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IT SEEMS ALLIES AND MORRISON SIMPLY THOUGHT IT COULD DO A BETTER JOB

By Kieran Long

My first week as editor of the AJ, and a young architect has been screwed over. London practice Mangera Yvars has been replaced on the east London mega mosque by Allies and Morrison (see pages 12-13), in a project where the client has acted first incompetently (allowing bad press to accumulate around the project for two years), and then underhandedly, unceremoniously jettisoning the youngsters for a safe pair of hands.

Allies and Morrison had the chance to collaborate, but turned it down. It wanted the project, so it took it. Mangera Yvars is now left to pursue opportunities elsewhere.

Allies and Morrison has a fantastic record of patronage of other architects, inviting an array of talented and underused practices to design buildings within its many masterplans. And there is no mistaking its good taste. Look at King's Cross (Tony Fretton, Stanton Williams and others), Brent Cross (Buschow Henley, Maccreanor Lavington), and its masterplan for

Land Securities at Victoria (Benson & Forsyth, Lynch Architects). A literate, late Modernism is the order of the day.

This is all to the good. If it's your masterplan, you get to choose. But the mosque project had won a competition and is outside the Olympic masterplan (though near the edge). Zaha Hadid told the AJ she turned down the invitation to pitch for the project out of respect for the original architect. The inescapable feeling is that Allies and Morrison just felt it could do a better job.

In refusing to work with Mangera Yvars, perhaps Allies and Morrison has revealed no more than its aesthetic predilections. The go-faster forms of the original mosque project are certainly not of the type appreciated by the firm's icon-hating partners.

Allies and Morrison is the 12th-largest practice in the country, and has become a gatekeeper to work. This is perhaps a sign of the kind of architecture that will not pass through.

CONTRIBUTORS



Jay Merrick, who reviews *Hollow Land: Israel's Architecture of Occupation* on page 45, is an author and the architecture critic for the *Independent* newspaper



Amir Sanei, whose work features on the *Sketchbook* on page 58, is the co-founder of *AJ/Corus 40 Under 40* practice Sanei Hopkins Architects, based in London



Ioana Marinescu, who photographed the Pier Arts Centre in Stromness for the *Building Study* on pages 21-33, has recently exhibited at the Architectural Association

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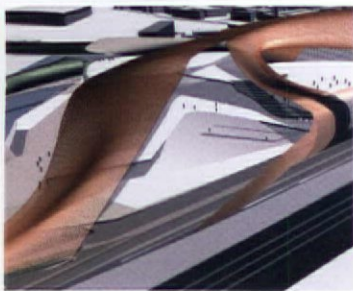
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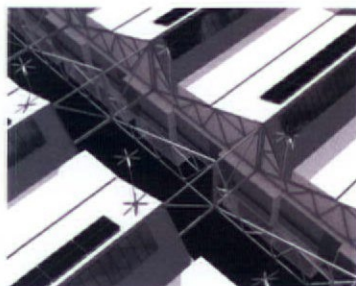
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FRIDAY 29 JUNE

- James Purnell named as new Culture Secretary in reshuffled cabinet (above)
- Purcell Miller Tritton buys South West-based Niall Phillips Architects
- Penoyre & Prasad in the running to design new arts complex at Bath University
- Renzo Piano speaks out over his New York plans



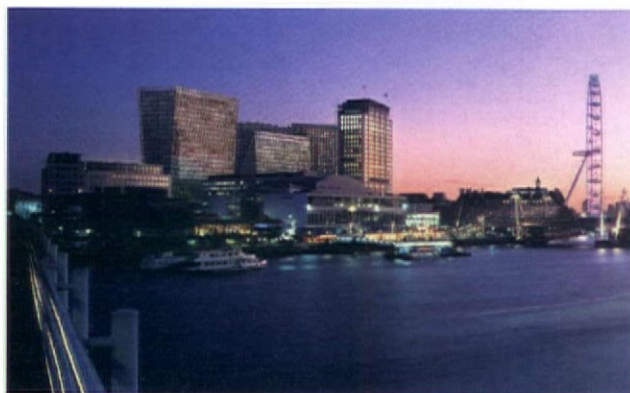
TUESDAY 3 JULY

- Prescott ignored advisors to approve Vauxhall Tower (right)
- Chris Wilkinson appointed as English Heritage commissioner
- Gehry's King Alfred scheme pushes on
- Barton Willmore to create garden in Arabian desert



THURSDAY 28 JUNE

- David Chipperfield unveils redesigned Berlin Museum Island scheme
- Caruso St John reveals new designs for Chiswick Park Gardens (above)
- Zaha Hadid misses out on Swiss casino jackpot
- East appointed to create strategic 'plan' for west London's Acton Town



MONDAY 2 JULY

- Allies and Morrison unveils new-look Three Sisters (above)
- Morgan McDonnell wins planning for Edinburgh regeneration
- Chipperfield to learn fate of Kensington Palace Hotel scheme
- Foster to join fellow starchitects on Abu Dhabi 'culture island'

WEDNESDAY 4 JULY

- Feilden Clegg Bradley's Hampshire masterplan wins green light
- RIBA says no to 'shoddy Noddy-box' homes
- Shortlist announced for Olympic bridge
- Sprunt wins Urban Splash's playground competition



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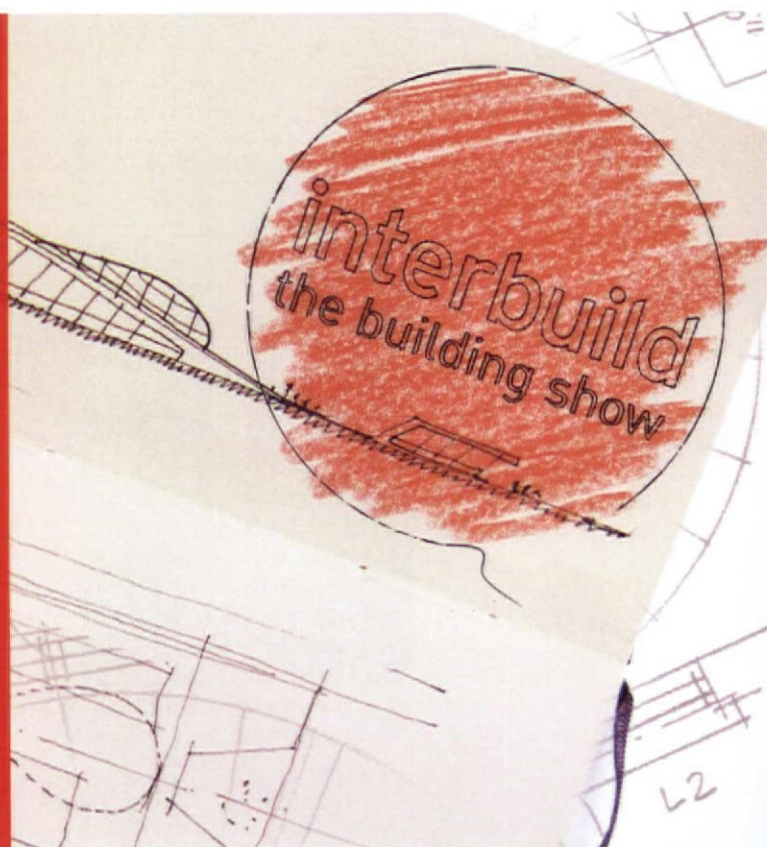
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Sketch image by Stuart Martin of WAM architects.

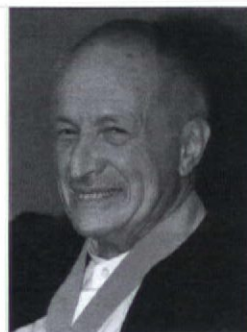
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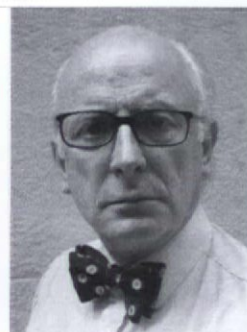




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1. The launch of the 2007 Architecture Week
2 & 3. Richard Rogers (left) and Peter
Murray both oppose the Arts Council's
decision to pull funding for the event

ARCHITECTURE WEEK SCRAPPED

By Richard Waite

Next year's Architecture Week has been cancelled after the Arts Council pulled its quarter of a million pound funding for the national architectural festival.

The revelation comes less than a fortnight after this year's event, which was hailed by the Arts Council – which runs the festival alongside the RIBA and Architecture Centre Network – as the most successful to date.

The government-sponsored organisation confirmed it had suspended its financial support for the 2008 event, and was carrying out an inquiry into whether or not to proceed with the festival in 2009 and beyond.

The Arts Council, which also coughed up only half of the £100,000 expected for the 2006 London Architecture Biennale, said it had made a 'tough, but correct decision'.

Visual arts strategy director Vivienne Bennett said: 'After 11 years, we decided to review the format and carry out an option appraisal – an appraisal which will take a year. The event has been suspended while it is conducted.'

'Everything needs to change and progress and we need to look at the strengths and weaknesses of the current format and what is the best way to engage the public.'

However, the decision has outraged both Peter Murray, the organiser of last year's London Architecture Biennale and Richard Rogers, who has been involved in a number of Architecture Week and Biennale events, and who labelled the suspension 'ridiculous'.

Rogers added: 'I can't tell you how strongly I feel about this. We must see Architecture

Week continue and perhaps we need to see how we can help.'

Murray said: 'It seems architecture is slipping down the Arts Council's list of priorities. It's very sad. I see no reason to cease funding it when it seems to be picking up steam rather than deflating.'

The decision has also saddened other supporters of the festival, including Charles Knevitt, director of the RIBA Trust, who admitted he was disappointed the Arts Council had ditched next year's event in order to carry out the review.

He said: 'We question the need to put Architecture Week on hold in 2008, and we will be meeting with the Arts Council to discuss this.'

'We believe there is a valuable role for events such as Architecture Week to raise the profile of architecture and the

built environment with a wider public.'

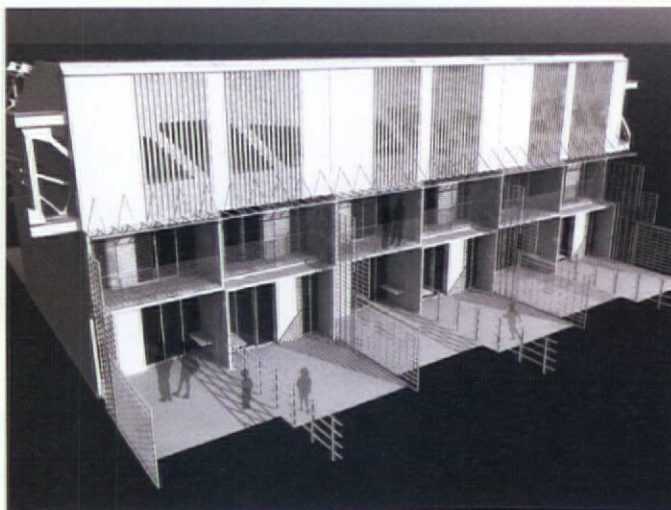
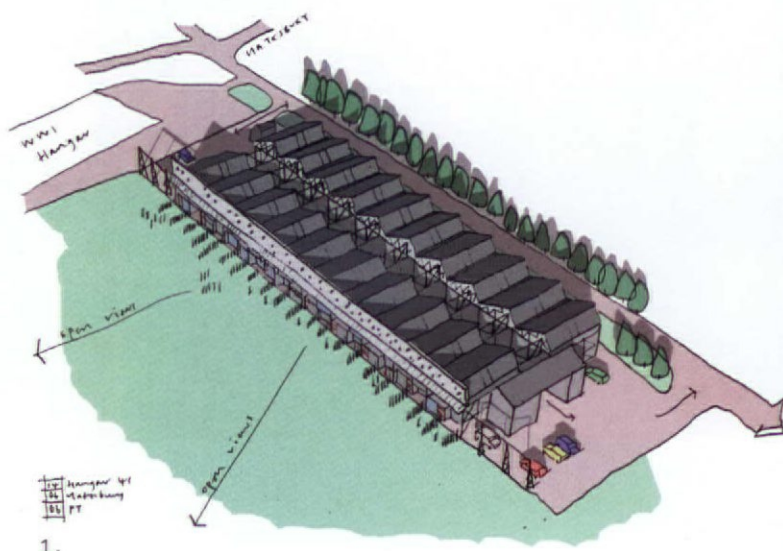
It is understood the Arts Council is to spend £10,000 on the independent review of the event. Meanwhile, the RIBA has quashed rumours that it would consider running the event without the support of the Arts Council, although a spokesman said the institute will be organising a 'major public-facing event' next year.

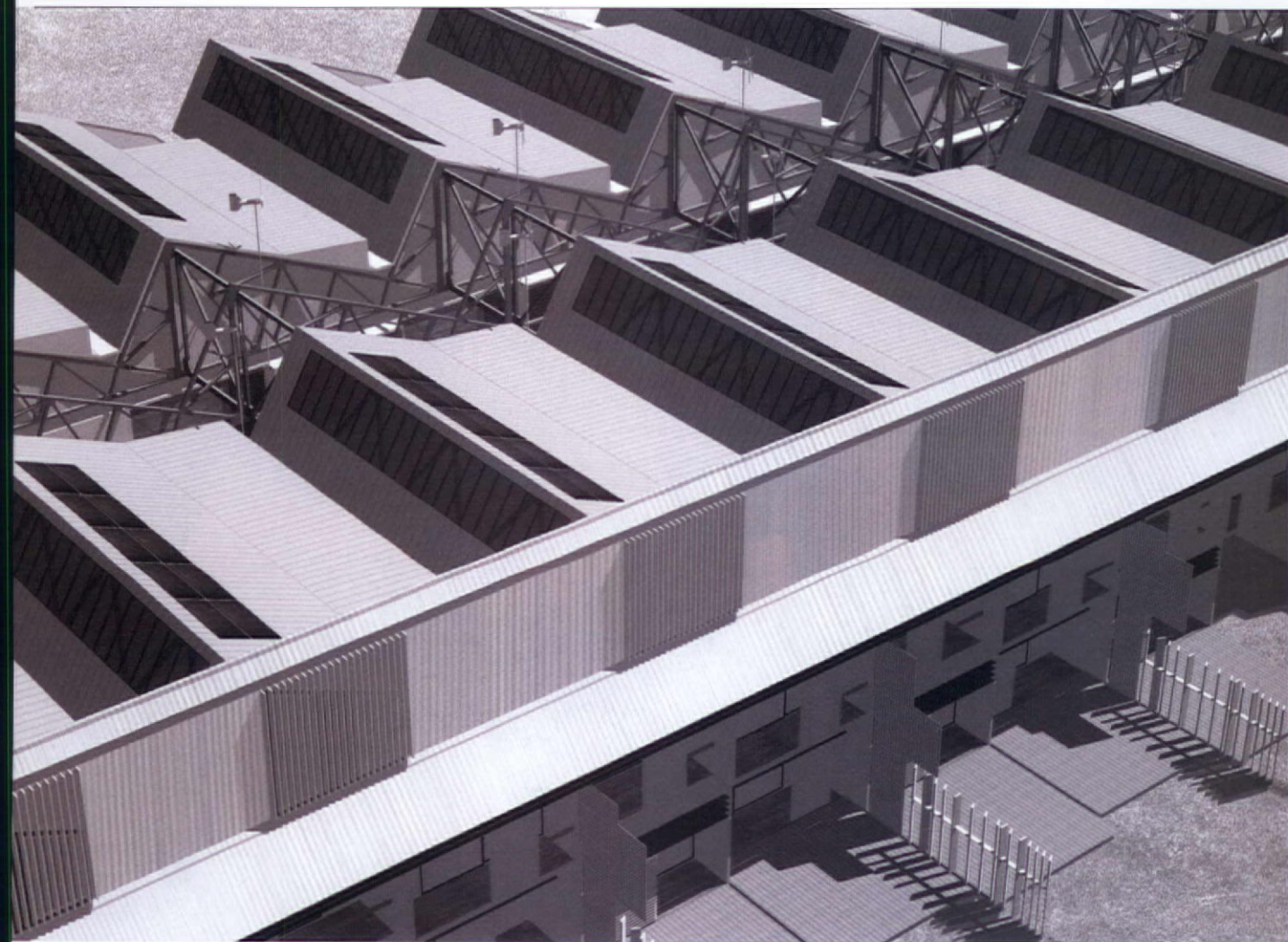
With more than 800 events this year, Architecture Week is the only nationwide festival celebrating the built environment, and includes such favourites as the 'Architect in the House' programme.

HOMES ARE CREATED FROM HANGARS

Mitchell Taylor Workshop (MTW) has won planning permission for this £12 million carbon-neutral live/work scheme in Yatesbury, Wiltshire. Hangar 45 is formed of 29 units that have been incorporated into a dilapidated Second World War aircraft hangar sited in what MTW director Piers Taylor described as a 'stark landscape'. The scheme is defined by an internal street which, said Taylor, 'conceals much traffic and parking, enabling each live/work unit to open out directly on to open countryside'. Much of the hangar's existing steel has been retained, but MTW has also inserted new loadbearing offset steel trusses. Taylor said: 'The rest of the building will be clad in steel and white tiles to create a simple, crisp finish. It's sui generis – a hybrid use between B1 studio and residential, and is the first major contemporary live/work space in a rural environment.' The 7,000m² scheme, which sits on the edge of the Avebury Circle World Heritage Site, also boasts a range of sustainable features, including a combined heat and power wood-chip system and wind turbines. It is expected to start on site towards the end of summer, with construction scheduled to take 16 months.

By Max Thompson





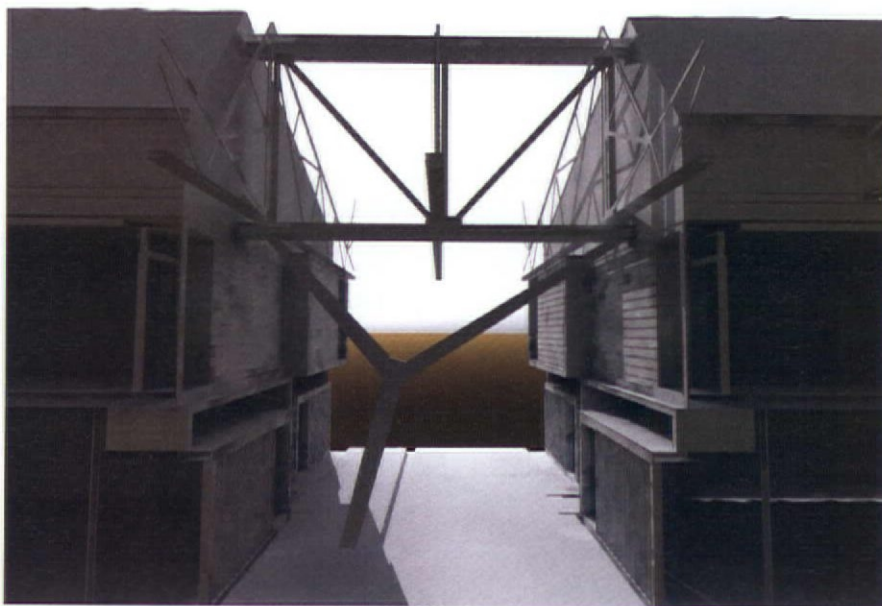
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1. A disused Second World War aircraft hangar is to be turned into live/work units in Mitchell Taylor's scheme

2. The site as it is today

3 & 4. The 29 units will be constructed around an internal street

5. The offset steel supports



5.



1.



2.

STEVE DOUBLE

'MEGA-MOSQUE' CHANGES HANDS

By Richard Vaughan

Allies and Morrison Architects has usurped Mangera Yvars Architects on the £300 million Abbey Mills 'mega-mosque' project in east London.

The 12th-largest practice in the UK, Allies and Morrison confirmed it was working on the project, but declined to comment further. The move pushes out the smaller Anglo-Spanish firm, which has been on the scheme since it won the competition in 2005.

Zaha Hadid, who turned down an opportunity to take on the project, backed her former employee, practice partner Ali Mangera.

Hadid said: 'I felt it inappropriate to say "yes" to a project if there was already an architect on board.

'There was land there for masterplanning, and [Mangera Yvars] was given the mosque to

work on. We were then approached to look at the site, but when we learned that they were working on it, we turned it down,' she added.

It is understood that Allies and Morrison was appointed after a design competition was held in December, despite Mangera Yvars still being under contract to work on the scheme. It is now thought that the AJ/Corus 40 Under 40 firm is seeking legal advice.

The original scheme – located in West Ham, a stone's throw from the Olympic Park – attracted a mountain of negative press coverage.

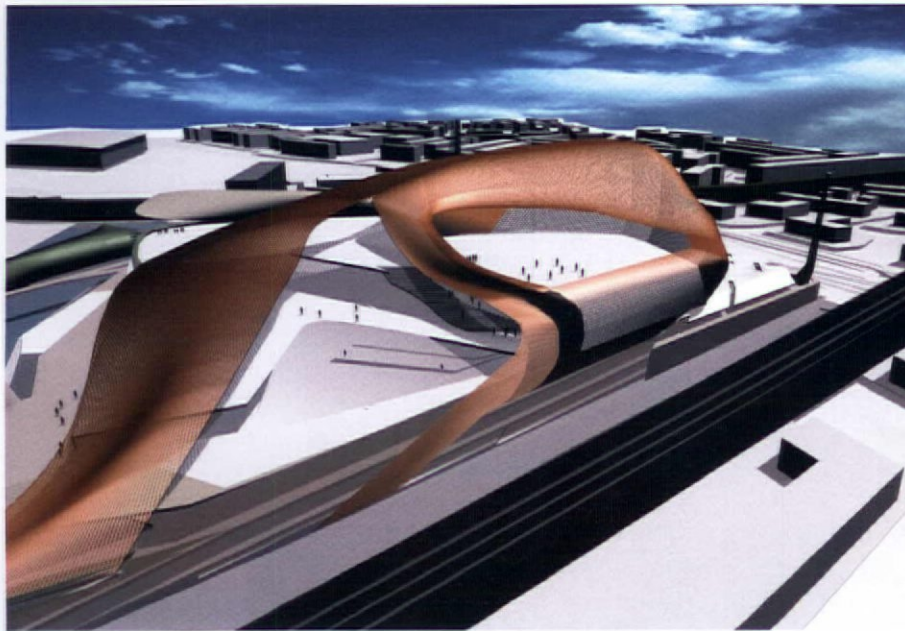
Dubbed the 'mega-mosque' by the *London Evening Standard*, the Abbey Mills Islamic Centre was said to have a capacity of 70,000, making it nearly 20 times larger than Liverpool's Anglican Cathedral.

A growing media storm, coupled with criticism from local residents, Christian groups, and even other Muslim leaders, forced the Abbey Mills Trust to change its strategy, claiming it had no intention to build a mosque of that size.

Part of the reason behind the mosque's change in tack was an increasing number of newspaper reports claiming that the trust's primary supporters, Tablighi Jamaat, had links with terrorism.

On 17 July 2006, the *Evening Standard* published the headline 'Terror link group to build London's biggest mosque', and used pictures of 7 July 2005 tube bombers Mohammad Siddique Khan and Shehzad Tanweer to illustrate the piece.

Speaking to the AJ in May (ajplus 01.05.07), Abbey Mills trustee Abdul Sattar



3.



4.

1 & 2. Zaha Hadid turned down a chance to work on the mosque after Mangera Yvars was dropped

3 & 4. Mangera Yvars' original plans will now be scrapped, with Allies and Morrison taking on the east London scheme

Shahid said: 'In the last few years we have, perhaps naively, pursued options to bring our vision for a new mosque to fruition with those who describe themselves as friends.

'We have never intended to build a mosque the size that has been suggested in the media. Our vision is for a development that enhances the area of West Ham and provides a mosque and complex that will support our work in the Muslim faith.'

The trust radically reduced the size of the mosque, claiming it would provide worship space for no more than 12,000, and even then would rarely host more than half that number at any given time.

Mangera Yvars continued to be involved with the design process until, despite claims that it had stuck to the brief, the young practice was dropped in

favour of Allies and Morrison. It now seems likely that the firm has been used as a scapegoat with the trust distancing itself from the bad press.

Allies and Morrison, which has a good track record of using smaller practices, is likely to start the design process from scratch, as a new planning application will have to be put forward.

The local authority, Newham Borough Council, said the site is occupied by a 'makeshift mosque', which is still using temporary planning permission that has now expired.

A spokesman from the council said it was not expecting a new planning application for a permanent mosque until early next year.

'MEGA-MOSQUE' TIMELINE

September 2005

Mangera Yvars unveils designs for new International Islamic Centre, dubbed the 'mega-mosque'

July 2006

Newspaper reports link mosque with terrorist groups

November 2006

Petition with 2,500 signatures issued against scheme

February 2007

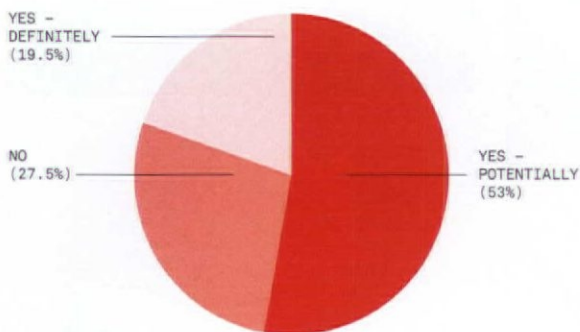
Further newspaper reports claim the government plans to block mosque

May 2007

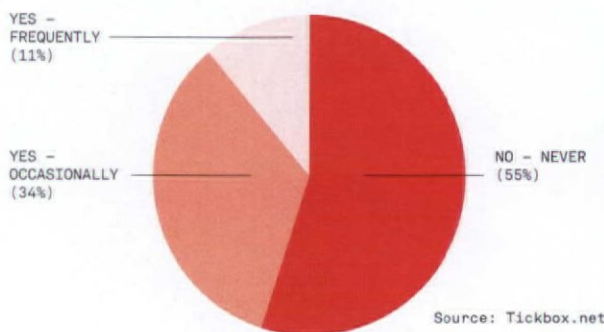
Mangera Yvars denies it has been dropped from the project

July 2007

Allies and Morrison takes over as lead designer, with new planning application expected in 2008



DO YOU FEEL THAT GLASS CEILINGS STILL EXIST FOR WOMEN WITHIN ARCHITECTURE?



Source: Tickbox.net

HAVE YOU EVER EXPERIENCED GENDER INEQUALITIES WITHIN THE WORKPLACE?

WOMEN 'FACE INEQUALITY AT WORK'

By Ruth Slavid

Nearly three-quarters of all women architects believe their careers could be checked by a glass ceiling, according to a new survey.

The study, carried out for consultant Atkins, also shows that almost half of female architects have experienced gender inequalities in the workplace.

The poll, which quizzed 3,300 men and women across a range of disciplines, including architecture, found that 19.5 per cent of female architects claim a glass ceiling 'definitely exists' and 53 per cent believe it is 'potentially there'. It also found that 11 per cent of women architects 'frequently' experience inequalities, while a further 34 per cent experience them 'occasionally'.

Pippa Nissen, director of London-based Nissen Adams

Architects, was not surprised by the findings.

'It is something I am very aware of,' said Nissen.


'In earlier architectural practices I felt that I wasn't getting the right kind of promotion. It is one of those things. I have my own practice now so it is different, but I won't allow it in the office,' she added.

Nissen employs eight women in a 14-strong workforce. By contrast, of the 7,108 architects employed by AJ100 practices, only 1,646 are women – just 23 per cent.

The study, conducted by market-research organisation Tickbox.net, found that one-third of women are put off a career in the construction sector because they believe it is dominated by men. This figure rose to 50 per cent among recent graduates.

However, despite the negative feedback from female architects, the research revealed that around 60 per cent of respondents believe that buildings designed by women 'would be more user-friendly, practical and better places to live and work.'

Atkins is the headline sponsor of the Inspire Awards, which recognises the achievements of women in architecture, engineering and construction. The winners of the awards will be unveiled at a celebration lunch in London's Riverbank Park Plaza Hotel tomorrow (6 July) and the results will be published in a supplement with next week's AJ.

A man in a dark suit and blue shirt is shown from the chest up, leaning forward and holding a large, dark brown, textured roof tile. He is looking down at the tile. The background is a solid dark green.

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'Before long you will need a bonus from Goldman Sachs to buy an inter-war semi'

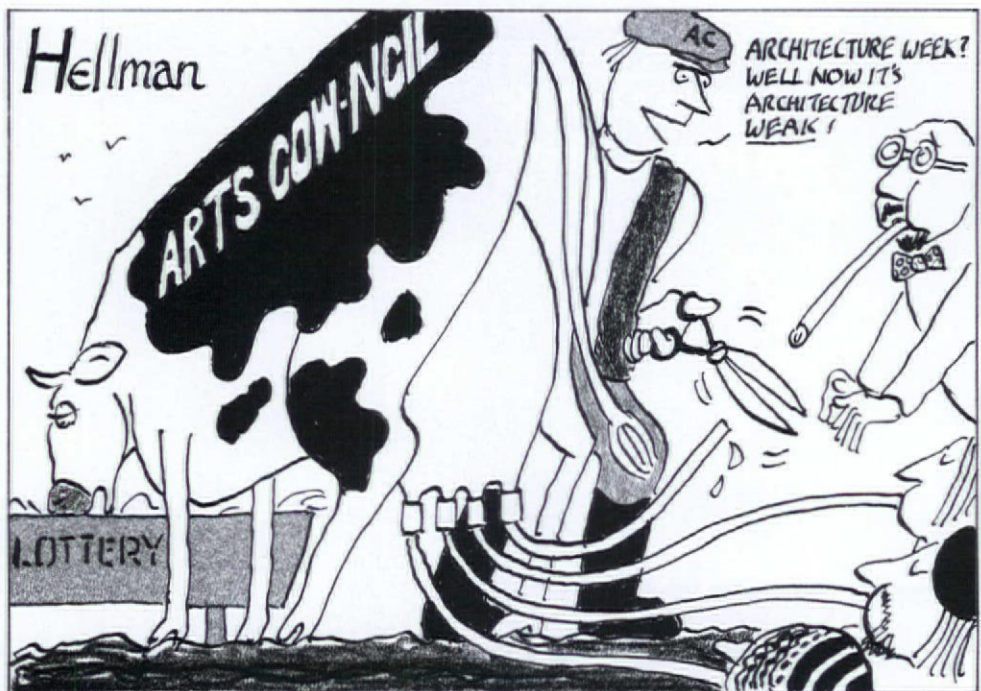
Paul Barker. *Independent* on Sunday, 01.07.07

'An appalling plan by Peter Cook suggests he believes that by using bright colours he has humanised the inhuman piles of cells that masquerade as homes'

Colin Amery at the RA's Summer Exhibition. *www.bloomberg.com*, 27.06.07

'It's not good money after bad. In Manchester, investment does work. Help us regenerate our city; we'll use your money wisely'

Manchester DJ and author Dave Haslam. *Observer*, 01.07.07



PIANO'S FORTE

Astragal recently received a call from a charming young Italian lady who turned out to be one of **Renzo Piano's** lackeys. She explained that the Genoese Shardmaster was overjoyed at being named 'Most Admired Architect' by his contemporaries in the recent AJ100 listings (AJ 24.05.07) and wanted to get hold of a copy of the article. 'No problem,' Astragal replied, 'what does he want to use it for?' 'To be honest,' came the response, 'I think he just wants to show **Richard Rogers**.'

THE CURRENT SITUATION

It's an ill wind that blows nobody any good. And produces no power. And costs far too much to harness. Just ask the current occupants of **Will Alsop's** Palestra building – the good folks at the London

Development Agency. It would not be an exaggeration to say the turbines on the top of the south London landmark have been completely and utterly rubbish. Put up late last year, the windmills flapped around aimlessly until they were finally taken down this January. Six months later they are still not back, leaving a forest of stalks swaying on the Southwark skyline. Apparently the 'installer' has 'not yet been able to provide evidence they have resolved the technical problems'. Who said this going green was a breeze?

A TOUCHING TALE

Astragal nobly roused himself from his pit early last Saturday morning (30 June) to go on an 'urban ramble'. Doggedly working through his hangover Astragal joined Touching the

City (www.touchingthecity.com) organisers **Oliver Froome-Lewis** and **Alexandra Daisy Ginsberg** and a gaggle of architects on a walk from Westminster to the O₂ Arena. The aim was to take a closer look at the forlorn urban spaces that they call 'BenchSpace'. No stranger to hanging around on park benches, Astragal was well placed to hold forth on the topic. The trip took in architectural highlights such as the Robin Hood Gardens Estate, Poplar Baths and the O₂ itself. Some culture was squeezed in with a show at the Wapping Project, which featured, ahem... 'contemporary dance'. Thankfully Astragal was suitably fortified after the group had made a visit to that other south London cathedral of high culture – Al's greasy spoon in Southwark...

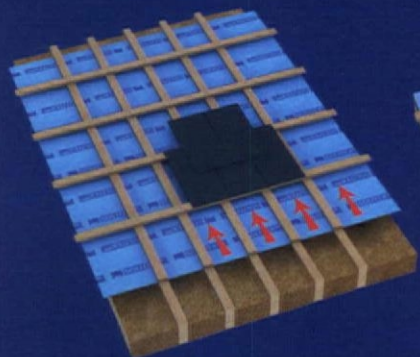
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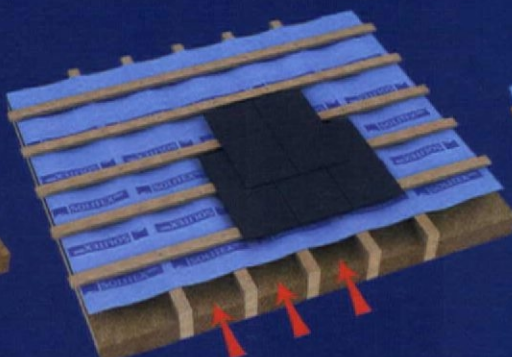
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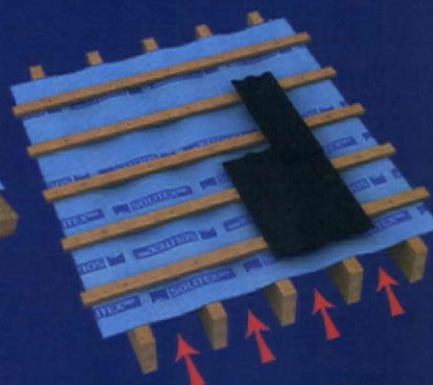
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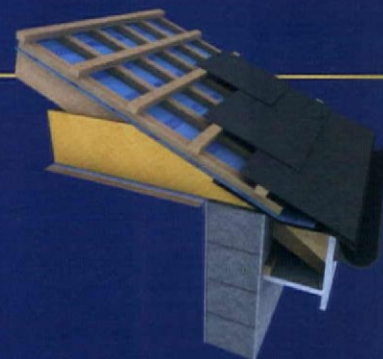
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due to moisture, condensation, mould, rot, damp & provides significant long-term energy-savings. Unlike conventional breather membranes which are micro-porous, solitexPLUS Breather Membrane, employs Closed Cell Technology which provides a combination of key benefits:

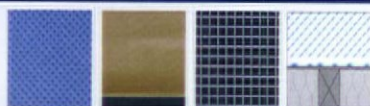
High Breathability
High Comfort
Light Weight
Save Energy

High Thermostability

Minimizes condensation risk
Non-slip, even when wet
Ease, speed & safety in use
Part the pro clima Intelligent Airtight System
Safety, even at high temperatures



Non-ventilated Cold Roof System



Multi-layered to ensure maximum water-tightness & strength. solitexPLUS membranes prevent tenting & can be supported across the whole surface

	SOLITEX ²⁰⁰ Breather Membrane Diffusion-Open	Standard Micro Porous Membrane
Total Resistance to Wood Preservatives	✓	✗
Total Resistance to Wood Resins (e.g. turpentine)	✓	✗
Total Resistance to Chainsaw Oils, Detergents, etc.	✓	✗
Extreme Nail Tear Resistance > 300N	✓	✗
High Watertightness > 2500mm	✓	✗

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SOLITEX^{PLUS}
Breather Membrane
Diffusion-Open

LIVERPOOL HOUSING COVERAGE IS 'NEGATIVE SPIN'

In response to your article on the creation of a Housing Market Renewal (HMR) scrutiny panel by Liverpool City Council (LCC) (*ajplus* 22.06.07), you appear to have been somewhat misinformed. The piece was an unbalanced representation of what is actually taking place.

The scrutiny panel, which is nothing out of the ordinary, was established by the council's Neighbourhoods and Housing Select Committee to reflect the high priority and commitment given to HMR. As I am sure you are aware, scrutiny panels are used in all areas of council business to inform, support and improve both service delivery and accountability. We look forward to working with the scrutiny panel and Liverpool City Council to achieve this. Against this background, the article contributed to the ongoing misrepresentation of a vital regeneration programme in the media.

Your source on Merseyside may wish to place a negative spin on the creation of this scrutiny panel and, while I am more than happy to hear alternative points of view in the press, I do believe that we have a right to balance and fairness in the treatment of HMR.

Finally, should you wish to visit NewHeartlands and see for yourself the transformation that is taking place, then please feel free to contact me and I will make the necessary arrangements.
Pauline Davis, managing director, NewHeartlands

THE POST-WAR PIONEERS OF MURRAY MEWS

I recently came across an *AJ* from last year which featured a Building Study on Murray Mews (*AJ* 18.05.06), and I was reminded of my brief involvement with what I believe was the first post-war dwelling built in the mews.

Early in 1953 an old friend, Derek Linsey, asked if I would draw up plans and details that he had drafted for a flat and play area over a garage/workshop. The project was to replace a derelict and abandoned artist's studio in Murray Mews – sited at the end of his parents' garden in St Augustine Road, where he was living in two rooms with his wife and expecting their first child.

I did this while still in my final years at the Northern Polytechnic School of Architecture – supported by a government ex-serviceman's grant (£109 per term) – having completed my first year before entering the RAF for war service.

The scheme received the necessary statutory approvals and, with the help of friends over many weekends, Derek demolished the studios and cleaned the old stock brick for reuse. Details of the condition, position and depth of the sewer under the road in the mews were obtained by the use of mirrors and a naked electric lightbulb lowered down to the sewer on its lead, via the existing soil-drain connection!

Derek, who had received no formal training, was a natural and talented engineer and inventor. He built the entire new dwelling almost singlehandedly. A cement mixer was created from

a 50-gallon airdrum on a timber stand, driven by an electrically powered marine winch. A similar winch powered a hoist to serve the first floor.

I provided details for steel reinforcement and concrete mixes for the various structural elements, including cantilevered concrete treads for the stairs and the cast floor over the garage and workshop. What Derek did not know, he asked others who did or researched it in the public library.

This little dwelling, although not as sophisticated or exciting as later works on the mews, fitted quietly into its surroundings at the time and was one man's determined response to the difficult conditions and general lack of housing accommodation after the war. I like to think that it may have been the germ for the later developments in Murray Mews.

R W Sale, Seaford, East Sussex

FIXING A POSITION ON THE USE OF THE ARB AFFIX

Expat Peter Arnold (*Letters, AJ* 21.06.07) has no qualification to signify his years of training and elects not to be an RIBA overseas member. Although he clings to the notion that it is acceptable to use the invented affix ARB, he is wrong. His sophistry is exposed by the following salient points:

- the ARB is not a professional body and thus cannot create a qualification;
- the ARB's website rightly emphasises that its logo must not be used in the manner of a professional membership or qualification;
- the ARB could sanction registered architects using the logo as an affix through its disciplinary procedures;
- when brought into force, the Consumer Protection from Unfair Trading Regulations 2007 will place new duties on bodies that impose a code of conduct and, in dealings with consumers, breaches of such codes will be a criminal offence; and
- the government intends to update the Control of Misleading Advertisements Regulations 1988, which implements the EU's Misleading and Comparative Advertisements Directive. New regulations will make misleading advertising a criminal offence in all circumstances. What can be classed as 'advertising' is defined very broadly and covers any form of representation (including oral representations) made in connection with a trade, business, craft, or profession in the promotion of supply of goods or services. Thus, the use of the affix 'ARB' on business cards or letterheads will become a criminal offence liable to prosecution by the Trading Standards Service.

Arnold should stay 'over there' in America lest in future he be recognised as a criminal 'over here' in Britain.

Maurice McCarthy, Chorleywood, Hertfordshire

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

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Architect

G4 Design

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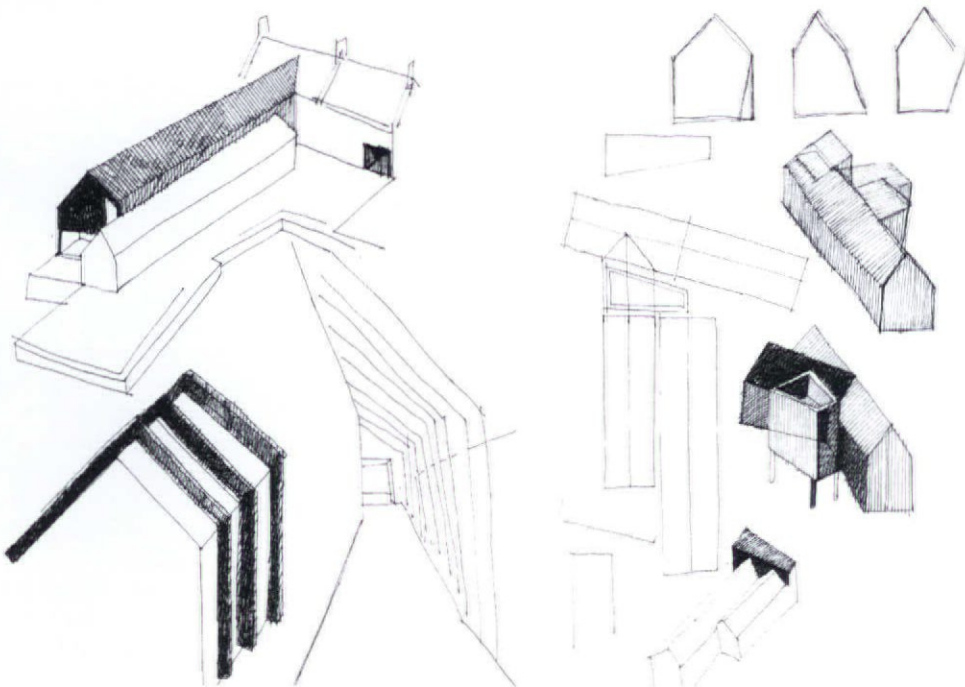
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REIACH AND HALL/ PIER ARTS CENTRE



FROM THE HARBOURSIDE THE NEW BUILDING IS AN ALDO ROSSI ARCHETYPE WITH ADDED COMPLEXITY

By Jonathan Woolf. Photography by Ioana Marinescu

Edinburgh-based Reiach and Hall was established in 1965, and has worked in the education, health, residential, commercial, arts and industrial sectors. Key projects include the Wolfson Medical School at Glasgow University (AJ 24.10.02), the Westport Offices in Edinburgh (AJ 24.04.03) and the Arts Faculty Building for the University of St Andrews (AJ 09.11.06).

Arriving by road past a flicker of suburbia, the harbour town of Stromness in Orkney is defined by two building types, laid over hill and sea like a weather-worn hand with a high street for a lifeline. Type one comprises the two-storey pitched-roof houses placed either parallel or perpendicular to the road, with chimneys flush to rendered gable ends resembling inkpots. Type two consists of the long chimneyless pitched-roof sheds, sitting on dry-stone jetties sticking into the water like so many stubby fingers.

This is an insistent morphology that reminds me both of the platonic form-making of Aldo Rossi and the nuanced buildings of Álvaro Siza, whose projects develop a topographical response. One can characterise the exterior expression of the scheme by Reiach and Hall to refurbish and extend Stromness' Pier Arts Centre as located somewhere between these two canons; and, as such, it offers lessons for future regional development.

The Pier Arts Centre is based around a collection of 20th-century 'St Ives School' paintings and sculpture, the bequest of Margaret Gardiner to the community of Orkney in the 1970s. To host this, architects Kate Heron and Axel Burrough refurnished a former harbour storage building and an 18th-century street

house in 1979. Their sympathetic project was contemporary with the completion of Kettle's Yard art gallery in Cambridge, whose extension of linked-together cottages by Leslie Martin and David Owers is an exemplar of its kind.

Kettle's Yard and the Pier have much in common: they have closely comparable collections centred on such artists as Ben Nicholson, Barbara Hepworth, Alfred Wallis, William Scott and Roger Hilton; the works were collected personally over a lifetime for intimate house settings; and both have purpose-made extensions that increase the range of possible arts activity. At this point the similarities end, as the architectural strategies for the respective extensions diverge considerably.

In Stromness, the original two-floor harbour building housing the main collection has been faithfully restored by Reiach and Hall. Each of the two floors is a gently inflected room-to-room experience, where the walls that define them are only partly reconstructed, allowing a sense of the whole. The ground floor is low-ceilinged while the upper floor, equally modest in scale, is open to the volume of the roof. It has an intimate feel, with enough sense of the domestic to present the collection appropriately; similar to Kettle's Yard, where the three knocked-through cottages create a meandering spatial cosiness.

Walls 60–80cm thick with deep-set windows create highly charged oculi of light. The relationship between interior flat white surface and deep reveals is powerful, rhyming with some of the artworks, particular Hepworth's *Oval* and *Involute II*.



1. The new building echoes the form of its harbourside neighbours

Aside from the ground floor, whose gridded quarry tiles were exchanged for a staggered layout, Reiach and Hall's restrained strategy was to upgrade without alteration. On the first floor a beige rustic carpet intensifies the feeling of a cottage. Externally, this rather ordinary-looking building has remained unaltered, other than to repoint the stone walls in lime mortar and retain the pair of 1970s external stone steps. As an entity, it is like a hollowed log with knots for windows.

By contrast, the new building is rather sleek. Parallel to, but separate from, the old, it is set further back from the sea, wider and higher, but otherwise markedly similar in form to its pitched-roof neighbours. Its roof and walls are black, but whereas the south elevation and roof have the paper-like surface of zinc sheeting with raised vertical creases at 45cm centres, the north side becomes pronounced, with vertical-ribbed hollow bars of aluminium and all glass infill strips set back about 30cm.

The eastern seafront facade is like the south face, except for stretches of glass which reveal the thickness of the structure and signify that this is not a building for industrial use. By maintaining a flush condition between glass and cladding, the continuity of the skin of the building – and the archetypal form of a shed – is sustained. This new structure – though formally mimicking the existing ones – has an imposing presence, creating a close relationship with the harbour building and merging directly into the slate roof of the newly refurbished 18th-century street building, which has been combined with one next door.

As at Kettle's Yard, the building on the street has been reworked into the overall gallery to act as a shop window – here with dignified bronze-framed plate glass. In the front facade treatment of the reworked building I see a Siza-esque composition of a 'face', with a parti that relies on continuity of surface and deep restraint. It is handled with assurance and skill.

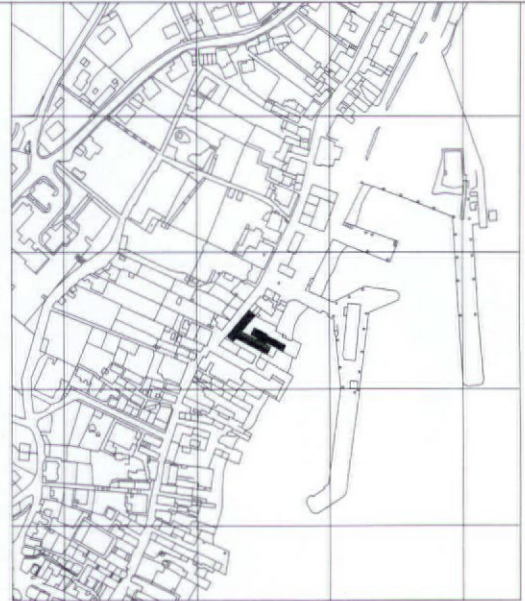
The focus on exterior expression is rightly different to Kettle's Yard, which is generally hidden behind the street frontage. Leslie Martin's team, encouraged to contrast the gallery and house addition with the domestic spaces, offered a larger scale of interlinked spaces which operate a rigorous strategy of painted masonry expressed structure that resonates with the older buildings in an emotive way. Light is almost always from above. Reiach and Hall's own interior strategy, by contrast, is not as clear.

While with the 1970s conversion for the Pier the street and rear buildings are kept separate, in the new project all are linked via the new one. Possibly as a consequence of focusing on the addition as a link building, the architect has eschewed the room-to-room configuration and opted for a corridor-cum-gallery that runs the length of the building. The close-mullioned north-facing glass wall dominates this space, which occurs on both the ground and taller glass-roofed first floors.

Rather than exploiting the width of the building and forming a contrasting spatial relationship with the modest-sized older rooms, the architect has gone for a strategy of fixed gallery rooms that more or less match in plan those of the old building.



2.



3.



2. The ribbed aluminium and glass of the new building

3. Site plan

4. View from the harbour's edge

There is a small harbourside room with a full-width glass facade, leading to an inner room which is double height. This 4m-high space has no natural light of its own but borrows from doorways. The decision not to span the reinforced-concrete structure across the width, but to set up another structural line on the inside of the corridor space (marked by one of three expressed concrete columns and beams), means these spaces remain fixed.

Upstairs, the building repeats itself around the drylined concrete wall to the double-height room below. The top floor has an attic library, with books in a generously proportioned white timber-framed glass cabinet. Surfaces in the new entrance and the staircase are lined with oak planks.

Taken overall, the interior of the new building is more difficult to comprehend than that of the existing one – partly because much of it is given to support activities, but more specifically in relation to its structural, spatial and lighting concept.

The original collection comprises small paintings and objects that are comfortable in modest domestic or rural vernacular settings. On the other hand, conceptual art challenges this and, seeking to operate with anything and everything, it could be anywhere. This means that the architect is now in a position where the merest whiff of ambiguity between object and setting can lead to a reading of fixtures and fittings as art. Added to this is the need to create environments with a laboratory-like atmosphere to satisfy insurance conditions for showing art. Reiach and Hall refers to specific art pieces inspiring its work and is clearly

interested in the subject matter. Given this, the older buildings, which appear to have little in the way of environmental paraphernalia (but do work), are juxtaposed baldly with the new building which appears laden with it – a surprising example being an oversized environmental access door to the new harbourside rooms, set into the whole of one wall.

Leaving the gallery to visit William Lethaby's nearby Melsetter House, the Arts and Crafts masterpiece, I was struck by the way he controlled the extraordinary daylight that is present in this part of the world as well as the way every detail has a role to play. Returning to the gallery I met two artists, Ragna Róbertsdóttir and Alan Johnston, both of whom were enthusiastic about the new gallery's interior, which they were busy christening with their own works.

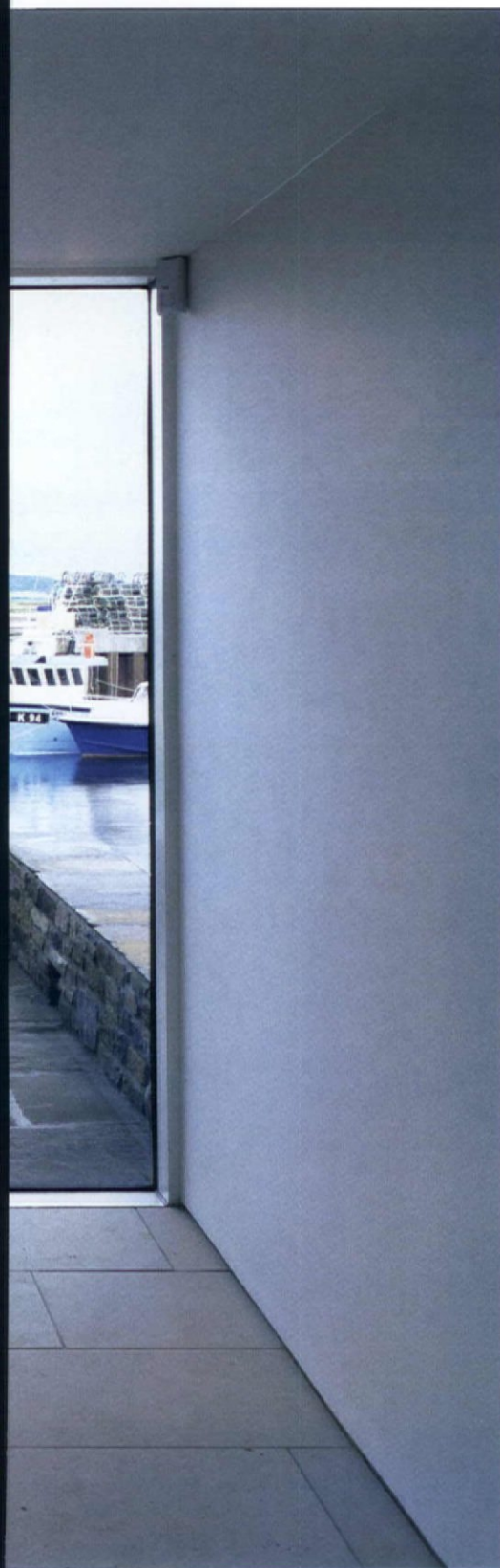
From the harbourside the new blackened building is an Aldo Rossi archetype with added complexity. The project sets up an ambiguity between building structure and skin, absorbing the vernacular of the adjacent ferry terminal with the more familiar forms of the town. The external expression of architecture, whether urban or rural, has the ability to generate great influence unconsciously on the work of others over time. There is no doubt that this project by Reiach and Hall, which is one of the three consistently interesting practices operating in Scotland, will continue this influence.



4.



5.



6.

5. View through the ground-floor window of the new building

6. Looking down the first floor past the link to the existing gallery



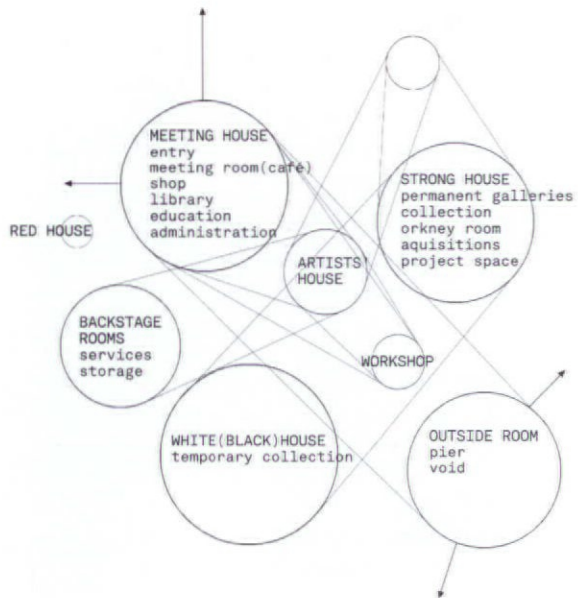
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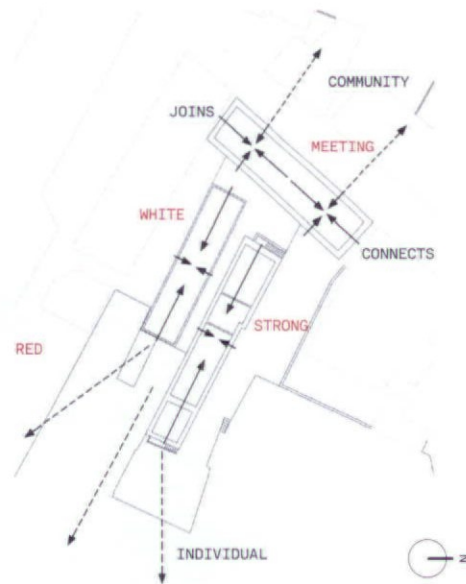
8.

7. On the ground floor of the original harbour building

8. Small-scale works are shown in a suitably intimate setting



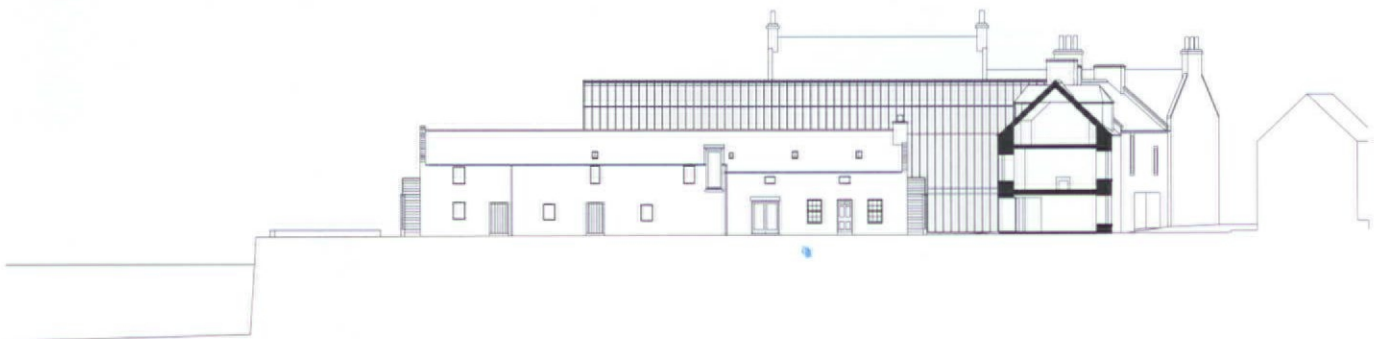
9. The underlying brief



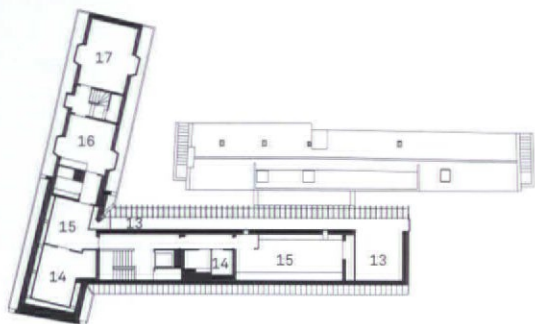
10. Site-relationship diagram



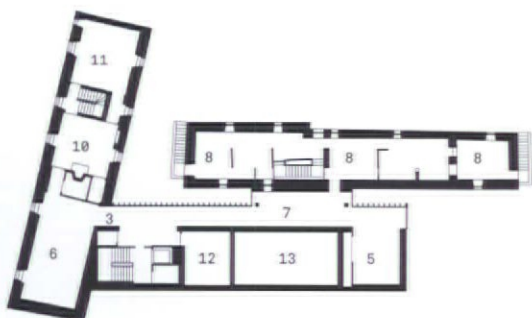
11. Sketch of the harbourfront site



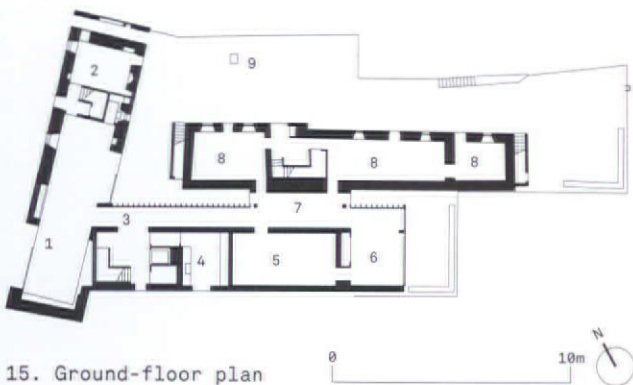
12. The new insertion in its immediate context



13. Second-floor plan



14. First-floor plan



15. Ground-floor plan

- | | |
|-------------------------|---------------------------|
| 1 ENTRY/MEETING/SHOP | 10 MEETING ROOM |
| 2 ADMINISTRATION | 11 ADMIN/EDUCATION/DESIGN |
| 3 LONG GALLERY | WORKSHOP |
| 4 WORKSHOP | 12 SWITCHGEAR ROOM |
| 5 DOUBLE-HEIGHT GALLERY | 13 VOID OVER GALLERY |
| 6 GALLERY | 14 STORAGE |
| 7 LINK | 15 HANDLING GALLERY |
| 8 COLLECTION | 16 ARTIST ACCOMMODATION |
| 9 HEPWORTH CURVED FORM | 17 DIRECTOR |
| TRAVELIGON | |

STRUCTURAL ENGINEER'S REPORT

The structural concepts which make up the Pier Arts Centre presented different engineering challenges of conservation, renovation and new build, but none greater than the integration of all three to create the linkages necessary for the centre to function effectively. The existing Pier gallery building is an early-19th-century B-listed stone-built pier warehouse converted in 1978 by Levitt Bernstein. Conservation focused on essential structural repairs and timber-truss adaptations to form openings for links to connect with the new-build adjacent gallery. The Victoria Street buildings, consisting of two stone-built 18th-century town houses, were combined to provide the entrance, reception, administration spaces and accommodation for meeting rooms. Structural works comprised substantial demolition and rebuilding to accommodate the new building extension; a full-width opening connecting the street buildings at ground floor by permanent removal of the dividing gables; and rebuilding the original first-floor fireplace, flue, chimney stack and ridge stonework, all suspended on a steel frame. Large openings in front and rear elevations were framed out with in-situ concrete. Floors, originally constructed using timber-pole joists and sagging alarmingly, were replaced with new timber joists on steel UC section beams to minimise depth and maintain headroom. The new gallery building provides galleries, circulation space and back-of-house functions. Timber and steel-frame structures with timber or light steel walling were all considered until the need to create varying volumes, clear spans, large openings and cantilevers with very limited slab depths and wall widths informed the decision to use in-situ concrete construction. This in turn contributed to the architectural finishes in the form of board-marked columns and ceilings sculpted to minimise the impact of lighting tracks. Concrete walls and floors provide lateral stability, but also distribute the building load to concrete piles bored to bedrock through loose rock-fill behind the original pier walls. Constrained as the site is by Victoria Street to landward and the harbour to seaward, with minimal space between, site access was a challenge which was eventually met with the help of local contractor Casey Construction. The concept of creating the site compound and access by temporarily infilling a section of harbour was realised using second-hand large-diameter steel tubes to build a new temporary harbour wall.

John Robson, SKM Anthony Hunt

Credits

Tender date
 20 December 2004
 Start on site date
 4 April 2005
 Contract duration
 75-week contract period, actual length 85 weeks (practical completion November 2006)
 Gross internal floor area
 1,023m²
 Form of contract
 SBCC Contractor Design Portion with quantities May 1999 addition (Jan 2002 revision)
 Total cost (based on tender sum)
 £2,814,500
 Client
 The Pier Arts Centre
 Project manager
 Pentarq Project Manager
 Architect
 Reiach and Hall
 Structural engineer
 SKM Anthony Hunt
 Quantity surveyor
 Pentarq Quantity Surveyor
 Planning supervisor
 Reiach and Hall Planning Supervisor
 Main contractor
 Casey Construction
 Access consultant
 JMU Access Partnership
 Lighting designer
 Foto-Ma



16. A domestic ambience prevails

Cost summary

	Cost per m ² (£)	Percentage of total
SUBSTRUCTURE	106.65	3.88
SUPERSTRUCTURE		
Upper floors	55.23	2.01
Roof	145.75	5.30
Staircases	18.67	0.68
External walls	440.27	14.0
Windows and external doors	142.62	5.18
Internal walls and partitions	84.65	3.08
Internal doors	79.47	2.89
GROUP ELEMENT TOTAL	966.66	35.14
INTERNAL FINISHES		
Wall finishes	108.21	3.93
Floor finishes	65.59	2.38
Ceiling finishes	37.93	1.38
GROUP ELEMENT TOTAL	211.73	7.69
FITTINGS AND FURNITURE	27.47	1.00
SERVICES		
Sanitary appliances	8.31	0.30
Disposal installations	39.78	1.44
Water installations	17.30	0.63
Space heating and air treatment	294.13	3.0
Electrical services	356.30	12.95
Lift installations	36.27	1.32
Protective installations	259.63	9.44
Communication installations	112.32	4.08
Builders' work in connection	4.30	0.15
GROUP ELEMENT TOTAL	1,128.34	41.00
EXTERNAL WORKS	102.05	3.71
PRELIMINARIES AND INSURANCE	208.31	7.58
TOTAL	2,751.21	100

Costs

SUBSTRUCTURE

Foundations/slabs	£106.65/m ²
Cast-in situ concrete slab and ground beams on concrete piles bored to bedrock through loose rock fill	

SUPERSTRUCTURE

Upper floors	£55.23/m ²
New build: primary reinforced cast-in situ concrete frame.	
Existing buildings: replacement/repairs to floors and miscellaneous steelwork	
Roof	£145.75/m ²
New build: VM zinc plus non-ventilated standing-seam zinc roof and wall cladding with protective layer patented coating to underside on rigid cellular glass insulation board to one side, bespoke double glazed thermally broken system on opposite side	
Existing buildings: all re-slatted and reinsulated	
Staircases	£18.67/m ²
Exposed cast-in situ concrete flights and landings with oak treads and risers, plus repair and rebuilding of existing stairs	
External walls	£440.27/m ²
New build: cast-in situ concrete structure, zinc cladding on one side, ribbed glazing on opposite	
Existing buildings: various downtakings, new openings and making good/renewing affected finishes	
Windows and external doors	£142.62/m ²
New build: curtain wall windows and doors	
Existing buildings: bronze shop-front screens and doors; replacement timber glazed windows with 4mm xenon gas-filled cavity and UV-resistant glass	
Internal walls and partitions	£84.65/m ²
Cast-in situ concrete structure, metal-stud partitions and wall-lining systems using Fermacell fibre-reinforced gypsum board for new build and skim-coated British Gypsum gypsum plasterboard for existing buildings; includes bulkheads, panelling, framing, subframes and feature joinery	
Internal doors	£79.47/m ²
Internal doors and ironmongery	

INTERNAL FINISHES

Wall finishes	£108.21/m ²
Skim-coated gypsum plasterboard and fibre-reinforced gypsum board as above; oak and Douglas fir linings to new entrance: oak boards treated for surface spread of fire with chemical impregnation (Dricon, Arch Timber), Douglas fir treated with white hardwax oil (Osmo)	
Floor finishes	£65.59/m ²
Jura limestone; quarry tiles; oak; carpets and linoleum	
Ceiling finishes	£37.93/m ²
As wall linings, including oak and Douglas fir to entrance	

FITTINGS AND FURNISHINGS

Furniture	£27.47/m ²
Various fixed furniture items by main contractor	

SERVICES

Sanitary appliances	£8.31/m ²
Disposal installations	£39.78/m ²
All drainage and rainwater goods, including replacement cast-iron rainwater goods	
Water installations	£17.30/m ²
Space heating/air treatment	£294.13/m ²
Close-control air conditioning; extract ventilation; underfloor heating and radiators	
Electrical services	£356.30/m ²
Electricity supply (including enhancement of existing remote utilities supply), low-voltage supply and distribution; main switchgear; specialist gallery and display lighting (fittings, wiring and lighting-control systems); emergency power supplies; earthing and bonding; structured cabling	
Lift installations	£36.27/m ²
Platform lift installation	
Protective installations	£259.63/m ²
Fire warning detection (aspirating system) and alarm; emergency lighting; close-circuit security TV; security detection and alarm; access control; lightning protection and earthing; smoke extract	
Communications installations	£112.32/m ²
Building-management system and associated controls; Telecommunications; fibre-optic link and barrier-free facilities, induction loop	
Builders' work in connection	£4.30/m ²

EXTERNAL WORKS

Landscaping, ancillary buildings	£102.05/m ²
New build: stone flag clad in-situ concrete pier and slipway.	
Existing building: lifting and relaying salvaged and reclaimed matching stone flags to existing (B-listed) pier surfaces, includes lighting and re-siting of Hepworth bronze curved-form artwork and various replacement PPC galvanised-zinc gates and stair handrails	

PRELIMINARIES AND INSURANCES

Preliminaries, overheads and profits	£208.31/m ²
--------------------------------------	------------------------

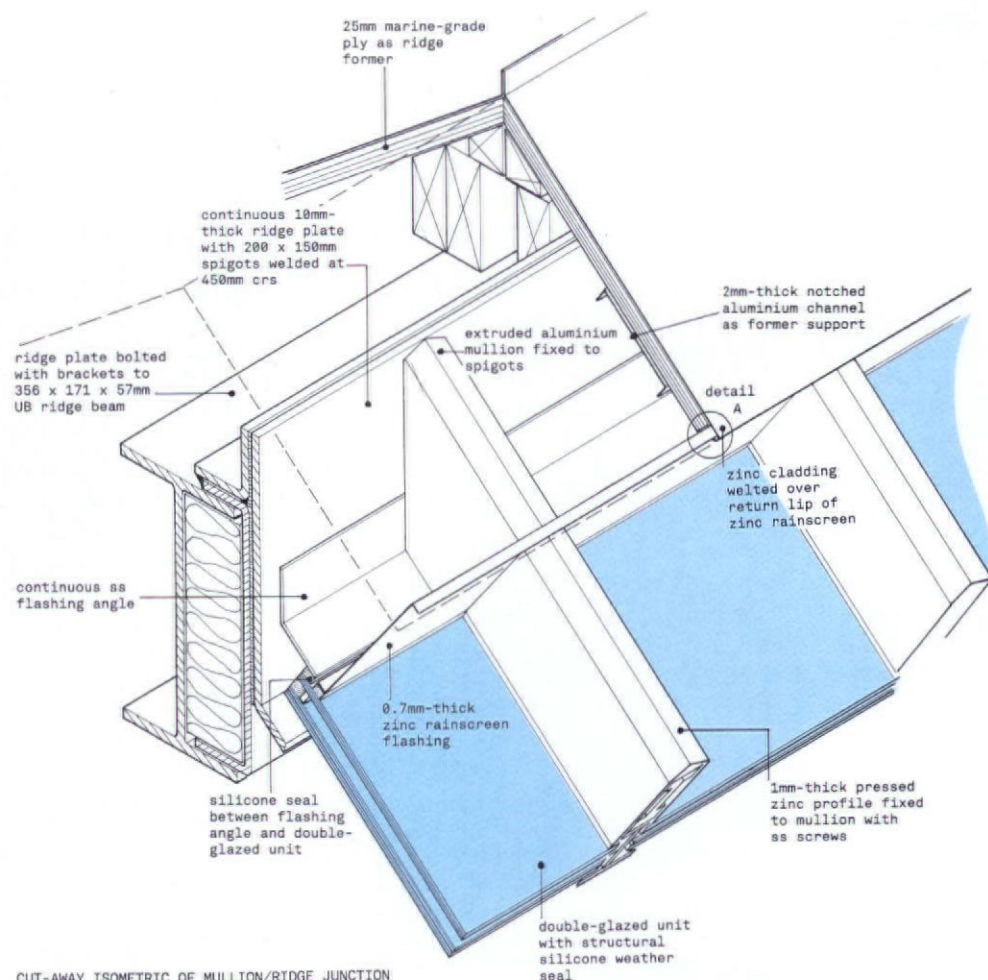
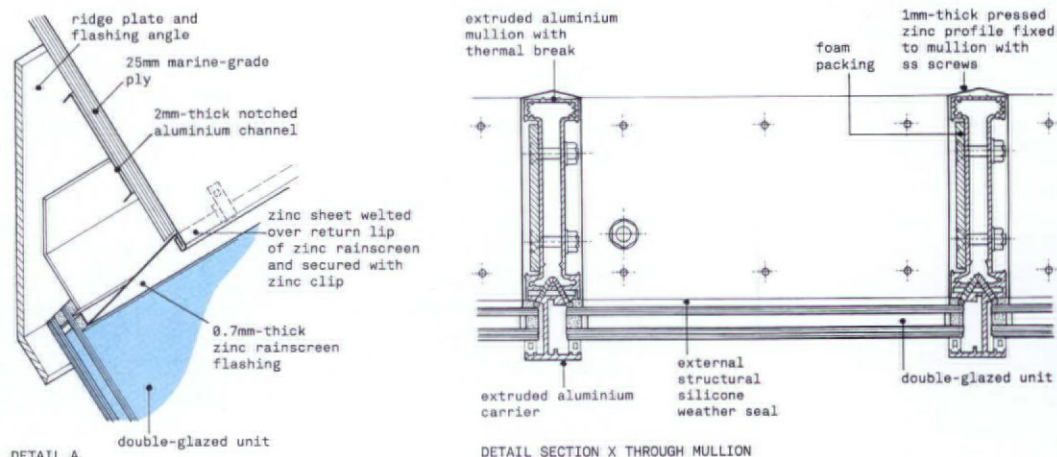
A ROOF WITH BANDS OF GLAZING SUPPORTED BY ZINC-CLAD MULLIONS

The new gallery is 26.5m long and 7.2m wide with a pitched roof, matching the proportions of the original building. The walls and roof are clad with prepatinated zinc. Viewed obliquely, the building envelope appears entirely sheeted with zinc but close inspection reveals that the north-east roof pitch and the wall below are glazed; the combination of narrow bands of glazing and projecting (215mm) zinc-clad mullions gives the appearance of solidity.

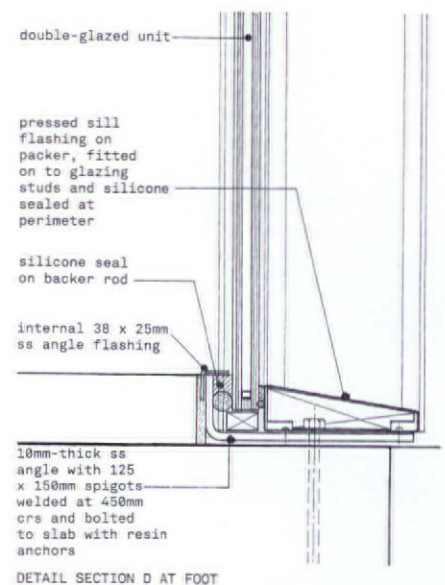
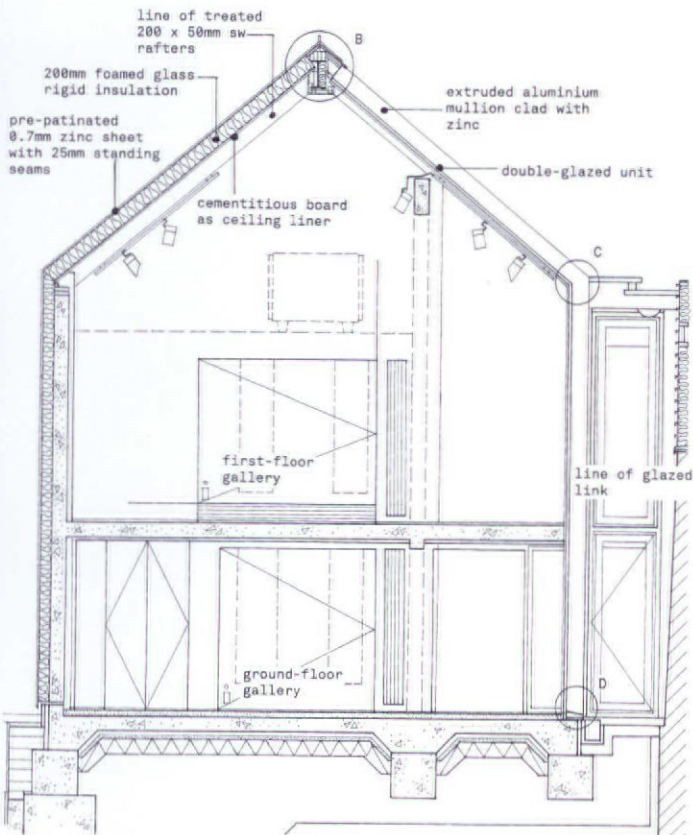
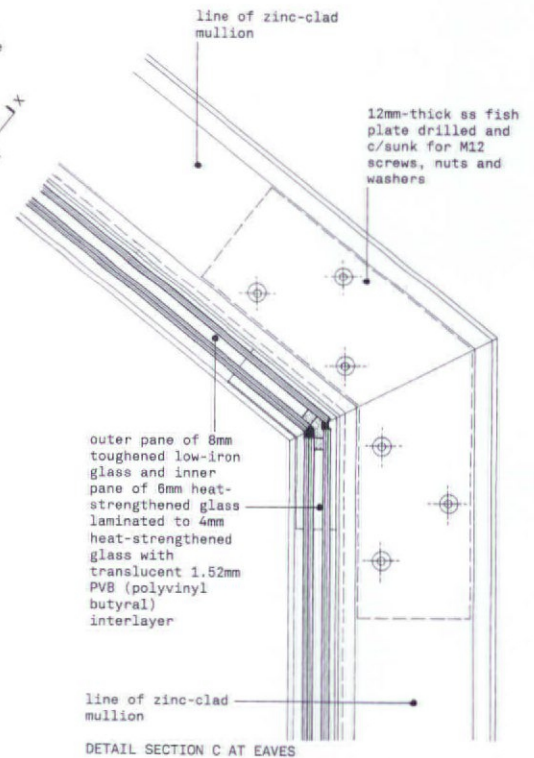
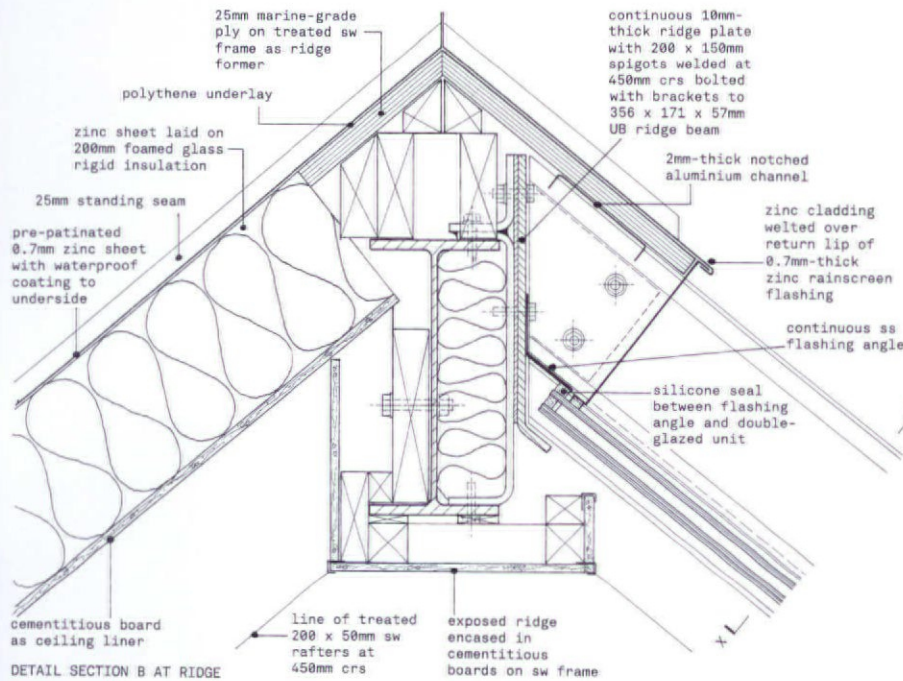
The gallery has a cast-in situ concrete frame with 200 x 50mm timber joists on the south-west roof pitch, clad with standing-seam zinc sheet. It has a protective coating to the underside so that it could be cleated directly to the foamed-glass insulation, avoiding the traditional ventilation gap and thus preventing wind uplift.

On the north-east side the zinc-clad aluminium mullions run at 450mm centres from ridge to ground-floor level and are tied to the cantilevered edge of the first-floor slab. They are fixed to spigots set in a continuous ridge plate bolted back to the 356 x 171 UB ridge beam. The zinc cladding to the ridge extends to overlap this connection and is then welted over the return lip of a zinc rainscreen which runs between the mullions. The inner pane of the glazing is laminated with PVB (polyvinyl butyral) which is clear at ground-floor level and translucent above.

By Susan Dawson



CUT-AWAY ISOMETRIC OF MULLION/RIDGE JUNCTION



A transparent approach to façades



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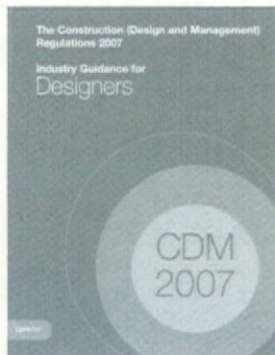
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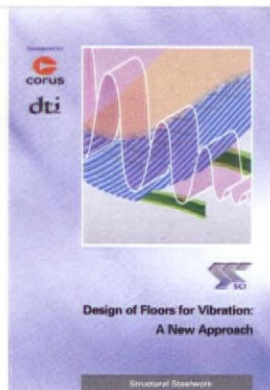
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1.



2.

1. Recent guidance from the HSE (News)
2. And from the SCI (News)

THIS WEEK ONLINE

- Ceilings, Partitions and Raised Floors is the new area added to our online materials and components section this week. We look at developments in each and, in another article, at how they can come together in retail spaces, from the prosaic to the 'shopping experience'.

- Jeremy Myerson discusses the bigger picture of the future workplace, setting out space-organisation concepts like the academy, lodge, agora and guild.

- There's also cost data on ceilings, floors and partitions, and on office fit-outs in particular. And, of course, there is a guide to free online resources. See all these at www.ajplus.co.uk/materials

TECHNICAL NEWS

- The Health and Safety Executive has recently released guidance on the new CDM regulations. A pdf of Industry Guidance for Designers may be downloaded at www.cskills.org/healthsafety/cdmregulations/guidance/designers.asp.

- The Steel Construction Institute has published P354, *Design of Floors for Vibration: A New Approach*, which includes new forms of construction since the 1989 edition, guidance on special floor types such as gyms and dance floors, and new design methodology which combines numerical models with test performance. www.steel-sci.org

TECHNICAL EVENTS

Concrete Extravaganza
5-6 July
 University of Edinburgh
www.concretecentre.com

Third Annual Sustainable Science Symposium
7-8 July
 Centre for Alternative Technology, Wales
 Part symposium and workshops, part exhibition, includes hands-on events for the whole family. £20 for two days.
www.cat.org.uk/courses

ICEM8: 8th International Conference of Eco-Materials
9-11 July
 Brunel University, West London
www.brunel.ac.uk

Achieving Low-Carbon Buildings: Essential to Tackling Climate Change
10-11 July
 RICS, Mayfair Conference Centre, London
www.the.waterfront.co.uk

Scratching the Surface: Bellingham Centre + Lloyd Park Centre
11 July, 8:30-9:30am
 Brian Vermeulen. Free, booking required.
www.newlondonarchitecture.org/talks

Modern Methods of Construction and Offsite Manufacture Workshop
11 July, 9:30am-12:15pm (repeated 1 Aug)
www.bre.co.uk/events

Natural Ventilation and the Building Regulations
11 July, 9:30am-3:50pm
 CIBSE, 222 Balham High Rd, London SW12
www.bre.co.uk/events

Towards the Olympics and Beyond
11 July, 6:30pm
 Urban Design Group, the Gallery 77 Cowcross St London EC1M
udsl@udg.org.uk

Sustainable Building & Services
12-13 July
 Cambridge
www.greenregister.org

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THE ARENA SHOWS THE POWERFUL BENEFITS OF 3D MODELLING

By Hattie Hartman

- 1. Construction view during installation of cladding
- 2. Aerial view

Wilkinson Eyre's vast Liverpool Arena and Conference Centre is the practice's first project designed primarily in 3D – an approach that led to myriad complexities.

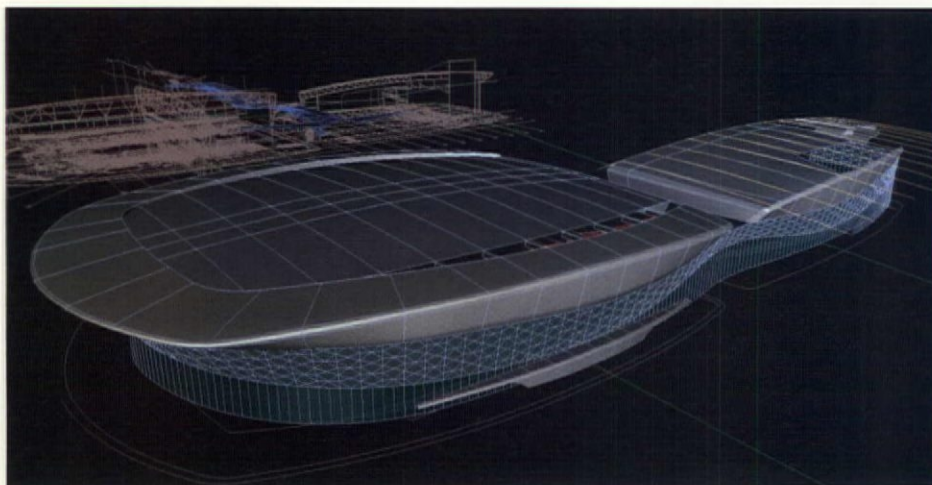
A stadium is not the first building type that comes to mind when one thinks of an inviting public realm and a vibrant pedestrian neighbourhood. Yet these were defining aspects of the brief put to Wilkinson Eyre for the £118 million Liverpool Arena and Conference Centre, due to open in January for the city's inauguration as European Capital of Culture 2008. Wilkinson Eyre's first response was to re-site the building within EDAW's 14ha Kings Waterfront masterplan, moving the stadium from its initial inland location to the water's edge. This makes ultimate urban design sense. The stadium's massing and height take their cue from the adjacent Albert Dock, and its dramatic form will undoubtedly make the arena the latest landmark on the Liverpool waterfront. The more challenging part of the brief was to create an attractive pedestrian approach from the nearby city centre and reclaim the site's waterfront as a place for human activity.

The arena will primarily act as a music venue, and the public piazza will host outdoor events. It is designed as a box within a box, to meet stringent planning regulations that require no increase in background noise levels. Kings Waterfront will be a mixed-use community that includes residential, office, retail and outdoor spaces, plus two hotels. Both daytime and night-time approaches to the venue have been carefully considered.

The Liverpool arena complex marks a significant innovation for Wilkinson Eyre because it is the practice's first project designed primarily in 3D – a design approach which ties into the scheme's urban-design objectives as well as facilitating detail design, tendering and construction. Director Oliver Tyler describes the approach as 'more akin to product design' – an iterative process of moulding and shaping the building to the site and the programme, 'squeezing the building to its tightest possible form to reduce its bulk and cost.' The building's flowing forms respond to pedestrian movement. Tyler compares the views of the building as one approaches to 'a glimpse of a liner parked at the end of a terrace between rectilinear industrial buildings'.

A key decisions early on was to bury the 10,000-seat horseshoe arena bowl 3m below grade to reduce the bulk of the building. The public will enter at mid-concourse level. All services are located either below grade or within the curvature of the roof – the steel trusses are 6m deep – to minimise dead pedestrian zones at plaza level and mechanical protrusions through the roof. The conference centre, with its 1,350-seat auditorium and 7,600m² of exhibition space mirrors the form of the arena, and the two are connected by an ETFE-covered gallery.

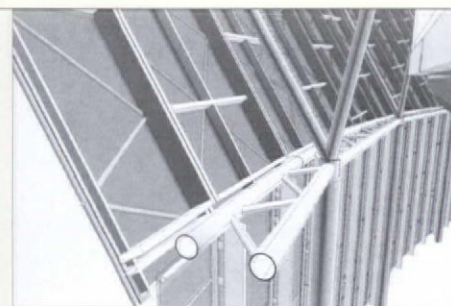
The cladding has been the subject of intense design scrutiny in order to achieve visual interest by both day and night, to break down the scale of the building and to control costs within the constraints of a limited budget. Horizontal bands of glazing with differing degrees of transparency – transparent at plaza level,



3.

3. Early envelope study

4. Early cladding study



4.

and translucent above, with sandwich panels at the top – reveal the drum-like forms of the arena and auditorium, which serve as orientating devices with exteriors painted in deep cobalt blue and silver. The 3D model meant that the surface area of the building could be established early on to explore and cost different cladding options.

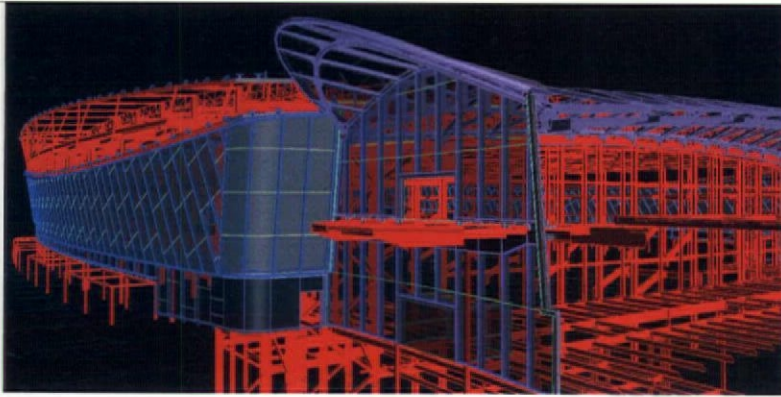
Acoustics were a driving factor in the specification of the exterior envelope, and led to the eventual selection of a Finnish cassette system by Ruukki for the roof. Acoustic isolation was ensured by a continuous 1m-deep air gap between the upper and lower roof skins. The translucent banding on the facade started as faceted Kalwall but was replaced by fritted glazing for acoustic reasons. The ratio of rainscreen cladding to translucent glazing was fine-tuned in several iterations in order to meet cost constraints. Double curvature in the original model has been resolved through the use of flat and folded metallic-grey sandwich panels, all 1,000m wide with varying lengths. The curve is accommodated through the joints.

The story of the different computer platforms used during the design, tendering and construction of the Liverpool arena highlights the powerful benefits of 3D modelling, but also points to the accompanying pitfalls which the current trend towards building information management is trying to eliminate – or at least reduce. Wilkinson Eyre associate Sam Wright explains that the project was only made possible with 3D modelling. The practice produced a 3D model in 3D Studio Max which was used by the

other consultants and some of the subcontractors in a range of software. There was a direct interface with Buro Happold's XSteel structural model and with WagnerBuro, the Austrian cladding supplier. This was facilitated by Wilkinson Eyre's Ivan Subanovic. It comes down to people skills in the end.

With complex buildings of this type it is becoming essential to communicate in 3D, and therefore the systems need to become more standardised. Differing levels of 3D capability across the project team impact the patterns of information flow, which in turn has implications of providing a clearly auditable route. This also has a ripple effect on the workload of the different members of the project team. Subanovic comments: 'The ball is really in the court of the software producers. They are all fighting for a corner of the construction market and there is no clear standard established. We have different expertise within our office than the contractors and subcontractors have. There's definitely a job out there for someone to market these products and train teams up.'

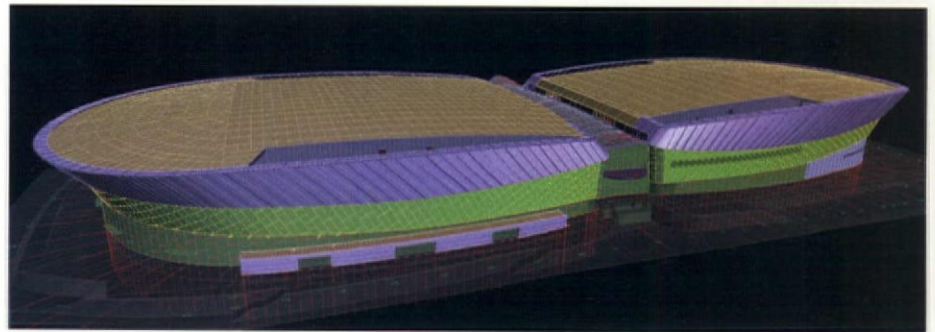
A comprehensive 3D model at tender stage is the promise of the not-too-distant future, but its potential will only really be unleashed when enough standardisation occurs across the industry, so that ready interface with contractor and subcontractors becomes the norm.



5.



6.



7.



8.



9.

5 & 6. Coordination studies
7. Final envelope
8 & 9. Cladding during construction



1.

THE STAND HAS TO COPE WITH THE ARDUOUS LOCAL CLIMATE

By Will Jones



2.

The new 3W's stand for Barbados' Kensington Oval cricket ground posed several challenges for architect/engineer Arup Associates – not least how to design for the unpredictable Caribbean weather.

During the 2007 Cricket World Cup final, a television commentator likened the curvaceous new main stand at Barbados' Kensington Oval to that of Future Systems' Media Centre at Lords. But in fact, the differences between the two buildings could not be more marked. While the latter is designed for the relatively temperate UK conditions, Arup Associates' new 3W's stand in Barbados has to withstand the much more arduous and unpredictable Caribbean climate.

A number of aspects affected the design of the 4,000-spectator stand at the home of West Indian cricket, including potential serious seismic activity; torrential downpours; high temperatures; intense humidity; strong trade winds; and extreme light levels and glare.

The 3W's stand combines a reinforced-concrete base section with a structural steel frame for its upper portions and cantilevered canopy. Designed as a moment frame, the main concrete structure has more uniform stability than a conventional building with cores and walls. In the Caribbean climate, a conventional building structure would have created stiff elements liable to fail in the instance of an earth tremor.

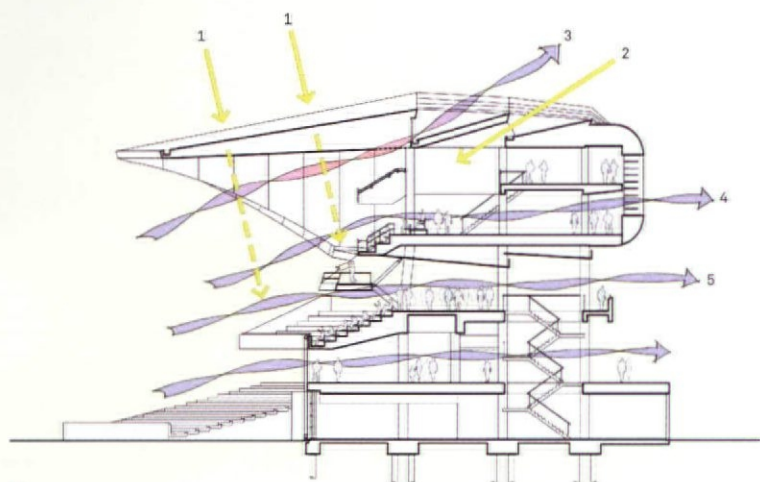
The structural steel frame – including the canopy, which cantilevers up to 20m at the outer edges of the stand and 16m at

its centre – was designed to accommodate a wind loading of three times that encountered in the UK. The rear elements of the steel frame were over-sized accordingly, to counteract the potential movement of the huge canopy.

The large cantilever of the canopy provides unobstructed viewing of the entire pitch throughout the stand. Project architect David Parsons says: 'Side supports or columns would have compromised sightlines to the nearside boundaries, but removing side protection altogether would have left spectators at the mercy of the weather – sun or rain.' Arup Associates designed a double-curved structural beam for the front of the canopy. Created by bisecting the front cone of the canopy with a cylinder, the design produces a cutaway to give the best views while also marrying the canopy structure with the rest of the steel frame.

The double-curved beam was manufactured at low cost from six pieces of hollow steel section. The steel frame was supplied by firms in both Barbados and the UK. All straight steel members came from the Caribbean. However, with no access to a steel bender locals could not complete the order, so the curved sections for the stand's side cheeks were manufactured in Coventry.

Arup was also instrumental in developing a low-cost cladding system. Using a detailed 3D wire-frame model of the stand, the exact size of each of the aluminium panels was plotted to allow the manufacturer to cut them as flat shapes. They were then shipped to Barbados and simply pressed over and fixed to the curved structure, with self-tapping surface fixings attached to



- 1 LIGHT DIFFUSED THROUGH ROOF
- 2 NORTHLIGHT TO BOXES
- 3 AIRFLOW OUT FROM UNDERSIDE OF ROOF
- 4 AIRFLOW THROUGH PRESIDENTIAL BOX
- 5 AIRFLOW THROUGH RESTAURANT LEVEL

1 & 2. Views of the main stand
3. Environmental diagram

Credits

Client

World Cup Barbados

Architect/engineer

Arup Associates

Quantity surveyor

Davis Langdon (London), Cooper Kauffman (Barbados), Tower Bucknall Austin (Barbados)

Architect (Barbados)

Gillespie & Steel, Tony Brooks Architects

Structural engineer (Barbados)

Consulting Engineers Partnership, Mahy

Chaderton & Ridley

M&E engineer (Barbados)

Leverage Consulting Engineers, ADeB

Consultants, Stantec Consulting International

Landscape architect (Barbados)

Talma Mill Studios

Main contractor (Barbados)

Larsen & Toubro

pre-rolled extruded aluminium carriers, which in turn run along aluminium Z purlins that are bolted to the steel frame.

The canopy roof is clad in profiled polycarbonate sheets. The roof completely covers all seats within the stand, protecting them from rain and sun. However, shading the spectators also causes potential problems. The contrast in light levels from the shaded rear of the stand to the bright sunlit pitch had the potential to make watching a match uncomfortable on the eyes. But Arup's use of a translucent roof material allows diffuse light to filter through. Parsons says: 'When light shines through, it produces a Japanese lantern effect; you can see the lines of the steel trusses through the tensile fabric inner skin as boxed shadow, and there's a lovely glow to the whole ceiling. It lessens the contrast in light levels between the inside of the stand and the outside, making it a far better environment in which to watch cricket.'

This vast canopy is a boon when, infrequently, the skies open to deluge the ground in torrential rain. A large-capacity gutter system is built into the canopy's front edge, while the side cheeks feature hidden gutters to stop run-off travelling down the curved form and soaking the spectators. Both gutters connect back through downpipes, hidden within the structure, to a central storage tank where water is filtered and reused to flush the WCs.

More common is the prospect of a hot sticky day at the cricket. To promote air movement within the stand, Arup Associates plotted the direction of the prevailing wind before positioning the stand to ensure that it blew into and through

the structure. 'The wind blows across the stand at an angle, providing optimum air movement,' says Parsons. 'Whereas the old stand had pockets of dead air, the new one is ventilated to actively promote the flow of air in all areas.'

Behind the main terrace of seating, the restaurant and bar have an open front and rear allowing air to blow straight through, naturally ventilating the space. This effect is repeated in the two-storey presidential box, where large 1m-wide louvres to the rear allow air to flow while protecting the box from wind-driven rain.

But the smaller corporate boxes don't have this luxury. Instead, glazed front facades have louvres at low level, which can be opened to encourage airflow into the box and out through high vents at the rear of the space. Even in the open terraced area of the stand the heat can become oppressive. So, to ensure maximum airflow, vents have been installed in the vertical north-facing elements of the saw-tooth design roof. Breezes blow across the rows of spectators, upwards into the stand and out through the vents via perforated sections in the tensile ceiling fabric.

The 3Ws stand is not a particularly high-tech structure, but it is exceptionally well designed. Structural and environmental design and architecture work together here to produce a building that was roundly praised at the opening of the recent World Cup.

Will Jones is a freelance architectural journalist.



'SMUTTY' SITES PROVE IT'S NOT ALL IN A NAME

I'm quite upset by what some of our readers get up to in the dark days before the next client rings up. But this column is tolerant beyond belief so I'll just present a topped and tailed version of what a reader, who I'm not going to embarrass by naming, sent in following months of web surfing.

There is a serious lesson here, of course. It's that you have to review your chosen website name from several locations, such as on the other side of the street and possibly up a lamp post. It is precisely what the people whose site is called www.whorepresents.com forgot to do. And the people owning sites called variously www.penisland.net, www.powergenitalia.com, www.therapistfinder.com and www.speedofart.com. Don't bother trying them out because they are really, really boring: respectively, a pen shop, an Italian power company, a guide to therapists and a London design firm which is surely taking the piss. I was tempted to offer a bottle of cheap champagne for an inventive architectural version, but with lovely extant practice names such as FAT, Make and Muf why bother?

sutherland.lyall@btinternet.com

GOOD MEDIATION

Is mediation a good thing? While evidence abounds about the enviable success rate enjoyed by mediation, it tends to be anecdotal, writes *Kim Franklin*.

Mediation falls within the category of Alternative Dispute Resolution (ADR) and as an alternative to full-blown litigation it may seem an attractive option. But it is nonetheless a formal procedure, with some essential prerequisites for success:

- desperation. All of the parties to the dispute must be desperate to settle. Mediation is a consensual process which will only work if everyone wants a negotiated settlement. If only some want to talk turkey, it won't work. One lot will do all the talking while the others sit and listen until they get fed up and walk out;
- information. The dispute needs to be sufficiently defined for the parties to know what they are arguing about. Wild claims bandied about in correspondence cannot be mediated. Sizeable claims set out in structured statements of case are not prime contenders without the evidence to back them up;
- the right time. The combination of these two factors usually means that litigation needs to be some way down the line before the protagonists reach the right state of intelligence and

desperation for mediation to bear fruit; and

- the right mediator. Views vary as to what makes a good mediator. There is some force in the argument that, if the time is right, little intervention is required to bring the parties to reason. Some mediators simply leave the parties to slog it out and step in only to read over the settlement agreement.

Nevertheless, it is generally believed that an effective mediator should have a good grasp of the subject matter, inspire confidence in the parties, be able to put the wind up those who believe they are on to a sure-fire winner and otherwise 'manage the expectations' of those involved. Contrary to popular perception, this tends to point to an experienced specialist lawyer.

Mediation is only a real alternative to litigation if it achieves its objective. Otherwise it is no more than a diverting, but expensive, detour from the road to judgment. This point is recognised in a recent report by King's College London on the use of mediation in construction disputes. A survey of all settled or concluded cases in the construction courts shows that 32 per cent of cases settle as a result of mediation. In the main these cases concerned defects, design issues and professional negligence.

Of the mediations undertaken, 81 per cent were

at the parties' instigation, with the remainder ordered by the court. Half of the settlements reached were achieved either during the exchange of statements of case (33 per cent) or shortly before trial (24 per cent). The remainder occurred anywhere between issuing the claim and judgment. The estimated costs saved as a result of mediation varied from £25,000 to £300,000. While 38 per cent of the mediators were construction professionals, a larger number still, 48 per cent, were construction barristers. Like I said, experienced specialist lawyers.

Kim Franklin is a barrister and chartered arbitrator at Crown Office Chambers in London. Visit www.crownofficechambers.com

BOOK

By Jay Merrick

Hollow Land: Israel's
Architecture of Occupation
By Eyal Weizman. Verso,
2007. £19.99



The Israeli separation wall in 2005

Architecture kills. Battle plans? How quaint. With new inverse urban geometry, you can get fractal on your opponent's ass. And as you do so, you can recall the words of Shimon Naveh, ex-director of Israel's Operational Theory Research Institute: 'The Israeli Defence Force started understanding fighting as a spatial problem. Some of the top brass are not afraid to talk about Deleuze or the deconstructivist Tschumi.'

Eyal Weizman's *Hollow Land* is an important coda to Edward Said's explication of Israel's cartographic-cum-topographic control of Palestinian enclaves (*London Review of Books*, 14.12.00). He surpasses Said's essentially two-dimensional vision with a 3D Sensurround revelation of a land in which architecture, infrastructure and town

planning have become strategic military apparatus as important as tanks and special troops.

It seems luridly ironic that, in the 1920s, town-planner Patrick Geddes supplied urban expansion schemes for Tel Aviv and Haifa. He spoke of 'neotechnic order, characterised by electricity, hygiene, and art, by efficient and beautiful town planning and associated rural development'. In 1978, Thomas Leitersdorf, trained at the AA, was appointed to create a new city east of Jerusalem, high on the slopes of the Judean desert. He described this covert bastion as a garden city.

Weizman's terminology might be found in philosophy, third-year musings at the Bartlett, or in Cecil Balmond's disquisitions: formless rival entities; the dialectics of structuring and structure; fractal

manoeuvre; velocity versus rhythms. There are shadows of these phrases in Gerry Judah's recent artworks, derived from the imagery of shattered West Bank towns, and they haunt the dismantled 'anarchitecture' houses of Gordon Matta-Clark that so intrigued Israeli military thinkers in the 1960s and '70s.

By 2002 General Aviv Kochavi was referring to the attack on Nablus as 'the reorganisation of urban syntax by means of a series of micro-tactical actions'. It was not the given order of space that governed patterns of aggressive movement, notes Weizman, but movement itself that produced space around it. He quotes the urban theorist, Simon Marvin, who claims the military-architectural 'shadow-world' is generating more intense and better-funded urban research

programmes than all universities put together. Does Terry Farrell know this?

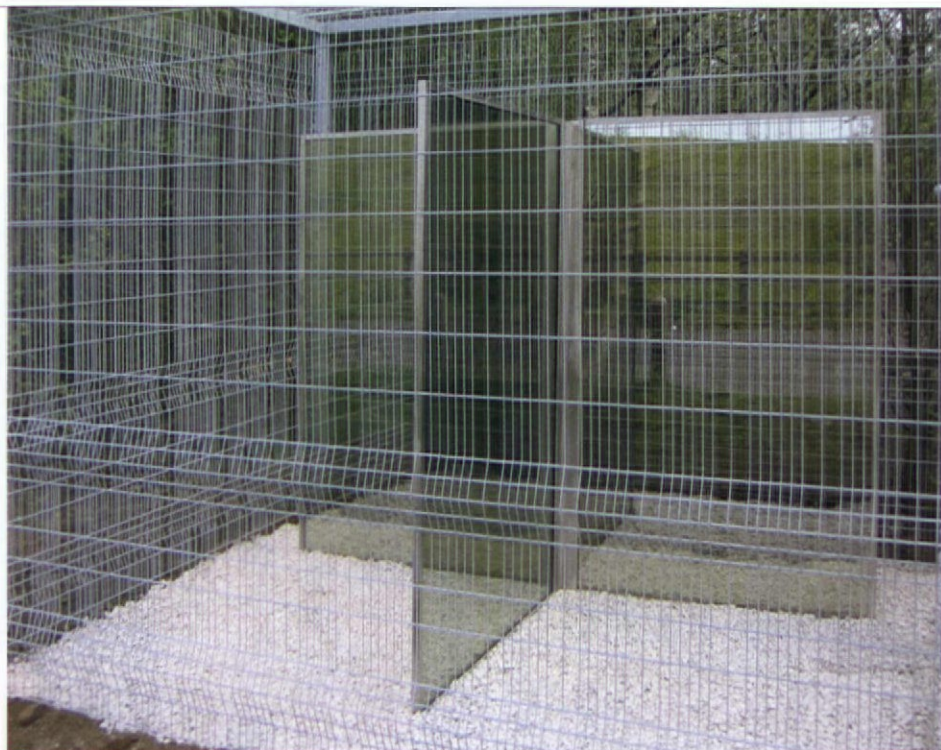
Weizman's *Hollow Land* stops short of polemical stridency. Yet we read of 'barrier archipelagos' and hallucinate Dubai; we encounter Ariel Sharon's description of the wall in the West Bank as being a 'seam-line obstacle' and see a crazed needle and thread. This is an engrossing, debatable and suitably disorientating treatise. Two criticisms cannot, however, be shirked: the index contains fewer than 250 entries, which is absurd; absurder still is Weizman's use of an infuriatingly specious quote about walls, supposedly by Georges Perec. I'm thinking Homer Simpson, myself.

Jay Merrick is architecture correspondent for the *Independent*

INSTALLATION

By Andrew Mead

Alan Johnston:
Northern Mirror
At Outwood Country Park,
Radcliffe, Lancashire,
indefinitely



1.

Instead of the usual stroll in a park or some woods that most outdoor collections of sculpture offer, the Irwell Sculpture Trail is a 50km-long footpath that threads its way from the River Irwell's source in the Pennines to Salford Quays. South of Radcliffe, near Bury, it picks up the course of an old railway line near the former Outwood Colliery, whose workings are now largely camouflaged, and a few hundred metres from here is a new permanent addition to the trail: a collaboration between artist Alan Johnston and architect Reiach and Hall.

Entitled *Northern Mirror*, the work is a T-shaped configuration of 2,000 x 1,200 x 17.5mm laminated toughened-glass panels, framed in stainless steel and enclosed in a gridded metal cage. Slightly recessed at the edge of some

quite thick woodland, its position signalled by a nearby silver birch, the sculpture plays with degrees of transparency, translucency and reflection – it's part mirror, part window.

Effects vary considerably with the intensity of light and the viewer's position. From an oblique angle, for instance, the sculpture seems to generate a fourth arm and become a Greek cross, with the reflected boundary of the cage appearing more 'real' and vivid than the actual one.

Some form of protective container was clearly a security necessity, and Johnston wanted it to be 'anonymous' not precious; the metal is painted an unassertive pale grey, rhyming with the floor of grey stone chippings. But the intervals in the cage's mesh fluctuate, adding to the complexity of

the sculpture as reality and reflections are overlain.

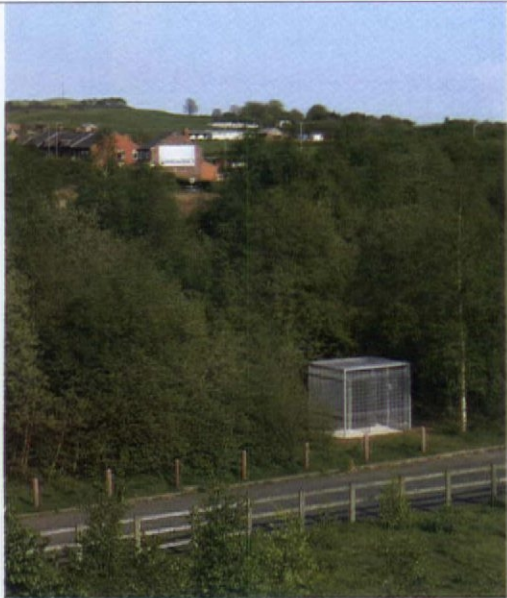
Johnston has a history of involvement with architecture and architects: his delicate wall drawings on Hans Schmidt's 1920s Colnaghi House near Basel; his collaborations with Diener and Diener and Shinichi Ogawa (AJ 20.07.00).

Whatever his own agenda in those works and this current one, from an AJ perspective it's hard to look at *Northern Mirror* without thinking of the close attention architects have given to optical effects during the last decade or so, particularly in their treatment of facades; their use of glass, polycarbonate or other materials in ways that actively welcome vagaries of light and weather. Herzog & de Meuron and Gigon Guyer are two of many names that come to mind; practices that relish

ambiguity. But then, as Tim Martin suggests in his review of *The Modern Sculpture Reader* (see page 48), architecture and sculpture have had much in common of late.

The setting of *Northern Mirror* is a definite factor in its success. Though the surrounding landscape still bears traces of its industrial past, it is relatively wild now, with an attractive air of seclusion. In the vicinity are some monumental granite works by Ulrich Ruckriem, and an electricity substation which reminds Johnston of Mies' brick villas at Krefeld – along with foxgloves and orchids. There's a strong sense of place here, which *Northern Mirror* has already reinforced.

Visit www.northernmirror.com
For Reiach and Hall's Pier Arts
Centre see pages 21-33



2.

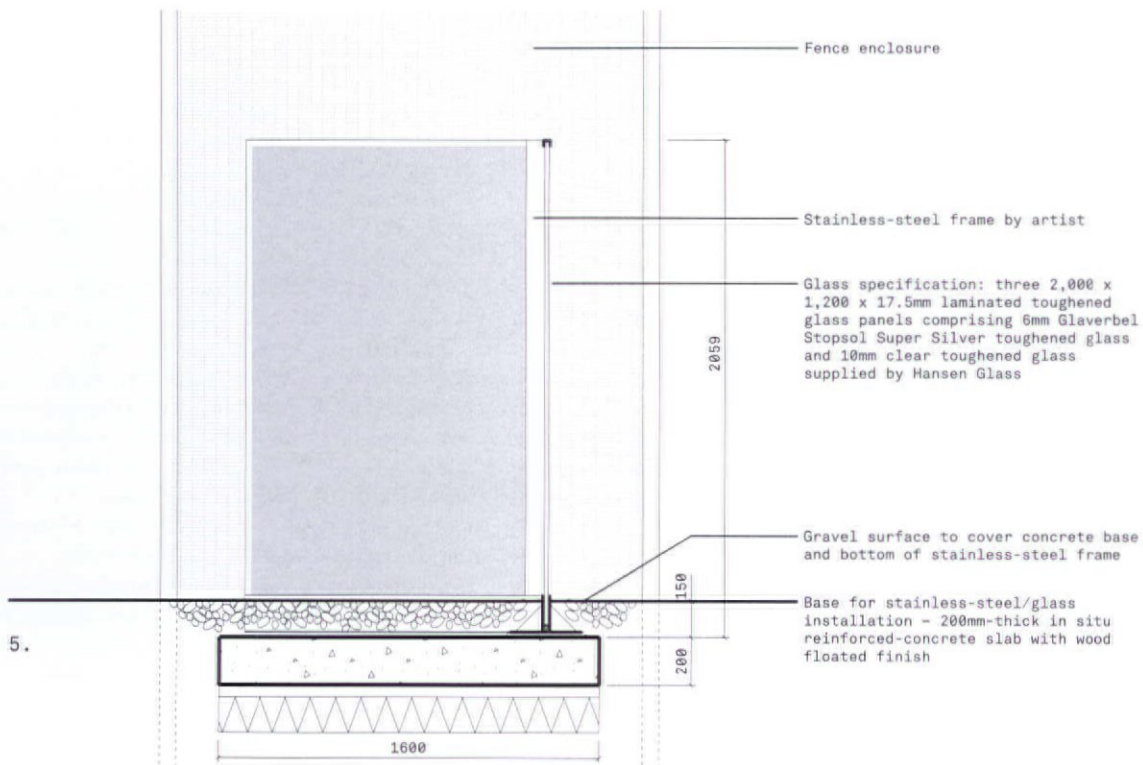


3.



4.

1. Close-up of the sculpture in its metal cage
2. Woods populate the former colliery site
3. One of Ulrich Ruckriem's granite works
4. The electricity substation
5. Section before cage detail was finalised

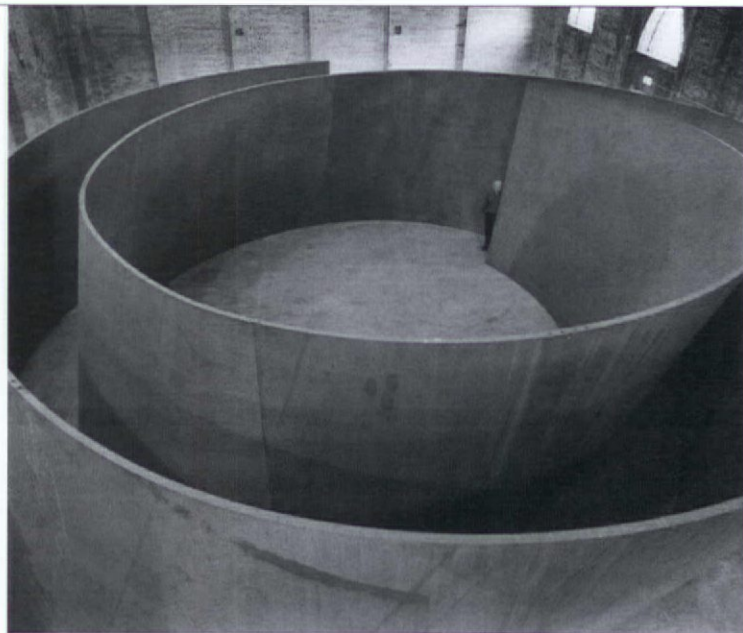


BOOK

By Tim Martin

The Modern Sculpture Reader

Edited by Jon Wood et al.
HMI Publications, 2007.
542pp. £20.00



A sculpture by Richard Serra, who features in the book

In an editorial earlier this year (AJ 25.01.07), Isabel Allen argued that 'visual intelligence, good judgement and creative critique' were the key components of architectural design, not a knee-jerk recourse to 'functionalism'. It was a reminder not only that functionalist reality may just be an escape for those who aren't strong enough to sustain their architectural dreams, but that sculpture and architecture's own archive remain the primary fantasy support for architecture.

It is in this sense that exhibitions of sculpture can prompt the architectural *imaginaire*, and when a book on sculpture is published that features nothing but words, the promise is that it will stir fruitful architectural narratives. For those seeking to enjoy architecture's many relations

to sculpture, *The Modern Sculpture Reader* consists of 70 highly stimulating short essays on sculpture from the last 100 years by artists, critics, poets and art historians, many with short introductions.

A few of the essays deserve special mention, particularly ones since the 1960s. Rosalind Krauss' 'Sculpture in the Expanded Field' sets out one of the most powerful statements of sculpture's formalist logic, locating it in a matrix between 'architecture and landscape' and 'not-architecture and not-landscape', and it has proved powerful for architecture too in suggesting and making sense of many 'shapist' works. Those interested in Gehry will enjoy the essay by Oldenberg; in phenomenology and deconstruction, the interview between Richard Serra and

Peter Eisenman; in the materialisation of architectural space, the interview with Rachel Whiteread.

Although an anthology, what this book provides is all the pieces of a story in which sculptors have increasingly produced 'architectural objects' and installations, and architects have reclaimed and recruited almost every new object type and spatial relation that avant-garde sculptors have explored.

Minimising, displacing, scattering, biomorphing, mirroring, appropriating and dematerialising (to name but a few) have become some of the most successful design strategies in architecture.

By entertaining these fantasy relations to sculpture, architects curiously end up the more aware of their own drives in relation, say, to the question

of functionalism and its possible alternatives.

Here a caveat is due. It's easy to state that architects who sacrifice their dreams to functionalist reality risk undermining the valuable contribution that architecture makes to (what might be called) the 'libidinal' economy of the built environment. What's harder is to say why architecture's imaginary relations with sculpture prompt *all* sorts of dreams – nightmares included – and to distinguish one from the other.

After all, there's relatively little in this book of the benevolence that distinguishes architecture from sculpture. And in this question of good will, much difference may lie.

Tim Martin teaches at Leicester De Montfort University

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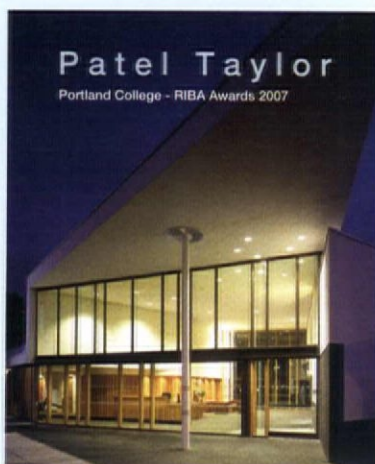
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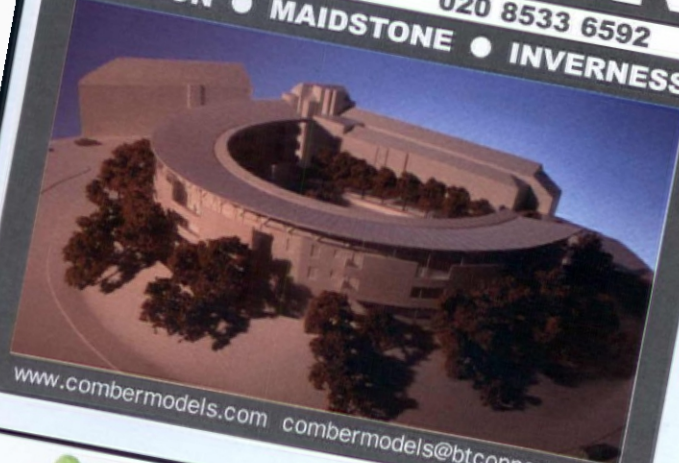
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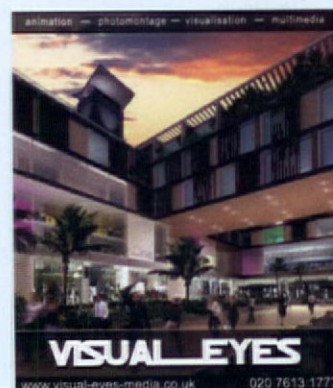
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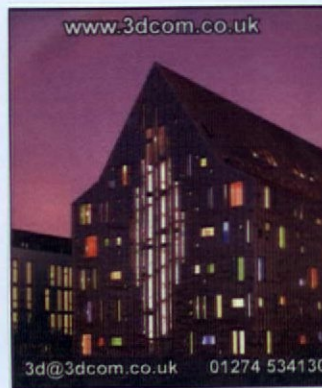
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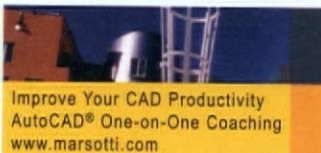
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Champion plans

At France's home
base with Thomas
Castaing

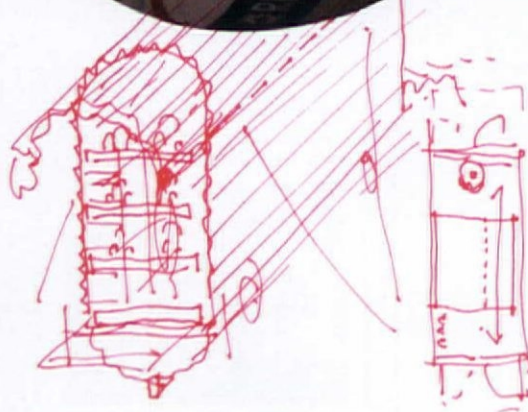
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the guardian 02.02.07 guardian.co.uk/sport/sixnations2007

sport

Six Nations 2007



Sketch for a mobile eco second home for a family of seven. Drawn by Amir Sanei of Sanei Hopkins while waiting in the corridor of London University College Hospital's maternity wing for his baby to be born

Respond to these panels at www.ajplus.co.uk/ajdirect

Readers may also obtain information about these products by filling in the enquiry numbers on an AJ enquiry card.

Advertisers wishing to promote their products on these pages should contact Lucy Herdsman on 020 7505 6873.

ARP



AJ ENQUIRY 201

ARP provides rainwater and eaves products with an extensive range of components to enable easy assembly and installation. The product range includes aluminium standard, bespoke to suit numerous profiles, cast aluminium and cast iron. For more information call 0116 289 4400.

STOAKES SYSTEMS



AJ ENQUIRY 202

Kalwall's diffused shadow-free natural daylight changes student behaviour, improves learning and playing and enhances personal wellbeing at Crestwood College in Hampshire, by Harding, Neil and Watson. New Kalwall project publications for Schools, Sports Halls and Pools will prove it!

BRETT MARTIN



AJ ENQUIRY 203

A series of Marvault HF rooflights, manufactured and supplied by Brett Martin, has been installed on the roof of Archibald Hope House, a 19th-century mill building that has been extensively renovated and now forms part of Eskmills, a new business park in Musselburgh near Edinburgh.

STATIC SYSTEMS



AJ ENQUIRY 204

Static Systems has started work on its first PFI contract to incorporate Modus bedhead services with newly designed integrated lighting. Along with the company's Codemlon nurse-call system, the equipment will be installed at the Freeman Hospital and Royal Victoria Infirmary in Newcastle.

ARDEX



AJ ENQUIRY 205

Regarded within the flooring industry as the 'solution providers', Ardex was delighted to team up with flooring contractor Amicitia of South Devon to provide the perfect resin flooring system for Plymouth Fisheries, the most modern fishing facility in the South West.

ILEVEL TRUSTJOIST



AJ ENQUIRY 206

A residential development in Cheshire has become one of the first of a growing number to utilise the recently launched iLevel Trus Joist 220 TJ joist series, which offers all the benefits of an engineered joist system without having to change building plans designed for solid sawn timber.

BUDERUS



AJ ENQUIRY 207

The highly efficient Buderus GB162 boiler, when used as a four-boiler cascade system, can provide an incredible 400kW of heat output in just 1m² of floor area, enough to meet the heating needs for large- and medium-sized office blocks or factories. The system is particularly installation-friendly.

TROAX



AJ ENQUIRY 208

An example of Troax's new Toledo partitioning system, which has been used for a series of new cleanrooms for global healthcare company Abbot Diabetes Care at its manufacturing facility in Witney, Oxfordshire. The project demanded a high standard of construction.

98% of people take their tea with milk,
but only 30% take sugar.

UK Tea Council, www.tea.co.uk

NBS

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*Roland Finch, NBS work section A36
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