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6 | 06 | 02

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contents

06 | 06 | 02

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This week, the industry's leading lights tell us what they consider to be the best buildings, best products and most significant innovations of the last half-century and the changes they expect to see over the next. In some cases, a favourite building has had a significant effect. The Skylon, pictured here, prompted engineer Tony Hunt to leave 'some boring engineering firm' and to get a job with Felix Samuely, where he stayed for seven years. The 50:50 interviews form the basis of the 50:50 exhibition at Interbuild next week.



'I knew here was the deep end of something completely different'

Tony Hunt, Anthony Hunt Associates

NEWS	4	
EDITORIAL/LETTERS	10	
WILL ALSOP/PEOPLE	12	New South Bank chief executive Michael Lynch
MARTIN PAWLEY	14	
50:50	16	We look at the most important buildings, projects, innovations and products of the past 50 years
TECHNICAL AND PRACTICE	38	Prefabrication comes back in vogue
	40	Theatre lighting and health and safety round-up
	42	Legal matters; dot.column
DIARY	45	Exhibitions and events
REVIEW	46	Alison and Peter Smithson go into the void
	47	Frank Lloyd Wright and Lewis Mumford: the letters
	48	Olafur Eliasson and the great outdoors
RECRUITMENT	50	
CLASSIFIED	54	
ASTRAGAL	58	

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'Immense ingenuity is going into an elaborate property deal that will keep it up against the odds; more ingenuity, indeed, than ever went into the design of its contents.'

Rowan Moore on the Dome, *Evening Standard*, 27.5.02

'Current levels of investment in new public buildings should be generating an almost Victorian sense of civic pride. But instead we seem to have grown used to poor design and bad management. We are simply not demanding enough.'

CABE chairman Sir Stuart Lipton, *IoS*, 26.5.02



FA SIGNS WEMBLEY DEAL

The Football Association has finally signed a £400 million loan deal for the Wembley project with the German bank, Westdeutsche Landesbank. The FA says the Foster and Partners/HOK Sport project will start within 10 weeks. +

GREENWICH GREEN LIGHT

The government has given the go-ahead for the regeneration of the Greenwich Peninsular, the land around the Millennium Dome, masterplanned by Terry Farrell & Partners. It also agreed to the development of a 20,000 capacity stadium within the Dome, to be designed by HOK Sport. +

HAWORTH TOMPKINS WIN

The Young Vic Theatre in Waterloo, London, has appointed architect Haworth Tompkins for its redesign and rebuild. +

ROGERS REGENERATION CALL

Lord Rogers speaking in the House of Lords, has called on the Government to do more for urban regeneration. +

DREAM JOB FOR ADJAYE

The AJ understands that David Adjaye, of Adjaye Associates, has agreed to be one of the six presenters of the BBC3 architecture programme, *Dream Space*.

PAIR WIN SILVER MEDALS

The RIAS has split its Silver Medal for best Part Two portfolio between two students of the Mackintosh School of Architecture at the Glasgow School of Art, Kirsty Lees and Joanne Muldoon. +

For the best jobs in architecture turn to page 50 or visit www.careersinconstruction.com



A Flint and Neill Partnership-led team has beaten five other entries to win an international competition to design a new £8 million bridge for the inner harbour in the Finnish capital, Helsinki. Spanning 140m, the cable-stayed bridge will incorporate a dual carriageway, tramlines, a footway and a cycle path. The development team includes architect Studio Bednarski and local engineering firm Innostructura Oy. +

Row rages over new Ritchie towers

Secret plans by Ian Ritchie Architects for a tower cluster on a 'hugely prominent' London site have sparked a row between London mayor Ken Livingstone and Southwark council.

Ritchie has designed a series of slender cylindrical towers, up to 18 storeys tall, for developer Berkeley Homes. While the scheme is largely residential, it will include other uses at ground level.

The mayor has thrown his weight behind the plans, and CABE is understood to be supportive. However, Southwark is threatening to force an international design competition and to insist on a major cultural building on the site.

The 1.1ha site at Potters' Fields faces the Tower of London across the river and neighbours Tower Bridge and Foster and Partners' new GLA building. It has a chequered history of failed development, with an earlier Ritchie-designed opera house and Will Alsop housing scheme coming to nothing.

The GLA's planning decisions manager, Giles Dolphin, told the AJ the mayor had written to Southwark responding to its draft planning brief for the area, and is urging the council to abandon its 'perverse' plans for a competition. 'The mayor is keen to see something on the site,' he said, 'and a competition could hold up development by a year. If Southwark want a cultural building it could delay things indefinitely.'

Southwark's head of regeneration and strategy, Chris Horn, denied the borough was trying to

block the Ritchie towers and said a competition was 'inevitable' for a major development opportunity in a world heritage location. 'Sites like that come up once in a generation. A competition is a useful means of testing markets, establishing the best solution and including the public.'

Deputy mayor Nicky Gavron told the AJ that Ritchie's scheme was an excellent example of a building responding to its context – unlike the neighbouring GLA building, a 'straightjacket', with no connection to its surroundings.

Zoë Blackler

Livingstone set to publish new vision for London

The London Plan – Ken Livingstone's overarching policy for the development of the city – will be published in three weeks' time, according to his deputy, Nicky Gavron.

Gavron, speaking at an event organised by architect DEGW, said the scheme would radically change the way the city works, through revitalising public transport networks, especially new rail lines such as CrossRail 1 and 2 and the East London line. Gavron also pledged to cut the reliance on the car, commit to sustainable design and build more affordable homes to increase the number of people able to live and work in the city. Asked if there were any obstacles to developing the capital, she replied: 'Falconer going was the first obstacle.'

'Of course I would have liked to have done the addition myself, but I wasn't contacted.'

Richard Meier, discovering that the \$130m expansion of his High Museum of Art in Atlanta will be undertaken by Renzo Piano. *New York Times*, 23.5.02

'Why is everybody into China now? Not to help the Chinese. It's more take than give, and I'm not interested in that.'

Glenn Murcutt. *Architecture Australia*, May/June 2002

'Soane was a genius of manipulating natural light, of its gradations and shadows, but Simpson fails to follow his master, and rapidly calls in the help of electricity.'

Rowan Moore on John Simpson's Queen's Gallery. *Evening Standard*, 24.5.02

+ FOR A DAILY NEWS FEED ON THE LATEST ARCHITECTURAL STORIES GO TO AJPLUS.CO.UK

Avery battles with Rolfe Judd over £20m Victoria project

The future of a prime site in central London is in the balance, with local residents and Westminster council in a stand-off.

A community-backed scheme by Bryan Avery Associates has been turned down by the council, which has appointed its own architect, Rolfe Judd, to produce an alternative office-dominated project.

Resident groups have accused the council of trying to maximise its own profits. The council pursued its own plans for the Tatchbrook Triangle area in Victoria after rejecting Avery's £20 million mixed-use scheme – which includes a cinema – and has the backing of 14 of the 15 local resident groups.

However, the council's plans for the site, close to Victoria station, have been brought to a stand-still after the DCMS decided to spotlight a number of Georgian houses on the site.

Community representative Moy Scott said they had been hoping for an 'exciting' new building for the site. Westminster denied it had a vested interest and is considering its next step, which could include an application for listed building consent or an alternative scheme that accommodates the existing buildings.

Zoë Blackler

Falconer exit causes unease over Planning Green Paper

Lord Falconer's departure from his role as planning minister has raised concerns about the future for the Planning Green Paper.

The RICS is urging the government not to use

the reshuffle as an excuse to delay the planning reforms, calling it a bad time for Falconer to be moved off the project.

Chair of the RIBA's planning committee Wendy Shillam agreed: 'For once in our lives, there is the chance of primary new legislation. It would be a shame if the changes within government jeopardised this.' And she warned that the separation of regeneration issues from those of transport meant there was less chance that the two will work together and could be 'a real blockage to regeneration working'.

Following the resignation of Stephen Byers, a Department of Transport will be re-established, with the rest of the DTLR transferring to the new deputy minister's department. Ministers Falconer, Nick Raynsford and Sally Keeble, who were responsible for planning, will be replaced by Lord Rooker and Nick McNulty. Their specific responsibilities are still to be decided.

Farrell returns to Camden project despite concerns

Camden council has persuaded Terry Farrell & Partners to return as masterplanner to the £75 million Swiss Cottage scheme. He walked out on the project in February.

The scheme, which includes a sports centre, library, and luxury block of flats, has been mired in controversy following Farrell's decision to leave the scheme. He claimed the two developers, Barratt and Dawnay Day, had sidelined his practice.

However, Jane Roberts, the leader of Camden council, has entered the fray and successfully negotiated Farrell's return.



Sports specialist KSS Architects has submitted a planning application to Epping Forest District Council to build this training centre and youth academy for Tottenham Hotspur Football Club. The scheme, for a 26ha site near Abridge in Essex, includes a pavilion building to house training and rehabilitation facilities for both the first-team squad and youth players. With its roof covered in natural turf, the building will be partially underground in an effort to reduce its impact on the Green Belt surroundings.

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Q&A

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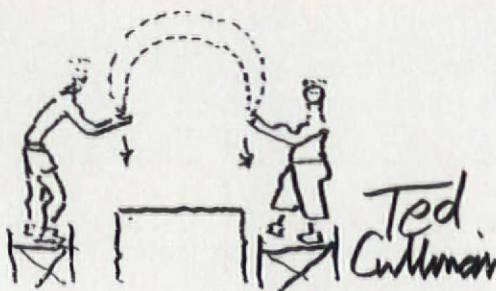
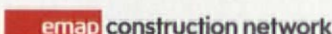
... of voters in a poll on the AJ's website think that the national stadium should be built in Birmingham, not Wembley, or 'taken on the road'.
Respondents: 2,055

This week: Should there be a competition on the contentious Potters' Fields site?
See page 4.

+ Register your view at
www.ajplus.co.uk

Facing the future

With a packed programme of star speakers and CPD seminars, RIBA Conference 2002 offers a combination of inspiration and practical advice



Doodle of the lowering of the gridshell of Edward Cullinan and Partners' Weald and Downland Museum

There is still time to sign up for this year's RIBA Conference, which takes place on 11-12 June at Interbuild in Birmingham, and promises to be the high point of the architectural year.

A packed programme of speakers includes Ted Cullinan, who will talk about drawing skills; Richard Murphy, who is presenting his education buildings and delivering a critique of PFI; Richard MacCormac, on the subject of art and accountability; Robert Adam on 'the Pastiche Problem'; Glenn Howells on his scheme at Timber Wharf, Manchester; and Elia Zenghelis, winner of last year's Annie Spink award, on the issue of educating tomorrow's architects.



Harmony School - one of three educational buildings being presented by Richard Murphy

Keynote speeches are complemented by a series of CPD sessions on practice issues such as marketing, with a range of events specifically aimed at the small practitioner, including one on how small practices can successfully compete for public sector work.

Sign up for either day, or stay for both and book tickets for the RIBA National Awards dinner on Tuesday night by calling 0121 233 2531 or e-mailing nancy.mills@member.riba.org. Look out for all 58 awards published in next week's AJ. The conference itself is free to RIBA members. Can you afford not to go?

To book your place at the RIBA Conference, call 020 7505 6719 or visit www.ajplus.co.uk/promotion/riba

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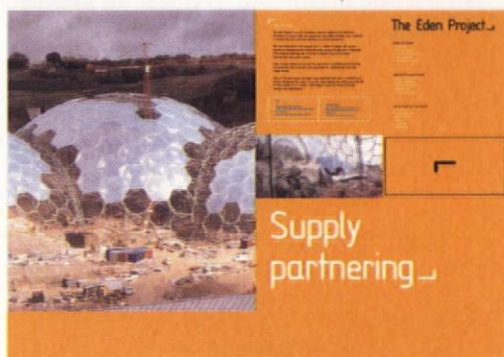


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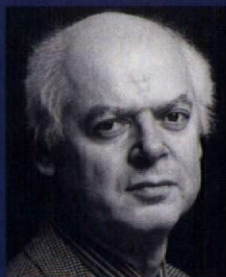
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Other attractions at Interbuild include hundreds of exhibitors (visit the AJ on the Emap stand in Hall 4), and, also in Hall 4, the 50:50 exhibition, an overview of key developments in architecture over the last half century, and a look at likely changes over the next (see pages 16-36).

'Do it Differently', in Hall 6, is an exhibition of architectural projects which exemplify innovative methods, new ideas, and collaborative processes for solving problems that typically arise from traditional procurement and construction procedures. Designed by Wordsearch and Allford Hall Monaghan Morris, the exhibition looks in detail at projects including Glenn Howells Architects' Market Place Theatre and Arts Centre, Armagh; Bennetts Associates' Wessex Water Operation Centre, Bath; Bauman Lyons' South Foreshore Promenade, Bridlington; Chetwood Associates' Sainsbury's, Greenwich and Nicholas Grimshaw and Partners' Eden Project.



Eden on show in the 'Do it Differently' exhibition



Architects are currently witnessing the biggest changes to practice and construction seen in decades. There are new forms of contract; there is new legislation; we have been exposed to Latham and Egan; we see the ARB being transformed from a registration board to a regulatory authority; and we see a government, albeit Labour, increasingly committed to procuring our state infrastructure – whether schools, hospitals or prisons – through design-and-build, framework agreements and Private Finance Initiative arrangements.

All this comes in the wake of a revolution in office communication technology and continuing advances in construction technology; and in a context where claims against architects are increasing, PI cover is now mandatory; minimum-required PI indemnity levels appear set to rise again; and criticisms of our profession seem to grow ever louder.

'Facing the future' is the first of what we expect to be an annual conference. Short, sharp, informative and enjoyable, it is intended to help you adjust to change. Seminars and workshops, top-class lectures and talks, an awards dinner, and the chance to network with colleagues throughout the wider industry, this event is for you.

To run annually, returning every other year to Interbuild, the conference confirms our commitment to practice, to training and to the need to face up to change. In support of this event, I have cancelled the traditional president's inaugural address, preferring to speak to the rank and file at Birmingham rather than an evening at Portland Place. So come and join us. Offered in partnership with Emap and the AJ, this event (free for members) is set to become one of the main occasions on the annual calendar. See you there.

Paul Hyett PRIBA

Interbuild takes place on 9-13 June 2002 at the NEC, Birmingham. For free entry to Interbuild, pre-register now at www.interbuild.com or telephone 0870 429 4558



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A centralised system could help mothers returning to work

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editorial

As part of the 50:50 exhibition previewed in this issue and on show at next week's Interbuild, leading lights of the construction industry were asked to offer their hopes and predictions as to changes which will affect the industry over the next 50 years. Many of those interviewed expressed a desire to see more diversity in a sector which is still disproportionately male and white.

Over the last few weeks, I have had endless conversations about the problems faced by women architects. This is my last week on the AJ before taking a break for maternity leave – David Taylor, the AJ's deputy editor, will be acting editor until I return. One advantage of working for a large corporation (both the AJ and our sister publication the *Architectural Review* are owned by publishing giant Emap) is that there is an established protocol for eventualities such as maternity leave and pay. This is a situation which has been greeted with envy by architect friends.

While architect employers tend to be supportive, it has often been left up to the individual to negotiate the terms of their leave – with varying degrees of success. It is understandable that they hesitate before offering the long-term security which working mothers need. A weekly magazine has a constant workload, and, given that the AJ has flourished for 107 years, it is safe to assume that the workload will still be there in a few months' time.

Few architectural practices enjoy the same degree of certainty. This is an inherent problem in a sector which is both unpredictable and cyclical. How do you guarantee a return to the same job at a given point in the future, when there is no clear means of predicting what the practice's own workload will be? And how can a small team undertake to generate sufficient income to pay a non-productive member of staff? Would it be possible to implement a centralised system, whereby practices would sign up to a recruitment policy prioritising women wishing to return to work after maternity leave, and a percentage of RIBA subscription money would be earmarked to top-up statutory maternity pay?

Isabel Allen

letters

Take a risk by all means but it could add to cost

I agree with Will Alsop that a cautionary approach can extinguish the creative spark (AJ 4.5.02), but I believe that he over-simplifies the matter. He implies that we are isolated individuals, out to please ourselves. This, more often than not, can only be the case in one-offs. Even then you have to ensure that the client sees your point of view, which requires a high degree of persuasiveness.

In the town or city where your building or buildings must contribute to the overall environment, where height, width, dynamic contrasts, focal points and delayed vistas might each have to be considered along with the client's preferences, taking risks to add sparkle may add to the complexity – and the cost.

First and foremost, our town or city streets, squares and special buildings must, quite subconsciously, be a delight, not simply each individual unrelated little or large gem. Such a building has its place, and where better than as a 'highlight' amid relative mediocrity, so, take the right risk in the right places!

Alsop's article was written in Venice – what better place to prove a point?

Richard Brown, Poole, Dorset

Only architects fail to see true value of nature

Both Will Alsop and Martin Pawley have written recently on greenfield, brownfield and housing density issues. Their columns are designed to provoke, but I'm concerned at their failure to raise the central issue.

The environment that a person encounters is a reflection of his inner being. From time to time, each person needs a means to maintain and restore his or her mental balance.

Until recently, in the UK,

meditation was rarely taught. People here use the reflected tranquillity of quiet space, natural materials and growing things to restore inner balance. Until other methods become widespread, the local woods, the much-scorned suburban garden, remain for most of us as much a need as food and water.

Only architects struggle with this concept. Most people know it intuitively. Other things being equal, the desirability of any office/living area will be defined by the ease of access to safe green space.

Ask any commuter. Ask any estate agent. Walls and paved areas do not cut it. The height, shape, composition and quality of buildings matters little compared with what is between these buildings. This is why people fondly remember the time when 'London was a collection of villages'.

The green belt is there, free, for all. With the current architectural mess in our cities, no other justification for maintaining it is required. Do we need public access to another stately home and garden? The answer depends where it is. If it restores balance, yes we do. And if we do, the acquisition is priceless.

Stephen Penfold, Jenkins & Potter Consulting Engineers

Tyntesfield's salvation merits real celebration

As Martin Pawley writes his column questioning the validity of the conservationists' latest cause (AJ 16.5.02), he also provides the obvious answer to his question, while not looking to the future of the building, furniture, collections, parks and gardens.

Tyntesfield and its collections have been lovingly cared for by the Gibbs family since the construction of the building. They have added to its collections over time, and have maintained the building and

Research past stories and articles using the AJ Plus archive, again accessible by a button to the left of the homepage. It also holds articles from Construction News and New Civil Engineer.

Check out all the latest news stories, including last week's updates on the Millennium Dome saga, Wimbledon FC's move to Milton Keynes and others, including Mi Architects' plans to build a new 'tidal clock' in Poole. The project (right) by the practice's Steven McGill and Rebecca Granger, includes a monumental stone wall constructed in local Portland Stone adjacent to the clock structure. It depicts Poole's 'vibrant identity' and fossils are sandwiched between the blocks.



The Architects' Journal welcomes your letters, which should preferably be typed double-spaced. Please address them to the editor at 151 Rosebery Avenue, London EC1R 4GB, fax them on 020 7505 6701, or e-mail them to angela.newton@construct.emap.com to arrive by 10am on the Monday before publication. Letters intended for publication should include a daytime telephone number. The editor reserves the right to shorten letters.

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gardens to a high standard – something that can be said of few owners of great buildings. The current crisis has come about because none of the 19 inheritors can afford to buy out the other and continue the fine work of their predecessors; ergo the executors of Lord Wraxall's will have a duty to sell the estate, house and contents.

Perhaps rather than asking what Tyntesfield is to be saved from, he should ask himself what it is to be saved for. Sadly, his less than sunny disposition towards heritage seems to have blinded him to the fabulous opportunities Tyntesfield presents for education, inspiration and conservation. The heritage world has not called for the house to be preserved in aspic – indeed, the calls have been for quite the opposite, as Martin will hopefully realise from the copy of our report on the building, collections, gardens and parks, which is now winging its way to him.

Developers and architects winning a permission or a commission is barely newsworthy (in the broadsheets) because it is a common occurrence, whereas major victories for a more altruistically minded heritage lobby are somewhat rarer and thus a cause for celebration. This is a rare opportunity: let us hope Martin at least finds the saving of this magnificent house and its collections for the nation worthy of his praise.

**Adam Wilkinson, secretary,
Save Britain's Heritage, London**

Prediction on property confounds disbelievers

Yes, I do remember the idea about property speculation, touched on by Martin Pawley, that housing would eventually end up 'earning more money than people' (AJ 9.5.02). It was as incisive then as it is now. My memory, however, puts it some-

where in the mid-1970s, in *Architectural Design* and in the run-up to an election. No matter – memories play tricks. I do remember, however, trying to explain the observation, unsuccessfully, to others. They were dismissive then, but I will try again, 30 years on. Thanks for the reminder!

Crawford Mackenzie, Dundee

Many deserve plaudits for Manchester stadium

With reference to the article on the Manchester stadium (AJ 16.5.02), I think it more appropriate to give credit where credit is due. As project manager in the complex's early years, I am well placed to do this.

The genesis of the stadium was 'The Eastlands Challenge', a competition of unprecedented scale and complexity organised in 1992 by Manchester City Council. This required consortia to 'design, build, own, finance and operate a mix of commercial and sport facilities' on the site. Intrinsic to this was a need to produce a strategy by which the development would act as a catalyst for East Manchester's regeneration, to produce an integrated transport strategy, and to propose decontamination.

The site was as 'brownfield' as one could wish. It included ancient coal mining shafts of uncertain location and contained every sort of pollution. It was crossed by the Ashton Canal, and by the River Medlock in conduit, and it was to be further crossed by an extension to the Manchester Metro.

I was recruited by AMEC Regeneration, headed by David Taylor, later head of English Partnerships, in order to put together an AMEC bid.

As an architect it was exciting and informative work to act as the client's representative and project design director by co-ordinating the activities and direction of the very many specialist disciplines required.

We put together a 'dream team'. We were impressed with the vitality and imagination of James Burland, then with Arup Associates; and the hand-in-glove way he worked with the talented Terry Raggett, Arup's assigned project structural engineer. We wanted North American stadium experience and construction know-how, so achieved something of a shotgun marriage between Arup and HOK Sport.

Professor Hillier of London University had recently worked convincingly with Sir Norman Foster on 'Urban Syntax' disciplines on the King's Cross project. Both agreed to join us on masterplanning.

The site, with its many severance lines, needed integration with its surrounding population if the stadium was to be a catalyst for regeneration as intended. Joe Berridge of Toronto, with a local track record in Hulme, worked on the larger regeneration strategies. In all, 29 companies and more than 100 individuals contributed massively; too many to list and credit here.

This was probably, in retro-

spect, the very first model for PFI projects. Even given generous fee deals by the design team for the competition stage, the cost of all this to AMEC was formidable. Interestingly, of all the original team members, only Arup's seem to have survived to the end.

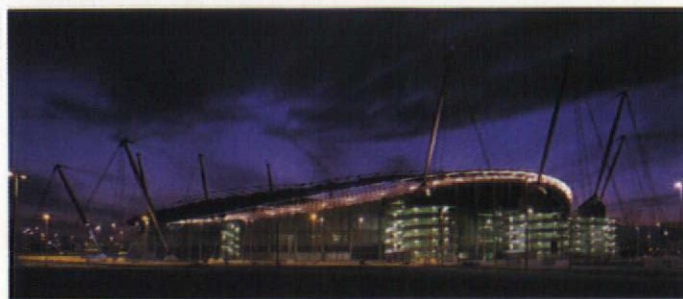
James Burland had worked with Phillip Cox on the Sydney football ground; and the sweeping curved roofs were thence derived, being developed further on Burland's Johannesburg Stadium, on which it appears Patel assisted. HOK Sport's stadium team was based in Kansas City; and the design team went there for a week-long brainstorm from which, it's fair to say, all the ingredients of the present stadium design and philosophy were derived. The spiral entry towers, for instance, came from HOK's stadia in Kansas City.

The AMEC team duly won the competition; months running into years were spent developing proposals to suit changing requirements, and in supporting Manchester City Council in its Olympic, National Stadium and Commonwealth Games bids. EDAW did an excellent job on masterplanning after Foster's went with opponents Wembley on the National Stadium bid. Rod Sheard of the Lobb Partnership (as was) contributed when a closing roof became a possibility.

Manchester City Council, as creators of the project, cannot be praised enough for its astonishing skill, determination and perseverance on this and other major projects radically changing the face of their great city.

It would be disappointing if only those present at the end got the credit for the whole huge exercise. The stadium is a fine piece of architecture combining beauty with functionality, as indeed James Burland's very first sketches promised.

Patrick Thomas, Monmouth





will also

Change in RIBA rules on funds could be Hyett's breathalyser

I am sitting high above the North Atlantic looking down on clouds of distinction hovering over a watery desert, wondering if Paul Hyett is the youngest RIBA president ever. I cannot check this here, but I suspect he is one of the youngest.

As his term in office reaches the mid-way point, I would like to ask him what he thinks is likely to be his greatest achievement during his presidency, and also what he will do next. I am thinking about Barbara Castle, who died aged 91, who, at the height of her political career, was very effective in making things happen. One of her achievements was the breathalyser, which has saved many lives since its introduction. She made this happen. What is Paul Hyett's breathalyser?

Ronald Reagan was the first Hollywood actor to become president, and it looks as though Bill Clinton may soon be the first president to turn himself into a TV star. Mr Clinton has been talking with NBC television about becoming a talk show host. The ex-president wants \$50 million a year for what would be a daytime show, in direct competition with Oprah. It is thought that Clinton, who was the youngest president of the US, is missing the limelight. Apparently, he has been wondering what his second act should be after the White House.

Our incumbent president at Portland Place also enjoys the limelight, and will probably find it dull to go back to the millstone of general practice. I can see Paul absorbing himself into the nether regions of BBC 4 with occasional topical interviews on BBC 2 and Radio 4.

Our president could be very good as some sort of environmental probe to ensure fair

play. Even though I felt he did not understand my comments on the RIBA in this column, I still have a respect for him. This respect is sometimes tested – like when I read about him asking for all new presidential candidates to declare what financial backing they might have.

He was a little quick to condemn Annette Fisher as I am not sure that she has done the things she was 'accused' of. And even if she has, whether it is such a bad thing. The fact that she may have been the poorest (financially) of the runners probably means that it is awkward for younger architects to compete for this august post.

I am pleased that she came forward as a possibility because, before Fisher's presence, the choice was a poor one. It is too late for the president to make calls for accountability at this stage: the horse has already bolted. But surely the RIBA should already have rules in place? Even if they do exist, I then worry about whether it is possible for the poorer members of our profession to become elected if, as it appears, a campaign has to be mounted at a cost.

I fail to see exactly where the money is needed, but I would like to suggest that in the interest of fair play, a donation should always be made to any candidate who has an income below a certain level to make sure that they can afford to stand without either disadvantage or the need to raise funds.

Perhaps this sum of money could be deducted from the current president's future income as a star of the media.

WA from seat 6A, flight AC 849, London to Toronto

'The fact that Fisher may have been the poorest (financially) of the runners probably means that it is awkward for younger architects to compete for this august post'

people

He's been here before, but as an odd-jobbing newspaper boy back in 1964. Now Michael Lynch has the odder job of heading one of the world's most renowned but troubled arts complexes.

The 51-year-old Australian is the latest high-profile leader to be enlisted by another 51 year old, London's South Bank Centre. Lynch becomes SBC chief executive in September and freely admits he will need his trademark tough-but-chummy approach for a masterplan that has stalled for 15 years.

'User-friendliness is critical' is his first impression of a stretch of riverside condemned by MPs three months ago as squalid and menacing. Times have changed since Lynch's last prolonged stay in England, a year with his father in Surrey when he was 14 years old.

Much of that change is cultural, and he's keen to bury the cliché of Australian backwardness. 'When I visited with a major arts programme in 1996, most of the TV footage of me was juxtaposed with Dame Edna,' says Lynch, who was lured from the Sydney Opera House by a £150,000 salary.

'I suspect things have moved on. I'm more comfortable this time round and feel on a pretty equal footing. You've embraced your national soccer manager in a very magnanimous way, and as another middle-aged balding guy from abroad, I should be in reasonably good shape to cope.'

Behind the humour lies a cold determination. As chief executive of Sydney Opera House, Lynch coaxed Jørn Utzon back into the concrete fold after an unhappy absence of 33 years. The opera house had a 'tumultuous history' and bad acoustics. Lynch pushed through a £20 million refurbishment over four years, and has to do much the same at Royal Festival Hall.

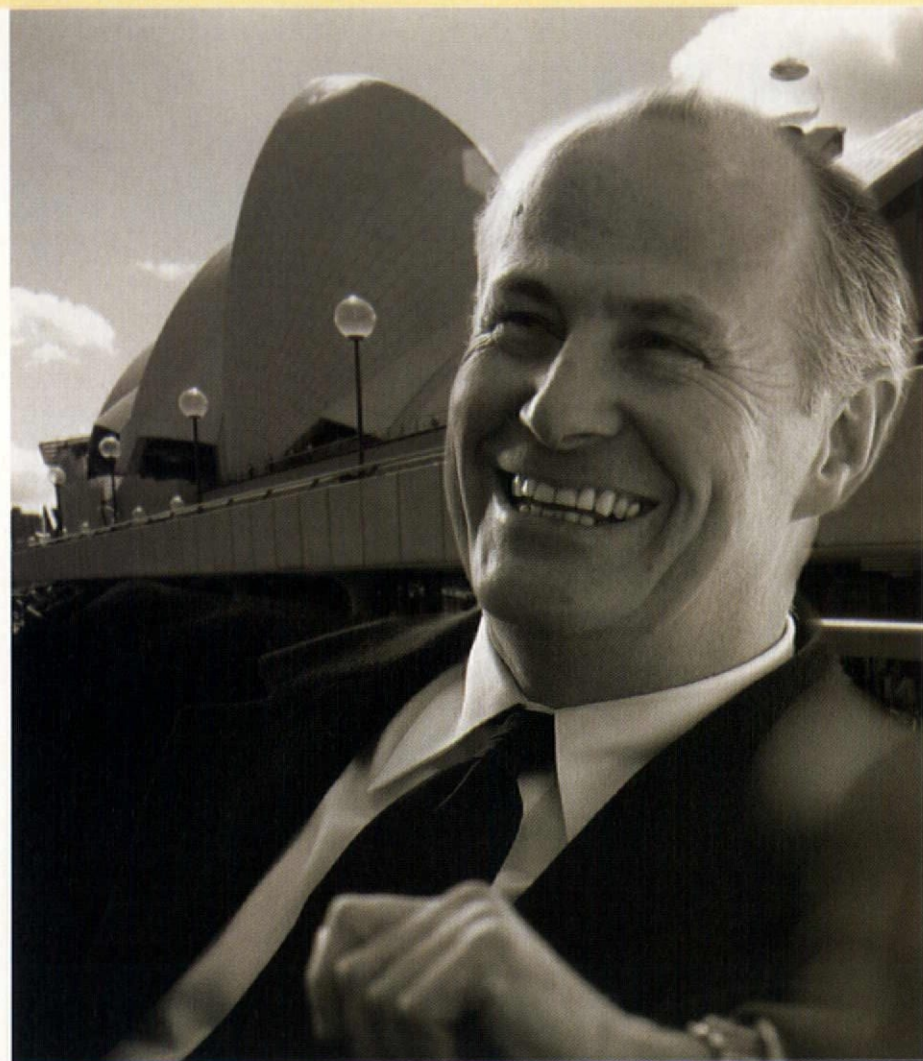
'What I have learned over the course of four years at the Sydney Opera House will inevitably inform how we move forward over the next few years here. It is with some regret I am leaving the opera house – I was on a five-year-contract – but after much soul-searching I knew this was too good an opportunity to turn down.'

In the meantime, he is looking at disaster areas here to battle-harden himself for the SBC's grey ramparts. 'We have kept close tabs on the Millennium Dome and Wembley Stadium. The Wembley experience is a very salutary example of how not to move forward, and that's why we

Michael Lynch's latest challenge – as the new chief executive of the unloved South Bank Centre – will seem like a cakewalk compared to coaxing the reclusive Jørn Utzon back to the Sydney Opera House

by jez abbott

access all areas



want to get more familiar with the masterplan and framework. There are no nirvana-type solutions we can plonk down.'

This may explain why he gives nothing away on the current masterplan by Rick Mather Architects, which could cost up to £200 million. 'I'm very interested in what's on the table. However, I would prefer to be more familiar with who is using it and the views of the staff before I say what we do.'

'But it's such a fantastic site with extraordinary opportunities, despite the problems. I'm coming with an outsider's view and hope it will be tempered by views of the staff. I need a clearer idea of how it sits in the broader plans of the council, the mayor and the government before I start putting my foot in.'

Lynch, who studied politics and lists 'macro politics' as an interest, has no doubt that he can handle those who have

contributed to the dithering arts scene in England. He has worked closely with several Australian premiers and could be in his element beside Tony Blair's pal Lord Hollick.

The Labour peer and SBC chairman has given the Aussie three months to cement an arts vision and artistic remit before focusing on building volumes, costs and the future of threatened buildings. Lynch feels he is up to it, coming from a breed of gritty arts leaders grounded in all aspects of administration.

'My generation of administrators grew up with a broad perspective, combined with a close understanding of what our centres do and how to work with the people running them. It gives us less hidebound ideas on how to do things.'

'In Australia, we have to survive on less money, we have to fight harder, and this is seen as valuable.'

Lynch is equally at ease taking a macro

view of arts from the stage to the big screen and insists any changes will be driven by the needs of the arts.

'I'm not interested only in grand architecture – I want the arts to work at their best. We will be looking at hard questions and the connection between what kind of people use arts centres and what they do when they arrive here.'

'But as well as focus purely on the arts we must look at big urban issues, such as the internal redevelopment of spaces and buildings and their future uses in design terms. This is a major cultural regeneration project and we have to engage with the masterplan in terms of urban design.'

Before the Opera House he was general manager of the Sydney Theatre Company, which followed a highly successful stint as a casting director for *Crocodile Dundee* and Kylie Minogue films.

'I didn't want to be seen as the new Crocodile Dundee then, and don't want to be seen as the new Les Patterson now,' he says, before you can say low-culture or Rupert Murdoch. Lynch is also the chairman of the Australia Asia Pacific Performing Arts Centres and used to head the Australia Council, the equivalent of our Arts Council.

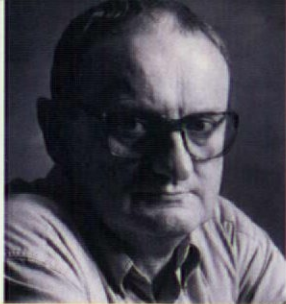
This training ground will become even more distant history in September when Lynch moves here with his wife Crissy Sharp, currently a general manager of the Sydney Festival.

'I always thought I would like to work outside Australia and am happy to do it at the age of 51 rather than 21. At my stage in life you want to look at new challenges, and to be offered this was thrilling and something I jumped at.'

A series of short visits is helping to ease him into SBC territory. His latest stopover saw him touring Foster and Partners' GLA building on an adjacent site, as well as the embattled Hayward Gallery, bang on his new doorstep. Both are superb, he says. But unlike the Royal Festival Hall's 'exciting 24-hour ambience', the Hayward needs closer engagement with visitors and has accessibility problems.

Accessibility is high on Lynch's agenda. As a child he contracted polio, which badly damaged his right leg.

'This job is an excellent chance to think longer term about a legacy for the 21st century rather than look back over the first 51 years,' he says of the South Bank Centre – not of his own years.



martin pawley

Here is the news: now pick and choose what you want to believe

Sometimes news items appear in the media that seem to have no connection with reality. Indeed, so unprepared are we for the way they drastically cut across conventional wisdom that we have to leave them alone, in the hope that they will go away as mysteriously as they arrived.

Probably the most dramatic example of this in recent weeks was the claim that farm animals in the fenced off fields surrounding the Chernobyl nuclear power station had not died of radiation sickness like the Hiroshima and Nagasaki victims of the Second World War, but were still getting along famously 16 years later.

'Most people think the zone surrounding the reactor is an apocalyptic wilderness occupied by two-headed monsters,' confessed a recent visitor to Chernobyl to the *Sunday Times*, 'whereas it appears to be exactly the opposite.' The newspaper quoted a UN official who insisted that Chernobyl 'represents an extraordinary environmental opportunity for tourism'.

Saying that we can learn to live with radiation after all seems amazing, but the story was virtually ignored. Perhaps it was deemed too confrontational for a country busy decommissioning its nuclear power stations.

Well, let's try another one. A recent criminal case reported in *France Soir* seems equally amazing – it too cuts across the conventional wisdom that says priceless pictures in art galleries are closely guarded by elaborate security systems.

This time the case is a mother-and-son drama in which the son is arrested so the mother chops up and throws into a canal the estimated £1 billion-worth of old masters that he had stolen from provincial art galleries all over Europe in an eight-year spree of art thefts. The son had never tried to sell his haul of 60 paintings and 112 art objects but, in a fit of rage at his foolishness in getting caught, the mother had mutilated and tossed into the

Rhine-Rhône canal paintings by (among others) Pieter Brueghel the Younger, Lucas Cranach the Elder, Watteau and Francois Boucher. When apprehended by the police after trying to steal a bugle from a museum in Lucerne, the son confessed to more than 100 thefts, but insisted that they had all taken place in broad daylight, without break-ins, during hours when the galleries and museums were open.

A spokesman for the specialist division of the Surete dealing with art crimes was quoted as saying that this was possible because most provincial galleries could not afford to insure or guard their collections. This in turn was confirmed by the Art Loss Register, which admitted that security problems in Europe have led to nearly £6 billion-worth of art being stolen from galleries and museums every year. Did you know that?

Perhaps there is room for just one more paradox. In England, 100 years after it was first proposed, the first experiments in milk delivery by postmen have been started. Unfortunately for the prospects of this bold initiative, over the same 100 years milk

rounds have declined in number by nearly 80 per cent and refrigerators have leaped from being in none to being in 98.9 per cent of British homes.

More recently, sales of large containers of milk (one litre or more) from supermarkets – which have themselves introduced competing home deliveries – already vastly exceed milk float deliveries. So are these experiments worth pursuing?

Better still, is it worth Consignia, which handles 250 million items of domestic mail a month, continuing to compete with electronic mail, which averages 550 million items a month? Clearly the milkman and Postman Pat are leftovers from another age, as is the unguarded exhibition of original works of art instead of digitised copies – and yes, Chernobyl really is where it's at this summer.

'Security problems in Europe have led to nearly £6 billion-worth of art being stolen from galleries and museums every year'

a life in architecture

dickie
bird



The world's most famous cricket umpire, with honorary doctorates from the universities of Sheffield-Hallam and Leeds, Harold 'Dickie' Bird MBE says firmly: 'I am a royalist.' And his favourite building? One of the most familiar landmarks in the world – Buckingham Palace (pictured).

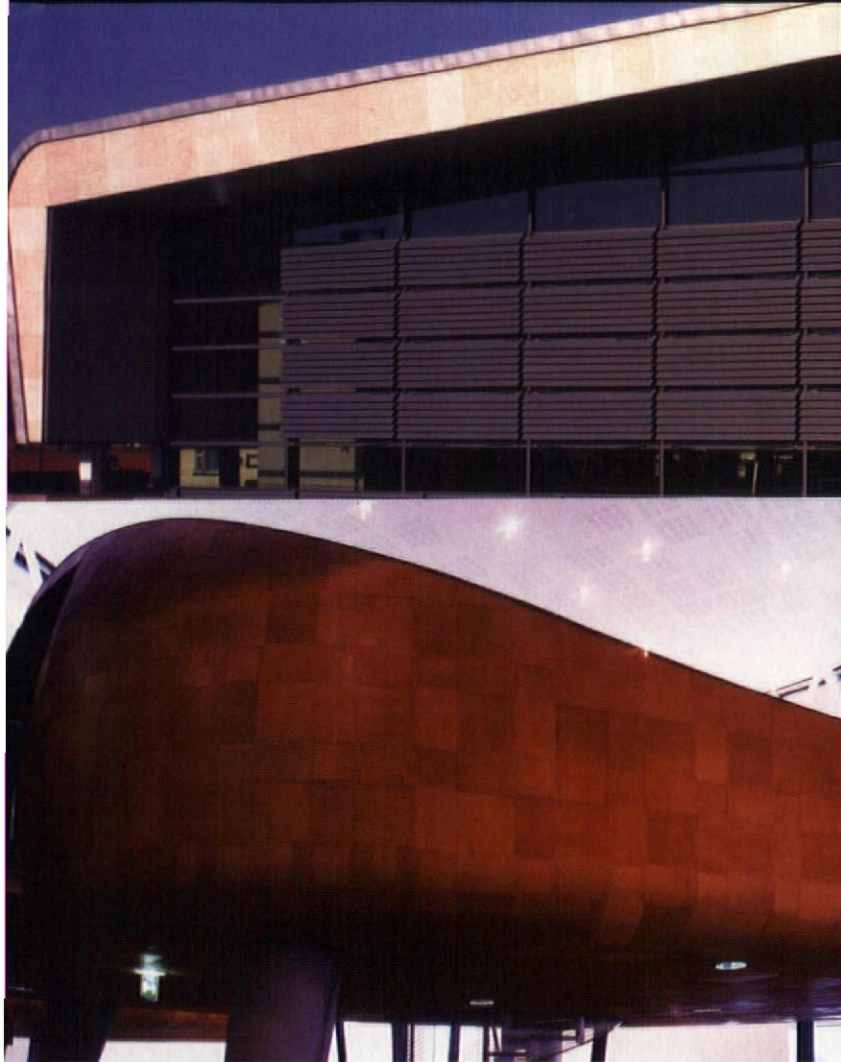
Originally built by William Winde for John Sheffield, Duke of Buckingham, in 1705, it was bought for use as a royal residence by George III in 1762 for £28,000, which the king paid in four instalments. Because of the illness that dogged George III's last years, the house fell into disrepair, and the restoration work required by George IV was entrusted to John Nash. What the public sees now, though, is Sir Aston Webb's east facade of 1913 – 'a tasteful but insipid performance in a French idiom,' is Pevsner's verdict.

Bird says the building is important to him because he has had 'lots of invitations to the Palace and lunch with the Queen.' He adds: 'They do a wonderful job.'

Given Bird's long association with cricket, it comes as no surprise that his other favourite building is Lord's Cricket Ground. Thomas Lord was an 18th-century Yorkshireman who founded the MCC, whose first headquarters was in Dorset Square. The present Lord's was opened in 1814 but a fire in 1825 destroyed the pavilion. Undaunted, the members rebuilt it; today, with Michael Hopkins' Mound Stand and Future Systems' NatWest media centre, Lord's continues to expand.

Eleanor Allen

6 June 2002



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1 – Darlaston Pool, Walsall Architects: Hodder Associates. Timber Engineering: Ove Arup & Partners. 21m roof span made up of 31 stressed skin panels, using LVL ribs lined top and bottom with an LVL deck. Roof fascia clad in plywood. Exposed spruce veneered LVL deck as ceiling and wall finish. 2 – Library pods, Peckham Architects: Alsop Architects. Timber Engineering: Mark Lovell. Pods constructed from curved Kerto LVL ribs, clad with Finnish airplane birch plywood tiles. 3 – Sibelius Hall, Lahti, Finland Architects: Artto Palo Rossi Tikka Oy. Structural Engineering: Turun Juva Oy. Glulam structure with Kerto LVL balconies. Facade, walls and ceilings clad with birch-faced plywood.

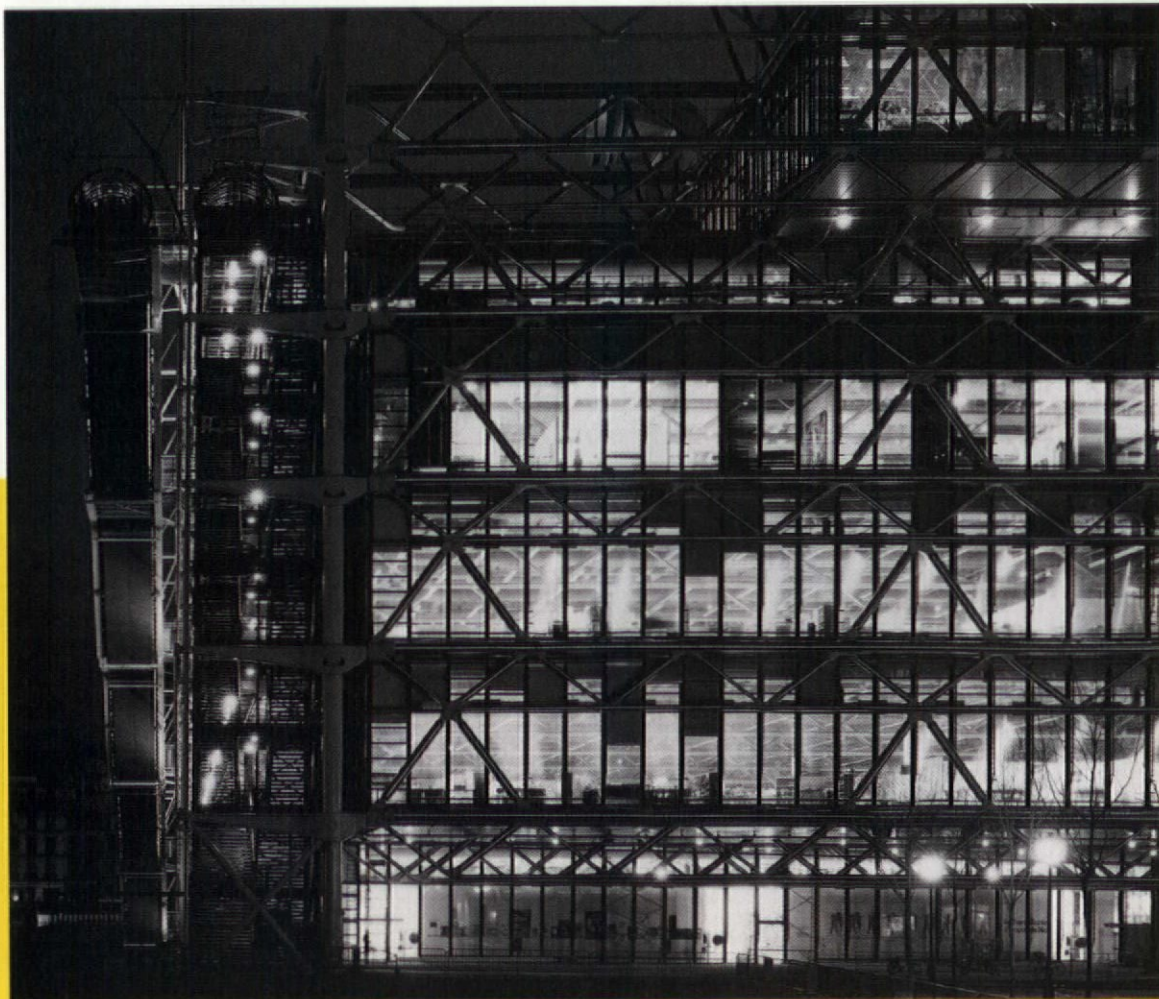
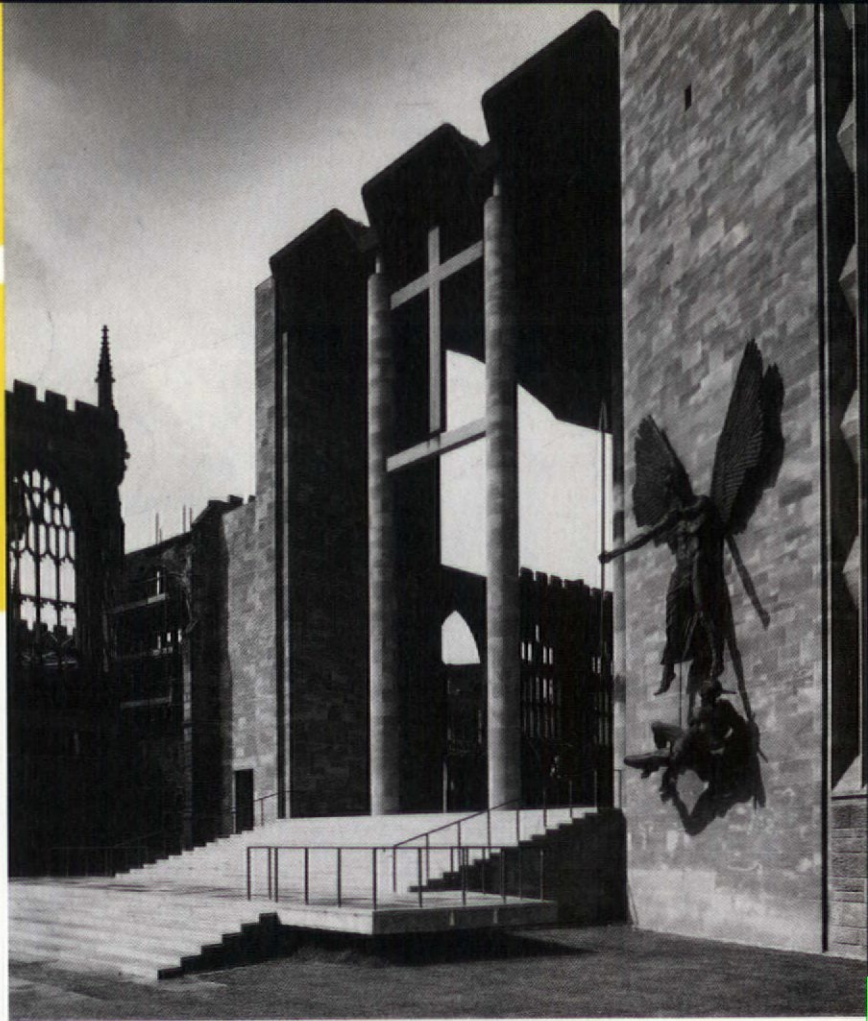
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ai interbuild 50:50

Back to the future

What are the most important, interesting, or treasured buildings, innovations, products and engineering projects of the last 50 years? Where are we heading in the next 50? This issue coincides with the 50:50 exhibition at Interbuild, where these questions are addressed by 50 experts. Which would you choose?





Above left: Stirling and Gowan's Leicester Engineering building, 1984
Above right: Basil Spence's Coventry Cathedral, 1962

Far left: Wright's Guggenheim in New York under construction in 1959.
Left: Piano and Rogers Centre Pompidou, 1977

buildings

Of all the categories within 50:50, there is least consensus about buildings – perhaps due to the wide choice and the very personal response they evoke. Even if two people chose the same building, it was for different reasons. So there is no statistical point to be made by noting that most votes went to Sydney Opera House, followed by Ronchamp and Centre Pompidou. The Farnsworth House, the Guggenheims in New York and Bilbao, and Broadgate in London got two votes each.

Several people see their chosen building as an architectural turning point



Such as ABK's **Richard Burton** with Stirling and Gowan's Leicester

Engineering: 'With its use of materials and its unexpected forms, it broke free from the new orthodoxy of white Modernism and showed the way for a new direction in British architecture.'



For **Eva Jiricna**, Wright's Guggenheim in New York is 'the first real example of modern architecture of the present time.'



For **Ian Liddell** of Buro Happold, Foster's Willis Faber is 'the landmark in glass-clad buildings.'

Although there were those Mies sketches, no one before had actually used glass totally for the skin of a real building.'



Sutherland Lyall, is another Willis Faber enthusiast, seeing it as 'an exquisite jewel, the

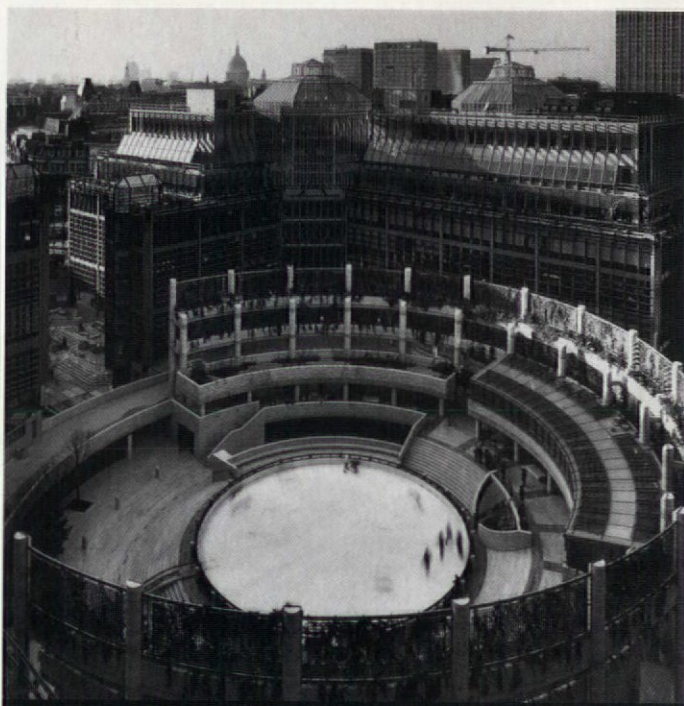
Chiswick House of the estuary, ambiguous because it is there one minute and the next is a collection of reflections of the surrounding buildings. And none of the agonising about how to fit a rectangle into an irregular mediaeval plot.'

And then Lyall outdoes the recent spate of Foster-bashing with the worst put-down an architect can suffer: 'The best the Foster office will ever do.'



For **Chris Blythe** of the CIOB, Roger's Inmos Factory

brought a degree of civilisation to factory work. 'For someone who had spent their working life up to that point in some of the grimmer factories of the West Midlands, Inmos was just out of this world.'



Broadgate, for **Peter Rogers** of Stanhope, who was involved in the project, made an urban design contribution as well as helping reshape the construction process. 'It was a seminal project both in terms of the urban infrastructure and the creation of spaces for people – and in the way it was procured and built. It represented a fundamental change in attitude to the whole construction process. Collaboration works better than confrontation. More people are negotiating and making a better effort to work together.'



A humane working environment is also the focus for **Paul Morrell** of Davis Langdon &

Everest with Hertzberger's Centraal Beheer. 'An example of what an enlightened client and an imaginative designer can achieve if they look below the skin of received wisdom. It is notable for the attempt to allow individual expression and flexibility in use, for the principle of designing outward from the key functional unit, and for an architecture rooted in social principle.'



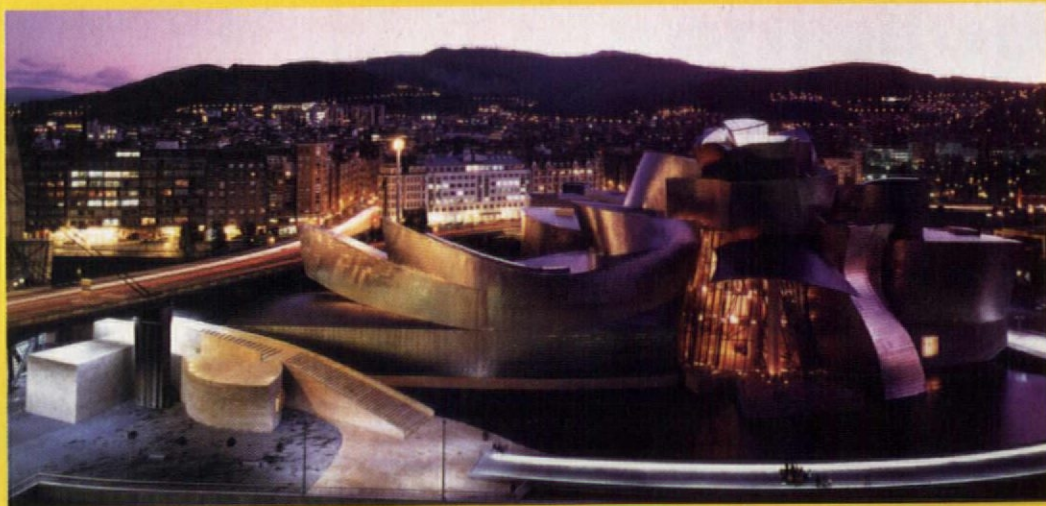
Architect and contractor **Andrew Rabeneck** sees Robert Venturi's Mother's House as a marker of

new influences on US architecture. 'It had the greatest effect on my thinking about architecture (as a student at Penn State) because it was so different in spirit from the exaggerated poetics of Louis Kahn, another local guru. In this modest, timber-framed house, the sensibility of Italian "continuata" I so admired in the work of Albini, BBPR, Castiglioni and Gardella, had finally crossed the Atlantic.'



Foster's Willis Faber building in Ipswich, photographed in 1975
Top right: Broadgate Forum in London, 1988

Frank Gehry's Bilbao Guggenheim won votes not just as a piece of architecture but as a sign of how form-making will develop, given enough IT



Some contributors' chosen building marked a turning point that was more directly personal



Engineer and acoustician **Derek Sugden** finds in Scharoun's Berlin

Philharmonie a new direction in acoustics, breaking the audience into sections to give a multiplicity of side reflections into the audience. This led to today's best of all possible halls, where this breaking up is combined with the conventional shoebox, as in the recent Bridgewater Hall.



For engineer **Anthony Hunt**, the Skylon is not only admirable; saying so to Felix Samuely got him a job in Samuely's office.

Some building choices focus on putting architecture on the map, showing its potential influence



For **Terry Farrell**, 'Frank Gehry's Bilbao Guggenheim has become a symbol for the power of architecture. It has got art back into architecture. Until I saw it in the flesh, I hadn't realised how it pieced the elements of the surrounding city together.'



Similarly, **Paul Hyett** sees in the Sydney Opera House '... the absolute and

unrelenting power of architecture at its best to lift the spirit to give identity and to express cultural aspiration.'



Peter Andrews of the European Construction Industry Federation sees the rebuilding of Basil

Spence's Coventry Cathedral as 'an act of faith, trust and hope intended to echo the Church's ministry of peace and reconciliation'.



Rab Bennetts feels Barry Gasson's Burrell Museum '... had a cataclysmic effect on

Scottish architecture. It reawakened an interest in culture in Glasgow. When it was built, its design was quite independent of architectural fashion. Now it is still a stunning piece of work.'



Bob White of M4I sees the London Eye as the foremost of the Millennium projects. 'I

believe that this is the project that appealed most to the imagination of the British public. The London Eye is not just an emblem of the 21st century, but celebrates the energy, aspirations, creativity and ingenuity of the construction industry at its best.'

Many chose to focus on their own savouring of a building, particularly the Ronchamp fan club.



Jan Kaplicky 'saw it rather late in my architectural life.

Everything about it was amazing. There were things like the sloping floor that I didn't know about before. It's just an extraordinary building.'



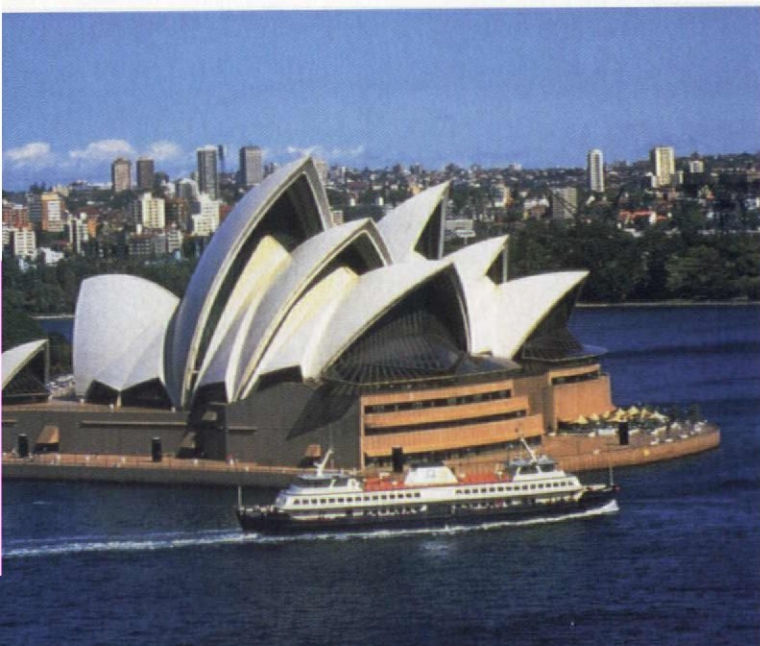
For cyber-guru **Neil Spiller**, 'Ronchamp is the high point. It

doesn't play by the rules. It's clumsy and beautiful at the same time. I hate all that white, clean and neat Mediterranean Modernism. Which admittedly was Corb's responsibility too. But he got funky at the end.'



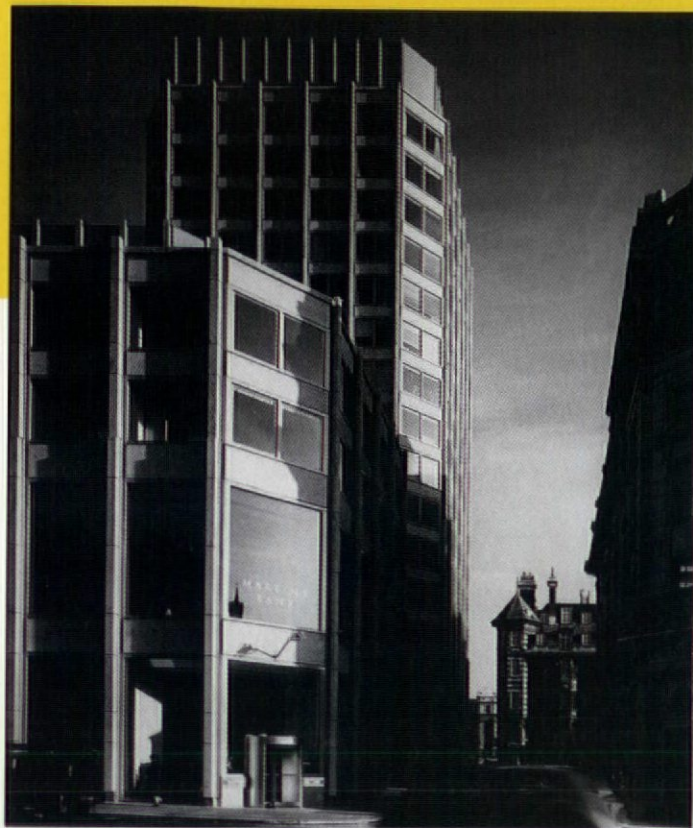
And for **David Rock**:

'This tiny church's majestic, sculptured strangeness and power conveys a religious conviction and atmosphere of the highest order. Stunning both inside and out, its design transcends most architectural concepts of its time'



'... the absolute and unrelenting power of architecture at its best ...' Paul Hyett

buildings



Left: the Smithsons' Economist group of buildings in London's St James, 1965. Below: Mies' Farnsworth House in Illinois, 1953



'I wouldn't have thought what is simply in the end a single-storey house could be infused with such an aura ...' Paul Finch

In a similar personal vein are several people particularly struck by encountering the building in the flesh, or rather the metal and glass



CABE chairman **Stuart Lipton** found in Piano & Rogers' Centre Pompidou 'a seminal

building which creates place, life, activity, and regeneration. The clarity of the internal spaces makes this project adaptable and practical. It's a building to be enjoyed from the escalators, from the facade, as an intervention in an old market area. Standing in the piazza is an unforgettable experience – sensing the fun that the place engenders, the running debate about the architectural context, the sheer colour and drama.'



Enjoyment too for Atelier Ten's **Patrick Bellew** of Piano's Beyler Foundation in Basel. 'It's

a long low box with largely solid walls and a roof made almost entirely of glass, which it shouldn't be, but... Piano handles the light beautifully. It is especially good at setting up the sculptures.'



And amusement. The Smithsons' Economist project created three

blocks and a new side bay to Boodle's Club. **Simon Allford** 'loves the image of the English gentleman in the bowler hat walking through a new vision of the world.'



Paul Finch enthuses, 'The Farnsworth House is such a revelation. I wouldn't have thought that what is in the end simply a single-storey house could be infused with such an aura, could achieve such a complementary, harmonious relationship between materials, space and the landscape outside.'



Chris Wilkinson too went for this house 'because of the way its interior connects with the outside. It's a powerful intervention in a wonderful natural setting. And also because of the clarity of layout. It's just a truly modern space.'



John Outram is moved by art more than architecture in his choice of Philip

Johnson's Rothko Chapel. 'As architecture, it's quite undistinguished; octagonal like a baptistery descended from the Tholos tomb. It houses 14

paintings in eight groups by suicider Mark Rothko. There's this secret tradition among fine artists about painting the painting to end all paintings and then, although it's never said, presumably suiciding. You feel this is probably what happened with Rothko at Houston.'



It is left to the CPA's **Michael Ankers**, who picks Bill Dunster's BedZED project for the Peabody Trust, to wave the flag for sustainability. 'It seems odd to select such a recent development as an example of the industry's finest achievements of the last 50 years. But I am convinced that the achievements on this project will prove to be as significant as any, as we increasingly focus on sustainable development. This project shows how new homes and workspaces can be built that are carbon-neutral over their lifetime, at an affordable price.'

People will still go hmm...

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What do we mean when we say something is a good material? Beyond all the worthy attributes such as ready availability, controllable performance, economy and more, there is a quality of open-ended possibilities that appeals to the designer. Way above everything else, those interviewed for the 50:50 exhibition see glass as the good material, full of design possibilities, both now and in the future as research extends the palette.



Tim MacFarlane sees a lot of possibilities for design in glass. 'What was stopping it was the absence of engineering. The glass industry's priority was not to take on the role of consulting engineer and do yet more one-off design. Now that has changed, and it has come to realise that we are able to engineer any glass system an architect might want to build. So there are new coatings and technologies and shading and insulation. Insulation is the really big challenge.'



Patrick Bellew focuses on dichroic glass. 'Glass is coated with many really thin layers of metal oxide in a vacuum chamber. The glass has the reflected colour of the coating plus a second colour when you look at it from a different angle. When you use it in lamps you get this very pure, deeply saturated, coloured light. Dichroic lamps are used at amazing rock shows. James Carpenter in New York has done fantastic architectural facades with bits of dichroic glass.'



Chris Wilkinson picks up this theme, too. 'It's not there yet. What I'm interested in is intelligent glass and the possibility of such things as zero U-value glass. And then you think of photovoltaic cells, which are bound up with the ideas of glazing and the way buildings could be powered.' Paul Hyett sees photovoltaics as central to sustainability.



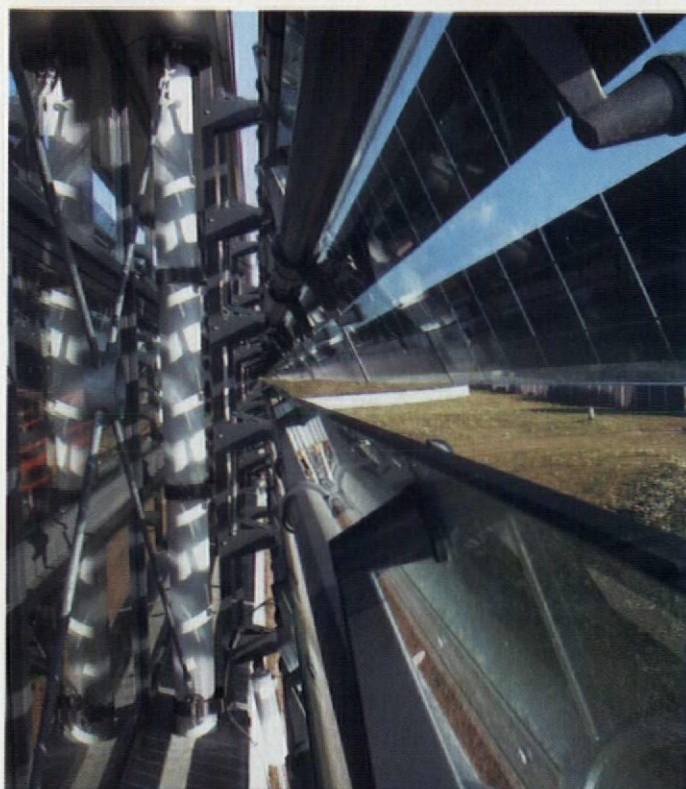
Richard Burton's choice is reactive glass, 'glasses which change due to the sun or reflect radiation, maybe selectively. Glass has become fascinating and, being treated sand, is such a sustainable material. And now there are prototypes of self-cleaning glass.'



Peter Cook sees smart glass as wonderful – but also slightly weird. He describes it as 'the ultimate gismo which does things effortlessly to change your life.'



For **Peter Rogers**, 'the fundamental thing is bringing light and enjoyment into buildings, and particularly connecting people to the external environment. New glass technology is allowing that to happen in a very friendly way.'



Glass and ETFE are not the only products with an energy story to tell. **Rab Bennetts** picked the louvre. 'It's very simple. It allows you to see the view out and stop the sun from coming in. And the rain. Opaque or translucent or transparent – metal or glass or timber – it's an increasingly sophisticated device. It is needed because of the environmental costs of overheating and because it can simultaneously enhance the visual and environmental qualities of architecture.'



Not to be outdone by the glass lobby, there are supporters too for ETFE foil, a material that a few years ago tended to be thought of as a cheaper, lighter, shorter-life glass-substitute. But it is gradually beginning to develop its own vocabulary



As **Ian Liddell** points out: 'We pioneered its use in 1990 in the atrium of Sheppard Robson's Chelsea and Westminster

Hospital and made it respectable. All sorts of developments have sprung from that, including Grimshaw's Eden Project and Wilkinson Eyre's Magna Centre. 'When you use it as a triple-layer, intelligent, pneumatic structure, as at Festo's HQ in Stuttgart, you can print it and develop a very high level of control over solar gain. It has a long way to go, not so much as a substitute for windows, more an alternative to sky.'

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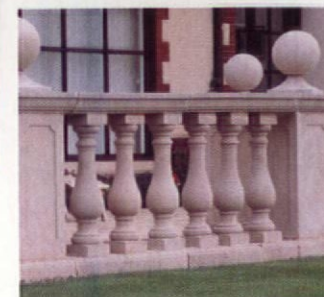


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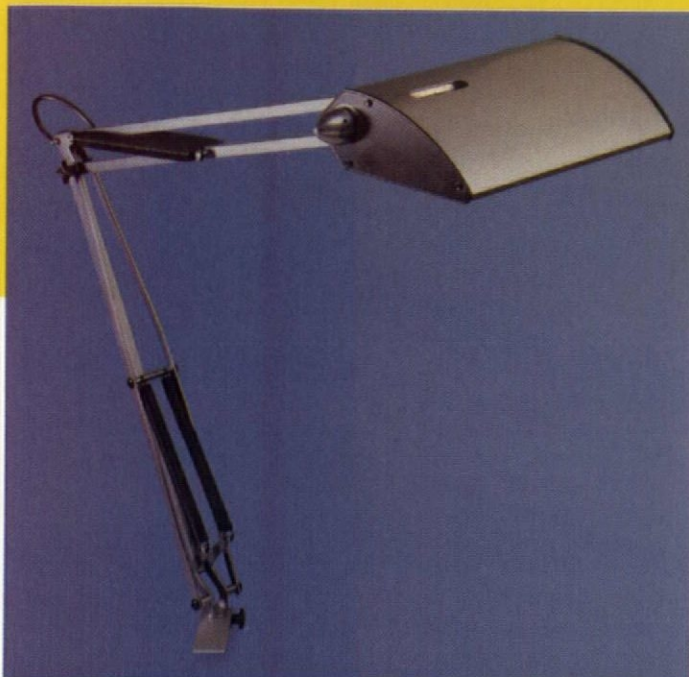
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products



Services engineer **Max Fordham** went for the Anglepoise lamp. 'People keep inventing task lighting and some of it is pretty stupid. But task lighting is what's coming. It's fantastically important that light is right for the way you work and the Anglepoise lamp enables you to achieve that.'



From the couch potato school of energy conservation, **Louis Hellman** seeks the universal zapper. 'The remote control is not yet applied to many intelligent buildings, but the idea that you modify your building's ambience, security, sustainability and style from the comfort of your recliner or car is hard to resist.'



Some conventional technologies get the vote. **Stuart Lipton** is an advocate of prefabrication, looking for factory quality on site.



Andrew Rabeneck picks stud/sheet partitioning. 'It has transformed the delivery of basic, low-cost products into the finished building, eliminating wet processes, speeding delivery and increasing the recyclable content of buildings. We take them for granted but they transformed both commercial and domestic construction.'



Tony Hunt is in raptures about the socket-head bolt: 'It's a bolt with a knurled head and a precise hexagonal hole. I've got boxes of them in black, stainless steel, chrome and cadmium plate. It's the most elegant piece of fastening ever designed. Fred Scott used them in his Supporto chair and the Eameses on theirs. I'm using them on a current bridge design.'



More pragmatic, **Derek Sugden** eulogises the HSFG (high strength friction grip) bolt: 'You used to design bolted joints for shear, but you knew the real connection was the friction between the plates. The HSFG bolt has a system where you calibrate the tension and the friction between the elements and know exactly where you are.'



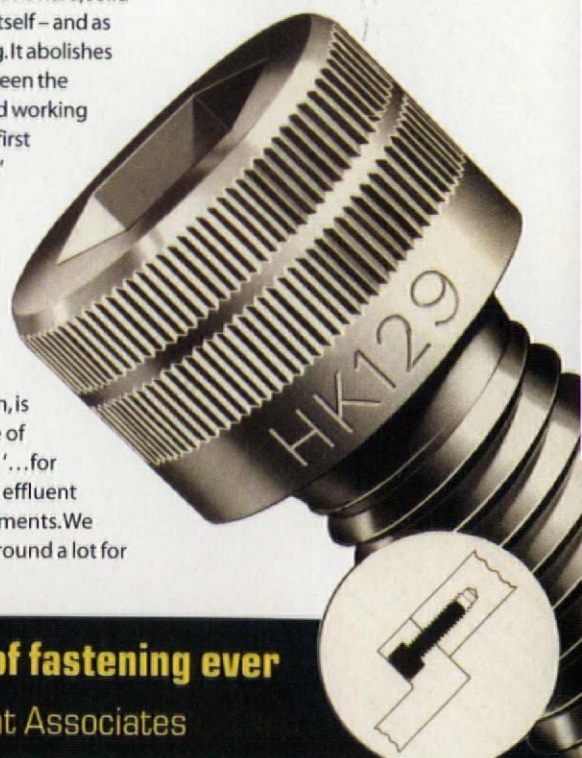
John Outram's choice may not be a surprise. 'Through-colour concrete with inlaid, scripted surfaces. This is the first designer material that is hard, solid and alien as matter itself – and as friendly as a painting. It abolishes the distinction between the cosmetic surface and working matter. I call this the first photolithic material.'



Equally personal, but perhaps saying more about personal tragedy than design triumph, is **Neil Spiller's** choice of pumped plumbing: '...for being able to pump effluent vertically from basements. We have the plumber around a lot for our macerator.'



Above left: the Anglepoise, now updated with compact fluorescent and glare filter. Above: John Outram's Wadhurst Park



'...it's the most elegant piece of fastening ever designed' Tony Hunt, Anthony Hunt Associates

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innovations

Not surprisingly, IT in all its guises was the most popular choice as a focus for innovation. Interest ranged from new design opportunities, both in form-making and analysis such as multi-storey frame design and supply chain integration generally, to specifics such as e-tagging of products and components to track where the products are in the construction delivery process. The beginnings of IT on site also won votes as a promising technology.



For **Terry Farrell**, CAD 'frees us from the drudgery of repetitive drafting (and) allows us to be more ambitious.'



Cecil Balmond of Arup enthuses about 3D form-finding software, describing it as 'a product that turned into a compelling language ... the high-strength tension cable, leading to wire and strut format high-tech curvilinear cable networks.'



For **Paul Morrell** there is a bigger picture 'in the microchip and its progeny. CAD is the route to a new discipline in construction information, as well as making possible geometries that could not have been achieved without it.' He adds: 'The Internet really will change the way we do business.'



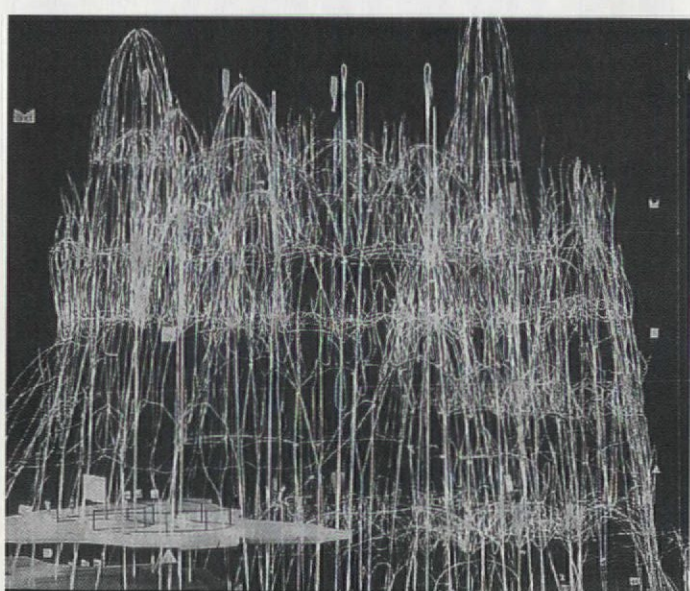
The possibilities of being connected are important too to Arup's **Bob Emmerson**.

'Multi-centred working and the integrated coordination between all elements of the building industry are now achievable. This is only the beginning.'



Tim MacFarlane of Dewhurst MacFarlane sees CNC machines' potential to 'allow a

whole new interface between design and making. It is the shortening of the hand-mind process. The new computer modelling, cutting and shaping can deform the skin and extend it. The cost is still prohibitive, but I suspect they will develop ways of modifying glass shapes using air pressure, which is much easier to do but more complex to set up. Whatever, these innovations will bring the maker and the designer closer together.'



Other technologies appeal, too. **Max Fordham** sees freedom in shells. 'Frei Otto's tree structures led to the whole lightweight thing. He partly developed the idea using upside-down models made from chains. These form an inverted arch-like shape – an arch has no bending moments and is in pure compression ... the structure can be very thin.'

Opposite, top left: large span, light cable nets. Opposite, below left: form-finding with chains – Gaudi predating Otto. Right: Outram at Rice University. Below: scaffold-surround images during station refurbishment, from Scanachrome. Bottom: Chris Wilkinson's scheme



John Outram is excited by 'computer-controlled, four-colour acrylic paint spraying because of its ability to enlarge to the scale of whole buildings, with perfect fidelity, the architect's original hand-drawn designs of surface-scripted decoration. It's just like making a scale drawing that is then built full-size.'



Another graphics vote, from **Sutherland Lyall**, went to 'the massive scaling-up of inkjet technology to print facade-sized images. These are used for safety screens and for advertising on new and refurbished buildings. They cheer up the street and lull us into the hope that what lies behind may turn out to be just as lively.'



Peter Rogers' favourite innovation is structural grade Velcro. 'You use it for things like fixing access panels; it has been a phenomenal success. The current round of Velcros are incredibly strong: even my boat's headlinings are stuck on with Velcro: easy and very effective.'



The potential of double-curvature cladding is **Chris Wilkinson's** choice. 'Computer design and manufacture has given us freedom to produce much more interesting shapes. We are getting closer to it, but there is still far too much craftsmanship involved. It's still closer to, say, boat-building. Although we can do it, it's still too expensive. We need affordable, double-curvature cladding.'



And **Peter Cook** of the Bartlett School of Architecture likes the way people are now using escalators 'in new and relaxed ways – like outdoors over grass'. He adds: 'I was in Hong Kong recently and they were using them as a way of moving over ground rather than between different levels.'

innovations

Right: Colt's combined sun-screening and photovoltaics, Alexander Platz, Berlin. Below centre: Bennetts Associates' public space, Brighton & Hove



Architecture and energy was also nominated. **Paul Hyett** focuses on natural

ventilation of large buildings 'I go for my friend Ken Yeang's notion of wing roofs. Think of an inverted aircraft wing on top of a tall building – where there will always be wind. Because the aerofoil is upside-down a negative pressure forms under the wing that can suck air out of the building. In a tall building there is an enormous amount of energy used by the ventilation fan motors. With a wing roof you have free extraction. This is also the first step to saying that here is an aesthetic expression of design with a social purpose.'



Patrick Bellew looks to fuel cells. 'They don't look very interesting. But they may solve the problem of CO₂ generation. OK, they may not. You feed a cell with hydrogen and you produce power and heat. There's one going in at Woking, as district heating.' Bellew sees photovoltaics as the long-term future.



Jan Kaplicky agrees with Bellew. 'I think photovoltaics will come to dictate architectural form, or at least prove to be the generator of form. No, it doesn't mean that all buildings will have to face south, because they work in any orientation.'



Those in the industry bodies often went for innovations that may change the construction process. **Bob White (M4I)** chooses performance measurement and continuous improvement. **Hugh Try (CITB)** picks the Latham and Egan reports



Paul Finch praises the mobile phone: 'On the one hand it symbolises the fragmentation of the industry with its myriad tiny units, which is actually a strength. It explains why construction can cope with anything from kitchen extensions to the Channel Tunnel rail link. On the other hand, the mobile represents linkage and the ability to sequence events. Because you can communicate instantly you can make decisions on the basis of information rather than guesswork.'



Derek Sugden is looking for a device that will immobilise every mobile phone in a 100m radius, especially on trains.



Despite all the risks innovations can bring, **David Rock** is pleased to see that we can get it right. 'The most significant innovation is the leak-less flat roof. No longer is it one of the public's classic conceptions, and criticisms, of contemporary architecture.'

Very few picked ideas that could shape the architectural world. **Richard Burton** went for the implications of lateral and joined-up thinking across the industry



Rab Bennetts chose 'the realisation that spaces between buildings are as important as the building in isolation. Not that the building should be less uncompromising. It does mean that architecture has a context – which is more than the sum of the architectural parts.'



Louis Hellman goes for access for all, 'the notion of accessibility and inclusivity. Unfortunately, this has led to the passing of dumb and myopic legislation concerned exclusively with the wheelchair-user minority. But the idea is powerful and may prompt architects to use their imagination in the service of people rather than formal gymnastics.'



On site, the JCB backhoe loader, articulated dump trucks, tower cranes and flight-augered piles all get votes. **Andrew Rabeneck** reflects on a sea-change stemming from hand power tools, which he describes as 'the overlooked innovation that has had the biggest impact on construction worldwide. This was a revolution spearheaded by Black & Decker in the US, initially with tools for the Apple Pie Building System – standard timber frame construction. Saws and pneumatic nailers could triple the output of carpenters. Globalisation of toolmakers, which happened early thanks to Germans (Wolf) and Japanese (Matsushita), has ensured universal diffusion of the technology.'

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civil engineering

Historically, civil engineering has been hugely influential in linking communities in ways that are both physical and symbolic. There are the great transport systems of canals, railways, road networks and airfields, the bridges and tunnels and the long-distance communications cables. Many contemporary practitioners are acutely aware of this heritage and of the wider implications of their own role.



Peter Andrews sees the Channel Tunnel as 'an irrevocable statement of this country's

commitment to Europe.

After several false starts, the construction industry was finally allowed to show what it could do.'



Bob Emmerson shares this pride, not least because of the scale of the work. 'It consists of

three tunnels, each more than 30 miles long, 24 of which are under the sea. When the removed rubble was dumped on the coast, it increased the size of Britain by 90 acres.'



Andrew Fishburn of JLG feels the Second Severn Crossing 'symbolises engineering at its finest'.



The Thames Barrier got the votes of CITB's Hugh Try and Osborne's **Geoffrey Osborne**,

who feels it matches the aim of the ICE itself, to 'harness the forces of nature for the benefits of mankind'.

Above: 'Allo Hello. Right: Thames Barrier, Woolwich, 1980. Below right: Foster at Canary Wharf



'to harness the forces of nature for the benefits of mankind'

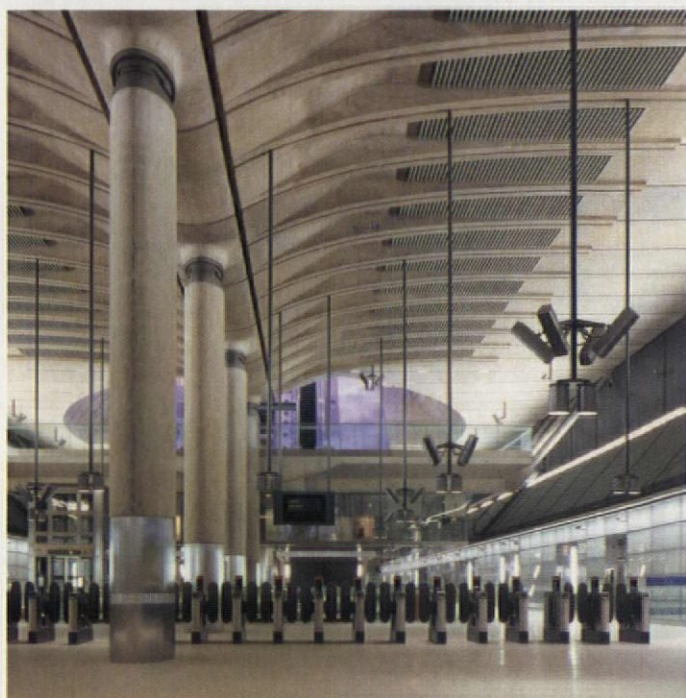
Geoffrey Osborne, Osborne Engineers

Some engineers' choices were a triumph over the physical, logistical and sometimes political barriers to completing projects such as runways and airports, power stations, railways and the motorway network. Nicholas Bennett of ACE dates the beginnings of the motorway network as the opening of the Preston bypass in 1958 under Ernest Marples. For M41's Bob White, the crucial project is the Jubilee Line Extension. For Oliver Whitehead of McAlpine, it was Mount Pleasant Airfield in the Falklands



Derek Tordoff of the British Constructional Steelwork Association worked on the

trans-Pennine M62, which he recalls with a mix of pride and pain. 'It was bitterly cold at times – fingers were freezing to the theodolite.'



Online catalogues now outpace the hard copy library for productivity

"More efficiency and a lot less paper". That's how Debbie Francis of Faber Maunsell, consulting engineers in Beckenham, Kent, sums up today's professional view within architectural and construction sectors.

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Debbie Francis says Faber Maunsell now use Specify-it on all projects, citing recent contracts for the Channel Tunnel Rail Link, the Nottingham Light Railway, Reading Sewage Treatment Works and two London PFI Schools projects.

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More than 18,000 CAD drawings online in new joint venture link

The new joint venture partnership announced by Technical Indexes and FastrackCAD will enable immediate downloads of drawings in CAD digital format from over 70 of the top UK building component manufacturers. Over 40,000 CAD drawings have been downloaded by specifiers in just 12 months.

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New online standards tracking service focuses on the Construction Products Directive

The new service, CPD Tracker, being launched by British Standards Publishing this summer, will keep pace with EU Construction Products Directive.

The service will assist in planning for the transition to European Harmonised Standards, focusing on the six essential requirements of the Directive for steel, concrete, masonry, timber, aluminium products, and fire safety and security.

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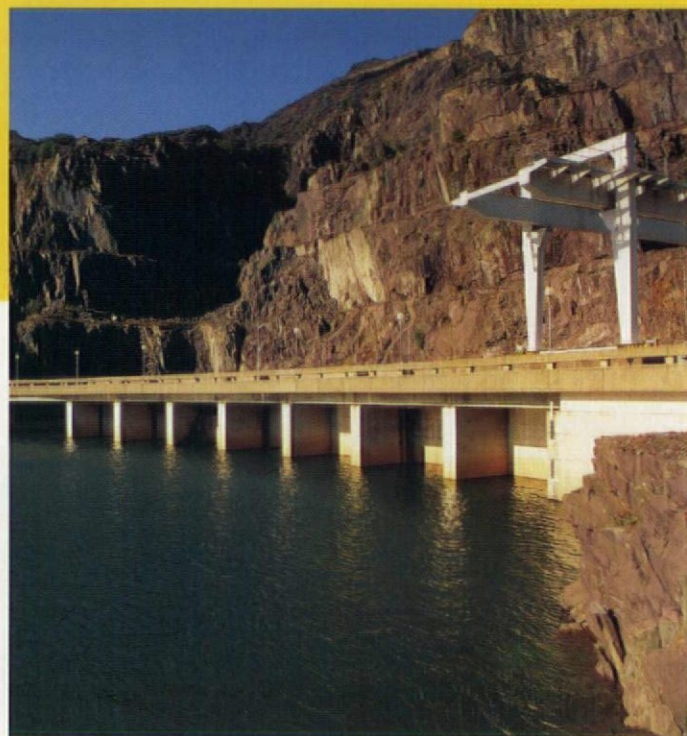
civil engineering

In all this triumphing over adversity there is not a triumphalism about mastering nature; more a sense of working with it, with several of the engineers concerned about the environmental credentials of their work



Graham Shennan of Kier picked Dinorwic Pumped Storage Scheme – a massive

project which uses off-peak generating capacity to pump water to the top of a hill, converting it to potential energy. This is then run downhill, hydro electric-style, at times of peak demand or when generating capacity is scarce and expensive. As Shennan describes it: 'It is situated in nine underground caverns in Mount Eldri in Snowdonia, in the middle of an enormous slate waste heap. The surrounding area was restored ... a vast structure (created) without disturbing the appearance of the surrounding environment.'



In Britain, public health has a long-established engineering tradition. It is often argued that as our understanding of health matters grew – especially in the 18th and 19th centuries – public health engineering did more for the nation's health than all the ministrations of the medical professions. We see this today in the focus on clean water supply and sanitation in the least developed countries of the world. In this vein, the Construction Products Association's Michael Ankers picked the Thames Water Ring Main



Similarly, **David Fison**, chief executive of Skanska, picked the Hull Wastewater Treatment Plant. Although this project has no discernible aesthetic merit, it has inner qualities which he applauds. 'Its appeal for me is what it represents. Water projects like this constantly remind us how vital civil engineering is to society. Without clean water and sewage management, where would civilisation be today?'



Stephen Ratcliffe of the Construction Confederation finds aesthetic pleasure and excitement for the user in the London Eye. 'I have always been afraid of heights, so it was with some trepidation that I rode 450 feet up. I needn't have worried – the modules remain still and don't twist and turn as the wheel revolves. It was a wonderful experience. As a civil engineering structure the London Eye is a magnificent success story. From an aesthetic point of view it has transformed the skyline, filling a void I recall vividly from the many years walking to work up Victoria Street.'



The Dinorwic pumped storage power station at Mount Eldri in Snowdonia. More are being built on the continent

Architecture's recently rekindled love affair with bridges indicates that aesthetics is firmly on the engineering agenda. The bridges built by engineers such as Maillart were part of many architects' education. Several engineers see long-span bridge building as one of the great developments



On a more modest scale, **Paris Moayed** of Jarvis gave his vote to Ove Arup's own seminal

bridge, the Kingsgate Footbridge at Durham University. 'The bridge was designed by Arup himself and completed in 1963. The skill of the construction was advanced for the time, and a good example of prefabrication. On each side of the river, a half-span of the bridge was constructed along the bank. The halves were then swivelled over the river and locked into place. It is an elegant concrete bridge with slender abutments.'



In the move from international to regional to local, we leave the last step to **Mark Whitby** of Whitby Bird. Whitby's acclaimed feat of civil engineering is the zebra crossing. 'Many people have forgotten that the introduction of the zebra crossing gave rights to pedestrians. I was born in 1950 and the first one was introduced soon after, so I grew up taking them for granted. Suddenly people didn't have to wait around for lights to change or risk life and limb rushing across busy roads. Under new laws, provided someone had a foot on a black or white line, cars had to stop for them. Many people still obey the rules as precisely as when they were first introduced. I am reassured to see they are beginning to make a comeback.'

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the future

For most people the key to the future lies with developments in software. There is also a wide range of people voicing the need to make the construction industry more attractive to work in. Many threads are suggested – safety, gender-balance, better management, an end to adversarialism, creating a world-class industry, investment, contractors employing direct labour again, respect for people, and contracts thrown away. But there is no grand plan.



Earlier Oxford Street
solution by Bryan Avery

Some envisage the future as a sci-fi fantasy. John Outram, for example, wants a robot butler



Peter Cook looks forward to a future when 'buildings and vehicles will come together as a seamless artefact'.



More immediately practical, **Tony Hunt** has 'always wanted to see computer-controlled vehicles running down Oxford Street, pollution-free, silent. We've sort of started with Docklands Light Railway and the Gatwick people mover. Sheffield's trams have drivers and conductors but they've got the flavour right.'



For **Andrew Rabeneck**, 'the evolution of CAD/CAM will be a key factor as simulation-costs approach zero and software integrates the design/manufacture/assemble process, as well as order processing and distribution. Huge leaps in computing capability make it a reality.'



Peter Rogers calls for multi-disciplinary understanding: 'We need to produce more broadly educated individuals. This involves dramatic change in the institutions to support the dilution of boundaries between them so that people can communicate – along the lines of the Bath course and the Cambridge MSc in the built environment.'



'Invest in design quality' is a perennial cry. But who benefits? **Rab Bennetts** has one answer. 'The really big one will be finding a connection between the quality of architectural design and improved performance by users. There is a link: good design properly and thoughtfully done can produce better schools, houses, offices. At present we are scratching around. There are people looking, for example, at how building design can impact on such things as absenteeism. But there's a need for proof of this: that would be the holy grail.'



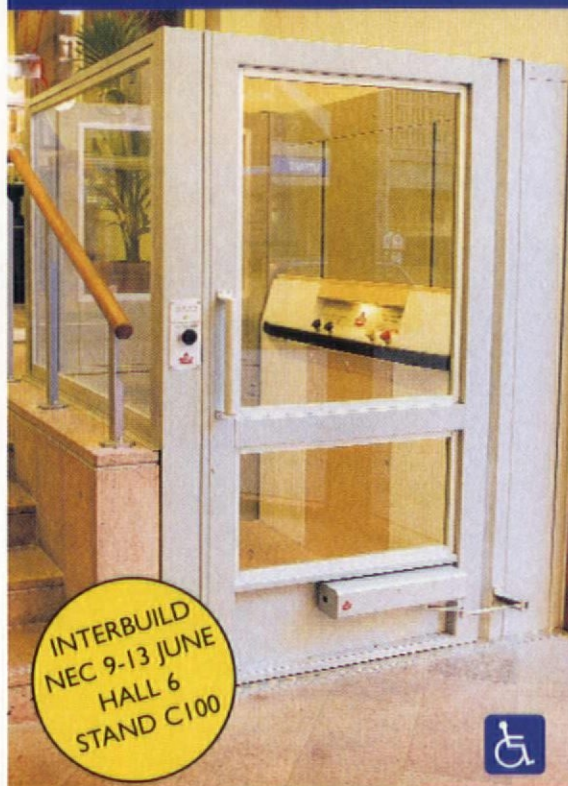
Others, such as **Louis Hellman**, look to education for a better future. 'In the realm of science fiction maybe, schools of architecture would educate students to design for people first. They should stop aping fashionable, deconstipated

superarchitects and return to a revised form-follows-function idea reinforced by the human sciences. The architect's main contribution to society is the understanding of people's individual needs rather than blindly serving commerce or bureaucracy. No other profession in the industry can offer this.'



Terry Farrell conjures up images of Sim City with its mix of masterplanning and emergence – the process of organisations growing from the bottom up. 'The most interesting thing would be the use of interactive technology and communications to manage cities so that people get the cities they want. Most people are victims of the city.'

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GEN/AJ/03

the future

Exercise in lightness – Jörg Schlaich's grandstand at Oldenberg, Germany. Each cone-shaped cantilever was prefabricated



'...sustainability by focusing on lightness, elegance and use of minimal means'

Matthew Wells, Techniker



On the technology front, **Ian Liddell** says: 'High tech will go higher and higher, low tech lower

and simpler. Already a lot of building processes are getting lower tech, for example recycled, lower-strength concrete, which entails thicker sections and more mass to dampen temperature cycles. In the other direction glass, foil and tension structures will continue to develop. What won't change will be the fact that although people say the building and the structure are responses to the client's needs, it's really a competitive sport in which most professional participants strive to do something bigger, better or more dramatic.'



A flexible approach to form is **Cecil Balmond's** goal: 'We need now to develop an understanding of complex shape and inner structure.'



Tim MacFarlane hopes that 'construction will be only a little way behind the latest research and funding for biological research, and metaphorically, learn the way we cross the skin and go inside. It is frightening and exciting that the whole industry should be influenced by such technology and that physical advances will have some influence on architecture.'

Sustainability has its visions too. Norman Haste reiterates the need for a UK strategic energy policy



Techniker's **Matthew Wells** speaks for engineers in saying 'we will make a contribution

to sustainability by focusing on lightness, elegance and use of minimal means. This will come about from instrumentation and observation of real buildings and analysing them against the original computer models.'



Patrick Bellew sees building facades acting as hydrogen-generators.

'You crack water into hydrogen and oxygen. You do the cracking with solar power and capture the hydrogen for fuel cells that power the building. OK, maybe you need a blast wall for when the hydrogen goes Hindenberg... but that's just a detail.'

As for the future of the industry, it's all going Egan-shaped. It will all be simple, standard, predictable products delivered anywhere, if Bob White (M41) is to be believed



However, **David Rock** dissents: 'In the next 50 years the government will realise that PFI, PPP,

prime contracting and the rest is costing at least 20 per cent more than client-controlled procurement. It will set up government-financed and controlled offices with teams of building designers and contractors. They will be overseen by CABE, and Kings Charles and then William, to fund, design and procure all state-finance buildings.'



And what will it all look like? For **Jan Kaplicky**, a distinctly European architecture – not all from Holland.'



For **Neil Spiller**, 'the big event will be the commercial

application of nanotechnology – the manipulation of matter from atom to atom – by molecule-sized factories. It's the ultimate alchemical technology in which you can change things into each other. They are already designing small robots that swim around the arteries and scrape off the virus stuff. But this is an order of smallness beyond that. The products of this technology will be soft, responsive, wet and smart, and they will be grown, grafted and bred. Objects could be changed by use to fit. Products could be constructed inside domestic vats (matter compilers). The home would become not only a human habitat but also a habitat for multiple networked intelligences.'



Independence from fuel supplies is **Max Fordham's** goal 'The thing we could do right

now is to create buildings with storey heights greater than the depth of rooms, big openable windows and probably rooflights – together with heavily-insulated shutters which automatically close at night and when nobody is there. But in future the idea to aim for in Britain is buildings which are naturally lit on overcast days, which don't need any heating or cooling.'

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John and Charlotte Thompson's new extension has added a modern dimension to their Art Deco home in Handforth, Cheshire. Nothing extraordinary about that – except that theirs was a prefabricated extension, delivered to site, that, using a rendered steel construction, manages to retain the period feel of the property.

On the cranked roof of the existing house a previous architect-designed circular 'observatory' had fallen into disrepair; its aluminium frames were leaking, the double glazing had failed and, in the words of John Thompson, 'it was in a very dilapidated state'. He decided to make the most of the refurbishment by adding more usable space and repairing the 'botched' repairs that had accumulated over the years.

The new design, by Paul Hughes of Hanson-TiS, is a curved roof extension, housing a bedroom with en-suite facilities. This connects to the full-height bow-frontage, containing a spiral stair. Large glass doors open out onto a timber deck over the existing roof. It is, says Thompson, 'an ideal getaway from the kids'.

The extension itself is built of heavy stock steel box sections at 2-3m centres, clad in composite sandwich panels – pultruded GRP skins containing 100mm extruded polystyrene insulation. These panels are glued to the external face of the framework steel box sections with two-part polyurethane glue; they are also mechanically fixed, and the bottom edge is held on a lip to prevent

Absolutely pre-fabulous

Prefabrication seems to be coming into its own at last. Here we examine some modern versions of an old idea

BY AUSTIN WILLIAMS



The finished unit was divided in two for transportation to the site and lifted into place and reassembled in just five hours. The en-suite bathroom was fitted out in the factory

Flat-pack kicks off with Wynyard debut

The Wynyard Estate development, originated by ex-Newcastle United chairman Sir John Hall and boasting the previous resident mansions of messrs Keegan and Shearer, is five miles from Tony Blair's constituency in Teesside. It is filled with exclusive developments, gated homes and many examples of self-build tastelessness.

One new home, which slightly breaks the mould, is described as a flat-pack house. Constructed in polystyrene and steel it will, in the course of a five-day erection period, take the shape of a five-bedroom 'Georgian-style' Hamsterley property.

Barry Miller, managing director of Bellway Homes North-East, says: 'From foundations to roof it will take five days [to build] compared with the normal 10 weeks for a traditional builder. It will be the first of its kind to be built by a national housebuilder and will be sold at the same price per square foot as all other properties on the site.' As part of the commercial evaluation process, this house has

undergone rigorous performance analysis, not least in terms of its saleability.

The 275m² house – including habitable attic space – is built of prefabricated panels of single leaf steel construction, finished in waterproof insulated render, as per conventional external wall insulation methods. The 100mm, 1.5 gauge lightweight loadbearing steel studs, set out at 600mm centres, can be configured to suit most plan layouts and are lined internally with 15mm Duplex plasterboard screw-fixed to the studs. Mineral wool insulation of 50mm is inserted and the studwork sheathed on the external face, with one layer of 15mm moisture resistant plasterboard and all joints are taped.

Then 80mm of expanded polystyrene insulation is adhered to the MR plasterboard substrate and finished with a mixture of acrylic base coat and cement with an embedded reinforcement mesh. Overall, the walls have a U-value of 0.26W/m²K.

The EIFS system (External Insulation and Finishing System) has

gravitational slippage. Acting as stiffeners, the panels are overlaid in calcium silicate boarding as a base for an elastomeric render.

Internally, the steel cavity is packed with 100mm mineral fibre insulation (for acoustic and insulation purposes), and overboarded with plasterboard with a skim finish, resulting in a wall with a nominal thickness overall of 200mm and a U-value of 0.18W/m²K.

The roof uses a composite 60mm insulated Kingspan board and the soffit has been battened out, interwoven with mineral fibre batts and plasterboarded to minimise rain noise and give a U-value of 0.21 W/m²K.

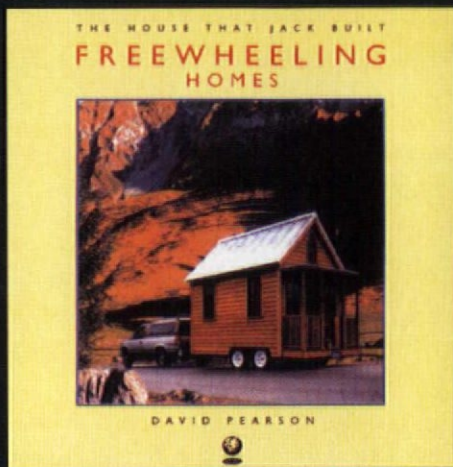
The original observatory was cut back to sill height as a datum point, above which to build, and where the new units have been plugged on. Because of the size of the prefabricated structure to be added to the house, after factory assembly it was broken into two pieces for ease of transportation.

From start to finish, work has taken just six weeks in the factory, where all fixtures and fittings were built into the unit. The site operations to offload and fix the units took place between 9am-5pm on 4 April, so that the Thompsons were able to sleep in their new penthouse suite the very same night. Connections and general interface items took a further week.

● For further details contact Hanson TiS on 0161 877 2370, or e-mail j.thompson@hanson-tis.co.uk

Freewheeling Homes

David Pearson, Gaia Books, 2002, hardback, 112pp, £10.99 (£8.99 on www.amazon.co.uk)



The author celebrates the creativity and ingenuity of what is called, in this book, 'wheeled home enthusiasts'. What might have been thought of as a caravans' guide to architecture is in fact an interesting photographic journey of eccentric travellers; displaying vehicles from hand-painted Roman caravans to one-off customised carts.

The common themes of the stories in this book – varying from tales of travelling in a classic American Airstream, (the 'silver bullet') or of a blacksmith journeying around America – are summed up in the belief that these modes of transport are allegedly promoting 'a way of life that is more environmentally sustainable, being less polluting and consuming fewer resources than the average modern home'. The pictures are nice, though.

Huf 'n' Puf: Swedish construction packages come to London

Although used in mainland Europe for around 30 years, the Huf Haus construction package has not made great inroads into the UK market. Now, however, an exclusive development of 330m² houses is being built in Dulwich Village, south London, by Wates Homes.

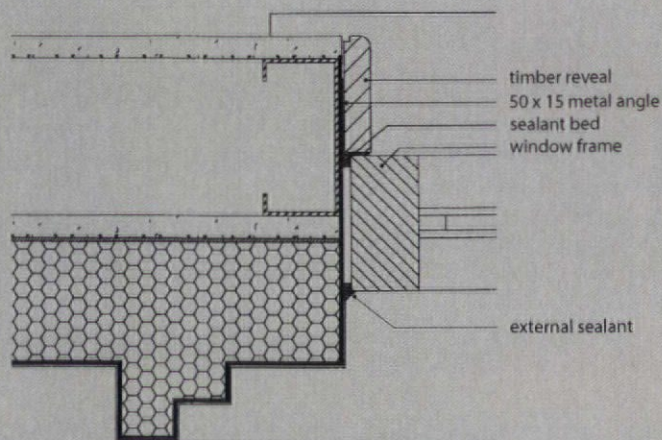
The houses are constructed out of pre-formed Swedish spruce timber post and beams, cut and sized in factory conditions in Germany and shipped over to site. Their design is relatively simple and frees the internal partitioning from its otherwise structural function. Each house is provided with a basement as standard. The large proportion of external glazing potentially allows views through the house, but light reflecting glass will minimise the sense of intrusion for the occupant while maximising their sense of openness.

Once the initial design specification has been finalised, the precast concrete basement is installed in one week and the building frame erected to provide a watertight envelope in a further seven to 10 days. Twelve weeks from start on site, the building is completed.

The construction costs (including fees but excluding the price of the land), is between £800-£1,000m² fully finished; selling for £1.25 million to £1.5 million each. At the top end of the market, these properties are built to an individual client's specification, allowing flexibility of floor plate, layout and elevational treatment all the way down to the internal finishings.

Being a German system, the energy efficiency is higher than current UK standards as a matter of course. Glass infill walls are made of argon-filled, low emissivity glass with a U-value of 1.1W/m²K. The non-glass walls (which are also infill panels that can be relocated to suit) have two cavities. Overall, the houses have achieved a SAP rating of 95-100.

Contact Peter Huf, tel 01932 828512



window detail

6 June 2002

a pedigree that extends back to post-World War II Germany where it was developed to repair war-ravaged structures as well as address the energy consumption caused by lack of insulation in masonry structures.

While there have been reports that EIPS has been prone to leaks in America (though not by this manufacturer) – relying as it does predominantly on the watertightness of the render layer alone as the main barrier to water ingress – the contractor will be evaluating its performance over time. For many, the additional attraction of this system is the ability to sculpt or add decoration and carry out modifications and repairs relatively easily. The detail shows how the polystyrene can be 'carved' to form the mouldings, architraves, etc, much beloved of this type of dwellinghouse.

In Wynyard, the work is being carried out by Teesside company WA Browne for Bellway Homes. The 'Hamsterley' will be on the market at around £350,000.

For information contact tel 0191 244 6658

Lighting and humans bounce back

A round-up of theatre lighting, home decorations and some novel ideas about maintaining health and safety on site

BY AUSTIN WILLIAMS



Some of the hundreds of lighting variations designed by Hoare Lee

As part of the £4 million refurbishment of London's Apollo Theatre in London, architects Jaques Muir and Partners, acting for ClearChannel Entertainment, commissioned Hoare Lea Lighting to reinterpret the auditorium lighting scheme.

The solution has been to replace the GLS lamps (at 3500 lumens) with LEDs to enable more lighting possibilities.

The original building used conventional light bulbs, so maintenance was regular and costly, and by using only two colours (aquamarine and

amber), the lighting could only be faded and brightened with a limited colour mix.

The new design incorporates 83,895 LEDs (987 fixtures) organised in 160 separate controllable groups using 643 DMX (Digital MultipleX) channels. DMX enables multiple dimming to be controlled down one cable by sending out each dimming level in sequence, one after the other, and repeating the levels over and over again. This is called 'multiplexing'. DMX is a widely-used standard that can control up to 512 dimming chan-

nels or other lighting units, down one 2-core cable.

LEDs were chosen because they have high-output, colour-mixing capacity, low running costs, durability, and in this configuration they avoided the need for dimmers.

The LEDs are located in the architectural details. Given that some fixtures are located in almost unreachable positions, the longevity of the lighting sources was an essential aspect of the design. Each group has four channels – red, green, blue and dimming – ensuring that almost any colour rendering combination can be provided at a range of intensities.

John Muir, senior partner at Jacques Muir and Partners, said: 'LEDs last for many years, so the need to access these places, which are almost impossible to reach, should be a long time hence. Running costs are also infinitely less than other lighting sources.'

'The real pleasure of it is that we can render whatever colour we want. The feature lighting fulfils the brief to return this important building back to its original lighting mode.'



A healthy incentive

The Channel Tunnel Rail Link involves constructing 109km of new high-speed railway (26km of which is in a tunnel) at a cost of £4.2 billion.

Rail Link Engineering (a consortium of Bechtel, Arup, Halcrow and Systra) is responsible for the design and project management of CTRL and has drawn up a rigorous ISO 14001 environmental management system to take account of design and construction issues.

To convey the consortium's twin messages of 'zero environmental incidents' and 'target zero accidents', a CTRL 'zero incident truck' tours the

sites to instruct workers of this ethos, using a 'mixture of specially commissioned short videos, posters, leaflets, talks and gifts'.

The CTRL safety awards have been organised to recognise each contract's achievements in attaining 250,000, 500,000 and 1,000,000-plus man-hours worked without a Health & Safety Executive reportable incident.

Contract teams reaching these milestones are given cash awards by the CTRL project to donate to the charity of their choice. Milestone donations have included money to a local special needs' school and buying a puppy for guide-dog training.



Changing Rads

Ever wondered what you could do to brighten up those dull and dowdy radiators? Myson has come up with a revolutionary new idea... how about painting them?

Martin Wright, marketing manager at Myson, says that 'painting a radiator can add a new dimension to a room'.

He adds: 'Rather than trying to hide it in a corner or behind a piece of furniture, a radiator can be brightly painted to make it stand out, particularly if it is one of those various eye-catching decorative designs now available on the market.' Hmm.

But what about those difficult areas behind the radiators? Easy, says Wright: 'Why not use an old sock. Put on a plastic glove to protect your hand and then slip an old, absorbent sock over the glove. You can then dip the sock directly into the paint can, and with your hand you will be able to get hard-to-reach spaces.'

Myson has provided us with an example of how to decorate a radiator (shown) although we assume that this design should be modified for offices and boardrooms.

Shuttlecock 'Life-Saver'

We have been sent details from Russia, of a new 'safety device' for improving safety of workers on, and in, tall buildings. We were intrigued, and below the full text of the official statement is reprinted for you to make up your own mind:

'The device, called "Life-Saver" by the designers, looks like a big badminton shuttlecock. A shock-absorbing cushion connected to two thick torus rings (bagels) covered by a special material, serves as the bean of this shuttlecock. When folded, the "Life-Saver" looks like a solid base backpack or a knapsack.

'When required, a person puts it on the back, secures it and... boldly steps out of the window with his/her back forward. Immediately afterwards, a person must push special buttons quickly. In the tenth of a second, the torus rings and the shock-absorbing cushion are filled with gases, the shuttlecock opening up. A mechanism, similar to the one inflating airbags in the cars by means of pyro-batteries, triggers the process. As a result, the person is descending to the ground as if lying inside the inflated funnel made of a special material.

'The "Life-Saver" has been designed by the scientists in such a way that the speed of the fall is independent of the initial height. The person makes two or three soft bounces on the shock-absorbing cushion, escaping the injuries that are so frequent among the inexperienced parachute jumpers. Moreover, while a person can parachute safely from the top of a skyscraper, the inflated



shuttlecock successfully works even if a person jumps from the first floor, when the fall takes less than a second.

'The "Life-Saver" design includes a number of know-how techniques developed by the scientists from the Babakin Research Center. First, the shape of the cone is calculated in such a way that the speed at the landing does not depend upon the initial height. Second, the designers suggested covering the cone with a special fireproof coating. It means that neither the device, nor the person inside will get damaged, even if there is a need to jump through fire in case of conflagration. Finally, a specially developed material and the design

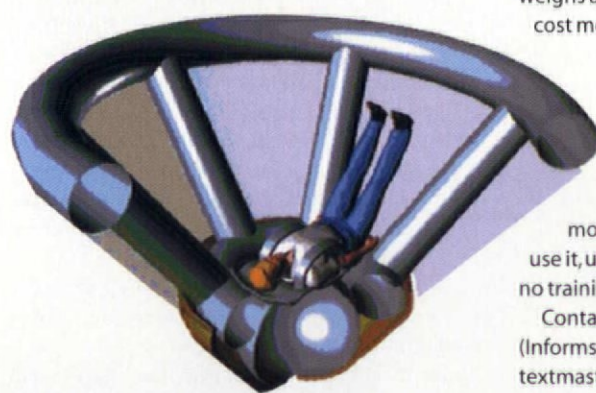
of the framework (which makes the folded "Life-Saver" look like a solid base backpack) will reliably protect the spine of the person from any damage, even if the shock-absorbing cushion gets torn (although this probability is very low).

'Naturally, everyone would like to have a "Life-Saver" at home in case of fire, earthquake or some other catastrophe. It is small in size (the volume of the pack makes 27 litres), and not very heavy – it weighs about 20 kilograms. But won't this device cost more than the Mercedes?

'Of course, the prototype that was virtually hand-made cost us quite a lot," says one of the device creators.

'However, in our estimates, if this device goes to the serial production, it may cost \$100-\$200, in any case not more than \$300. Anyone will be able to use it, unlike the sky-jumping, it will require no training.'

Contact Olga Maksimenko Informnauka (Informscience) Agency on 7-095-2675418, textmaster@informnauka.ru



Service Management Contracts

The Institution of Civil Engineers is inviting comments on its latest edition to the New Engineering Contract series.

This new document has been developed for those 'who engage a service for a period of time, either continuously or on a task-by-task call off basis'. It is, therefore, intended to be used by those engaging, managing or providing a service, rather than for managing a project – principally for maintenance agreements.

The consultative draft of the new NEC Term Service Contract is available on www.newengineeringcontract.com. The third edition of the NEC Construction Contract should be available by late autumn.

Both John Elders, of Cleveland-based roofing firm Factorycover, and the company itself, were found not guilty of corporate manslaughter by a unanimous verdict at Teeside Crown Court last month. The case concerned an employee, Robert Stanley Dawson, who had fallen through a skylight to his death in May 2000. Elders and his firm admitted two breaches of health and safety regulations including failing to make a risk assessment and failing to discharge a duty to protect the health, safety and welfare of employees.



Instincts could lead you astray in the jungle of adjudication

A recent clutch of adjudication cases demonstrates that it is a procedural jungle out there, teeming with traps for the unwary.

Furthermore, you can no longer trust your instincts in response to an adjudication problem. Instead, you have to pick your way through the forest of decided cases and map out a path between those factors that may influence the courts to support an adjudicator's decision and those that may not.

And the forest is sprouting at an alarming rate. A useful website – www.adjudication.co.uk – now lists nearly 100 cases on adjudication decided since *Macob v Morrison* in 1999.

In the case of *RJT Consulting Engineers Limited v DM Engineering (NI) Ltd* (Judgment 8.3.02/AJ 30.5.02), the Court of Appeal held that for a contract to be a contract in writing as required by the Housing Grants Construction and Regeneration Act (HGCRA), all of its terms, or at least all of the terms relied upon by the referring party, should be recorded in writing.

When giving their decision, the Court of Appeal did not consider the case of *Total M and E Services Ltd v ABB Building Technologies Limited Ltd* (Judgment 26.2.02), in which the same point was taken a stage further. The defendant argued that because the construction contract was required to be in writing, it could not be varied orally: any variation had to be in writing. In that case, the contract defined the original works but contained no mechanism for additional work or variations.

The defendants maintained that oral variations prevented the contract from being a contract in writing, which in turn excluded the adjudication provisions of the HGCRA. The judge disagreed and found instead that the adjudicator's decision was based on a single written contract as varied orally by the parties. Your instincts may support this as the common-sense approach. On the face of it though, the Court of Appeal in *RJT Consulting* has a different view.

In the *Total M and E Services* case, the judge also decided that the fact that the claimants had

started the adjudication in the name of 'Total Mechanical and Electrical Services Limited' did not preclude them from reaping the benefit of the adjudicator's decision. This, despite the fact that Total M and E Services was a different company from Total Mechanical and Electrical Services, registered at a different time with different directors.

The judge decided that as the parties were aware all along of the true identities of the contracting parties, no one had been misled. Instinctively, a mere typographical slip ought not to deny a claimant justice, but if it is to apply to all wrongly named parties, this decision may raise more problems than it solves.

If the decision is given in favour of the wrong party, can it be enforced by the right party? If not, against whom should the losing party commence subsequent arbitration or litigation proceedings? Against the right party with whom they have a contract? Or the wrong party who has the benefit of the adjudicator's decision? Is an adjudicator entitled to rectify the referral notice and to change the name of the referring party if it is discovered that the adjudication has been started in the name of the wrong party? Certainly in court proceedings, substituting parties after the start of the action is not straight-

forward, but then should the same rules apply to adjudication?

Your instincts may tell you that there is no analogy between court proceedings and adjudication. In *RG Carter Ltd v Edmund Nuttall Ltd* (judgment 18.4.02), the judge found that for an adjudicator to determine a dispute without a referral notice is much like a judge saying that he is going to try an action having only received what used to be called a writ, with no statement of claim or defence. In fact, he held, until the referral notice has been served, the adjudicator has no obligations and no jurisdiction. Like I say, it's a jungle out there. Don't rely on your instincts to guide you.

Kim Franklin

The bind, bother and bliss that is broadband...

I received an e-mail from Telewest Broadband Consumer Sales (the site is www.telewest.co.uk) promising that a rep would call. Ten days later, I rang the press office. Originally I could not work out why the rep needed to call because I had filled out an electronic form with lots of details and a precise idea of what I wanted.

I think the reason was that the Telewest TV offer had diminished in scope since I had e-mailed in. Anyway, following lots of apologies from the press officer we agreed a phone, broadband, TV deal. Admittedly the TV part was for the really basic service, but the whole cost is only a few quid a month more than BT's ADSL-only charge.

The blokes came around and wired everything up and, unlike BT, everything worked first time – and, fingers crossed, has continued to work serenely and invisibly ever since. There has been no plugging and unplugging of USB connectors, now a daily event with BT broadband. Or it was, until even that failed to stop BT's Alcatel modem doing its flashing LED again – indicating that the outward connection with BT had gone down the tubes. Last time it was out of action for 10 days. Happily, I've got the Telewest cable modem, haven't I? Er, yes. But, the newspapers tell us, Telewest is about to lay off squillions of staff in an effort to reduce losses. Quite apart from the general worry about any firm's longevity in the telecoms trade, that probably means a cut-back in the troubleshooting section. At the very least.

Now it turns out that although they do not tell anyone until they have signed up, BT has known all along about broadband problems with computers which use the VIA motherboard management chipset with AMD processors. Excuse me, but don't most of the board makers use the VIA chipset? And now after a year, my mainstream Asus AMD board with a Via chipset has suddenly developed an aversion to BT. Still, can you blame it? I've got one too. sutherland.lyall@btinternet.com

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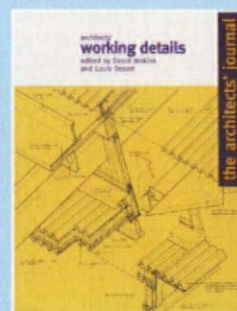
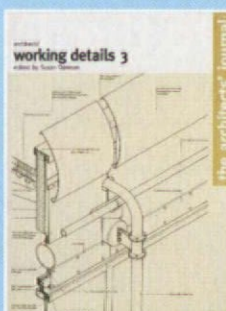
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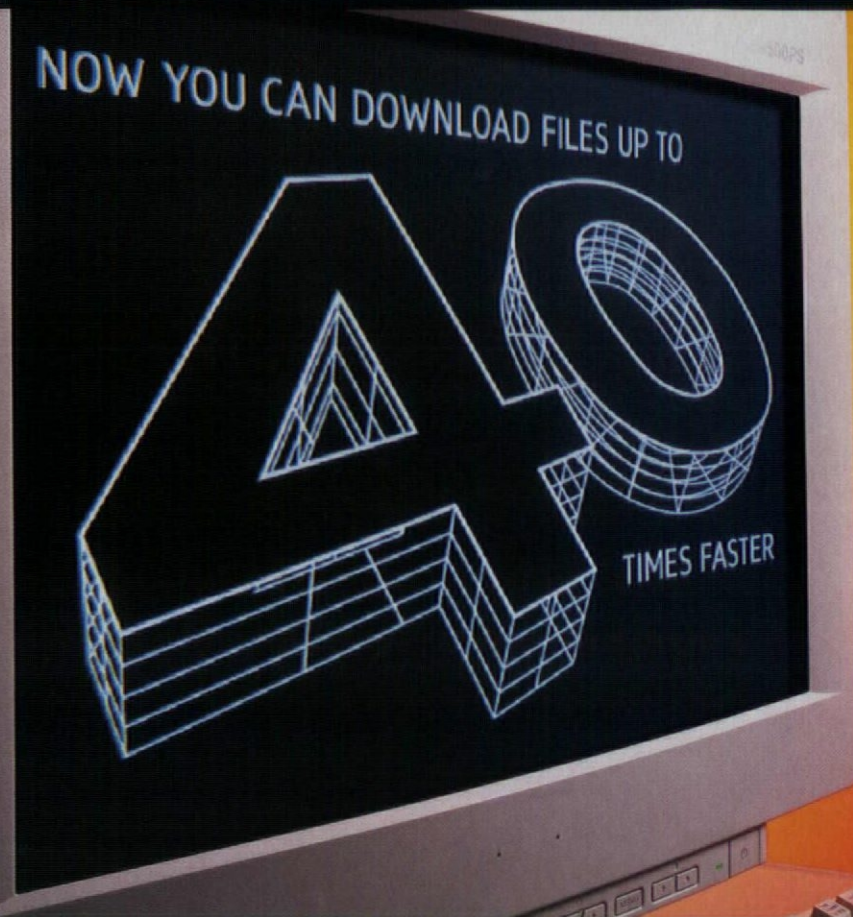
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by Susan Dawson

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Either that or it's back to the drawing board.

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London

Charles Jencks: The New Paradigm in Architecture Tuesday 11 June, 18.30.

A lecture at the RIBA, 66 Portland Place, W1. Tickets 020 7307 3699.

CABE: The First Three Years – And The Next Three Wednesday 12 June, 18.00. A lecture by Les Sparks at The Gallery, 77 Cowcross St, EC1. Details 020 7250 0892.

Practice Structure, Management and Growth Thursday 13 June. A Colander course at the Building Centre, WC1. Details 020 8771 6445.

Nigel Henderson: Parallel of Life and Art Until 14 June. An exhibition at the AA, 36 Bedford Sq, WC1. Details 020 7887 4000.

Neighbourhoods by Design Until 15 June. An exhibition at the RIBA, 66 Portland Place, W1 (020 7307 3681).

Art of the Model Maker Until 15 June. An exhibition at the Building Centre, 26 Store St, WC1 (020 7692 6209).

Kjetil Thorsen Sunday 16 June, 15.30. A lecture at the V&A Museum, SW7. Tickets 020 7942 2211.

Exile, Legacy and Memory Sunday 16 June at the London Jewish Cultural Centre; Sunday 30 June at the RIBA. A two-part symposium with Daniel Libeskind. Details 020 7431 0345.

Atelier van Lieshout Until 16 June. An exhibition at Camden Arts Centre, Arkwright Rd, NW3 (020 7435 2643).

The Value of Architecture Centres 18-19 June. An international conference at the British Museum. Details 020 7253 3334.

With Design in Mind: Building for Mental Healthcare Wednesday 19 June. A conference at the RIBA, 66 Portland Place, W1. Details Gurinder Whall 020 7274 4438.

Massimiliano Fuksas: From Concept to Realisation Saturday 22 June, 18.30. A lecture at the Royal Academy, Piccadilly, W1 (020 7300 5839).

Getting Value out of Lighting Consultants Tuesday 25 June, 18.00. At the Artemide showroom, 90 Gt Portland St, W1. Details Owen Howlett 020 8589 1809.

Design Skills for the New Urban Agenda 25-28 June. A residential course at the Prince's Foundation, EC2. Details 020 7613 8500.

Question of Housing Wednesday 26 June, 18.30. A panel discussion at the RIBA, 66 Portland Place, W1. Tickets 020 7307 3699.

American Beauty Until 13 July. American Minimalist works at Annely Juda Fine Art, 23 Dering St, W1. Details 020 7629 7578.

Gio Ponti Until 6 October. An exhibition at the Design Museum, Shad Thames, SE1 (020 7940 8790).



DOUBLE VISION

Is this a detail of a Giacometti sculpture or a close-up of a burnt discarded match? It proves to be the latter, as Spanish artist Jaime Pitarch finds unsuspected potential in overlooked everyday things. His show is at the Hales Gallery, 70 Deptford High St, SW8 until 13 July (020 8694 1194).

Eastern

Advanced Shading Design Tuesday 18 June. A course at the BRE, Garston, Watford. Details John Kempster 01923 664800.

Enrico Castellani Until 23 June. An exhibition of monochrome reliefs at Kettle's Yard, Castle St, Cambridge. Details 01223 352124.

The Eco-Friendly Historic Building Tuesday 23 July. A craft day at Cressing Temple, nr Witham. Details 01245 437672.

East Midlands

RIBA CPD Event: Party Wall Act Wednesday 26 June, 16.00. Details of venue 0121 233 2321.

Northern

Are You Sitting Comfortably? Until 28 August. An 'interactive seating exhibition' at Belsay Hall, Northumberland. Details 01661 881 636.

North West

To Refurbish or Redevelop: Is There a Sustainable Option? Tuesday 18 June, 16.00. A CIEF seminar at Manchester. Details 020 7222 8891.

Junichi Arai Until 19 June. A large-scale textile installation at the Harris Museum and Art Gallery, Preston. Details 01772 257112.

South Eastern

RIBA CPD Event: Fire Safety Thursday 13 June, 16.00. A seminar at Gatwick Le Meridien Hotel. Details 01892 515878.

Conservation and Repair of Timber 18-21 June. A conservation masterclass at West Dean College, West Dean, near Chichester. Details 01243 811301.

RIBA CPD Event: Size Does Matter – When is MW98 Inappropriate? Thursday 27 June, 16.00. At Gatwick Le Meridien Hotel. Details 01892 515878.

Colour White Until 7 July. An exhibition at the De La Warr Pavilion, Bexhill-on-Sea. Details 01424 787900.

Southern

Arne Jacobsen Until 23 June. An exhibition at the Museum of Modern Art, Pembroke St, Oxford. Details 01865 813830.

Classic White Houses Wednesday 26 June, 18.00. A talk by Kenneth Powell and Nick Dawe at the De La Warr Pavilion, Bexhill on Sea. Details 01424 787900.

Time for Timber Thursday 27 June. A conference in the new Downland Gridshell at the Weald & Downland Open Air Museum, nr Chichester. Details 01989 762470.

South West

Challenges of Climate Change for Architects Wednesday 26 June. An exhibition and seminar at the Sherwell Centre, Plymouth University. Details 01752 265921.

Wessex

Juha Leiviska 6 June-2 August. An exhibition at the Architecture Centre, Narrow Quay, Bristol. Details 0117 922 1540.

Bath University End of Year Exhibition 10-14 June. Details 01225 826908.

A Bristol Eye: Tim Mowl Tuesday 11 June, 19.30. A lecture at the Dept of the History of Art, 44 Woodland Rd, Clifton. Tickets 0117 922 1540.

Richard Long Until 22 September. An exhibition at the New Art Centre, Roche Court, East Winterslow, Salisbury. Details 01980 862447.

West Midlands

John Creed: Metal Transformed Monday 10 June, 19.30. A lecture at St Leonard's First School, Brookfield Rd, Ipstones, Staffs. Details Chris Hesketh 01538 373497.

Facing the Future 11-12 June. The RIBA/AJ conference at Interbuild, the NEC, Birmingham. Details Martin Davies, fax 020 7505 6650.

RIBA CPD Event: Adjudication – How It Affects You Thursday 20 June, 16.00. A seminar at Birmingham. Details 0121 233 2321.

RIBA CPD Event: The Party Wall Act 1996 Thursday 4 July, 16.00. Details of venue 0121 233 2321.

Yorkshire

Design for Homes: Meeting Design Guidance for Housing under PP63 Friday 5 July. A conference at St William's College, York. Details Keith Knight 01904 658482.

Maintaining Safe and Secure Housing Thursday 11 July. A one-day BRE seminar at Leeds. Details 01923 664766.

The Object Sculpture Until 1 September. An exhibition at the Henry Moore Institute, 74 The Headrow, Leeds (0113 246 7467).

Scotland

To Refurbish or Redevelop: Is There a Sustainable Option? Thursday 20 June, 16.00. A CIEF workshop at Glasgow. Details 020 7222 8891.

International

UN Studio: Ben van Berkel / Caroline Bos 1987-2002 Until 15 September. An exhibition at the NAI, Museumplein 25, Rotterdam. Details 003110 4401200.

Poets of the everyday

STEPHEN GREENBERG

The Charged Void: Architecture

By Alison and Peter Smithson. Monacelli Press, 2002. 608pp. £50

This is the first volume of the Smithsons' long-awaited *oeuvre complète*; a second, on their urban projects, will follow soon. Both books cover 50 years of projects, ideas and thoughts.

The Charged Void: Architecture fills an intellectual void left at a time when style and lifestyle have triumphed over content. The Smithsons invented, took risks, changed course, moved on, and repeated the cycle. They stayed outside the academy, revered and respected, managing to remain avant-garde – the Duchamps of architecture.

Each project lays down a depth charge. Take Hunstanton School, an incredible achievement for 1948, completed with no direct experience of Mies' work at IIT. Hunstanton followed Peter Smithson's diploma thesis for a new Fitzwilliam Museum in Cambridge, one of the most eloquent of Miesian essays. Hunstanton charged the void: where would a generation of AA students have been without it? Hopkins at Schlumberger and Bedford Lakes is really only Hunstanton on silicone, fritted glass and low-emissivity coatings, without the depth, or rawness, or particularly English 'Palladian' response to Mies.

The Smithsons set out a position that they never wavered from: legibility of plan, expression of structure and the use of materials 'as found'. They left the style to others and moved on. For English High-Tech, Hunstanton is the crucible.

They built a house for Derek Sugden, low budget, in an era of shortages in building



materials – a house that says houses can be elemental and different, using ordinary bricks and standard joinery. It was a profound influence on the Venturis and the iconic Mother's House. The Smithsons left this field too, and only now is the 'ordinary', another of their preoccupations, being picked up again by the likes of Sergison Bates.

With the House of the Future at the 1956 Ideal Home Exhibition – an arena as static as the state opening of Parliament – the Smithsons made a radical proposition about living, home technology and fashion. Its style became a source for all the injection-moulded, plastic NASA fantasies and all those Future Systems oval apertures. The Smithsons never returned to this territory either, perhaps because it was too close to the

American commodification and sci-fi comics that had inspired Pop (or as Hal Foster has so precisely put it, the apparent contradiction of being both 'American leaning and left-orientated').

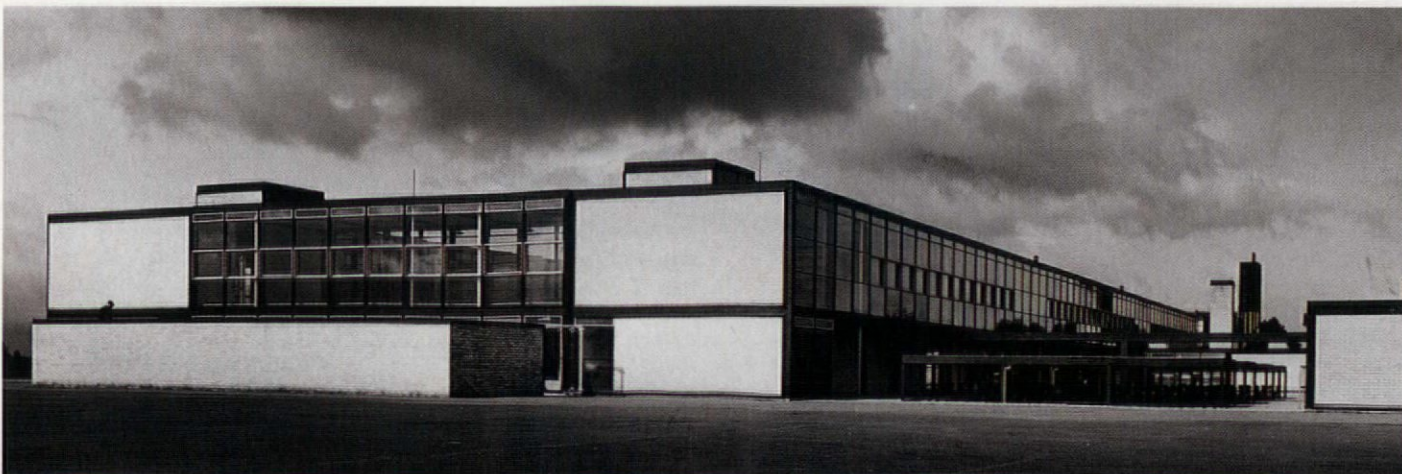
Then there is the Economist Building, which still casts a long shadow over corporate urban architecture. It remains the standard against which every Broadgate must be judged. It is to the Rockefeller Centre what Chiswick House is to the Villa Rotonda, scaled down and intense. At once embedded in English architecture, reworking Mies, and with archaic and Classical allusions, it has an exceptional quality.

'As in the components of ancient buildings, the modern components of the Economist Building indicate an architecture that has been first made in the mind': here is another Smithsons' theme – architecture locked directly into other architectures in the charged void.

This volume is filled with projects worthy of hours of study; many have planted seeds that are still dormant. Some central ideas – 'layering', 'conglomerate ordering' – are re-examined or redeveloped on projects years later, becoming still more resonant in the process.

Robin Hood Gardens was another turning point. In response, and in rejection, Cullinan and MacCormac embraced Wright, the vernacular, and consciously led the move to prettier work (where they have stayed); and Farrell went through his Po-Mo period. Now Robin Hood looks almost tame – robust, and oddly heroic compared to the later dross in Docklands. But the Smithsons remained defiantly with work that is difficult, uncomfortable, that baffles, and sometimes is deliberately almost ugly (much harder to do than pretty).

In hindsight, we can see that the para-



Top: Alison and Peter Smithson in their Limerston Street studio. Above: Hunstanton School, Norfolk – 'an incredible achievement for 1948'

digm shift of the early 1970s, that the Smithsons eschewed, was far more complex: a move from legibility, abstraction, found materials, and 'left-leaning' to forms and images loaded with allusions, to gismos, complex shape grammars and the software to construct them. This shift eclipsed the Smithsons' attempt, grounded in the 1950s, 'to drag a rough poetry out of the confused and powerful forces which are at work in a mass production society'.

But then we also have to understand the aftermath of the Second World War: its austerity, its make-do-and-mend, its flush of optimism, the disappointment at the prettiness of the Festival of Britain, the Cold War. Alison studied during the war, and Peter's training was prolonged by national service. Working with ordinary materials and low budgets was a social obligation that they never discarded.

The Smithsons positioned themselves consistently on the edge, as part of a European avant garde (rejecting CIAM, founding Team X and The Independent Group). No one has matched this – not the MARS group, not NATO, not the maverick Cedric Price. And who else has, at the same time, made their explorations so personal and so poetic? Much of their writing has a haiku-like compression: you need to read it several times and let it reverberate.

It is also hard to think who else has been so deeply influenced by Modernism, but by its underlying content rather than as a style, and who has had such a personal communion with previous generations. The Smithsons' work is wedded to the antecedents of these shores, to the hand-someness of namesake Robert Smythson. Their thinking, however, is wedded to what used to be called the continent, where ideas are no less valued than pragmatic action.

Following these highly distilled volumes, we will need a comprehensive study of the Smithsons from a historian who can relate the changing landscape to their explorations – who can explain to a new generation what the famous photograph in the 'This is Tomorrow' catalogue, of Peter, Alison, Eduardo Paolozzi and Nigel Henderson in a grimy Limerston Street, says about the time and the culture.

Fortunately, the Smithsons' archive is comprehensive and detailed. There is correspondence with everyone – the Eameses, Le Corbusier, Kahn – and annotated photo-albums with buildings and details that you never knew existed. There are many more jewels to come.

Stephen Greenberg is director of Metaphor

Weird and wonderful

JEREMY MELVIN

Frank Lloyd Wright & Lewis Mumford: Thirty Years of Correspondence

Edited by Bruce Brooks Pfeiffer and Robert Wojtowicz. Princeton Architectural Press, 2001.

256pp. £19.95

Apart from their longevity – both lived well into their 90s – Frank Lloyd Wright and Lewis Mumford shared several traits. Both rose to prominence outside the conventional nurseries and always maintained an ambiguity towards the formal institutions of power, represented most obviously in this book by the Museum of Modern Art. Both had a facility to express themselves in writing, but their styles suggest that neither was a natural writer. Writing was a means to expressing something else, and that something was no less than a perception of the Modern condition.

Wright, of course, thought he knew what that was. Scholars might trace the mutations in his architecture over his extraordinarily long career, but many of the letters show him trying to establish and defend a position as an originator of Modernism. Writing on 7 July 1930, he claimed: 'The Larkin Building made definitely the negation now engaging Le Corbusier et al. Unity Temple went a step further on from that negation to affirmation.' He had got there, in other words, 25 years earlier.

Mumford, too, knew what Modernism was. Whether influenced by his erstwhile lover, the housing expert Catherine Bauer, his propensity for socialistic collectivism, his acute perceptions of American tradition, or Wright himself, he also evolved a personal position. 'As for the so-called International Style,' he railed on 6 February 1932, 'it is a dreadful phrase, since architecture is architecture and never, except in bastard form, a style... [Le Corbusier's] designs are as weak as his soul itself is arid.'

Mumford, engaged for much of the span of the correspondence on his 'Renewal of Life' tetralogy, saw architecture as part, but only part, of that renewal whose motors could come from anywhere. For Wright, architecture was everything, and as architecture sprang 'organically' from its surroundings, his mindset precluded almost all influences from abroad. So it is not sur-

prising that Wright should have retreated into isolationism, just as Mumford was perceiving that Europe needed renewal a dashed sight more than the US.

Their 10-year rift, from 1941 to 1951, is marked by some of the most naïve and flaccid comments in the book. 'You have become a living corpse... Be silent! lest you bring upon yourself some greater shame,' wrote Mumford on 30 May 1941, provoking a reply that ended: 'Goodbye, Lewis, I shall read your "brief" ... knowing your real opinion is worthless, whatever you write.'

This quality of a lovers' tiff hints at a more profound psychological bond. Olgivanna

Wright makes this explicit in a letter to Sophia Mumford of 2 April 1954: 'Whatever disagreements Lewis and Frank might have is entirely their own affair. We somehow correspond as families – the three of you and the three of us and the two that are missing' (a reference to the death of her daughter in a car crash and of the Mumfords' son in Italy in 1944).

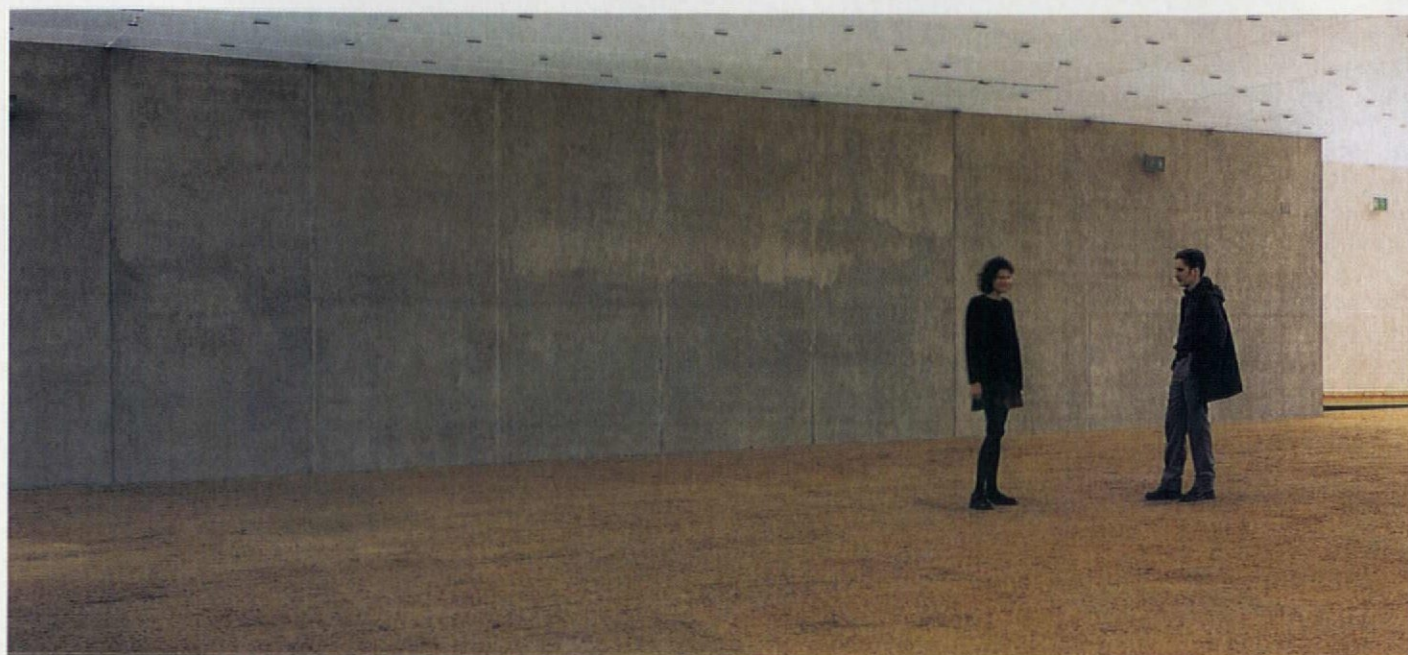
While the illegitimate Mumford resisted Wright's implicit invitation to become his son – at least in an intellectual sense – and continually refused to visit either Taliesin, his principled

internationalism called him to accept the terrible sacrifice of his son, which even Abraham was ultimately spared.

So this unstable, heated and stalemated correspondence in the end portrays a pair of increasingly curmudgeonly weirdos. The book is too particular to say much about the relationship between architect and critic in a general sense, and only with extensive knowledge of the actual works of both protagonists does it add much to our understanding of the history of American architecture. But there are a few delightful asides (Henry-Russell Hitchcock and Philip Johnson characterised as the twins, and being invited to bring their wives to Taliesin, has a nice ring); it is superbly edited. And they were rather important weirdos.

Jeremy Melvin teaches at South Bank University, London





MARQUIS TREITER

The great outdoors

ANDREW MEAD

Olafur Eliasson: The Mediated Motion

Kunsthau Bregenz / Walther König, 2001. 120pp. £13.95. (ISBN 3-88375-505-2)

Olafur Eliasson: Surroundings Surrounded – Essays on Space and Science

Edited by Peter Weibel. MIT Press, 2002. 720pp. £23.95

Last spring, the Danish artist Olafur Eliasson occupied all of Peter Zumthor's Kunsthau Bregenz with a striking sequence of installations, making the trip to a gallery more like a hike through changing landscapes.

One floor was turned into a shallow pool of duckweed, which you negotiated on a narrow boardwalk, with Zumthor's luminous gridded ceiling reflected in the water that was not yet dense with weed. Reached by climbing up a single tight staircase, the next floor was carpeted with rammed earth (see picture), while the top room was filled with fog; a narrow footbridge swayed precariously across it. The whole event was subsequently documented in a compact catalogue, *The Mediated Motion*.

Whether in watercolour miniatures, Monet's 'widescreen' water lilies, or Richard Long's circles of slate, nature – variously mediated – is, of course, a long-time staple of art galleries. Eliasson, by contrast, seems at first to be making our encounter with it as unmediated and direct as possible.

But, while Cézanne settled for a strip of wood around his watercolours, now the gallery itself is the frame; and you never lose sight of Zumthor's satin-smooth concrete.

Moreover, as the photographs in *Surroundings Surrounded* make clear, Eliasson does not disguise the artifice that his installations depend on – in fact the reverse.

This second book is based on exhibitions in Graz and Karlsruhe, again conceived as journeys through disparate environments, in which natural phenomena are simulated by devices such as fog, ice or wave-effect machines. Huge quantities of moss are compressed to create a wall; water-pumps make temporary waterfalls; and Eliasson does conjuring tricks with mirrors, strobe lights and steam.

Certainly the results can be spectacular, and viewers are obviously engaged. But to what end? Presumably, in *staging* nature so sedulously, Eliasson reminds us that today all landscapes are constructed, that culture has won; while the audience, all their senses awakened (unusual in a gallery), and often intensely conscious of their movements (the Bregenz duckboards), are encouraged to examine their responses, not just applaud the theatrical effects. Aesthetic clichés of the Romantic tradition come under the spotlight, while at the same time – in the words of *Surroundings*

Surrounded – viewers 'see themselves seeing'.

Maybe so. One thing this second book shows is that Eliasson takes himself very seriously indeed. Whereas *The Mediated Motion* is orthodox, in that its texts comment on the exhibition they accompany, none of the 700 pages of *Surroundings Surrounded* touches directly on the Graz and Karlsruhe installations. 'Early on, Eliasson expressed the wish to publish not a conventional catalogue but rather to have his work surrounded by scholarly commentaries,' says the introduction.

So we find 50 essays, some already in print, others written especially, which are meant to place Eliasson's concerns in a broad scientific/cultural context. Among the contributors are Rem Koolhaas, Norman Foster, Cecil Balmond, Diller + Scofidio, Anthony Vidler and Richard Sennett. The essays are (very) loosely grouped by theme, with photographs of Eliasson's exhibitions interpolated between the separate sections. Few readers are likely to approach this collection systematically – it can only be seen as a miscellany; but for anyone interested in exploring the connections between art and science, it is frequently rewarding (and something of a bargain).

Ironically, in choosing to keep such high-profile company, Eliasson does not necessarily do himself a favour. The images of his work that punctuate the book are often intriguing but, shorn of commentary or one's own direct experience, there is no way really to gauge just how resonant or profound it is. In that respect, *The Mediated Motion* is rather more persuasive.

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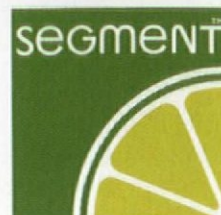
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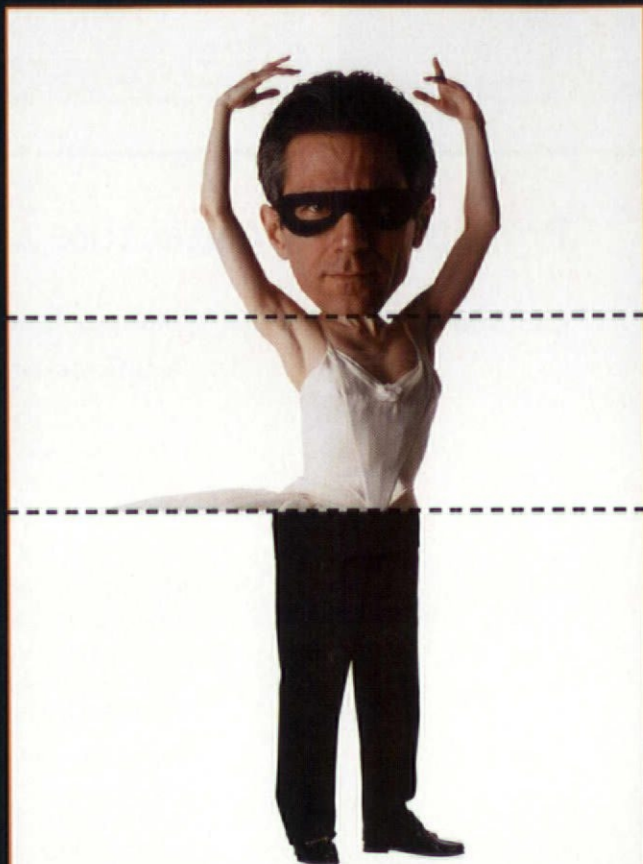
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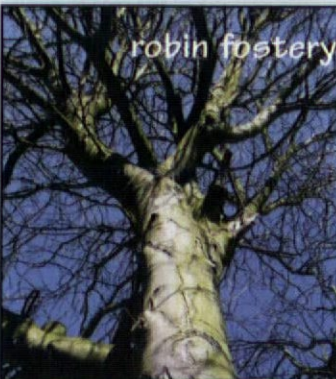


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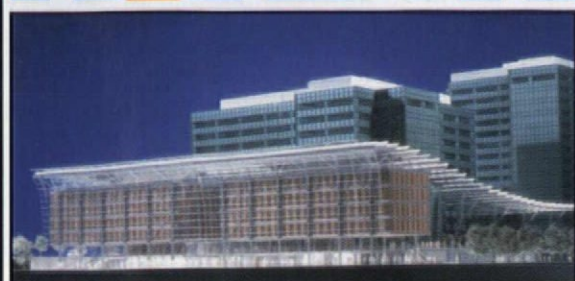
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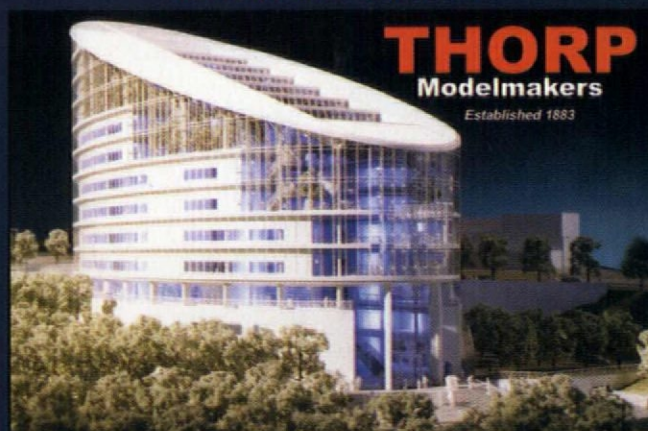
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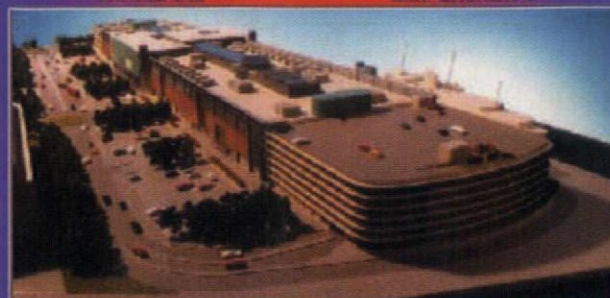
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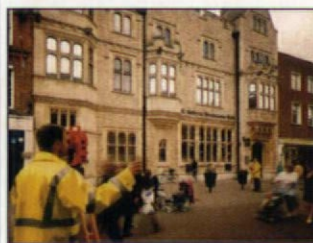
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Congratulations to Liz Wilby of Dignan Read Dewar Architects, Edinburgh, who wins a bottle of champagne for correctly identifying Mart Stam from the clues in our 'archicharades' competition last week. Can you identify the famous architect from this week's clues? Fax your entry to 020 7505 6701 by 10am on Friday 7 June, or send your answer on a postcard to: AJ Astragal, 151 Rosebery Avenue, London EC1R 4GB. The first correct entry pulled out of the hat wins a bottle of bubbly.

Taking a stand

As Jubilee fever gripped the country and Buckingham Palace became the focus for the world of popular entertainment, **Sir Terry Farrell** could be forgiven for a wry smile as the crowds filled the temporary stands surrounding the Victoria Memorial outside the palace. The stands bore an uncanny similarity to Farrell's own proposals for a more permanent arrangement, which were unveiled in a provocative documentary on the modernisation of the House (and Houses) of Windsor, on Channel 4 just after Christmas. Farrell's point, that the contemporary monarchy should not be closeted behind the walls and fences that have traditionally surrounded royal residences, is surely a sound one. His long campaign for more open routes around Buckingham Palace, and connecting the various royal parks with pedestrian-friendly links, is still a great masterplan for improving London's public spaces.

Consonant with security, it is time for the authorities to give these ideas a serious look.

Golden years

It is an appropriate moment to consider how architecture has fared at the hands of the monarch since 1952. The answer, leaving aside the role of the **Prince of Wales** (of which more later), must be: not too badly. On a simple level, the Royal Gold Medal has gone to a fair share of the British profession as opposed to overseas recipients. Gold medallists have included Lasdun,

Powell, Dowson, Stirling, Foster, Rogers, the Hopkinses and, of course, this year's recipient, Archigram. Perhaps more significant is the number of knighthoods and peerages awarded over the 50 years. Here, it can scarcely be said that contemporary British architecture and its architects have gone unrewarded. **Norman Foster**, as an OM, has achieved the highest honour the Queen bestows; he has succeeded **Sir Basil Spence** (and **Giles Gilbert Scott**) in that respect, Spence having been for a period the country's best-known architect, along with **Lord Holford** and **Richard Seifert**. Richard Rogers' peerage, which shortly followed his knighthood, resulted in the most politically active architect since another similar Labour stalwart from an earlier era, but still within the jubilee period, **Lord Llewelyn-Davies**. Knighthoods have been in good supply – Grimshaw, Farrell, MacCormac et al.

Déjà vu

The Queen has opened thousands of buildings, and has reigned over us long enough to be visiting some sites the second time around. Perhaps the most piquant of these is Paternoster Square, where she opened the commercial scheme by the above-mentioned Lord Holford in the mid-50s. That, of course, has now been demolished under the masterplan arrangements of another of her architectural knights, **Sir William Whitfield**. Of course, the most dramatic redevelopment of her reign, from a personal point of

view, was the remaking of Windsor Castle following the disastrous fire of 1992. If that gave an indication of the Queen's tastes it was for a certain tradition. That is probably a diplomatic position to adopt, though **Prince Philip** has always had an interest in more advanced design and engineering. Has anyone ever actually seen the designs for a revamped Sandringham by the Cambridge architect, David Roberts?

Princely powers

Of course the most significant architectural politics of the Queen's reign have concerned her son, the **Prince of Wales**. For nearly 20 years now he has been running a one-prince campaign for architectural quality, associated with – at various times, community architecture, Classical architecture, organic architecture, traditional urban design, and the many and various thoughts of **Leon Krier**. The most famous quip concerning the monarch and her son was delivered by the late, great **Sir James Stirling**, target of princely attacks over his building at No 1 Poultry. Asked at a party for his opinion of the prince, there was a long pause before Stirling replied: 'God save the Queen'.

Making ends meet

In retrospect, what at one time appeared like a massive gulf between Prince and architecture turned out to be more of a fault line. Take Paternoster Square, for example. The scheme that the Prince so much opposed, masterplanned

by **Sir Philip Dowson** and **Peter Foggo**, in retrospect looks like a restrained Modernism with a distinctly Neo-Classical flavour. Similarly **Peter Ahrends'** National Gallery design, with its drum plan, looks today like the sort of thing the Prince should have welcomed rather than reviled. On the other hand, many of the mantras about sustainability and context now preached by architects sound as though they have been lifted wholesale from the Prince's 'Ten Principles' which informed his exhibition at the V&A.

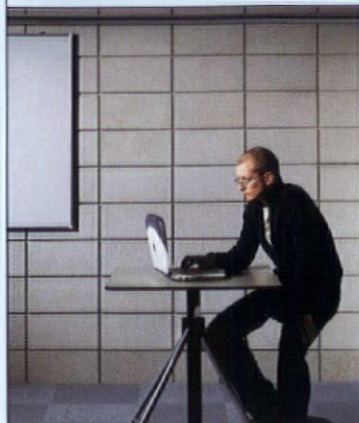
Royal touch

Suppose the Queen follows the comings and going of her architectural knights and peers – what would she make of them? One thing is certain, they have dominated public and major private commissions throughout her reign. Consider some of the major projects currently or recently undertaken: British Museum, Greater London Authority, Wembley Stadium, **Lord Foster**. Masshouse Library, Birmingham, Terminal 5 at Heathrow, **Lord Rogers**. Portcullis House, **Sir Michael Hopkins** (who also designed the canopy over the revamped entrance to the Royal Academy, visited by the Queen last week). And so on. No doubt these thoughts were running through the mind of my old editor, **Paul Finch**, who went to Buckingham Palace last week to receive his OBE. Appropriately enough, since the Queen was in Scotland, it was bestowed by Prince Charles. I must find out what they chatted about.

astragal ●

LIGNACITE

AJ ENQUIRY NO: 201



Polished Snowstorm Facing Masonry from Lignacite has been stylishly used in a Learning Resource Centre designed by Richard Rogers Partnership. Lignacite is keen to demonstrate that Facing Masonry works aesthetically not only in external applications, but also to create different and unique interiors. For information contact 01842 810678 or info@lignacite.co.uk

HANSENGROUP PRESTIGE CONTRACT 22 AJ ENQUIRY NO: 202



AccentHansen has supplied its SoundShield doors to the new lecture theatre at York University. Single-leaf SoundShield doors, factory finished in matt grey RAL, have been designed and installed throughout the single-storey campus lecture theatre. The SoundShield doorsets offer high performance noise insulation and life-saving fire protection.

ECOIMPACT

AJ ENQUIRY NO: 203



Ecofloor is made from bamboo. It is harder than oak, making it perfect for high-traffic areas. And being non-allergenic, it is particularly suitable for hospitals, hotels and fitness centres. Available in light and dark, it will transform the look of a commercial space or home and there are matching panels and worktops to go with it. Visit www.ecoimpact.co.uk or call 020 8940 7072.

FORBES AND LOMAX

AJ ENQUIRY NO: 204



Invisible switches have flush-to-the-wall acrylic plates, allowing the wall colour to show through. Other plate finishes include frosted acrylic, stainless steel, nickel silver and unlacquered brass. The invisible dimming system is a remote-controlled, scene-setting dimmer, tel 020 7738 0202 or visit www.forbesandlomax.co.uk for more information.

KEIM

AJ ENQUIRY NO: 205

Keim Mineral Paints have been used to decorate all the exposed concrete on the impressive Forum building at the heart of the Norwich & Norfolk Millennium project. Keim Concretal



Lasur was specified to unify the colour of the exposed concrete surfaces and to provide a truly long-life finish.

KINGSPAN INSULATION

AJ ENQUIRY NO: 206



Kingspan's Koolduct pre-insulated ducting system played a key role in the £100 million new build and refurbishment project that has doubled the size of Edinburgh Airport's passenger terminal. A total of 4,000m² of Koolduct was specified throughout the airport complex, mainly because of the limitation of roof cavity space resulting from the high ceiling design.

HARTINGTON CONWAY

AJ ENQUIRY NO: 207

Using Hartington Conway's patented new XLOK panel glazing system enabled Frank Ryan Roofing Contractors to halve the installation time on this refurbished slate roof. Lathe manufacturer Boxford required an attractive glazing system



for the converted mill building which forms part of its Design & Development Centre. For further details about the XLOK panel glazing system, contact tel 024 7660 2022.

SAFE ACCESS GROUP

AJ ENQUIRY NO: 208



Rostek Permanent Access Equipment by The Access Group provides a range of four aluminium monorail systems – RS63, RS110, RS127 & RS133. Each monorail offers the specifier a range of benefits. RS133 enables two access units to be mounted on the track simultaneously and still be able to pass each other freely. Contact sales@the-access-group.com or tel 0114 2731333.

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