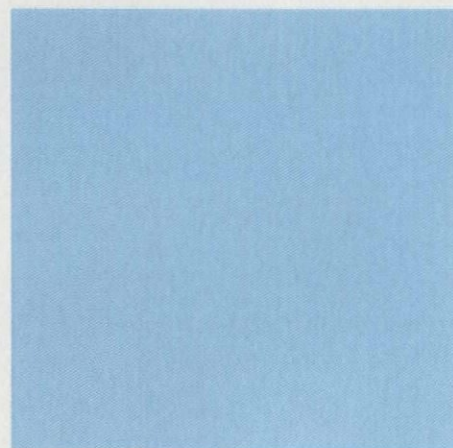
Together, these disparate parameters inflect the distribution of macro environments and macrosystemic connectivities. This macro environmental distribution, combined with the differentiated structural system, evolves a highly articulated post-agricultural landscape. In the microsystemic layout the livestock and solar gain are the main heat and light sources, conserved and modulated by the thermal mass of fish basins. A digital simulation run of one year, with particular focus on temperature scan and light analysis, indicates how the structure responds to locally specific load-bearing requirements and evolves microclimatic differentiation and thus enables the organisational model to become operative. More importantly, the analysis of the structural and environmental performance also indicates the gradient transition from the hard-modulated micro environments to a negotiable field of soft-modulated areas. These areas, which emerge between the regulated material and surface manipulations, enable a robustness of distributed open systems over a broad range of

conditions that can trigger and accommodate a manifold of programmatic mutations. This indicates that the project follows a twofold strategy: one passive and one active. Firstly, the negotiable field of differentiated micro environments passively provides for anticipated criteria of change. Secondly, active key structural elements provide adaptation for divergent criteria. The consequent mutations of relations between systems will then feed back alterations to the topological organisational model.

In conclusion, the project demonstrates how an intensified localisation of agriculture could save future resources by including urban programmes in a production landscape. It aims to clarify the critical agenda of agricultural production, presenting an argument for a paradigmatic shift away from the current practice of concealing industrialised food production. It is self-evident that this requires a structure and an organisation that is responsive, and capable of accepting programmatic, spatial and environmental changes to accommodate fluctuating needs.

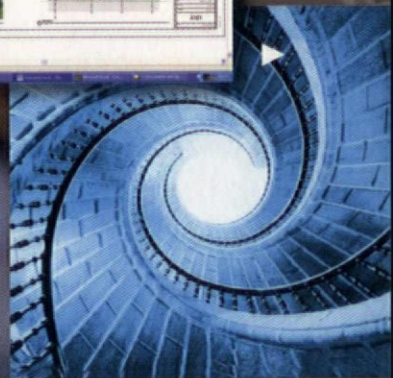
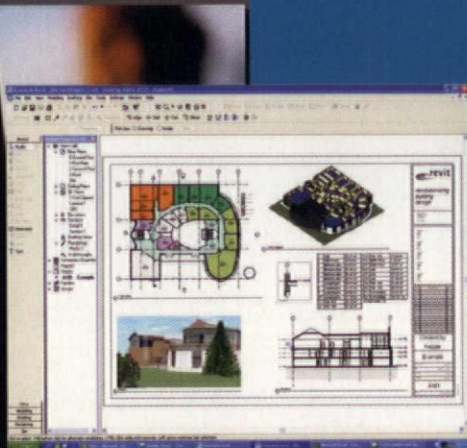


**The developed surface component proliferates into an overall structural system by the differentiation of structural parameters such as the internal pressure, the depth of the 'pneus', the reinforcement of the seams, etc. It is also informed by local and overall geometry in relation to programmatic requirements, load-bearing capacities, and evolving light and climatic conditions**





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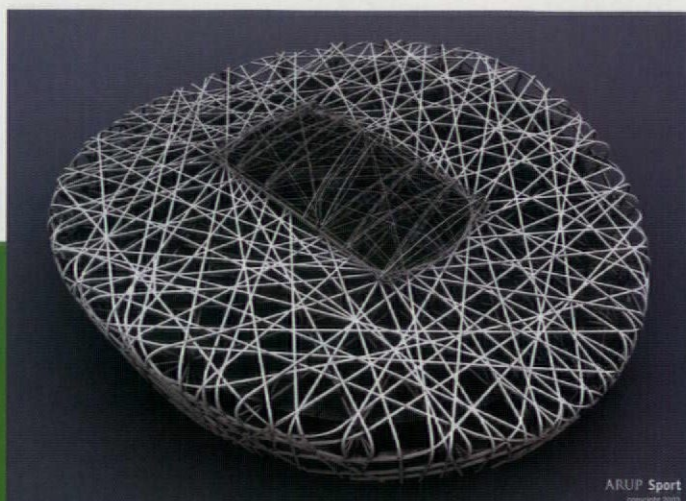
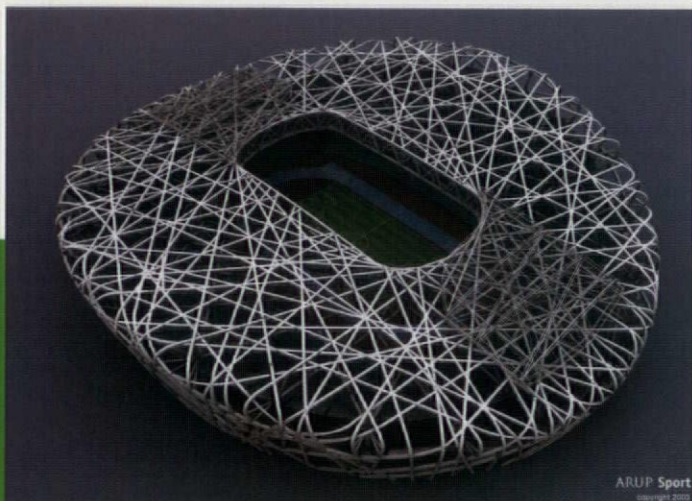
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# The National Stadium, Beijing

The exploration of the complex form and geometry of the Olympic stadium in Beijing by Herzog & de Meuron and ArupSport was made possible by a range of tools including CAD visualisations and rapid prototypes

Above left: visualisation of the structure and moving roof. Above right: external view showing the moving roof in the closed position

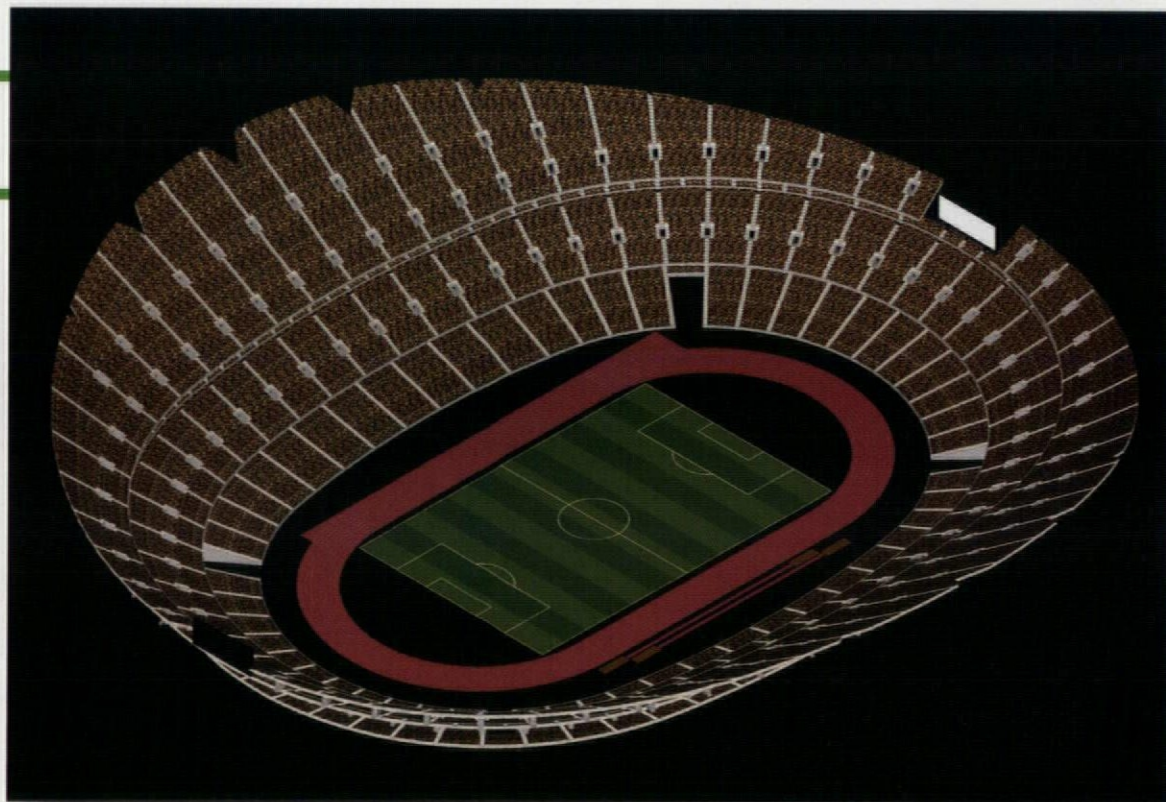
The main stadium for the XXIX Olympiad, to be held in Beijing in 2008, designed by a team of Herzog & de Meuron, ArupSport and China Architecture Research Group, will be an iconic form.

The concept behind the design is to create a form that is pure structure with an almost archaic quality. The elements for the facade and roof mutually support each other to create an integrated structure that blurs the line between primary and secondary elements. The apparent chaotic pattern is governed by a series of 'rules' that generates the nest-like structure.

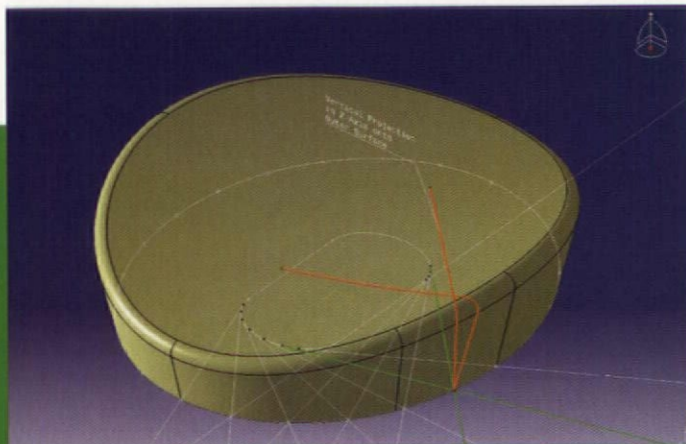
## Geometry

The pattern for the structure, in addition to forming an interwoven mesh of members, also follows a three-dimensional, undulating

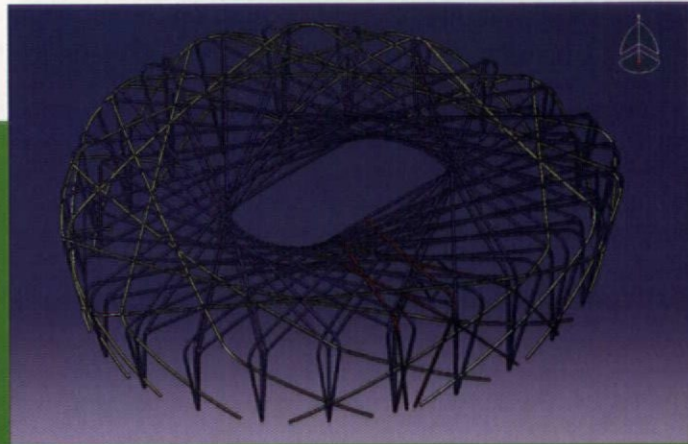
Right: stadium bowl in Olympic mode, with a 100,000-seat configuration. Note the saddle profile to the rear edge of the tier







The primary structure mapped on to the neutral surfaces



Isometric of the structural elements. Primary structure is shown in blue, stair secondaries in yellow, and secondary infill in red

form that mirrors the profile of the seating bowl contained within. The constraints of seating 100,000 people round an athletics track and field create an overall elliptical base, and it is this parameter that determines the plan form of the structure. In cross-section the majority of the spectators are contained on the long sides of the track; at the ends of the stadium the seating tiers are smaller. This profile ensures that all the spectators are within the same radius of view from the corners of the field.

From these constraints a set of neutral surfaces can be generated for the inner and outer elements of the roof structure.

The outer surface is constructed from three principal surfaces:

- a toroid patch for the roof surface;
- a conical ellipse for the facade surface; and

- a radiused fillet between the toroid and the cone.

Having defined this surface, the structural members can be projected from their plan geometry on to the three-dimensional surface. The members are classified into a number of different categories, which respect their function within the structure as a whole:

- the primary structure, consisting of a series of tangential trusses that intersect to create a three-dimensional space frame structure. This is the only element of the structure that extends out of the neutral surface plane, to create a 12m-deep truss;
- the stair-geometry, facade elements defined by the perimeter circulation stairs. These are mapped on to the elevation and then extended across the roof surface;
- the radial infill pattern;

- additional infill members.

Each member of the above groups is formed from a square steel box section. These sections twist and rotate as they cross the surfaces to ensure that the top flange of the member is parallel to the surface in all instances.

### Primary column

Once the base geometry has been created, the detail construction of principal components can begin. Illustrated overleaf is the detail at the top of the primary column where the trusses intersect. This is one of the major structural connections within the roof as it is the focus for the applied loads to be transferred from roof to foundation.

In addition to the digital studies, a rapid prototype of the model was also constructed.

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Left: isometric view of one of the 24 primary columns that support the roof and facade

Below: each of the spokes has a slightly different cross-section form, changing from a rectangular section at the near horizontal to a trapezoidal section at the vertical



## Facade elements

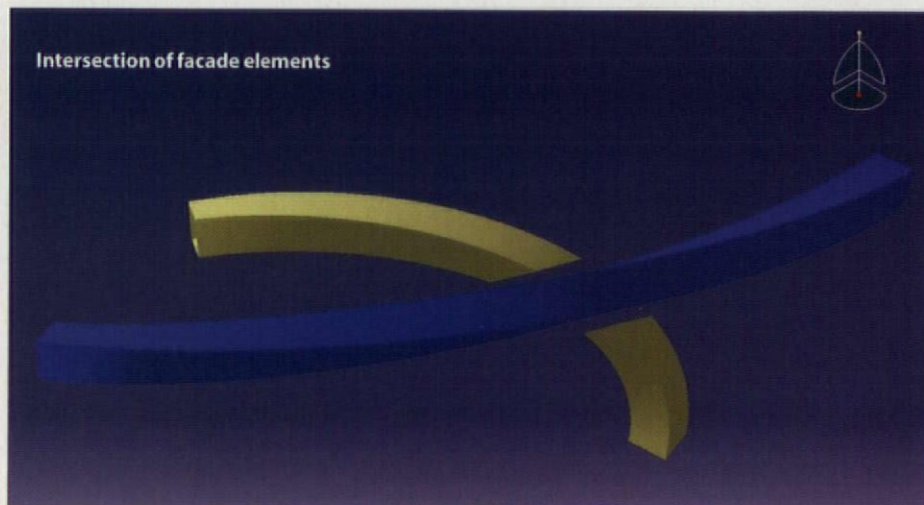
The elements that make up the facade are perhaps the most complex, as the section is required to twist to maintain its outer edge parallel to the facade.

## The full pattern

The implementation stage of this project has relied on a wide range of visualisation tools, from physical models to rapid prototypes and CAD visualisations. Without each of these studies, the exploration of the form and geometry may not have been fully resolvable.

A great deal of time was spent ensuring that geometric simplicity was maintained as well as being able to satisfy the required architectural aesthetic. The computer visualisations help constrain the geometric aspects of the members, while the physical modelling represents a tactile exploration of the potential results. This mixed-media approach allows all members of the team to participate in the creation of the stadium, and helps ensure that, as the design develops into the construction stage, the principles involved in describing the geometry can be passed logically from the designers to the constructors.

## Intersection of facade elements








Masterplan of the Beijing Olympics site showing Herzog & de Meuron and ArupSport's stadium alongside the Watercube, a \$152 million (£84 million) swimming complex by Sydney-based practice PTW. The cube – made from two layers of air-filled EFTE, held together in frames and set 3.5m apart – minimises the molecular structure of the foam bubble, while creating an ethereal, floating, practically translucent, building.

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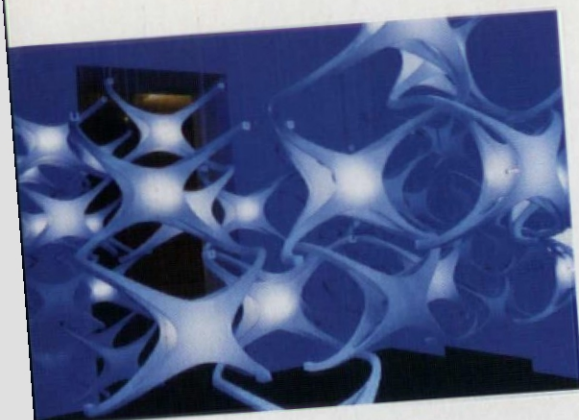

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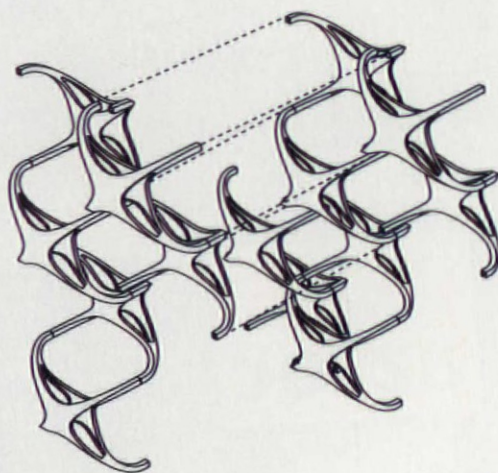
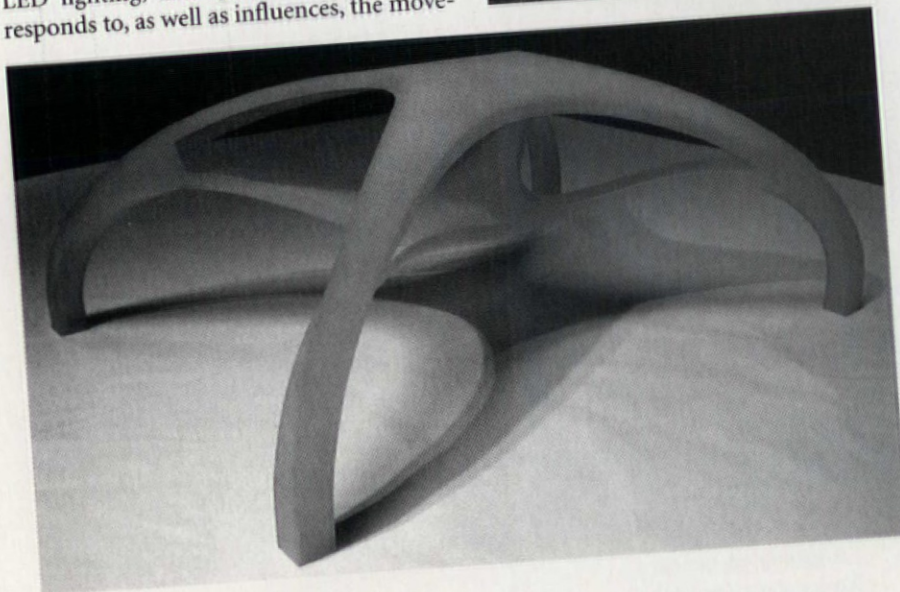
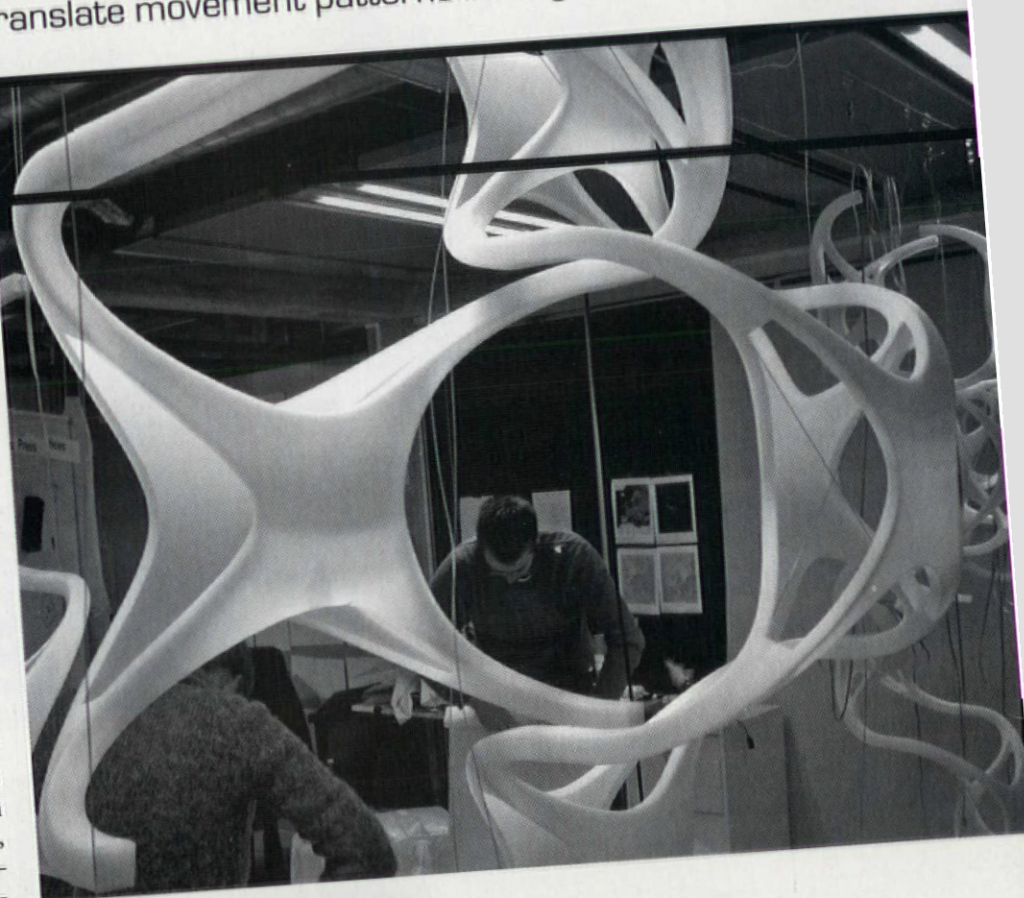
# Lattice Archipelogs

An installation by Servo in collaboration with Smart Studio/Interactive Institute uses spatial software to translate movement patterns into lighting formations

Right: assembly and suspension test of vacuum-cast cells. Below: the acrylic STL rapid prototype

*Lattice Archipelogs*, by Servo with Smart Studio/Interactive Institute, integrates new technologies and material systems in an architectural installation for the exhibition 'Latent Utopias' at the Landesmuseum Joanneum in Graz. The intention is not so much the static display of a material object, but the generation of new material through real-time interaction between the object and its users.

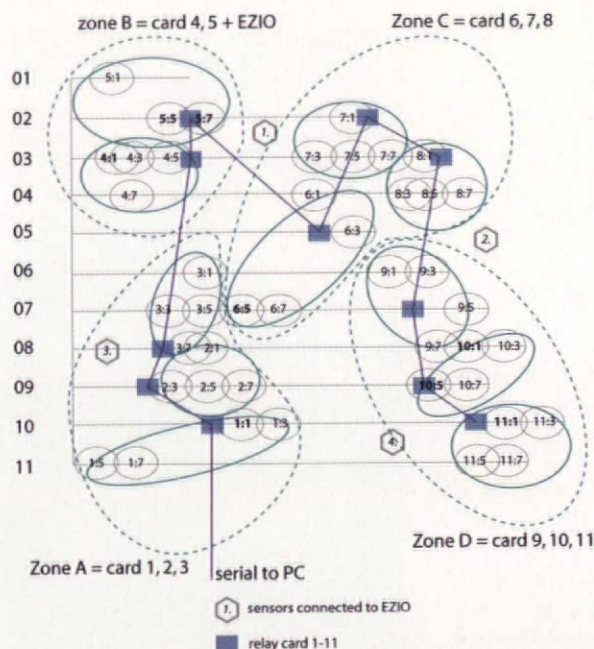
Integrating both physical and virtual infrastructures, *Lattice Archipelogs* functions less as a site for passive consumption and more as a dynamic spatial instrument of active production. Using the museum hallway as a corridor of circulatory exchange, it absorbs, processes, and ultimately performs the social and political interactions of visitors within the gallery itself. A suspended cellular archipelago of fabricated elements embedded with intelligent technologies – motion sensors, LED lighting, and speaker technologies – responds to, as well as influences, the move-



Cellular cluster showing interlocking assembly system

15 April 2004





Sensor/computation network diagram produced by Smart Studio/Interactive Institute

#### PRINCIPALS

David Erdman, Marcelyn Gow, Ulrika Karlsson, Chris Perry

#### DESIGN TEAM

Servo: Daniel Norell, Clare Olsen, Jonas Runberger; in collaboration with Smart Studio/Interactive Institute – design team: Ingvar Sjöberg, Tobi Schneider, Fredrik Petersson, Olof Bendt, Magnus Jonsson, Pablo Miranda/designers of the responsive field of lattice archipelogs. Vacuum casting and fabrication consulting provided by CARAN

#### THANKS TO:

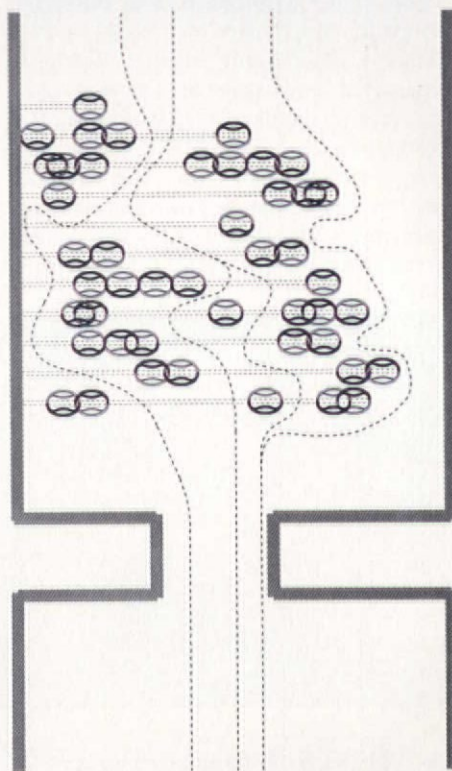
IASPIS (International Artists' Studio Program me in Sweden), KTH-Royal Institute of Technology, SSARK medialab, White arkitektur, and CARAN

ment patterns of its users. These movement patterns are then interpreted by software designed specifically to translate that information into a series of lighting formations, eventually distributing these formations throughout the lattice structure via an array of LED lighting elements. It is to this extent that the installation effectively indexes and materialises its users' activities by becoming an instrument of their individual and collective potential. The end result is as much the existing material system itself as it is the virtual inflection and transformation of that system by its users.

The spatial hardware of *Lattice Archipelogs* is a thick atmosphere of 102 vacuum-cast polyurethane cells. Through the numerical input of a 3D model, an acrylic STL rapid prototype provided a positive form for a negative soft silicon cast. The softness of the silicon cast, the possibility of peeling it off the positive form, made it recyclable for the fabrication of several vacuum-cast

polyurethane cells. In *Lattice Archipelogs* the cells interlock with a twin cell in the formation of the larger system. The cells are later staggered vertically in a pattern of self-counterbalance, and double as conduit for the distribution of various cables and wires specific to its structural suspension and programming systems.

The spatial software of *Lattice Archipelogs* is an intricate web of interactivity. Motion sensors track the movement of visitors through the installation, effectively allowing the system to observe or listen to the behaviour of its occupants. That information is then processed by software designed to translate these patterns into new ones. When left in its inert state, the algorithmic interface will sample from the catalogue of stored movement patterns to perform them iteratively. These newly generated patterns are then distributed through the system in the form of light, altering the spatial conditions of the installation.



Plan showing user circulation patterns

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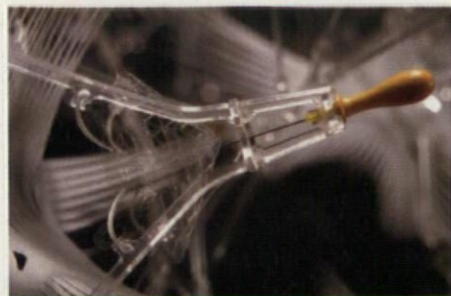
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*Orpheus Filter*, the latest in a series of reflexive membranes developed by Canadian architect Philip Beesley with artist and scientist Diane Willow, is an intricate structure that will give way to a living wall



## Orpheus Filter

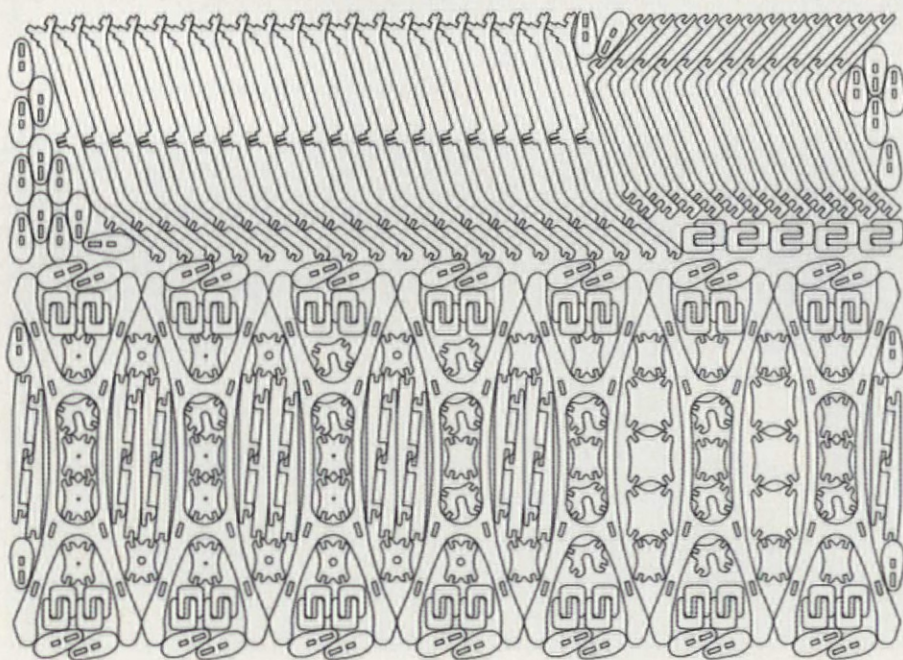
For the 'Digital Fabricators' exhibition, the Canadian architect Philip Beesley has produced a prototype building membrane. *Orpheus Filter* is conceived as an 'interactive geotextile' and is part of a series entitled 'Reflexive Membrane' being developed with artist and scientist Diane Willow. The fabric comprises a dense array of interlinking elements, making an intricate three-dimensional structure. It is equipped with layers of miniature valves and clamping mechanisms that slowly digest and convert surrounding material into a fertile living

wall. The array is organised in a cohesive structure using shifting patterns of non-repeating geometry. The project draws on Beesley's knowledge of industrial design and architectural textiles (honed at the University of Waterloo's Integrated Centre for Visualization, Design and Manufacturing) and on the expertise of Willow, who specialises in integrating flexible miniature computer components (microprocessors, sensors, actuators) at the MIT Media Lab.

The work aims to confirm the notion that textiles can react in a concrete and percepti-



Above: miniature valves and clamping mechanisms slowly digest and convert surrounding material into a fertile living wall  
Left: the fabric is organised using a shifting patterns of non-repeating geometry





# Streets of colour

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A dense array of interlinking elements, including valves and clamps, makes an intricate three-dimensional structure

ble manner. The actions in this project are subtle and occur over long stretches of time. Trembling vibrations and visual oscillation provide a general undercurrent. Osmotic action, which pulls moisture and floating matter through the pores of outer membranes, is created within intermeshing valves detailed into the meshwork surface of the installation. Clamping, injection and digestion functions would occur in reaction to the intrusion of larger organisms within the structure. These processes would encourage a living turf to accumulate, covering the lightweight matrix. The piece would eventually decay and be replaced by this growth.

Central to this reflection is the desire to harmonise artificial and natural processes, and to expose similarities in the act of creation in man and nature. The project seeks

to provoke intense emotional and psychological responses in visitors so that they question the boundaries between nature and artifice and examine their own organic condition as they interact with technology.

*Orpheus Filter* was produced by directly laser-cutting acrylic, latex and Mylar membranes from digital models. The tectonic assembly of the laser-cut parts forms an intrinsic part of the design of each component, reflecting the carefully considered craft of architecture by Philip Beesley.

In Beesley's practice, the 'Reflexive Membranes' project acts as a laboratory that directly informs architectural design. This can be seen in the design of his recent Niagara Credit Union, Ontario, where a high, light-filled hall uses a basketwork structure similar to the lattice systems originally conceived for the '...Membranes' project.

#### ARCHITECT

Philip Beesley, University of Waterloo

#### CONSULTANT

Diane Willow, MIT Media Lab

#### PROTOTYPING

University of Waterloo's Integrated Centre for Visualization, Design and Manufacturing

#### DESIGN ASSISTANTS

Will Elsworth, Alex Josephson, Luanna Lam, Thomas-Bernard Kenniff, Alex Lukachko, Vincent Hui, Kirsten Douglas

#### INSTALLATION

Collaboration with London Metropolitan University Department of Architecture and Spatial Design



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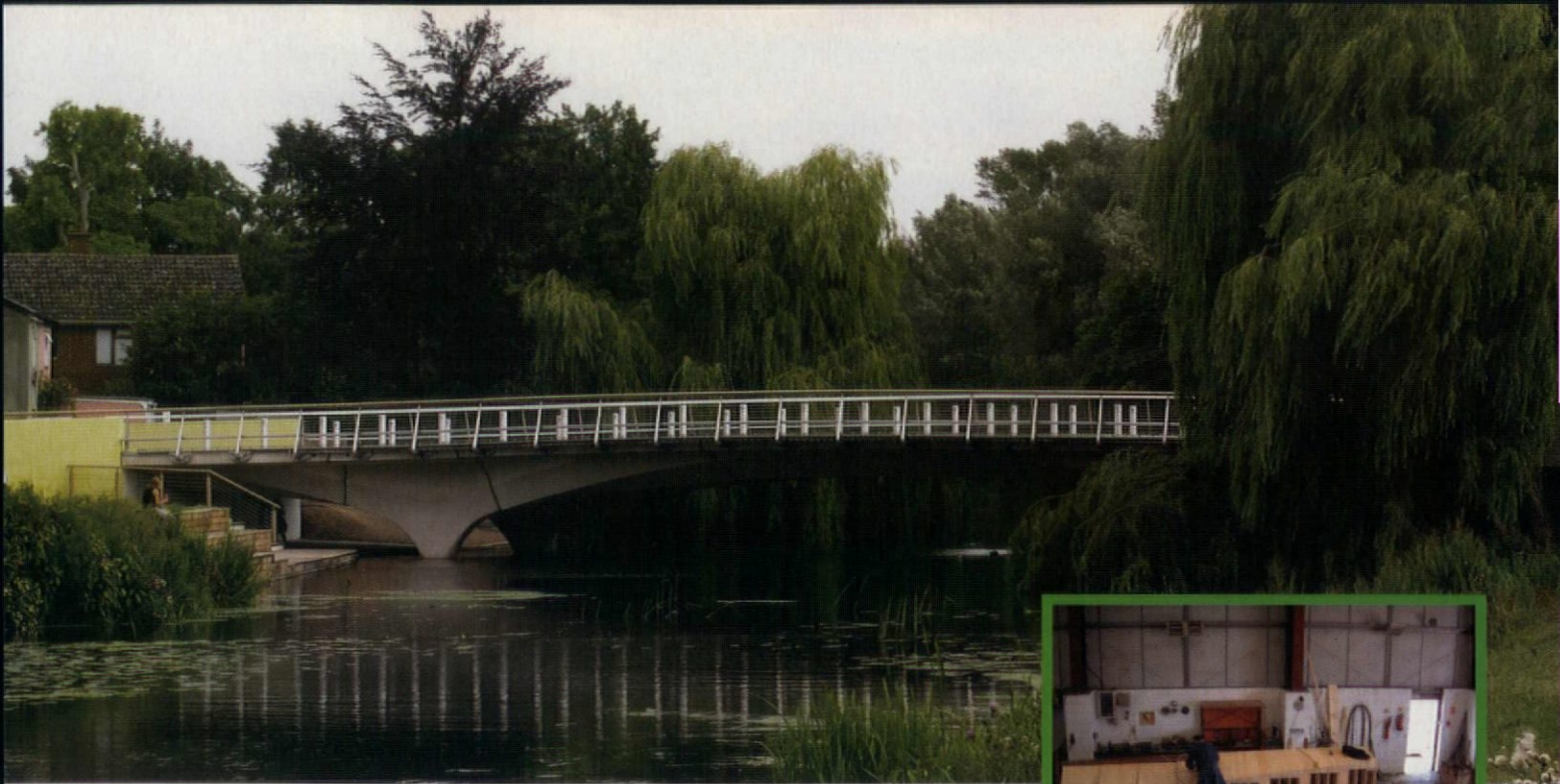
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## Ballingdon Bridge

Brookes Stacey Randall Architects used precast units crafted from digital geometry to construct an elegant road bridge over the River Stour

The new Ballingdon Bridge, designed by Brookes Stacey Randall and Arup, is an integral reinforced concrete structure that carries the A131 over the River Stour, replacing the existing bridge, which can no longer sustain 42-tonne articulated lorries. The setting is a wonderful combination of the water meadows that surround Sudbury and the listed buildings that form a conservation area, including the village of Ballingdon. There have been bridges on this site since the 12th century. The previous bridge, built in 1911, was not capable of sustaining heavy traffic and closure would have resulted in a 35-mile diversion.

The design of the new bridge is visually calm, respecting the historic context; however, the structure has a dynamically three-dimensional soffit. Designed using an evolutionary technique, the bridge has an every-change and site-specific geometry. The feet of the new bridge appear to touch the surface of the water lightly. The primary structure of the bridge is formed from precast concrete; the mix has been selected to match the local limestone of the Norman church. The precast units were manufactured by Buchan in timber moulds, which were beautifully crafted from Brookes Stacey Randall's

digital geometry. By careful study of the construction and phasing of the bridge, and extensive prefabrication, disruption to Ballingdon was minimised and two-way traffic on the bridge was maximised during reconstruction. The bridge was rebuilt in 18 months and has a design life of 120 years. Brookes Stacey Randall sought to uphold the rich architectural traditions and construction quality of Suffolk – Sudbury was the home of Gainsborough, and the landscape of the river Stour is Constable country.

The balustrade has been designed to be visually open so that the views of the landscape are as uninterrupted as possible. This 'P2 Low Containment' balustrade, in combination with the bollards, is capable of arresting a 42-tonne truck, yet appears to be an elegant pedestrian handrail. The traffic and pedestrian functions of the bridge have been safely separated, the pavement being protected by bollards that also house light fittings. The enlarged walkways create a generous provision for pedestrians to appreciate the views of the river and meadows. People enjoying the river and the urban spaces of Ballingdon and Sudbury are the priority within the design of this road bridge.



### PROJECT TEAM

Brookes Stacey Randall Architects: Michael Stacey (partner in charge), Laura Irving (project architect); Ove Arup and Partners: Ian Burton and Stuart Smith; Suffolk Highways Engineering Consultancy: Andy Bilby and Chris Graves; Equation Lighting Design: Helen Milligan and Alexis Themis

### CLIENT/SPONSOR

Suffolk County Council, Department of Environment and Transport.  
Nigel Burrows: bridge improvement and maintenance manager

### CONTRACTOR

Costain

### OTHER PARTICIPANTS

Suffolk County Council Planning Department, The Landscape Partnership, and the Environment Agency. Delivering the design has taken close collaboration and teamwork, facilitated by partnering

### PHOTOGRAPHY

By the design team including: Andy Bilby, Laura Irving and Michael Stacey



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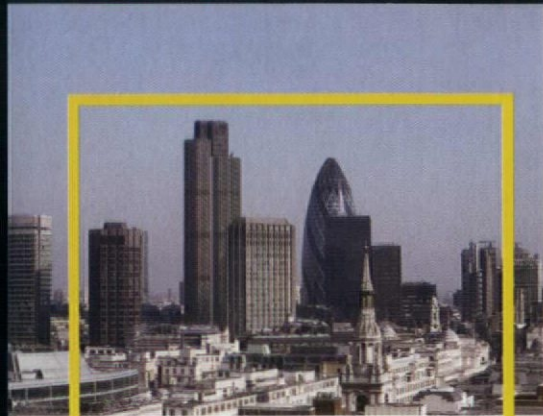
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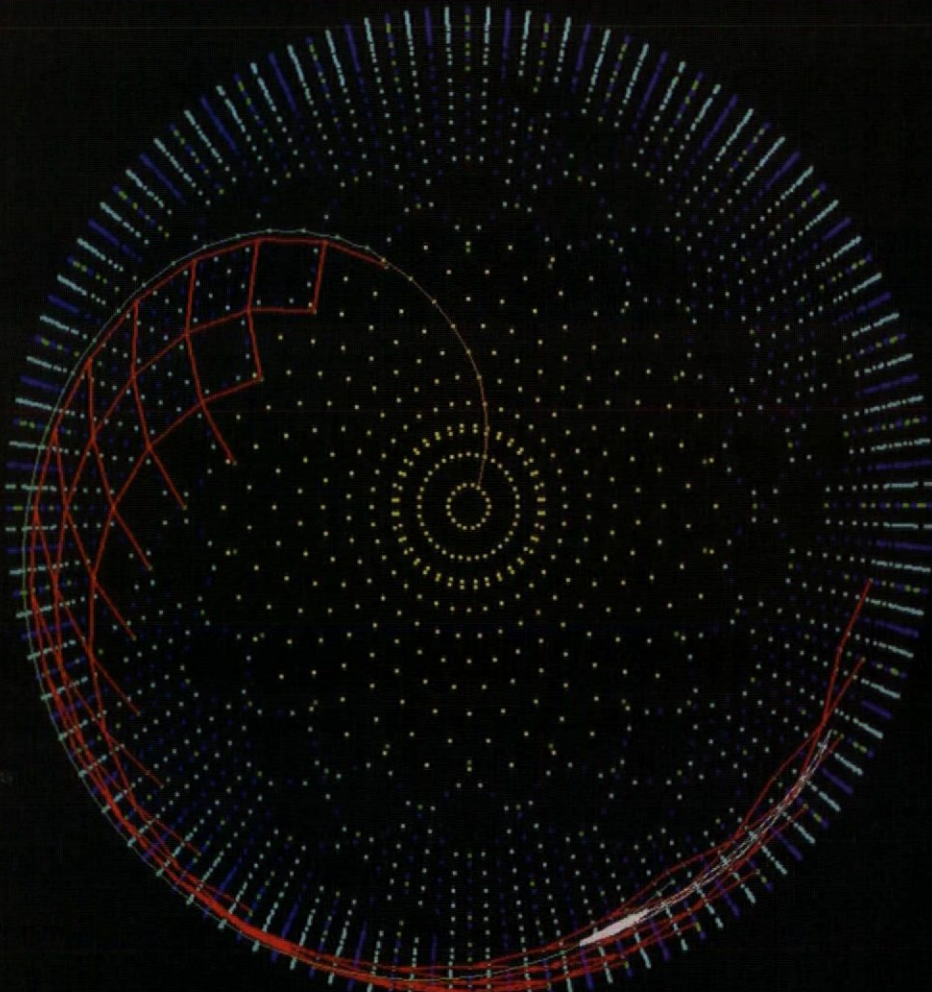
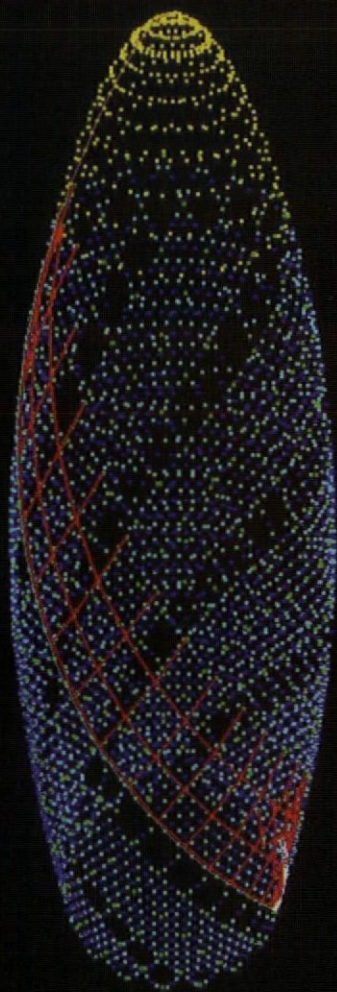
NEEL YOUNG

Foster and Partners' design for Swiss Re draws on advances in digital technologies to develop ideas first explored in the Climaoffice design with Buckminster Fuller in the early 1970s

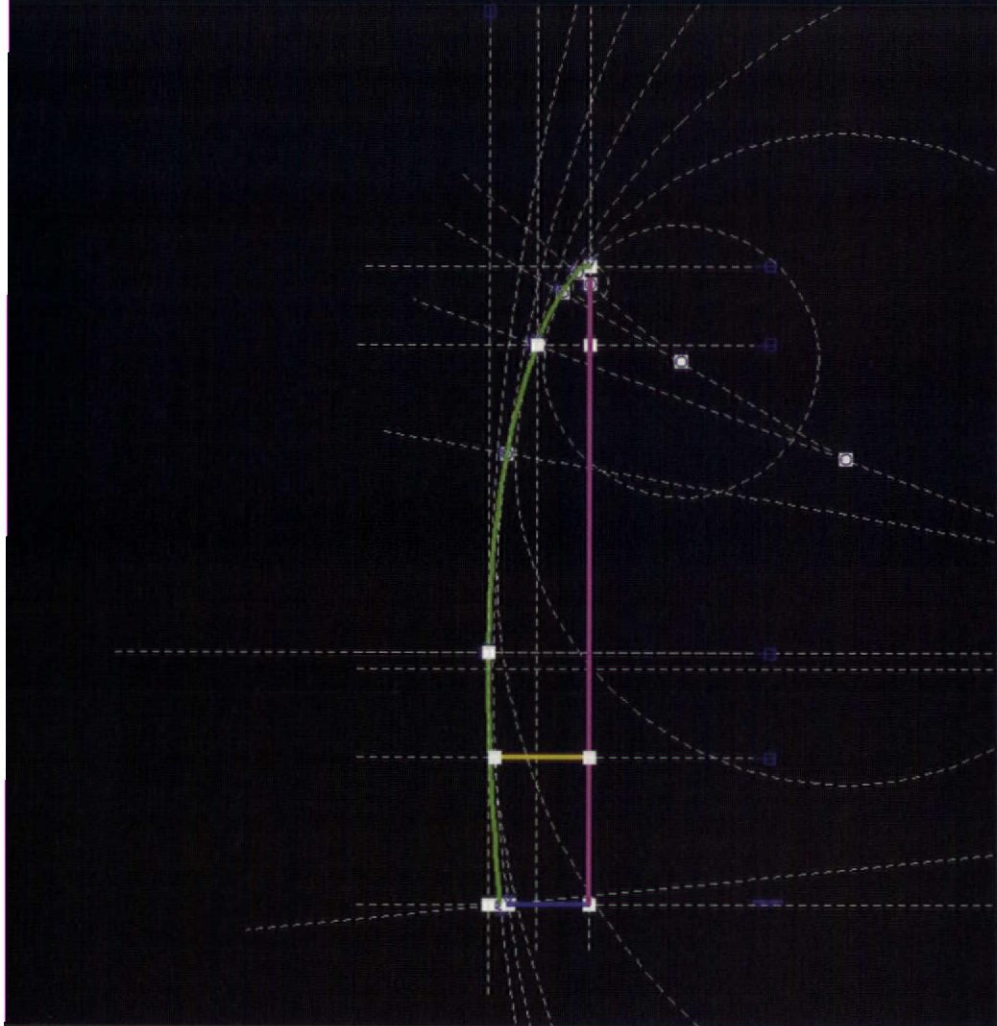
## Swiss Re

Swiss Re is on the site of the former Baltic Exchange in the City of London. The distinctive form of the 40-storey tower adds to the cluster of tall buildings that symbolise the heart of London's financial centre. It is the capital's first environmentally progressive tall building, and it is not only offices; its street level will be publicly accessible, with double-height retail outlets to serve the local working community, and the building is set within a new public plaza.

At the top of the building are dining and events facilities for the building's occupants and their guests. Beneath the glazed dome, a restaurant offers spectacular westerly views. The restaurant's mezzanine – a flexible space for drinks, gatherings or presentations – has a full 360° panorama over the city and beyond. The building is radical – technically, architecturally, socially, and spatially. Both from the outside and from within, it is unlike any office building so far conceived.







years later, digital technologies facilitate the design and construction of buildings such as Swiss Re in a fraction of the time it would have taken in the 1970s.

Parametric modelling, originally developed in the aerospace and automotive industries for designing complex curved forms, has had a fundamental effect on the design of the building. The three-dimensional computer modelling process works like a conventional numerical spreadsheet.

### Aerodynamic form

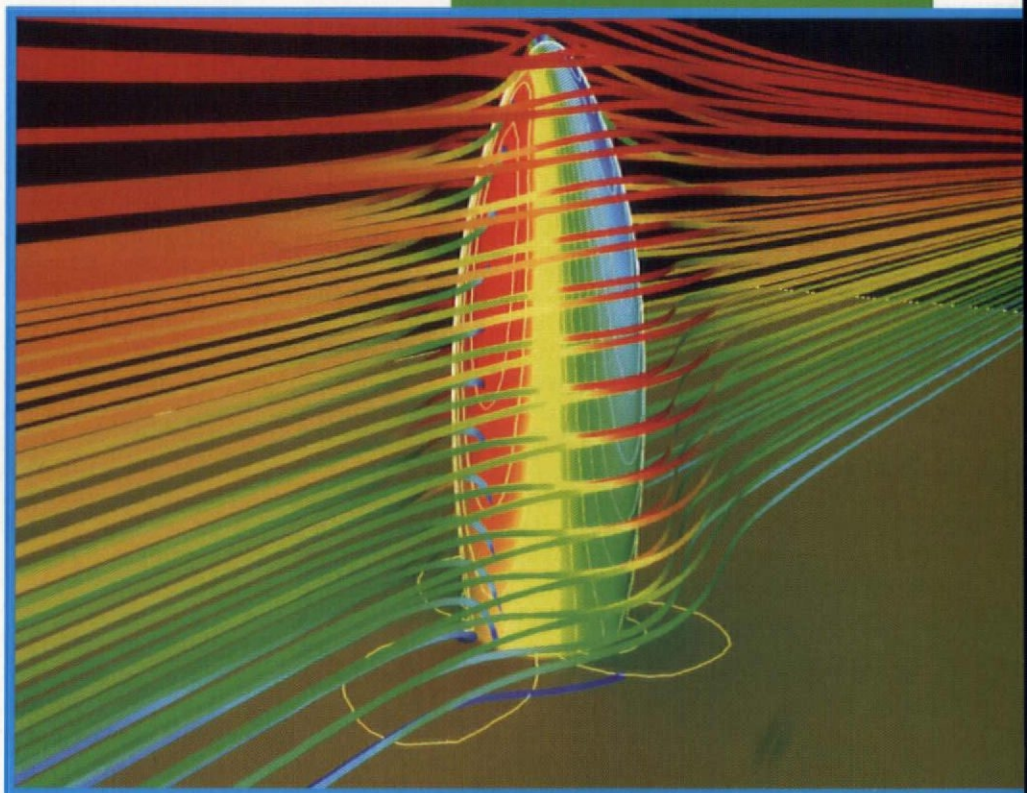
The tower has a circular plan that widens as it rises from the ground and then tapers towards its apex. This form responds to the specific demands of the small site. The building appears less bulky than a conventional rectangular block of equivalent floor area; the slimming of the building's profile at its base reduces reflections, improves transparency and increases daylight penetration at ground level. Mid-height, the floor plates offer larger areas of office accommodation; the tapering peak of the tower minimises the extent of reflected sky.

The aerodynamic form encourages wind to flow around its face, minimising wind loads on the structure and cladding, enabling the use of a more efficient structure. Wind deflection to ground level is reduced, helping to maintain pedestrian comfort and safety at the base of the building. Wind tunnel tests have shown that the building will improve wind conditions in the vicinity. Natural air movement around the building generates substantial pressure differences across its face, which can be used to facilitate natural ventilation within the building.

### Parametric modelling

Conceptually the project develops ideas first explored in the Climatroffice design with Buckminster Fuller in the early 1970s. That project envisioned office space enclosed within a free-form glass skin to create a building with its own microclimate. At the time its complex, double-curved geometry would have been difficult to build. Thirty

Above and opposite: parametric modelling allows curved surfaces to be rationalised into flat panels. Below: the aerodynamic form encourages wind to blow around the face





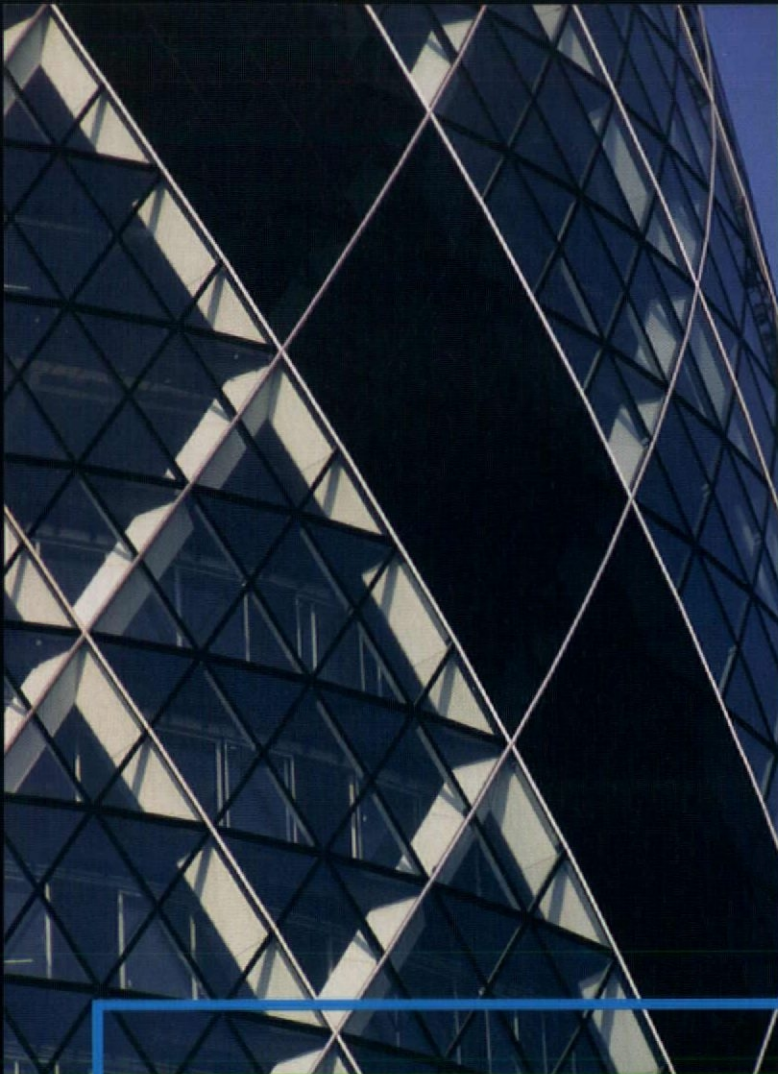


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**Glazing to the office areas comprises two layers of glass with a cavity ventilated by used air drawn from the offices**

materials, including natural stone, stainless steel and aluminium, are used throughout. Mature trees form an integral part of the public realm.

### Structure and cladding

The 180m-tall tower is supported by a highly efficient structure consisting of a central core and a perimeter diagrid – a grid of diagonally interlocking steel elements. Some traditional central-cored buildings of this height would use the core as a means of providing the necessary lateral structural stability. Because of the inherent stiffness of the external diagrid, the central core is required to act only as a load-bearing element and is free from diagonal bracing, producing more flexible floor plates.

The fully glazed skin of the building allows the occupants to enjoy increased external awareness and the benefits of daylight. The glazing of the office areas comprises two layers of glass with a cavity, which is ventilated by the used air drawn from the offices. This enables solar radiation to be intercepted before it reaches the office spaces to reduce the typically large air-conditioning load. The cladding of the lightwells consists of simple operable and fixed double-glazed panels, with tinted glass and a high-performance coating to reduce the penetration of solar radiation.

By storing the relationships between the various features of the design and treating these relationships like mathematical equations, it allows any element of the model to be changed and automatically regenerates the model in much the same way that a spreadsheet automatically recalculates any numerical changes. As such, it becomes a 'living' model – one that is constantly responsive to change – offering a degree of flexibility never previously available. The same technology also allows curved surfaces to be rationalised into flat panels, demystifying the structure and building components of highly complex geometric forms, allowing them to be built economically and efficiently.

### Spiralling lightwells

Swiss Re can use natural ventilation in addition to air conditioning, so that for up to 40 per cent of the year much of the mechanical cooling and ventilation supply systems can be supplemented, reducing energy consumption and carbon dioxide emissions. Fresh air may be drawn through lightwells, which spiral up the building, to ventilate the

offices naturally. The building's aerodynamic form generates pressure differentials on the facade that greatly assist this natural flow.

The lightwells maximise daylight penetration to the office accommodation and therefore reduce reliance on artificial lighting. They also help to break down the scale of the floor plates, while externally they add variety and life to its facades. The balconies on the edge of each lightwell have strong visual links between floors and provide a natural focus for communal office facilities such as refreshment points, copy centres, filing and impromptu meeting areas.

### Public space

If the building occupied the whole of its site it would leave very narrow streets at its edges. Instead, the building has a relatively small circular footprint, allowing the remaining space at ground level to be landscaped for public use, and improving the surrounding environment. A new plaza is contained within low stone walls, which define the historical site boundary and act as elements of street furniture. High-quality





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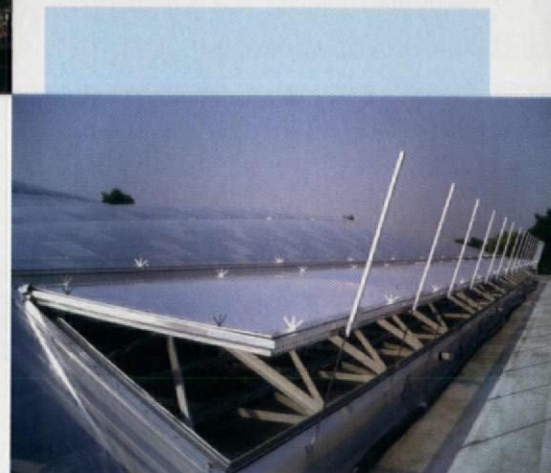




The roof allows for multiple uses to take place within a spectacular indoor/outdoor space

## Kingsdale School

The design team for the refurbishment of Kingsdale School used dynamic thermal-analysis software to explore the use of ventilation and light in the creation of a 3,200m<sup>2</sup> variable skin roof



Above: ETFE flaps in the clerestory provide passive ventilation at high level. Left: the ETFE Texlon variable skin roof will be the largest of its type in the world

The Kingsdale School project, a £10 million Architecture Foundation/Schoolworks and DfES-backed (Department for Education and Skills) initiative to demonstrate whether quality architecture improves school standards, is well advanced on site in Dulwich, south-east London. The roof allows for various uses – including circulation, dining, assembly, auditorium and library – within a spectacular 3,200m<sup>2</sup> indoor/outdoor space. De Rijke Marsh Morgan Architects (dRMM), working with Mike Hadi Associates, Vector Special Projects and Fulcrum Consulting, designed the 40 x 80m ETFE Texlon variable skin roof – the first in the UK and the largest in the world. A technical tour de force, it represents Buckminster Fuller's ambition of a climatic envelope realised in a material he could only dream of.

The opportunities of the variable skin option, including integrated passive/through ventilation and light levels, were explored using dynamic thermal-analysis software.

Ventilation is via doors and motorised dampers at ground-floor level, and by ETFE flaps in the clerestory. Summertime overheating within the surrounding classrooms will be reduced considerably thanks to the

shading provided by the new roof, and in winter fresh-air ventilation will be increased thanks to the manually openable windows that face into the sheltered courtyard space. The insulating buffer zone of the 'climatic envelope' generates a subsequent net energy saving to the existing building.


dRMM designed the distinctive solar shading pattern on Op Art principles, developing a dynamic three-dimensional solar control principle, offering extraordinary qualities of light; the brief called for 55 per cent solar shading generally and 95 per cent during the warmer season where temperatures were analysed as peaking around 35°C.

The amount of air to the two cells within the cushions can be altered either automatically by sensors or manually by teachers. By splitting the 23 cushions into three separate zones, another layer of flexibility was achieved, allowing for incremental alteration of the daylight within the space – say for a theatrical performance. The main roof can alter from light to dark within 30 to 45 minutes.

A span to weight ratio of approximately 30kg/m<sup>2</sup> made it possible to superimpose the structure straight on to the existing flat roof with no foundation requirements.

**ARCHITECT**  
de Rijke Marsh Morgan Architects  
**STRUCTURAL ENGINEER**  
Michael Hadi Associates  
**SERVICE ENGINEER**  
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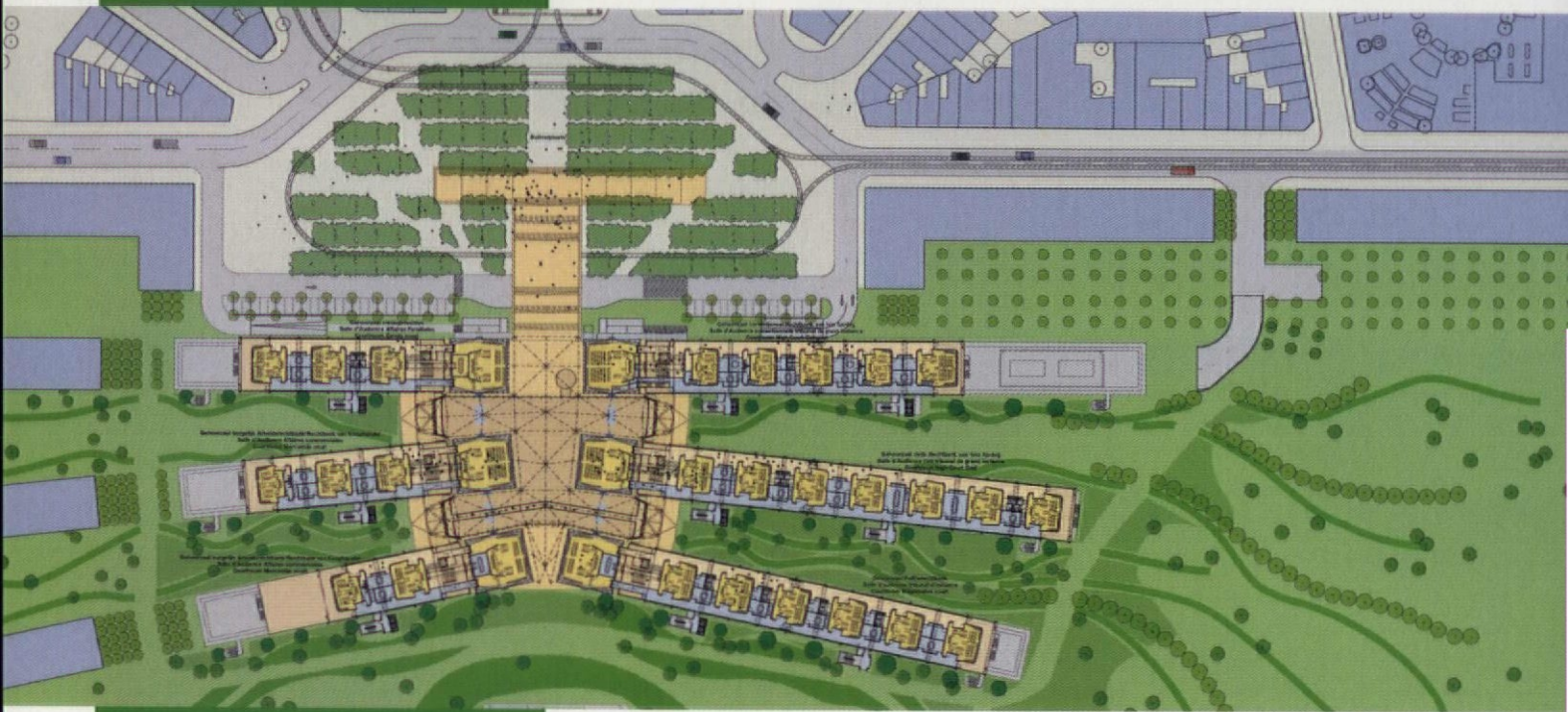


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# Antwerp

Richard Rogers Partnership's design for the new law courts in Antwerp elegantly demonstrates the progression from digital representation to digital fabrication including large-scale off-site manufacture



The new law courts complex for the Flemish city of Antwerp is one of Richard Rogers Partnership's (RRP) major public buildings of the early 21st century. Like many projects by the practice, it reflects a vision of the city as a humane and inhabitable democratic place and represents a commitment to the regeneration of urban life.

The site for the law courts is at the Bolivarplaats, on the southern edge of Antwerp's central area, where the urban fabric is broken by a massive motorway interchange, cutting off the boulevard that leads into the city. The new building is one of the catalysts for RRP's long-term masterplan of 'the new south' of the city, currently in progress.

The courts building, designed in conjunction with Belgian co-architect VK Group and Arup, is conceived both as a gateway to the city and as providing a link across the motorway between the city centre and the Schelde river. It houses eight distinct civil and criminal courts and includes 36 courtrooms plus offices, chambers for judges and

lawyers, library and dining room, and a great public hall – the 'Salle des Pas Perdus' – linking six radiating wings of office accommodation. This space is capped by a striking, crystalline roof structure. The courtrooms are placed on top of the office wings and are crowned with hyperbolic paraboloid roof forms.

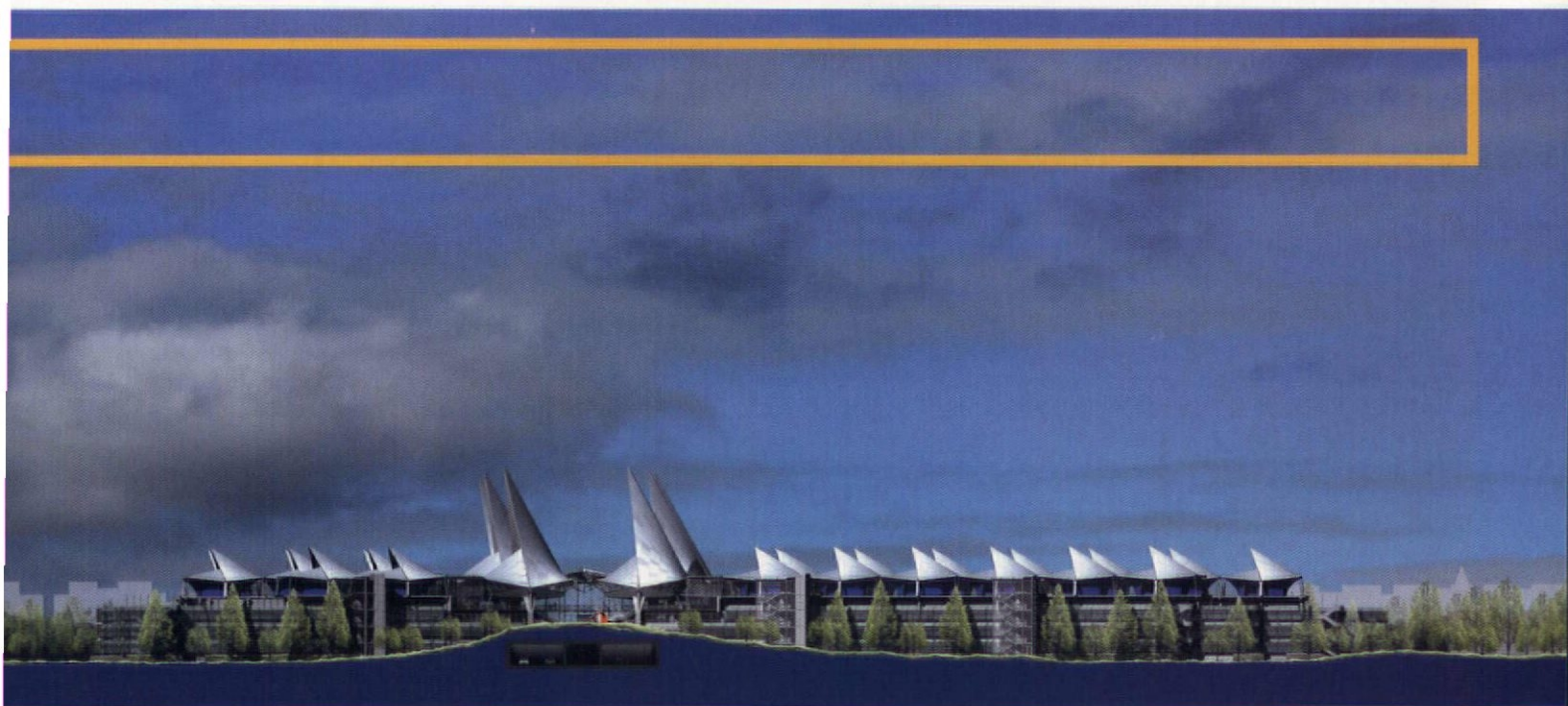
A low-energy services strategy is fundamental to this project – natural light is used to optimum effect, reducing reliance on artificial lighting. External solar shading to the office facades controls the solar gain. Opening windows provide natural ventilation to the offices, supplemented by low-velocity ventilation for the hearing rooms. Rainwater is recycled.

The building, straddling a major highway, looks out to a large area of parkland and is designed to create 'fingers' of landscaped parkland, which extend right into the heart of the building. The landscape is configured and planted to shield the building from the noise and pollution of the motorway.



### Courtroom roofs

Arup modelled the roofs in ACAD 3D, importing the centreline geometry and sections sizes from OASIS GSA, which is the Arup in-house structural analysis package. Each courtroom roof is composed of four geometric hyperbolic paraboloid (HP) forms. In simple terms, the HP is a double-curved surface: on plan it consists of a simple rectangular grid with the corners pulled up (or down) to create a double curve. On each courtroom roof, two HP forms are 'pulled' higher and cantilevered over the two lower ones, creating a gap in-between, which in turn is glazed to maximise the natural light coming into the courtrooms. These rooflights face northwards, with the overhangs providing solar shading against the high-altitude sun. The four roof sections are seen as individual, identifiable components and are further separated by strip rooflights between each of the two higher and lower roof elements.



Each of the courtroom roofs is composed of four geometric hyperbolic paraboloid forms, two of which cantilever over the lower ones, creating a gap to accommodate glazing





The roof construction was assembled in a shipyard a few kilometres upriver from the site

The initial design of the HP forms consisted of a perimeter steel tubular frame containing short sections of prefabricated laminated timber beams connected at the nodes to form the double-curved grid. This grid of beams in turn was covered with LVL ketro plywood to form the outer structural skin of the roof.

Following detailed discussions with the timber contractor, Merk, a new solution emerged, consisting of grid beams laminated in full lengths with each layer. This arrangement was built up progressively by screwing together long lengths of timber and connecting these to the perimeter tubular steelwork. The new simplified solution obviated the necessity for the original timber-to-timber connections, allowing the long timber-strip construction to follow accurately the geometry of the HP form. The original LVL ketro plywood shell was replaced by similarly long lengths of timber forming the outer structural skin of the roof.

The whole of the roof construction was assembled in a large shipyard a few kilometres upriver from the site. The work areas were set out as a production line to deal with welding, painting, timber gridshell assembly and roofing. Given the number of roofs that had to be assembled (32), working under cover ensured quality control of the end product.

Several contractors worked together. Partially prepared materials were delivered to the shipyard and assembled in an efficient manner – the first complete roof emerged in under four weeks. Thereafter, one complete roof (four sections) was being delivered to site every week.

The prepared tubular steel members for each of the HP forms were transported from the steel contractor and then welded together to form the HP's perimeter frame. These frames were then moved into a giant spray booth, where they were prepared and painted.

The frames were then moved to the next work area, where they were set on to a timber jig reflecting the double-curved surface. The

timber contractor assembled the grid beams, which were built up layer by layer on the jig, making connections to the steel perimeter frame. After the required number of layers had been built up, the shell of the structure, consisting of similar strips of timber running at 45° to the grid beams, was assembled to form a continuous top surface.

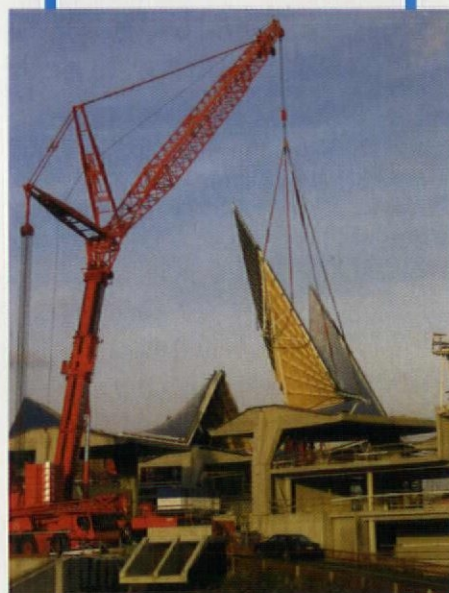
The roof sections were then moved to the next work area, where the roofing contractor installed the vapour barriers, insulation and the stainless-steel, fully welded, standing-seam roofs. The cantilevers and all edges not requiring site interface were completed. Roof edges requiring later site interface were prepared and left ready to 'zip up' on site.

The complete sections of the roofs were transported along the river by barge, completing their journey on the back of a wide-loader across the fields, finally arriving on site where they were craned into position.

### Solar-shading brackets

Office accommodation is organised into six radiating wings on three levels. Offices are naturally ventilated, with external solar shading. This shading consists of 2.8m-long fritted glass louvres fixed to a carrier system, with access walkways cantilevered from the facade line at 1.4m centres. The brackets, which hold the glass at the predefined angle and pitch, were initially designed to be part casting and part profiled cut plate. The louvres were intended to be 'held' at the ends by the brackets, obviating the need for holes in the glass.

The cladding contractor, Permasteelisa, proposed to cast the whole bracket in stainless steel for strength and corrosion purposes, which required RRP to revise the design to streamline it for the casting process. The design was developed from the initial sketches, through to CAD drawings; a full-size rapid prototype was then made and subsequently adjusted and refined by RRP. The casting of the support brackets was eventually outsourced to a foundry in mainland China.



Complete sections of the roofs were transported by barge (top) and craned into position (above)

### DESIGN TEAM

RVA Joint Venture (Richard Rogers Partnerships/VK Group/Arup)

### CLIENT

Regie der Gebouwen

### PROMOTER

Interbuild

### CLADDING CONTRACTOR

Permasteelisa; thv Gevelcombinatie Antwerpen

### STEELWORK CONTRACTOR

Lemants

### TIMBER CONTRACTOR

Merk

### ROOFING CONTRACTOR

ME Construct





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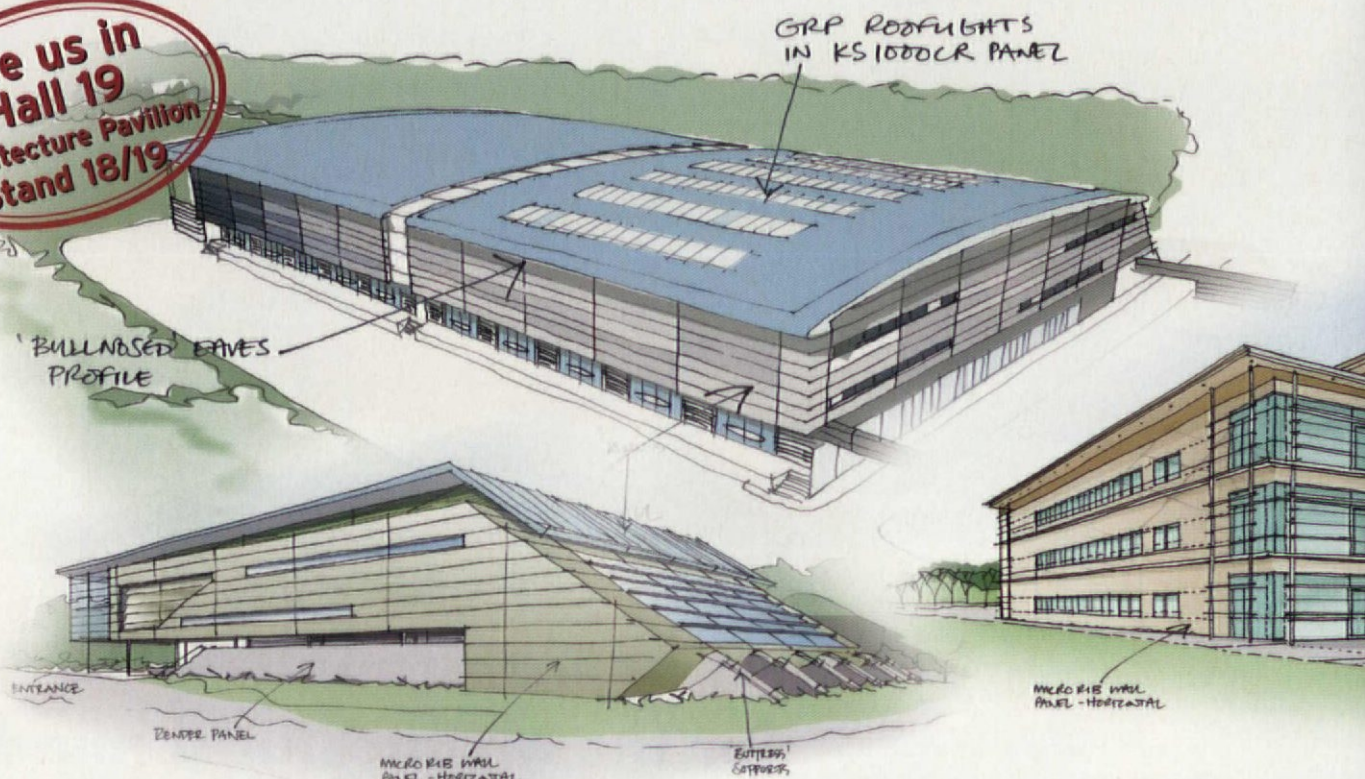
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# Kingspan at Int

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Architecture Pavilion  
Stand 18/19



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# Interbuild 25-29 April 2004

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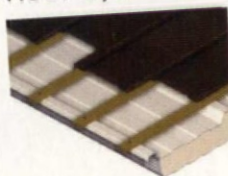
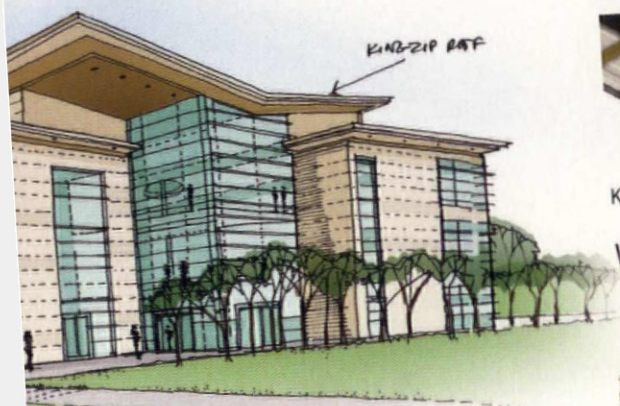
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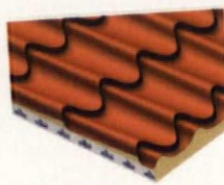
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[www.kingspanpanels.com](http://www.kingspanpanels.com)

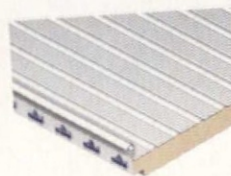
### Roof Systems



KS1000 TS



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KS500/1000 Kingzip

### Wall & Facade Systems



KS1000 Optimo



KS1000 MM



KS1000 CX



KS1000 WV



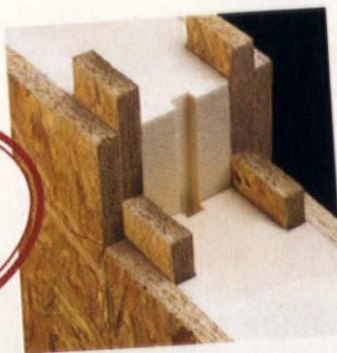
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For further information, please contact:

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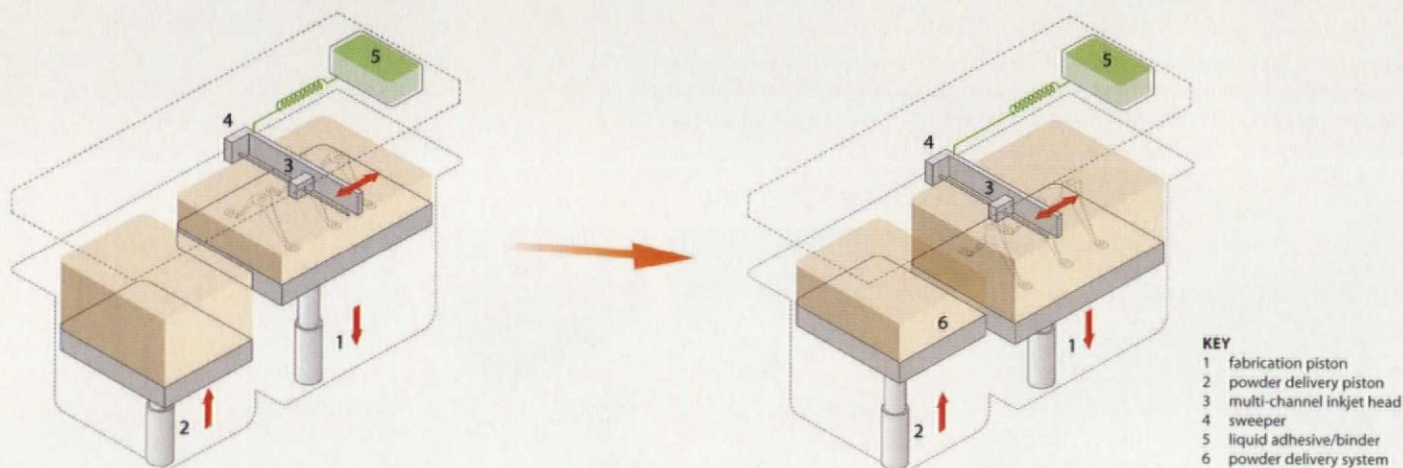
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# Rapid prototyping

The exhibition 'Digital Fabricators' includes a review of current rapid prototyping technologies. Rapid prototyping is the creation of physical objects from three-dimensional computer models



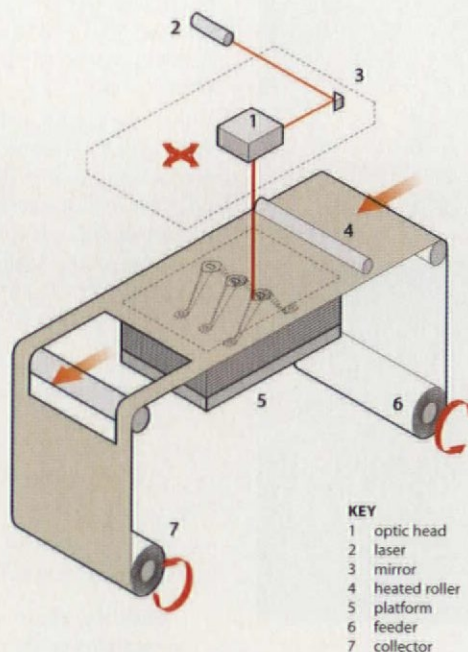
## Three-dimensional physical printing (3DP)

In 3DP, the part is built up in a bin fitted with a piston to lower the part incrementally. Powder (such as alumina) is dispensed from a hopper above, and a roller is used to spread and level the powder. An ink-jet printing head scans the powder surface and selectively injects a binder (such as colloidal

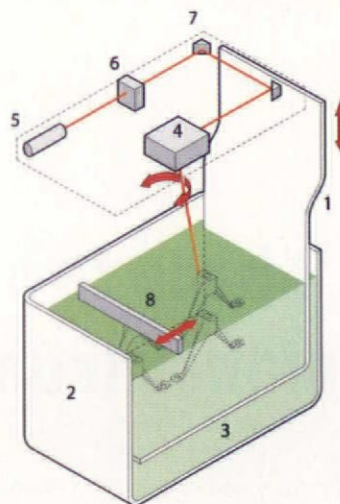
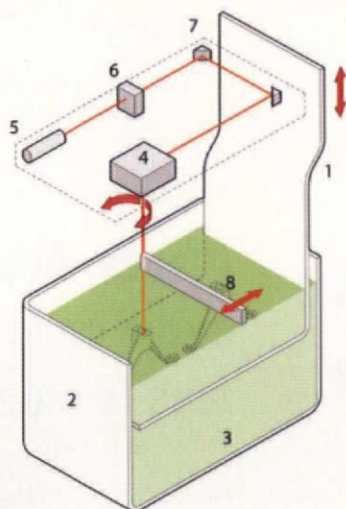
silica) into the powder. The binder joins the powder together into those areas defined by the geometry of the cross-section. The unbound powder becomes the support material. When the shape is completely built up, the part is removed from the unbound powder. Three-dimensional physical printing is used directly to form moulds for metal-cast components.

## Laminated object modelling (LOM)

This is a lamination method that was developed and commercialised by Helisys Corporation (US). LOM builds shapes with layers of paper or plastic. The laminates, which have a thermally activated adhesive, are glued to the previous layer with a heated roller. A laser cuts the outline of the part cross-section for each layer. The laser then scribes the remaining material in each layer into a cross-hatch pattern of small squares, and as the process repeats, the cross-hatches build up into a removable structure supporting the component. The cross-hatching facilitates removal of this tiled structure when the part is completed. LOM builds up large parts relatively rapidly because only contours need to be scanned,







- KEY**
- 1 elevator
  - 2 tank
  - 3 liquid polymer
  - 4 beam delivery
  - 5 laser
  - 6 lenses
  - 7 mirror
  - 8 sweeper

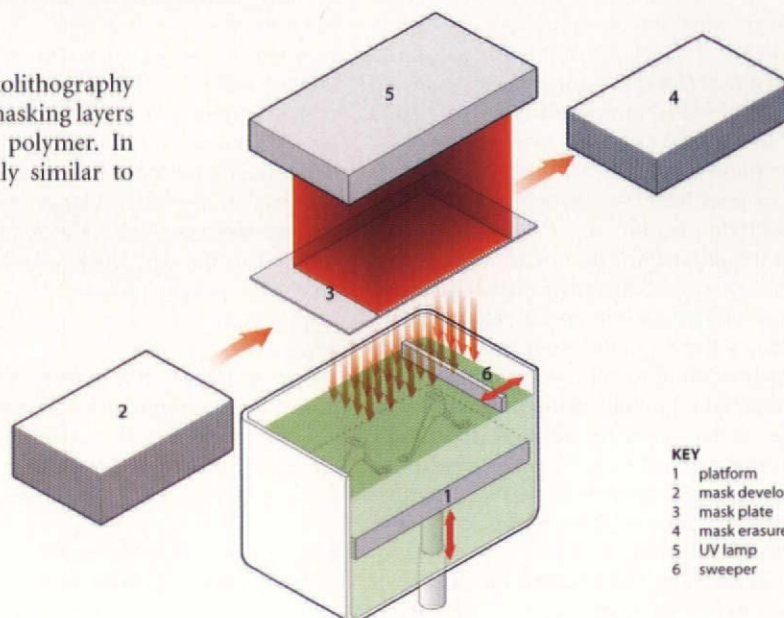
### Photolithography including stereolithography

Photolithography systems build shapes using light to selectively solidify photocurable resins. There are two basic approaches: laser photolithography and photomasking. The laser photolithography approach, which is currently the most widely used solid free-form rapid prototyping technology, was first commercialised by the US company 3D Systems in 1988. Not only was 3D Systems the first company to successfully commercialise the stereolithography process, but the company must also be credited with both popularising rapid prototyping and establishing a marketplace for rapid prototyping technologies.

Laser stereolithography creates acrylic or epoxy parts directly from a vat of liquid photocurable polymer by selectively solidifying the polymer with a scanning laser beam. Parts are built up on an elevator platform that incrementally lowers the part into the vat by the distance of the layer thickness. To build each layer, a laser beam is guided across the surface (by servo-controlled galvanometer mirrors, for example), drawing a cross-sectional pattern in the x-y plane to form a solid section. The platform is then lowered into the vat and the next layer is drawn and adhered to the previous layer. These steps are repeated, layer by layer, until the complete part is built up.

### Photomasking

This is a distinct form of photolithography that uses ultraviolet light and masking layers to selectively cure the liquid polymer. In other respects it is intrinsically similar to laser stereolithography.



- KEY**
- 1 platform
  - 2 mask development
  - 3 mask plate
  - 4 mask erasure
  - 5 UV lamp
  - 6 sweeper





## You don't have to handle cash to breach money laundering regs

The government made many businesses into tax collectors on 1 April 1973 when it introduced VAT, much to the surprise of a friend of mine who cheerfully informed the man from Customs and Excise that she 'didn't want to join'. The new money laundering regulations, which came into effect last month, have now turned many businesses into policemen too. Traditionally we all think of money laundering as being something that banks need to worry about, but that responsibility is now cast much wider.

Money laundering is the processing of the proceeds of crime so that they appear to come from a legitimate source. It is illegal. As the authorities battle with terrorism and organised crime, the pressure on them to intercept illegal funds is increasing. The new regulations implement the Second European Money Laundering Directive, which recognises the increased need for effective vigilance. It is against this background that greater obligations have now been placed on many businesses.

The regulations are directed at activities rather than specific professionals, and are not confined to those who actually handle

others' cash. For example, the regulations cover those of us who provide 'legal services' (rather than lawyers). This will be of interest to arbitrators and adjudicators who, in issuing an award for the payment of money, are arguably engaged in 'the provision... of legal services... which involves participation in a financial... transaction (...by assisting in the planning or execution of any such transaction...)'.

While the regulations do not appear to catch architects going about their usual business, including certifying, it is important to appreciate how broadly the regulations are drawn, and to consider from time to time whether any additional activities might fall within their ambit. For example, estate agency work is specifically covered, as is providing services in relation to the operation or management of trusts or companies. For the purposes of the regulations, these are all 'relevant businesses'.

So what do those carrying out relevant business have to do? In short, they have to find out who they are really dealing with, and blow the

whistle if they have any doubts. If a proposed one-off transaction is for more than €15,000 (£10,000), or the establishment of an ongoing business relationship is in prospect, they need to get identification from their 'applicant for business' as soon as reasonably practicable. If it is not forthcoming, matters must not proceed.

Relevant business providers have to establish internal control procedures, make their employees aware of the regulations and give them appropriate training, and maintain suitable identification procedures. There are also record-keeping requirements that cover both identification and details of transactions. If they know or suspect, or have reasonable grounds for knowing or suspecting, that money laundering may be afoot, that has to be reported to the authorities.

Failure to comply is an offence, which includes failure to maintain identification procedures, train staff, keep records and operate appropriate internal reporting procedures.

This begs the question as to what an arbitrator or adjudicator should do and, in particular, when. Where identification is required, it has to be obtained as soon as is reasonably practicable after the relevant business provider (the arbitrator/adjudicator) makes contact with the applicant for business (the party). But the nature of the dispute business is such that the tribunal does not know at the outset who may be ordered at the end of the day to pay what. The regulations offer no help here.

However, useful guidance from the Law Society (and much helpful information about the regulations besides, albeit aimed at solicitors<sup>1</sup>) suggests nothing prevents information being sought at an early stage, even if it may not prove necessary.

Even if you are not in the dispute business, remember the regulations are there, what they are aimed at, and reflect from time to time whether you need to look at them more closely<sup>2</sup>.

Sue Lindsey

1 This guidance can be found on the Law Society's website at [www.lawsociety.org.uk](http://www.lawsociety.org.uk)

2 The regulations can be found at [www.legislation.hms.gov.uk](http://www.legislation.hms.gov.uk)

## Plants, Apples and a case of less is more

You couldn't not take a look at a site which is announced in a one line email 'cutting hedge design' ([www.floragardens.co.uk](http://www.floragardens.co.uk)). Less is surely more. This is the site of Jon Vincent and it is organised with accessible simplicity. There is no hanging around while it opens to reveal a left-hand column with a list of topics. Click on one of them and a second darker green column offers the sub-sections. When you click on one of these an image or some text appears in the fat white column on the right. One amusing touch is the 'palette of plants' section where you click on a botanical name and up pops an image of the plant. Here you discover what *trachelospermum*, *chamaerops* and *elaegnis* all look like – though not how to pronounce them.

You wonder if Vincent works with a rather restricted palette of plants because there are only 18 of these names and thumbnails. Another negative is Vincent's sketching skills: definitely limited. He also runs a shop – well, more accurately, he has three items: a 5m-long by 1,500mm-wide by 500mm-high hedge at £3,000; balled-root *taxus baccata* at £30; and the PVC injection-moulded jelly beret, 'ideal for stylish all-weather gardening and outdoor posing' at £60. A case of more being less.

Along with every PC user, this column has long endured the insufferable patronising of Macites – never mind the melting hard drives of the fanless Cube or the crap batteries of at least one marque of the iPod. So it is with a certain smugness that I report difficulties one reader had with upgrading to OS X 10.3 from OS 9.0. The helpline (in nearby India) said to zap the PRAM (presumably some sort of memory). Which our reader did. Only to discover that this is fatal on a Mac with out-of-date firmware, 'whatever that is', he writes. A committed Mac hierophant, he hadn't the faintest idea what went on inside the limpidly elegant plastic casing and it was only his natural bolshiness that persuaded a terrified Apple to stump up for repairs.

[sutherland.lyall@btinternet.com](mailto:sutherland.lyall@btinternet.com)



PROJECT HIGHLIGHTS



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## London

**AJ Small Projects Award** *Until 24 April.* An exhibition at the RIBA, 66 Portland Place, W1. Details 020 7580 5533.

**Anne Lacaton: A Place to Live** *Monday 26 April, 18.30.* A lecture at the Royal Academy, Piccadilly, W1. Tickets 020 7300 5839.

**Craig Ellwood** *Tuesday 27 April, 19.00.* A Docomomo lecture by Neil Jackson at the Building Centre, 26 Store St, WC1. Details: events@buildingcentre.org

**Lucy Orta: Selected Works** *Until 30 April.* An exhibition at the RIBA, 66 Portland Place, W1 (020 7580 5533).

**Women in the Workplace 1860-2004** *Until 1 May.* An exhibition at the Women's Library, LNU, Old Castle St, E1. Details 020 7320 2222.

**From Functionalism to the Future: C F Møller Architects** *Until 10 May.* An exhibition at the RIBA, 66 Portland Place, W1. Details 020 7580 5533.

**Lesley Foxcroft** *Until 15 May.* An exhibition at Annely Juda Fine Art, 23 Dering St, W1. Details 020 7629 7578.

**Antoni Malinowski** *Until 22 May.* Paintings by an artist known for his architectural collaborations. At Gimpel Fils, 30 Davies St, W1. Details 020 7493 2488.

**Archigram** *Until 4 July.* An exhibition at the Design Museum, Shad Thames, SE1. Details 0870 833 9955.

## East

**Timber Frame Repairs** *5-7 May.* A three-day course at Cressing Temple, Essex. Details Pauline Hudspeth 01245 437672.

**Attila Csorgo** *Until 9 May.* An art-meets-science exhibition at Kettle's Yard, Castle St, Cambridge. Details 01223 352124.

**Architects' Legal Update Conference** *18-19 May.* A Workplace Law Training course at Cambridge. Details 0870 777 8881.

## East Midlands

**RIBA CPD Event: Towards a Sustainable Architecture** *Wednesday 21 April, 14.00.* A half-day seminar at Nottingham. Details 0115 941 3650.

**The Possibilities of Architecture: Archigram 1961-1974** *Until 26 April.* An exhibition (and some related events) at Nottingham Castle. Details 0115 915 3648.

## North West

**RIBA CPD Event: Party Walls Revisited** *Wednesday 21 April, 10.00.* A half-day seminar at the Civic Centre, Knutsford. Details 01565 652927.

**Richard Saxon** *Thursday 29 April, 19.30.* A lecture at St George's Church,



## GONE TO PIECES

The many possibilities of collage are explored in an exhibition at Bloomberg Space, 50 Finsbury Square, London EC2, until 8 May. There are works by more than 100 artists, including Kurt Schwitters, Robert Rauschenberg and Angus Fairhurst (above). Details 020 7330 7959 (gallery@bloomberg.net).

Friargate, Preston. Details Doug Chadwick 01254 59835.

**Eric Parry** *Thursday 6 May, 19.30.* A lecture at the Grosvenor Museum, Grosvenor St, Chester. Details Mark Kyffin 0161 236 5667.

**Architecture and Ideology; Best Studio 3 (Arkheion)** *Until 29 May.* Two exhibitions at CUBE, 113 Portland St, Manchester. Details 0161 237 5525.

## South

**Immaterial: Brancusi, Gabo, Moholy-Nagy** *Until 23 May.* An exhibition at Southampton City Art Gallery, Southampton City Centre. Details 023 8083 2153.

## South East

**Traditional Timber-Frame Construction** *Thursday 29 April.* At the Weald & Downland Open Air Museum, near Chichester. Details 01243 811464.

**Giuseppe Penone: The Imprint of Drawing** *Until 9 May.* An exhibition at Milton Keynes Gallery, 900 Midsummer Boulevard, Milton Keynes. Details 01908 676 900.

**RIBA CPD Event: Essential Legal Update (Building Regs, DDA)** *Thursday 13 May, 16.00.* At Le Meridien Hotel, Gatwick. Details 01892 515878.

**Dungeness** *Until 16 May.* Photographs by Nigel Green at Rye Art Gallery, Ockman Lane, Rye. Details 01797 222433.

## Wessex

**The New English Country House** *Until 24 April.* An exhibition at the Architecture Centre, Narrow Quay, Bristol. Details 0117 922 1540.

**Domestic (Futility)** *Until 3 May.* A group exhibition at the New Art Centre and Sculpture Park, Roche Court, East Winterslow, near Salisbury. Details 01980 862244.

**Successful Development of Brownfield & Contaminated Land** *Tuesday 11 May.* A Construction Study Centre event at the Avon Gorge Hotel, Clifton, Bristol. Details 0121 434 3337.

## West Midlands

**RIBA CPD Event: Conservation & Repair of Timber** *Thursday 22 April, 14.00.* At Birmingham. Details 0121 233 2321.

**Interbuild 2004** *25-29 April.* At the NEC, Birmingham. Details 0870 429 4558 or register online at www.interbuild.com

**The DDA - in Action** *Thursday 6 May.* A Construction Study Centre course at a Birmingham venue. Details 0121 434 3337.

**Making Construction Contracts Work** *Monday 10 May.* A Construction Study Centre course at Birmingham. Details 0121 434 3337.

**Elizabeth Magill** *Until 23 May.* An exhibition at the Ikon Gallery, Brindleyplace, Birmingham. Details 0121 248 0708.

## Yorkshire

**Malcolm Fraser** *Thursday 29 April, 18.00.* A lecture at the Arts Tower, University of Sheffield. Details www.suas.org

**Eduardo Chillida** *Until 4 May.* An exhibition at the Yorkshire Sculpture Park, West Bretton, Wakefield. Details 01924 830302.

**With Hidden Noise** *8 May-8 August.* An exhibition at the Henry Moore Institute, 74 the Headrow, Leeds. Details 0113 234 3158.

**Working with the CDM Regulations** *Monday 10 May.* A Construction Study Centre course at Harrogate. Details 0121 434 3337.

## Scotland

**Kees Kaan** *Thursday 22 April, 17.00.* A lecture at Robert Gordon University, Garthdee Rd, Aberdeen. Details 01224 263700.

**RIAS Convention 2004** *6-7 May.* At Aberdeen, with speakers including Peter Cook, Colin Fournier, Benedetta Tagliabue and Richard Weston. Details 0131 229 7545.

**C J Lim** *Until 7 May.* An exhibition at Glasgow School of Art, Renfrew St, Glasgow. Details 0141 353 4525.

**Field Trip** *Until 2 July.* An exhibition at The Lighthouse, 11 Mitchell Lane, Glasgow. Details 0141 221 6362.

## Wales

**M J Long** *Thursday 22 April, 19.30.* A lecture at Faenol Fawr Hotel, Bodelwyddan, St Asaph. Details Peter Stonebridge 01745 815600.

**Rut Blees Luxemburg** *Until 25 April.* Urban photos at Ffotogallery, Turner House Gallery, Plymouth Rd, Penarth. Details 029 2070 8870

**RSAP Spring School: the Client - Architect Relation** *Friday 30 April.* At Portmeirion. Details 029 2087 4753.

**Urban Legacies** *6-7 May.* A two-day conference on the role of artists & architects in shaping the public realm. At Cardiff. Details Gordon Dalton 02920 193004.

## International

**Giancarlo De Carlo** *21 April-14 June.* At the Pompidou Centre, Paris. Details www.centrepompidou.fr

**Content: Rem Koolhaas - OMA - AMO** *Until 29 August.* An exhibition at the Kunsthall, Rotterdam. Details www.kunsthall.nl

**Jørn Utzon** *Until 29 August.* An exhibition at the Louisiana Museum, Humelbaek, near Copenhagen. Details www.louisiana.dk

Information for inclusion should be sent to Andrew Mead at The Architects' Journal at least two weeks before publication.



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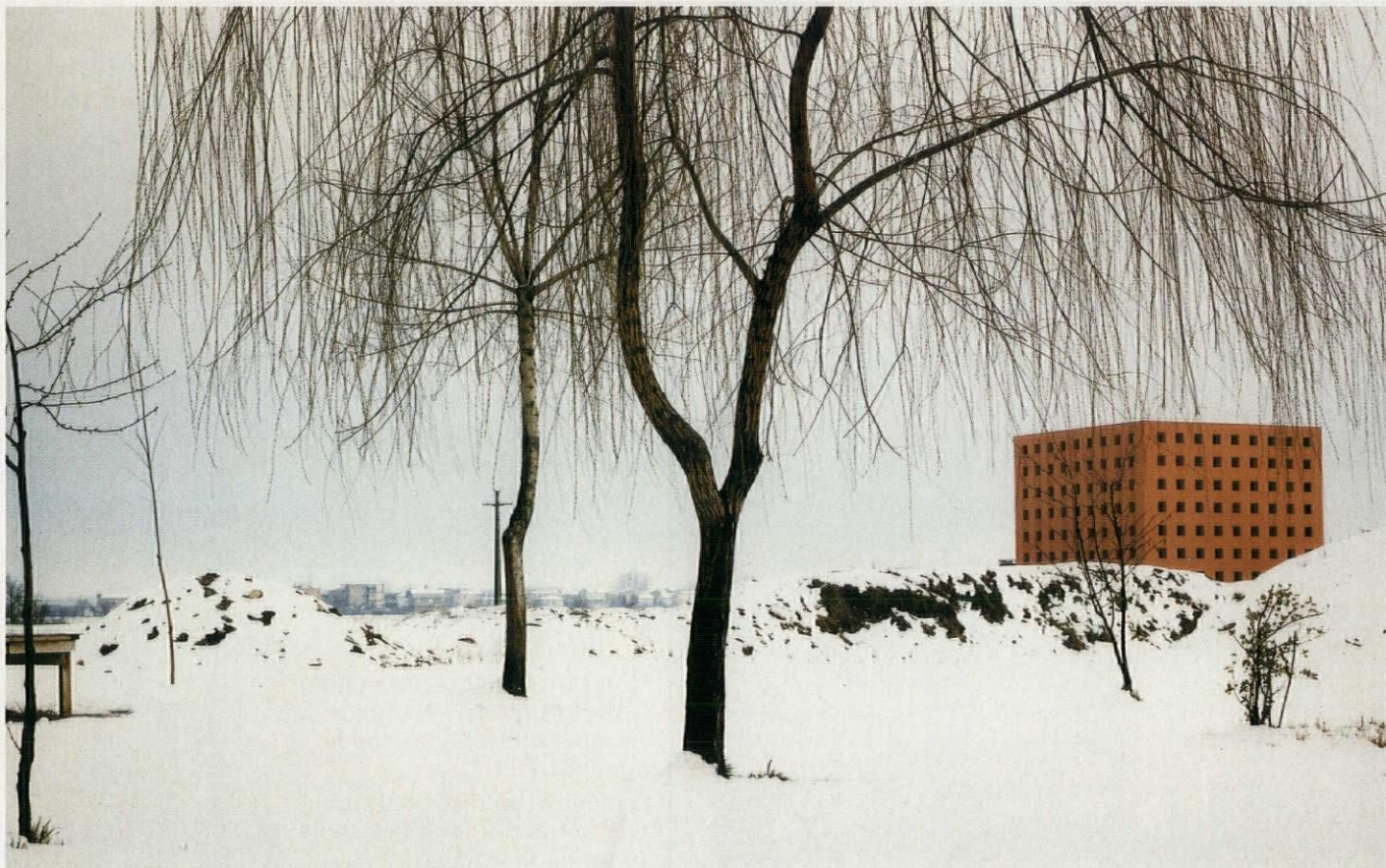
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## Light fantastic

SUTHERLAND LYALL

### **Building with Light: The International History of Architectural Photography**

By Robert Elwall. Merrell/RIBA, 2004. 240pp. £39.95

It is probably still true that, when two or more architects are gathered together, trannies of the latest architectural tour are being readied for projection. As Robert Elwall points out in his wonderful *Building with Light*, photography has played a crucial role in disseminating ideas about architecture ever since it was invented – or at least since the unexpectedly early date of 1839 when this book begins.

Elwall is the RIBA's curator of photographs. In *Building with Light* he has written a remarkable study, which must come to be the standard work on the subject because of its completeness, its scholarship and the clarity of its writing. You start reading with a rare and pleasurable glow of discovery, which continues unabated as Elwall carefully unfolds a complicated story of technical innovation, of swings of fashions in taking and composing architectural photos, and of the significant names behind the lenses of picture-taking devices, from the portable laboratories of the

early pioneers to the 35mm cameras of today.

The organisation of the text is well suited to the shape of Elwall's history. It begins with 'The Triumph of the Apparatus' and moves on in 25- to 30-year leaps, through an early sub-Claudian haze, through the literalism of record photography, the art photo, the topographical view, the new vision of interwar Modernism, the too-briefly shocking photo-journalism of the late '60s, and – with the beginnings of colour printing in magazines ('wholly baleful', says photographer Cervin Robinson) – on to the present.

Each of the six phases is discussed in the kind of detail that comes, not from mugging up for the occasion, but from a profound knowledge of the subject, and is then illustrated in a sequence of stunning examples, each meticulously captioned. There are those haunting and highly detailed record photos by Edouard Baldus of the construction of the Louvre, Jacob Olie's atmospheric Dutch townscapes, Henry Fuermann & Co's evoca-

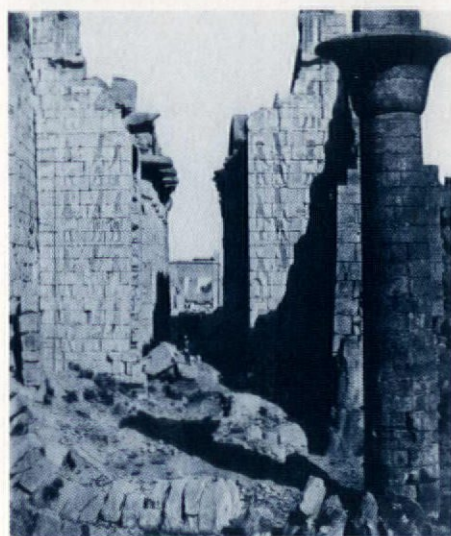
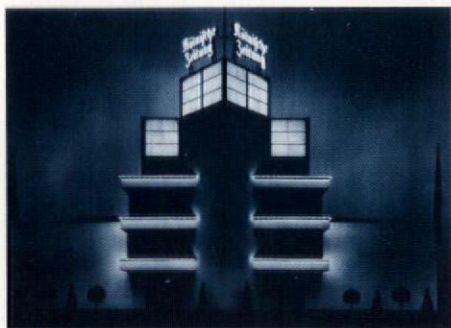
**Clockwise from above: architecture seen through the lenses of Luigi Ghirri, Werner Mantz and Maxine du Camp**

tive images of Sullivan and Wright's turn-of-the-century work.

There is a poignant view by Frank Yerbury of rows of stone caryatids removed from Soane's Bank of England, standing like those Chinese warriors in Shaanxi province; Eugène Atget's timeless architectural details; Charles Sheeler's American vernacular studies; and the photographers of Modernism – Werner Mantz, Moholy-Nagy, the AR's Dell and Wainwright. More recent is the American giant, Julius Shulman, who, untypically, was happy to include people; and there are the rest of the Moderns, known to us from the international magazines.

There is a long-standing and still active tradition of amateur architectural photography. But this book is mostly about *professional* photography. And the market for it among architects was early and strong. In 1857 Charles Barry and Anthony Salvin were among the founding members of the short-lived Architectural Photographic Association, which aimed to supply its members with 'photographs of architectural works of various countries by means of a moderate subscrip-





tion'. At its peak in 1859 it had 1,200 subscribers around the world.

Today architectural photography is mostly done for architectural practices and magazines. In the past it was for the picture-postcard industry, and those 19th-century books of views of cities and places, now seen as an important quarry for understanding the society and architecture of the relatively recent past. But professional photographers were also deployed to record a nation's heritage: Charles Marville documenting those parts of Paris that were to be demolished by Haussmann; George Koppmann & Co doing likewise in condemned parts of Hamburg; the work of the Society for Photographing Relics of Old London. And almost a century before the wartime founding of our National Building Record, the French government had commissioned a nationwide photographic survey of its architecture.

If there is a criticism of the book, it is that recovering information from it is not all that easy. The index is overly mechanical and there are no crossheads in the text. For a book of this importance, so dense with information, it is critical that you should be able to put your finger on material without re-reading the whole text again, pleasurable though that may be. *Sutherland Lyall is a freelance journalist*

# Nothing new

ALEX WRIGHT

## Innovation

Edited by Alan J Brookes and Dominique Poole. Spon Press, 2003. 192pp. £36

*Innovation* is a book that sets itself the task of exploring the ideas that drive architectural solutions. It does this in preference to appraising the end results and is, accordingly, relatively devoid of the more usual type of architectural criticism. It somewhat narrows its potential audience by saying: 'It is assumed that the reader will already be familiar with most of the projects described' – which, in view of the variety of the projects included, presupposes a particularly well-informed readership.

The book emerged from Dominique Poole's PhD thesis and an Illinois Institute of Technology conference in 1999. It consists of 12 brief chapters on, or by, different practitioners from well-known architectural and engineering practices. One might expect the short introduction by Poole and co-editor Alan Brookes to be a well-informed prelude to the chapters which follow. Unfortunately the book's credibility is undermined soon after it begins by such jaw-dropping insights as: 'Our belief is that technology actively exists within the present building industry.'

The contributors include a number of leading figures in building innovation during the past 30 years. What they have to say is generally interesting and they contribute some memorable anecdotes. Nevertheless, they were apparently unaware of each other's contributions. You therefore read on numerous occasions how the computer has made new forms possible, or is bringing in a new range of possibilities, or is revolutionising the way designers work. While each chapter reads well independently, such repetition becomes irritating; having got used to it, I was still surprised to find Alan Brookes repeating the same story on page 96 that he had told on page five.

On other occasions a contributor, presumably unwittingly, contradicts what another has just said. In chapter two, Mike Davies expresses his 'fear that the driving

ideas of sustainability will be less powerful in six or seven years' and that 'there is a certain amount of fashion associated with sustainability'. A few pages later, David Kirkland claims: 'It is clear that the most important issue facing the profession currently (and perhaps the most important issue for centuries) is sustainability.'

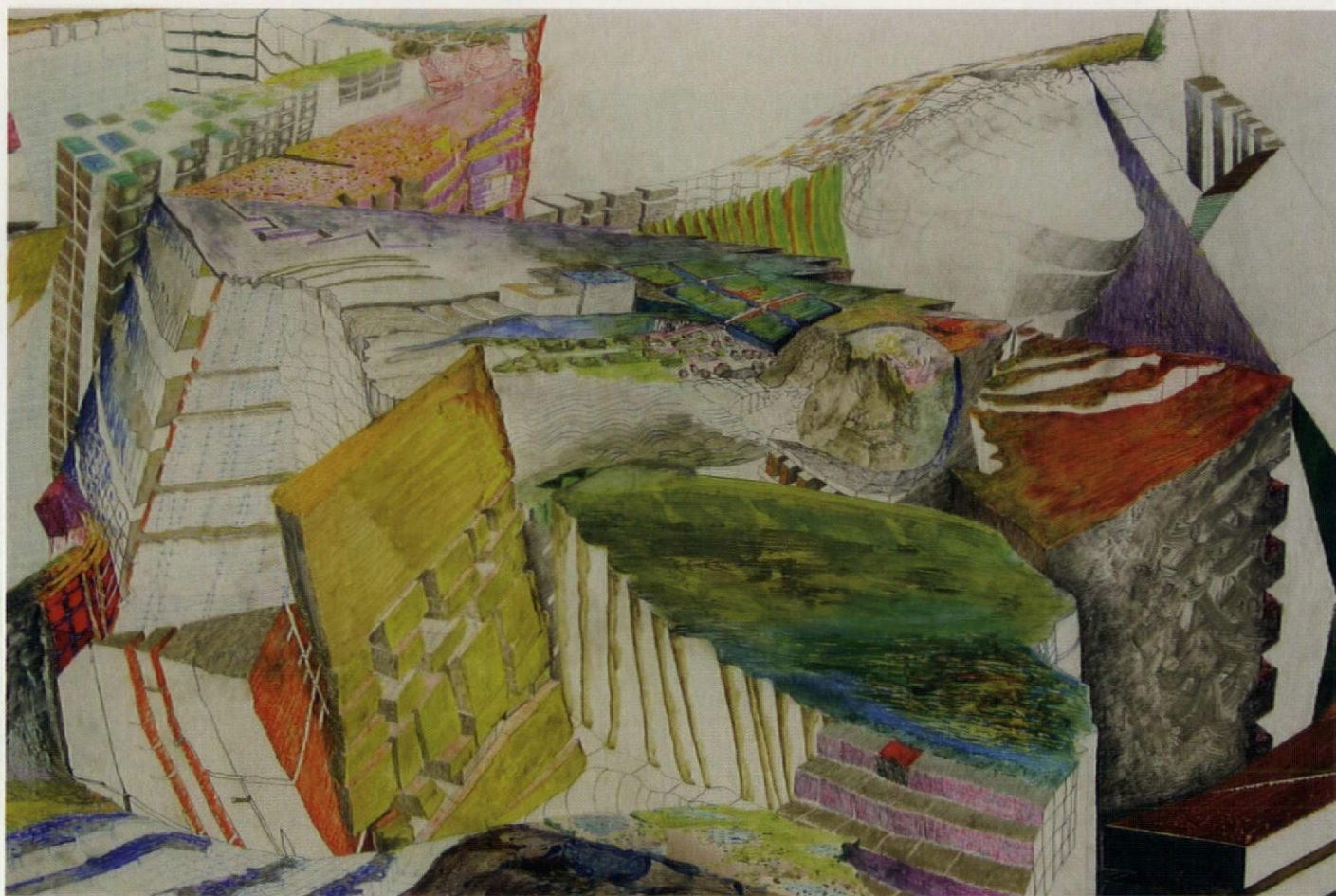
Presumably just as unintentionally, immediately after Poole's essay on Richard Horden, which describes his fascination with boat building, space research and aircraft design, Brookes starts his chapter titled 'Production processes, sources and the use of materials' with a quotation from Eva Jiricna. This includes her observation that 'architects being so keen to impress very often look for inspiration to other associated professions – for example, boat building, space research and exploration, the aircraft industry – but very often for only one reason: to stand out from the crowd'.

Some chapters are particularly worth reading, such as those by Mike Cook and Tony Hunt; others far less so. Mike Davies' account of innovation at the Richard Rogers Partnership reads as rather self-congratulatory, which with a little helpful editing could have been avoided.

Overall, *Innovation* is singularly uninnovative. So many books on architecture and design at present are the result of a desire to publish, driven by the Research Assessment Exercise and its system of ratings. One of the most expedient ways appears to be to gather together a group of relatively short essays on a theme and add an introduction. This book probably emerged from such a process, but it doesn't seem to have benefited from an editor having read the whole thing through. This failure may not be much noticed, though, as I suspect that reading the whole thing through will be something few people choose to do.

*Alex Wright is an architect in Bath*





## Living cities

LIZ ELLSTON

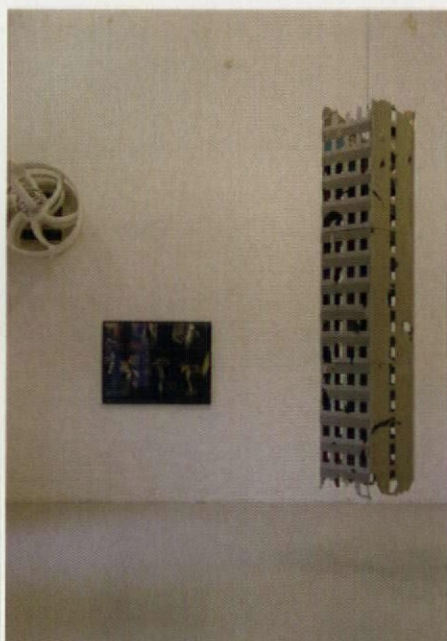
**Oliver Zwick**

At f a projects, 1-2 Bear Gardens, London SE1, until 24 April

Oliver Zwick is fascinated by the form and scale of cities. By using simple materials to create complex imaginary urban landscapes, he captures a part of our everyday lives, and looks at it again from a different perspective – literally.

Based in Berlin but having lived in a number of cities including London, Zwick explores his interest in the urban landscape in a range of media. At f a projects, he has made an installation specific to the gallery, suspended in its main space – a grey card tower, broken, derelict and empty. You can interpret the piece how you choose; as with most of the works on display, it isn't titled, nor is there any explanatory text. It could be seen as a reflection on the threat of terrorism, the demolition of once utopian flats, poverty, or perhaps as just an observation of form, colour and texture in the built environment. Zwick leaves you to make up your mind.

In previous shows, Zwick has created small-scale cities, made predominantly from card and coloured paper – cardboard 'cities'



Top: a detail of Oliver Zwick's *Land*, 2002-2004.

Above: the installation at f a projects

like shanty towns. Appropriately, his exhibition 'Zora' was named after one of Italo Calvino's *Invisible Cities*. With their corroded facades, these urban miniatures, little more than waist-high, had an apocalyptic air. Devoid of people, they seemed desolate and abandoned.

At this current exhibition, the cardboard city is only present in two dimensions. The three-dimensional city 'lives' in Zwick's studio in Berlin, slowly evolving. He interprets this transformation in dark dramatic photographs. Somehow scaleless, these images depict the depths of the 'city' that you would not experience with an installation. Whereas our cities change over decades and centuries, Zwick's do so within a matter of months.

In a separate room, pencil drawings depict imaginary cityscapes seen from the sky. The distortion of perspective and scale makes them almost childlike, but the observation of urban space is more developed and complicated than at first glance. Zwick has been working on one piece for two years, and although he has completed it for the exhibition, there is a sense that its development could have continued indefinitely.

This is an absorbing and mysterious show. Like the cities it refers to, Zwick's intriguing work seems to constantly evolve.

Liz Ellston is a designer with Weldon Walshe





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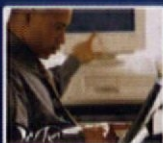
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For further details and an application form please log onto our website at [www.barking-dagenham.gov.uk](http://www.barking-dagenham.gov.uk) alternatively please telephone the Leisure and Environmental Services Department on 020 8227 3075 or email [lepersonnel@barking-dagenham.gov.uk](mailto:lepersonnel@barking-dagenham.gov.uk) quoting reference LES258.

Closing date for the receipt of completed applications: 30th April 2004 at 4.00pm.



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## Pll Assistant

to £30k • Central London

## Architect/Senior Technician

to £35k • South East London

## Project Design Architect

to £38k • Berkshire

Our client, an AJ 100 practice has a formidable reputation for producing high quality large scale schemes. Currently looking to recruit an assistant with 3 years' commercial experience coupled with sound technical knowledge, proficient with AutoCAD 2000 and Photoshop. Experience with data sheet loading and C sheets would be advantageous.

This large successful multi-disciplinary practice is looking for a talented addition to a solid team. You will provide support for the team whilst producing design and production drawings. Experience of scheme development standards and lifetime homes would be advantageous. Competitive remuneration package is on offer along with private health care, life assurance and 25-27 days annual holiday.

Based in an excellent barn conversion, this well established design-focused practice is looking for an architect with high expectations. Current projects include a £30m mixed-use development. You will have a proven design record, good client liaison skills and be a team player with 5-10 years' post part 3 experience.

To discuss these and other opportunities in the strictest confidence, please contact Leigh Maltby on 020 7202 0005 or e-mail [leigh.maltby@capita.co.uk](mailto:leigh.maltby@capita.co.uk)

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Tel: 020 7505 6737  
Email: charlie.connor@emap.com

Laurie Shenoda  
Tel: 0207 505 6803  
Email: laurie.shenoda@emap.com

**Deadlines**

Bookings/copy 5pm Monday  
Artwork 12 noon Tuesday  
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### Senior Architectural Technician £29,000 - £32,000 - Hertfordshire

A dynamic multi-disciplined consultancy seeks an experienced Architectural Technician to work with their Surveying teams. This is primarily a CAD support role, although you will have some site involvement. You will have a proven track record working with UK Building Regs. and be literate in the use of AutoCAD LT 2000.  
Simon Brady t. 020 8603 1818 e. sbrady@bbt.co.uk  
Ref: SB0100

### Project Architect £33,000 - £38,000 + Package - Central Belt

Architect required to join growing team of medium sized, Central Belt based Practice. You will have the opportunity to work on high spec urban commercial and residential projects with values to £8 million. Post qualification experience preferred but Part III students will be considered.  
Ami Wright t. 0141 204 6789 e. awright@bbt.co.uk  
Ref: AMWR0704/01

### Architectural Technicians £26,000 - £29,000 - Central London

A leading London based practice seeks Architectural Technicians to work on Hotels and Healthcare projects. You must have a solid career history and a documented track record. Superior CAD skills are essential and any PFI experience is beneficial.  
Simon Brady t. 020 8603 1818 e. sbrady@bbt.co.uk  
Ref: SB0101

### Job Architect To £38,000 + Package - Edinburgh

Job Architect required for Edinburgh practice to work on commercial, residential and healthcare restoration as well as new build projects. Experience of working on Grade A listed properties is preferable, however, it is essential that you have a minimum of 3 years' post qualification experience. This is an exciting opportunity to develop your career within a modern and innovative practice.  
Ami Wright t. 0141 204 6789 e. awright@bbt.co.uk  
Ref: AMWR0704/02

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## Wilkinson Eyre Architects

Wilkinson Eyre Architects is recruiting for Architects, Graduate Architects and Architectural Visualisers to work on a number of major new projects:

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CAD skills are essential with fluency in Microstation 2D/3D an advantage.

Please apply in writing with CV and A4 samples of work to: Katie Davies, Wilkinson Eyre Architects, Transworld House, 100 City Road, London EC1Y 2BP. No agency, email, telephone or fax enquiries.



### Architect

We are looking for an Architect to work within our award-winning, medium-sized practice. Varied and interesting workload.

You must:

- be energetic and imaginative with excellent design abilities
- have at least 3 years post Part III job-running experience

Please send your CV to John Hancock, Director  
Brocklehurst Architects  
15 High Street, West Wycombe, Buckinghamshire HP14 3AE  
E: architects@brocklehurst.com  
W: [www.brocklehurst.com](http://www.brocklehurst.com)

BROCKLEHURST ARCHITECTS

## The Architecture Foundation

### PLEASURE IN PUBLIC

The Architecture Foundation, the leading charity for the promotion of contemporary architecture, is beginning an ambitious programme of public space transformations in the UK. It will set a new agenda for the design and use of public space and inspire people to think about spaces that they share with their communities. It will transform familiar places with temporary and permanent installations. We are looking for motivated individuals to be part of it.

### PROJECT CO-ORDINATOR £23K -£25K

To assist in the development and delivery of the AF's Pleasure in Public project. To work alongside the Project Director in the delivery of the programme: Generating ideas, testing feasibility and establishing opportunities as the programme develops: To assist in the management of the diverse teams needed to produce the projects: To liaise with other partners and organisations. Recent Part II Architecture Graduate or similar with commitment to contemporary architecture. Good interpersonal and organisational skills. Flexible and able to work under own initiative. Ability to maintain confidentiality.

### PROJECT ADMINISTRATOR £17K -£18K

Administrative role to assist in the development and delivery of the AF's Pleasure in Public project. To work alongside the Project Team in the delivery of the programme: You will be responsible to the Project director, to provide administrative support, for example on general correspondence, diary management, project filing, establishing databases and travel arrangements and presentations. You will also be required to support the team where necessary and carry out general office management, Training in basic secretarial skills and IT. Good interpersonal and organisational skills. Ability to maintain confidentiality.

Interested candidates should send a full CV with covering letter to: Gerrard O'Carroll, Pleasure in Public, The Architecture Foundation, 60 Bastwick Street, London, EC1V 3TN

Closing date for applications is Wednesday 28 April 2004.



## edinburgh WORLD HERITAGE TRUST DIRECTOR

**Salary c £40,000 plus benefits**

The Trust wishes to recruit a new Director to the Trust. Established in 1999, the Edinburgh World Heritage Trust has responsibility for the protection and enhancement of the UNESCO designated World Heritage Site in Edinburgh, which covers a significant proportion of the Old and New Towns. It is also responsible for awarding grants for the repair of properties within the World Heritage Site and for the enhancement of the public realm.

As Director, you will be responsible for all operational activities of the Trust. It is looking for candidates with strong leadership, presentational and management skills, with a proven track record of leading, managing and motivating a small team. The successful candidate should have strong inter-personal and communication skills. A background in conservation and architectural heritage with a keen interest in the architectural heritage and streetscape within Edinburgh is desirable. A relevant degree is also considered essential.

Candidates should also be able to bring innovative thinking, drive and enthusiasm to deliver the aims of the Trust and to support its future development.

Interested candidates should contact Caroline Sibbald, Edinburgh World Heritage Trust, 5 Charlotte Square, Edinburgh EH2 4DR, Telephone No. 0131 220 7720, e-mail [info@ewht.org.uk](mailto:info@ewht.org.uk) for an application form and information pack. The closing date for return of application forms is 21 April 2004.



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## FUTURE SYSTEMS

Future Systems are looking for a native French speaking architect to work on new French projects starting in April. Apply in writing to Jan Kaplicky and Amanda Levele. No CD's, emails or agencies.

Future Systems  
The Warehouse  
20 Victoria Gardens  
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## CONSENSUS

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### PERMANENT POSITIONS – Matt

**MH0404-54** Assistant Architect Bucks £26,000

Busy Architectural practice requires an RIBA Part 2 qualified Assistant Architect to work on a broad range of Residential developments. Our client's projects vary from small one off's to large multi unit developments and they require you to contribute both technically and design wise. Estate layout experience would be a benefit, AutoCAD ability and UK Building Regs knowledge is essential.

**MH0404-56** Architect Bucks £32,000

Working in the commercial, education and residential sectors you will be offered the opportunity to run projects from conception to completion, manage teams and work closely with clients. Our client operates on AutoCAD and knowledge of this software is essential. Beyond that our client is looking for you to provide individual design solutions, be self motivated and able to deal with contractual issues

**MH0404-26** Senior Architect (historic) London £37,000

**MH0404-51** Architect (residential) Surrey £33,000

**MH0404-53** Senior Architect (residential) Surrey £36,000

### CONTRACT POSITIONS – Alex or Charmaine

**AD0404-61** Architect Oxford £20ph

Does the opportunity to run award winning projects appeal? Multi-discipline practice has an urgent need for a contract Architect (RIBA Part 2) to be based in Oxford. It is an ongoing contract with every possibility of being permanent eventually. You MUST be eligible to work in the UK and be in commuting distance to Oxford.

**AD0404-39** CAD Technician Harpenden £14ph

**AD0404-27** Part II Assistant Cardiff £13ph

**AD0404-25** Architectural Tech Oxford £15ph

**AD0404-24** Technical Co-ordinator SW London £20ph

**CGR0403-194** Senior Architectural Technician Kent £16ph

**CGR0403-134** Architectural Technician Sussex £17ph

**CGR0404-35** Architectural Technician East Sussex £15ph

**CGR0404-55** Part II Assistant Cambridge £14ph

**CGR0404-76** Project Architect London £17ph

**CGR0403-135** Design Architect Sussex £17ph

[aj@consensushr.co.uk](mailto:aj@consensushr.co.uk)

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Bankside House, 107-112 Leadenhall Street  
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## Designs on a new career?



**Architectural Technician Birmingham £28,000**

An exciting and demanding challenge awaits you. This multidisciplinary private practice is a market leader in the city centre and now requires an enthusiastic and dedicated individual. You will have sound technical acumen and either the experience of, or aptitude for dealing with site related issues, AutoCAD skills are essential. RefASH0401

**Architectural Technician Birmingham £33,000**

Due to continuing growth and expansion this predominant practice require a highly skilled individual to work on major Residential and Commercial projects. The successful candidate will have a minimum of 5 years experience along with excellent AutoCAD skills. RefASH080402

**Part II Architect Birmingham £25,000**

Market leading national multidisciplinary consultancy now seek an ambitious team player. You must be part II qualified and possess excellent AutoCAD skills. RefASH080403

**Architectural Technician Birmingham £26,000**

A world leading technologically based consultancy now seeks to employ a talented young professional. You must have a minimum of 3 years experience in an Architectural practice along with excellent experience of AutoCAD and building regulations. RefASH080404

### Contract Positions

**Architectural Technician Pembrokeshire £18hr x 3**

**Architect Pembrokeshire £20hr x3**

**Architectural Technician Birmingham £22hr**

For further details and information on many other roles,

please contact Adrian Sharpe on 0121 450 5020

or email on [adrian.sharpe@netrec.co.uk](mailto:adrian.sharpe@netrec.co.uk)

[www.netrec.co.uk/property.php](http://www.netrec.co.uk/property.php)

Network Property, Consulting & Construction Ltd., Westbourne  
Manor, Westbourne Road, Edgbaston, Birmingham, B15 3TR



**Recruitment enquiries**

Charlie Connor  
Tel: 020 7505 6737  
Email: charlie.connor@emap.com

Laurie Shenoda  
Tel: 0207 505 6803  
Email: laurie.shenoda@emap.com

**Deadlines**

Bookings/copy 5pm Monday  
Artwork 12 noon Tuesday  
Cancellations 12pm Monday

Recruitment advertisements in the AJ can be found on our internet recruitment service [www.careersinconstruction.com](http://www.careersinconstruction.com)

John McAslan + Partners are seeking enthusiastic and talented architects to join their Manchester studio, working on a variety of new residential, education and masterplanning projects.

**TECHNICAL CO-ORDINATOR**

with direct experience of managing technically complex large-scale projects ensuring the coordination and delivery of design and tender packages to programme.

**PROJECT ARCHITECTS**

with exceptional design skills and a sound knowledge of construction detailing and the ability to run projects from inception to completion.

**PTII / ARCHITECTURAL ASSISTANTS**

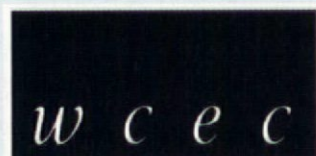
or experienced technician within an existing design based practice with at least 3-4 years of experience.

Microstation proficiency and knowledge of Quark and Photoshop essential.

Please send CV, plus covering letter and A3 examples of work to:

Tony Skipper,  
John McAslan + Partners  
St John's House,  
2-10 Queen Street  
Manchester, M2 5JB  
[www.mcaslan.co.uk](http://www.mcaslan.co.uk)

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We are a small, friendly team with an increasing and varied workload and currently require enthusiastic

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Autocad and computing skills essential

Send CV to:  
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Byshops, High Street  
Henfield, West Sussex BN5 9HP  
Email: [jsargent@wcec-architects.com](mailto:jsargent@wcec-architects.com)

**ARCHITECT & TECHNICIAN (DEVON)**

Required by busy, friendly, expanding practice. Enthusiastic and self-motivated to work on a variety of interesting commercial and domestic projects.

Conservation experience an advantage. Architect minimum 5 years experience. Technician minimum 3 years experience. Autocad skills essential.

If you are seeking a rewarding challenge with career prospects within a growing practice and a good quality of life in the south west, please apply with CV to:

DAVID RANDELL ARCHITECTS  
THE STUDIO, 7 WILLIAM STREET,  
TIVERTON, DEVON EX16 6BJ

(No Agencies)

**Retail Design Architect**

Central London • To £38k

A Design Architect is required by this award-winning practice to work on a prestigious shopping centre project in Austria. You will need at least 5 years' post part III experience, with at least 2-3 years' retail design experience, preferably working on shopping centres. Applicants must have design flair coupled with an idea of how a building is put together.



Eden Brown promotes diversity in the workplace.

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Ref: 55444  
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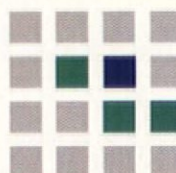


## 06/05/04 BOOKING DEADLINE ALTERATION

Due to the May Day bank holiday the booking deadline for the 6th of May issue will be 5 pm on Friday 30th April.

For Further details please call  
Charlie Connor

on 0207 505 6737 or  
Email [charlie.connor@emap.com](mailto:charlie.connor@emap.com)



### ANTHONY REDDY ASSOCIATES

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**SENIOR PROJECT LEADER - ASSOCIATE**

We are currently involved in a number of exciting large-scale retail/mixed use developments throughout the country and are now seeking an experienced Project Team Leader to head our Retail Team based in our Dublin Office. The successful candidate will have a minimum of 10 years' experience in the design procurement and delivery of large complex projects and will preferably have a strong background in retail design.

A highly attractive remuneration package and scope for career development as well as the opportunity to join the Practice Management are available to the appropriate candidate.

Mail replies in confidence to:  
Managing Director  
Anthony Reddy Associates,  
Dartry Mills, Dartry Road, Dublin 6.  
Fax: 01-4987001

Alternatively, e-mail to:  
Email: [info@arad.ie](mailto:info@arad.ie)

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Must have minimum 5 years experience of traditional building construction and be proficient in AutoCAD / Vectorworks Current Workload: New and Existing Ecclesiastical / Community, Primary Health Care, Residential, Conservation / Sustainable.

Short CV and covering letter to  
[rm@molyarch.co.uk](mailto:rm@molyarch.co.uk)

**Planning and Design Manager**

Rushmon New Homes are an established housebuilder operating throughout Surrey, Kent and Middlesex.

Due to continued growth we are seeking a high calibre individual with a proven track record for obtaining Town Planning approvals for residential developments ranging from 2 to 50 units predominantly on brownfield land, with an element of mixed use.

An attractive salary and a fully expensed company car will be provided to the right applicant who should have a pro-active approach and an eye for detail.

Candidates wishing to be part of a successful team should apply in writing, stating current salary, to:

**Mike Bicknell**  
Managing Director  
Rushmon New Homes  
Cardinal House  
7 Wolsey Road  
East Molesey  
Surrey KT8 9EL



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**Invitation to Tender  
For developing  
a Regeneration Framework  
The Horwich Loco Renaissance**

This major regeneration project is being developed through an informal partnership of private and public sector stakeholders.

The site is located close to Horwich town centre and adjacent to the Reebok Stadium and the Middlebrook development, five minutes from Junction 6 of the M61.

The site is approximately 100 hectares. Included within the site are the former Locomotive Workshops now used for general industrial purposes, privately owned terraced housing, an SSSI, open storage, offices and farmland.

The partners, led by Bolton MBC, are committed to determining the optimal re-use of the site, and to put in place a detailed and deliverable Regeneration Framework.

We are looking to appoint experienced, enthusiastic multi-disciplinary consultants with a national profile to undertake this work. Consultants will be required to have excellent skills and experience in the fields of regeneration, planning, urban design, conservation, marketing, and, consultation.

Ensuring economic viability, partner support and deliverability are fundamental requirements.

For a copy of the brief, please send your contact details to Simon Godley, Project Coordinator, by 12 noon 30.04.04., stating where you saw the advert.  
[simon.godley@bolton.gov.uk](mailto:simon.godley@bolton.gov.uk)



*Working in Partnership to Regenerate Horwich Loco*



Lee Valley Regional Park Authority



Expressions of Interest

**VeloPark Feasibility Study**

Lee Valley Park wishes to appoint a firm of Consultants to undertake a preliminary feasibility study for a VeloPark in East London. There is a description of our concept for a VeloPark on our website.

To be considered, the consultant team must have experience of designing indoor Cycling facilities, or closely related sporting facilities, and of conducting feasibility studies with the principal outputs of a technical brief, outline proposals, and a cost plan.

Tender documents may be obtained from:

Neil Thomson  
Myddelton House  
Bulls Cross  
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EN2 9HG

Closing date for receipt of expressions of interest: 23rd April 2004

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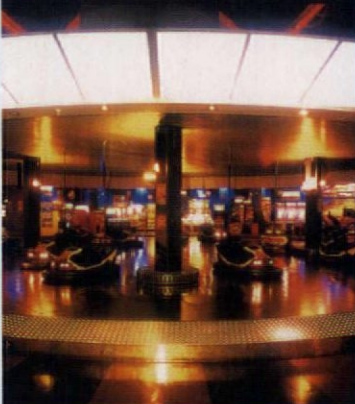
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**CAD Training Service**



**LG ELECTRONICS**

**AJ ENQUIRY NO: 301**



LG is hosting a major product presentation at the IMAX cinema in central London at the end of April. Open to all air-conditioning system installers, the briefing covers a range of new product types, including New Art Cools, wall-mounts and cassettes. The presentation will be followed by an afternoon of interactive games and simulators at the Namco Station in County Hall.

**CLAXTON BLINDS**

**AJ ENQUIRY NO: 302**

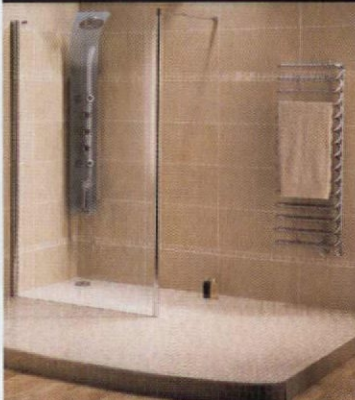


We are the leading commercial window blind company in the UK, specialising in providing interior window treatments for any requirement.

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**SHOWERLUX**

**AJ ENQUIRY NO: 303**



Showerlux has extended its Urban enclosure collection with the addition of a range of wet room panels. Designed to cater for various wet room configurations, the sleek, frameless panels come in four flat sizes and two curved sizes. Incorporating the minimalist styling of the enclosure collection, each panel is made from toughened safety glass. Visit [www.showerlux.com](http://www.showerlux.com)

**BLenheim CARPET COMPANY**

**AJ ENQUIRY NO: 304**



The Geneva collection, from Blenheim Carpets, has a distinctive herringbone design, highlighted by the choice of 13 natural colours. A woven construction with an attractive textured pile made from 100 per cent pure wool, Geneva carries a heavy domestic rating, and is easy to maintain. Warm, soft and luxurious, the Geneva carpet keeps its good looks for years.

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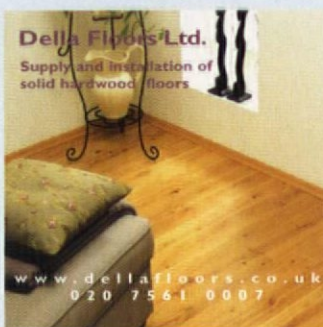
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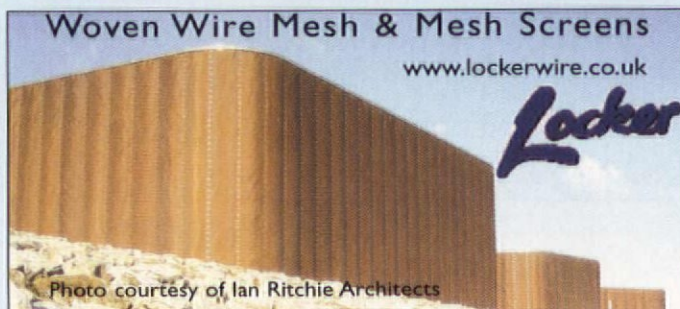
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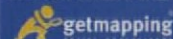
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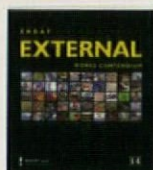
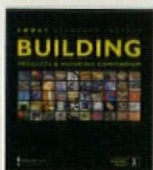
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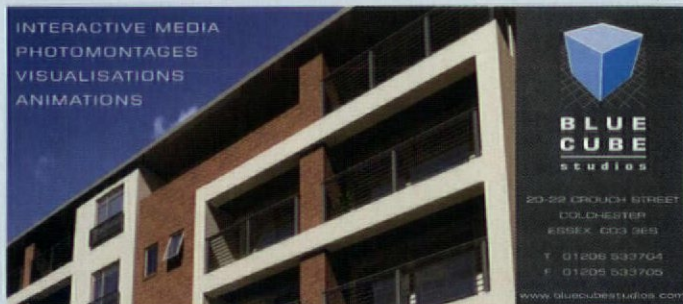
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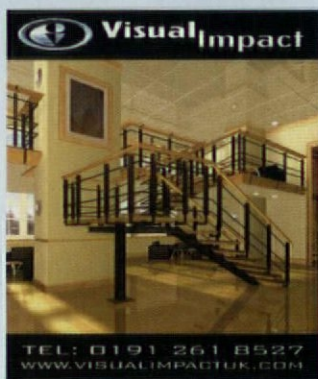
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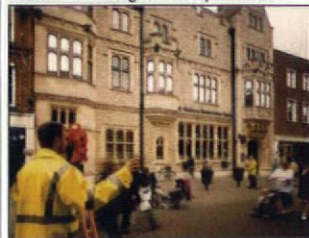
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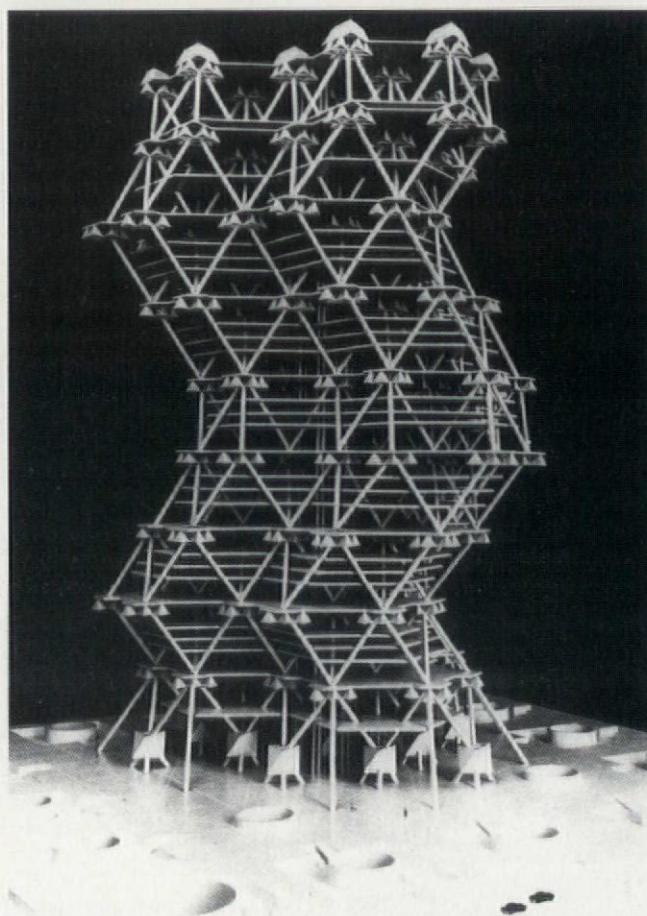
## Table talk

**A**rchitecture Foundation chairman **Will Alsop** was on characteristic form at a packed lecture in east London just before Easter. A string of aphorisms and observations included this welcome clarion call: 'Architects should be rich. And go on holiday. A lot.' Disappointingly for a professor, he also declared that: 'All the architectural theory I've ever learned is rubbish'; but on the bright side, 'young people in Bradford don't really wear very much... which isn't a bad thing in itself, I suppose.' A lively dinner followed at hot new Clerkenwell restaurant Zetter, named after the pools company whose old building has been converted by **Laurie Chetwood** into a hotel and restaurant. I noticed critic **Deyan Sudjic**, foundation director **Rowan Moore**, deputy **Alicia Pivaro**, and **Paul Monaghan** of AHMM tucking into a feast of octopus, sweetbreads and other tasties. The table contributed to the restaurant running out of (a) Bardolino and (b) grappa. The public lecture was Will's second in two weeks – the other delivered at the Canadian Centre for Architecture, on his old mentor and employer, Cedric Price. Cedric, incidentally, will be the subject of a Design Museum exhibition later this year.

## George town

**W**hile the men and babes in black scurried to the Foundation event, a nice selection of old and new faces turned out for **George Ferguson's** 'inaugural' lecture, delivered (fashionably) halfway through his presidency. Introducing, *The Times* columnist **Simon Jenkins** reminded the audience that architects' mistakes were there for all to see for a very long time, while journalists' were used to wrap fish the following day. George was on good form, with a string of thought-provoking observations. For example, his proposition that 'nothing but the best should be good enough' does rather exclude the good ordinary, doesn't it? On the other hand, his welcome analogy with restaurant food and architecture – 'we should be intolerant of the bad and

## the ones that got away



**Astragal's 'The Ones That Got Away' competition features schemes that, for better or worse, stayed on the drawing board. Can you identify this project and its architect? Post your entry, to arrive by first thing Monday morning, to AJ Astragal, 151 Rosebery Avenue, London EC1R 4GB, or fax 020 7505 6701. The first correct entry out of the hat wins a bottle of champagne. The never-built scheme in last week's competition (AJ 8.4.04) was Frank Gehry's proposed extension to the Neues Museum, Berlin. Louise Munroe of Stockport was the winner.**

mediocre' – struck a distinct chord. He showed a ghastly looking hotel complex in London's Surrey Quays as an example of the hideous, without revealing the architect (champagne for information). Other comments covered the New York Prada store ('a very easy place not to shop'), the listing system ('we should have an ex-list for buildings that should be demolished'), planning ('we are all urbanists now'); and architectural education. His big idea is giving all architectural students free membership of the institute, starting in January next year. Oh, and a foundation course of one year for all design and construction disciplines.

## Man with plan

**G**eorge is an old pal of **Mike Hayes**, current president of the Royal Town Planning Institute, ex-city planner at Glasgow (when it won the City of Architecture bid), and more recently a less-happy development supremo at Lambeth council. Speaking from the floor, he suggested that the planning system should be more concerned with proactive, quality-led development, and less with whether or not certain proportions of schemes get permission within eight weeks. He reminded the audience that assessment of local authority performance on planning will soon include plaudits or

brickbats depending on the number of staff with a design qualification in a planning office. Since this will affect funding allocations, it should prove a significant boost to planning department performance. Currently, the oddest councils are recipients of government largesse for meeting their performance targets; for example, a cheque for £500,000 from **John Prescott's** department recently landed on the desk of the City Corporation. While no doubt a well-deserved tribute to the efficiency of chief planner **Peter Rees**, can it really make any sense to dish out cash to a well-funded body like the City, when neighbouring Hackney is the borough that needs all the planning help it can get?

## Autumn leave

**P**ost-Easter, one's thoughts turn to the architect who might be chosen for this year's Serpentine Gallery. Nothing is yet forthcoming from the gallery, which must count as one of the great patrons of architecture in the UK. Thinking about possibilities, Astragal gets a certain Netherlands feeling, what with **Rem Koolhaas** getting the Gold, and working so much with **Cecil Balmond**, who generally engineers the Serpentine design. But maybe it will be one of those groovy young Dutch collectives one hears so much about. There is a suggestion that the timing of the event may move to later in the year; if so, let's hope gallery director **Julia Peyton-Jones** still holds several of her exemplary summer parties...

## Step change

**Q**uote of the week comes from the AJ profile of dancer **Claire Russ**, who performs at various architectural events: 'The functional gestures between the contractors on the building site were fascinating, so wonderfully expressive.' I know just what she means.

## Sole practice

**C**an it be true that **Sadie Morgan** of dRMM (or **Doctor Millimetre**, as the practice is sometimes known) only has 180 pairs of shoes? Shouldn't any right-thinking girl have at least 200?

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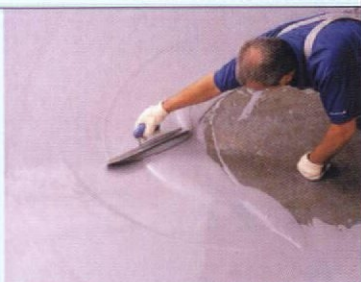


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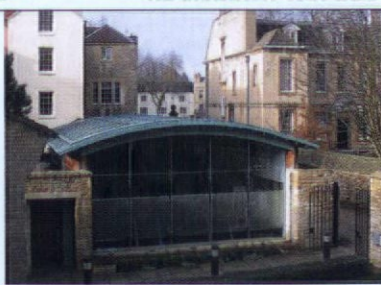


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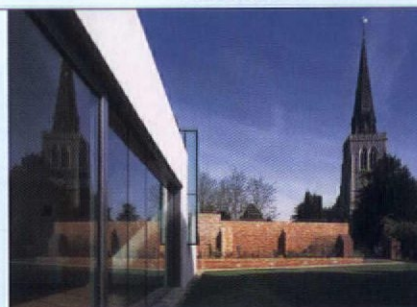
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## KINGSPAN INSULATION

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Tapered insulation manufactured by market leader Kingspan Insulation has played a key role in protecting the flat roof system of the new St Mary's Garden Hall at Wimbledon, a project that has attracted a lot of attention for the way in which it has successfully brought old and new together. A total of 135m<sup>2</sup> of Kingspan Thermataper TT47 zero ODP was installed by Robseal Roofing beneath a Sarnafil roof membrane.



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