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01/12.05

# KEITH WILLIAMS/ UNICORN THEATRE

ISSN 0003-8466



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£3.25

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THE ARCHITECTS' JOURNAL  
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## DESIGNING CHILDREN'S THEATRES IS ABOUT MORE THAN BRIGHT COLOURS

By Isabel Allen

Back in 1996, the AJ ran a children's issue, where we invited young people to review buildings which had been designed specifically with children in mind. Despite everybody's best efforts, it was a deeply unappetising issue: lumpy education buildings; soul-destroying children's wards; token attempts to introduce 'child-friendliness' with the random application of coloured flags. (The one high point of the issue was a series of interviews with children living in homes designed by their architect parents and the revelation that Norman Foster's son would rather live in 'a normal house like the one across the road'). The paucity of decent images was such that the cover was given over to an image of a skateboarder performing a death-defying manoeuvre in front of the Design Museum, which subsequently chided the AJ for encouraging anti-social behaviour.

What a difference a decade makes. Our greatest architects are designing schools and

city academies. Haworth Tompkins and Keith Williams have demonstrated that designing children's theatres is about a whole lot more than the liberal application of brightly coloured paint. Zaha Hadid has completed a science centre in Wolfsburg which is radical, heroic, sophisticated – and designed primarily with children in mind. The one recurring criticism among the otherwise effusive reviews is that its dramatic undercroft is likely to encourage skateboarders. Why that is seen as a failing is not entirely clear. Hadid's brief was to make a strong contribution to the city's civic space. The concession (inadvertent or otherwise) to skateboarders could be taken as evidence of a realistic understanding of what teenagers really require of the public realm.

The brutal beauty of both Hadid's Phaeno Science Centre ([www.ajplus.co.uk](http://www.ajplus.co.uk)) and Williams' Unicorn Theatre (pages 23-35) is testament to the conviction that children deserve architecture which is thoroughly grown up.



## CONTRIBUTORS



Gerry Feenan, who writes about the Ideas Store in Concrete Quarterly, which is on pages 43-58, is the commercial director of Hanson Building Projects



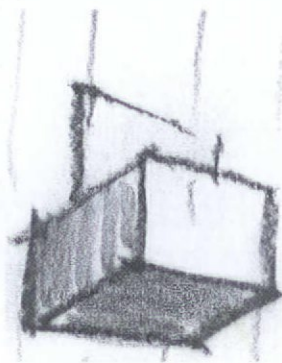
Piers Gough, whose sketchbook is featured on page 74, is a founding partner of CZWG Architects and was elected to the Royal Academy in 2001



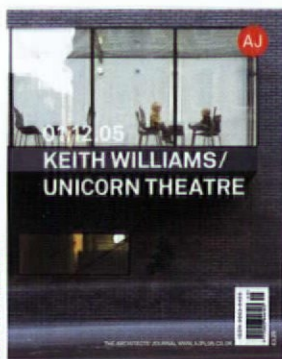
Mark Foley, who reviews the Unicorn Theatre on pages 23-35, is a partner of Burrell Foley Fischer and is responsible for many of its performing arts buildings



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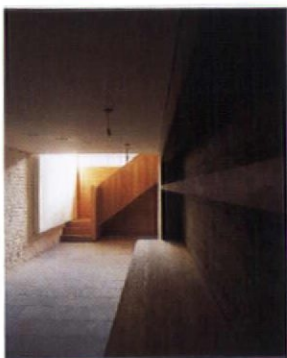
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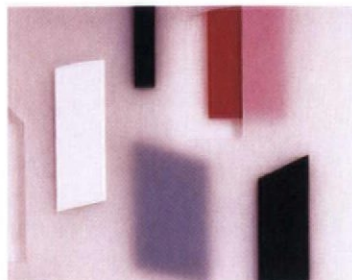
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## AJ PLUS ZAHA HADID

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#### SCHOOL EXCLUDED

The Twentieth Century Society has hit out at Westminster council's plans to surround John Bancroft's Modernist Pimlico School with a conservation area. The society claims the building has purposely been singled out for exclusion after planning guidance was mooted to demolish and redevelop the site.

#### COUNCIL LEADS GREEN EFFORT

Kirklees council in West Yorkshire has unveiled a pioneering policy which will see almost a third of energy in new public buildings come from renewable sources by 2011. The policy – which will act as an in-house supplement to the Part L regulations – will apply to all new council-funded building projects.

#### AJ REPORTER SCOOPS YOUNG JOURNALIST AWARD

AJ reporter Rob Sharp has won the International Building Press (IBP) Young Journalist of the Year Award. Sharp, 25, beat journalists on rival publications in the property, construction and architecture sectors to scoop the prestigious prize. The IBP judging panel, which included Wordsearch's Peter Murray and Ryder HKS chairman Paul Hyett, was particularly impressed with Sharp's use of sources.

#### LIVINGSTONE TO FUND NIMBYS

London Mayor Ken Livingstone is set to fund local objections to major infrastructure projects in the wake of the public inquiry into Marks Barfield's Thames Gateway Bridge. The mayor is considering offering financial assistance to local interest groups with 'clear environmental concerns' over projects like the controversial bridge scheme.

#### CLADDING FALLS FROM BEETHAM TOWER

Roads had to be closed around Ian Simpson's nearly completed Beetham Tower in Birmingham after five pieces of metal cladding fell from the 39-storey skyscraper last Thursday (24 November). According to contractors Laing O'Rourke, the metal plates at the 122m-tall mixed-use tower in Holloway Circus were ripped off by 'exceptionally high winds.'

#### BRITAIN 'COULD BURN LIKE FRANCE'

A leading member of the reconvened Urban Task Force (UTF) has warned that Britain's cities are on a 'knife-edge' and could experience rioting similar to that in France. Speaking at the launch of the second UTF report last week, LSE professor of social policy Anne Power claimed the ethnic polarisation in Britain's inner cities has led to a rise of extreme community tension.



#### RMJM LOOKS EAST WITH INDIAN CONVENTION CENTRE

RMJM is to design India's new international convention and exhibition centre on a 4.1ha site in Kolkata (Calcutta). The scheme will become one of the largest mixed-use developments in the country and includes two hotels, apartments, offices and retail space. Catering for up to 2,000 delegates, the centre will sit in a new public park on the outskirts of the city.





#### LOCAL FIRM IN OXFORD WIN

Berman Guedes Stretton has seen off a raft of big names to win the design competition for a new lecture theatre at the Queen's College, Oxford. The locally based practice triumphed over Rick Mather Architects, MacCormac Jamieson Prichard and van Heyningen and Haward to land the job on the prestigious university site.

#### VIÑOLY PLANS MOVE AWAY FROM THE BRINK

Rafael Viñoly's controversial plans for a gallery in Colchester have narrowly escaped being put to a public vote after opposition councillors rounded on the project. At a council meeting last week, local politicians raised concerns that the project could become a 'financial burden' and that the money would be better spent elsewhere.

#### CAPITA SET FOR MORE TAKEOVERS

Capita Percy Thomas is set for another round of major architectural takeovers. The massive commercial practice, which snapped up Norman + Dawbarn earlier this year, is expected to buy two firms before Christmas and has another three acquisitions lined up for next year.

#### CABE PANS GATEWAY PARK PLAN

The chair of CABE has slammed Farrels' plans for a national park in the heart of the Thames Gateway. Speaking at the Thames Gateway Forum (24 November), John Sorrell said he did not believe the development zone east of London was the right place for a massive, protected park. The revelation comes less than two weeks after it was reported housing minister Yvette Cooper had given Farrels' park plans the green light.

#### NO PENALTY FROM ARB

An architect who was fined £500 and ordered to pay £1,000 costs following a health and safety prosecution has escaped any further punishment from the ARB's Professional Conduct Committee. Neil Vesma previously pleaded guilty to a charge under the Construction (Design and Management) Regulations at Gloucester Magistrates' Court for failing to specify that heavy building blocks had to be lifted – not carried.

#### NAO BACKS PREFAB CONSTRUCTION IN REPORT

The highly-influential National Audit Office has called for the wider-spread adoption of off-site construction. The quango has published a report, entitled *Using Modern Methods of Construction to Build Homes More Quickly and Efficiently*, which claims that prefabrication is four times as efficient in its use of labour as traditional construction. An analysis of the current prefab debate can be found on pages 14-15.

#### HIGH-PROFILE RIBA RECRUIT RUSSELL RESIGNS

Graeme Russell, one of the RIBA's most high-profile recruits in recent years, has resigned from the institute less than three months after he joined. Russell, who was appointed as head of programmes for the RIBA Trust, arrived from Manchester's troubled architecture centre, CUBE, in September. RIBA officials claim he will continue in a 'consultancy capacity' from a base in the North West.



JAMES BOLTON

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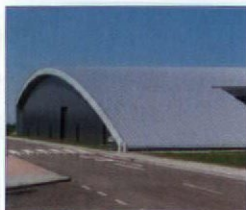
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\* External claddings that are LPCB approved to LPS1181 can be classed as 'non-combustible building', Association of British Insurers (ABI) May 2003.

\* Independent research carried out by EC Harris 2005



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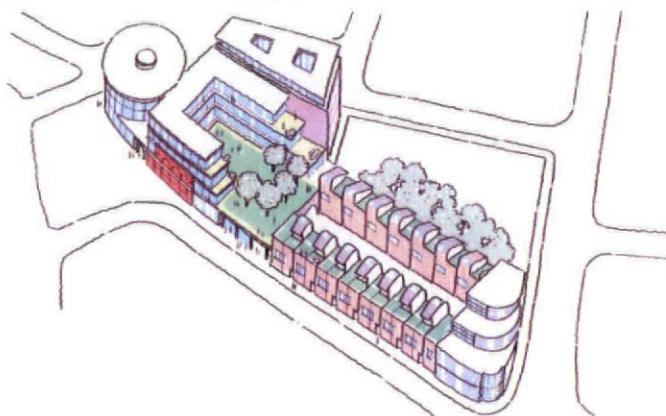
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Panter Hudspith, Munkenbeck + Marshall and Birds  
Portchmouth Russum may join Farrells in leaving

## FARRELLS WALKS AT SOUTH KEN

By Ed Dorrell

Farrells has walked away from one of the most contentious projects in London after committing 10 years to working on schemes for the site, the AJ can reveal.

The practice left the Stanhope team astonished last week when it suddenly resigned from the controversial South Kensington tube station redevelopment scheme.

The office is also expected to take with it Panter Hudspith, Munkenbeck + Marshall and Birds Portchmouth Russum, all of whom were working with it on the proposals for the highly significant site.

Farrells' proposals – which are currently being touted by Stanhope to locals and planners at Kensington and Chelsea council – are the latest attempt to find a commercial scheme

that would fund the renovation of the historic tube station.

They would see the development of a large site above and around the station, including offices, residential and retail elements (*pictured*).

This is not the first time the site has hit the headlines. The last Farrells planning application, rejected in December 2003, was one of the chief reasons behind the problems faced by CABE when it was subject to a Conflict of Interest Audit last summer. Conservationists and locals had complained to the government that the design watchdog – which gave the Farrells and Stanhope scheme the thumbs up – was chaired by Stanhope boss Stuart Lipton.

After these proposals were thrown out by planners, Stanhope sent Farrells back

to the drawing board and the practice recruited the other three offices to collaborate on fresh plans for the site. They were also set a new brief after the existing building was listed in August 2004.

Less than 24 hours before these new designs were set to be presented to planners and locals last Friday, Stanhope received a letter from Farrells directors, withdrawing from the project.

The reasons for this sudden departure are currently unclear, but one long-term observer said that the office felt it was 'somehow being undermined on the project'.

But it is certain that local campaigners, who have objected to every scheme proposed for the site by Farrells over the last decade, will be delighted by the resignation.

'It has been our opinion that since the station was listed there should have been a new architect on the project,' Sophie Blain, chairman of local campaign group the Brompton Association said. She also said she has the support of the Kensington Society and the Chelsea Society in the matter.

'We need to get an architect on board that will work within the sensitivity of the building,' she added.

It is understood that Stanhope is expected to appoint a new architect for the project imminently.









## SUFFOLK SCHEMES GO ON SHOW

The six practices shortlisted in the final round of the Elmswell housing competition in Suffolk have seen their projects go on anonymous display in the village. The projects – labelled Schemes A to F (pictured) – were designed by Alison Brooks Architects, Allies and Morrison, Foster Lomas, Fraser Brown MacKenna Architects, Henning Stummel Architects and Riches Hawley Mikhail Architects. To get to this stage they saw off 73 other expressions of interest. The practices' schemes were responding to a brief that demanded they 'interpret the distinctiveness of Suffolk in a contemporary way'. Additionally, they had to 'reflect the needs of people living in a rural environment, offer flexible accommodation and act as an exemplar for 21st-century housing'. The winning scheme, which will have a budget of £2.9 million, will provide 25 affordable houses with properties for both rent and shared ownership, with half of the site to be retained as open 'play space'. The competition is organised by Elmswell Parish Council, the East of England Development Agency, Mid Suffolk District Council, the Orwell Housing Association and the Suffolk Preservation Society. The winner will be revealed later this month.

*By Ed Dorrell*







1.



2.

## FABRICATING A NEW FUTURE

By Richard Waite

The National Audit Office (NAO) says prefab homes can save the world.

Well, it actually claims that Modern Methods of Construction (MMC) can slash on-site labour by almost three quarters and cut construction time by more than a half.

It sounds like the perfect answer for those waiting to build mammoth new housing developments around the Olympic zone and in the rest of the Thames Gateway area. Especially as the long-awaited skills shortage is due any day...

There are some risks, of course, and the NAO report, commissioned by the ODPM and the Housing Corporation, points to the 'higher-than-average' cost of such schemes.

However, the NAO argues that prices can be 'comparable' to conventional schemes,

depending on the project, and building performance is 'at least as good'.

But who's listening? Where are the queues of housebuilders hoping to roll out hundreds of off-site homes?

The big boys – both developers and construction giants – are reticent about off-site projects and have only been willing to stick tentative toes into the prefab pool.

Unfortunately for its supporters, without an economy of scale, the prospect of viable off-site production could remain a 'what might have been'.

'The government can talk and talk, but until suppliers and contractors are doing it, it is just empty rhetoric,' says Andy von Bradsky, a director at PRP Architects.

The practice is currently developing a prototype modular

apartment in London for Notting Hill Housing (pictured above) which will incorporate MMC elements.

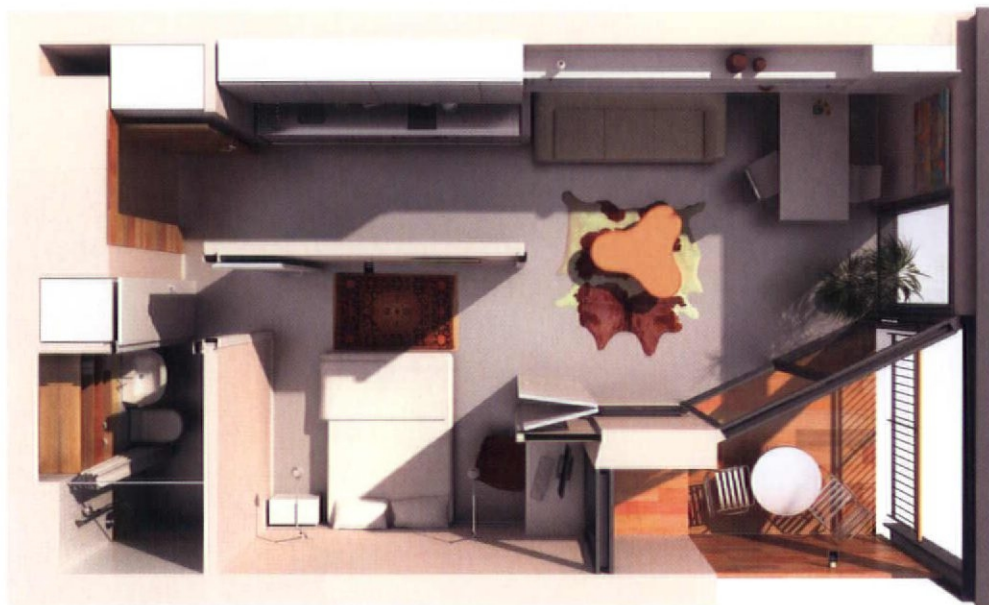
It is not the first scheme the firm has designed with off-site construction methods in mind. Yet, as von Bradsky admits, the approach to MMC is fragmented and the practice has not been given the chance to concentrate on delivering a large volume of prefab homes.

According to von Bradsky, the issue is not the architectural innovations needed to carry off such schemes but the will to see them through on a mass scale.

He says: 'There is no end of ideas and you can have any number of competitions.'

'What's important is how you get the industry to latch onto them and turn them into reality. MMC needs to move to the next level of





3.

1, 2 & 3. PRP Architects' design for a modular apartment in west London will use modern methods of construction, including prefabricated cladding panels and modular bathrooms and kitchens

implementation – that means the supplier and contractor.

'We have to stop experimenting and do it, be 100 per cent committed and do it for long periods,' he adds.

Martin Wood, of Bryden Wood Associates, agrees. About two thirds of the practice's work involves some off-site construction but the majority of those schemes are in the commercial field – such as flexible office and factory projects – and not in the mass residential market.

'My perception is that we are waiting on the sidelines for the macro-politics to sort itself out. A muddy building site cannot be an efficient way of working, but we are helpless to do anything about it,' he says.

'We feel frustrated trying to change a difficult, fragmented industry.'

Wood, a recent speaker on the subject of prefab at the Thames Gateway Forum, also feels that even if there was a widespread commitment to MMC, the country would not be in a position to handle it.

'The problem is that the MMC process is still a fledgling – it is still a cottage industry,' says Wood. 'When you think about industrial processes you think about car plants and the reliability of supply in delivering 100 units a day.'

'But MMC is still done on a batch basis – which is less reliable. The whole thing hasn't reached a critical mass.'

On top of all these issues, there remains one bugbear that continues to overshadow the rest – design quality.

Whatever the NAO says about the speed and efficiency of MMC construction, there is

still a widespread view that prefabs are ugly – based, perhaps, on the failure of mass housebuilding in the 1950s.

There is even a perception that architects are to blame – an argument supported by comments from a Housing Corporation chief last week (*ajplus* 25.11.05).

Wood feels that this is unfair and that modern techniques of off-site construction can deliver both functionality and variation in looks and layout.

He suggests taking a more component-based approach to the MMC process. 'The fear of a Portakabin aesthetic just isn't necessary,' he says. 'People are looking at the wrong scale by looking at the container on the back of a lorry.'

'But once you are down to the component scale, the

external aesthetic is far more flexible.'

And one by-product of the prefab debate could be a new off-site aesthetic. Wood concludes: 'The introduction of reinforced concrete at the start of the 20th century was seized on by the architectural profession and it radically changed architecture as we know it.'

'We are going to be disappointed waiting for the next material revolution. I believe the next revolution is in the construction industry. It could effectively become a new movement.'

Whether we will see much of this 'movement' remains unclear. From the sounds coming from the main players, the first major stage for a new generation of prefabs is unlikely to be the Thames Gateway.



*'Rogers... cannot say what he means, which is that the middle classes are a civilising force on inner cities, and areas that lack them tend to be unpleasant'*

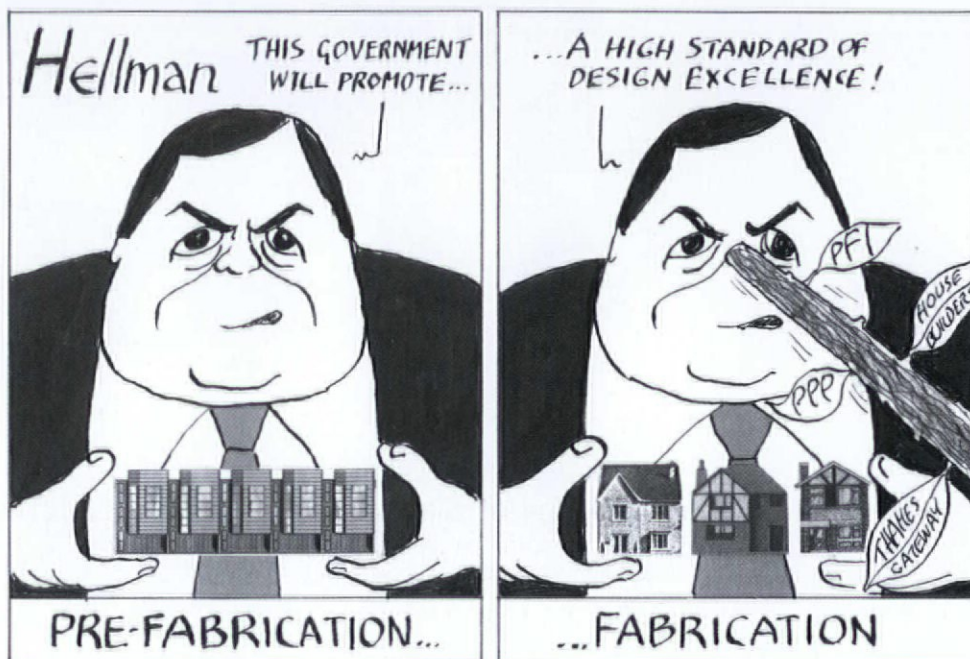
Alice Miles.  
Times, 23.11.05

*'Orson Welles said that all the Swiss ever produced was a cuckoo clock but in architecture, as in pharmaceuticals and banking, they can't be touched'*

Edwin Heathcote.  
Financial Times, 25.11.05

*'Architecturally, the country has been the equivalent of a teenager experimenting with make-up'*

Steve Rose on Dubai.  
Guardian, 28.11.05



#### A SPOT OF MARITAL BOTTA

There was a formidable force present at the opening of Swiss giant **Mario Botta's** first ever UK exhibition at the RIBA. Astragal refers not to the architect's sizeable entourage, nor even the minuscule wild-haired maestro himself. It was rather Signora Botta – looking demure in fur – who held court while her husband frantically sketched on a giant blackboard, the *pièce de résistance* of the exhibition. Spotting a space where he hadn't applied his sacred hand, Mrs Botta helpfully shouted suggestions from the crowd, not content until her husband had reduced his chalk to a mere stub and his arms hung limply by his sides in artistic exhaustion. Mastermind of San Francisco's Museum of Modern Art and prodigy of **Le Corbusier** and **Louis Kahn**

Botta may be, but Mrs B appeared to steal the show. Behind every powerful man...

#### LIPTON FORCED TO LIP UP

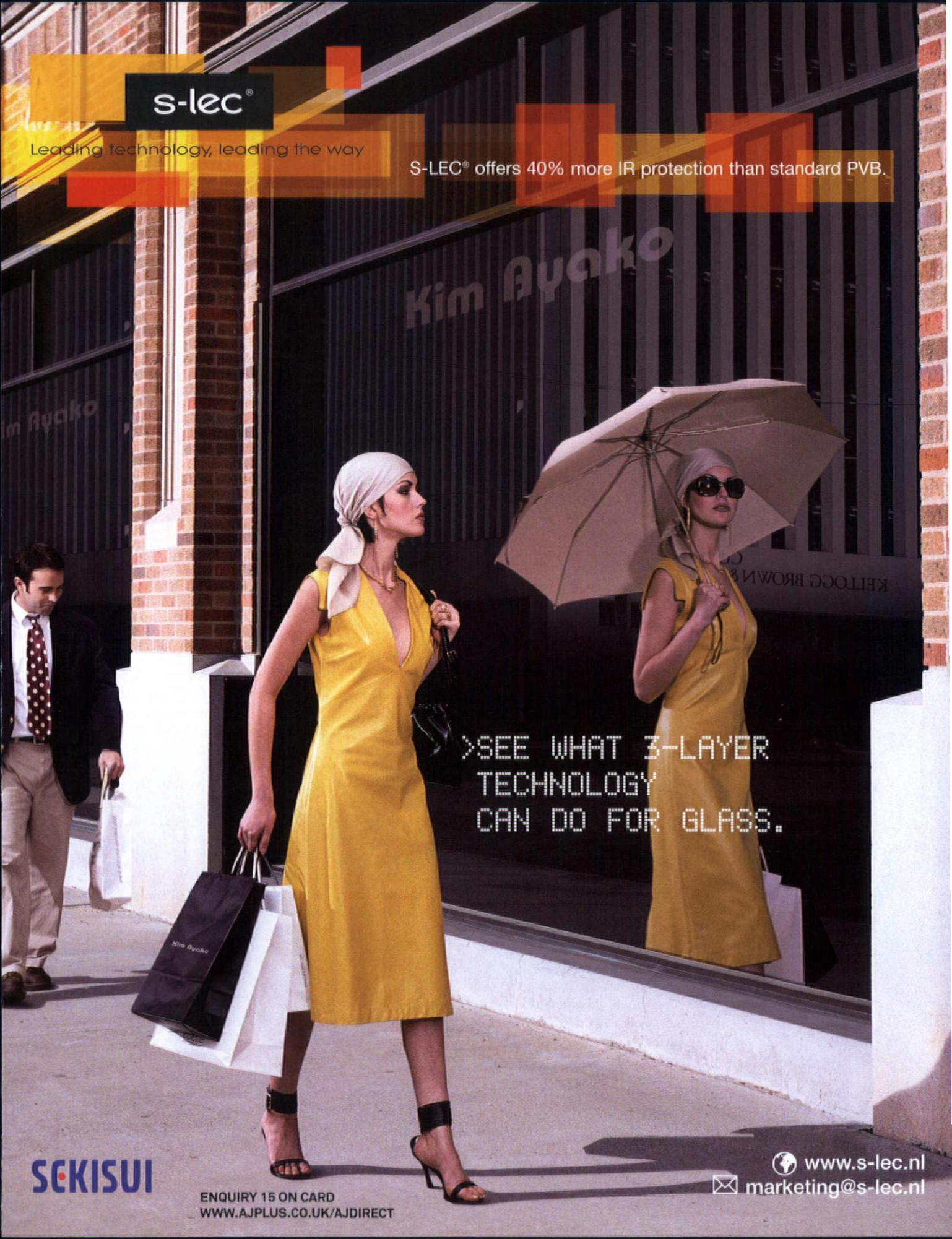
Amusing antics at the Thames Gateway Forum last week, bringing much-needed light-hearted respite to an otherwise dry occasion. When **Stuart Lipton** was asked to chair a debate on 'inspirational development', he took time-keeping – over speeches by the likes of **Eric Kuhne** and Lend Lease Communities chief **Keith Perry** – to extremes. Halfway through their talks the former head of CAFE would walk over the stage and stand next to them, to give the speaker a gentle reminder to hurry up. But Bluewater bruiser **Kuhne** was having none of it. 'I know Stuart wants me to hurry up but he's gonna have

to give me a couple more minutes,' said the architect, before Lipton was forced to take a seat in the front row with his tail between his legs, much to the audience's hilarity.

#### YEANGING TOUGH

Staying at the forum, **Ken Yeang's** was not one of the slickest presentations of the event. For the most part inaudible, the eco-superstar bumbled his way through with a selection of slides that seemed foreign to both audience and speaker. In his defence, Yeang was always going to disappoint the crowd after a sycophantic introduction from **Piers 'Gusher' Gough**. Hailing the 'future Lord Yeang', Gough then described his designs as like '**Norman Foster** on speed.' Having heard the talk, morphine is perhaps more accurate.





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## OUR CITIES MUST NOT BE SACRIFICED BY THE BLIND AND OPINIONATED WHO TALK ENDLESSLY ABOUT AVENUES, CITY BLOCKS AND 'PUBLIC SPACE'

There is an awful lot of talk around at the moment about masterplanning, urban design and planning. This has given impetus to an emerging army of consultants who are battering their way through public procurement exercises in order to secure work. Architects, landscape architects and some engineers have all embraced this area of expertise; but is this a good thing?

There are some warnings. For example, the area around Potsdamer Platz and Leipziger Platz in Berlin was the subject of much public debate and consultation after the Wall came down. The public meetings were interminable and led up to a competition, the winner of which created the basis of what we see here today – which is boring, clinical and lacking in any edge. It is here that we see the downside of urban design as administered by a director of planning who firmly believed in the city block idea, pandering, with no creativity, to an unfounded perceived public requirement. I observed a blind application of a planning dogma in the city that ultimately failed to live up to the extraordinary opportunity, on a world scale, that the Berliners had until the early 1990s.

A similar warning may be heeded in Toronto. The waterfront, which has been subjected to much scrutiny and 'best practice' (sic), fails to attract people and certainly does not engage with the emotional and experiential passions that people respond to.

In both cases we can see the arrogance of the masterplanner rise above evolution as a necessary component for place making. Our cities must not be sacrificed by the blind and the opinionated who talk endlessly about avenues, boulevards, city blocks and 'public space' as though they can't break out of this vocabulary. It is a good example of how process can be constrained by language. Planners often talk as though buildings do not matter. In fact, I heard one illustrious practitioner say exactly this at a recent conference. This is someone who then proceeds to go on and design buildings in his own masterplans which we can see would clearly benefit if he thought architecture was important. The relationship between the ground and the objects (buildings) is critical. We ignore it at our peril.

The process involved with masterplanning is of

vital importance. In fact, at the outset of a project it is better to start by designing the conditions in which a conversation might occur. The spirit and openness of the procedure is vital. The whole period of working is like a voyage of discovery on a ship that can house a number of people. The eventual course charted is plotted by many, which gives common ownership. The guiding into the port of destination is the job of the captain and the pilot. In my experience, the community is concerned with identity and uniqueness of its area. It is appropriate for the urban designer to report back in terms of 3D representation in order that people understand the implications of the collective vision.

The idea that the buildings themselves do not form a part of their concern is far from the truth. The success of our future places lies in being able to make possible futures visible, and current masterplanning practice seems to ignore this.

*From Parkgate Studio, London  
Email [ajcolumnists@emap.com](mailto:ajcolumnists@emap.com)*



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## ARCHITECTS MUST ENGAGE TO EMPOWER THEMSELVES

Your despairing leader (AJ 24.11.05) highlights the impotence of architects who are fixated on architectural values alone.

The profession has progressively slipped from its pedestal of natural leadership in the interests of all to the position of an artist seeking patronage and shouting defiance when it isn't there to be had. Surely the best architecture comes from empathy between the architect, the client and the rest of the stakeholders – in other words from shared values?

'Real value is not delivered through endless compromise' you rightly say – but from proper definition of the value proposition for the project, followed by reasoned defence of the proposition against erosion as the work proceeds.

I have just edited a guide to creating value in the built environment, *Be Valuable*, which is available from Constructing Excellence. It points to many opportunities for architects to create value for everyone, including themselves, and to make the case for good architecture compelling through understanding and communicating its benefits in lay terms.

I hope it empowers us to regain the initiative by focussing on the product and thus putting the process in its proper perspective.

*Richard Saxon, by email*

## WE MUST BE CONSTANTLY VIGILANT ABOUT 'RESEARCH'

Austin Williams has nailed one of the most insidiously deceptive *canards* of current times – the all-embracing, all-justifying 'research shows' and its twin 'the evidence is' (AJ 17.11.05).

As a scientist I constantly ask how the alleged figures/prognostications/justifications were arrived at. Williams rightly says that the media never seems to ask fundamental questions about exactly how the conclusions were reached. The holy writs of 'research shows' or 'evidence is' are simply accepted and exploited unchallenged.

Much 'research' nowadays is directed to producing a pre-determined conclusion. The hypothesis is drawn up in advance

and any statements produced in evidence are skewed to support it. Contrary evidence, even if uncovered, is suppressed and the public is duped into swallowing it whole.

One of the areas where I have experienced this phenomenon is in the arena of environmentalist propaganda. I was professionally involved in the implementation of the 1990 Environmental Protection Act and had first-hand experience of how specious many of the green lobbies' arguments were. Consequently, my view of skewed data used as justification for imposing rules based on self-interest is deeply jaundiced.

What Williams has said in his article is of profound importance and should be taken to heart by all who are concerned with operating in a world that is real and is not based on convenient propaganda.

*Rebecca Goldsmith, London SW11*

## JOURNAL'S RAW QUALITY IS AN INSPIRATION

A quick note to tell you how delighted I am with the wonderfully *raw* quality of the Architects' Journal.

Reading through the Stirling Prize issue (AJ 13.10.05) was a joy – it was like being another member of the pack, loitering up the back, looking around and catching a range of opinions, not just the polished submission spin.

It seems to be in the DNA of the journal to be just that – a journal. A working on-the-go capture of ideas, thoughts, scribbles, events and news – all thrown together the way you might grow one of your own.

You really are publishing the architects' (collective) journal – and this is informing the layout, the design and the content in a brilliant way. Well done and thank you.

*Sue Wittenoom, Lend Lease Corporate Solutions, Australia*

Please address letters to: The Editor, The Architects' Journal, 151 Rosebery Avenue, London EC1R 4GB, fax 020 7505 6701, or email [angela.newton@emap.com](mailto:angela.newton@emap.com) to arrive by 10am on the Monday before publication. The Architects' Journal reserves the right to edit letters.

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Will Layzell, a third-year student at Edinburgh University, recently completed this project to design a primary school in the soon-to-be-developed waterfront area in Edinburgh. His design was based on the idea of protection and enclosure – how the building and landscaping can create safe and secure areas for children to play in. It provides glass facades to all the classrooms, allowing access at the start and finish of every day.

## STUDENT SHOWCASE

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



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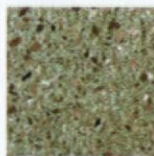
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# KEITH WILLIAMS/ UNICORN THEATRE





## IT SEEMS A REMARKABLY REFINED 'ROUGH' DESPITE ITS TOUGH MATERIALS AND FINISHES

By Mark Foley. Photography by Dennis Gilbert

*Keith Williams was a partner in Pawson Williams Architects before establishing Keith Williams Architects in 2001. The London-based practice has worked in Ireland, Italy and Spain as well as the UK. Current projects include a private house in St John's Wood and a Library HQ in Co Monaghan, Ireland. Following the completion of the Athlone Civic Centre, which opened in 2004, the practice has been appointed to design the new Wexford Opera House in Ireland with the Office of Public Works.*

Perhaps by chance or coincidence, two new theatre venues for children have opened within months of each other, one inhabiting an existing Grade II-listed shell in the historic city of Bath (AJ 10.11.05) and the other an entirely new building surrounded by mostly powerful new contemporary office buildings on the south bank of the River Thames near Tower Bridge in London. As well as the settings being the antithesis of each other, the approaches by both architects to the building of theatres for children also appear to be from very different perspectives. The former is wrought and scaled from full-size to that of a child, while the latter is a refined, grown-up building by adults to present theatre for children.

Both theatres avoid the patronising condescension of second-guessing children's tastes, which can change quite dramatically from early childhood to near adult (the Unicorn's target audience is from the ages of four to 12 years old).

Founded in 1947 by Caryl Jenner specifically to provide children in post-war Britain with an opportunity to experience high-quality, live theatre, the Unicorn began life touring in two

ex-MOD trucks with a cast of professional actors, before sharing space at the Arts Theatre in London's West End from 1967 to 1999, when it vacated to move into a space of its own.

In late 2000, Keith Williams Architects won a competition to design the new theatre. From an early briefing, the Unicorn's artistic director, Tony Graham, encapsulated his aspirations for the new building as being 'rough, yet beautiful', developing on the spatial organisation set out in the competition design proposals.

The location of the new theatre on the north side of Tooley Street, between London Bridge Station and Tower Bridge Road, forms part of Foster and Partners' masterplan for the 'More London Development' surrounding the GLA building and providing a backdrop of giant, glazed office buildings. The Unicorn sits on a compact site with a reduced footprint, facing Tooley Street and a pedestrian passage – serendipitously named Unicorn Passage – which opens up a narrow vista to the Thames.

The constrained footprint of the site has influenced the vertical order of spaces within the building – leading to the main auditorium (the Weston Theatre) of 300–340 seats being set as a 'Theatre in the Sky' with a 'Grand Stair' forming the main approach to the auditorium. At ground level, the smaller studio theatre (The Foyle Studio), of 120 seats in flexible formats, acts as the main support for the overhanging form of the main auditorium, under which nestles the double-height volume of the foyer area. This arrangement supports the architectural play of interlocking volumes, voids and clear openings which runs like



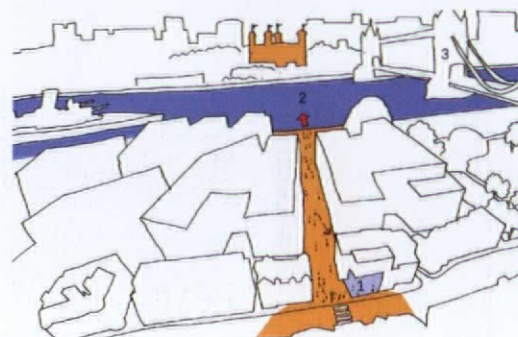


1. The foyer: low glazed cut-outs in the concrete balconies allow children to look out





2.



3.

KEY  
1 UNICORN THEATRE  
2 RIVER THAMES  
3 TOWER BRIDGE

2. View along Tooley Street showing the rear 'stage door' facade

3. Sketch showing relationship to the River Thames

a *leitmotif* throughout the composition of the building and, indeed, much of Williams' work.

The internal layout of the building is parallel to Tooley Street, with the 'front' facing London Bridge and the 'back' facing Tower Bridge. Being exposed like this, it becomes more sculptural object than theatre, with a clear front and back.

When viewed on the approach from London Bridge, the grand stair is revealed behind the glazed elevation, turning into a reversed L-shape as it runs under the volume of the main auditorium to reveal the activity in the public areas. With the main theatre hoisted into the air, the staircase acts as a vertical foyer. The landing levels are faux balconies, acting as rather elevated Juliet balconies above the foyer below, or simply as somewhere to perch while surveying the scene. Low, glazed cut-outs in the concrete balcony upstands provide places for children to look out.

From the Tower Bridge end, blue mosaic tiles brighten the elevation around the stage door and scene dock, while the composition of interlocking masses and elongated window openings continues to define the treatment of the elevation (Keith Williams cites 1990s paintings by the American artist Peter Halley as a painterly influence on the design).

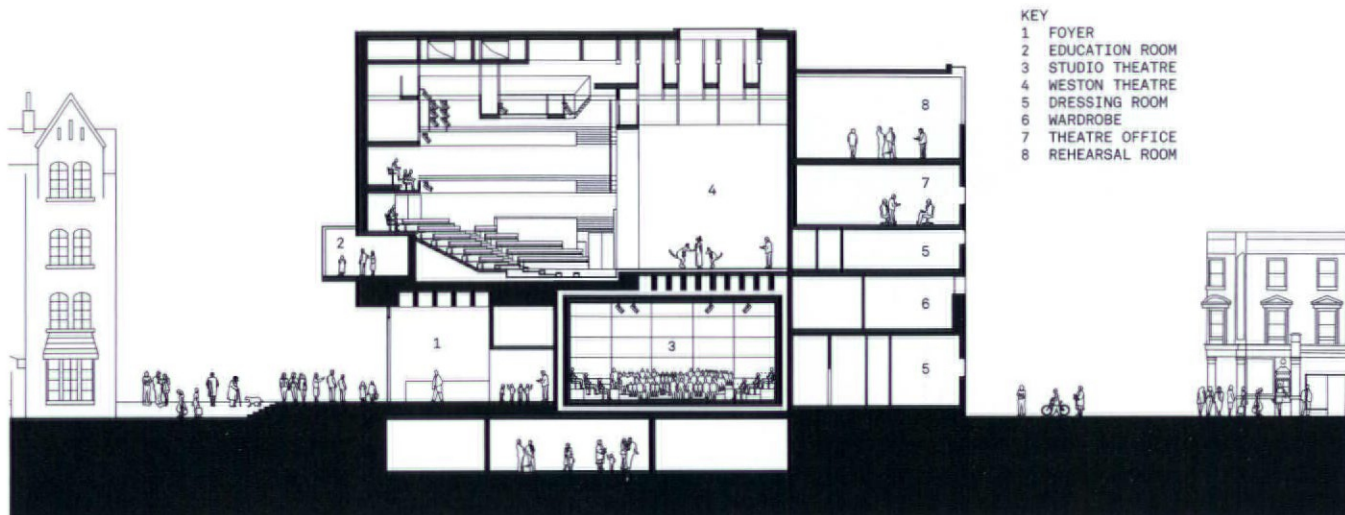
The orthogonal mass of the main auditorium disguises the form of the theatre space within and is clad in pre-oxidised copper panels of varying widths which wrap around and continue internally under the volume of the space. Within the ceiling of the foyer, the copper is stripped away to reveal the cantilevered

structural bones of the mass and troughs in which to recess the foyer lighting. Juxtaposed against the volume of the main auditorium, a contrasting white rendered mass of less than half the width of the auditorium hangs as another volume, which encloses the educational room at tree-top level and reveals the 'grand stair' below.

Williams describes the relative proportions of the spaces and volumes created: the height of the glazed stair volume is half of the enclosed mass above. The studio theatre, which is 12m x 12m in plan, is 6m in height, being half a cube or four smaller cubes side by side. In the main auditorium, the sectional proportion of the space is prescribed by a circle from the setting line at the front of the stage to the front of the first balcony, relating also to the circular plan of the seating at balcony level. At stalls level, the setting line is the mid line through an oval which kisses the back wall of the stage at one end and the balcony front at the other.

So do these geometrics make for good theatre spaces, particularly when the stage area is stripped back to reveal the basic space? There is no doubt that the interlocking realms of the auditorium and stage reinforce the contact between performer and audience, (a theory long propounded by Iain Mackintosh of Theatre Projects when describing the sacred geometry of theatre spaces), but when the stage area is laid bare, part of the stripped-back, exposing-all ethos of the Unicorn's play-making, the large volume of the stage house is distracting and undoes the intimacy created in the auditorium.





4. Section

Williams explains that a strict drawing of sacred geometry was not his starting point, but that he derived more from the simple principle of the story-teller gathering his audience around him in an arc, following the form that Peter Brook achieved at La Bouffé du Nord in Paris. This is the relationship created in the steeply raked stalls, when the first five rows of the pit are levelled to create a flat floor.

To be fair, the dressing of the stage house is the realm of the stage designer, and masking of the void in this area will be necessary to complete the circle and make sense of the geometry. It should also be noted that the theatre is designed to address different seating/stage configurations, from end stage and in-the-round to thrust stage (with the pit filled in and the focus brought forward into the auditorium, surrounded by the steeply raked stalls seating, the encirclement of the balcony and technical gallery above can come more into its own).

Backstage, the fine finishes revert to the more utilitarian economy of so many venues where, whatever the budget, there is never enough. However, this is not at the expense of the quality of accommodation provided. The dressing rooms are well appointed and the Green Room is rather special: it sits halfway in and halfway out of the building, providing a fully glazed box as it protrudes from the main envelope of the building providing clear views up and down Tooley Street. There is no doubting the quality of escape for those confined in darkness for many hours in the interior of a theatre building.

The other glass box that bursts half-in, half-out through the pre-oxidised copper box of the main auditorium enclosure is designated as the VIP/Board Room, but is also to be used for education and as a children's eating area when school groups attend. This is similarly detailed to the Green Room and provides glimpses along Unicorn Passage to the river beyond. From my perspective, this would have made a good foyer space for the 'Theatre in the Sky', as it always seems to be a long haul to the bar at ground level, even if only for the fizzy pop and chocolates. But perhaps this is just grown-up thinking and kids are much happier hanging around on the stairs.

The only visible concessions to children's physical size are the height of the seats, the double-height handrails on the stairs, the ascending scale of the urinals in the gents' loo, the glazed drop in the concrete balustrade to the grand stairs and a small box seat in the ground-floor foyer, with a roof preventing grown-ups from sitting on it. Even the bar in the ground-floor foyer has a grown-up feel about it, although it too has a lower shelf. It is in every other respect a 'grown-up' building, and the first entirely dedicated to producing theatre for children, families and schools.

'Rough yet beautiful?' Beauty is in the eye of the beholder and the Unicorn Theatre is all about stimulating the child's imagination. Rough? It seems a remarkably refined 'rough' despite its tough materials and finishes. No doubt the kids will lend credence to this aspiration in due course and, in the meantime, the Unicorn has a very fine building in which to develop its art.





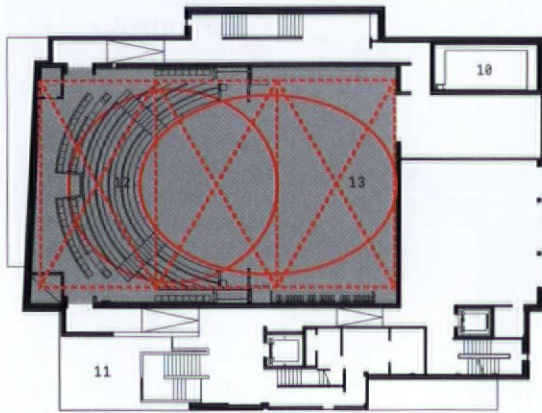
5. Front elevation showing the main entrance and cantilevered education room



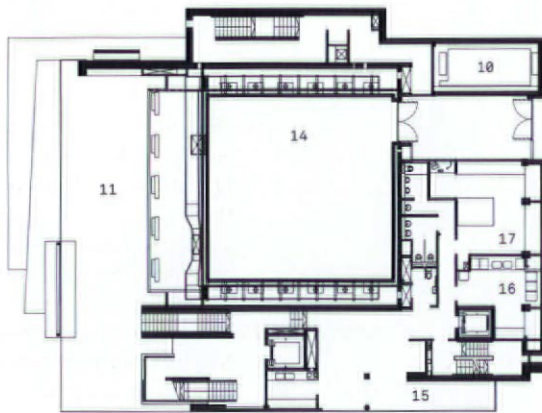


6. Like the Green Room, the Education Room offers a sense of escape

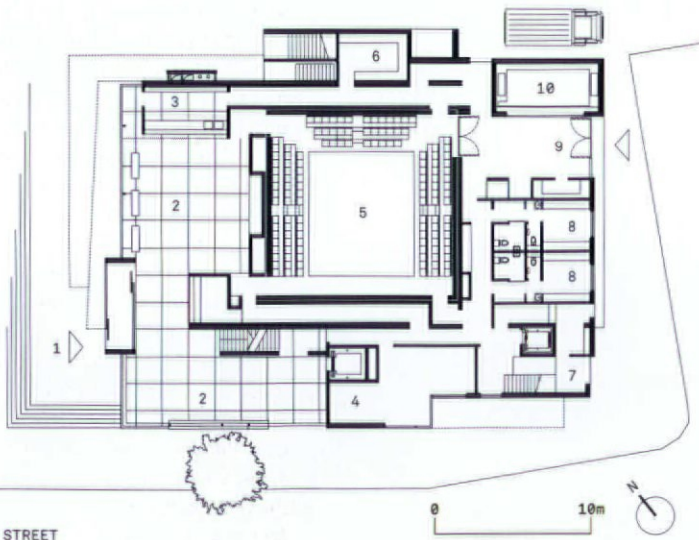




Stage-level plan showing geometric concept patterns



Mezzanine-level plan

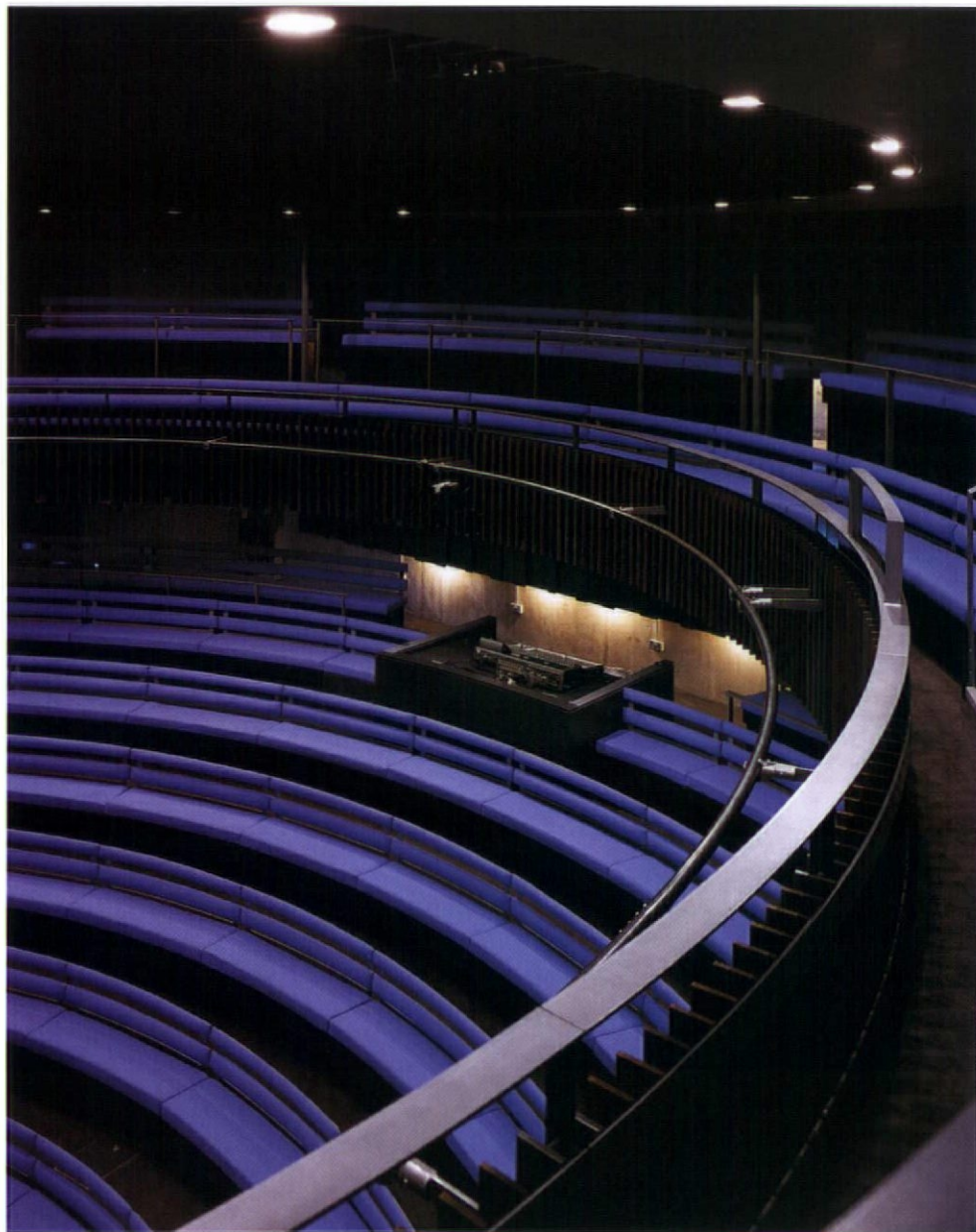


- KEY
- 1 MAIN ENTRANCE
  - 2 FOYER
  - 3 CAFÉ
  - 4 BOX OFFICE
  - 5 STUDIO THEATRE
  - 6 KITCHEN
  - 7 STAGE DOOR
  - 8 DRESSING ROOM
  - 9 SCENE DOCK
  - 10 SCENERY LIFT
  - 11 VOID OVER FOYER
  - 12 STALLS/AMPHITHEATRE
  - 13 STAGE
  - 14 VOID OVER STUDIO THEATRE
  - 15 GREEN ROOM
  - 16 LAUNDRY
  - 17 WARDROBE

TOOLEY STREET

Foyer-level plan





7. The form of the auditorium is derived from the principle of the story-teller gathering his audience around him

## STRUCTURE

Arup has provided structural engineering, building-services design, and acoustic consultancy for the Unicorn. One of the most striking features of the scheme is that the main auditorium cantilevers out over the entrance foyer and the tower in turn cantilevers off the main auditorium box out over the foyer. This subtle and complex symbiotic support system has enabled the architect to have a completely column-free foyer space, thereby allowing a dramatic light and free feel to this part of the building. Inside the building, the studio theatre sits directly below the main auditorium and is acoustically separated by a small air gap. To achieve this close proximity, the box-in-box construction of the studio was created using self-compacting concrete to form the roof slab. As well as the larger structural features, Arup's engineering extended to the in-house technical facilities, such as designing the complex steelwork associated with the support of theatre equipment, scenery flying equipment, technical balconies and lighting bridges with innovative flip-up floors. The building consists of a number of primary spaces, each with individual uses requiring a different specific building service to each area. Coupled with this, the theatre needs a very high level of servicing and a high volume of electrical services have to be distributed in relatively constrained areas. The main design challenge for Arup Acoustics has been to accommodate sound integrity for two theatres occupying the same building, one on top of the other. One theatre is basically a concrete box-in-box construction, so that the high sound levels which could disturb the other theatre above are mitigated. As well as the insulation factor, there have been enhancements to allow for high speech intelligibility throughout the theatre spaces.

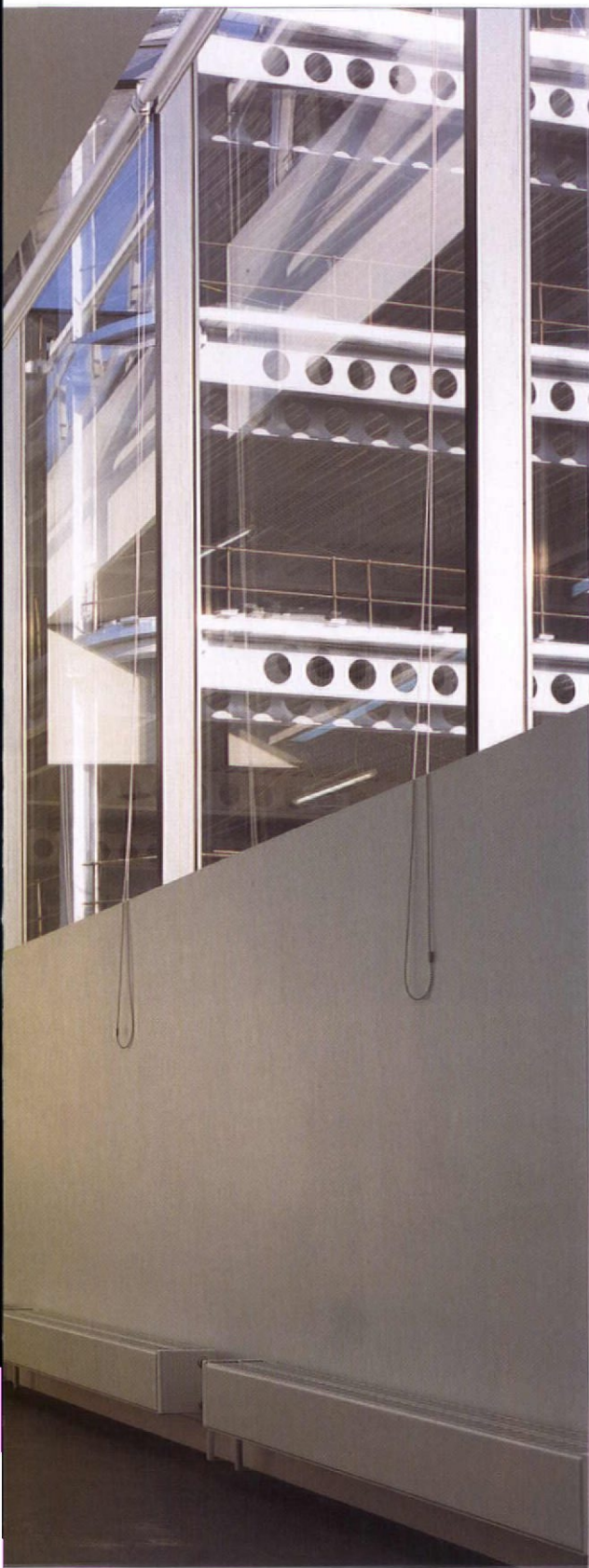
*James Fleming, Arup*





8. The rehearsal room: backstage finishes revert to more utilitarian economy





## Credits

### Tender date

July 2003

### Start on site date

9 February 2004

### Contract duration

82 weeks

### Gross internal floor area

3,640m<sup>2</sup>

### Form of contract and procurement

JCT 98 Private without quantities/two-stage procurement

### Total cost

£9,245,966

### Client

Unicorn Theatre for Children

### Architect

Keith Williams Architects: Keith Williams, Richard Brown, Nick Bradley, Wei-Yang Chiu, Guy Davies, Annika Grafweg, Sofia Kapsalis, Bruno Paolucci, Melanie Schubert

### Theatre consultants

Theatre Projects Consultants with Charcoal Blue

### Access consultant

Buro Happold

### Structural, M&E and acoustic engineer

Arup

### Cost consultant

Bucknall Austin

### Main contractor

Mansell Construction Services

### Artists

David Cotterrell, Martin Richman

### Subcontractors and suppliers

*Engineering bricks* Baggeridge Brick; *external glazing* Hynds Architectural Systems, Cantifix; *copper cladding* KME UK; *roof membrane* Sarnafil; *panel cubicles* Amwell Systems; *rooflights* McKenzie-Martin; *vinyl flooring* Altro; *rubber flooring* Freudenberg; *mosaic tiles* Domus; *insulated render* Alumasc; *levelling screeds* Ronacrete; *ladders, walkways and gates* Steelway Fensecure; *intumescent coatings* Quelfire; *sanitary appliances* Ideal Standard, Armitage Shanks; *fall-arrest system* Latchways; *insulation* Knauf, Rockwool, Kingspan; *blockwork* Celcon H + H; *lifts* Mitsubishi; *lighting* Erco, Bega, Wever & Ducr , Zumtobel, Fagerhult, Modular, Concord, Kreon, Philip Payne, Coughtrie; *ironmongery* Iz , Yannedis; *steelwork* Allslade; *handrails & balustrades* Baroque Balustrades; *doors* A Edmond, Ahmarra, Industrial Acoustics; *ss cladding* NDM; *plastering* Rosslyn; *rostra and seating systems* Steeldeck



## Costs

Costs based on final account for GIFA

### SUBSTRUCTURE

Foundations/slabs £139.56/m<sup>2</sup>

### SUPERSTRUCTURE

Frame £56.87/m<sup>2</sup>

Structural steelwork

Upper floors £479.67/m<sup>2</sup>

In situ and precast reinforced concrete walls and slabs, including ribbed stage slab and acoustic separation bearings

Roof £29.88/m<sup>2</sup>

In situ concrete and Sarnafil finish

Rooflights £2.75/m<sup>2</sup>

Proprietary glazed

Staircases £8.24/m<sup>2</sup>

In situ concrete

External walls £156.91/m<sup>2</sup>

Engineering brickwork, render and curtain-walled elevations

Copper cladding £32.78/m<sup>2</sup>

Stainless-steel cladding £5.93/m<sup>2</sup>

Windows £49.97/m<sup>2</sup>

Glazed windows

External doors £10.99/m<sup>2</sup>

Steel

Internal walls and partitions £59.01/m<sup>2</sup>

Blockwork and plasterboard partitions

Internal doors £63.77/m<sup>2</sup>

### INTERNAL FINISHES

Wall finishes £37.12/m<sup>2</sup>

Plaster and paint finish

Floor finishes £50.26/m<sup>2</sup>

Screed, vinyl, carpets and hardwood timber floors

Stone flooring £8.44/m<sup>2</sup>

Ceiling finishes £8.03/m<sup>2</sup>

Plasterboard ceilings, plaster and paint finish

### FITTINGS AND FURNISHINGS

£209.20/m<sup>2</sup>

### SERVICES

Sanitary appliances £9.51/m<sup>2</sup>

Ceramic and stainless steel

Services equipment £105.36/m<sup>2</sup>

Building management, pumps, water tanks

Disposal installations £22.18/m<sup>2</sup>

Rainwater services, soil- and waste-disposal systems

Water installations £46.03/m<sup>2</sup>

Space heating/air treatment £108.10/m<sup>2</sup>

Electrical services £242.14/m<sup>2</sup>

Including production sound and lighting

Lift and conveyor installations £57.82/m<sup>2</sup>

Two passenger lifts and one scenery/goods lift

Protective installations £29.87/m<sup>2</sup>

Fire detection and alarms, CCTV, lightning protection

Communication installations £24.15/m<sup>2</sup>

Voice alarm system

Builders' work in connection £5.44/m<sup>2</sup>

### PRELIMINARIES AND INSURANCES

Preliminaries, overheads and profit £480.13/m<sup>2</sup>

## Cost summary

	Cost per m <sup>2</sup>	Percentage of total
SUBSTRUCTURE	139.56	5.49
SUPERSTRUCTURE		
Frame	56.87	2.24
Upper floors	479.67	18.88
Roof	29.88	1.18
Rooflights	2.75	0.11
Staircases	8.24	0.32
External walls	156.91	6.18
Copper cladding	32.78	1.29
Stainless-steel cladding	5.93	0.23
External doors	10.99	0.43
Internal walls and partitions	59.01	2.32
Internal doors	63.77	2.51
GROUP ELEMENT TOTAL	956.75	37.67
INTERNAL FINISHES		
Wall finishes	37.12	1.46
Floor finishes	50.26	1.98
Stone flooring	8.44	0.33
Ceiling finishes	8.03	0.32
GROUP ELEMENT TOTAL	103.85	4.09
FITTINGS AND FURNISHING	209.20	8.24
SERVICES		
Sanitary appliances	9.51	0.37
Services equipment	105.36	4.15
Disposal installations	22.18	0.87
Water installations	46.03	1.81
Space heating and air treatment	108.10	4.26
Electrical services	242.14	9.53
Lift and conveyor installations	57.82	2.23
Protective installations	29.87	1.18
Communication installation	24.15	0.95
Builders' work in connection	5.44	0.21
GROUP ELEMENT TOTAL	350.60	25.61
PRELIMINARIES AND INSURANCE	480.13	18.90
TOTAL	2,540.10	100





9. Interlocking volumes, voids and openings run like a leitmotif throughout the building



## A WALL CLAD IN COPPER SHEET WITH HORIZONTAL STANDING SEAMS

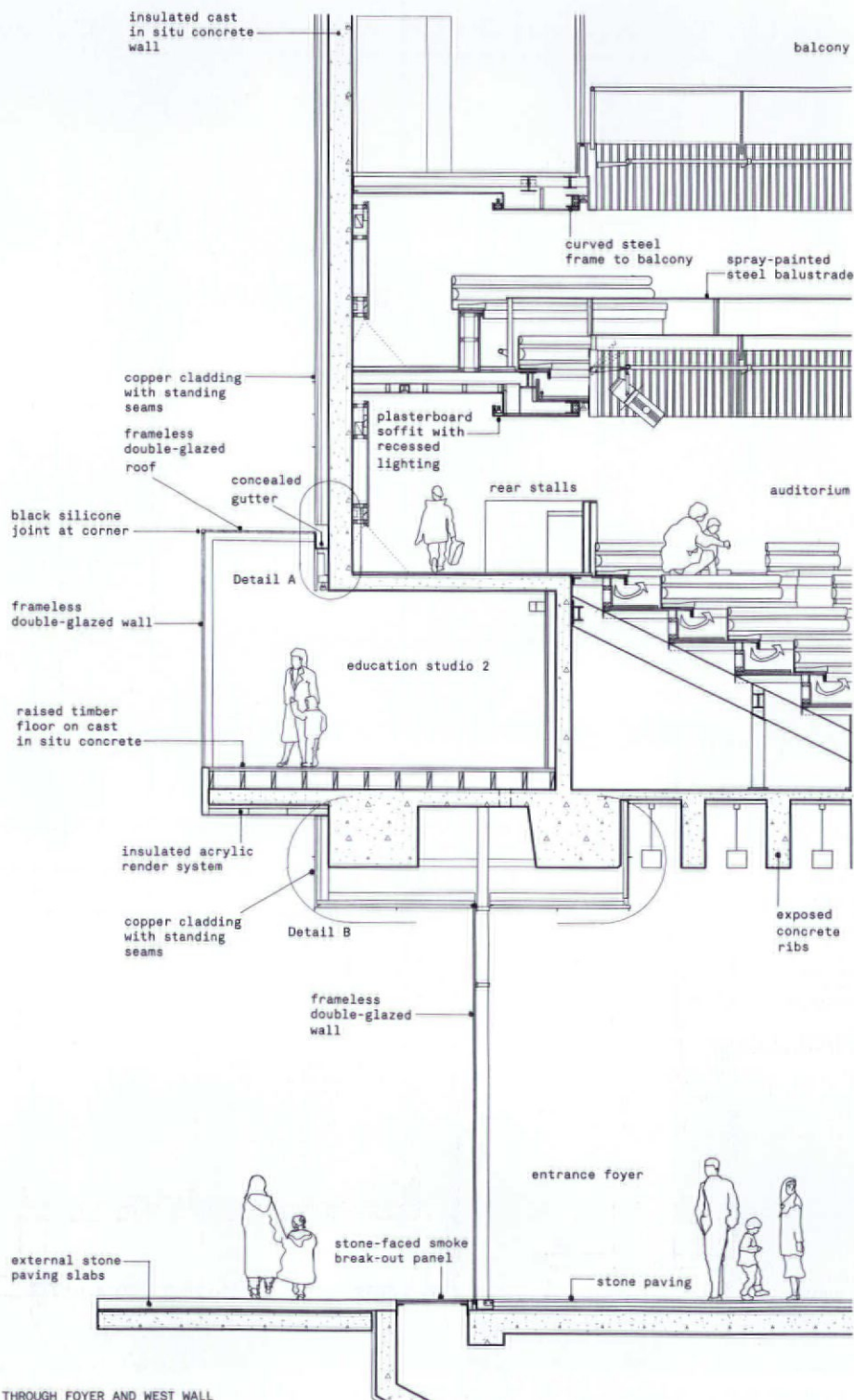
The main auditorium of the theatre is designed as a steel structure, supporting the seating tiers, within a cast in situ concrete box. On the west elevation the use of concrete allows the auditorium to cantilever over the ground-floor entrance foyer below it.

External walls are clad with horizontal strips of copper sheet, pre-oxidised to a deep chestnut colour. The 0.7mm sheet is laid in random widths based on standard coil widths of 230, 430 and 600mm, with standing seams at the horizontal joints. The sheets are fixed to a backing of 18mm WBP ply supported on a framework of back-to-back aluminium angles; this is fixed to the concrete wall and lined with 50mm insulation batts.

On the west elevation an education studio projects beyond the copper walls as a transparent glass box. The roof and three walls are of frameless double-glazed units. An inset gutter is set at the junction of the glazed roof and the copper-clad wall. The glazing is fixed to an internal aluminium structure supported by a proprietary steel channel that also forms the gutter profile. A plasterboard bulkhead conceals the gutter and glazing support system, and houses lighting.

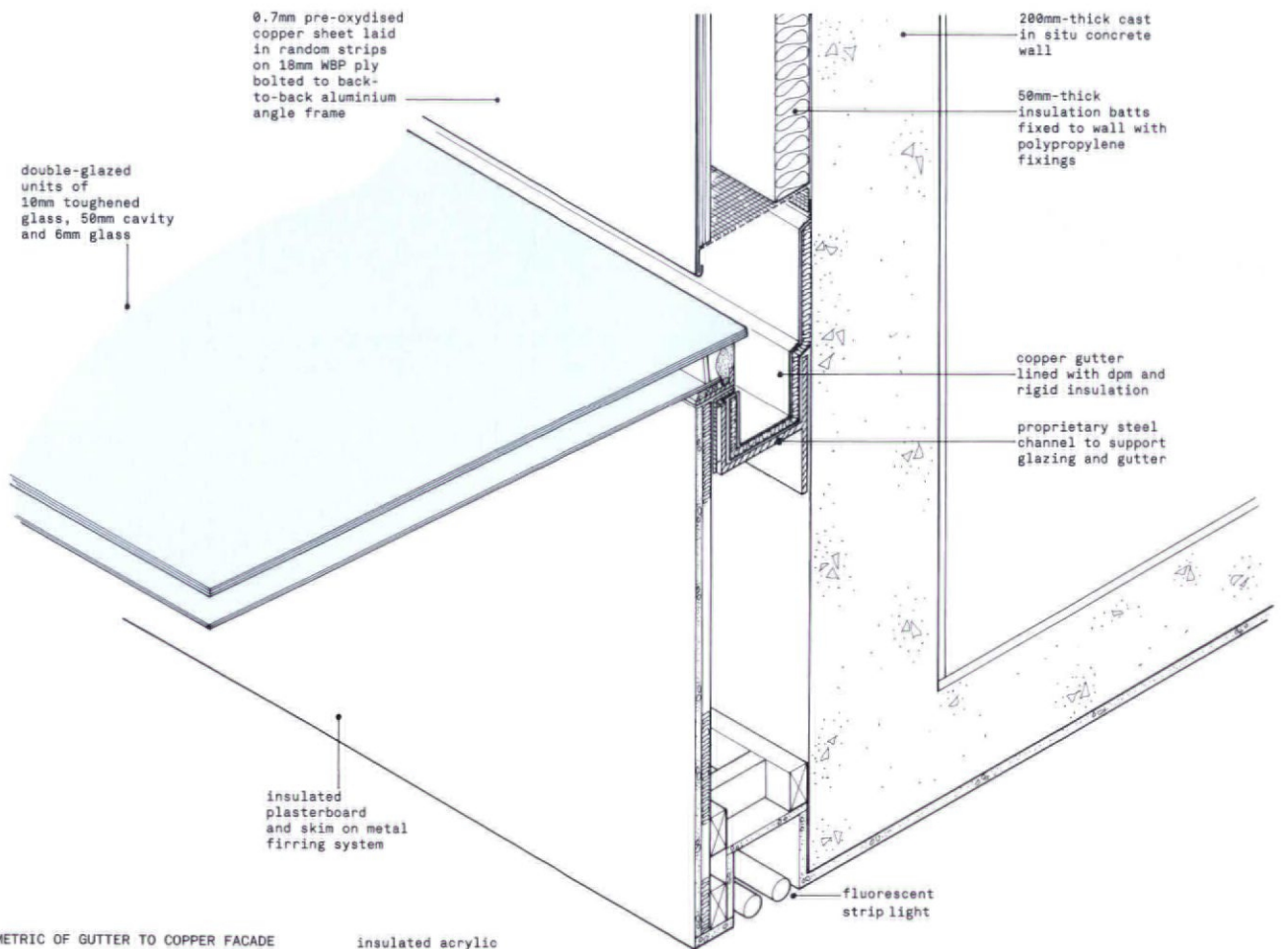
The soffit of the studio is finished in insulated acrylic render. The soffit of the main entrance foyer is clad with standing-seam copper sheet.

*Susan Dawson*

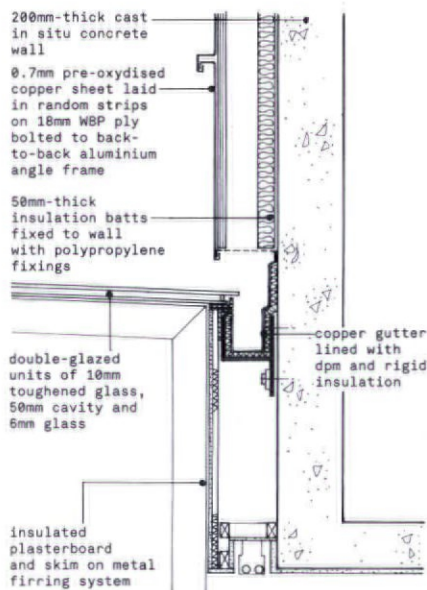


SECTION THROUGH FOYER AND WEST WALL



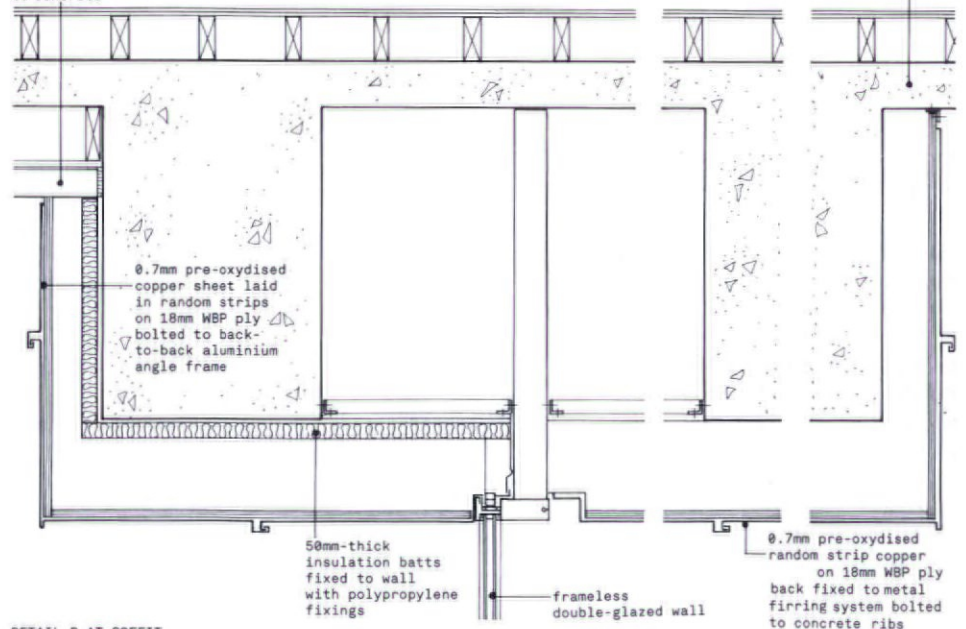


CUT-AWAY ISOMETRIC OF GUTTER TO COPPER FACADE



DETAIL A AT GUTTER

insulated acrylic render system on rigid insulation board fixed directly to concrete



DETAIL B AT SOFFIT





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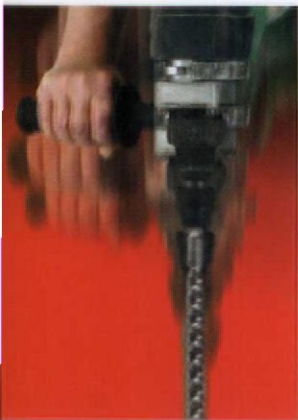
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## TIME AND ENERGY

*By Austin Williams*

The Standard Assessment Procedure for Energy Rating of Dwellings (the SAP rating) is now out and hidden away on the BRE's website. Those expecting the ODPM – the arbiter of the Building Regulations – to notify them of its release should be aware that it has been sneaked out as a publication for DEFRA. That's the Department for Environment, Food and Rural Affairs. Coincidentally, DEFRA has no reference to the document on its website.

At the recent Chartered Institute of Building Engineers (CIBSE) conference to discuss Approved Document Part L, Ant Wilson, Faber Maunsell's director responsible for the applied research at the private company charged with effectively overseeing the research and writing of the ADL, criticised those who complained there were 20-odd second-tier documents related to it published by firms other than the lead company.

The benefit of this system, he said, was that every time there was an advance in one area of energy efficiency, there would be no need to reprint the entire ADL, as the revised second-tier upgrade would simply slot into the main document format.

This would be fine if only the system of making architects aware of the forthcoming changes was a little more straightforward and transparent. As it stands, second-tier documents could be published, questioned, amended, legally challenged and revoked for all anyone would know and we'd still merrily be referencing an undated download copy from a government website. Perhaps we need to build into our ISO:9000 documentation the stipulation that every document must be checked for validity before referencing it.

The bullishness prevalent at the CIBSE conference, by those with vested interests in making the audience dependent on

their services, was palpable. A cynic might conclude that 'confusion', nowadays, is a marketing device. Fortunately, Ted King, the officer within the ODPM responsible for Part L, assured us that there will be 'an extensive dissemination campaign'. Too little: too late. The new Part L is definitively published in six weeks and comes into force four months from today.

King told the audience the ODPM was reviewing 'with lawyers' how to limit the impact of ADL:2006 on projects already in progress. He said that the 'best advice at present' is that the new amendment will not apply if you have already obtained full plans approval; 'possibly' if you have conditional approvals that do not relate to Part L; and if you have started on site. This possibly relates to 'substantial' starts on site as was the case with ADL:2002, given that the recommendations of the DTLR (Department of Transport Local Government and the Regions)

Circular 3/2001 Annex E still apply.

Extrapolating from Annex E implies that the new regs will not apply to work commenced before 1 April 2006 if the building works are in accordance with a building submission and include a commencement notice. For works commencing after 1 April 2006, the revised regs will not apply, provided that Building Regs approval has been granted without conditions, or that a letter confirming the satisfactory compliance with conditions has been issued and a plans certificate has been accepted by the local authority.

If constructing an estate of houses under a building notice, any of the constituent buildings comprising part of that estate that have not substantially started on site before April 1 2006, will need to comply with the new Approved Document.

At least the man in charge seems to think so...



## WE CAN STILL TURN UP THE THERMOSTAT IN THE PRIVACY OF OUR COMPLIANT NEW HOME

*By Austin Williams*

The Government's Standard Assessment Procedure for Energy Rating of Dwellings covers the traditional SAP calculations of energy use per m<sup>2</sup>, but also includes an environmental impact rating based on CO<sub>2</sub> emissions and the DER (Dwellings Emission Rate, see AJ 27.10.05). The SAP calculation can only be carried out via a computer program that has been developed by the BRE. To this end, DEFRA has licensed the certification process to a number of acceptable companies who have all developed a range of SAP programmes that you will have to use, although none are, as yet, available.

These nine chosen companies are listed on <http://tinyurl.com/7hcgh> and include the usual suspects like the National Energy Services (or National Home Energy Rating, as it is known) and 'software outsourcing company' MVM Consultants, as well as smaller players – including my *alma mater*, John Potter Architect in Newcastle.

The idea behind the SAP ratings is relatively unchanged in that they are designed to assess the amount of energy used by a building without any regard for the shape, size or geographical location. Thankfully, they are also independent of the actual use to which a building's heating system is put, so we can still turn up the thermostat in the privacy of our compliant new home without John Potter sending the boys round.

In the new SAP:2005 the main alterations are as follows:

- On the scale of 1 to 100 (where 100 represents zero energy costs) you can score >100 as a net exporter of electricity;

- Thermal bridging has been included in the calculations;
- The measurement system is now kWh instead of GJ; and
- Lighting energy and alternative generation sources are included.

Even though the BRE provides a six-page worksheet calculation print out, the SAP calculations cannot really be done by hand and architects will be forced to seek advice.

Page 7 retains some of the clues about how to minimise the extent of compliance. Attics, for example, should still only be included in the calculations if they are 'habitable rooms accessed by a fixed staircase'. Whether sales of loft ladders have increased is unknown.

For the dedicated, Appendix Q allows for 'new energy-saving technologies that are not included in the published SAP specification.' At the time of going to press, these technologies (which must have been approved and be included on the web page [bre.co.uk/sap2005](http://bre.co.uk/sap2005) to be acceptable) are not yet listed but can be used to offset other energy sources by adding the kWh/year and CO<sub>2</sub> emissions generated by the new technology (including fans, motors, pumps, etc) and subtracting that notionally generated by a principal heating system. Manufacturers' data can take precedence over notional values.

In general, my advice is to read the first 25 pages (especially the helpfully highlighted changes from SAP:2002), skim pages 28–37 and 41 and forget the rest. You are going to have to trust someone else to read, digest and perform the detailed work on your behalf, I'm afraid.





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## GOING BACK TO THE FUTURE

Here are some early thoughts for next year. Since they have been the Next Big Things\* for at least a decade already I don't see why spectacle-like display screens and voice input shouldn't occupy this important position again this next year. And the next. And the one after that. For at least a decade I have been writing gush about the bright future of computer displays that you hang on your nose and use like ordinary specs.

This goes back to having once used a virtual-reality helmet – which probably changed my life. I seem to vaguely recall around the same time reading about virtual sex, which may have had something to do with this special enthusiasm. Hmm. Whatever. Spec displays and the whole VR thing have become ashes in my mouth.

So too voice input. Here we have a functional problem quite beyond the fact that it rarely works. In the noisy office, how do you stop snippets of the spec being written by the loud-mouth from the design team across the desk becoming embedded in your own? And why does everybody start walking past when you find yourself repeating furtively 'Computer. Turn that image off right now. Computer...?'

\* Computerspeak for vapourware, aka 'yeah, yeah'. [sutherland.lyall@btinternet.com](mailto:sutherland.lyall@btinternet.com)

## FORWARD MARCH

There is a new phrase on the block, guaranteed to raise the hackles of the purists. It is 'going forward', writes Kim Franklin. I recently learned that my building society is 'going forward to dematerialisation'. Happily, they explained this meant that they no longer stored paper title deeds, otherwise I would have had no idea what was involved, but would have imagined some form of 'beam me up Scottie' scenario. The concept of future-gazing reminded me of the wag's graffiti, 'whither atrophy?'

All this sprang to mind when I was asked to present a paper entitled 'The Future of Adjudication'. As I pointed out to the delegates, you cannot predict the future without looking at the past. This, of course, is in sharp contradiction to what any financial adviser with a sense of self preservation would tell you, but none the less true for all that.

Adjudication has come a long way from the germ of an idea first floated by Sir Michael Latham in his 'Constructing the Team' report of 1994. He meant it to be an 'on-site' remedy for payment disputes between contractors and sub-contractors, possibly even employers. He did not intend it to be used for £10 million final-account claims brought long after practical completion. He has said so. He also envisaged that

it would provide rough justice, cheaply and quickly – within 28 days in fact.

Since then, adjudicators' fees have gone up disproportionately to the amounts at stake – fees in excess of £150 per hour are common. Adjudicators are permitting increasingly expensive procedures, such as extended exchanges of written submissions and meetings with the parties. A significant proportion of adjudications are now conducted over an extended time scale, beyond the original 28-day limit.

Reliable information as to the cost of all this to the parties is not available, but anecdotal information abounds. In *CIB v Birse*, for example, the adjudicator's fees totalled £150,000 and the parties' costs were in the region of £1 million. So adjudication has come a long way. Where is it going?

Some light may be thrown on its future by the recent decision of the Court of Appeal in *Carillion Construction v Devonport Royal Dockyard* (16.11.05). The court refused the dockyard's application to appeal from an adjudicator's substantive decision that they pay the contractors, Carillion, £12 million. The court pointed out that the scheme was not enacted to provide definitive answers to complex questions. In adjudication, the need to

have the 'right' answer has been subordinated to the need to have an answer quickly.

To challenge an adjudicator's decision, save in the plainest of cases, was likely to lead to a substantial waste of time and expense. Better to pay up and then take legal or arbitration proceedings to establish the true position.

It seems, therefore, that if you want the wrong answer, not too quickly and at surprising cost, the future for adjudication is bright.

*Kim Franklin is a barrister and chartered arbitrator at Crown Office Chambers in London. Visit [www.crownofficechambers.com](http://www.crownofficechambers.com)*





# CONCRETE QUARTERLY/ WINTER 05



The Concrete Centre





Concrete's versatility and ability to surprise mean that it is increasingly being discovered and used for interiors, whether exposed as part of the structure (which in itself provides significant thermal-efficiency benefits) or as a new take on interior fixtures and fittings.

A main attraction of concrete is that it is a paradox. It can be used as a utilitarian or as a luxurious material. Its lightweight elegance disguises great robustness and strength. Despite being manufactured, concrete can take the guise of a natural, organic and evolved form. All of these characteristics are being explored and exploited by a new generation of designers who are not limited by preconception. The only limit to realising the potential of the material is imagination.

The increased use of concrete in interiors underlines a renewed interest in the aesthetic and plastic qualities and possibilities of concrete. This is coupled with a growing appreciation of the structural honesty of exposed concrete construction, free from the paraphernalia of fire proofing, acoustic insulation and vibration dampers. All of which are offered free and inbuilt as part of concrete's wide range of inherent benefits.

Concrete is fast becoming a material of expression for designers and artists. It offers them new creative possibilities and offers us all exciting living and working environments.

*Ian Cox*

*Chief executive, The Concrete Centre*

Issue number: 214

### BARRIER SCOOPS CONCRETE SUSTAINABILITY AWARD

The new concrete step barrier has won the inaugural Concrete Centre Sustainability Award. The barrier, which is designed to prevent that most dangerous of motorway accidents – the crossover, where a vehicle crashes through a motorway barrier into the path of on-coming traffic – was praised for its holistic approach to the environmental, social and economic requirements of road safety. Runners-up included the Royal Geographical Society Study Centre in London, designed by Studio Downie; Marshalls Precast's concrete paving in a sustainable urban drainage project for Berkeley Homes in Oxford and Slice House at Porto Alegre in Brazil, designed by Proctor-Rihl.



JAMES SILVERMAN

### CONCRETE VILLA DESIGNED

Swedish architect Gert Wingårdh has designed Villa Ann for Ann and Benny Olsson, on the coast south of Gothenburg in Sweden. Having moved from a mansion, they sought here what is essentially a single 3,000m<sup>2</sup> space. Precast concrete is both structure and interior finish.





#### TECHRETE DOUBLES PRODUCTION CAPACITY

Techrete, which claims to be the largest manufacturer of architectural precast cladding in the UK and Ireland, has recently completed commissioning of its expanded factory, at Brigg, Lincolnshire. This doubling of production capacity is based on setting up a continuous production process, with panels being moved from preparation to casting to finishing on a carousel. This is despite the bespoke nature of precast cladding manufacture, including polished concrete, reconstructed stone and incorporation of panel-facing materials, such as brick and terracotta.

#### RELEASE OF EUROCODE 2 IMMINENT

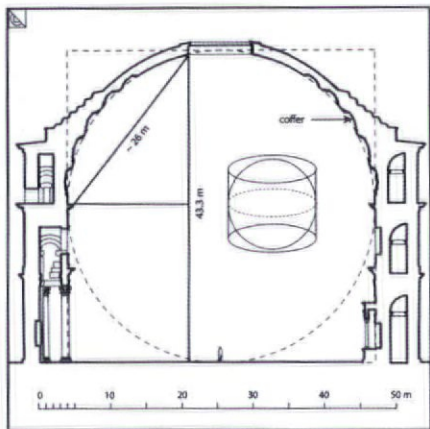
The public comment period for the UK's national annex to Eurocode 2 Design of Concrete Structures Part 1:1: General Rules and Rules for Building has closed and the expected date of issue is early 2006. This national annex gives the 'nationally determined parameters' required for design in the UK using the Eurocode, which is why its release is crucial. Eurocode 2, Part 1:1 itself was issued in December 2004. The Concrete Centre is providing full support and guidance throughout the introduction and implementation of Eurocode 2. This includes a series of short courses and seminars and a range of 'how to' design leaflets. For more details visit [www.eurocode2.info](http://www.eurocode2.info)

#### INTERNATIONAL STUDENT CONCRETE COMPETITION LAUNCHED

The second international concrete-design competition for students has been launched by The Concrete Centre. The theme is 'plastic-OPACITY', drawing on key concrete characteristics: versatility, plasticity and opacity. The competition is held in the UK, Belgium, Netherlands, Germany, Sweden, Italy and Turkey. Entrants will examine concrete's potential for spatial transparency and for the engagement of shadow, light and tactility. They will also examine the structural and environmental potential of concrete and possibilities of new techniques such as weaving, punching and folding. Jurors include Graham Morrison of Allies and Morrison; Sean Griffiths of FAT; Mark Swenarton of Oxford Brookes University and Jerry Van Eyck of West 8. Visit [www.concretedesigncompetition.com](http://www.concretedesigncompetition.com)

#### BOOK REVEALS ROMAN CONCRETE WORK

Author Lynne Lancaster wrote *Concrete Vaulted Construction in Imperial Rome* first as a thesis, then continued researching for another two decades. The result is both fascinating and frustrating. Fascinating in opening up the technology and context of Roman construction. Frustrating because it is a researcher's book – for most readers there will be too much detail. Roman concrete was generally a mix of high-strength mortar and rubble-sized stone. It was laid on centring rather than poured. Lancaster looks at the development of the Roman construction industry in all its detail. This invention survived Rome's decline of course, with wisdom passed to us through a succession of buildings. *Concrete Vaulted Construction in Imperial Rome* by Lynne C Lancaster. Cambridge University Press, 2005, £55.





## THE HAPHAZARD HISTORY OF INTERVENTION WAS INSTRUMENTAL IN DICTATING THE APPROACH OF THE ARCHITECTS

*By Helen Elias. Photography by Sue Barr/View*

Sometime in the past the owners of a typical early-Victorian house in north London decided to make a bit more room in the basement. Extraordinary as it may seem, they did this by neatly slicing the foundation corbelling at the bottom of the party walls and digging out the space. Prior to this, someone else had added an extra storey and a shop at street level. The neighbours on either side were active too, contributing, at different times, extensions which increased loads on the undermined party walls.

This haphazard history of construction and intervention was instrumental in dictating the approach of DRDH Architects to a brief from the new owner, an artist, to develop the house as a living and studio space. The owner wanted to open up the building, creating a clear relationship between the new and found spaces in the lower half of the building. The project was designed in 1999 but construction did not start until 2004. It was eventually funded by separating out a two-floor maisonette in the rooms at the top of the house, to be refurbished separately for sale or let. The focus for the designers was the client's own retained space – compressed into a number of small dark cellular areas in the basement, ground and first floors – which needed to be redefined to create the intended open spaces in the re-established house.

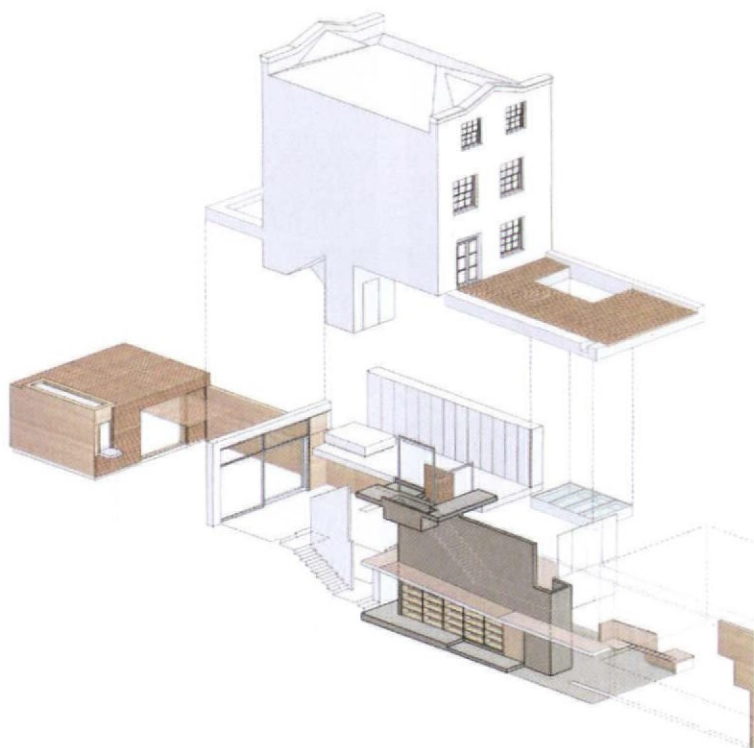
'The immediate concern was to structurally stabilise the building,' says Daniel Rosbottom of DRDH Architects. 'We cast a holding foundation at the outset, a triangular piece of concrete that replaced the missing corbels. The new foundation grew through the course of the design process to become a physical

entity in its own right. Expressed as a vertical concrete element, it rises through all spaces on the three levels, an armature that frames the newly created areas.' At basement level the massive concrete volume offers the means to work, providing library space, a desk and storage. At ground level the monolithic structure defines separation between the house and the corridor which provides access to the existing stair, leading to the flat above – it facilitates this through the formation of a precise concrete stair linking living and sleeping spaces. The concrete form continues to the first floor, where it defines the bathroom space and offers a deep step to an external terrace.

'Each floor in the house is a sequence of connected spaces at varying levels. The concrete element allows this to happen not only programmatically but also structurally,' says Rosbottom. Structural engineer Mervyn Rodrigues developed this with the architect, allowing the concrete to pick up part of the load of the party walls at first-floor level and transfer it onto six new mini piles at basement level. This new loadbearing structure allowed the removal of existing cross walls which had until then braced the party walls. This meant that the house could be opened up from front to back, with a double-height space introduced against the street to allow natural light into the studio.

'The client is an artist who has previously – within his own work – examined the idea of the cast. Likewise, we are interested in that process and the sense of space and form it might offer,' says Rosbottom. 'We did a series of small test casts with the





1. Knitting together this slice of structure

contractor to explore which concrete mix to use and how long to cure it before we removed the timber shutters. We also tried a series of casts to test the colour of the concrete. Originally, we wanted to cast the armature in a whiter concrete with a lot of mica in the surface so that it glittered but we had sourcing difficulties and could not find anyone in London who would mix us the small amount that we needed. So we went for a standard mix using a 10mm rather than 20mm aggregate and, in retrospect, we are very pleased with the result. It is a London project so it's right that we should use London concrete, which is mixed using beach sand. It has a warm grey tone to it which works well, giving the interior a warm surface feel, so it was a good choice.'

The material pumped in incorporated an admixture selected so that the concrete requires minimal vibration and to allow it to flow easily into the complicated mould. The monolithic section was cast in two pours, all against shuttering boxes of careful joinery, in Douglas fir. 'Douglas fir has a high sugar content, which means that the finest particles in the concrete, which move to the outside surface during the drying process, never quite cure,' explains Rosbottom. 'When the shutters were removed the grain of the timber took the finest particles with it, leaving a clear echo of the timber planks on the concrete itself.'

The armature was cast against two different scales of shuttering, giving alternative finishes to reflect the different spaces the massive volume defined. The side of the concrete stair was shuttered using slender 67mm-wide planks. This width was trebled

to shutter the massive concrete wall, using 200mm boards which also defined the depth of the concrete steps. These dimensions also set up step heights and the widths of timber boards used elsewhere in the interior.

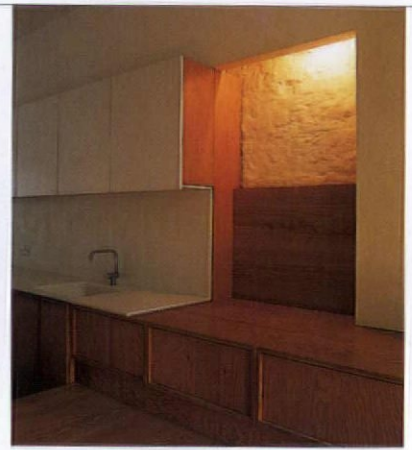
'The contractor, Jonathan Jackson, is really a cabinet maker, so all the timber formwork was very accurately made. You can follow the shutter lines left in the concrete with precision, although the material quality is very raw' says Rosbottom. The use of Douglas fir for floors, stairs to the basement and furniture continues the consistent relationship between timber and concrete across the entire volume of the house. Part of the timber lining folds to become a door which connects to a small balcony that is carved out of the concrete and overlooks the double-height space of the studio.

With 18mm Douglas fir ply used to form the furniture in the living space, the actual wood and a memory of wood resonate through the whole interior. And existing party walls were stripped of their finishes and painted in a traditional limewash, revealing the ghosts of found surfaces and the marks and scars of previous interventions inside the house.



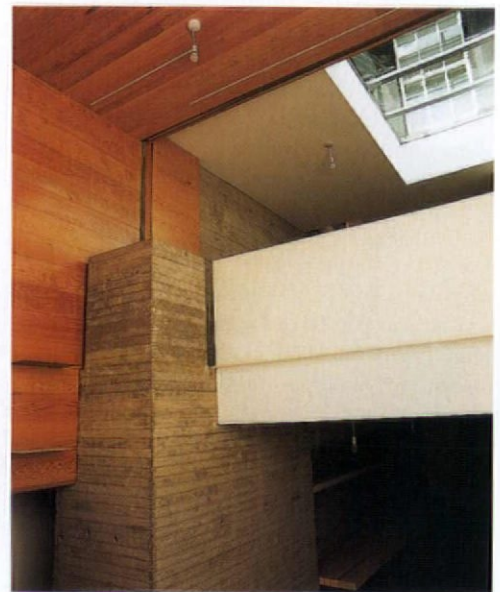


2.



3.

- 2. Sliding screens around the rooflight
- 3. Sink and bench detail
- 4. Double-height space providing a lit studio



4.





5. The basement work bench and shelf



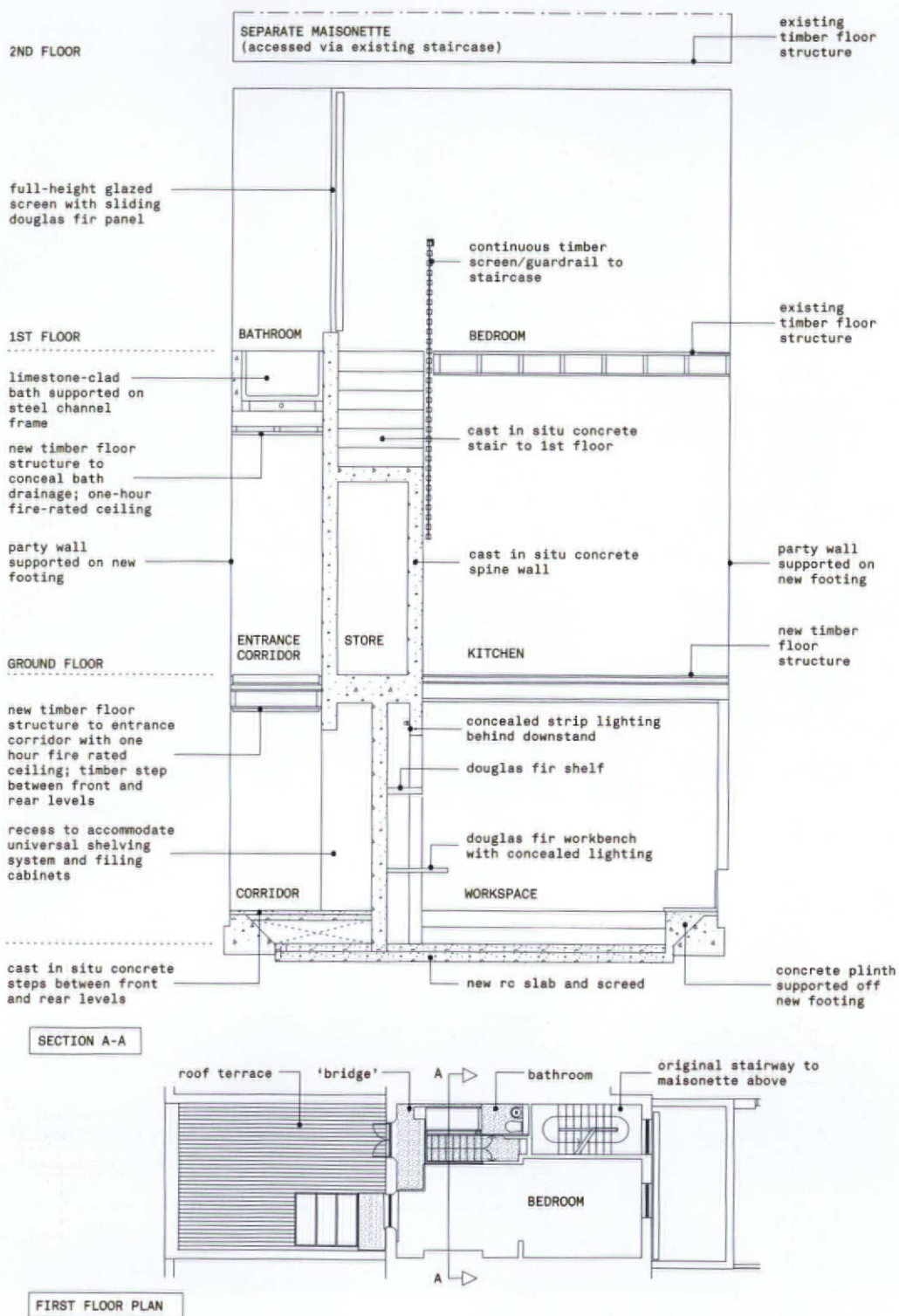
## COMBINED FOUNDATION AND BUILDING SPINE

The technical challenge was to restabilise the building. This followed the discovery that the brick corbels had been sheared off the bottom of the party walls in an earlier enlargement of the basement – and the same walls had been loaded with an additional storey above.

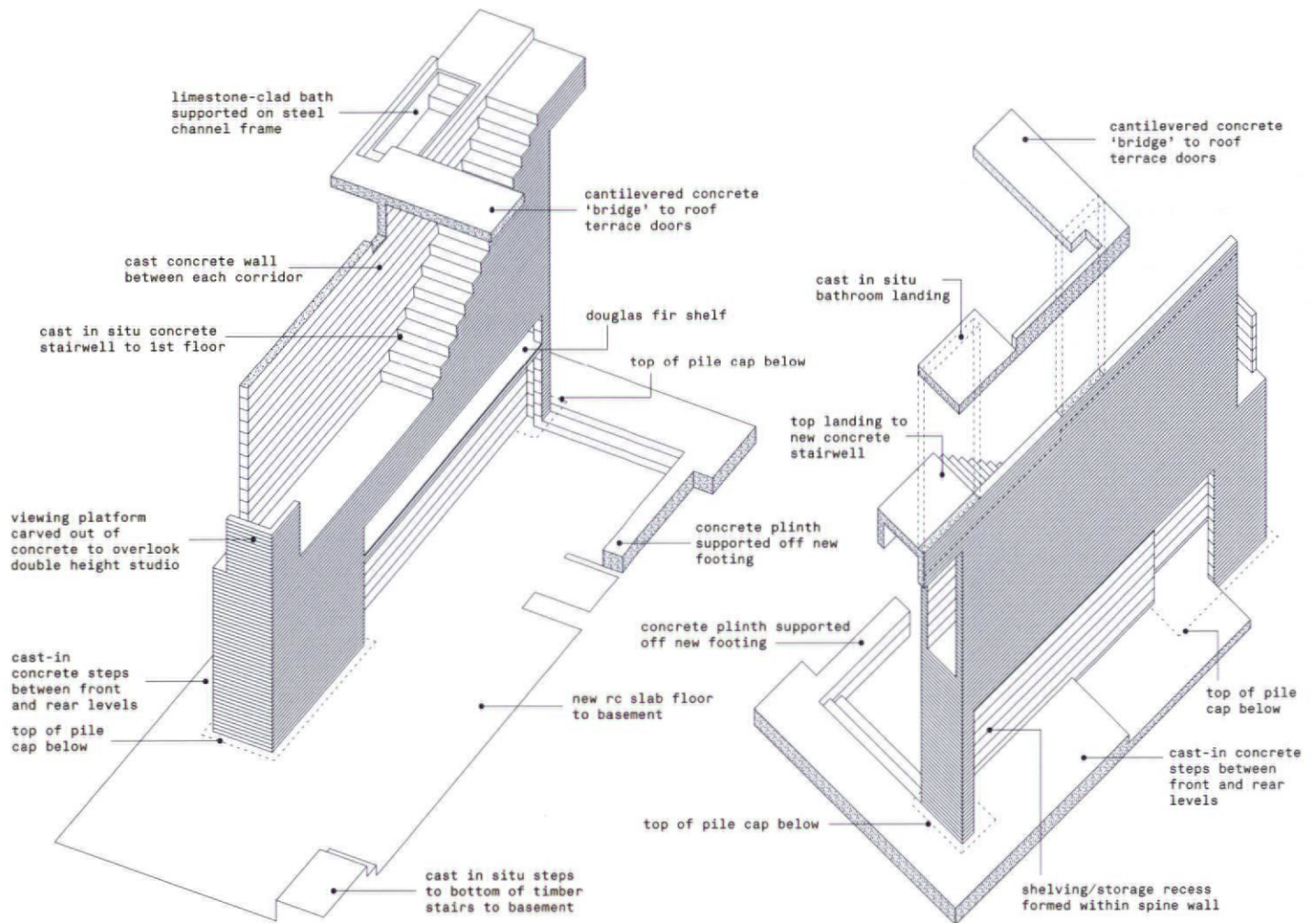
A 'holding' foundation was cast at an early stage, in the form of a triangular fillet of concrete, which directly replaced the corbelling. This was overlaid with a separating dpm, before a stepped rc slab was cast across the full width of the basement. Structurally, this transferred some of the load away from the party walls and down onto six mini-pile foundations. It also allowed the removal of the internal cross walls, which had previously braced the party walls. The pile cap was cast in waterproof concrete that ensured a direct connection between concrete slab and piles.

The in situ spine wall was cast in two pours within Douglas fir shuttering. This was selected for the high sugar content of the timber, which prevented the fine particles on the outer surface of the concrete from curing, and revealed the grain upon release of the shuttering. The concrete is a standard London concrete mix, except for the use of a 10mm aggregate and an admixture. This optimised concrete flow within the formwork and minimised the requirement for vibration.

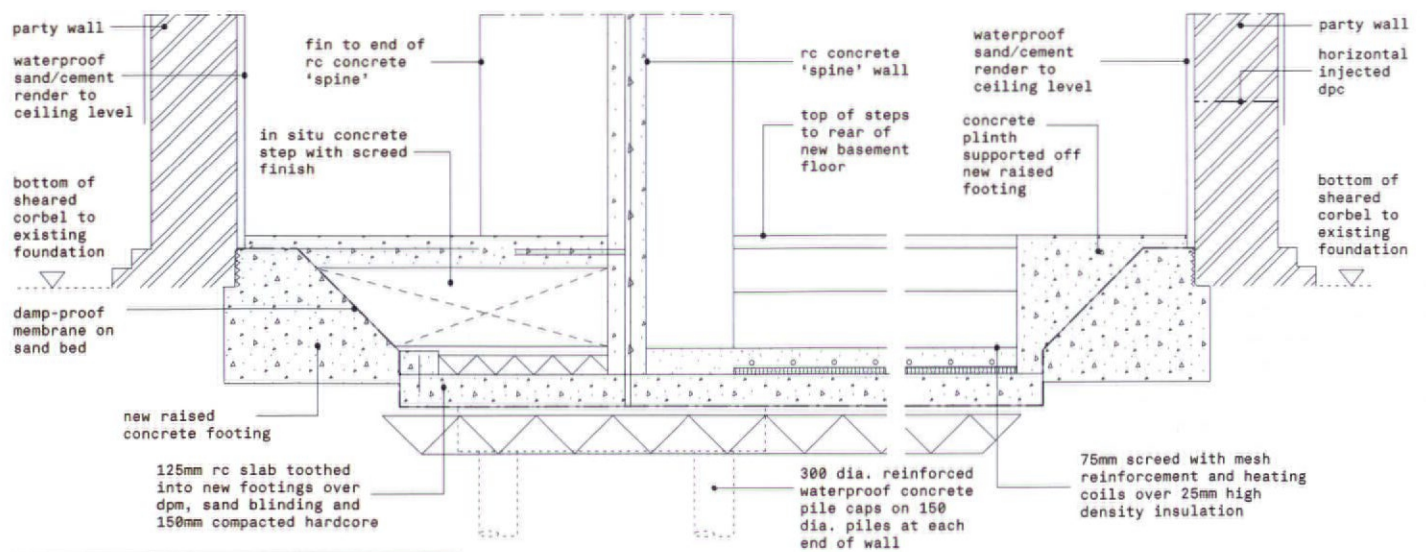
Louise Turley







AXONOMETRIC OF SPINE WALL



BASEMENT CONSTRUCTION DETAIL AT SECTION A-A



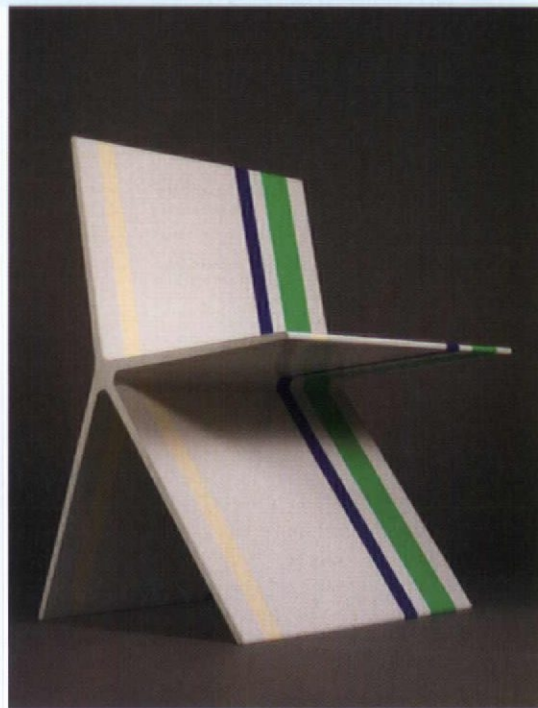


### FABRIC CONDITIONER

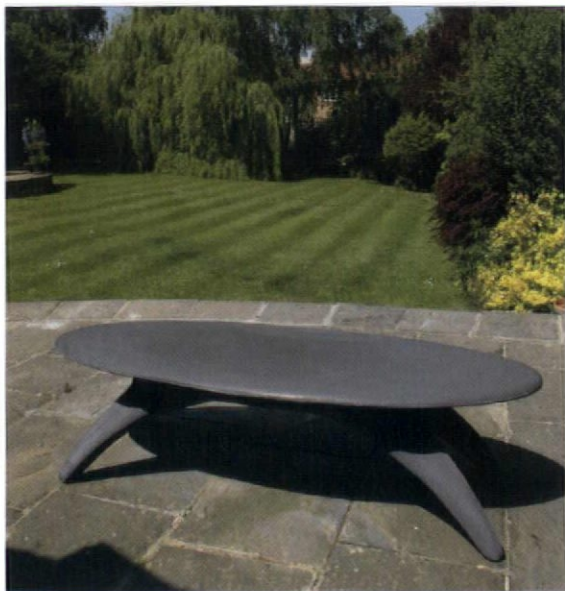
Concrete is being reinvented in many innovative ways writes Ian Cox. An exciting new look for the material comes from Glasgow-based designer Eileen Elliott, who has created an unexpected and magical fusion of ordinary concrete tiles imprinted with images of the finest Persian and Chinese antique textiles. This gives a whole new meaning to the term 'carpet tiles'. The result is a juxtaposition of a hard urban material with the opulence of antique rugs and kilims. It is a contrast that plays with our expectations and tactile senses. This elegant combination of the solid and the delicate manages to look both traditional and modern at the same time and works well as flooring or as wall-hung pieces of art. The tiles won the DKNY Award at the New Designers exhibition and were overall runner-up at Urban Interiors. Elliott believes concrete is a much-maligned material when in fact, as her work proves, it is very durable, flexible and beautiful. Measuring 300mm x 300mm with a depth of 38mm, the tiles are available from Cho Cho San, tel 020 7359 6000, or visit [www.chochosan.co.uk](http://www.chochosan.co.uk)

### SEAT OF STRENGTH

The strength of concrete is fully demonstrated by the elegant new chair designed by Omer Arbel and launched at this year's International Contemporary Furniture Fair in New York. The 8.0 chair is a prototype of a new collection of indoor/outdoor furniture being developed in collaboration with concrete manufacturer Lafarge and Formglas, a fabrication company. The chair is produced using a high-strength concrete called Ductal that offers six to eight times greater strength than traditional concrete. So far Ductal has only been used for infrastructure and construction projects. Arbel's intention is to explore the potential of the material for furniture. The high strength of Ductal means that the chair has a very thin profile and a tenuous-looking cantilever for the seat. This gives the chair a fragile elegance that belies its strength. For further details visit [www.omerarbel.com](http://www.omerarbel.com)





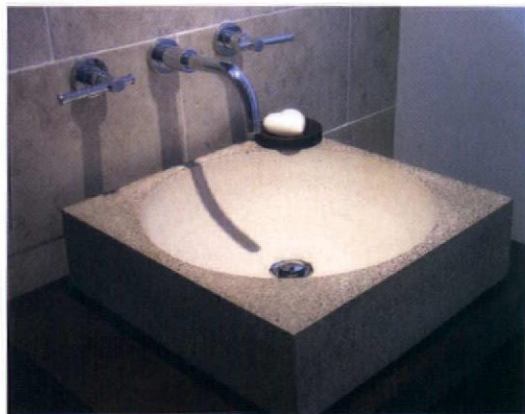


#### GARDEN PARTY

Urbis Design is making a range of pieces of striking simplicity for the garden. Made from lightweight glass-reinforced concrete, the plant containers and garden furniture have an organic, sculptural form that can be finished in traditional concrete or rusted steel, copper and bronze patinas. Their sculptural form raises the pieces from function to art. The range of products is continually evolving. Contact Urbis Design on tel 01759 373839, or visit [www.urbisdesign.co.uk](http://www.urbisdesign.co.uk)

#### TAKEN TO ANOTHER LEVEL

Concrete has been used for kitchen work surfaces for some time. However, a new laminated-concrete technology promises to take them a step further. Developed by Cast Advanced Concretes, MASS1 is a 15mm-thick concrete precast sheet with a fine diamond-polished and sealed surface that is chemically bonded to a composite fibreboard backing. This produces a total standard thickness of 40mm. The concrete sheet is fibre-reinforced and cross-linked to a thin hardened decorative surface concrete layer. This layer is subject to a complex curing process which results in a product with significantly increased hardness and strength, as well as significantly decreased porosity compared to other cast concretes. The surface layer is waterproof and alcohol-resistant, non-yellowing and contains an anti-microbial agent for hygiene. It also offers heat resistance up to 200°C. Silky smooth to the touch, MASS1 is available in a large semi-matt colour range that includes natural greys, whites and browns as well as subtle pigmented colours, all of which offer a visual blend of fine graded sands. For further details contact Cast Advanced Concretes, tel 08702 418171, or visit [www.castadvancedconcretes.com](http://www.castadvancedconcretes.com)



#### TOO INFINITY... AND BEYOND

The versatility of concrete is underlined by the work of product designer Tom Huxtable. Using concrete for a range of basins as well as tables, Huxtable believes that the design possibilities of concrete are almost infinite and applications are limited only by the imagination. The concrete for his basins and furniture is hand polished to a glass-like finish. The inclusion of different materials such as quartz dust, metal filings or shell sand creates different luminous sparkles within the surface. A particularly dramatic finish is the inclusion of fine slithers of Welsh slate mixed into a white base along with ground marble. Colours and tones can be specified to complement any interiors scheme. The concrete is sealed to protect it from staining. Huxtable successfully combines different materials. For example, his concrete, birch-ply and stainless steel table celebrates the particular visual and strength characteristics of each material in a complementary form. For further details contact Tom Huxtable on telephone number 01584 890210 or visit: [www.tomhuxtabledesigns.co.uk](http://www.tomhuxtabledesigns.co.uk)



## COLOURED LIGHT FALLS ONTO THE EXPOSED, DELIBERATELY VISUAL CONCRETE STRUCTURE

By Gerry Feenan

Opened during the summer, the Adjaye Associates-designed Idea Store on Whitechapel Road in east London realises the high-quality interior finish potential of precast concrete.

A modern redefinition of the neighbourhood library, Idea Stores are state-of-the-art facilities with educational learning areas in partnership with Tower Hamlets College. The idea is being introduced to increase usage of library facilities by providing a modern, high-quality environment akin to a retail operation. This building accommodates traditional learning spaces, library stacks, after-school study zones, business facilities and formal and informal reading areas, along with retail areas and a café.

The hung facade's panels of green and blue glass take the external market awning atmosphere into the building through broad stripes of coloured light that fall onto the monolithic walls and ceilings of the exposed, deliberately visual concrete structure. With flexibility a key client requirement, engineer Arup set the building out on a rectangular grid designed to work as a sway frame – stability provided by the frame itself, avoiding the need for any internal shear walls or bracing that could have constrained the spaces in use. The intentional monolithic look was achieved by a combination of cast in situ beams and columns, and precast ribbed soffits slabs, a solution whose thermal capacity enhances environmental performance as well as making for a more efficient construction sequence.

Early meetings were held between structural and mechanical engineer Arup, architect Adjaye Associates, precaster

Hanson Floors and main contractor Verry Construction to discuss buildability issues, including those involved with the precast planks for the project. Hanson supplied 3,000m<sup>2</sup> of bespoke precast concrete flooring units and 18 concrete staircases for the Idea Store. Discussions included questions about the maximum size and weight of the slabs that could be placed on a tight city-centre site using the proposed tower crane. Once all these issues had been agreed, the in situ frame could be designed although, with substructure work already under way, some redesign was needed by Arup because of the store's close proximity to the soon-to-be-built Crossrail project.

Adjaye wanted an exposed-concrete finish for the building and Arup proposed a hybrid precast and in situ solution. Hanson was given the task of designing, manufacturing and supplying units to create an exposed concrete ribbed ceiling to the open expanse of floors on the three upper storeys of what promises to become a landmark building in the area. Initially, the concept called for hundreds of separate beams and short concrete-deck elements to act compositely using a structural concrete topping. However, Hanson was able to redesign the units so that, in most cases, multiple ribs and decking were cast in one piece. This greatly aided the handling process during transport and installation and significantly reduced the number of construction joints. Hanson also designed and produced the bespoke staircase elements that are left exposed to match the rest of the building.

As the concrete frame was to be fully visible from outside and inside the building, the colours of the in situ frame and the



1.

TIM SOAR





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precast floor planks had to be matched closely – a task made more difficult by the fact that the mix used for precasting was not suitable for site work. Following trials, Verry Construction built a full-size mock-up of the floor panel, supported by four columns and beams.

Connecting in situ concrete to ribbed precast planks created the challenge of sealing the junction between the two while achieving a visually acceptable finish. Several possible solutions were considered and it was finally decided to provide individual shutters for each rib. These were machine cut and then fixed in place before the precast planks were located. They had to be slightly smaller than the rib and be moveable to allow for tolerances. Once the precast slabs had been placed, mastic was applied to ensure a tight seal. With the shutters sealed, the reinforcement was fixed, tying in the precast slabs to the in situ frame.

A further implication of the design was that for the frame to be fully monolithic, the 500m<sup>2</sup> floor with its 300 individual rib shutters had to be poured in one go. To ensure everything went smoothly, a vigorous inspection system was instigated.

Main contractor Verry Construction managed the construction of the in situ structural frame with Modebest, a special formwork process developed to ensure that the in situ and precast elements formed a seamless match.

The five floors of the Ideas Store were completed within 24 weeks and the standard of concrete finish is exemplary.

*Gerry Feenan works for Hanson Building Projects*

1. The concrete structure is both foil and reflective surface
2. The bespoke staircase elements are left exposed to match the rest of the building
3. The concrete frame was to be visible from both the inside and outside
4. Shuttering the connection of pre-cast beams to in situ framing



## THE IN SITU WALLS AND CEILING PROVIDE A COLOUR AND TEXTURE THAT CONTRASTS WITH THE HYGIENIC LOOK TYPICAL OF THE MEDICAL WORLD

*By Barrie Evans. Photography by Margherita Spiluttini*

The combination of an open-minded client and the aim to present a building as a holistic 'wellness' centre, not just a shop (pharmacy), led Austrian architect Artec towards theatrical place making. The fully glazed frontage, curtained when closed at night, otherwise reveals an art-installation-like interior. Ordered by parallel bands of ceiling light, display cabinets appear to drop from slots in the ceiling, wrapped in this light, or slide out from slots in the walls. The feeling is movement, though the cabinets are in fact fixed.

These cabinets are the figures against a ground of concrete walls, ceiling and floors, and as with figure-ground compositions the ground has to do work too – it is not merely a neutral background. Particularly, the in situ walls and long-span in situ ceiling (rebated for lighting, stitched into precast upstand beams at the perimeter) provide a colour and texture that contrasts strongly with the hygienic look typical of the traditional medical world. The floor is of Confalt ([www.confalt.com](http://www.confalt.com)), a pourable, plasticised mortar and asphalt mix, here with a green tinge.

Called the Lion of Aspern Pharmacy, located at Aspern near Vienna, the 580m<sup>2</sup> building includes courtyards around trees – one a large established chestnut – dispensary, lab, seminar/ multipurpose rooms for discussions and for sessions on holistic health, and a roof terrace for staff and visitors. Medicinal herbs are planted in a cloister-like garden – a demonstration garden for tours.

In its sculptural form, colours and textures, this interior avoids the separateness of health buildings, rather aiming to celebrate health.



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1. Walls, ceilings and floors set the atmosphere
2. Display cabinets appear to drop from slots in the ceiling
3. One of the courtyards that illuminate the deep shop space



3.





## CONCRETE ELEGANCE

Concrete Elegance is a book by David Bennett documenting the 2004 Concrete Elegance lecture series, which he also organised. This series of architectural presentations is a Concrete Centre initiative in collaboration with The Building Centre Trust. The lectures, given by leading concrete designers, innovators and manufacturers, examine the wide-ranging versatility of concrete – from small-scale artefacts and sculptures, through domestic-scale architecture to multi-storey buildings, and the use of concrete in the built environment and urban landscape.

Lectures given during the 2004 series were:

**Precast 'prefabulous' technology: The Canongate Wall of the Scottish Parliament Building**

David Shillito, Malling Products, and Gary Lucas, Patterns and Moulds

**Spiral dreams: CRC challenges metal for slimness**

Bendt Aarup, CRC Technology, and Hans Exner, Ramboll Engineers

**Residential delights: elegant concrete houses**

Alex de Rijke, dRMM, and Ferhan Azman, Azman Architects

**Sculptural inspirations: concrete as art**

Sculptor Carole Vincent and artist David Undery

**Prefabricated perfection: the Bridge of Peace in Seoul**

Mouloud Behloul, Lafarge DUCTAL

Concrete Elegance is available, priced £10 plus p&p, from The Concrete Centre, tel 0700 4 500 500, or The Building Centre Trust, tel 020 7692 6208

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# BOOK

By Robert Harbison

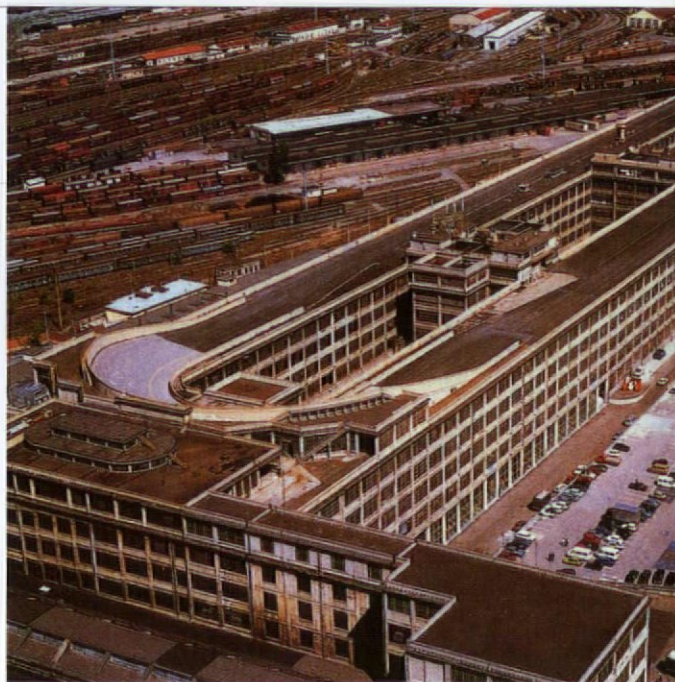
The Architecture of Modern Italy: Vol One The Change of Tradition 1750-1900, Vol Two Visions of Utopia 1900-Present

By Terry Kirk.

Princeton Architectural Press, 2005. £25 each



1.



2.

The publisher of this book makes false claims for it in the blurb. *The Architecture of Modern Italy* isn't 'authoritative' or 'groundbreaking' or 'the first in any language'. It has other virtues: at his best Terry Kirk gives clear, flexible and lively accounts of an architect's career or a moment in urban history. Most of the high spots come in the 20th century, though the four pages on the 19th-century Torinese architect Alessandro Antonelli form one of the most interesting treatments.

Four pages is more than most architects, however important, are lucky enough to get. The book comes in two hefty volumes but still contains much in a thumbnail mode. Dividing it in two may have come late in the process: the same introduction is repeated twice and clearly wasn't written

with this in mind. It is impossible to learn anything about the author from the book and he isn't well served by the format, which stretches out the text by printing too little on each page and emphasising subheads within chapters with extra blank space until at times the whole seems a collection of short articles. Although there's lots of empty space on the page, the format isn't large; hence the illustrations sometimes work better as reminders for those who already know their subjects than as first encounters. In the Nolli map of Rome, which appears early on, individual streets and buildings are not distinguishable.

Kirk seems less comfortable in the 18th century than in later periods. It is almost as if another person is writing this part, who talks about 'gardens

as an integral element in the experience of Bourbon self-imagery', or says that Fuga 'left behind in Naples a *modus operandi* of a high level of professionalism'. I cannot see what these earlier parts contribute to those that follow. In fact, the whole book is unusually un-comprehensive, in the sense of not referring back to its own earlier stages. This may be a result of the way it was written, in bits (and this is just speculation), or maybe it is a sign of something deeper, a view of history as being inherently fragmented.

For that is how it comes out here – individuals like Carlo Scarpa burst onto the scene and onto the page without warning and without much assimilation to a narrative. The Scarpa section is particularly strong, but strongest on what he is not

and on how he does not fit. Strangely enough, Kirk, who is very good at placing people by picking out details from their background and experience, sometimes does not convey a clear idea when describing a building. Perhaps he jumps too quickly to what he thinks the building means before the reader has got the basic idea of it. No one will come to this book for constructional detail; it does not move at that level. But clear descriptions of important spaces are hard to come by here, and plans are almost never included among the illustrations.

Perhaps I haven't read enough architectural history written by Italians to know if Kirk is echoing his sources here, but it seems possible, because in a few places I found him picking up the tone and even





3.

1. Scarpa's Castelvecchio
2. Fiat complex, Lingotto
3. Alessandro Antonelli's Case delle Colonne, Turin

the vocabulary of the currently favoured writer on the subject – Foucault was detectable on institutions for example.

In a book where space is in short supply it is surprising to meet so much non-architectural material. Near the beginning, there is much on archaeology (spelled 'archeology' mimicking Italian, but where does 'brusk' for 'brusque' come from?) not particularly angled toward architecture and bearing, for good measure, the incorrect claim that archaeology did not greatly influence architects.

Among the best things in the book are the summaries of Fiat's installation at Lingotto, and the building history – meaning not construction but politics – of the railway stations in Florence and Rome. I particularly enjoyed Kirk's diatribe about the scandalous

negligence and venality of Roman bureaucrats in the 1960s. The last 30 pages are weak because the author can't place architects as confidently and therefore hedges his bets with shorter sections on more numerous figures. Renzo Piano is given disproportionate space at the end, but unevenness is not always a bad thing. This book is most attractive when according a subject more space than is strictly its due. Robert Harbison is a professor at London Metropolitan University



## CRITIC'S CHOICE

By Andrew Mead

You might think that during the last two decades the *Charles Rennie Mackintosh* industry had left no remunerative stone unturned. Log on to [www.justmackintosh.co.uk](http://www.justmackintosh.co.uk) and you can buy a 'Rennie Mackintosh-inspired Salt & Pepper set', a 16-piece cutlery set, and an Argyle Bread Crock ('in deep pink'), among much else. But largely overlooked in this continuing Mackintosh-fest have been the watercolours which he painted in south-west France in the last years of his life.

Some appear marginally in the many books on Mackintosh, while a larger selection was well-reproduced in the Hunterian Art Gallery's *The Chronycle* (sic) – a rather poignant selection of Mackintosh's letters to his wife Margaret. But now, in an exhibition at the Scottish National Gallery of Modern Art, Edinburgh, until 5 February, there's a chance to see almost all of the 44 works Mackintosh painted between 1923–27. The catalogue includes an essay by co-curator Philip Long, who argues that 'the paintings develop in a way out of his architectural work'. Meanwhile Mackintosh's Glasgow School of Art has embarked on an £8.4 million restoration, following a large lottery grant earlier this year ([www.natgalscot.ac.uk](http://www.natgalscot.ac.uk)).

Both the principles and the nitty-gritty of restoration/conservation feature in the series of masterclasses which the *Scottish Centre for Conservation Studies* at Edinburgh College of Art holds in the first months of each year. The next series runs from 12 January to 16 March and includes *Ola Wedebrunn* of Docomomo International on 'Renewing Modern Movement Technology', *John McAslan* on 'Adaptive Conservation for Modern Movement Buildings', and *David Yeomans* on 'Historic Buildings: The Structural Engineer's Dilemma' (details 0131 221 6072).

Over the last few years, the *AR Awards for Emerging Architecture*, which are the basis of both an exhibition and an issue of *The Architectural Review*, have attracted many high-quality entries. This year's show is at the RIBA, 66 Portland Place, London W1, from 7 December to 28 February, with the winners – who are announced on 6 December – appearing in a lecture series early in the new year ([www.arplus.com](http://www.arplus.com)). For forthcoming events visit [www.ajplus.co.uk/diary](http://www.ajplus.co.uk/diary)

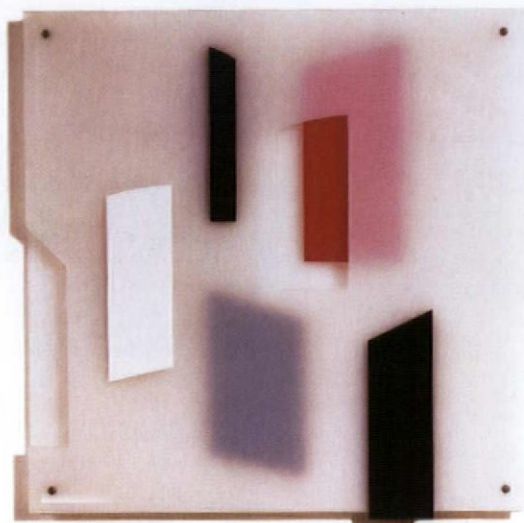


## BOOK

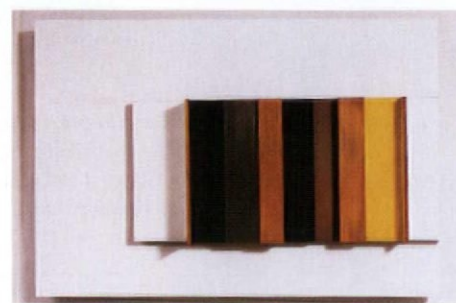
By Dean Hawkes

Constructed Abstract Art  
in England: A Neglected  
Avant-Garde

By Alistair Grieve.  
Yale University Press,  
2005. £40



1.



2.

1. Adrian Heath's Light Screen

2. John Ernest's Strip Relief IV

In a letter in *The Listener* in 1951, Victor Pasmore declared: 'In painting and sculpture, as also in architecture, an entirely new language has been formed bearing no resemblance at all to traditional forms.' In this book, Alastair Grieve explores the nature, origins and development of this new language from 1949 to 1969.

The emphasis is on the painting and sculpture of Pasmore and his contemporaries, Kenneth and Mary Martin, Robert Adams, Adrian Heath and Anthony Hill, as they all pursued their quest for an art in which, as Kenneth Martin wrote in 1951, 'the object created is real and not illusional, in that it sets out to represent no object outside the canvas, but to contain within itself the force of its own nature.'

The book is the product of fastidious research over many years. Grieve has interviewed artists, collectors and critics and made careful analytical assessments of the works themselves. A particular strength is the book's many illustrations, with archive images depicting long-lost exhibitions, and first-class colour photographs of the most significant works.

A chapter on 'theory' reveals the relevance to these artists of Le Corbusier's *Le Modulor* and of D'Arcy Wentworth Thompson's *On Growth and Form*, that at the time was an important reference for many architects.

That interaction with architects and architecture is strongly represented. From the beginning, architects collaborated in the design

of exhibitions of constructed art. Trevor Dannatt designed a show in 1952 that included works by Adams, Heath, Hill, Kenneth Martin, Eduardo Paolozzi and Pasmore, and in 1956 the core members of the group all contributed to 'This is Tomorrow' at the Whitechapel, in which Theo Crosby, the Smithsons, John Voelcker, Sandy Wilson, Peter Carter, and John Weeks featured. Grieve's chapter on this is first rate.

Pasmore's work at Peterlee is well known, but is effectively revisited here, and it is good to see images of the works by the Martins, Hill and John Ernest and Gillian Wise that were commissioned by Theo Crosby for the 6th UIA Congress on the South Bank in 1961. Ernest and Wise, along with Stephen Gilbert, represent a slightly younger group of artists, who

are discussed later in the book. It is good to find such a detailed account of Gilbert's bold architectural projects undertaken with Peter Stead, a Huddersfield builder and patron of contemporary art.

Grieve acknowledges that 'constructed abstract art' has never been popular and suffered much critical hostility. His calm and systematic study now provides an opportunity for a review of the work created by these serious artists. This will be a pleasure for those who have long known and enjoyed these pieces, but I strongly recommend younger readers to seek out this book, to learn about interesting aspects of English art and architecture, but most of all to discover some wonderful work.

*Dean Hawkes is an architect based in Cambridge*



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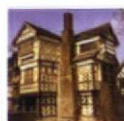
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Candidates should have completed a course in Architecture or Architectural Technology and have good technical ability and an interest in residential design, as well as experience in the use of AutoCAD.

The positions are permanent and salary is negotiable depending on experience. Please apply in writing / e-mail with CV and A4 examples of work to:

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**3 Architectural Technicians/Technologists**

South Yorkshire

Ref: 0511-42

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My client is one of the Top 50 Practices in the UK who have built a reputation for expertise in the Education sector and recently they have been successful in securing several new and exciting projects in this growth sector. You will be required to assist the Project Architect to produce technical information and drawings required for the project. Full involvement in the project is encouraged including liaison with other consultants, site visits and meetings. My client can in return offer a friendly working environment, competitive salary, health and life insurance and CPD.

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Please email your full CV to Tom Copeland at [tcopeland@roevin.co.uk](mailto:tcopeland@roevin.co.uk) or call **0113 2340226**. View more architectural vacancies at [www.roevin.co.uk](http://www.roevin.co.uk)



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Ref: AJ5

### Part 2/3 Architect

### NW London

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Fabulous International project with medium-size practice. You can be part of a new team, working with existing staff from the concept design to planning stage. Great scope for input in this huge project, including Hotel, Residential, Health and Leisure designs for a large village overseas. Excellent AutoCAD and presentation skills vital, in addition to a fresh design outlook. 6 months ongoing contract.

Ref: AJ6

### Architectural Technicians

### Manchester

To £25/hr

One of the UK's leading design practices is urgently seeking experienced Architectural Technicians to join their Manchester based office. An experienced Technician, you will have at least three years experience within the Architectural Market place. Proficiency on Microstation is vital.

Ref: AJ4

## Permanent

### Senior Urban Designer

### SW London

£Neg

Our Client, a well established Architectural Practice in London, is looking to form a new Urban Design section and is looking for a Senior Urban Designer to take a lead role in building upon the practices existing work, as well as creating and winning new opportunities. This will be a challenging and exciting role with great career prospects for the right individual.

Ref: AJ3

### Architect

### Central London

To £35k pa

Our award winning client is a market leader in the Social Housing field and are currently looking for an Architect to join their successful team. This is an excellent opportunity for an Architect with 2-5 years post qualification UK experience to develop their career. You will have strong client liaison abilities and a realistic approach to design, ideally gained in the Residential sector although this is not essential.

Ref: AJ7

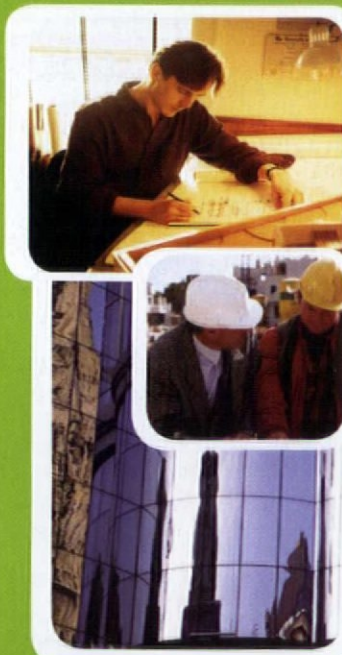
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### Oxford

To £35k pa

Due to continued success, this Oxford based Architectural practice requires an experienced Project Architect to manage a small team. You will have at least 3 years PP3 experience, preferably in the Healthcare, Educational or Industrial sectors. The ability to run projects and take responsibility is vital. Design skills and proficiency on AutoCAD are desirable.

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## Principal Architect

**£25,437-£31,557**

(Ref B741)

The ideal candidate will be an enthusiastic and highly motivated Architect with a minimum of five years' post qualification experience, will have good communication and interpersonal skills, be capable of leading and managing design teams and be conversant with AutoCAD 2006. Experience in all aspects of pre and post contract works are required together with a commitment to excellence in design.

## Senior Architectural Technologist

**£15,675-£26,157**

(Ref B742)

The ideal candidate will have at least five years relevant experience, a proven background in managing all stages of a project through to completion, coupled with good design skills, a solid technical background, knowledge of building regulations and experience in using AutoCAD.

For an informal discussion about either of the above posts, please contact Stephen Stokoe (Design Services Manager) on (01642) 728115 or Doug Grimston (Group Leader) on 728122, after receipt of application information.

Application forms and further details can be obtained from and should be returned to HBS Employee Services, PO Box 369, Middlesbrough, TS1 1WX. Telephone: (01642) 727421 or 727422.

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Please apply with your CV and examples of work to Peter Runacres at:  
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t 020 7520 3300 f 020 7520 3333 w [www.bennettsassociates.com](http://www.bennettsassociates.com)

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Alun Davies or Emma Ellis

t. 020 7881 2700 e. [vadavies@bbt.co.uk](mailto:vadavies@bbt.co.uk) or [e.ellis@bbt.co.uk](mailto:e.ellis@bbt.co.uk) Ref: ADoon



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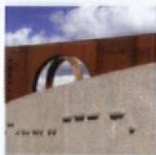
CV and samples of work to:

Andrzej Hewanicki  
Foggo Associates  
55 Charterhouse Street  
London EC1M 6PR

[andrzej.hewanicki@foggo.com](mailto:andrzej.hewanicki@foggo.com)  
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Applicants should be fully conversant with AutoCad 2005

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Gordon Almond  
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19 Old Hall Street, Liverpool L3 9JQ

e-mail: [almond.g@brockcarmichael.co.uk](mailto:almond.g@brockcarmichael.co.uk)



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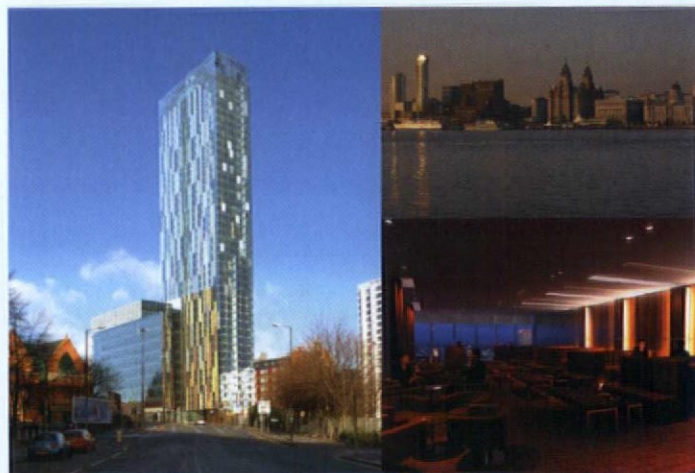
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Scottish Ministers are seeking enthusiastic and committed applicants who would like to be considered for appointment to Architecture and Design Scotland to help it fulfil a growing range of activities.

The appointments are unremunerated but reasonable travelling and subsistence expenses are met. Reasonable dependant carer expenses will also be reimbursed. The Role involves a time commitment of the equivalent of up to two days a month. Design Review Panel and Advisory Board meetings may be held at various venues throughout Scotland. Appointments will be for four years initially with possible reappointment, following satisfactory performance appraisal.

Architecture and Design Scotland has been in operation since April 2005 as Scotland's national champion for good architecture, design and planning in the built environment. Its principal aim is to inspire better quality in design and architecture so that Scotland's built environment contributes in a positive way to our quality of life and our built heritage.

The role involves:

- assisting the Chair, Deputy Chairs and Chief Executive in carrying out the design review, enabling or research and communication areas of activity;
- providing advice to the Chair and Chief Executive in the formulation and review of the strategic aims of Architecture and Design Scotland;
- ensuring that Architecture and Design Scotland's activities are conducted efficiently and effectively.

Successful candidates will:

- have a long standing interest in and knowledge of architecture, the built environment and the planning system; which may have been acquired, for example, by means of formal study, occupation, personal interest or any other comparable means;



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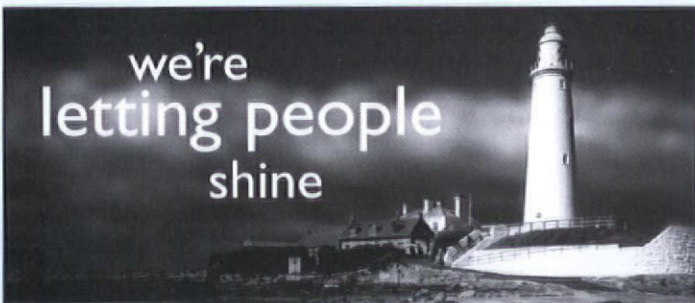
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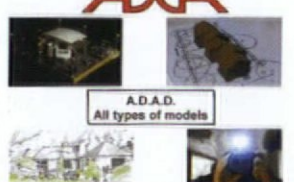


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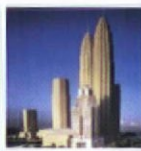







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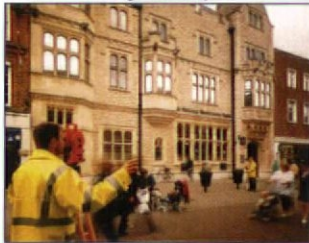
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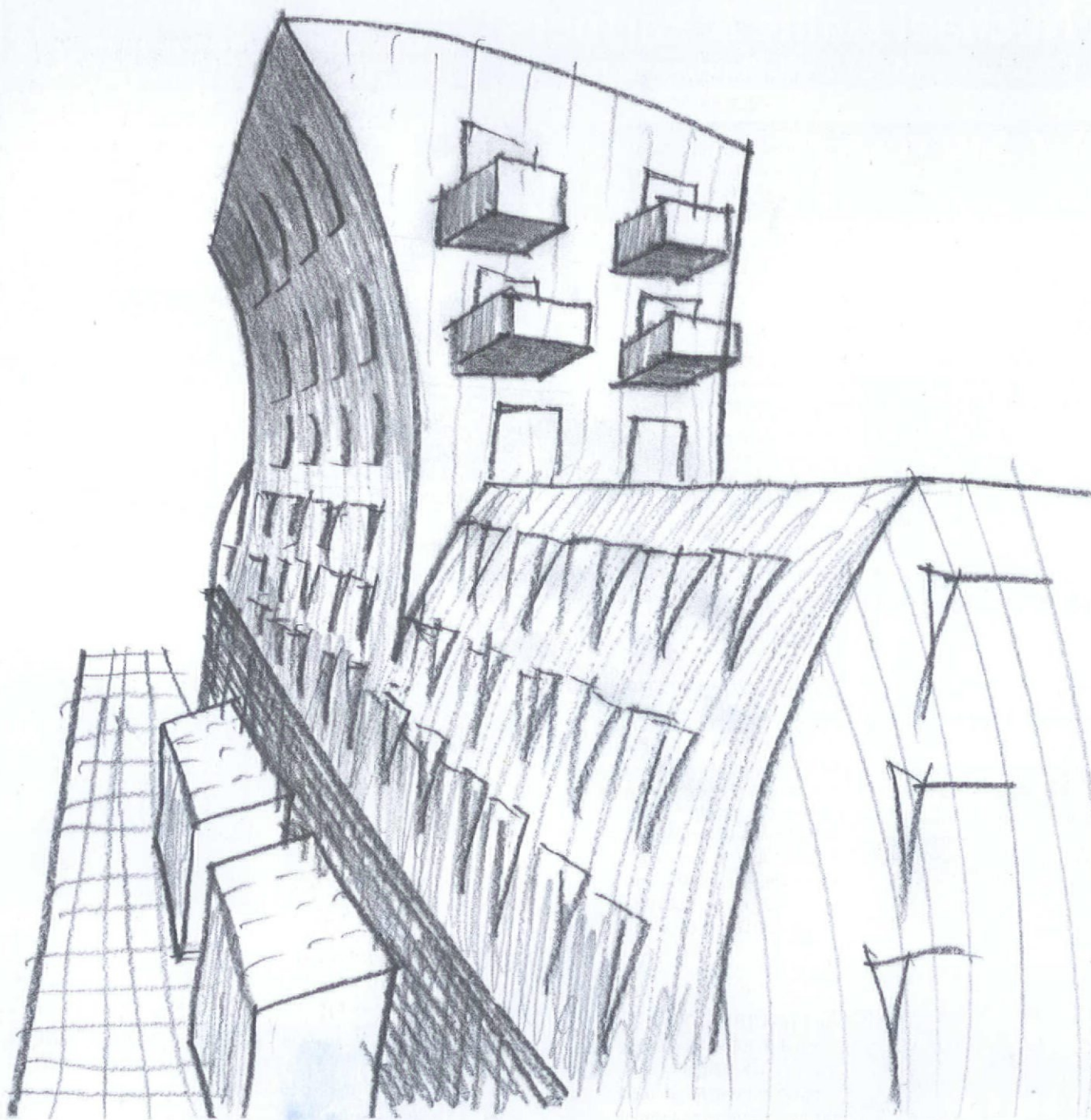
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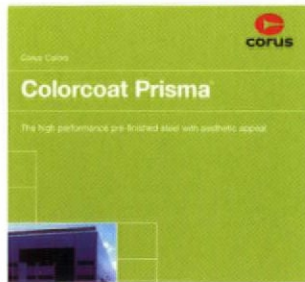
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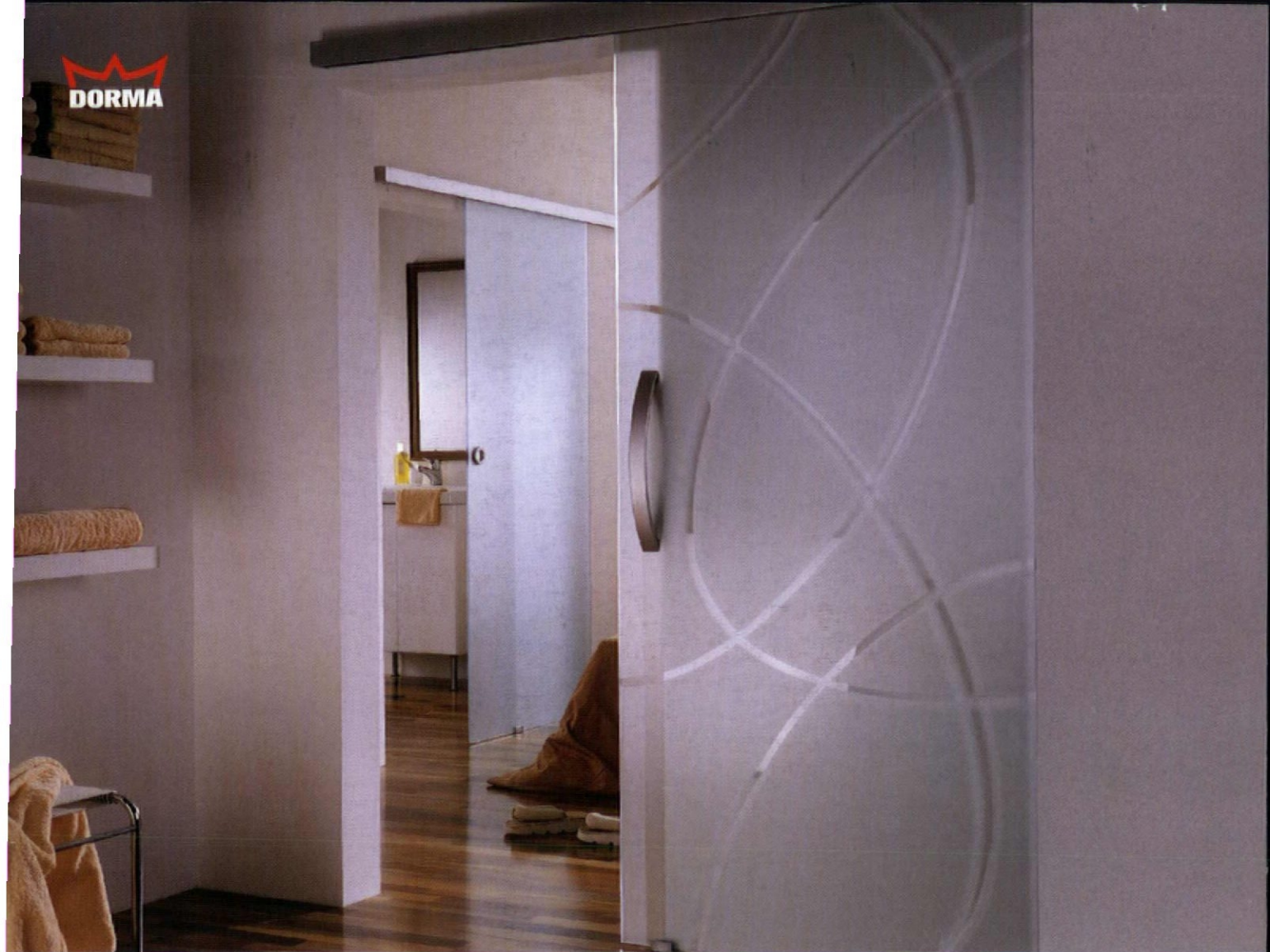
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