

AJ

21.06.07
LUTYENS/
CASTLE DROGO

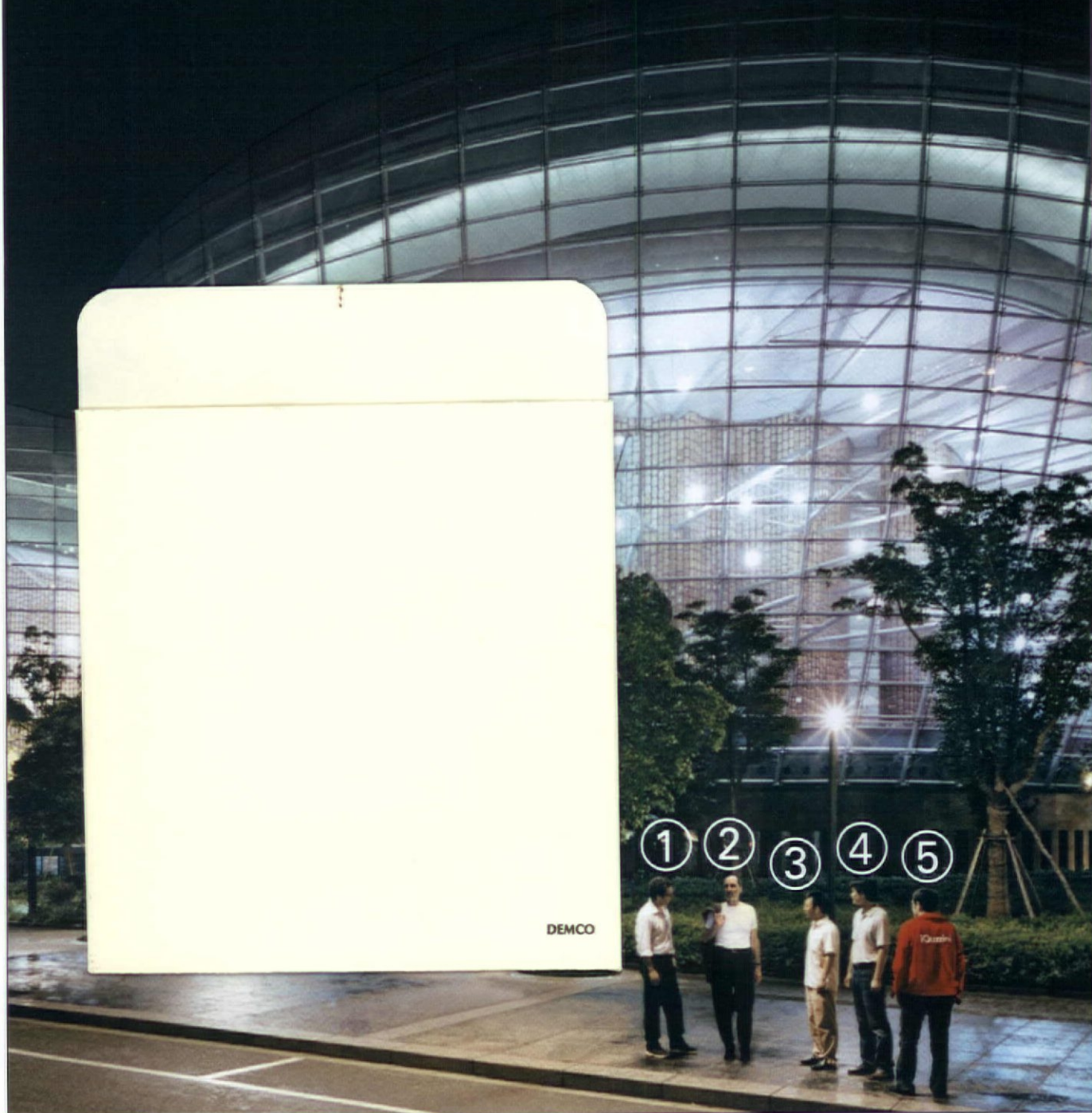


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THE ARCHITECTS' JOURNAL
151 Rosebery Avenue,
London EC1R 4GB

Editorial enquiries
Anna Robertson/Kaye Alexander
020 7505 6700
Editorial fax
020 7505 6701
Email
firstname.surname@emap.com

Acting editor
Ruth Slavid (020 7505 6703)
News editor
Max Thompson (020 7505 6715)
Senior reporter/
Northern correspondent
Richard Waite (07918 650875)
Reporter
Richard Vaughan (020 7505 6770)
Working details editor
Susan Dawson (015242 21692)
Reviews editor
Andrew Mead (020 7505 6717)
Technical editor
Hattie Hartman (020 7505 6711)
Acting art editor
Eriko Shimazaki (020 7505 6704)
Chief sub-editor
Angus Montgomery (020 7505 6708)
Sub-editor
Isla McMillan (020 7505 6707)
Editorial assistant
James Pallister (020 7505 6713)
Editor, AJ Specification
Will Hunter (020 7505 6716)
Managing editor online
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Marketing manager
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Commercial manager
Malcolm Perryman (020 7505 6698)
Business development manager
Toby Redington (020 7505 6634)
Recruitment
Ellen Stanier (020 7728 3827)

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NOT FOR THE FIRST TIME HAS THE SERPENTINE HAD PAVILION PROBLEMS

By Ruth Slavid

Construction lawyers would starve to death if there were more clients like Julius Drewe, the man who commissioned Castle Drogo from Lutyens. As our building study reveals (see pages 25-37), the roof, in the grand tradition of adventurous architecture, leaked from day one. But, subverting all expectations, the clients not only fought the problem valiantly – if ineffectively – but also ‘kept the matter from their architect so as not to hurt his pride’.

Nor is this the only reversal of the accepted order. Also at Castle Drogo, it was the client that pushed for an ambitious, grandiose building, while the architect tried to dig in his heels and go for a more modest and domestic solution. Maybe there is something in the air. This building study is published in the week that Peter Cook, for so long the consummate outsider for his ludic achievements with Archigram, crowned several establishment awards with the receipt of a knighthood. Surely there will be accusations of

selling out? But Cook has trodden such a careful path as an insider/outsider that his most fervent admirers are celebrating, not deriding, his achievement.

And what about the Serpentine? Not for the first time it has had programme problems with its summer pavilions. This year's first choice, Frei Otto, had to withdraw when he felt unready to meet his deadlines. Then it transpired that the replacement, a collaboration between Snøhetta and artist Olafur Eliasson, would not be ready for the all-important glitzy summer party. So who did the Serpentine call in to help in this emergency? Some steady, reliable old ally? No – none other than Zaha Hadid, who has magically made time from her packed schedule to rustle up a couple of canopies.

They do say that if you want a job done you should ask a busy person. But it seems that a gloriously topsy-turvy summer season may be starting early.



CONTRIBUTORS



Christine Sullivan, who photographs Castle Drogo for the Building Study on pages 25-37, is an artist based in London working in photography and video

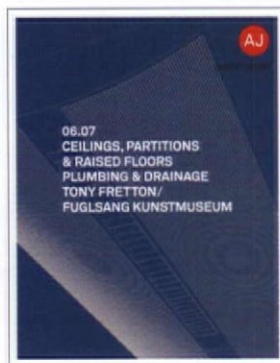


Isabel Allen, who writes the Building Study, is former editor of The Architects' Journal and is now design director for HAB Housing



Murray Fraser, who reviews a book on Gerrit Rietveld's houses on pages 46-47, is a professor at the University of Westminster's department of architecture

CONTENTS



AJ SPECIFICATION



P.25 LUTYENS/ CASTLE DROGO



P.16 LANDMARK CAVES

NEWS

7
Weekly digest/online news

9
Last chance for Rudolph school

10 – 11
Sheffield Festival Centre contest

16
Architects go underground

18
Theis and Khan revamp church

AGENDA

14 – 15
Rogers Stirk Harbour + Partners'
new metro station in Naples

BUILDING STUDY

25 – 37
Inskip + Jenkins' refurbishment
of *Edwin Lutyens'* Castle Drogo

TECHNICAL & PRACTICE

39
Update

40 – 42
Our latest NBS Shortcut looks
at specifying acoustic loops for
hearing-impaired building users

43
Planning for a Sustainable
Future

44
Legal/Webwatch



P.58 AB ROGERS



P.46 GERRIT RIETVELD

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P.10 SHEFFIELD COMPETITION

REVIEWS

45
Paris and the Belle Epoque

46
Gerrit Rietveld's houses

47
Critic's choice

REGULARS

20
Astragal and Hellman

22
Letters

58
Sketchbook: *Ab Rogers*

JOBS & CLASSIFIED

49
Top five jobs:

- British Nuclear Group – architects
- Newham's Design Panel – built environment professionals
- University of Cambridge – design fellows in architecture
- University of Hertfordshire – senior lecturer/programme leader
- Nottingham Trent University – lecturer/senior lecturer

55
Classified advertising

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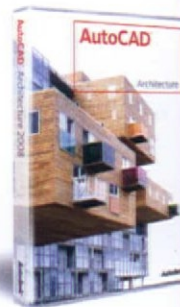
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FRIDAY 15 JUNE

- Search begins to find new owner for troubled Hodder pool
- 'For sale' French Communist Party HQ in Paris to host RIBA conference
- Newham design review panel seeks architects
- Peter Bishop calls for open dialogue on public spaces spending

THURSDAY 14 JUNE

- Plans to save Rudolph's Cerrito House in ruins
- Luder's Trinity Square car park faces demolition (right)
- Waugh Thistleton challenges dRMM for 'tallest timber tower' title
- Future Systems is surprise winner at AJ/Bovis Awards

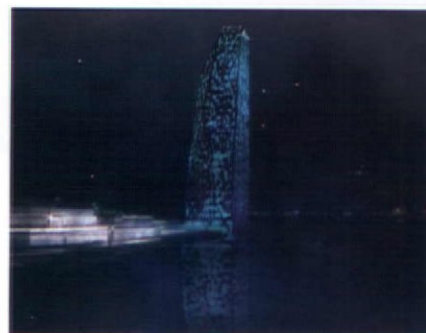
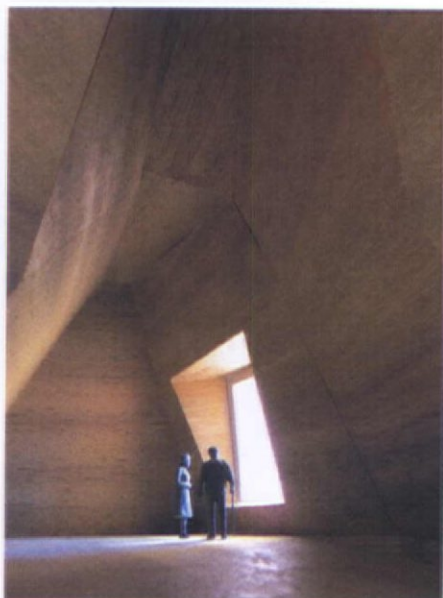


MONDAY 18 JUNE

- First glimpse of Chipperfield's replacement for ditched Turner Contemporary gallery (left)
- 'Arise, Sir Peter' – Cook receives knighthood while Adjaye bags OBE
- Design team sought for Grade-I listed Forty Hall revamp
- Rolfe Judd sees leap in profits

TUESDAY 19 JUNE

- Foster forced to rethink Edinburgh ForthQuarter masterplan...
- ...While police raise concerns over Allan Murray's Caltongate project
- Former Caruso St John protégé, Adam Khan, wins King's Cross competition (left)
- BDP to produce new vision for Gatwick Diamond



WEDNESDAY 20 JUNE

- RMJM merges with US giant Hillier
- Jean Nouvel pips Chipperfield to Spanish port victory (above)
- Prime Minister's Better Public Buildings shortlist unveiled
- World Heritage bid for Darwin's home at Downe dropped



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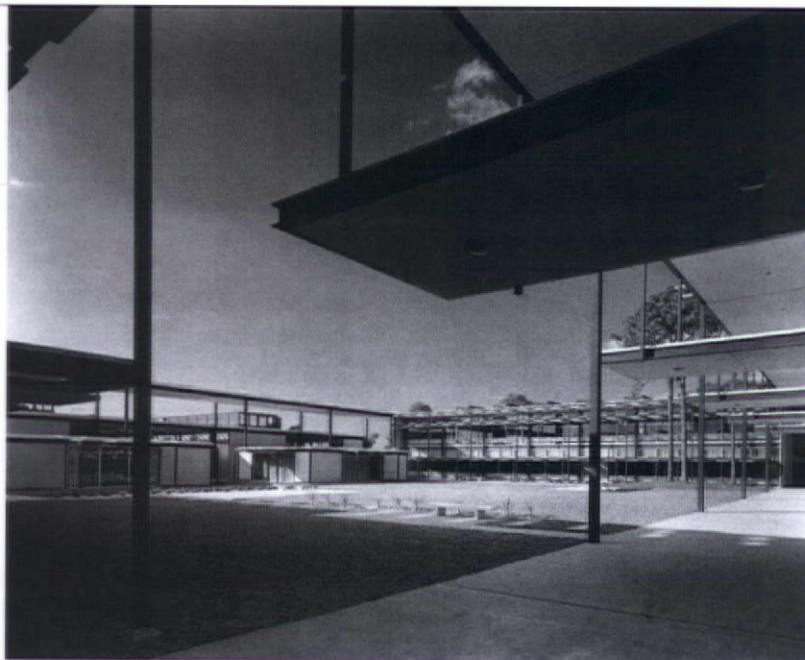
The Royal Parks

require a design team to design a permanent memorial in London's Hyde Park to the innocent victims of the terrorist bombings on 7th July 2005.

Expressions of interest should be directed to sblyth@royalparks.gsi.gov.uk or Tel. 020 7298 2124 by 29th June 2007 and an information pack will be issued which will include a pre qualification questionnaire.

Deadline for submissions is 1700 hours on 6th July 2007.
Previous relevant experience of exemplar commissions essential.

Applications particularly welcome from landscape architects, architects and artists capable of putting together a professional team.



John McAslan said that a design contest is Riverview's only hope

'LAST CHANCE' TO SAVE RIVERVIEW

By Max Thompson

A new international design competition is the 'one chance' left to save the Riverview School in Sarasota, Florida – one of Paul Rudolph's most high-profile buildings – it has been claimed.

John McAslan has told the AJ that only a global contest will spare the 1958 school – a leading example of the architect's 'Sarasota Modern' period – from the wrecking ball.

The building's owner, Sarasota County School Board (SCSB), has warned that funds are now in place to raze it to the ground to make way for a Perkins + Will-designed school and 1,000-space car park.

Although The Twentieth Century Society and architectural heavyweights including Richard Rogers and Norman Foster – both of whom were tutored by

Rudolph – have been vocal in their opposition to the proposed demolition, McAslan said he had now implemented firm steps to ensure the design competition took place.

Currently being drawn up by the school board and Californian competition organiser Bill Liskamm, the design competition will be launched in July. 'Now is the time,' warned McAslan. 'This is the one chance to make something happen.'

'Without blowing our own trumpet, we have made this happen. When I went to see [SCSB] it was all over the place,' he added.

However, while the competition details are yet to be confirmed and despite describing SCSB's plans as 'ludicrous' and 'madness', McAslan applauded the SCSB's

move to set up a foundation to save the building.

'There is no point drawing swords and fighting the board. It has said it wants to save the building if there is a way to do so without incurring cost.'

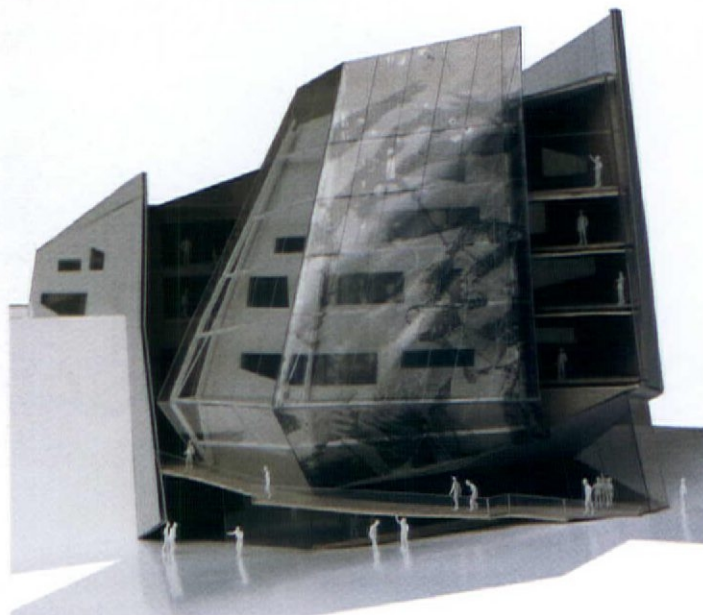
McAslan said he hoped the competition would be won by a developer-led team and added that he believed the winning scheme should be incorporated within the existing Rudolph school.

'To me that is what must happen. It is not that difficult. The key part of the school is the courtyard and the classic view from under the arcade. It has been expanded greatly since Rudolph's original and should be consolidated to the key core.'

FESTIVAL FINALISTS REVEALED

The RIBA's competitions office has unveiled these images of the shortlisted schemes in the Sheffield Festival Centre contest. Designs by ex-Chipperfield duo Carmody Groarke and locals Houghton Budd Architects are among the six finalists vying to land the £3 million project to expand Sheffield's Showroom cinema and Workstation business centre. The other four firms still in the running are Prue Chiles Architects, HLM Architects, Jason King, and Slovenian practice Sadar Vuga Arhitekti with The Designers Republic. Architects were asked to come up with a flexible, 'bold and high-quality' building for the site opposite the city's railway station, which would be 'much more' than just a new entrance to the existing centre. All six schemes are on public exhibition at The Showroom until next Friday (29 June).

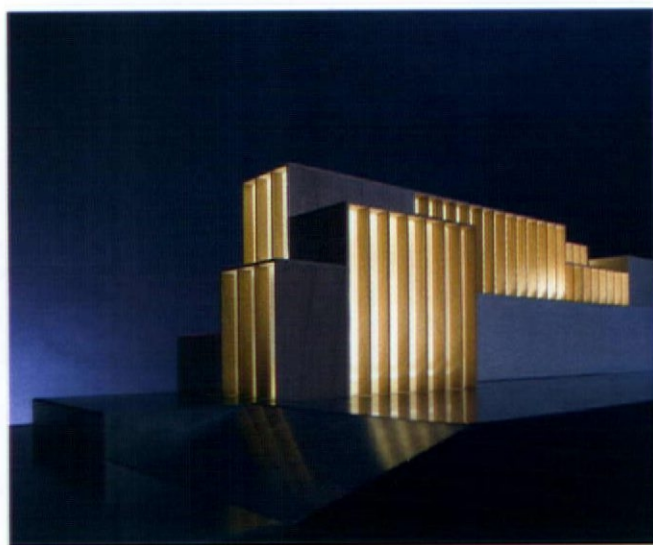
By Richard Waite



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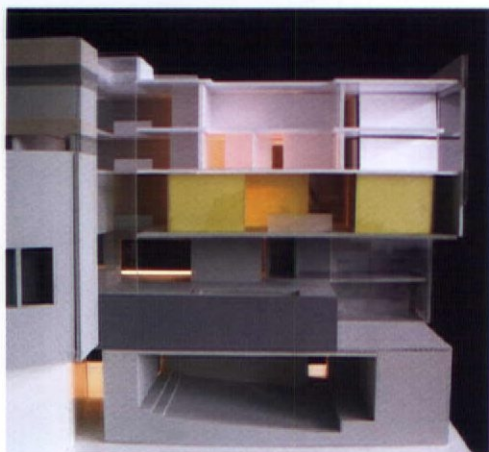
2.



3.



4.



5.

1, 2, 3, 4, 5 & 6. The anonymous shortlisted entries for the Sheffield Festival Centre contest



6.



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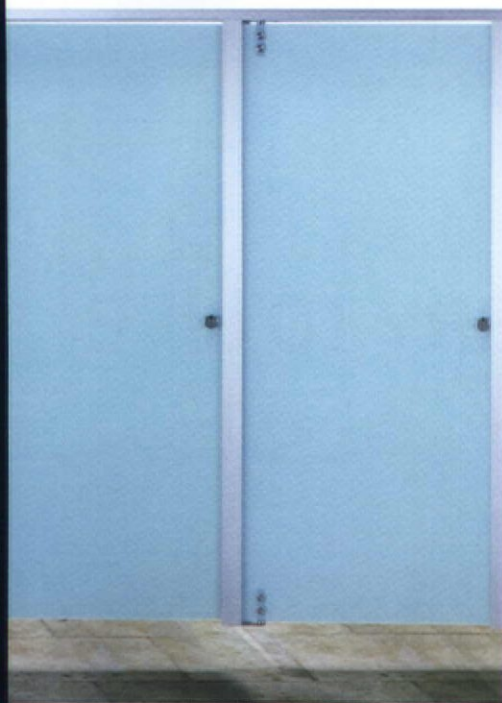
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CNC turned stainless steel feet. Bolted into the floor and set out of sight 200mm. back from front of cubicle.



1.



2.

ROGERS BRINGS CEMETERY TO LIFE

By Max Thompson

Rogers Stirk Harbour + Partners (RSHP) director Amarjit Kalsi and associate Davide Costa are in a meeting room in the firm's Hammersmith headquarters. They are overlooking a grey Thames, but their minds are hundreds of miles away in the hustle and bustle of sunny Naples.

This is because Kalsi and Costa are poring over images and the practice's plans for the Santa Maria del Pianto metro station – a proposed extension to the southern Italian city's multi-billion euro Metro Linea 1.

RSHP is already working for the same client, Metropolitana di Napoli, on its Capodichino metro terminal. The airport station is one of Italy's busiest transport hubs; fuelled not only by thousands of

jetsetters, but also by people wanting to visit the region's famous cemetery – Santa Maria del Pianto [SMdP].

The problem facing Metropolitana di Napoli is twofold. Santa Maria del Pianto – which roughly translates as the 'Tears of the Madonna' – is cut off from the Capodichino transport hub by an extremely busy dual carriageway.

Secondly, since its creation in 1762 the cemetery has expanded rapidly, and with space at a premium, it has been a while since the newly departed have been buried there. 'The cemetery includes warehouses. They are building vertically, creating filing cabinets of bodies,' says Kalsi.

In this devout region of Italy, a pilgrimage to the last resting place of one's dead

relatives is not the sombre, private affair it is in the UK, and this means that at certain times of the year carnival-size crowds descend on to the area.

'You have to understand the culture of Catholicism in the south of Italy,' says Costa. '[SMdP] is not a city of the dead; there's a constant pilgrimage of people visiting their dead relatives.'

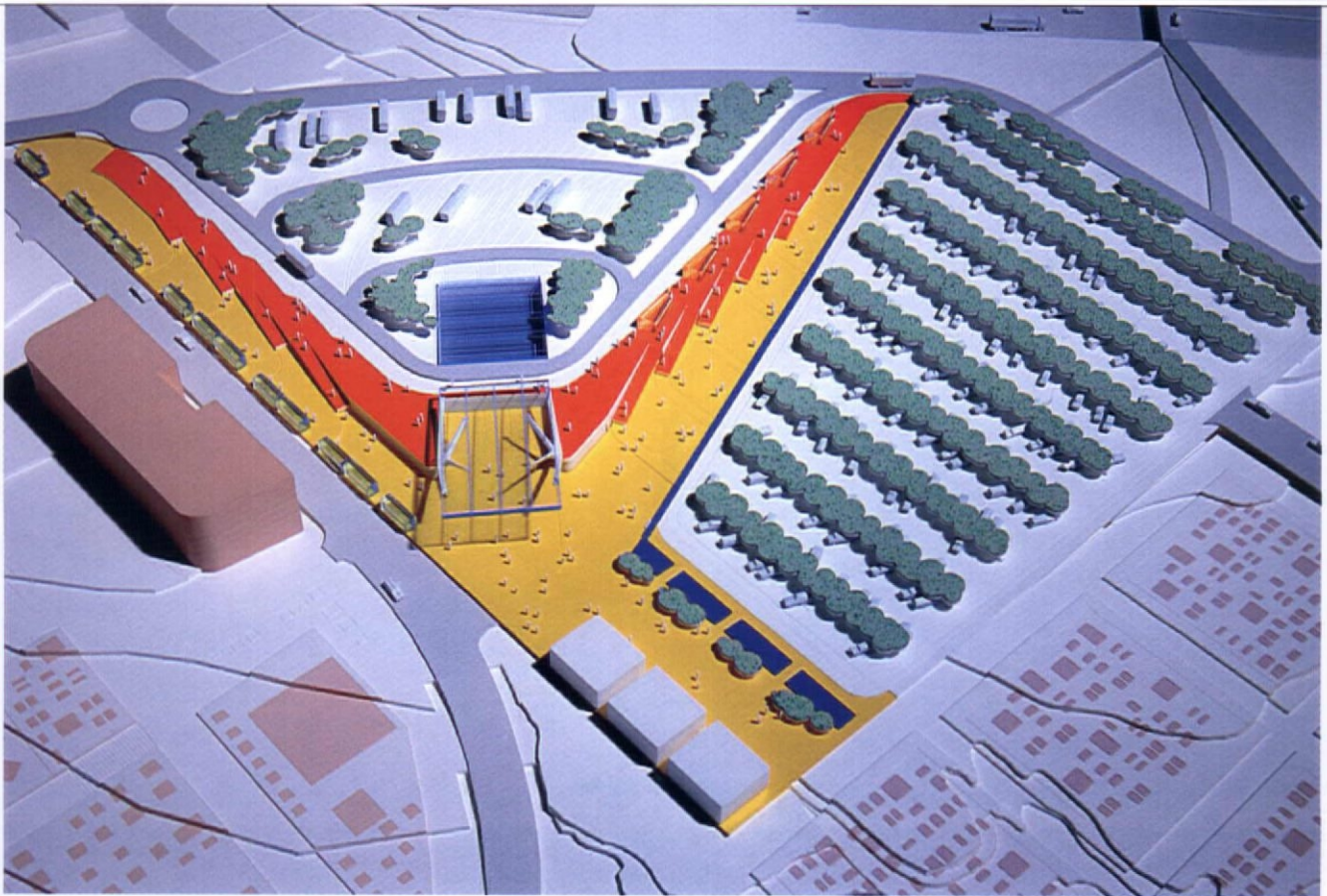
'These places can be a mass of cars and in peak time, when up to 25,000 people visit, there is no parking and no public transport. You can imagine the problem,' adds Costa.

To solve this predicament the team – which also includes Paris-based landscape architect AWP and Arup Traffic – 'exploited the contours of the site to let gravity bring people into the new station'.

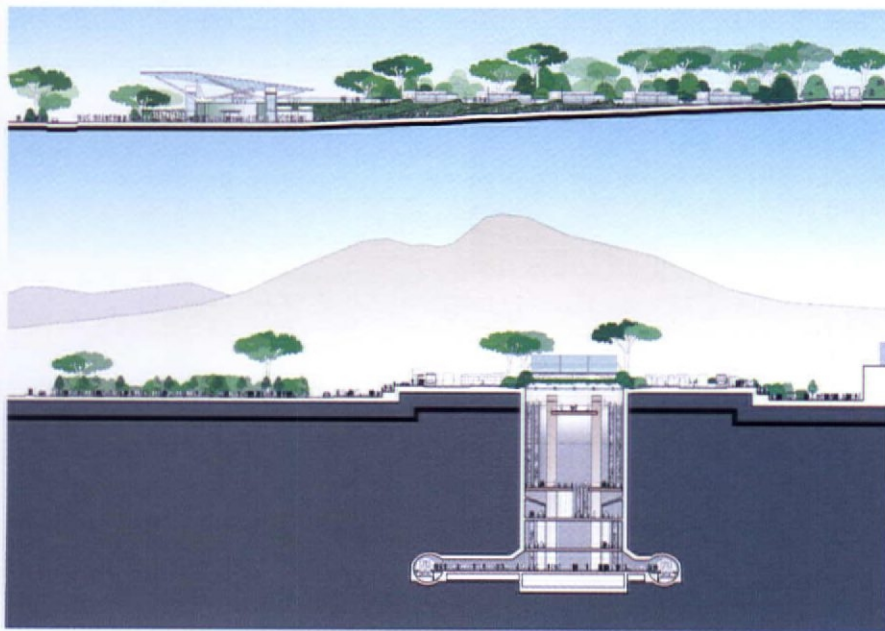
They have also melded a terraced 1,500-space car park into the site, which will be clad in vegetation representing the regions from which the visiting pilgrims have travelled.

While the SMdP cemetery is clearly 'the hook' for the 40-50 million euro (£26-34 million), 42m-deep station, the local government hopes it will also act as a catalyst for growth in what is currently a neglected, inaccessible area.

Indeed, Kalsi admits that Naples itself is 'not a pretty, pretty city.' Instead he describes it as 'a vibrant, fabulous city with an edge to it'. When Metro Linea 1 is delivered in 2017, it will be much easier to see for ourselves.



3.

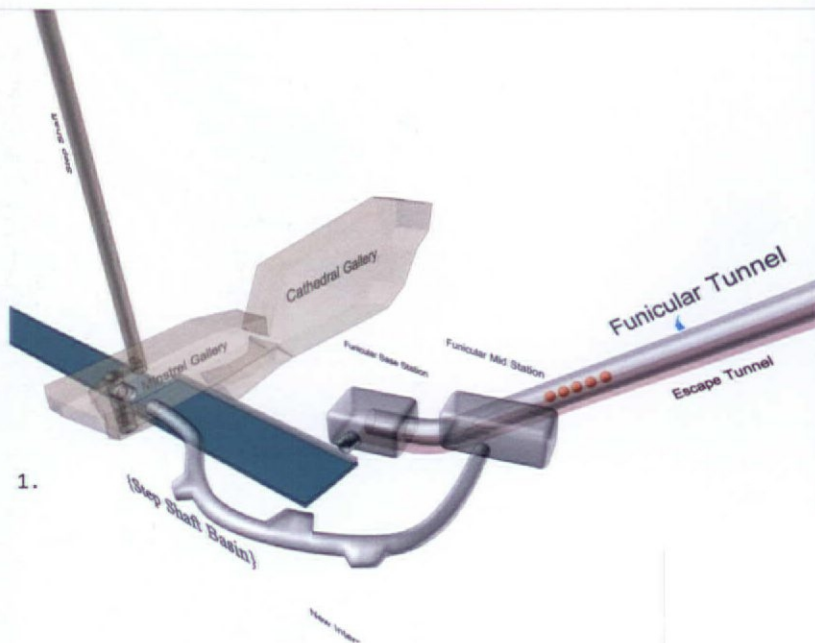


4.

1. Concept sketch
2. The site for the station is currently hard to access
3. The pink buildings represent the cemetery
4. The station will have a sculptural roof and will blend into the landscape

MOXON AND KNIGHT IN THE MINES

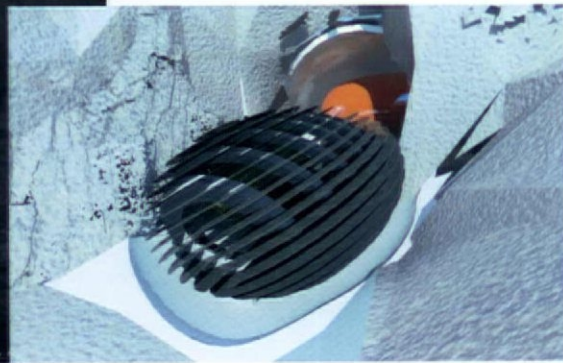
Moxon Architects and Knight Architects are collaborating to transform a network of underground canals and limestone mines in the West Midlands into a new tourist attraction. The Strata project, part of the Black Country Consortium's Big Lottery Living Landmarks initiative, will link the Wren's Nest Nature Reserve with a honeycomb of mines. According to the two AJ 40 under 40 firms, the scheme is made up of three distinct components. First is a new canalside museum and visitor centre at Todd's End, which guides visitors to narrowboats while explaining the history of the network. Second is the Step Shaft Mine element, which includes a 200m-long funicular lift to the different cavern levels. Third are the Seven Sisters daylight galleries – a series of open-air mines linked by a striking foyer enclosure. The People's Millions – a televised vote in September – will decide if the scheme is built.
By Richard Vaughan



1.



2.



3.

1. A funicular lift will travel to the different cavern levels, including the 20m-high Step Shaft Cavern

2. The basin of the UK's largest underground canal system

3. Galleries will be linked by a striking foyer enclosure

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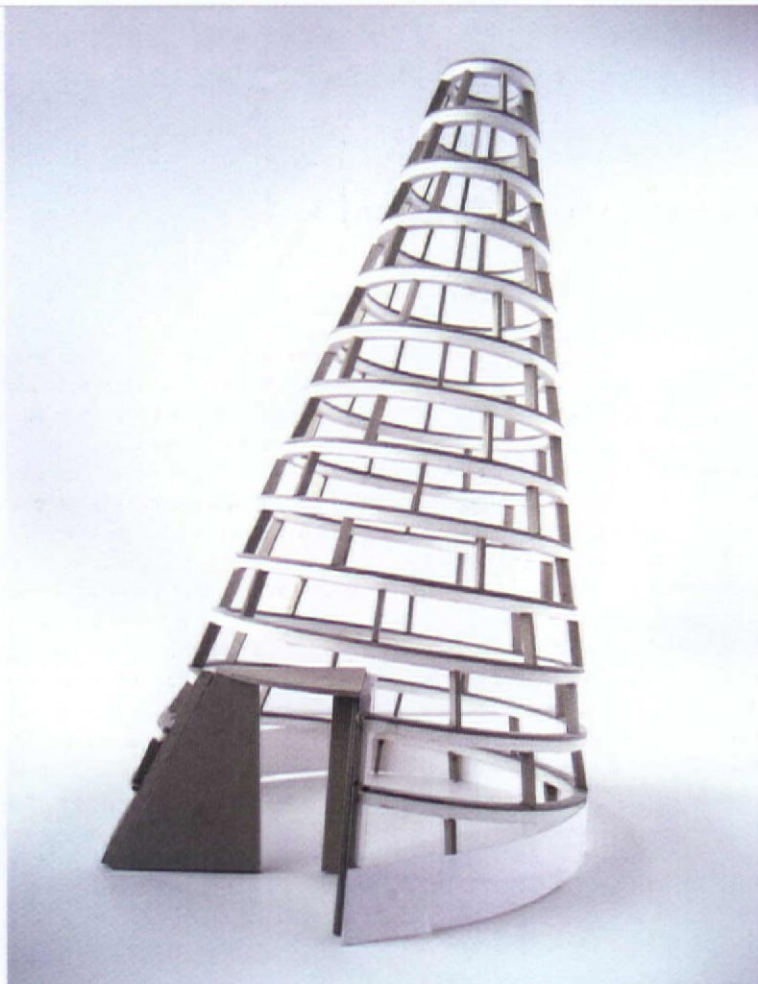
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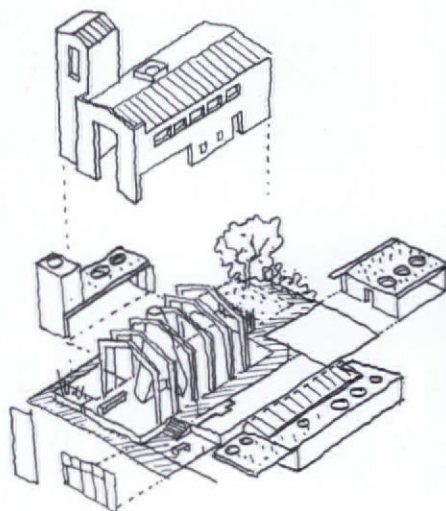
Emirates Stadium, London

Architect: HOK Sport

Roofing Contractor: Prater Limited



1.



2.

- 1. The conical worship space
- 2. Concept sketch
- 3. The existing church facade

'CONE' PROVIDES SPACE FOR WORSHIP

Theis and Khan Architects is set to begin work on the redevelopment of this 1960s Scandinavian-style church in Regent Square, central London. The scheme includes the extension and alteration of the existing United Reformed Church building to provide a new church area as well as a café and community centre. Most striking is the new worship space – the 'tilted cone' – which creates a divide between the café and the church, while offering a place of contemplation. According to the practice, the minister was insistent on the worship space being only a step away from the café. This led to the notion of a 'chapel within a rectangular space', inspired by Bramante's Tempietto of San Pietro in Rome. Theis and Khan is working with Turkish artist Haluk Akakçe, who is creating a new stained-glass window in the church's facade.

By Richard Vaughan



3.



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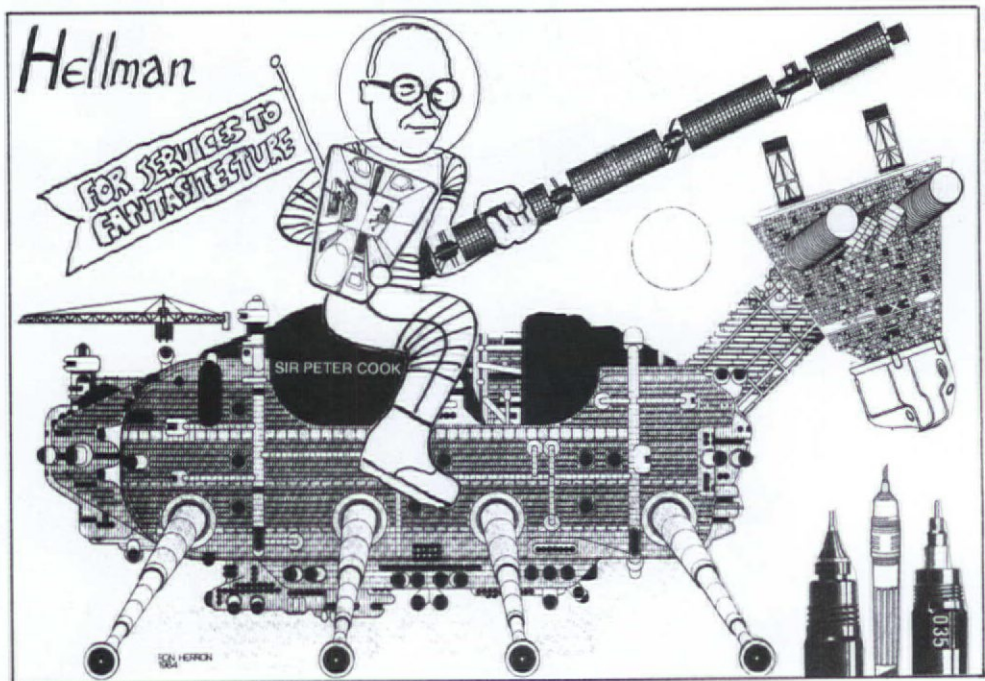
Terry Farrell. *Evening Standard*, 18.06.07

'The area seems to have been redesigned from a helicopter, with all the nuances of civic life obliterated'

Tristram Hunt on the Thames Gateway. *Guardian*, 18.06.07

'The only certain Olympic legacy is a transfer of wealth from the poor to the rich'

George Monbiot looks at the evidence since 1988. *Guardian*, 12.06.07



LOCO MOTION

On Monday night Astragal pitched up at the House of Commons to hear two teams, one led by *Guardian* journo **Simon Jenkins** and the other by **Jack Pringle**, debate the motion 'This House believes that architects have failed to learn anything from their mistakes in the 60s'. Presided over by that dominatrix of the House **Bettie Boothroyd**, a string of eloquent debaters took their turn to debate the frankly ridiculous motion. Nonetheless, it was all good-natured stuff and the general consensus seemed to be yes, there really was some awful stuff built in the 60s but on the whole architects are very nice people. Surprise surprise. Highlight of the night? A young man, old at heart, who stood up and pointed at the Architecture Week logo and

said, 'Turn that logo upside down and read it. That's what architects are really all about!'

STICKY END

Astragal had the recent pleasure of lunch with some of London's most esteemed architectural hob-nobbers. **Lord Rogers** was there, along with **Peter Bishop**, **Richard McCormac** and former AJ editor **Isabel Allen**. But once the main course was finished the assembled parties all but vanished, despite the promise of pear tart. Perhaps that's how Rogers stays so active regardless of his advancing age? Well, rest assured dear readers, Astragal was going nowhere until that tart was laid before him. But given the option of a pear tart or still working at the age of 72, Astragal is in little doubt which he would choose. 'I'll have cream and ice-cream, please.'

SUGAR AND SPICE

Make Architects sweetened up **Sir Alan Sugar** last week with a radical building confection known as the Wave on the final of *The Apprentice*. The concept (see www.ajplus.co.uk/astragal for images) helped eventual winner **Simon Ambrose** steal the £100,000-a-year job from underneath hot-favourite **Kristina Grimes'** nose. **Ken Shuttleworth** made a star turn on the show, suggesting that perhaps Kristina should abandon her initial concepts as they bore more than a passing resemblance to Neo-Fascist architecture. Before meeting **Make**, the candidates practised tall building architecture with Play-Doh (as you do). The outcome was a building akin to a one-fingered salute – perhaps a gesture to Sugar's eccentric approach to line management.



Face

Facts



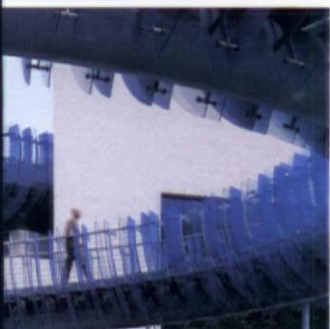
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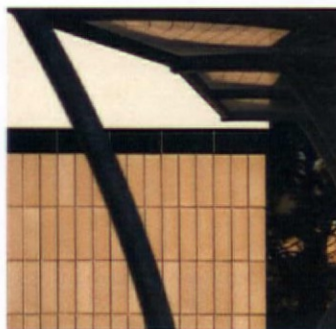
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ENQUIRY 17 ON CARD WWW.AJPLUS.CO.UK/AJDIRECT

UNWELCOME RETURN TO THE 1960S

I cannot believe my eyes. Florian Beigel + ARU's scheme in Paju Book City, South Korea (AJ 14.06.07), bears an uncanny resemblance to any of the unbelievably dull system-built blocks which can still be found around some of the less attractive parts of 1960s university campuses, now looking more and more drab, stained and uninspiring with the passage of time. Here we go again, deluding ourselves with the usual verbal eyewash with inevitable references to Bach fugues and Walter Segal.

Margaret Mackinder, York

PASSION ALONE WON'T BUY GOOD DESIGN

In response to Thomas Quinton's letter (AJ 31.05.07), I concur that passion is the driving force of architecture and is essential to the design process. However, design is inextricably linked to money, because without money our industry is unsupported.

Good design costs money. To argue that money is not important to architecture is simply naive and demonstrates the fundamental problems the development and construction industry have with our profession. We are constantly criticised for our lack of business acumen, and such attitudes only compound this view and damage the preconceptions of our industry.

The sooner architects understand that money is the most important obstacle to overcome in order to achieve the design they desire, the sooner we can get rid of this tiresome argument and start co-operating with other industries to produce better buildings.

Christopher Smith, Sheppard Robson

ARB DEBATE GETS BACK TO BASICS

Maurice McCarthy (Letters, AJ 26.04.07) again fails to follow the argument or to research matters prior to his correspondence.

If McCarthy would refer back to my original letter (AJ 01.03.07) he would see that my point was simply that ARB would have no right to tell the CABA panel member architects how to announce their registration, as long as they do not misrepresent their status. It seems that McCarthy is under the impression that if a statutory body is not expressly empowered to authorise something, it follows that it is given the lawful right to prevent it,

even though it is not expressly empowered to enforce that prevention. Clearly this is nonsense.

McCarthy goes on to claim that a registered architect using the ARB affix to signify a professional qualification or membership is acting fraudulently. In trying to wriggle out of his errors, he is digging an even deeper hole for himself by implying that the CABA panel members were committing fraud – after all, what else were they doing by using the affix other than signifying that they were qualified to be registered?

Peter Arnold, Colorado, USA

SEED OF CHANGE IS A GROWING CONCERN

Some might remember when the AJ mailed out some seeds to subscribers a few years ago, with the rejoinder to 'give something back to the environment, to compensate for what you take out'.

Out of 100 or so seeds in the packet a few germinated, but only one hardy individual persisted. After many years of extremely slow growth, it suddenly took off about five years ago and now puts on more than a foot of growth a year. It's now a 12ft-high specimen of some type of evergreen, which is rapidly outgrowing everything in my and the neighbours' fairly small gardens. Any idea what species of tree the seeds were from? I might just about be able to live with a pine, but a giant redwood? Er... no.

Roy Desouza, associate, WSP Development & Transportation

CORRECTIONS

Buschow Henley was the architect for the St John's Therapy Centre (page 50, AJ 14.06.07) and Paul Willetts wrote the article.

Reid Architecture's Gibraltar Airport (pages 10-11, AJ 14.06.07) will not house Spanish officials on the Gibraltar side of the border or in the same building; and there will be separate flows for different passenger journeys, not nationalities.

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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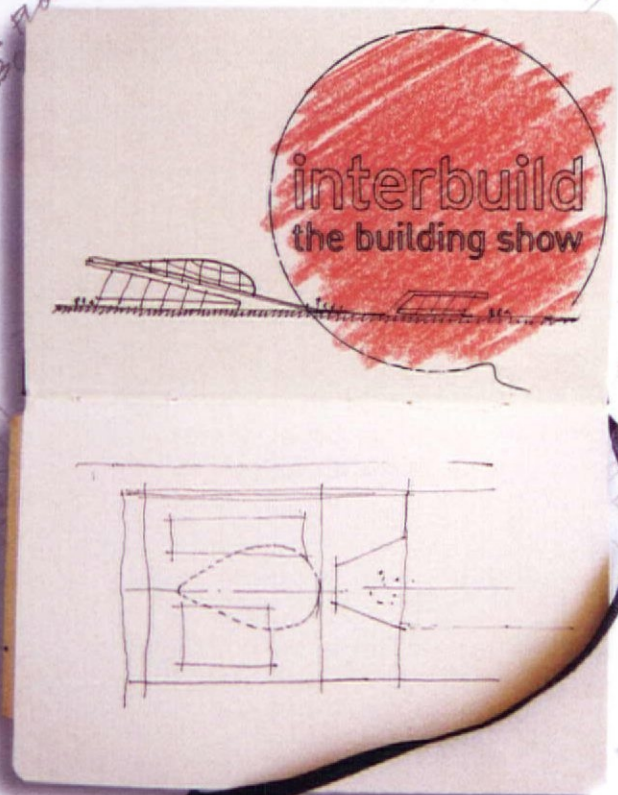
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Sketch image by Stuart Martin of WAM architects.

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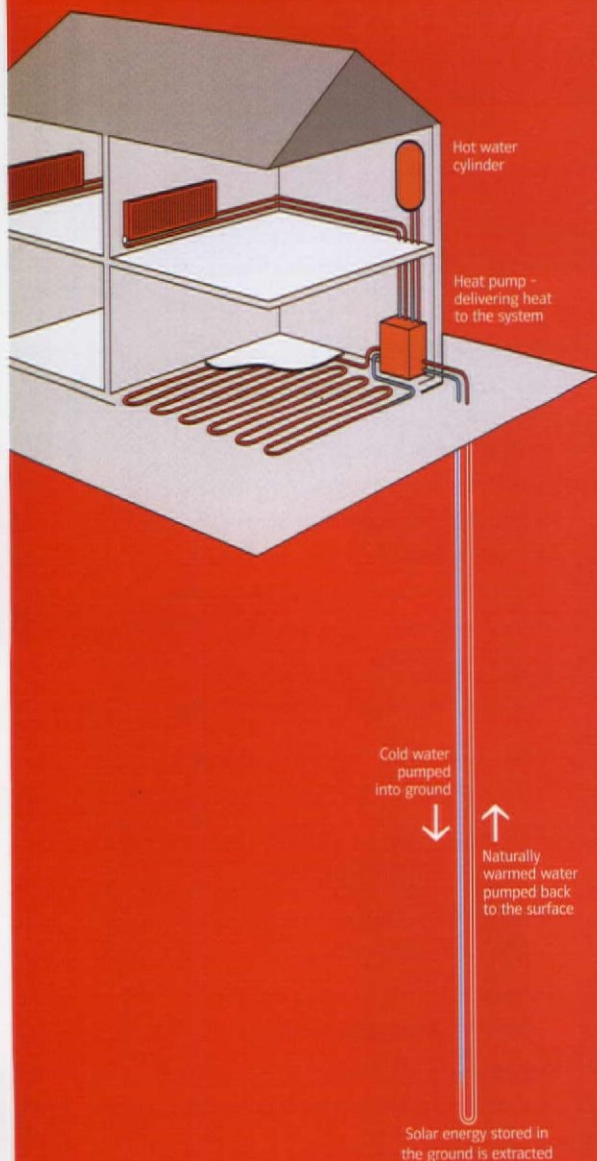


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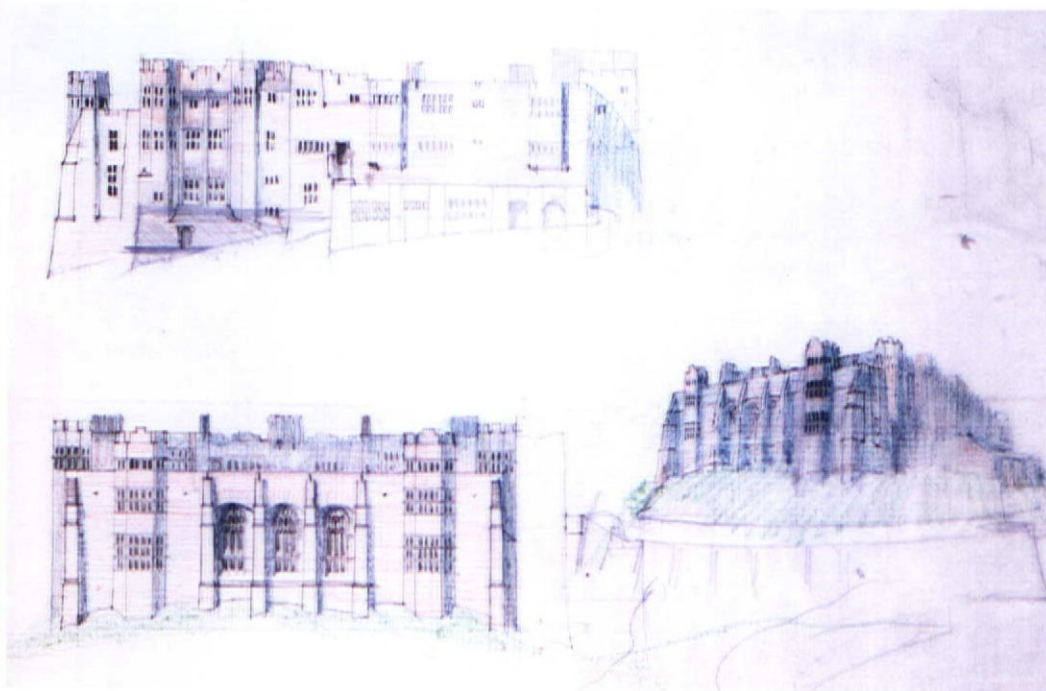
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LUTYENS/ CASTLE DROGO



1. Presentation sketches from 1911 showing the initial U-shaped courtyard scheme

THE BUILDING IS IN A STATE OF SEMI-UNDRESS BUT IT BEARS THE INDIGNITY RATHER WELL

By Isabel Allen. Photography by Christine Sullivan

On 3 August 1910, Edwin Lutyens wrote to his wife: 'I do wish he did not want a castle but a delicious lovely house with plenty of good rooms in it.' But the client, Julius Drewe, was not to be persuaded. The founder of the Home and Colonial Stores and a self-made millionaire, Drewe had retired at the age of 33 in order to establish himself as a country gentleman. His choice of location, a granite outcrop 270m above the Teign Gorge on the edge of Dartmoor, was determined by his claim to be descended from the land's one-time owner, a Norman baron named Drogo de Teigne. Only a castle would do.

By 1911 the Drewes had approved a scheme which drew on elements of Lutyens' earlier houses – the U-shaped plan, open to the north, was reminiscent of Papillon in Leicestershire and Goddards at Abinger in Surrey – but had the scale (and the gatehouse) of a full-blown castle.

The following year they had a change of heart and decreed that the plans were too generous for their needs. However, work had already begun. The foundation stone had been laid on Drewe's 55th birthday in 1911, and so the design was truncated rather than scaled down.

This pared-down scheme comprised the east wing and the played service wing to its north, along with the foundations of the south range. The principal living rooms, originally intended to occupy the south range, were transferred to the east wing; the basement of the south wing was redesigned as the chapel; and the west wing was dispensed with altogether.

It was still a monumental undertaking, and one which was not completed until 1930, a year before Drewe's death. The intention was to provide 20th-century comfort within a fortress of solid granite walls; the floors and the flat roof were constructed of concrete and steel. Lutyens' solution to the issue of water penetration was simple: asphalt, a then new material brought from pits in the Caribbean. The 60-90cm solid walls were built with a vertical layer of asphalt between internal and external faces. This vertical asphalt skin was carried through to roof level, where it joined a horizontal asphalt screed.

Mehmet Berker of Inskip + Jenkins, project architect for the current programme of repairs at Castle Drogo, says: 'Lutyens did not really understand how asphalt works. He thought of it as a panacea curing all ills. He assumed that it could act like a damp-proof course, tanking and waterproofing, so he used it on the horizontal, on the vertical and on the horizontal again. But of course it gets restrained and it cracks. It was leaking from day one.'

The problems were – and are – compounded both by the exposed, wet site and the extreme austerity of Lutyens' design. Exterior detail is, to quote Pevsner, 'minimal Tudor: mullioned and transomed windows, without dripstones, set in vast expanses of sheer ashlar walling of local granite, carried up without interruption to an irregular crenellated parapet'. Only the entrance is less austere, with moulded plinths to the polygonal corner turrets, and a corbelled-out central oriel. The absence of waterspouts or dripstones makes the entire facade susceptible to rain.



2. Draped furniture and empty rooms: Castle Drogo during the latest repairs

There is ample evidence of the Drewes' increasingly desperate, ad hoc attempts to assuage the invasion of water through the flat roof, the huge leaded windows and the mortar joints in the granite walls. They seem to have borne the matter in surprisingly good humour, gamely lifting up the heavy paving slabs on the rooftop to chase away the water underneath and, touchingly, keeping the matter from their architect so as not to hurt his pride. But they were fighting a losing battle. After the Second World War the rooftop slabs were removed altogether and put into storage, though nobody can quite remember where.

In 1974, fearful that the newly elected Labour government would introduce a wealth tax, the remaining Drewes made Drogo the first 20th-century property to be gifted to the National Trust. Announcing the acquisition (AJ 02.04.75), a youthful Gavin Stamp felt able to reassure readers that 'the only important work necessary was to repair the flat roofs and insert a new damp course below the parapet'. By 1979, the AJ was running a news story with the headline 'Leaking Lutyens to cost a fortune' (AJ 25.07.79) as the true scale of the problems began to emerge.

The trust launched successive attempts to make the castle watertight, but to little avail. Between 1983 and 1989 the parapets were dismantled to enable a new lead damp course to be inserted, preventing water ingress from the top of the building, and new asphalt was applied. Although this was successful in the short term, it wasn't long before the asphalt began to crack. As Peter Inskip of Inskip + Jenkins says: 'A lot of architects have spent a lot of time

trying to solve the damp problem but it became blatantly obvious that no one had actually investigated the real cause.'

It fell to Inskip + Jenkins to carry out a comprehensive investigation into the underlying causes of the defects. Although phase one of the current repair programme started on site in June 2006, Inskip is quick to add that 'it took us a decade to get to that point', making it one of the most intensive programmes of conservation and building research to be carried out by the trust. The research emphasised the importance of using materials which would act as a waterproofing membrane and, crucially, would flex in response to environmental conditions.

The parapet walls, bell tower and three courses of stone from the bottom of the west wall have been removed to facilitate the installation of a Bauder waterproofing membrane and the insertion of Rubberoid damp courses over the parapet walls. An insulation layer will be laid over the membrane, then a drainage layer topped with fine gravel. The granite slabs, including the central dais, will be replaced according to Lutyens' original design. The chapel wing is being repointed using a mortar that, while lime-based, will not leach 'free lime' that would stain the castle walls. Windows are being removed one by one to allow for the repair of the leading, and the replacement of the linseed-oil putty which seals the junctions between the windows and granite walls.

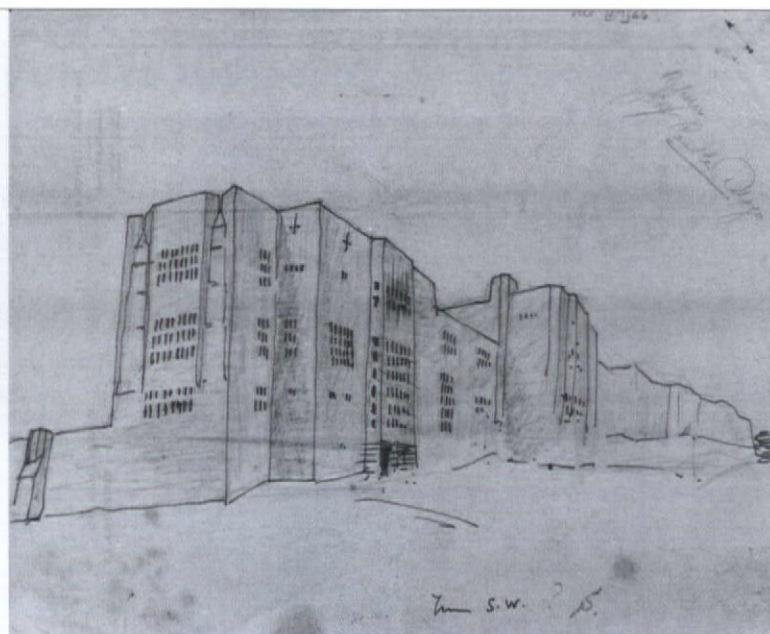
Drogo is, effectively, in a state of semi-undress. Sections of timber panelling have been removed to allow access to the walls behind. Swatches of blotting paper are dotted around the windows



©NATIONAL TRUST

3.

3. Aerial view showing Castle Drogo and its grounds



4.

4. 1920 sketch with south tower in the foreground

in an attempt to absorb and monitor water ingress. Where windows have been removed for repair, makeshift screens shield the openings, concealing outdoor views.

The castle bears the indignity rather well. The temporary absence of windows compounds the disorientating geometry, in a way which one imagines Lutyens might have rather enjoyed. The two different ranges have different orientations and floor levels, allowing for spatially complex circulation space. It is easy to believe that you have burrowed deep within the castle when in reality you have returned to the building's edge, a reading which is encouraged by the presence of an internal window in the drawing room overlooking the internal stair. Doors in the temporary screens, designed to give builders access, allow the uninitiated to imagine that, rather than shielding the perimeter, the screens are a threshold to another world.

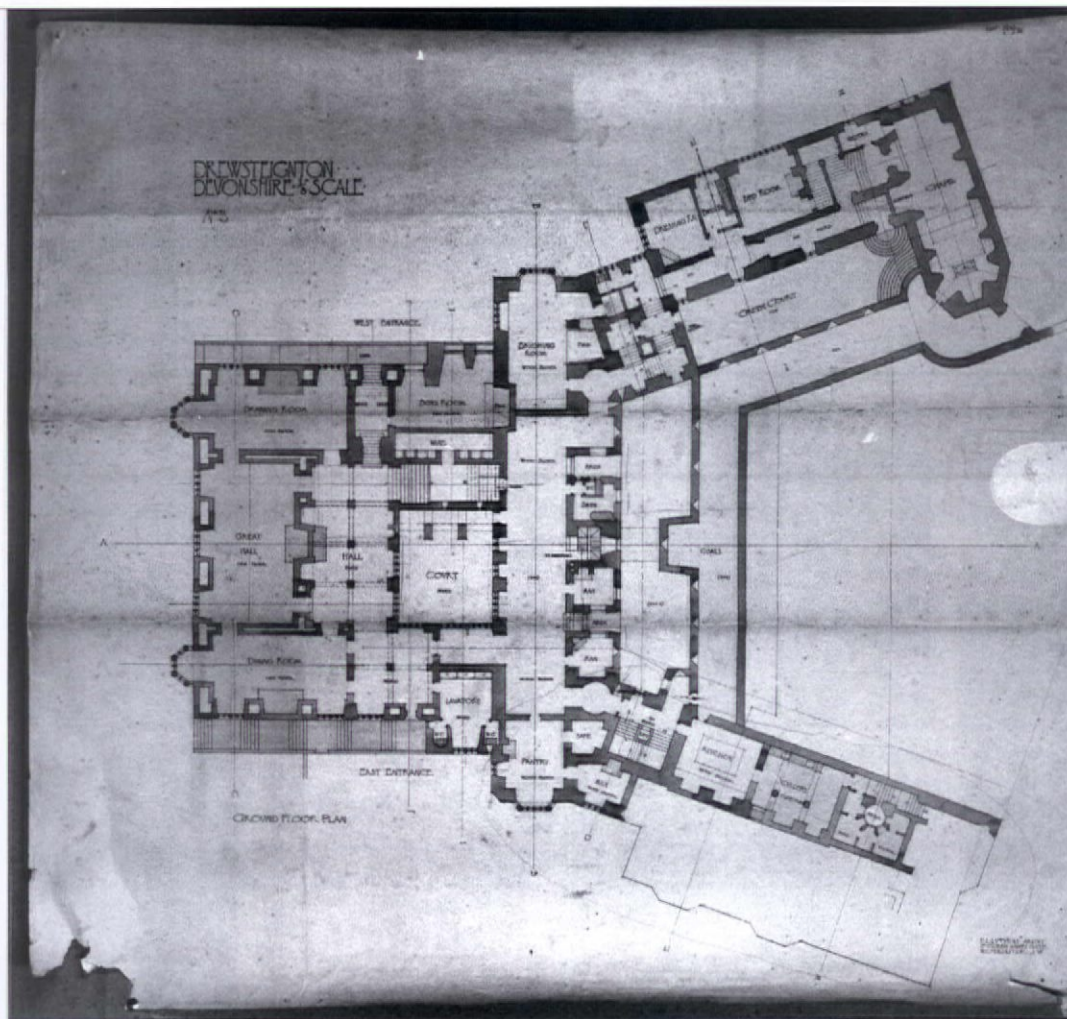
There is a Marie Celeste-like poetry to the great dust-sheets draped over fittings and furniture marooned in the centre of the room; an incidental installation which suggests the seasonal flux of a country seat – the 'semi-slumber' which characterises the periods when the owner is not in residence and the grand public spaces become a stagnant top-water to the bustle of servant activity downstairs. Paradoxically, the overt impression of absence implies inhabitation far more intensely than the carefully conserved 'as found' interiors.

Similarly, there's a sense in which the areas in the drawing room where the timber panelling has been removed to reveal the

solid construction behind, convey more about the architectural aspiration than the excellent, but rather literal, temporary exhibition on Castle Drogo's construction and conservation, which has been mounted in a replica of one of the original builders' huts.

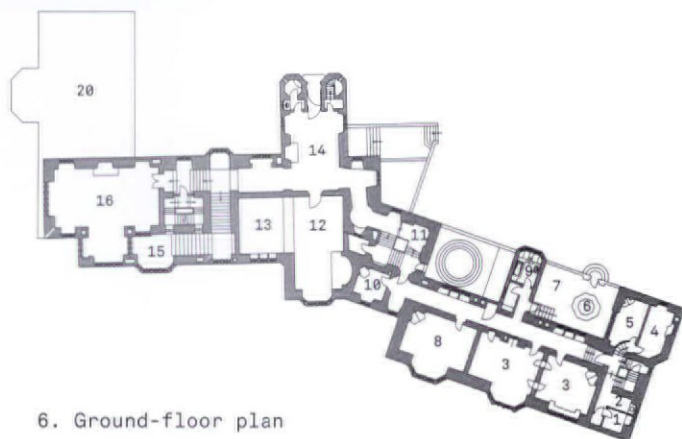
It is hard to imagine a more pithy encapsulation of 'comfort within a fortress' than the juxtaposition of internal and external skin; the obvious signs of repair an evocative reminder of the difficulty of reconciling the two. Even the scaffolding, which creeps around the walls as the castle's windows are repaired, seems to underline rather than detract from Drogo's essential gravitas; a delicate tracery compared with the unadorned expanse of Lutyens' granite facade. For all its weightiness, there is an air of determined informality which is able to accommodate compromise. Scaffolding and site huts, while clearly imposters, do not have the destabilising effect they would have had on a symmetrical form.

With characteristic eloquence, Pevsner remarked that 'the completed fragment has a compellingly abrupt sublimity that would have been diluted in the more ample and even arrangement of the earlier plan'. Its asymmetry bestows a sense of near-geological permanence, allowing the castle to be read as part and parcel of the rocky outcrop on which it stands; both powerful and picturesque. In retrospect, we can be grateful for the Drewes' retreat from their original plans, but also for their refusal to defer to their architect's advice. A 'lovely delicious house' may have kept the rain at bay, but it would scarcely have been a match for the forbidding drama of the site.

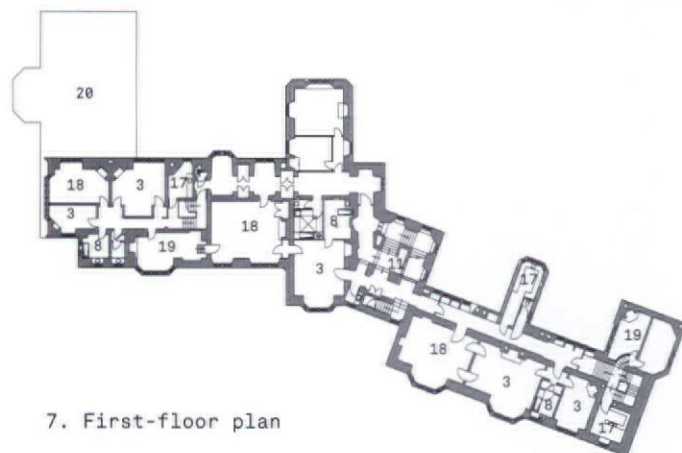


RIBA LIBRARY DRAWINGS + ARCHIVES COLLECTION

5. Early ground-floor plan showing U-shaped layout



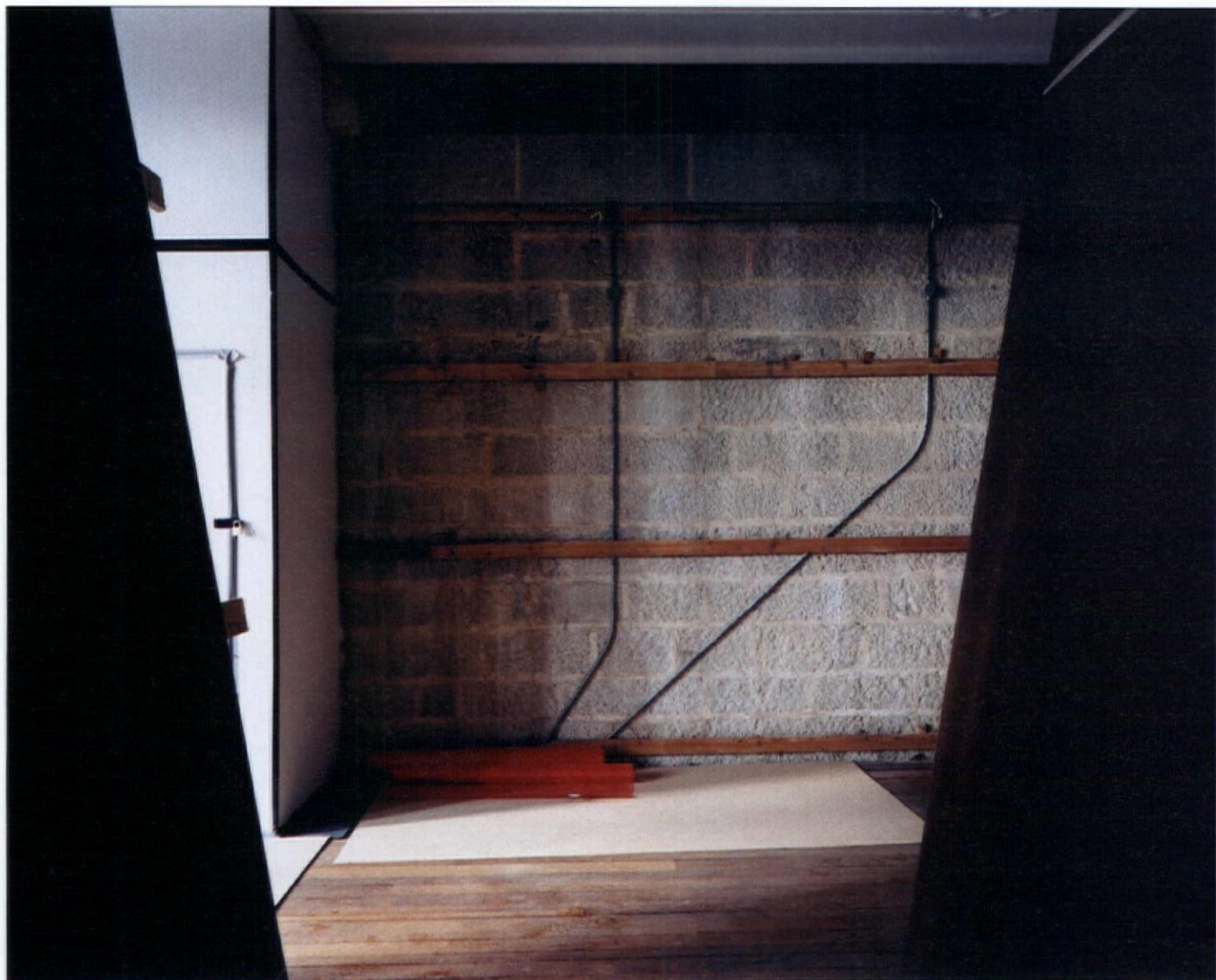
6. Ground-floor plan



7. First-floor plan

- | | | |
|--------------|------------------|--------------------|
| 1 STORE | 8 BATH | 15 STAIRWAY |
| 2 LAUNDRY | 9 BOUDOIR | 16 DRAWING ROOM |
| 3 BEDROOM | 10 STUDY | 17 KITCHEN |
| 4 OFFICE | 11 LIFT | 18 SITTING ROOM |
| 5 STAFF ROOM | 12 LIBRARY | 19 DINING |
| 6 LIGHTWELL | 13 BILLIARD ROOM | 20 BASEMENT CHAPEL |
| 7 PAVED AREA | 14 HALL | UNDER TERRACE |





8.



9.

8 & 9. Mahogany panelling has been temporarily removed, revealing the battens on which it is usually fixed and the solid masonry behind



10.



11.

10 & 11. Parts of Castle Drogo are reminiscent of the periods of 'semi-slumber' in a country house, when the owners were not in residence and only servants were active

ARCHITECT'S ACCOUNT

Our involvement in Castle Drogo began in 1994. We had recommended that any solutions should be based upon a long-term investigation programme into the causes of the problems affecting the castle. This approach was considered to be more conducive to reaching strategic solutions than a simple report summarising the castle's condition. In 1996, together with a team of consultants, we began on-site testing.

We conducted a series of tests on an area of the south wing's west elevation, with a two-fold purpose: to ascertain the extent of the water problems and to test the efficacy of existing and new types of mortar. We used non-destructive testing techniques to study the arrangement and condition of materials within the masonry structures. The process consisted of a series of monitoring periods of one and two years, punctuated by intervals of analysis leading to the publication of a report recommending next steps.

This first set of investigations focused on the defective waterproofing envelope. We used thermography and pulsed radar – which shows differences in moisture content – to measure how much water penetration was occurring through the roof, elevations and windows, as well as finding out how much moisture was already in the walls. Moisture levels within the west wall were measured with wooden and metal sensors placed at varying depths. The resulting data was uploaded to a computer every three months and the results analysed after a period of two years.

For the stonework, Lutyens used an early cement mortar with properties akin to hydraulic lime. This was replaced at a later date with a Portland cement mortar with a waterproofing additive; it failed due to shrinkage relatively quickly, which led to water build-up behind and hindered the evaporation of moisture. 'Free lime' from the mortars was precipitated on the face of the stonework and poisonous lead salts developed from the lead damp-proof course. Through an iterative process of on-site trialing and testing over six years, we identified an Italian lime mortar which was suitable and which did not leave an unsightly calcium carbonate precipitate.

Lutyens' construction build-up was technically flawed and the subsequent repair solutions over the years were largely ineffective. Inspections by GB Geotechnics uncovered cracking due to differential movement at the base of the parapet and the roof.

Criteria for restoration were laid down in a series of documents, and the following policies were put forward for repairing the roofs:

- Policy 8: the principle of authenticity in matching of Lutyens' construction technology should not be adopted. This is justifiable on the grounds that the fabric remains at risk for the future and the burden of maintenance is not sustainable. It would not be possible to hand down the building in good or better condition;
- Policy 9: to respect Lutyens' original design intentions for the granite paved roof terraces and parapet wall; and
- Policy 10: to seek an improved sustainable solution to the thermal and moisture problems.

Lutyens' roofscape could be considered as very 'modern' for this period. However, Lutyens designed a 'cold' roof, without insulation or ventilation and without accommodating thermal movement at abutments of concrete, steel and granite. Inspections of the mastic asphalt concluded that deterioration was due to interstitial condensation and lack of movement joints at abutments. Significant interstitial condensation was found to be present and surface condensation had promoted mould growth.

Lutyens covered the roofs with granite paving slabs to achieve a monumental unity with the granite walls, but this had an adverse effect of enhancing cracking of the asphalt and water penetration through the construction. The Drewes disposed of the slabs but the roofs continued to leak for obvious reasons. This was compounded further when the parapets were dismantled and a lead damp-proof course inserted.

Current works have employed modern roofing technology from Bauder for the selection and build-up of the waterproofing membrane, insulation and ballast to ensure the performance and longevity of the construction and to minimise maintenance requirements – to resolve the inherent design flaws, we adopted an inverted warm deck roof to eliminate interstitial and surface condensation. The choice of a membrane is determined by its resistance to differential movement. The choice of insulation (closed cell) above the membrane is determined by its ability to resist interstitial condensation damage and cold bridging problems. Reinstatement of granite slabs would then prevent wind uplift of the insulation as well as restoring Lutyens' design intentions.

Stephen Gee, Peter Inskip + Peter Jenkins Architects

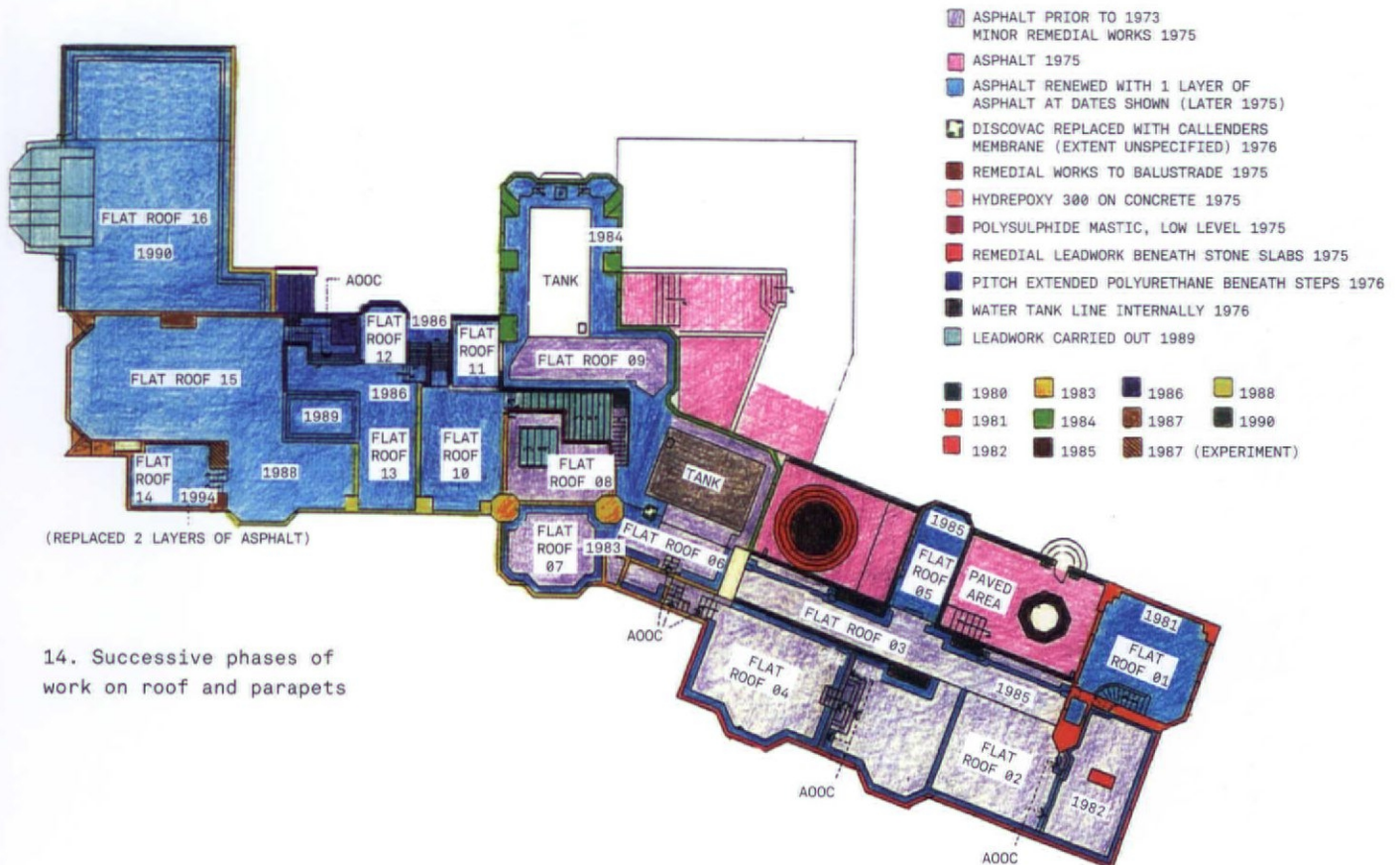


12.



13.

12 & 13. Photographs at roof level in August 2006 of an area still to be treated. Note the lime precipitate on the stonework



14. Successive phases of work on roof and parapets

Credits

Tender date

19 April 2006

Start on site

24 July 2006

Contract duration

31 weeks

Gross external floor area

Chapel: 230m²; castle: 1,073m²

Total: 1,303m²

Form of contract

JCT IBC 2005

Total cost

£426,846.65

Client

The National Trust, Devon and Cornwall
Region

Architect

Peter Inskip + Peter Jenkins Architects: Peter
Inskip, Stephen Gee, Mehmet Berker, Simon
Perera, Maja Polenz

Structural engineer

Ralph Mills Associates

Services engineer

FHP Engineering Services Solutions

Quantity surveyor

Sawyer and Fisher

Planning supervisor

LHC Safety Management

Main contractor

St Blaise

Selected subcontractors and suppliers

Roofing Bauder; *metal conservator* Eura
Conservation; *paint analysis* Catherine
Hassall; *sculpture* Andy Mitchell; *lime
mortars* Telling Lime, Arte Construco,
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latex screed SBD; *surveying and restoration*
George Bollard Geotechnics



15.

15. A lectern displaced by work in progress

16. Castle Drogo's exterior is 'minimal Tudor':
only the entrance is a little less austere



16.

Register now - spaces are limited and booking fast!



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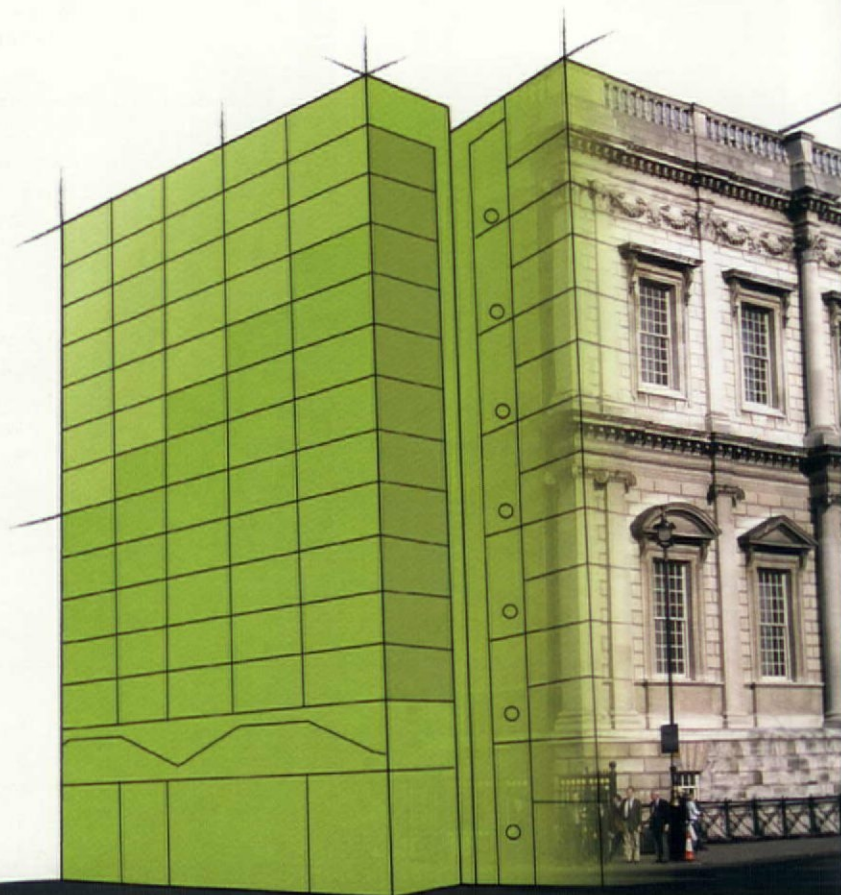
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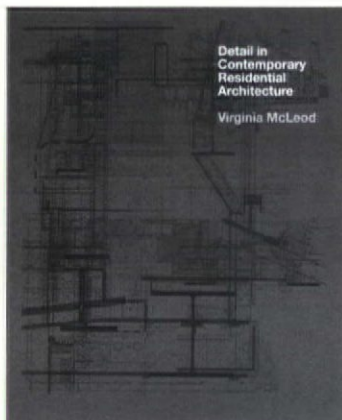
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VICTORIA HENRIKSSON

1.



2.

1. Stockholm's Olympic Village at the Building Centre (Events)
2. Recent houses from across the globe (Books)

THIS WEEK ONLINE

- Added to our materials and components section this week is a guide to online resources for steel, plus a selection of 34 buildings from our online database where steel has been a formative influence.
- These additions complement our existing information on cladding; doors, windows and ironmongery; fire; flooring; H&V; landscape; lighting; and masonry, timber and steel. See www.ajplus.co.uk/materials

TECHNICAL NEWS

- The UK Concrete Platform Sustainability Task Group has launched a new website which provides detailed information about concrete and sustainability. See www.sustainableconcrete.org.uk
- The Energy Performance Label project has launched an online demonstration system which allows users to enter building data to develop an online energy performance certificate for public buildings. See www.online.eplabel.org
- Environmental developer BioRegional is starting a CPD course on zero-carbon homes at the BedZED education centre in Sutton. The dates are 29 June, 28 September, 30 November and 25 January. The 29 June event is a free launch, but numbers are limited so email gemma.swistak@bioregional.com to book. www.bioregional.com

TECHNICAL EVENTS

Hammarby Sjöstad: Stockholm's Sustainable Olympic Village
26 June, 2.30-6.30pm
 Building Centre, 26 Store Street, London WC1
www.buildingcentre.co.uk

Go Wide with Wood: Wide-Span Timber Structures
2 July, 6.30-8.30pm
 Building Centre, 26 Store Street, London WC1
www.buildingcentre.co.uk

Communicating Clearly
27 June, 6.30-9.30pm
 BDP, 16 Brewhouse Yard, London EC1
santa.raymond@inst.riba.org

Part L Seminars
10 July, 11 and 13 September
 RIBA, 66 Portland Place, London W1
www.merlin-events.co.uk

BOOKS

Detail in Contemporary Residential Architecture
 Virginia McLeod
 Laurence King Publishing, 2007, £30

This handsome, large-format book does what so many others profess to do: it shows details. We need more books like this – witness the large following of *DETAIL* magazine. McLeod has selected more than 50 houses from across the globe, built between 2001 and 2005, and grouped them into chapters according to their predominant material: concrete, glass, masonry etc. Each house gets a 4pp spread, with a brief text, well-chosen photographs, clearly-drawn and consistent plans and sections, and the details. Where this book disappoints, however, is where it should excel: in the choice of details. Rather than representing the essence of each house, the details are uneven and random, which means that the book falls short of the revelatory volume that it set out to be.

INDUCTION LOOPS ARE A COMMON AND CHEAP WAY OF IMPROVING SOUND

By Austin Williams

This latest article in our series of NBS Shortcuts looks at how designers can cater for hard-of-hearing building users with the specification of acoustic loops and other systems.

The placing and operation of acoustic loops in public buildings needs careful consideration. Incorrect specification can result in an unsatisfactory audible environment for the hard of hearing as well as the possibility that electronic equipment, within range of the acoustic loop's magnetic field, may be adversely affected.

In 2005, a design collaboration between the Royal National Institute for Deaf People (RNID), *Blueprint* magazine and creative agency Wolff Olins, was set up with the aim to convince the public that hearing aids, re-branded as 'hearwear', should become as stylish as designer glasses. By making people realise that ungainly, badly flesh-toned plastic earpieces are a thing of the past, the designers hope to encourage some of the nine million UK residents who are hard of hearing to use hearing aids. At present, only two million UK residents own hearing aids and just 1.4 million admit to using them regularly. There is still, it seems, something of a stigma associated with hearing loss. A bit like bifocals, it tends to suggest that you are getting on a bit.

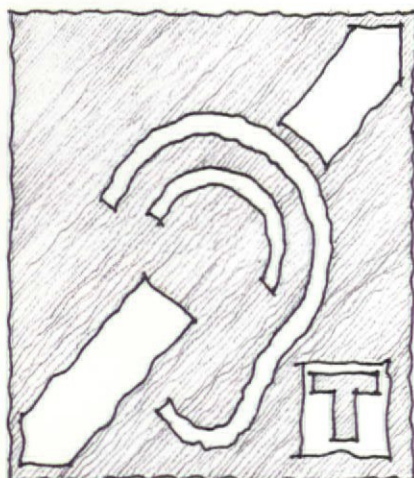
Over the years, deaf and hard of hearing children have begun to be educated in mainstream, rather than 'special' schools, and the British Association of Teachers of the Deaf (BATOD) has assessed that these pupils account for about 75 per cent of all deaf children of school age. One of the simplest methods to enhance

their ability to hear the lesson clearly is to reduce background noise by siting the classroom away from playgrounds, busy circulation spaces and communal areas; improving acoustic separation and keeping the classroom occupants quiet.

Coincidentally, there is a growing Health and Safety campaign by the National Union of Teachers, pointing out that teachers are more likely than most other occupational groups to consult doctors about voice disorders. The Health and Safety Executive (HSE) and the General Teaching Council of Scotland have both confirmed that teachers are more likely than other professionals to be absent from work with voice problems. As a recommended solution, microphones, which have been used in schools in the United States since the early 1970s, may find their way into UK classrooms. According to the British Association of Audiological Scientists (subsequently merged and renamed the British Academy of Audiology), amplified sound combined with low background noise can have more of a beneficial impact on students' hearing ability than fine-tuning the reverberation times of fittings and finishes.

AMPLIFIED SOUND

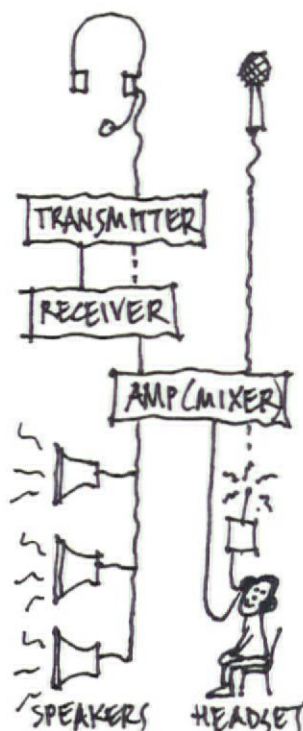
The 'sound-field system' comprises a teacher's headset and transmitter, an amplifier and a number of audio speakers to provide an equal distribution of sound whichever way the teacher or pupils are facing. This amplified audible sound system is an improvement on hard-of-hearing children having to wear a



1.

1. Induction loop symbol. Users switch hearing aids to the 'T' position
2. The sound-field system

THE SOUNDFIELD SYSTEM



2.

LEVELS OF DEAFNESS:

The 'Decibel hearing level' (dBHL) indicates a person's hearing relative to accepted standards for normal hearing. For example, 50 dBHL marks a hearing loss of 50 dB.

- Mild hearing loss (25 – 40 dBHL). Difficulty in following speech
- Moderate hearing loss (41 – 70 dBHL). Difficulty in noisy situations; ability to use telephone with amplification
- Severe hearing loss (71 – 95 dBHL). Lip-reading is an essential skill. Difficulty hearing amplified telephones. Text messaging is increasingly used
- Profound hearing loss (96+ dBHL). Hearing aids are of little or no help. Lip-reading, signing and/or writing and texting may be the main communication tools used

headset in class, but this may still be necessary for those with significant hearing loss. The sound-field system uses a wireless link between the microphone and amplifier, operating on VHF, UHF Radio or infrared frequencies, and is relatively simple to set up.

INFRARED SYSTEMS

While a sound-field system may be suitable for some school and lecture situations, it is not always desirable to improve audibility by magnifying the sound for everyone. Infrared systems (available with a stereo facility) use invisible infrared light to transfer sound from the 'radiator' (a transmitter linked to a speaker's microphone and amplifier, for example) to receivers' headsets. It may be necessary to have several radiators, depending on the size and shape of the venue. In general, infrared systems are directional, which means that headset wearers may lose sound quality if they turn their heads. Care should also be taken to ensure that infrared-absorbent wall coverings and furnishings are not used.

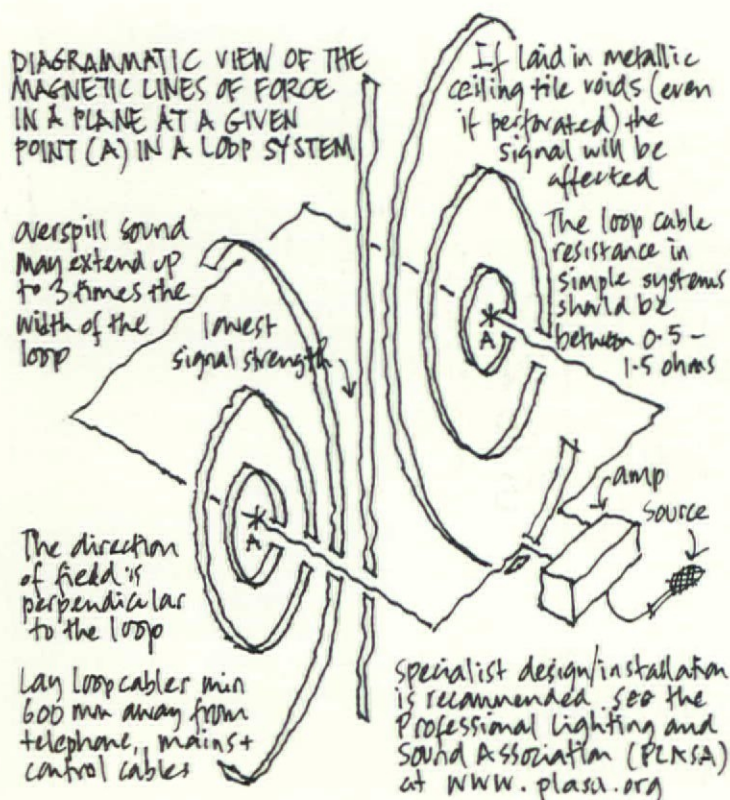
AUDIO FREQUENCY INDUCTION LOOP SYSTEMS

One of the more common – and cheapest – methods to improve the sound for targeted users is the use of Audio Frequency Induction Loop Systems (AFILS). Approved Document M – 'Access to and Use of Buildings', 2004, states that AFILS are needed in the somewhat ill-defined 'reception points' of buildings other than dwellings. In 1985 the International Federation of Hard of Hearing People (IFHOH) adopted the induction loop icon as

the official symbol for AFILS. These signs should identify the presence of the system and prime locations for reception. Ideally, approved signage should be displayed if reception is not possible.

An acoustic loop is simply a coil of electrical wire, preferably solid rather than stranded, connected in a loop to the output device (an amplifier linked to a microphone, radio, etc). Essentially, an audio-frequency electric current circulates in the wire, varying with the speech or music played through the amplifier; this, in turn, generates a magnetic field within the loop. The alternating magnetic field replicates the input sound modulation and this can be picked up within range by suitable receivers and reconverted back into sound. Receivers in hearing aids must be tuned to 'T' for 'telecoil' to enable the wearer to pick up the useful component of the magnetic field, and once tuned in, he or she can hear without having to rely on visible paraphernalia that would draw attention to their deafness. In normal situations, hearing aids are tuned to 'M' for 'microphone', which allows the wearer to pick up normal close contact sounds; and for those with hearing aids without an M-T switch, a special adaptor is required to benefit from acoustic loops.

When setting out an induction loop circuit, consideration must be given to the listening plane, which lies at the median level of listeners' ears, about 1.2m above finished floor level. Loops are often embedded in the walls but as the field gets stronger the nearer to the loop, this can cause disturbances to hearing aid wearers if they are seated around the perimeter wall. Placing the loop in the



3. Acoustic loop system

slab or the ceiling/void is acceptable although this requires more current for the same field strength. Wherever the location, all systems must be satisfactorily designed to provide what BS 7594 calls 'a sufficiently (but not excessively) strong, and uniform (useful) component of magnetic field within the required working area'.

In a horizontal loop the magnetic field is in the vertical plane and lines up with the vertical magnetic pick-up coil in the hearing aids of the audience. If the loop is situated in a hospital, where the hearing aid wearers may be lying down for considerable periods of time, the loop should not be horizontal as it is the perpendicular component that is important. Similarly, in large auditoria, several loops will be required at various tier heights to ensure that each storey benefits, although there must be no magnetic interference between each loop. While the RNID suggests that in domestic conditions loops are not badly affected by having to lay the perimeter wire around obstructions, in larger applications the effect on the magnetic field caused by a non-uniform layout should be carefully calculated.

The system must be designed and installed for maximum efficiency: BS 7594 states that it must not produce 'an unacceptably extended coverage area which could cause interference with other systems or compromise confidentiality'. Solid (not twisted-core) wires with a core diameter ranging from 0.5mm to 2.5mm, which complies with BS 6500 and is chosen to suit the specifics of the room layout, can be housed in plastic tubing for added protection. However, these must not be laid within the vicinity of other

horizontally laid electrical wiring, as this will cause magnetic interference and consequently create an annoying background hum in the ears of hearing aid wearers. Similarly, if there are metal, or other conductors, in the area surrounding the loop (metal-stud walls and steel columns, for example), they will also give rise to poor levels of reception.

Conversely, the magnetic field can spread beyond the designated room, meaning that those with telecoil functions on their hearing aids can pick up conversations outside the area; this can be irritating for the wearer, but also worrying for the speaker, especially if it is a home-based system where you expect private conversations to stay private. Often, multiple-loop systems laid into the floor slab are sufficient to combat this, but there are a number of proprietary systems that deal with this issue. Professional design guidance and installation as well as thorough precompletion certificate testing is essential to minimise this problem – but you may want to consider an infrared system if the speech is likely to be of a personal nature, as in doctors' surgeries. After installation, the system should be calibrated and its controls 'locked' to prevent unauthorised or accidental alterations to the system. It is wise to provide accessible junction boxes for maintenance, which should be minimal. On completion, the person responsible for the building should be given full instructions on how to use the system.

Austin Williams is the author and illustrator of NBS Shortcuts. For more information visit www.thebuildingregs.com



CHANGES TO LOCAL PLANNING POLICY SHOULD BE SCRUTINISED

By Brian Waters

On the day of the publication of the White Paper 'Planning for a Sustainable Future' (see www.communities.gov.uk) in May, *The Times* congratulated the makers of Mars Bars for the perfect corporate apology: 'We listened, we got it wrong, we are fixing it'. This would have been a better introduction to the paper than the pervading tone of complacency, which was reinforced by Ruth Kelly's assertion on its launch: 'The planning system has improved significantly since 1997.'

It has taken 10 years for the government to get serious about implementing its 1997 paper 'Modernising Planning'. This time, it means business. In summary, the measures set out in a White Paper (subject to consultation) are designed to:

- fast-track major infrastructure projects;
- simplify the regime for local householder applications;
- streamline new local plan procedures;
- improve the handling of

major planning applications;

- speed up appeals;
- reduce the schemes 'called in' by the Secretary of State;
- strengthen policy on climate change;
- change planning fees;
- clarify national policy guidance;
- introduce a new test to protect town centres.

The establishment of an independent Infrastructure Planning Commission (IPC) to decide on major projects is a slow response to the long-running Terminal 5 inquiry – its planning application was made in 1998. The commission will have a wide remit, covering motorways, energy and airports and will actually issue consent.

Many of the Barker Review's recommendations are likely to be adopted. The procedures for Framework Plans in the 2004 Act are to be streamlined, but we face several years of policy confusion at the local level. A bundle of 'daughter' papers have been

published, which are out for consultation. Architects should give them close attention for it is here that most of the specific changes which affect our clients and practice are to be found. For example, a paper on fees includes a proposal to remove the £50,000 cap on planning application fees and to raise all but the smallest by 25 per cent from April next year.

The paper is clearer on proposals to speed up the householder appeals system. These make good sense though much has to change to make their targets credible.

'Planning Performance Agreements' can be negotiated for major applications, establishing a fixed timetable for processing. For these to be effective, architects and their clients must ensure their thorough preparation, including preapplication consultations.

The General Permitted Development Order as it affects householder developments, such as extensions and basements, is

to be based on impacts rather than measured volumes. The consultation paper and related report should be scrutinised by architects. They show a naivety that needs to be addressed. The dimensional rules should be limited to 'deemed to satisfy' guidance rather than cast as rigid criteria as at present.

Section 9(e) discusses streamlining information requirements. It promises revised guidance 'in the Summer' on determining the validity of applications. 'Later in 2007, we will start a further review with the objective of reducing information requirements.' The Association of Consultant Architects considers this to be unacceptable. Why confuse and elaborate the present system which is clear and, when respected, effective? Why not suspend these unhelpful changes and carry out the review first?

Brian Waters is principal of the Boisot Waters Cohen Partnership and director of planning at HTA



THAT LOOKS LIKE A RARE SMILE FROM ZAHA

I don't want you to get the idea this column tolerates frivolity. But hot on the heels of 'Mis van der Rockke' and that pachydermophilic Walker and Martin site comes this Mirage Studio 7 posting: <http://tinyurl.com/ypvmdm>. Headed 'Separated at Birth', it arranges photos of architects against better-known lookalikes in a manner familiar to readers of Private Eye. A tidied-up version of a posting of the same name on Archinet, it's a hoot.

More seriously, the divine Zaha is setting up a blog courtesy of the amiable Marcus Fairs, who runs the terrific but embarrassingly named blog Dezeen. He has wheeled in broadsheet and critical heavies to drum up interest in next month's Design Museum show about Hadid. Check it out as it features something you don't see often: Her Serenity gives a bit of a smile. Witness this momentous event at <http://zahahadidblog.com>. You can get a free subscription to the blog Dezeen at www.dezeen.com. Rival sites are Chris O'Shea's Pixelsumo at www.pixelsumo.com, Milan-based www.designboom.com and www.mocoloco.com. Actually just type the name: *dezeen*, *mocoloco* etc. Your browser understands. sutherland.lyall@btinternet.com

GUN FOR HIRE

'When is an expert not an expert?' While this may conjure all manner of light-hearted responses at the expense of the expert community (my favourite is, 'when X is the unknown quantity and "spurt" is a drip under pressure'), the correct answer is 'when they are not independent', writes *Kim Franklin*. One of the fundamental requirements of expert evidence, emphasised by the Civil Procedure Rules (CPR), is that the expert owes a primary duty to the court, irrespective of the interests of their instructing party. The CPR reforms targeted excessive, partisan expert evidence. Experts were suspected of being prepared to stride into the court room, saloon doors swinging, dust swirling, Doc Holliday-style, as a 'hired gun' to fight the party's cause.

Various proposals were canvassed to chase these misplaced mercenaries out of town. The ultimate solution, the Single Joint Expert (SJE), a latter-day Lone Ranger, did not solve the problem entirely. The courts were reluctant to saddle the unsuccessful party with an adverse finding without the opportunity of testing it in court. The net result was that the parties would need their own experts in order to challenge the SJE's findings. Far from reducing the amount of expert evidence, the SJE potentially increased the

number of experts involved. For this reason, while it is used to deal with straightforward money issues, the SJE is seldom involved for contentious liability issues.

The limitations of the SJE have caused the parties to fall back on their own experts. With the CPR ringing in their ears, experts appointed by either party are required to declare their independence and acknowledge their overriding duty to the court. This put tobacco company Gallaher in difficulty when it wanted to rely on the evidence of a Mr Goel. He was one of only a handful of senior executives in the international cigarette industry who had experience of building business in developing markets and preventing smuggling. The problem was that he worked for them.

In *Gallaher International v Tlais Enterprises* (Judgment 08.03.07), cigarette distributor Tlais objected to Goel's evidence because he was employed by Gallaher. He was not, they said, 'a suitable person' to be an independent expert in their dispute with Gallaher over a distribution agreement for particular brands of cigarettes in the Middle East.

The court concluded that while it is always desirable for an expert to have no actual or apparent interest in the outcome of the proceedings, the

existence of such an interest did not automatically make their evidence inadmissible. It was a question of fact and degree.

The court held that Goel should be permitted to give evidence, particularly as Gallaher had declared his employment and put him on secondment for the duration of his expert involvement. As Goel's expertise was so scarce, it would be unfair to require Gallaher to find a replacement. Ultimately Goel would be subject to cross-examination as to his independence. Hired gun or not, he would not be spared the shoot-out at the OK Corral.

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

BOOK

By Deborah Singmaster

Parisian Architecture
of the Belle Epoque

By Roy Johnston.

Wiley, 2007.

216pp. £39.99



1.

1. Castel Béranger, c.1890
2. Galeries Lafayette, 1912



2.

Salvador Dalí drooled over edible buildings; had he hungered for historic periods, the Belle Epoque would surely have been his favoured *amuse-gueule* – an excellent choice to judge by Roy Johnston's hugely enjoyable book.

The Belle Epoque spanned the decades either side of 1900, which were pivotal in the architectural transition from Beaux Arts Classicism to a freer inventiveness. Johnston, an architect, relates this shift in architectural styles to changes in Parisian society, drawing references from literature and the arts: Zola provides textbook depictions of life in the *atelier*, the attic and the salon; Proust pinpoints the most fashionable time for dining.

Johnston's central topic is the apartment block, or *immeuble*. He uses floor plans

as historical documentation: the layout of a 1906 apartment shows the rising importance of family life, with folding doors between salon and dining room and children's bedrooms next to that of their parents. Of Auguste Perret's 25 bis rue Benjamin Franklin (1903-4), he writes: 'The external appearance of this building is well known, but it is the refined plan that excites most admiration.'

Johnston regards Paris as 'an object lesson to city builders everywhere'. Haussmann's boulevards, never used as intended for riot control, provided space for café life and strollers. In 1897, with a demand for taller buildings unsuited to the prevailing Classical template, a *concours de façades* was instituted, with tax breaks for winning designs. In one chapter, Johnston describes

over 30 innovative *immeubles* built post-1900.

We associate the Belle Epoque with Art Nouveau, but the whiplash was 'only one approach to the problem of adaptation and changing economic and cultural needs'. Hector Guimard's style was not popular at first: Parisians referred to Castel Béranger as 'Castel Dérangé'.

The English scene is an unvoiced subtext throughout. The French embraced iron in a way we never did – Paris was a Ruskin-free zone. England has railway stations and the ghost of the Crystal Palace, but nothing so establishment as Labrouste's marvels: the reading rooms at the Bibliothèque National and Bibliothèque Sainte-Geneviève. Paris even has an iron church (Astruc's Eglise Notre-Dame-du-Travail),

immeubles and *grands magasins* – Samaritaine, Au Printemps and Galeries Lafayette. It's no wonder the English flocked to Paris to shop.

The International Exhibitions of 1889 and 1900 anchor the Belle Epoque. That of 1889 heralded a new world with its innovative ironwork pavilions and the Eiffel Tower. The 1900 Exhibition harked back with its two late-Classical showpieces, the Petit Palais and the Grand Palais.

Johnston writes evocatively and succinctly about a city he knows intimately. Some of the more academic sections sparkle less than others, but this is a fine account of an entrancing epoch and Steve Gorton's photographs are the icing on the cake.

Deborah Singmaster is co-director of Footnotes Audio Walks



BOOK

By Murray Fraser

2G no. 39/40 – Gerrit Rietveld: Casas/Houses
Editorial Gustavo Gili,
2006. 287pp. £40.00



1.

Imagine creating a canonical building as your first proper architectural project while still in your mid 30s, yet never designing anything as important again. You would be in the same boat as Orson Welles or Joseph Heller, forever associated with your earliest, seminal work; blessed and cursed at the same time. It's what happened to Gerrit Rietveld with the Schröder House of 1924–25 – although he had already achieved a notable hit with his Red and Blue chair, designed in its unpainted form in 1918.

Both these artefacts were icons of the De Stijl movement, of which Rietveld was a part. Although never as theoretically sharp as Theo van Doesburg, or as naturally talented an architect as J J P Oud or Jan Duiker, he created the

ultimate symbols of Dutch Modernism. But of course, Rietveld produced a lot more than the Schröder House, and this issue of 2G, edited by Marijke Kuper, does a sterling job of filling in the gap by focusing on his private house designs.

Several things emerge from reading it. One is that Rietveld was a Dutch parallel to Mies van der Rohe, someone with no formal architectural training but who came instead from a European craft tradition. In Mies' case it was stone-carving, whereas Rietveld trained in his father's wood furniture workshop. Both Mies and Rietveld shared a love of clarity and austerity, choosing to express themselves through enigmatic, often oxymoronic aphorisms. Rietveld spoke of 'the wealth of sobriety', and

was fond of pointing out that 'dwelling is a verb', envisaging an active role for the user. Socialist by principle and Calvinist by temperament, Rietveld lived most of his life with his family in a modest rented apartment in Utrecht, eschewing possessions as far as possible.

What this volume also reveals is the consistency of Rietveld's approach, based on the classic Modernist tropes of form, function, free-flowing spaces and framed structures. He was known for thinking through his hands, making endless models, and deliberately leaving details to be worked out on site. Rietveld's aim was for flexibility, standardisation and prefabrication wherever possible. These he saw as the architectural expressions of the concept of abstraction, the

removal from nature which was called for by De Stijl doctrine. As a die-hard Modernist, he was a Dutch representative at CIAM's La Sarraz declaration in 1928 and remained a member until that body fizzled out in the 1950s. Ideally, he wanted to design working-class housing, but got little chance to do so; rather his socially orientated projects tended to be museum pavilions and art academies in Amsterdam and elsewhere.

Instead, Rietveld had to fall back on to private house commissions – around 100 of them, often holiday retreats, almost all in the Netherlands. Working usually on a 1m² planning grid, he pursued his architectural hunches – evolving from two-storey houses wrapped around a central core before the Second World War,



2.

1. Verrijn Stuart House, 1940-41
2. Visser House, 1954-55



CRITIC'S CHOICE

By Andrew Mead

In his introduction to an issue of the *Architectural Review* back in September 1989, Peter Davey wrote: 'One of the great failings of the High Modern Movement was that it valued gardens so little.' Looking for contemporary examples that showed a change of heart and priorities, Davey highlighted Peter Aldington's garden at Turn End, Haddenham, in Buckinghamshire (pictured above). Sensitively fusing the tectonic and the horticultural, it was integral to the trio of houses that Aldington built there in the 1960s. 'This group has become a classic of its time and genre,' said Davey.

Almost 20 years later, that judgement has surely been confirmed. Aldington's own house is now Grade II*-listed, while the garden has continued to flourish and develop, with the Turn End Trust looking to its long-term future. Jane Brown's book *A Garden and Three Houses* tells the story well, but on Sunday 8 July (2.00-5.30pm) there's a chance to see for yourself, as Aldington is opening both house and garden to the public. A trip here is always a pleasure. Details from turnend.peter@macunlimited.net, tel. 01844 291383.

The rapport between building and landscape is also key to one of Niall McLaughlin Architects' early projects, a zoomorphic studio for a photographer on the reedy fringe of a Northamptonshire pond. Until 7 July, it features in a show called *Unfinished* at Photofusion, 17a Electric Lane, Brixton, in which McLaughlin focuses on the role of photography in his teaching and practice (www.photofusion.org).

It seems to be multi-faceted: a generative tool, which goes hand in hand with model-making in the development of project; a medium of record, capturing moments in construction where, as McLaughlin neatly puts it, 'the impermanence of the situation does not diminish the strength of the fleeting spaces and forms'; and a way of exploring the 'unfinished' nature of architecture, its life after completion (the same window seen in 1993 and 2007). With the spirit of enquiry that pervades this exhibition comes a welcome emphasis on collaboration, not the architect's ego, which extends to the practice's new project for a church in Peckham. For forthcoming events visit www.ajplus.co.uk/diary

towards a freer bungalow style along American lines after the war. The later houses mixed steel or concrete frames with large glazed panels and exposed brickwork that was often painted white, black, blue or yellow for visual effect.

It is fascinating to see how Rietveld's emphasis on constructability could lead him to extreme conclusions. For instance, the rough-sawn clapboarding of the Verrijn Stuart House in Breukelen (1940-41) ended up looking like something Robert Venturi might turn out if asked to represent Dutch vernacular. Many of Rietveld's post-war houses reflected growing Dutch prosperity, such as the Van Slobbe House in Heerlen (1961-64), a sumptuous, bourgeois villa miles away from his early ideals: it contained

seven bedrooms, including one for a live-in maid. However, for all his ingenious attention to domestic design, the paradox was that Rietveld's house plans were just as controlling as anyone else's; flexibility turned out to be another mythical 'holy grail' of Modernism.

Altogether, some 21 houses are shown in this book. Yet for all its good intentions, it can't help but reinforce the pre-eminence of the Rietveld-Schröder House, which is given far more pages than any other. After all, it was a shining icon that Rietveld could never escape. When his wife died in 1957, Rietveld moved into the house with Truus Schröder, spending the last seven years of his life there.

Murray Fraser is a professor at the University of Westminster

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"Climate Change – The Future for Building Design"

A broad, holistic approach is encouraged, and entries will accordingly be accepted not only from individuals but also from formal or informal partnerships.

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The value of the award is £30,000 pa for each of two years.

Application forms can be downloaded from the Commission's website and should be forwarded together with five unbound copies of a project proposal of no more than four pages of A4, to include a CV. Lavishly produced or illustrated submissions are not required and electronic submissions are not acceptable.

Based on these applications a short list will be selected and these candidates will be invited to provide a further, more comprehensive written submission before being interviewed.

Key dates are as follows:

Closing date for initial applications	Thursday 12 July 2007
Short list promulgated	mid-August 2007
Closing date for further submissions	late September 2007
Interviews and final selection	November 2007

The Selection Committee will be:

Mr Alan Baxter	<i>Engineer and Chairman of the Committee</i>
Lord Linley	<i>Designer</i>
Dr Joanna Kennedy OBE	<i>Civil Engineer</i>
Professor Ian Ritchie CBE	<i>Architect</i>

Entries should be sent to: The Secretary, Royal Commission for the Exhibition of 1851, Room 453, Sheffield Building, Imperial College, London SW7 2AZ

Entries to be received by 12th July 2007

Telephone enquires may also be made to The Secretary on 020 7594 8790

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Head of Physical Regeneration and Development
London Borough of Newham
Town Hall Annexe
330-354 Barking Road
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The closing date for applications is: 13/07/2007

For an invitation to our launch at New London Architecture on July 3rd or for more information please contact:

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jennifer.currier@newham.gov.uk
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Additional information about the Department of Architecture is available from its website at <http://www.arct.cam.ac.uk>. Further particulars of the posts and an application form (PD18) are also available from the website or from the Faculty Administrator, Faculty of Architecture and History of Art, 1-5 Scroope Terrace, Trumpington Street, Cambridge CB2 1PX (email: as820@cam.ac.uk), to whom applications should be sent by 29 June 2007. We expect interviews to take place on 13 July. Please quote reference: GC01898.

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Click your way to www.solent.ac.uk for further details and to access our recruitment forms. Alternatively, contact the Faculty Personnel Administrator on 023 8031 9636 or email recruitment@solent.ac.uk quoting the post number. Please note, CVs can only be accepted in support of a completed application form. Closing date: 6 July 2007.

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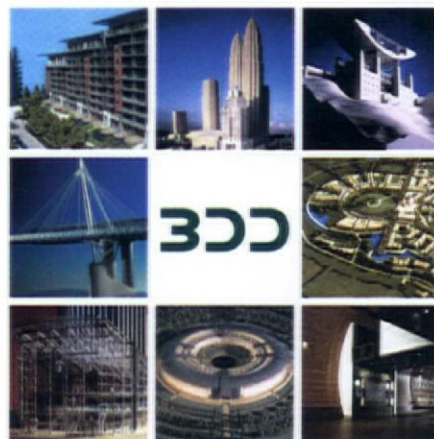
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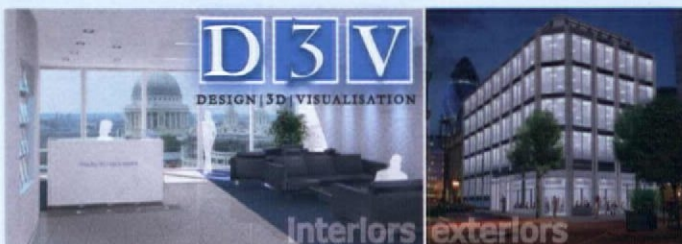
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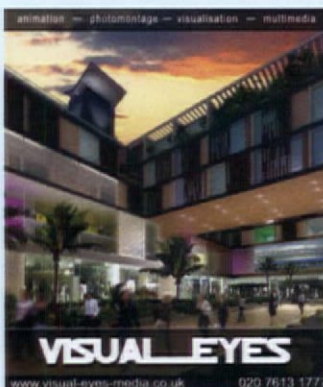
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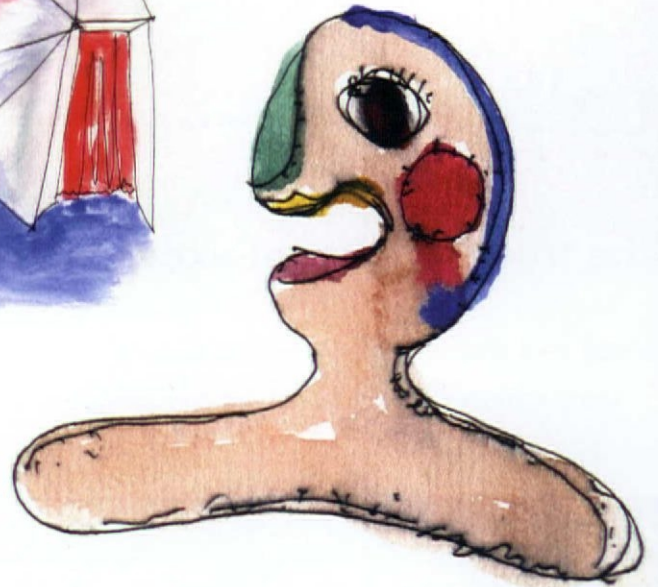
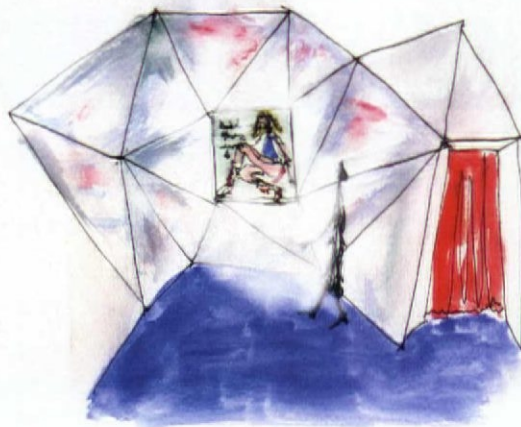
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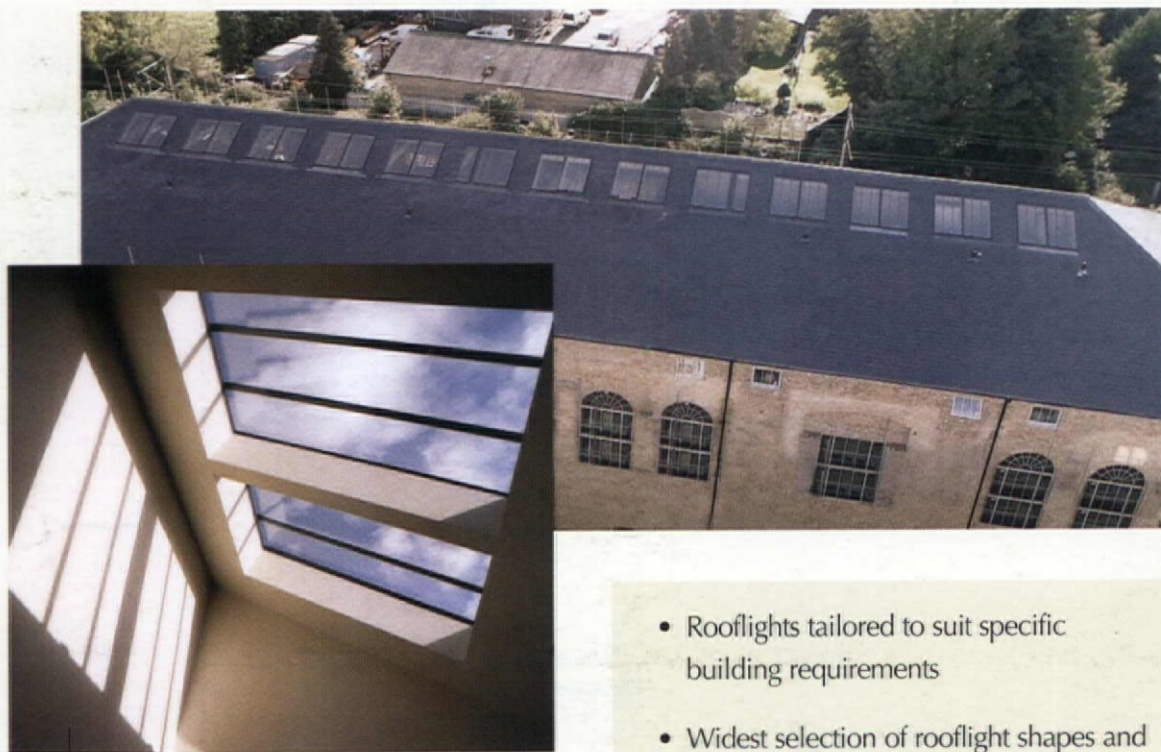
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