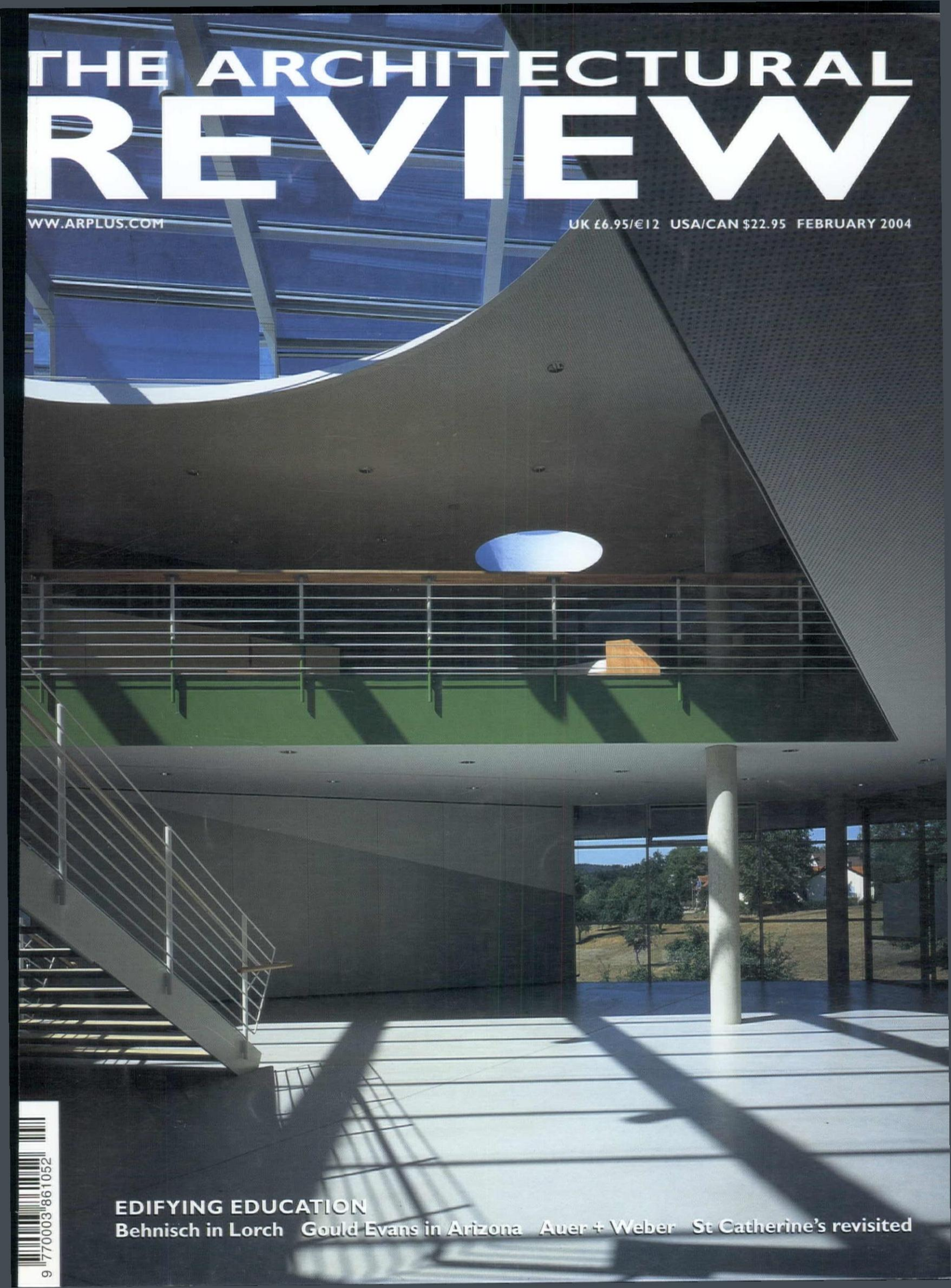


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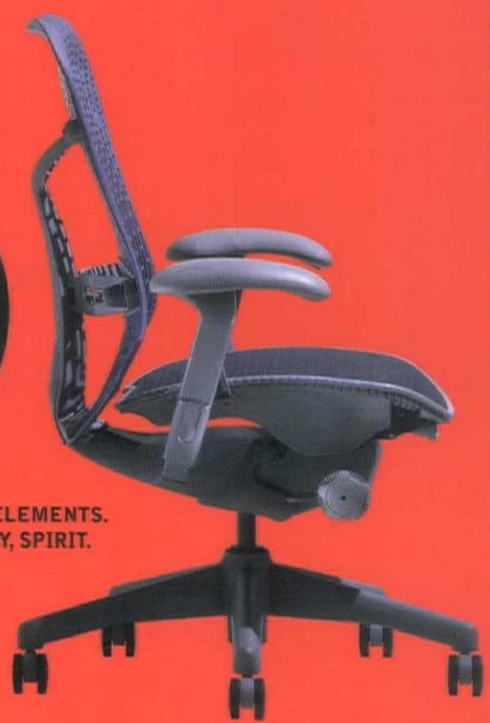
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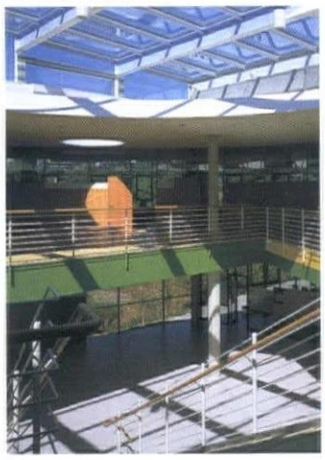
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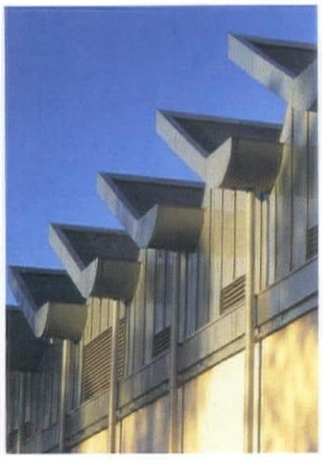
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Behnisch school in Lorch (p38)



Auer + Weber's university library (p62)



Feilden Clegg Bradley campus (p68)

EDIFYING EDUCATION

VIEW
20 Ray Kappe retrospective; Thomas Heatherwick exhibition; Lyons Fête des Lumières; Browser

VIEW FROM BAM
28 By Archie Walls

DESIGN REVIEW
32 Revivification, Istanbul, Turkey GAD

COMMENT
36 Making places and spaces for teaching and learning

EDIFYING EDUCATION
38 School, Lorch, Germany BEHNISCH & PARTNER
44 Steiner school, Kirchheim unter Teck, Germany PETER HÜBNER
52 Laboratory, Dublin, Ireland MCCULLOUGH MULVIN ARCHITECTS
56 Dance theatre, Tucson, Arizona, USA GOULD EVANS
62 University library, Magdeburg, Germany AUER + WEBER
68 University campus, Gloucester, England FEILDEN CLEGG BRADLEY ARCHITECTS

PROCESS
74 Adding to a modern masterpiece: St Catherine's College, Oxford, England HODDER ASSOCIATES

INTERIOR DESIGN
80 Sea life centre, Huelva, Spain CRUZ AND ORTIZ

HOUSE
84 House, Singapore WOHA ARCHITECTS

PRODUCT REVIEW
89 External envelope

BOOKS
96 Netzstadt; last landscapes; Corb and the concept of self; Arups; Asia's old dwellings

DELIGHT
98 Fish market, Treviso, Italy TONI FOLLINA

COVER
38 School, Lorch, Germany BEHNISCH & PARTNER Photograph by Peter Blundell Jones


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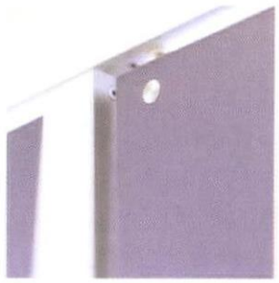
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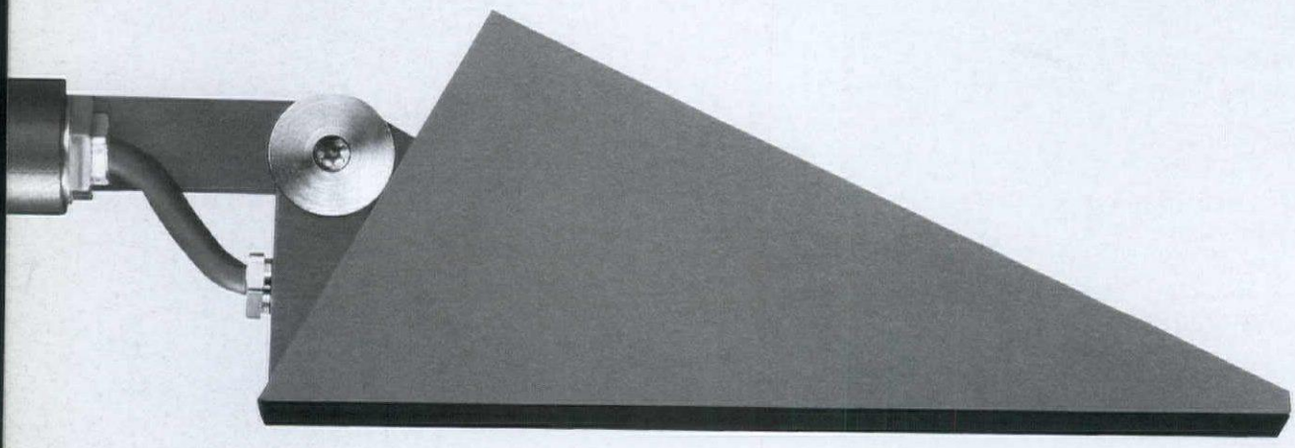


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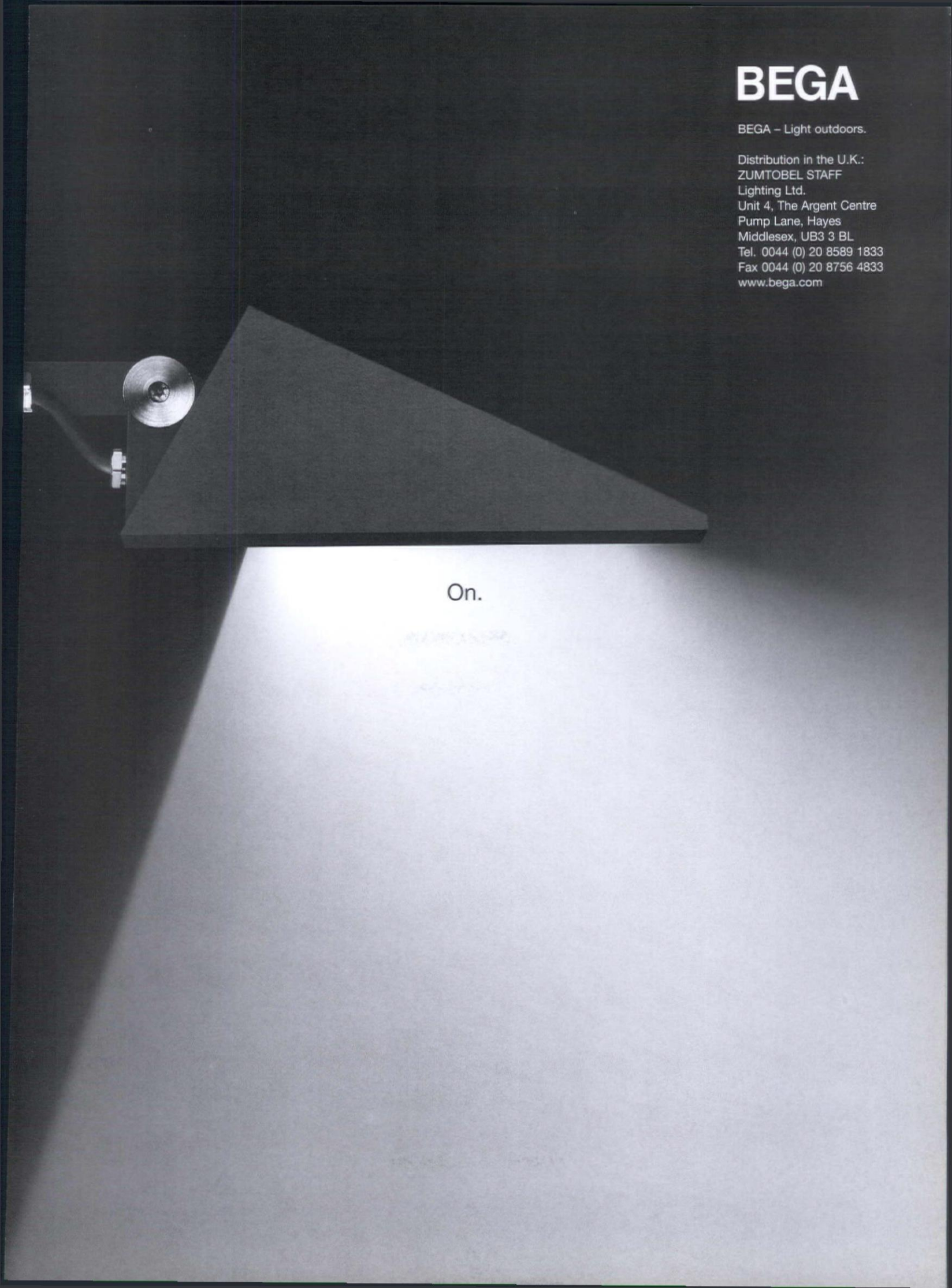


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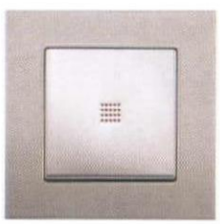
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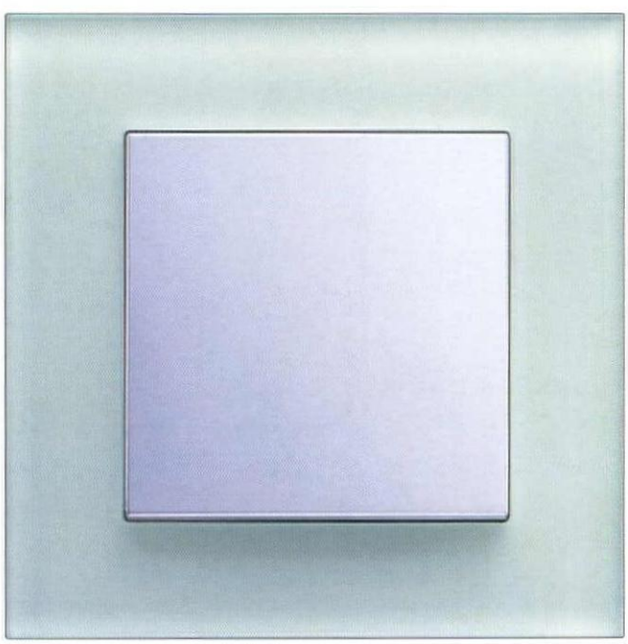


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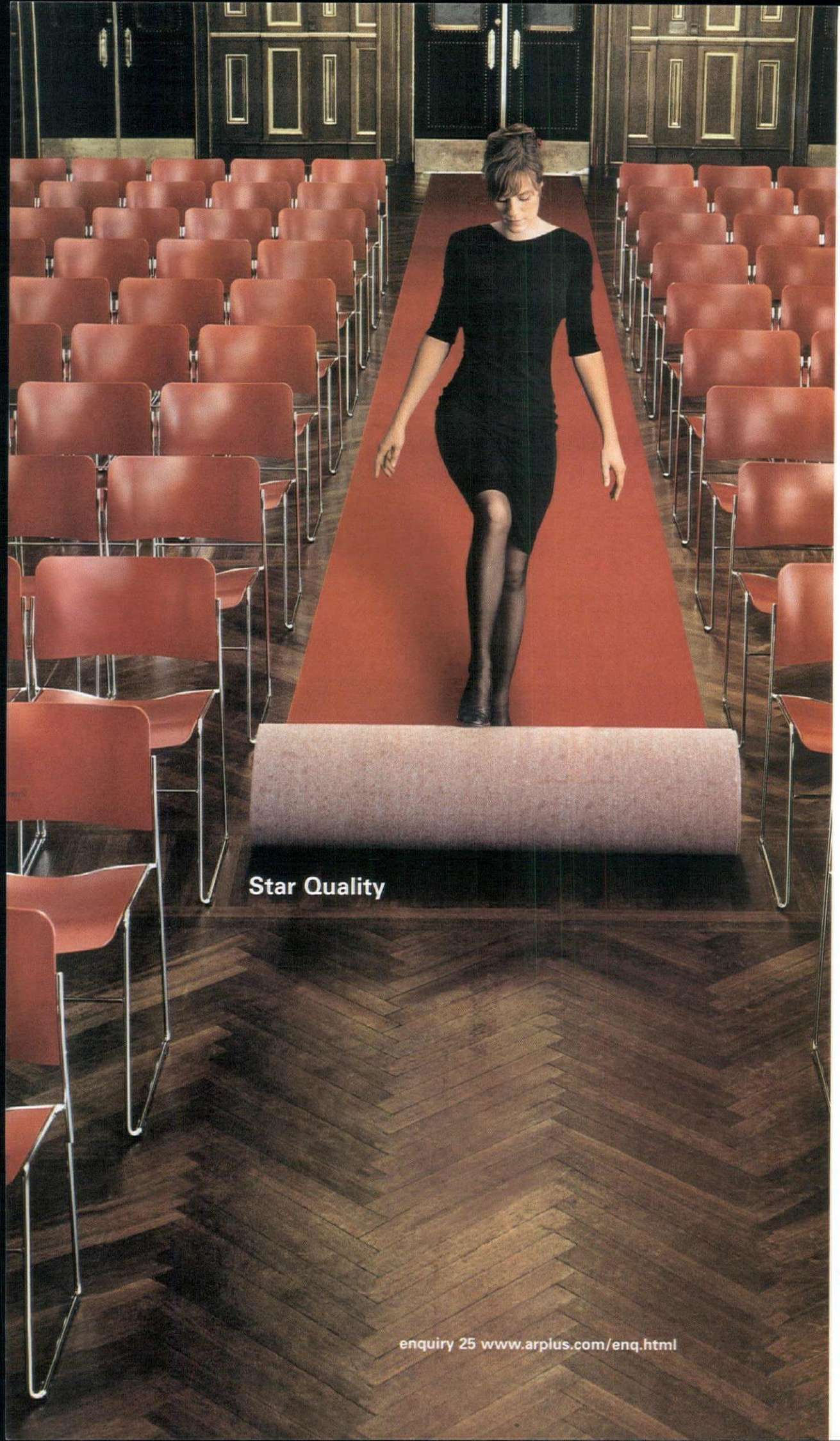
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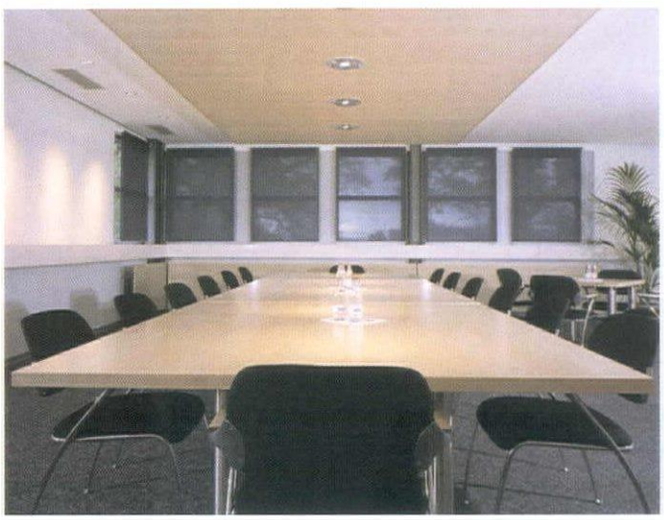
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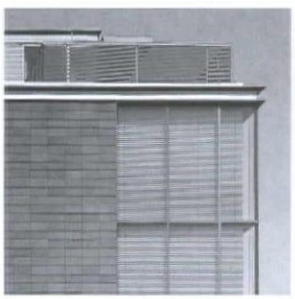
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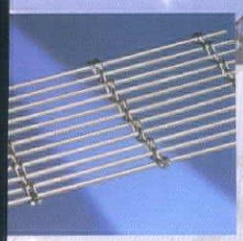
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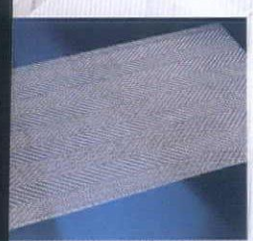


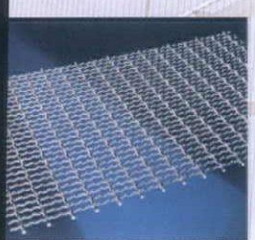
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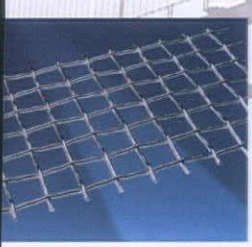


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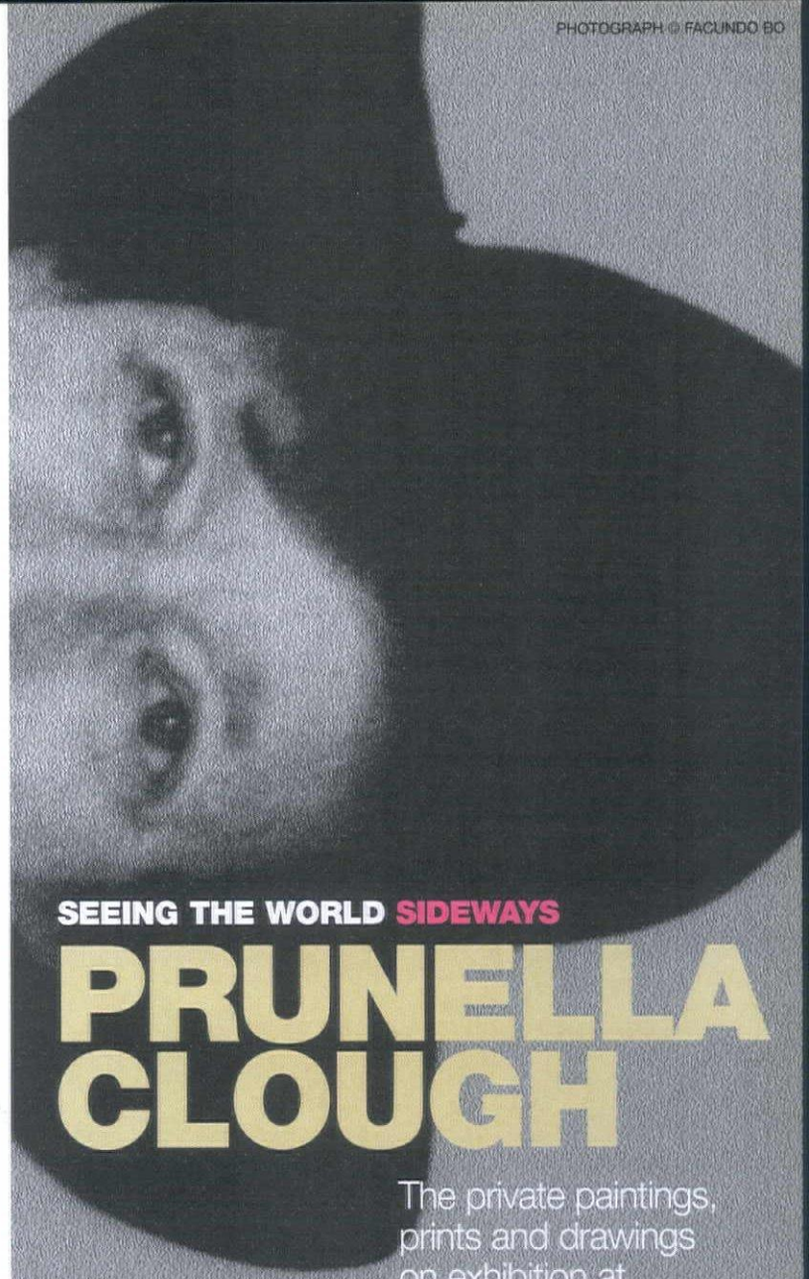
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view

THOMAS HEATHERWICK EXPLORES THE WORLD FOR DESIGN IDEAS; RAY KAPPE REDISCOVERED IN LOS ANGELES; LYONS LIT UP; LOOKING AT THE FUTURE ON THE WORLDWIDE WEB; VIEW FROM BAM, THE EARTHQUAKE-DESTROYED IRANIAN CITY WHICH WAS ONE OF THE UNSUNG WONDERS OF TRADITIONAL MIDDLE-EASTERN MUD CONSTRUCTION.



Heatherwick's exhibition is not about good taste, but an exploration of ideas. Each object has its own specially-made case.

OBJETS TROUVÉS

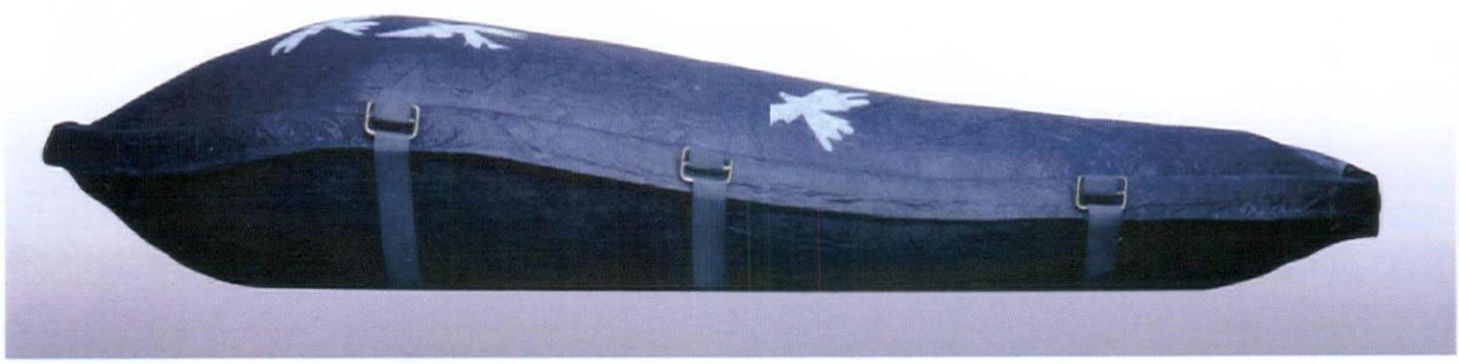
Thomas Heatherwick has spent the last 18 months scouring 15 countries (visiting six personally for shopping trips) to collect 960 items to be placed simultaneously into the 'things you'd like to live with' exhibition held at the London Design Museum (until 21 March). He was given a budget of £30 000 from the Conran Foundation and an open brief when spending the money. The result is quite extraordinary, producing a collection that's intriguing, diverse and grand in scale. It is reminiscent of a great nineteenth-century eclectic collection, like those of Henry Welcome and John Soane. Where it differs is in the modernity of the acquisitions and its ability to celebrate objects of little financial value.

Heatherwick's choices were based on the objects' ability to demonstrate inventiveness and human ingenuity and not just form. Heatherwick says that, 'This is not an exhibition about iconic design or good taste. It is about ideas: how many can you buy for £30 000? My choice of objects was led by whether I found the objects interesting and inventive.' His choices range from a handmade papier-mâché coffin sympathetically made to fit the human form, to a specially cultivated square-shaped bamboo, to an electrically operated colour-changing slab of concrete.

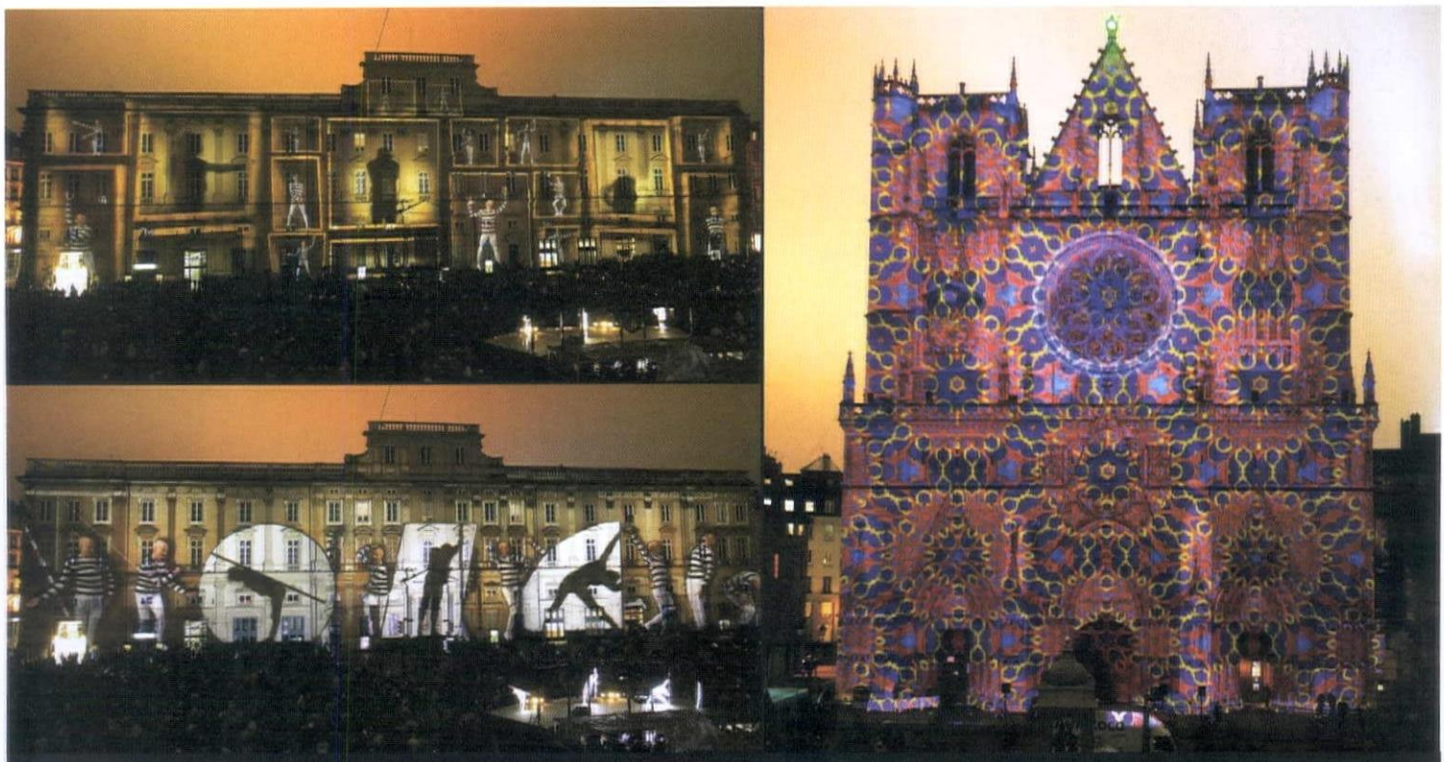
The exhibition is organized in chronological order based on the date of purchase for each item, in three aisles. All the objects have purpose-built rectangular cabinets projecting from the walls, each with an internal strip light. The different shapes of the cabinets, bunched closely together, give the feel of a richly textured three-dimensional tapestry.

Thomas Heatherwick Studio was set up in 1994, to explore cross-disciplinary approaches to architecture, engineering, design and sculpture. Known for a vibrant experimental approach to use of materials, Heatherwick draws on his sculptural background, creating work that is playful, inventive and thought provoking (see for instance ARs January 1998, July 1999, November 1999 and January 2004). He is currently involved with the B of the Bang, a star-burst of cones to be the UK's tallest sculpture, a pedestrian bridge that hydraulically rolls up into a spherical shape for the Paddington basin, an amorphic Buddhist temple in Japan and the artistic masterplan for Milton Keynes.

Heatherwick's show will be the last in an annual ten-year tradition of curating the 'things you'd like to live with' at the Design



The exhibition celebrates 'things you'd like to live with', or in this case to die with: eco-friendly papier-mâché coffin.



Just before Christmas, the centre of Lyons was transformed by the Fête des Lumières, during which some of the most well-loved urban landmarks were radically altered at night. Mime artists Skertzò (directed by Hélène Richard and Jean-Michel Quesne) created their 'Zone d'ombres' in the main square, the Place des Terreaux. Live performers acted on platforms so that their shadows could be cast onto the facade of the Musée des Beaux Arts to interact with moving projected images of the same performers seen in full light. The show lasted 15 minutes, ran in a continuous loop from 5pm to 1am and attracted crowds every night of the Fête.
At the same time, the Saint-Jean Cathedral was made to bloom by Casa Magica's projections of Tissage Automatique, inspired by the city's tradition of silk weaving: many different types of fabric were woven in light onto the cathedral's west facade, 45m high and 35m wide. The Thienot Hladiy Workshop produced the third contribution Le Veillée des Anges (The Vigil of the Angels) in which a barge travelled up and down the city's two rivers (Rhône and Saône) projecting images that interacted with the water onto quayside buildings.
The Fête has been held in the city for 150 years, though of course it has been continually changed by continual technical developments. It can never have been as brilliant as it was in December, when large format projection specialists E\T\C used 16 xenon projectors.

Museum. Its contents will be added to the Conran Foundation Collection, and will join the objects from previous exhibitions. Past curators have included designers Jasper Morrison, Ross Lovegrove, Marc Newson and the Droog group.

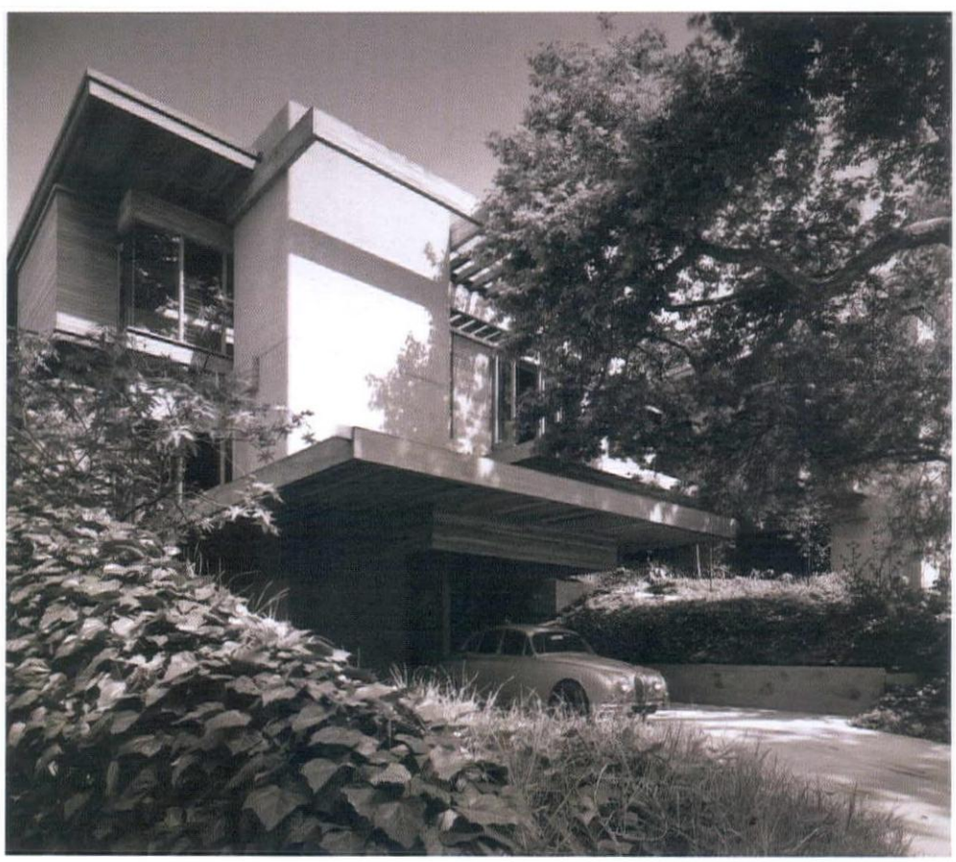
The growing Conran Foundation Collection reflects a blend of 'good design' with more idiosyncratic design choices, illustrating changing taste and advances in design technology in the twentieth and twenty-first centuries.

PELHAM DAVEY

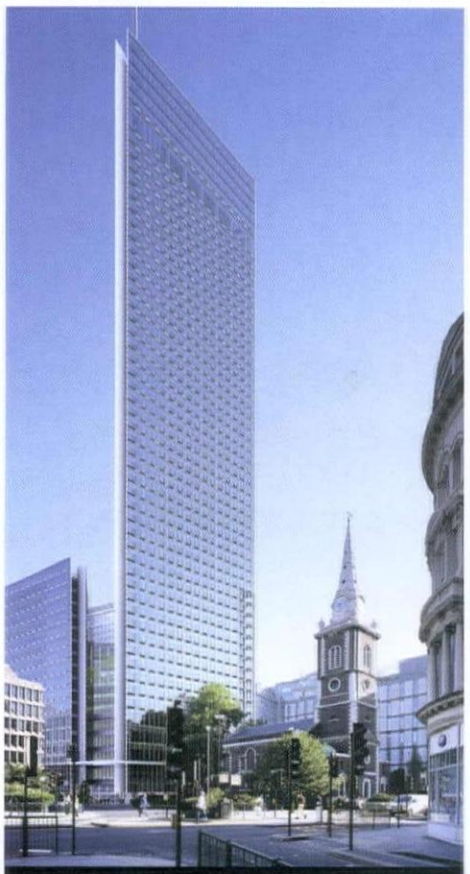
SENSE OF ENQUIRY

Marking 50 years of professional practice, *Ray Kappe – A Retrospective* is also a timely reminder of this architect's critical role as an educator in Los Angeles. Known primarily for homes that take advantage of hillside sites and views, an architecture that distils construction – as in Kappe's own canonical residence of 1965-67 – to vertical shafts and horizontal decks, Kappe is also a pivotal figure as founder of SCI-Arc (the Southern California Institute of Architecture) and as Director of that radical school from its inception in 1973 until 1987.

Installed in a spacious, light-filled suite accessed from the Sunset Strip, the show



Ray Kappe's own house in Los Angeles, 1965-67, raised on decks to avoid underground springs.



Grimshaw's have won planning permission for the tallest office tower in the City of London. Its 50 floors will offer a range of uses with public restaurant on top.



Mario Cucinella Architects have won the competition to build the new headquarters for Bologna city council, in which all the different municipal offices will be brought together round a social and commercial centre arranged in a long galleria that leads from the city centre to a new park, so creating a new urban space.

includes giant black and white photographs as hanging screens, a dozen or so models of key houses along one wall, and larger models of larger projects as occasional, free-standing elements. One side chamber houses a video interview with the architect (in need of editing and a better sound system), while a second exhibits period photographs of Kappe buildings by Marvin Rand and Julius Shulman.

These elements are linked by scroll-like horizontal panels that recount, through text and image, Kappe's development from initial exploration of post-and-beam techniques (projects contemporary with later Case Study and early Frank Gehry houses) through the maturity of his own home (its decks raised above grade to avoid underground springs), to more recent structures such as the Cookston Residence and the Santa Monica Bus Administration building (where curves in plan and section respond to climatic and modular concerns).

One entire facade of his Culbert beach house slides back, as do some in Japan by former SCI-Arc student Shigeru Ban. Indeed, like Schindler before him, Kappe manipulates light and the merits of each chosen material – whether concrete or timber or steel – as settings for healthy, unpretentious lifestyles.

His larger and mostly unrealized planning proposals for Downtown LA and for responsible hillside development reflect the positive sense of enquiry and experiment associated with SCI-Arc. Including shots of Ron Herron and Peter Cook holding forth, and of Michael Rotondi – Kappe's eventual successor as Director – in SCI-Arc's first graduating class, this is an exhibition positing architecture as a pragmatic adventure. RAYMUND RYAN



Interior of the Kappe House – light, airy spaces for a healthy and unpretentious modern lifestyle.

Ray Kappe – A Retrospective, *A + D Museum, 8560 W. Sunset Boulevard, West Hollywood, until 6 February. www.aplusd.org*

INTERVENING IN THE EUROPEAN CITY

The AR will hold a conference on Intervening in the European City on 16 March.

Almost all European architects work in or among old buildings and our conference Intervening in the European City will examine some of the most creative contemporary interventions.

Distinguished and innovative architects will explain how they have worked creatively with our inheritance from previous generations, adapting the legacy to present-day needs and aspirations. How can new materials and methods of construction, and radical notions of form, space and light relate to existing city fabrics that were largely derived in scale and texture from the properties of masonry and timber?

The challenge is to generate cities that respond to the past and future as well as the needs of the immediate present. The range of approaches is very diverse. Speakers will include Günther Domenig (Austria), Massimiliano Fuksas (Italy), Hubert van Henket (Netherlands), Valerie Mulvin (Ireland), Peter Cook (UK), Ole Wiig (Norway), Chris Wilkinson (UK) and Francine Houben (The Netherlands).

Bookings can be made through the RIBA at *www.architecture.com.*

RIBA

Royal Institute
of British Architects

Emerging Architecture

Next generation architects from around the world show and tell at the RIBA with a series of talks and accompanying exhibition

Emerging Architecture spring lecture series

A series of four seminars with presentations from winners and highly commended architects from the ar+d Emerging Architecture competition. The architects will talk about their recent work in general as well as focusing on their prize winning projects.

The awards are a partnership between *The Architectural Review* and d line International, the Danish architectural design firm. They celebrate the work of young architects and designers usually at the start of their career and not yet well known.

The accompanying free exhibition of winning and highly commended entrants will be in the Florence Hall until 16 March 2004.

ar+d

Supported by

Buro Happold

How to book

Tickets cost: £7 full price and £4 RIBA members, student members and concessions.

Tickets for RIBA talks are available on 020 7307 3699, or at www.riba-gallery.com

RIBA Gallery
66 Portland Place
London W1B 1AD
T 020 7580 5533
F 020 7307 3703
Ticket line
T 020 7307 3699





10 February

Ville Hara
Jean Pierre Crousse

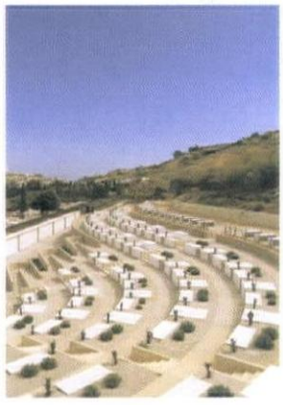
6.30pm

Ville Hara talks about his project for the Korkeasaari Lookout Tower at Helsinki Zoo, constructed in collaboration with HUT Wood Studio Workshop.

Jean Pierre Crousse of Barclay & Crousse presents their Casa Equis, the second house they have designed for Peru's La Escondida Beach to have been recognised with an ar+d commendation.

Chaired by Peter Davey





17 February

Aldo Amoretti
with Marco Calvi
Christian & Peter Brückner

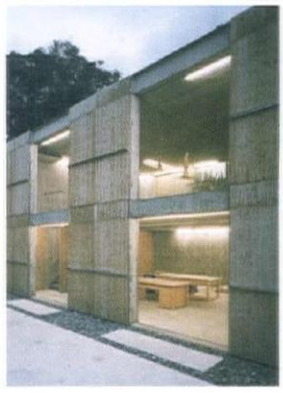
6.30pm

Amoretti & Calvi Architetti have received a commendation for their extension to the cemetery at Sanremo, Italy. Using the naturally sloping site to create a very modern necropolis, the project includes a small ossuary in the form of a tower.

Christian and Peter Brückner present their project for a meeting place on the German Czech border. A careful selection of natural site-specific materials and glass are used to build two walls that enclose a small room, a place for reconciliation and reflection.

Chaired by Catherine Slessor





24 February

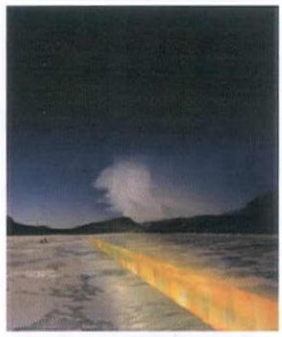
Hiroshi Sambuichi
Juan Antonio González Pérez
with Urbano Yanes Tuña

6.30pm

Hiroshi Sambuichi talks about the Air House, a glass and wood pavilion, and a potter's atelier for the Miwa ceramicists, a considered construction which has re-used the cedar employed to produce the shuttered concrete as external doors and shutters.

Juan Antonio González Pérez and Urbano Yanes Tuña of GPY Arquitectos present their ingenious community centre for Los Silos in Tenerife, a new building that has a clever roof system to filter the strong Tenerife sunlight.

Chaired by Iain Borden





2 March

Pierre Thibault
Maurice Nio

6.30pm

Pierre Thibault of L'Atelier Pierre Thibault presents their project for Quebec's Winter Gardens. A stripe of fire runs dramatically across a frozen lake in this piece of land art which contrasts vividly with the surrounding environment.

Maurice Nio of NIO architecten talks about their winning project for a Bus Station at Hoofddorp in The Netherlands. Its dramatic organic shape, reminiscent of a whale's jawbone, is carved out of a polystyrene foam, treated to provide a durable finish.

Chaired by Iain Borden

Images from left:
above: Korkeasaari Lookout Tower ©Jussi Tiainen
below: Casa Equis ©Barclay & Crousse
above: Meeting Place ©Brückner & Brückner
below: Sanremo cemetery ©Amoretti & Calvi Architetti
above: Cultural centre, Los Silos ©GPY Arquitectos
below: Miwa ceramicists' atelier ©Daici Ano
above: Winter Gardens, Canada ©L'Atelier Pierre Thibault
below: Bus Station, Hoofddorp ©NIO architecten

browser

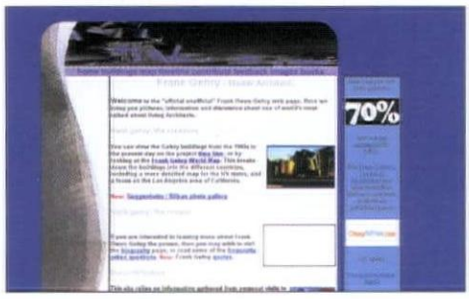
Sutherland Lyall munches his way through the heavy and spicy mid-winter diet.

Spread bets

Archiseek continues its inexorable global expansion with *http://germany.archiseek.com* and two new mini-portals *http://scotland.archiseek.com* and *http://canada.archiseek.com*. They are in their infancy and, although content is all in website design, the basic infrastructure looks solid: these are sites you should put in your international Favourites list. You have to admire Irish chutzpah in going for the big picture for these are more from the Desire Publishing stable that runs the excellent *www.archeire.com* which, last month, had (and possibly still has) the full skinny on all the entries for the recent U2 Landmark Tower competition.

Oh, pooh, snigger, snigger

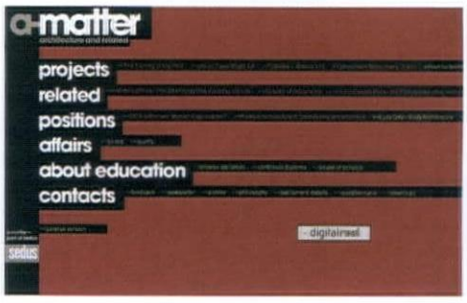
There was a demonstration home assembled in the car park at January's International Consumer Electronics Show and the parallel 2004 International Builders Show in Las Vegas – try *www.nextgen04.com*. Designed by a company associated with a home plans outfit and rather obviously not by architects, the accoutrements stuffed into the half million dollar building suggest that the Big Things for the coming year are giant tvs and (unlike last year when wiring new houses up for networks was hot) wireless networks – which need nothing at all in the way of installation from the builder. The most interesting things seemed to be in the kitchen and loo departments. Distance-controls people, TMIO, had a stove/refrigerator (try *www.tmio.com* for an explanation of that) and the world's largest water closet manufacturer, TOTO USA, whose output includes the slightly bewildering self-generating hydropower faucet (not another way of describing a genetically modified tap but one whose power supply is generated by a miniature water-powered turbine), washlets (the site is so coy about these streamlined water wands that it's not at all clear what they do and how they are used) and the NEOREST water closet. It is operated by wireless remote, has a 'gentle front-and back aerated warm water spray', a lid which opens when people approach it – and closes when you have risen from the throne. Among many other features including a heated seat and warm air dryer, it uses fuzzy logic to establish your pattern of use. Take a peek at the future at *www.totousa.com/toto/totohome.asp* where the motto is 'Beauty is More than Porcelain Deep'.



www.frank-gehry.com



www.h2olland.nl



www.a-matter.com

To the rescue, Blobbistes!

We looked at the Frank Gehry site two years ago. One of the problems with being so grand that you distain setting up a site yourself and allow fans to create one for you is that you're dependent on their continuing commitment. The site at *www.frank-gehry.com* is the work of Coventry-based Briton, James Avery, and is billed as the '"official unofficial" Frank Owen Gehry web page'. Avery's admiration seems undimmed but he's not had a lot of enthusiasm from the Gehry office. There are now around 31 000 Google entries for 'Frank Gehry' and perhaps it is this wide unofficial coverage which has persuaded Avery to call for someone else to perhaps take over the running of the site. That was, er, a year ago. Shame, I say. Look, there must be somebody out there. Go on, call Avery at *james @ architects .net* (the spaces are deliberate, he says, to prevent spam robots).

Pied à l'eau

Excuse the pedalo joke but it's a Dutch one (at least I hope it's a joke) to be found on an otherwise fairly sober site *www.h2olland.nl*. It's the title of a design for a floating house at Amersfoort by architect Rik Lagerwaard, one of many look-worthy schemes to be found on the site. Lagerwaard's own potentially intriguing site is at *www.lagerwaardarchitect.nl* but, even when you use two screens, it turns out to be unmanageable. I could just make out the tops of what have to be long-lost frames from Tin Tin but there was no way to scroll down. The main site, h2olland, is, as its sub-title explains, devoted to 'architecture with wet feet.' When you think about it almost all the Dutch schemes you know about are on dry land despite the fact that much of the country is below sea level and has been intimately involved with water for most of its history. So this is a great site for setting the record straight about Dutch water-related architecture, design, landscape, engineering, urban planning and regeneration. In comparison with some of the content, it's a distinctly unflashy site. But that's because the designer has grasped that simplicity and plainness are terrific virtues when you have a lot of visual stories to present.

Missed all the tricks

You have to get cheerful about practically any debate about architectural education because there seems to be so little of it about. Debate, that is. So I was intrigued to hear about a new site of the highly regarded Penn State school. It is called REBOOT: Rethinking the Design Thesis at *www.courses.psu.edu/arch/arch491_clg15/*. Bizarrely, it starts by asking you to download the Chinese (Simplified) Text Display Support but since the download time is 23 minutes you don't. Maybe that was why I later got a Blue Screen of Death when I tried to leave the site. REBOOT was sponsored by the Graham Foundation so some if not lots of dosh for all that hard work. But the end result of the inquiry seems to be no more than a set of dreary interviews with current and recent celebrities. Journalists do this kind of thing off the tops of their heads before breakfast but we get published and paid only when the story says something new or interesting. I dozed off during the interview video so maybe I missed the whole point. I never did work out what the Chinese connection might be.

Firmness, commoditie ...

Coincidentally, a great site that I mentioned recently, a-matter, is trawling the world for architecture students' design theses, a selection of the best and most interesting of which it features on the site at *www.a-matter.com*. Even a quick run-through reinvigorates the impression you have always had that education is where quite a lot of that Woottonesque delight in architecture takes place. But perhaps not at Penn State any more.



enquiry 4 www.arplus.com/enq.html

architects'
working details 9



Architects' Working Details Volume 9 is a selection of details published in the Architects' Journal between 2000 and 2001. Covering buildings that range from large office buildings and visitor centres to small domestic extensions and conservatories, it provides a practical resource of building details for working architects, designers and students.

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- External walls and windows
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If you are searching for inspiration or want to see how new materials and components are being handled by other designers, then the Architects' Working Details series is the place to look. It could save you reinventing the wheel, or you may just be curious – you saw the building in the AJ and want to know how they did it.

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Diary

AR'S CHOICE OF CURRENT INTERNATIONAL EXHIBITIONS AND EVENTS

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AUSTRIA

YEARNING FOR BEAUTY: THE 100TH ANNIVERSARY OF WIENER WERKSTÄTTE

Until 7 March 2004

Architekturzentrum, Vienna

Books on modern architecture from collection of Italian art collector Egidio Marzona, including Frank Lloyd Wright, Adolf Behne and Gordon Matta-Clark and by artists who have crossed the boundaries of art and architecture.

www.azw.at

GERMANY

OTTO STEIDLE – THE CITY AND THE HOUSE

Until 15 February

Pinakothek der Moderne, Munich

Retrospective show of the work of Otto Steidle, now 60, one of Germany's most productive and imaginative architects.

www.pinakothek-der-moderne.de

SWITZERLAND

MARK ROTHKO

Until 12 April

Fondation Beyeler, Basel

This thoughtful refurbishment and expansion of the museum's Rothko Rooms heightens appreciation of the master's oeuvre, especially his famous final Black on Grey suite of paintings.

www.beyeler.com

UNITED KINGDOM

EMERGING ARCHITECTURE

Until 2 March

RIBA, London

Winning projects from this year's ar+d awards are elevated to the majestic confines of the Florence Hall. Come and savour the amazing diversity and ingenuity of the world's leading awards programme for young architects.

www.riba-london.com

FOREIGN OFFICE ARCHITECTS

Until 29 February

ICA Galleries, London

Tenth anniversary show of the talented and extremely hip young gunslingers. New York, Yokohama, Tehran – the world is now their digitally reconfigured oyster.

www.ica.org.uk

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letters

TOO ARTY?

SIR: I am intrigued by attempts to relate architecture to the other arts, and the report of the Royal Academy Forum in the January issue gave much food for thought, ranging from Simon Callery's moving exploration of the nature of earth to Andro Linklater's exposition of the great American grid, which brilliantly and succinctly explains the reasons why US culture is so different from those of the rest of the world.

But I could not understand the point of publishing Hamish Fulton's contribution. Was the idea of printing most of it in CAPITALS of different kinds an attempt to indicate some of the drama of Fulton's lecture style? Or was it an attempt to make a series of banalities seem profound?

Yours etc
ANNE PERDOCK
Geneva

AR+D EXALTATION

SIR: I've just returned from seeing the ar+d awards exhibition at the RIBA where I was heartened to see such fresh wonderful work by young architects. There was no decent international competition for young architects before the ar+d awards and you have admirably filled the void. Well done!

Yours etc
HARRY OTTWAY
Dublin, Ireland

AR+D DISAPPOINTMENT

SIR: While I was not unimpressed by the results of the latest round of the ar+d contest, I could not help but be a bit disappointed. In previous years, you have managed to celebrate a huge range of design activity, from landscapes to tea-pots. There was nothing this year at the furniture/small object end of the spectrum. Was this because there were no suitable entries, or because the jury had a wilful bias against such things?

You seem to have been happy to vote for a wilful house by Laurie Chetwood, which will assuredly look pretty tatty in a few years (months?), and for that elongated ectoplasmic attempt at a bus station. I simply can't imagine that the latter, made of plastic, will be able to stand up to the hard wear that it will experience in use – bus stops seem to bring out the worst in people's characters (particularly at night) and, though the Dutch are doubtless very admirable people, it is impossible to believe that all of them will refrain from what would appear to be a vandal's dream of heaven.

On the other hand, when you did choose buildings of a more orthodox kind, why on earth go for such safe bets? Sambuichi's two celebrated offerings are pretty dull. The Vlotho fortress seems to be no more than an assembly of incidents.

Still I mustn't complain too hard: ar+d is the only contest of its kind in the world, and it really does bring out previously unconsidered talent, some of which – Hara, Thibault, Yamaguchi, Barclay & Crousse for instance – is really impressive.

Yours etc
JAMES JOHNSON
Ottawa, Canada

GRAZ VERSUS BIRMINGHAM

SIR: I was intrigued to see the warm welcome for the Cook and Fournier Kunsthaus in Graz (December) and the outraged attack on the store in Birmingham by Future Systems (AR September 2003). They are somewhat alike: huge blob masses which have little relationship to their context. In Graz the new intrusion seems particularly difficult because of the fine scale of its surroundings.

But there is surely a crucial difference: the Birmingham building is like a giant spotty slug, which slurps in visitors through tiny orifices. But (at least judging by your photograph), the Graz piece has a welcoming ground floor, an active edge against the street, which has a chance of really improving the life of the place. We await further elucidation in your pages. Do those spiky light chutes really work for instance?

Yours etc
ALYSOUN MADDISON
Sydney, Australia

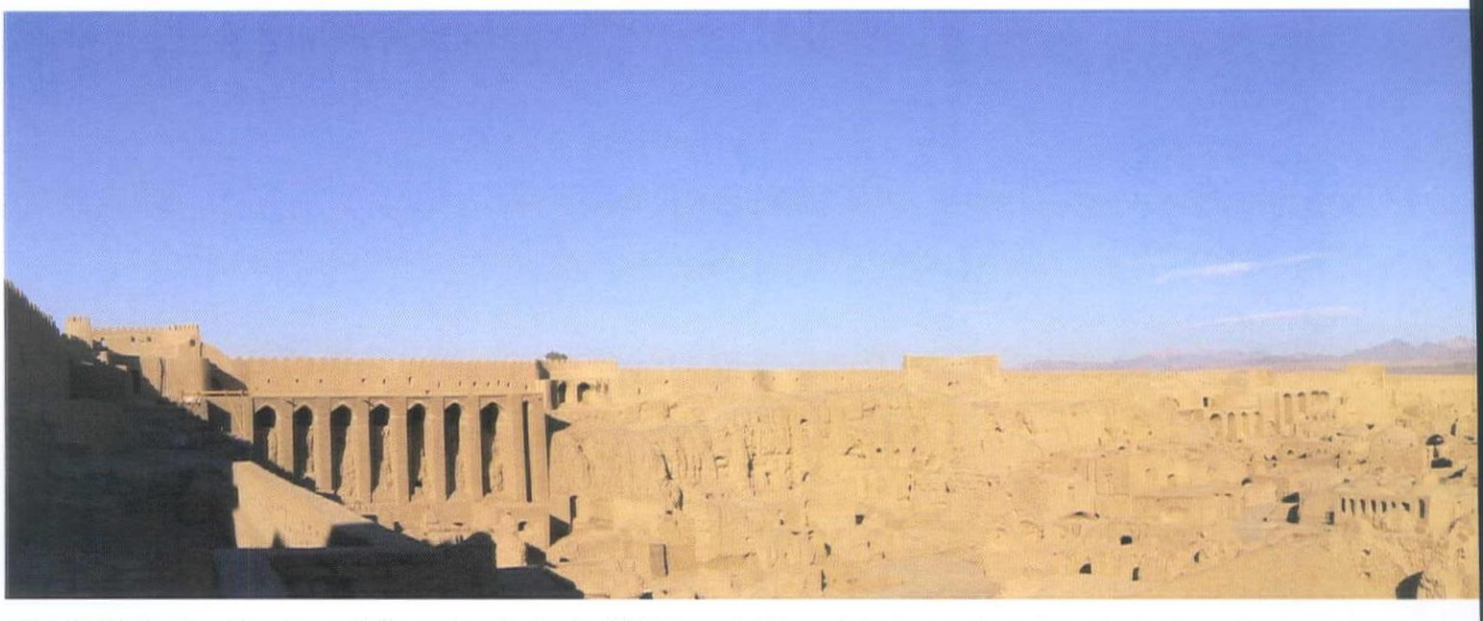
PREMATURE EXCLAMATION

SIR: The Architectural Review (January 2004) appears to have succumbed to that old schoolboy malady premature exclamation. Or is it just that we are to have construction technology and site visits as a new feature. Leave that to the AJ, and let Zaha wait her turn.

Yours etc
GORDON MURRAY
Glasgow, Scotland

ERRATUM

Lynne Bryant was the author of January's Delight on Scarpa's Palazzo Abatellis in Palermo (p98), and not Richard Bryant.



Bam's old city before the earthquake: a veritable encyclopaedia of ancient Middle Eastern building methods: domes, vaults, squinches, fortifications made with sun-dried brick in

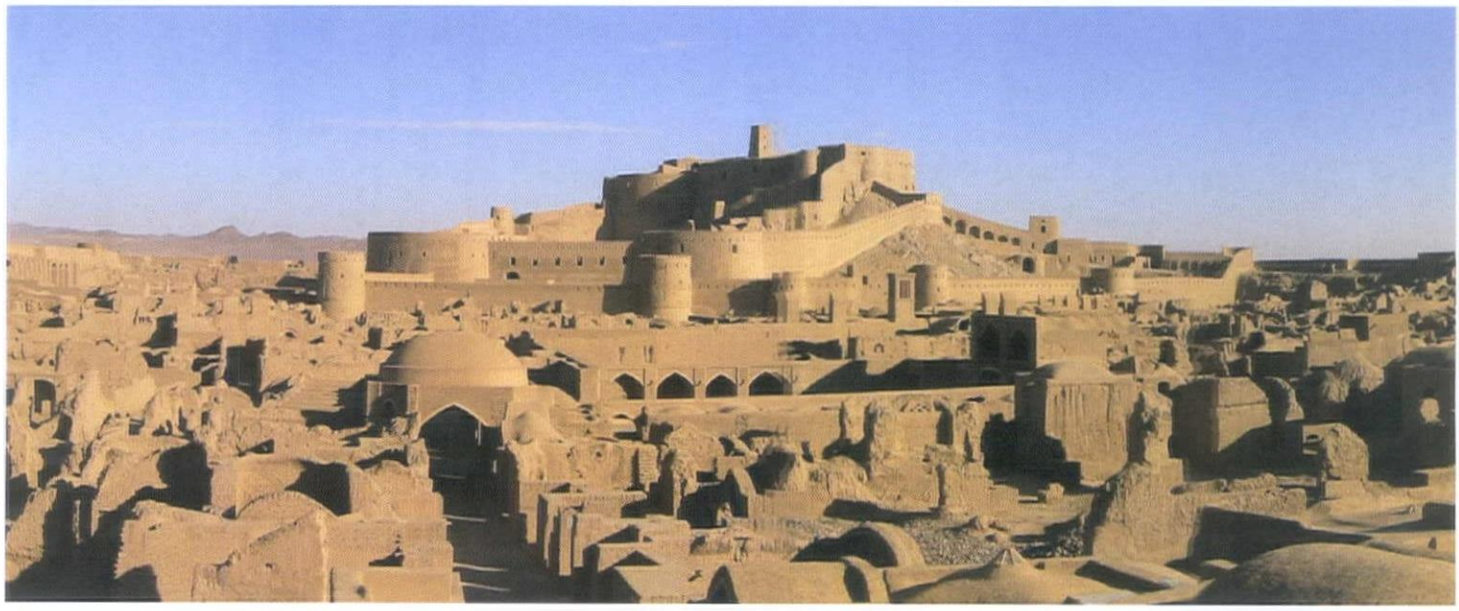
View from Bam

One of the finest and most ancient mud cities in the world, Bam, in Iran's Kerman Province, was largely demolished by an earthquake in December. Archie Walls reports on past glories and possible futures.

I waited 30 years to visit Bam. When I did, it was a dream come true – and that was in December. As the reports came through, I was overwhelmed by a feeling of loss, not only for a magnificent city but for the engaging children I had met, and friends we had made whose hospitality abounded – plump Bam dates, full of flavour, sticky syrupy cakes, sweet black tea – and in the nearby town of Mahan a mouth-watering lunch of local specialities spread on a floor strewn with rugs, a blazing fire in the hearth and spectacular views out to the Shah Nematollah Vali mausoleum. Life flowed so naturally that it is difficult to conceive of the horrors, the loss and bitter cold the survivors have endured since.

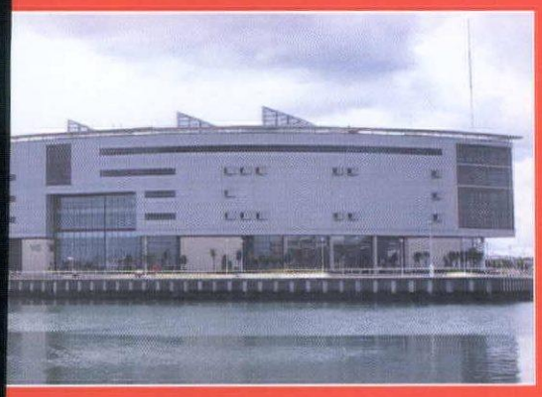
What was so special about Bam? It is in the first rank of my Great Magical Cities of the Orient: cities such as the walled Old City of Jerusalem with the holy sites of three religions; Aleppo, with its central citadel and miles of covered markets; Damascus with its Grand Mosque; Cairo with its many Islamic monuments and the millions of people living in its narrow byways; and Sana'a with gravity-defying earthen structures and beautiful gardens. Bam had many of the characteristics common to these cities and, although smaller than most, its uninhabited ruins offered an abandoned. mystical quality in the midst of a desert with sharp mountains on the horizon – a perfect setting for *The Rubáiyát of Omar Khayyám.*

Bam is located on top of a large archaeological mound. This, together with the architecture of its buildings, illustrates how it has developed and changed over its 2000 year old history. Far below the existing fortified circuit of walls, there is another line of mud brick walls and watchtowers that separate the city from the wide flood plain of the Poshtrud River. These walls indicate an even greater area that was once inhabited and defended. Bam provided a veritable encyclopaedia of such historic structural elements: varieties of sun-dried mud brick squinches and vaults, many with the inclined arched technique recently used by Hassan Fathy. Variously



Bam's citadel is built on top of an immensely ancient mound in which the unexplored remains of successive civilizations are imposed on each other. Before earthquake.

corus



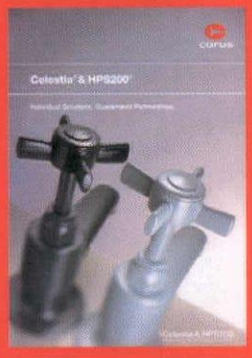
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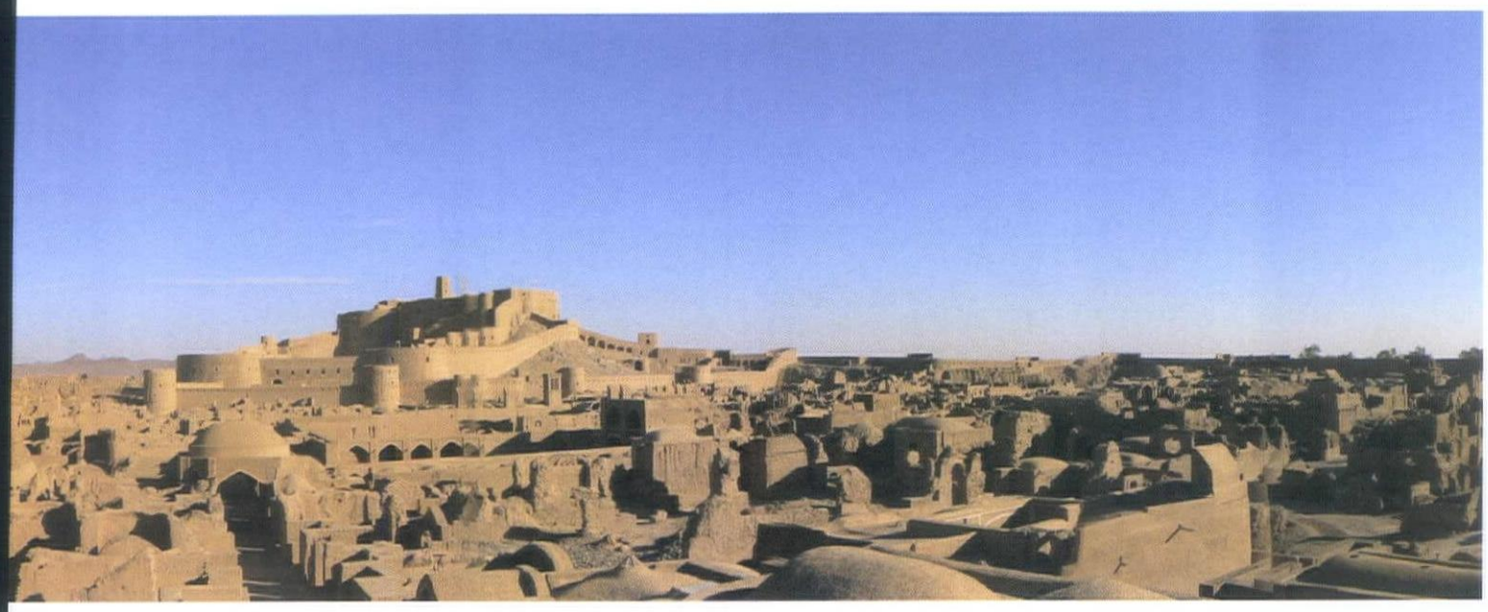
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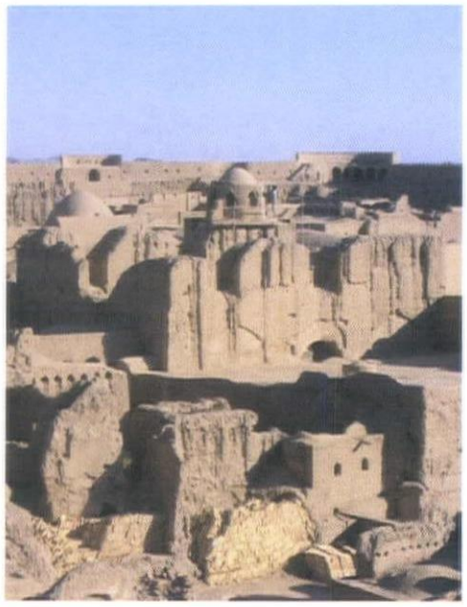
techniques that date back to Biblical times. The old city was largely deserted since the 1930s and so had already partly fallen into decay. Restoration work had started.

shaped domes decorated by intricately laid bricks formed fascinating geometric patterns. Then there were the courtyards – some small, some large, some square, some rectangular, some with arcading, some with iwan recesses. Khans, or caravanserais, provided safe haven to travelling merchants and pilgrims; their courtyards with rooms at each end had fireplaces to ward off winter cold.

Bam had a historic mix of religions. I visited a nineteenth-century courtyard house built by a wealthy Jewish merchant which was being restored by the Iranian Cultural Organisation as part of a general restoration project covering the whole fortified area. Numerous historic events have been recorded in Bam connected to the Zoroastrian faith that first took root in Persia in about 600BC. There is evidence of other links to Christianity and to Judaism and, with the advent of Islam, to its communities – the Shia, Sunni, Ismaili, and no doubt Sufi. From the beginning of the sixteenth century until the eighteenth, the city flourished, being on the trade route joining the Persian Gulf to India and Pakistan. The citadel was evacuated to avoid political reprisals in the 1780s, but civilians remained in the fortified town until its decline in the mid-nineteenth century. Thereafter soldiers occupied it until 1931 since when the old city and citadel have lain empty.

I was in Iran in December to attend the ninth International Conference on the Study and Conservation of Earthen Architecture, Terra 2003 in Yazd, which lies between Tehran and Bam. When I arrived in Bam, I discovered my paper exactly described the specific structural technique used in its historic walls and buildings – a different method of construction to that used in the modern areas of the town where there was the greatest loss of life.

The background to my paper was my identification, some 25 years ago, of a particular form of wall construction used in the historic forts and towns in Oman, which I called the 'layered technique'. A continuous render is taken up the sides and over the top of the core material of a wall, the core material being some three courses of mud bricks about forty centimetres high. Over the years, during architectural and archaeological projects I have traced this technique throughout an area stretching from south-west Iraq, through the Jordanian desert, across the Arabian peninsula to Yemen and Oman, then south to Zanzibar. Now I have found it in his-



Domes, vaults and arcades before earthquake.



From citadel before earthquake, with old town in foreground and , beyond, new (where there was much greater loss of life).



Layered mud-brick construction which, claims Walls, is more resistant to earthquakes than modern cement mixtures.

toric structures in Iran, from Tehran to Bam. In the buildings I have seen, various combinations of materials have been used, from earth renders with hand formed and box-made mud bricks to harder lime-gypsum renders with stone, but the essential feature of the layering has been there. The earliest example I have come across was in Bahrain, where I found a wall with squared stones on one face backed by courses of smaller stones, enveloped by a render. This dated from 800 BC, and it can be assumed that this was preceded by hundreds of years of experiment. The advantage of this system is that if the external render is damaged – by the elements or enemy attack – attrition is restricted to specific layers and does not spread to the layers above or below.

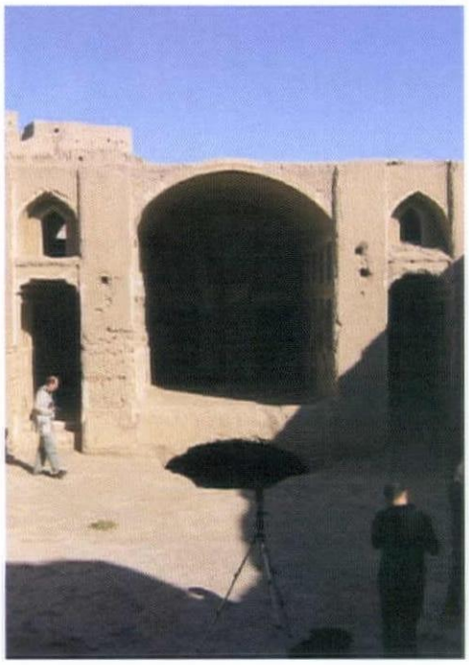
Looking at photographs of Bam since the earthquake, I am convinced that the old city and citadel can be reconstructed and returned to their mystical splendour. I have successfully restored buildings of similar construction in Bahrain and Zanzibar by following the layers and replacing damaged renders systematically and with compatible materials. And we could add a new dimension by identifying the direction in which the builders constructed the walls, as I found in Bahrain.

Re-plastering a layered wall in one continuous coat, or cutting it back and inserting an outer face of fired bricks, can never benefit a historic structure. So I worry for Bam when I read of 'super-adobe' buildings constructed of sandbags filled with a mixture of cement and mud, connected by barbed wire for reinforcement. To say that such constructions would be indistinguishable from Bam's original buildings makes my hair stand on end. On the other hand, 'super-adobe' buildings could house the inhabitants of the modern city quickly and cheaply with readily available materials. I also worry that, in the old city, speed and need may tempt the cement brigade to push their products, and that earthquake strengthening measures may be introduced to the detriment of the historic fabric.

So much for the above ground structures, but what about the *qanat* (aqueduct) systems that for millennia have criss-crossed the desert to bring water from the mountains to Bam, and other oases of the region? What happened to these wonders when the earthquake struck?

Bam is the leading example of an indigenous architecture that expresses the common historical and cultural roots of ancient peoples spread over a vast region of the world well before modern geo-political boundaries were drawn. Its tragic devastation provides an opportunity for three major areas of learning: first to undertake a detailed archaeological survey of the mound; second to restore sensitively and with compatible materials the extant structures; and third to re-establish an appreciation of the common historic and cultural roots which once upon a time bound the peoples of the whole region.

ARCHIE WALLS



Pre-earthquake court with traditional Persian *iwan*.



After earthquake: Walls believes that devastated citadel and city can be reconstructed.



Stylish function

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rchitect: Dominique Perrault, Paris

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WORLD WIDE WEAVE

Invisible box

A long deserted ruin has been dramatically brought back to life by inserting a completely new interior.

REVIVIFICATION, ISTANBUL, TURKEY
ARCHITECT
GAD

Istanbul still has many enigmatic ruins, rarely explained in guide-books, and often almost impossible to date unless you are a real expert: is it sixteenth century or eighteenth, or even basically Byzantine? Until recently, Esma Sultan was one of these. In the old fishing village of Ortaköy on the Bosporus, the late eighteenth-century brick palace was a summer retreat for the daughter of a sultan. It was burnt down about 100 years ago, and became a useless but picturesque shell.

Now, Ortaköy is almost under the shadow of the Bosporous suspension bridge, and is very much part of the great city. Yet it still retains a good deal of its village atmosphere, with colourful houses round a gem of a seaside Baroque mosque, and the area has become popular as a focus of entertainment, artistic life and a slightly recherché tourist centre.

The palace shell is next to the mosque, and in the '90s, the Marmara hotel group realized the place's potential, and decided to make it into a centre for concerts and exhibitions. Esma Sultan proved so successful that the developers contacted GAD Architecture to make a structure that would allow all weather use – though Istanbul can be baking in summer, it can be very cold and wet in winter as the wind buffets down between grey planes of sea and sky.

It was decided from the first to keep the enigmatic brick walls. The architects responded to them by creating an inner glass box, containing a bar and a restaurant on the ground floor and a flexible event space on the upper one. As a result, the nineteenth-century shell can still be appreciated both outside and in. Its massive presence shades the planar glass walls of the box, which would have been impossible to make as pure as

1
Ruined brick palace gives very little hint of new interior, which ...
2
... is in glass and stainless steel.
3
Mosque is centre of little settlement on shore of Bosporos .
4
Glass roof of stair box.
5
Upper, general-purpose floor has marvellous Bosporus views.





they are in such a periodically hot climate without the outer brick shell. The two structures are linked by stainless-steel rods that allow them mutual support, but enough independence to cope with earthquake movement and high winds.

The two work so well together that a casual passer-by might not even notice that the old ruin has been radically transformed and given new life. But from the upper floor of the glass building, you can at last understand why Esma Sultan wanted such splendid views over the Bosporus from her summer palace. An exemplary synthesis has been created between old and new that should be an example to more timid and mincing renovation architects.

P. D.

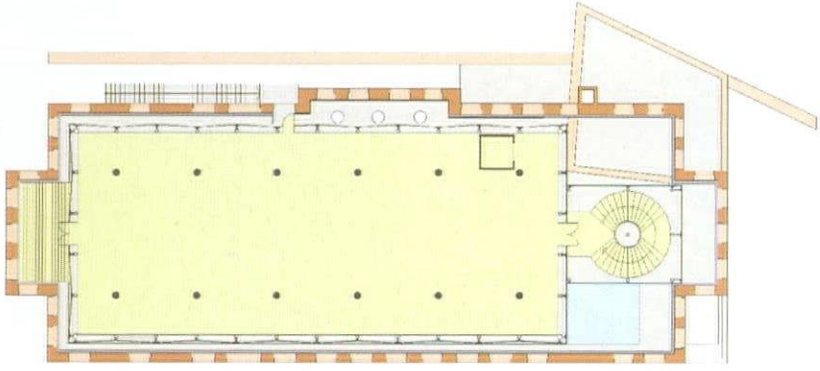


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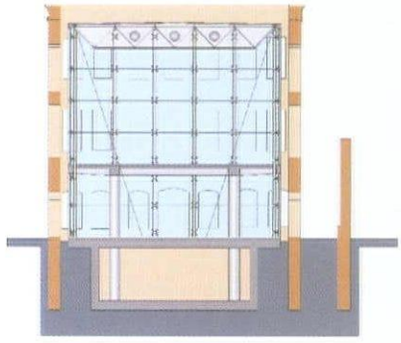
REVIVIFICATION, ISTANBUL, TURKEY

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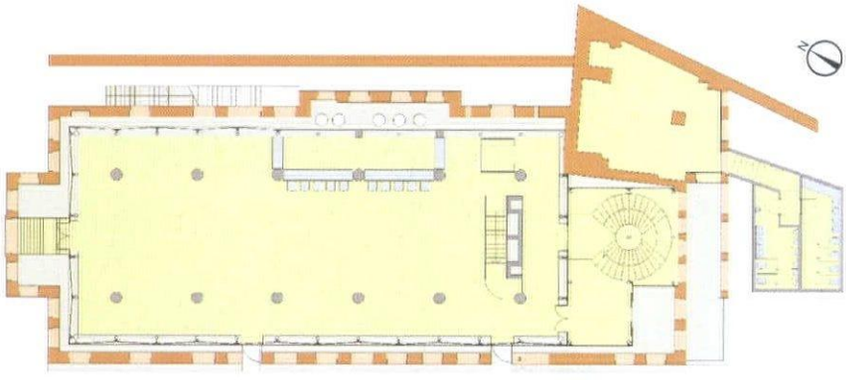
GAD



upper floor



cross section



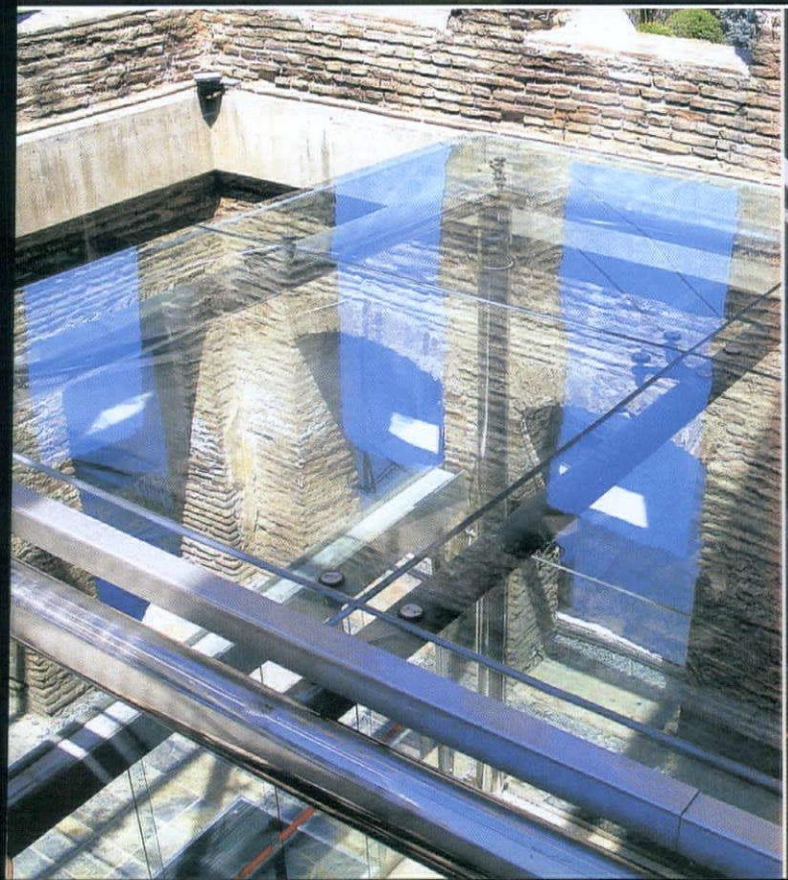
ground floor (scale approx 1:425)

6
Enclosed ground floor contains restaurant and bar.

Architect
GAD
Project team
Gokhan Avcioglu, Haluk Sezgin (principal architects), Phillipe Robert, Durmus Dilekci, Salih Kucuktuna, Ozlem Ercil, Kerem Turker
Photographs
Ali Bekman and Salih Kucuktuna

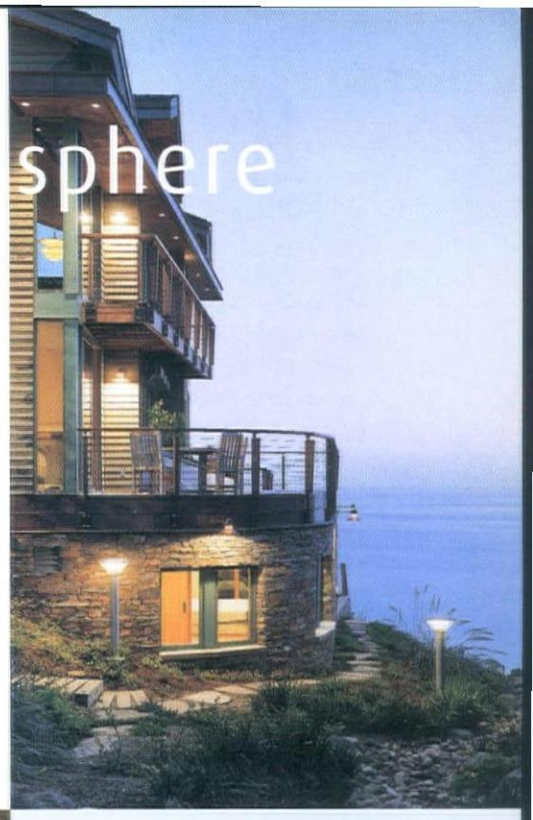


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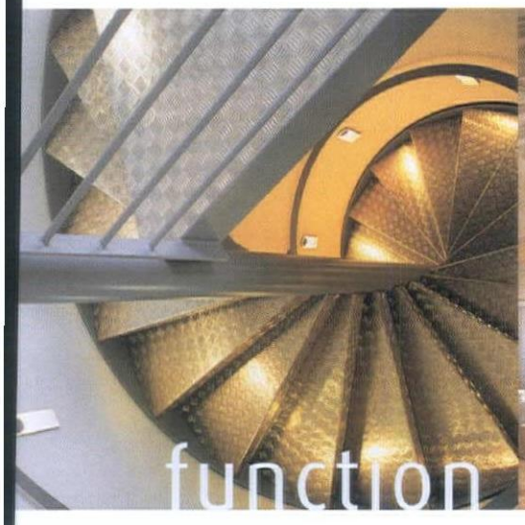




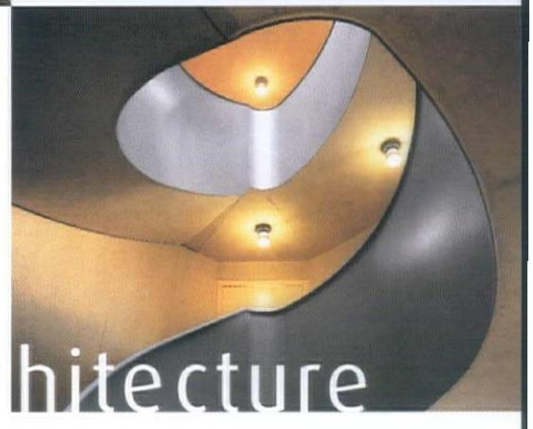
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Edifying education

Though mass education is taken for granted in the developed world, educating future generations is still a vital task that needs the full resources of architectural imagination to create inspiring places and spaces for learning.

Making education accessible and effective is not only one of the great challenges of modern societies, it is also at the crux of their civilized development. The importance of education cannot be overestimated; conversely the lack of it is a persistent root cause of social problems, alienation, dysfunction and criminal behaviour. Some 60 per cent of inmates in British prisons are functionally illiterate and innumerate (AR October 2003), a shameful fact that fuels high levels of recidivism (over half of prisoners re-offend within two years of release). Without their educational needs being addressed, few offenders will be able to build meaningful lives away from crime, no matter how often or long they spend in prison.

The historic relationship between education and society is both complex and revealing, as Eliza Cook, a Victorian poet, wrote in 1853

'Better build schoolrooms for the boy,
Than cells and gibbets for the man'.

Ironically, within the UK, school building is currently one of the more bullish sectors of development. Politicians are acutely aware of the importance of appearing to get education right, mainly by showing how much they can spend on it. Since the present Labour administration came to power, capital investment in schools has risen sharply from £683 million in 1996-97 to £3.1 billion in the current financial year. By 2005-06 it is set to rise to £5.1 billion.[1] Though some of this largesse is being ploughed into progressive sounding initiatives, such as Classrooms of the Future, in reality, much of the funding is being directed at the refurbishment and adaptation of existing facilities. The obvious hope that inspiring new paradigms for educational buildings might emerge from all this should not be overstated, as new projects must endure the baleful scrutiny of the PFI (Private Finance Initiative), the current UK system of public building procurement, which is doggedly driven by the tenets of cost cutting and mediocrity, making it much harder for architects and their clients to be imaginative or experimental.

As a type, the school per se often proves strangely elusive to pin down, evolving to reflect the changing political, educational or social dogmas of the day. Since mass education has constantly and often radically reinvented itself, there is great formal disparity and discontinuity across different eras, with many older buildings still in use. In large urban centres such as London or Manchester, for instance, schooling at all levels still takes place in a diverse array of buildings from the Victorian monolith to the flimsy postwar prefab, patched up and retrofitted as funds and fashion permit, and *arriviste* redbrick universities rub shoulders with historic seats of learning.

The shape of schools

In his seminal typological survey,[2] Pevsner blithely ignored educational buildings (apart from libraries), perhaps because of the lack of clear historical antecedents. Early teaching methods were modelled on the monastic system or based on trade guilds, with no specific forms of architecture. The Reformation released large numbers of surplus ecclesiastical buildings that were adapted for educational use, but up until then, schooling was a grim affair, with scant provision in the way of premises or equipment. The emergence of colleges such as Winchester and Eton in the fourteenth and fifteenth centuries spearheaded the transition to modern forms of school organization and buildings. With their tightly ordered social and physical structures, colleges were a reaction against the often ill-disciplined and undifferentiated character of early schooling, yet the humanly-scaled collegiate network of cloisters and quadrangles has became an enduring template for educational buildings of all kinds, from kindergartens to universities.

Though it is taken for granted in the developed world, mass education is a relatively recent phenomenon. The British Education Act of 1870 made primary education available to all, but Victorian school buildings took their cue from bleak, authoritarian models such as prisons or barracks that could be economically produced to process and subjugate the newly educated masses. In the modern era, the pattern of development changed in response to pressure to build more and more schools, especially in the inter- and postwar years, for a more prosperous and geographically dispersed population. New approaches in educational theory advanced a more liberal and egalitarian curriculum, that found expression in the light, flexible, multivalent spaces of Modernism.

Now, as then, the challenges remain to provide places and spaces for education that can ease the transition from the private world of home to the complex, rapidly changing world of wider society. Everyone remembers with varying degrees of affection their progress through school with its routines and rules, pleasures and punishments. In this respect, education is more than simply the accumulation of knowledge; it is an intensely social rite of passage with school and university as crucial milestones on the long journey of self discovery. There is a proven, explicit connection between the quality of architecture and what educationalists call 'the learning outcome', and the best educational buildings, as in the best education, successfully orchestrate a balance between overall discipline and particular event, between framework and improvization.

In different ways the buildings in this issue all embody this enlightened approach. The work of German architect Peter Hübner as a designer of highly thoughtful, socially responsive schools needs no introduction; here we look at two of his latest buildings (p44) based on the organic, anti-elitist principles of Rudolf Steiner. Günter Behnisch's new school at Lorch (p38) also creates a richly nuanced environment for learning while intelligently addressing issues of sustainability, as does Feilden Clegg Bradley's ambitious new campus for the University of Gloucester (p68). Projects by Gould Evans at the University of Arizona (p56) and McCullough Mulvin at University College Dublin (p52) show how to make distinguished object buildings on a greenfield campus yet still create a sense of place, while Stephen Hodder grapples with the challenge of adding to St Catherine's College, Arne Jacobsen's Modernist masterpiece in Oxford (p74). All these enhance the quality of life, for students, teachers and ultimately for society as a whole, nurturing and civilizing future generations.

CATHERINE SLESSOR

1 *Building Design*, 9 January 2004, p11.
2 *A History of Building Types*, Nikolaus Pevsner, London, 1976, Thames and Hudson.

Above: turn of the century geography class at Alma School in London in 1908. Many such buildings are still in use, though teaching methods have moved on.
Below: students rehearsing in their new dance studio at the University of Arizona, designed by Gould Evans. Photograph: Timothy Hursley.

SCHOOL, LORCH, GERMANY
ARCHITECT
BEHNISCH & PARTNER

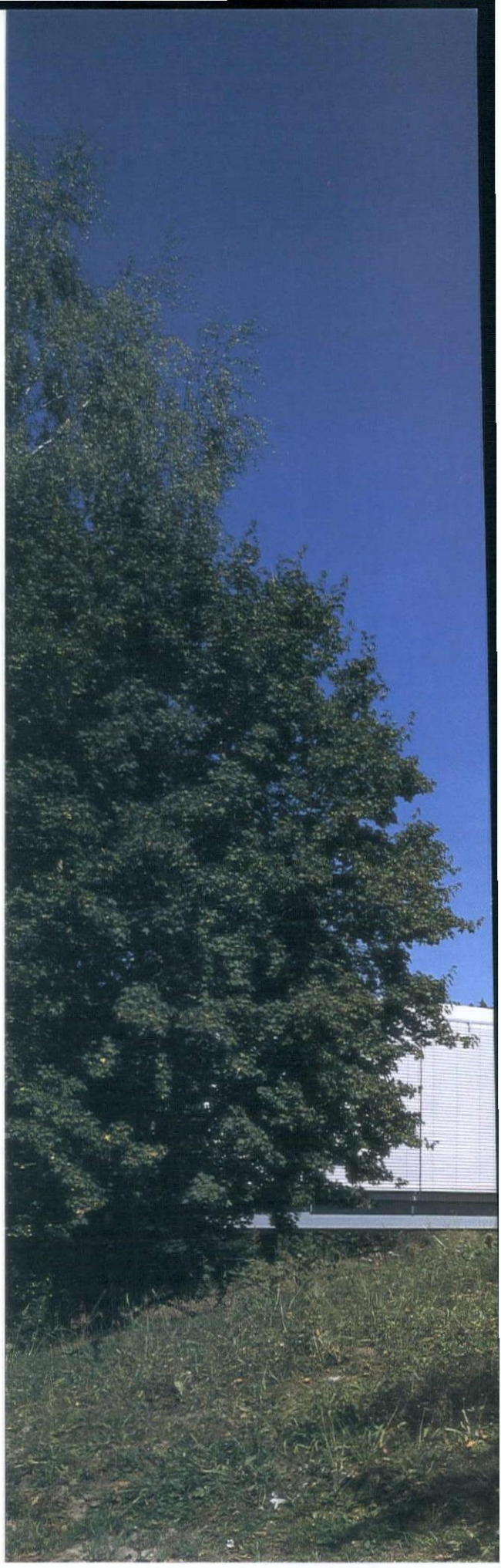
SCHOLASTIC CENTRALITY

A delicate and thorough investigation into the nature of learning has allowed the Behnisch practice to produce schools appropriate for a modern democracy.

The invention in the Behnisch office of the polygonal school dates back to 1969 and the school 'In den Berglen' near Oppelsbohm. The round form gave a ring of classrooms with each facing a different direction, some combinable with folding partitions. These opened into a central toplit hall which could be used for assembly. Entered from beneath, the design was compact, promoting a sense of togetherness, and long dreary corridors were avoided.

This model improved with the next Behnisch school: the Progymnasium on the Schäfersfeld in Lorch of 1973. The polygonal upper floor of classrooms around a central hall was added to a radically irregular ground floor made up of specialized departments – sciences, arts and crafts. These articulated the branches of the curriculum and reduced the scale of the whole building, while also making a transition between the purity of the upper ring and the shape of the hillside, acknowledging both orientation and slope. The addition of colourful projecting sunblinds layered the facade pleasingly as well as solving the climatic problem.

The Behnisch office added a sports hall and, ten years later, they were commisioned for a further school on the site, the Hauptschule, similar in overall form and layout but with a triangular top floor and a hall glazed to the north. It showed its kinship with the Progymnasium while taking on a strong identity of its own and advancing the vocabulary of construction and detailing into new realms. Both schools have been highly appreciated by the town and were seen as exemplary in Germany. There has also been a growth in pupil numbers. In the mid '90s, a new wing of six classrooms, delicately slipped into the slope, was added to the Progymnasium, but this did not suffice. Pupil numbers kept growing, and in 1999 the town authorities, in consultation with Behnisch, decided to add a whole new school.



1



1
Specialist science departments radiate into the landscape under form of general classrooms round central hall.

The Schäfersfeld (shepherd's pasture) is a hillside high above Lorch, just one hill away from Lorch's famous medieval monastery. The whole area is surrounded by woodland. The former schools were placed on the south side overlooking the town, and were approached by a drive from behind. The new school takes its place behind them, enjoying the view of an open meadow to the north and anchored to the edge of a small gully, a careful and dramatic placing. The slope of the site absorbs a whole storey, so science classrooms could be on the lowest level, physics and chemistry incorporated into the slope, while biology projects dramatically on stilts towards a footbridge over the tiny stream. Storage and plant rooms take up the underground spaces.

The main entrance is one storey higher, with the administration, canteen and art and music rooms, again in separate wings partly following those beneath. The irregular glazed entrance hall linking them all centres on a stair and toplit well connecting to the upper floor of classrooms. These are not polygonal as in the earlier Progymnasium, but segments of a circle, 12 in number set at 30 degree intervals. Regular columns support the ring, sometimes extending up two storeys and creating sheltered areas outside the upper and lower entrances. The central hall started as a circle in plan, but became asymmetrical due to the floorwell cut in sympathy with the hall beneath, and because of the ingress of the partition delimiting the computer and earth-science rooms which break the regular classroom pattern. These asymmetries disguise the fact that the main staircase occupies the exact centre of the circle, almost on its north-south axis. The lower stair, a dog-leg set in a void to east, arrives right next to it, but is positioned to pick up the thrust of the corridor opposite at entry and lower levels, the only corridor of any length in the entire building.

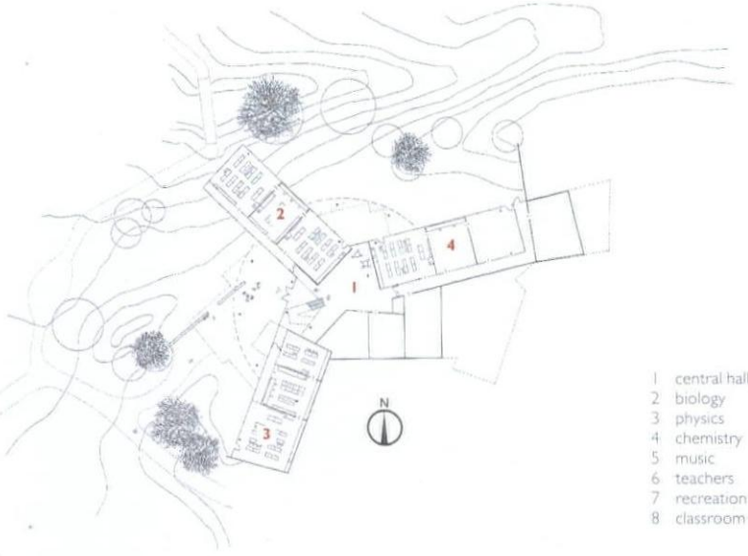
The main architectural lesson is surely the unifying power of the circular form in pulling everything together, allowing its universal theme to stand in opposition to particularities of orientation and landscape played out below. It makes the building so instantly readable in every direction that it no longer matters how disparate subordinate elements are allowed to become: there is really no problem of it becoming chaotic. On the other hand, the lower departments can be fiercely articulated, each with its different character and experience, and this must produce a strong sense of place for the pupils. Relationships with the land are everywhere exploited: the apparent 'plateau' of the entrance, the sudden first-floor outlook of administration at the same level, the even more 'elevated' music room. At the lower level, the east- and north-facing physics and chemistry departments offer views of immediate landscapes, as opposed to the pier-like double-sided experience in biology, looking out and over. All of this contrasts with the wider panorama from the top floor, where each class gets a different view and sun penetration, almost like a sundial.

The parts embedded in the ground absorb the necessarily lightless rooms and aid thermal stability, but elsewhere life is lived under natural light, with a variety of external and internal sun-shading devices to prevent excess. Far from ruining the purity of the architecture, these blinds and visors are well integrated, adding a kinetic layer to the facade, which creates visible changes in the face of the building for the outside world.

SCHOOL, LORCH, GERMANY

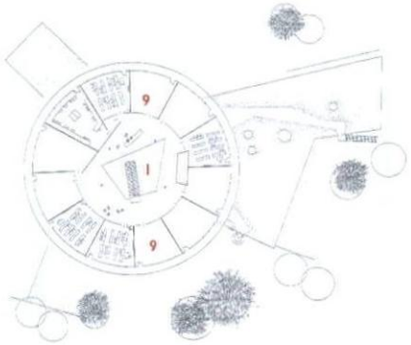
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BEHNISCH & PARTNER

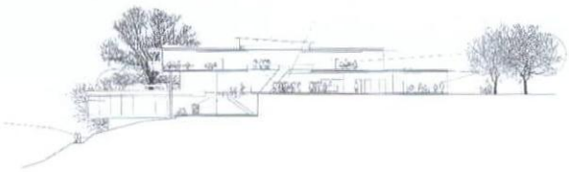


1 central hall
2 biology
3 physics
4 chemistry
5 music
6 teachers
7 recreation
8 classroom

lower floor plan (scale approx 1:1400)



top floor plan



north-west/south-east section



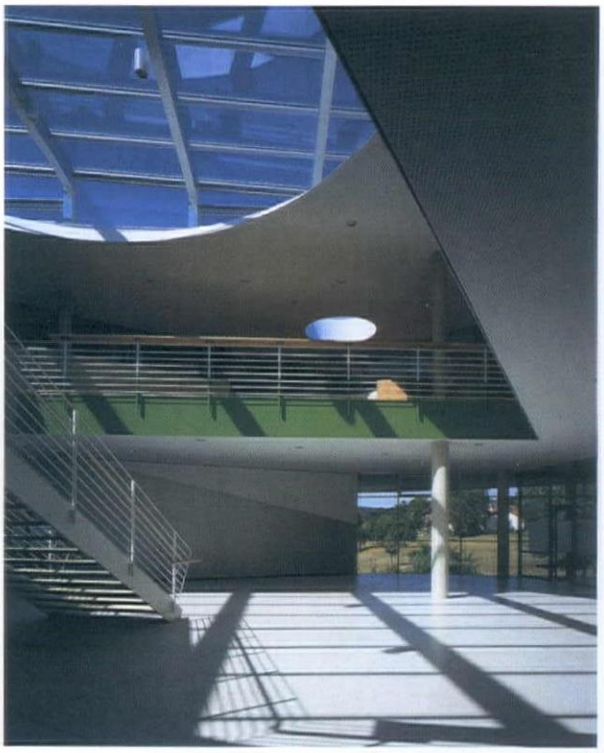
entrance level plan

Perhaps most exceptional in a school of this kind is the quality of the circulation spaces, always daylit, continuously relieved with different views of the outside world, always telling you where you are and suggesting where you might go next. This is one way in which the building scores heavily over some of recent British Private Finance Initiative (PFI) schools, where everything is flooded in the same dingy fluorescent light summer and winter, and blind smelly corridors are automatically double-loaded for economy.

How will we ever teach our children to live with the climate and not to squander energy when we teach them in such hermetic environments? The problem comes not only of repetitive unimaginative architecture, but also from the standards invented in the 1960s and still enshrined in bureaucratic PFI norms which set a certain temperature and level of light despite our ability to adjust our clothes and our eyes' ability to read under anything from candle light to full sun. Changing conditions inform us of night and day, summer and winter, and we lived for thousands of years in response to them. We know it is destructive of health and well-being to experience conditions that are invariable, yet we carry on with deep plans and heavy servicing based on these mistaken assumptions about presumed conditions of comfort.

Another virtue of the Behnisch school is the quality of construction and finish, which makes the most of the logic of the assembly process without much embellishment apart from some deftly applied colour, the responsibility of Christian Kandzia. Exposed concrete appears here and there, sometimes painted when its area might seem excessive. Ceilings are of perforated plasterboard, the holes filled to make a solid edge, cheap enough but avoiding the mechanistic grid of suspended ceiling systems and allowing lamps to be sited by choice rather than dictated by a meaningless rhythm. Glazing is managed with the lightest possible mullions despite the sealed units, and painted steel balustrades preserve safety while maintaining maximum transparency. Beech veneers on doors, benches and partitions add a touch of warmth, and there is even the reassurance of solid timber in places. This carefully developed and selected vocabulary is routine for the Behnisch office. It looks expensive, and one has to be reminded that this office has built large numbers of schools for normal prices, and in that regard this one is no exception. PETER BLUNDELL JONES

4
A typical classroom.
5, 6
Luminous heart of whole enterprise.



5

SCHOOL, LORCH, GERMANY

ARCHITECT

BEHNISCH & PARTNER



4

Architect
Behnisch & Partner, Stuttgart
Project team
Günter Behnisch, Manfred Sabatke, Dieter Rehm, Cornelia Wust
Structural engineer
Hermann U. Hottmann
Services engineer
Schreiber Ingenieure
Photographs
Peter Blundell Jones



2
The unifying power of the circular form pulls all together ...
3
... all is lived in natural light, apart from some technically specialized spaces.

2



3



HUMAN HÜBNER

The Steiner system of education offers many lessons to society in general. Peter Hübner crystallizes them.

STEINER SCHOOL, KIRCHHEIM UNTER TECK, GERMANY

ARCHITECT

PETER HÜBNER

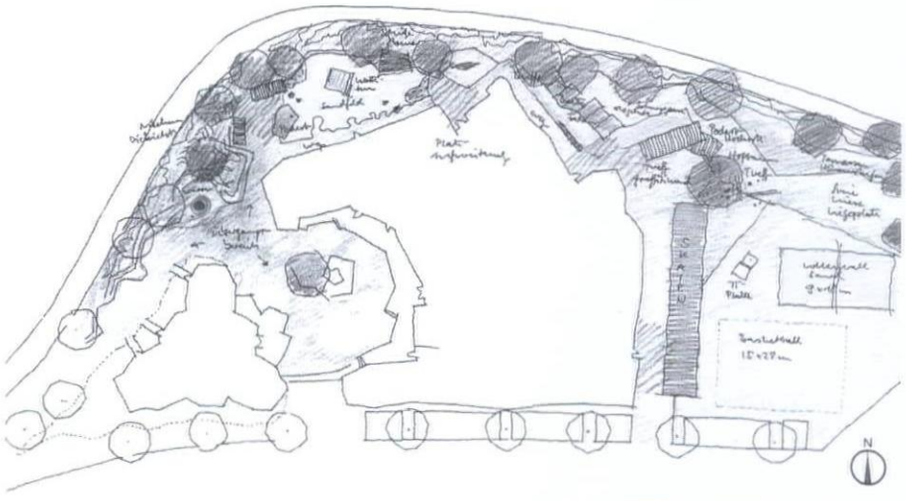
The Waldorf schools, based on the principles of Rudolf Steiner (1861-1925), have been growing across Germany for the best part of a century and now number around 185. Independently founded, they are run by groups of teachers on an egalitarian basis, and are widely known for their caring approach and concern for allowing each pupil to find his or her place in the world. The curriculum stresses the integration of thought, feeling and will, attempting to overcome the mind/body split and to combine self-realization with a growing sense of personal responsibility. It is specially designed to awaken awareness in stages which follow the natural development of mind and body, and pupils are taught for several years by the same teacher to maintain a family-like relationship.

The Waldorf schools are anti-elitist in the sense that they aim to develop each pupil according to his or her talents, wherever that may lead, and to maintain the principle that all are of equal worth. Because of the importance of learning by doing, there is a considerable emphasis on arts and crafts and also an active school garden. But perhaps most architecturally visible, every Waldorf school centres on a theatre, a community centre where every pupil can learn to perform some music, a recitation, dance, drama, or the special Steiner practice of eurhythmy. Taking the stage is part of the development of self-confidence and finding a place in society, while gathering to share a performance is an archetypal social act. That the youngest pupil might recite a poem in the morning in the space where an internationally famous musician gives a concert for parents and locals in the evening is quite intentional.

Until 1990, Kirchheim parents keen on the Steiner education sent their children to a Waldorf school in Nürtingen, but for that year too many applications were submitted, and with no possibility of expansion, the decision was made to found a new school in Kirchheim. It began as a single class with one teacher in rented premises, funded by parents, loans and help from the sister institution, and it struggled on adding a new class each year. In Germany such private schools can be state-funded on a pro-pupil basis, but only after gaining registration by running independently for three years.

In 1994 the little school was established in its own right, and in 1996-97 the decision was made to build, a site being provided at reduced cost by the town, who greeted the initiative with enthusiasm. Peter Hübner was approached because of his successful Morgenstern school at Reutlingen (AR March 1987) which recycled materials from abandoned factory sheds in a highly ingenious way. The school group at Kirchheim at first intended something similar, but Hübner dissuaded them, having found the recycling in the end hardly worth the effort, due to the labour of de-nailing. There were easier ways to get a new school, and with more freedom. He gave a lecture about his work and methods to the staff, parents and school governing body, suggesting at first that they should build a new classroom each year, involving staff and pupils in the execution.

Hübner, his son Olaf and fellow architect Christoph Forster then started work with the pupils of the sixth and seventh classes to determine the ideal classroom. First the pupils made clay models of themselves at 1:10, then models of classroom furniture, then the walls of the classroom and finally the roof. The architects explained the principles of timber structures, the problems of spanning 8m and



site plan (north to top, small school west)



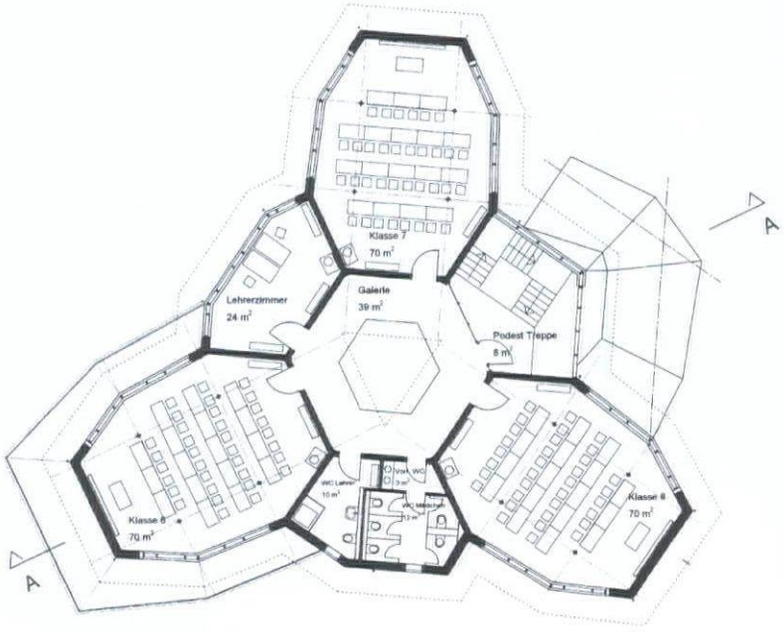


1
Small school as prow of complex.
2
Small school entrance.
3
Small school faces large across focusing court.

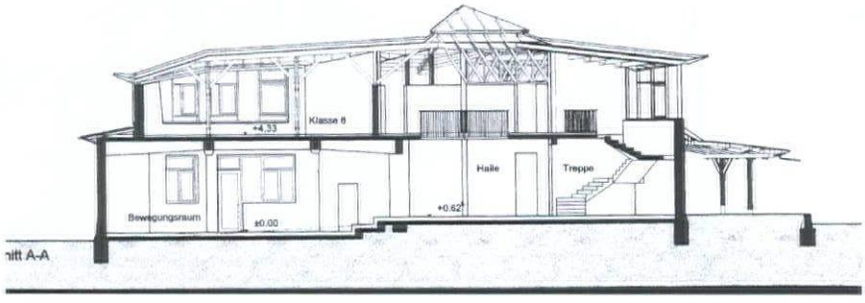
the limitations of timber sizes, and the children came up with the idea of internal columns, which persisted into the final design. Ambitions grew, and funding was found to create a new building of two storeys, with five classrooms and a slightly larger eurhythmy room. It was completed for the school-year of 1998-99, by when the school's seven classes (some still in rented rooms) encompassed 175 pupils, served by 18 teachers working without a Head.

The little school

The site is a flat wasteland in an industrial zone on the north side of Kirchheim, bounded by a sloping bank that carries a public footpath. Predicting expansion, the architects placed the small school at the west end of the triangle, making a kind of prow for the whole building group. The triaxial plan gives classrooms daylight on both sides which are entered off a remarkably economical central hall, while stores and lavatories occupy the corners. The greater size of the eurhythmy room, and the placing of main entrance and stair opposite it in plan, produce a dominant east-west axis, the main axis of symmetry. In contrast the hexagonal hall is played up for its centrality, with a hexagonal well to the upper floor and a triangular rooflight above, the exposed roof structure bringing the whole building to a tidy climax. The lower part of the hall can occasionally serve as a stage to the eurhythmy room when the latter is used as a theatre. A four-step drop in floor level gives this stage priority while also extending the height of the largest room. Construction was hybrid, with concrete below and timber above, a logical choice combining economy with fire-protection. The timber roof has a light



principal floor (scale approx 1:320)



section A-A



STEINER SCHOOL, KIRCHHEIM UNTER TECK, GERMANY
ARCHITECT
PETER HÜBNER

4
Classroom looking towards hexagonal hall.
5, 6, 7
Double-height hexagonal hall on which whole school focuses.



5



6



7



structure thanks to the inner columns, and the roof is left visible internally, in contrast with the flat ceilings and beams of the floor below. Upper-floor windows are also wider than those of the load-bearing floor beneath, enhancing the sense of a floating roof, and giving some sense of the changing structure despite the continuity of the yellow render.

The building looks elegant and expensive, but it started without adequate funding. The intention had been to roof the space then fill it in gradually as money allowed, but savings were made by leaving finishings to teachers and parents, and successful fundraising by the school's Baukreis (Building-circle) permitted completion within a year. The architects visited every Tuesday evening to instruct Baukreis members on the next stage of work, often staying until eleven at night. After all the discussions and models constructed with the help of the clients, the project was drawn and refined on computer by Peter Hübner's son Olaf, one of the last students in Enric Miralles's studio at Frankfurt's Städelschule. It was his first realized building.

The big school

The completion of the first school gave it a home and made its aspirations visible, encouraging ambitions toward a next stage. Only two years later, a much larger school was planned, again with Hübner's office under the same kind of participative process. With a new class entering every autumn and existing ones moving up each year, the expansion was partly automatic. Thirteen new classes were needed along with further specialized arts and craft rooms, but a key requirement was a larger theatre where the whole enlarged school society could assemble for festivities and performances. The nature of this theatre turned out to be the main bone of contention in the participative process, for two groups arose. One favoured a theatre on the Greek model, while the other wanted a more ambiguous 'market-place' theatre, more of a street or like the Shakespearian Globe. Arguments swung to and fro, and Peter Hübner was unable to break the deadlock. Eventually, he proposed that they create both types, with a stage set in between them. With the number of classrooms required on two levels this turned out to be a plausible solution. The open hall of the market-place makes a good general-purpose space and entrance hall: it also sets a limit on the area of blind corridor that necessarily surrounds the closed Greek theatre.

It was assumed when planning the first school that an entrance court should be created between it and the later building, the two entrances facing each other across it. Rounded off, and with sheltering colonnades on both sides, this court gives the big school the shape of a grasping hand, its thumb aligned with the straight road and its curling fingers expanding to north into the deepest area of the site. The court dominates the west side of the big school, its main entrance set at the north-west corner, leading past the school cafeteria into the



STEINER SCHOOL, KIRCHHEIM UNTER TECK, GERMANY
ARCHITECT
PETER HÜBNER

8
Street front, looking towards central court. Small school left.
9
Big school embraces central court.
10, 11
Generous canopied curve of big school's entrance sequence.



12

market-place with administration adjacent. With stage doors open, one can see right through the stage area into the Greek theatre beyond. Classrooms are gathered around the periphery on two levels, often glazed to the inside as well as to the external world, so relieving corridor spaces from claustrophobia. As usual with Steiner schools, there was a demand to avoid strict rectangularity, and resulting gentle variations confer on each polygonal room a particular character while allowing advantage to be taken of a corner, an annexe, a step in plan or whatever. Upper classrooms also ring the changes on roof structure, different structural principles having been explored by the architects of Hübner's office in exercises involving the pupils. An art-room extends the building to second floor level over the stage area, giving a suitable climax to the whole but also allowing more height to the passive vent stacks placed on either side of the stage – a typical Hübner ecological measure. The triple rooms of the central auditorium can be used together or separately by closing the doors to either side of the stage area, allowing a very large social space for large occasions if it is all open at once.

Again, there was an intention to work in stages; and again it was abandoned when more funds were obtained. Teachers and parents joined in for the finishing works, some of which are still going on, including floor mosaics, sculptural tiles, stained glass and interior painting with colour washes. Colour is an area in which the Steiner people have their own theories, and it has been coordinated by an elaborate programme. Outside, there is an ambitious landscaping scheme to rediscover the nature of the valley, with playgrounds, sports areas, educational gardens and much ecological planting. The atmosphere is lively and creative, with drawings and craft objects in almost every classroom. The continuing elaboration of the building reveals it as a living, developing place much loved by its users. PETER BLUNDELL JONES

Architect
Peter Hübner
Project architect (big school)
Christoph Forster
Project architect (little school)
Olaf Hübner
Photographs
Peter Blundell Jones

STEINER SCHOOL, KIRCHHEIM UNTER TECK, GERMANY

ARCHITECT
PETER HÜBNER

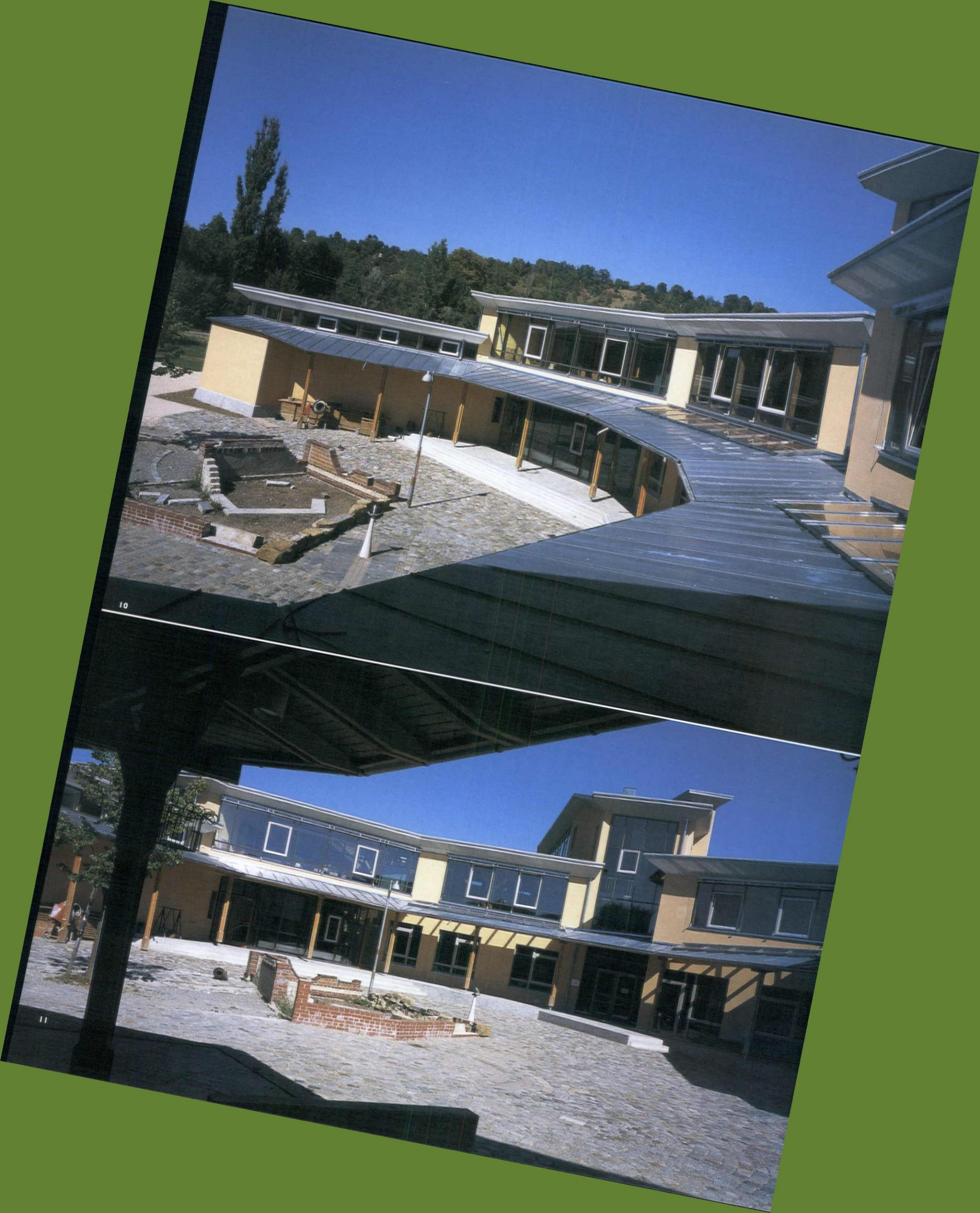
1 entrance
2 Greek theatre
3 market-place
4 administration
5 cafeteria
6 eurhythmy
7 handwork
8 class
9 music
10 meeting
11 group
12 textiles





50 | 2 ground floor plan (scale approx 1:500)

upper floor plan



Founded in the mid-nineteenth century as the Catholic University of Ireland, University College Dublin (UCD) was first established in the heart of Dublin overlooking St Stephen's Green. Famous alumni include Gerard Manley Hopkins and James Joyce. During the 1960s, the university decamped to a suburban greenfield site at Belfield, to the south of the city centre. Over time the campus has evolved and expanded, adding new faculty buildings, student residences and recreational facilities. With 10 faculties, 80 departments and a student body of 22 000, UCD is now the largest university in Ireland.

One of the most recent campus additions is McCullough Mulvin's extension to the Virus Reference Laboratory (VRL). Affiliated with the university's Department of Medical Microbiology, the VRL provides a national diagnostic virology service for Ireland, as well as undertaking research and issuing regular publications. The new building slots into a tight site between the main VRL laboratory and Ardmore House on the upper part of the campus. Though small in scale, the project plays a significant role in consolidating the relationship between the central buildings and the surrounding landscape, and, in particular, the lake directly below it.



Conceived both as a place of work and social interaction, the project is one of a series of new pavilions designed to support and challenge the notion of architecture in the landscape that informed UCD's orginal development in the 1960s. More specifically, it is clearly an object building in the greenfield campus tradition, but is also concerned with connecting with its surroundings and creating a sense of place. The main public frontage is defined by a triangular, rock-studded parvis while the inner edge encloses a small garden landscaped in an artfully minimal Japanese style, creating a peaceful haven for contemplation.

With its lightweight skin and simple geometry, the new building forms an expressive contrast with its more leaden brick and stone-clad campus counterparts. Facades are wrapped in a taut skin of interlocking and overlapping panels of glass and Western red cedar which project and recede from the main surface plane. The cedar will weather to a delicate silvery grey, but the light has a slightly different effect on the vertical and horizontal boards, so that the skin will eventually resemble a piece of worn fabric with subtly contrasting textures. Extended parapets give the building muscular, cube-like, proportions.

1, 2
The new extension is an object building in the landscape, starkly different from its neighbours, but it also strives to connect with its surroundings and create a sense of place.
3
Detail of Western red cedar skin.

ACADEMIC DEBATE

This extension to UCD's microbiology department is a rational cube that reworks the campus object building.



2

LABORATORY, DUBLIN, IRELAND
ARCHITECT
MCCULLOUGH MULVIN ARCHITECTS

12
Market-place.
13, 14
Upper level market-place.
15
Greek theatre.



13



14



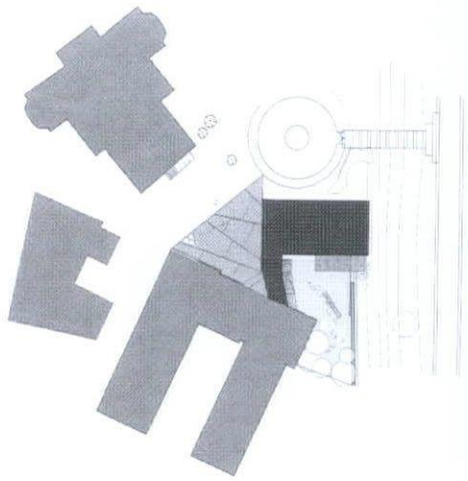
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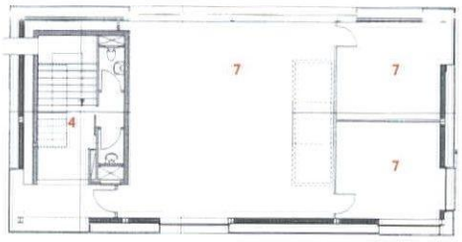
The plan is elegantly economical, with offices on the upper floor and a laboratory, canteen and meeting room at ground level, with access to the courtyard garden. In abstract, the plan resembles a simple unicellular organism, with a coloured circulation core as its nucleus. The free-standing, sky-blue core can be glimpsed as you move through the building and a canted link corridor connects the new extension with the main laboratory. The linking arm also functions as an entrance hall.

UCD'S evolving campus can, perhaps, be compared to a 40 year conversation, with new members joining in and adding to the growing dialogue. McCullough Mulvin's modest yet intelligently judged contribution adds to the richness of this academic debate.

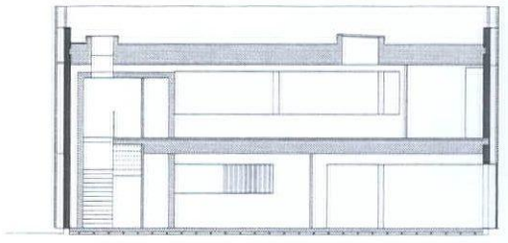
CATHERINE SLESSOR

Architect
McCullough Mulvin Architects, Dublin
Structural engineer
Thomas Garland & Partners
Services engineer
UCD Buildings Services Department
Photographs
Christian Richters



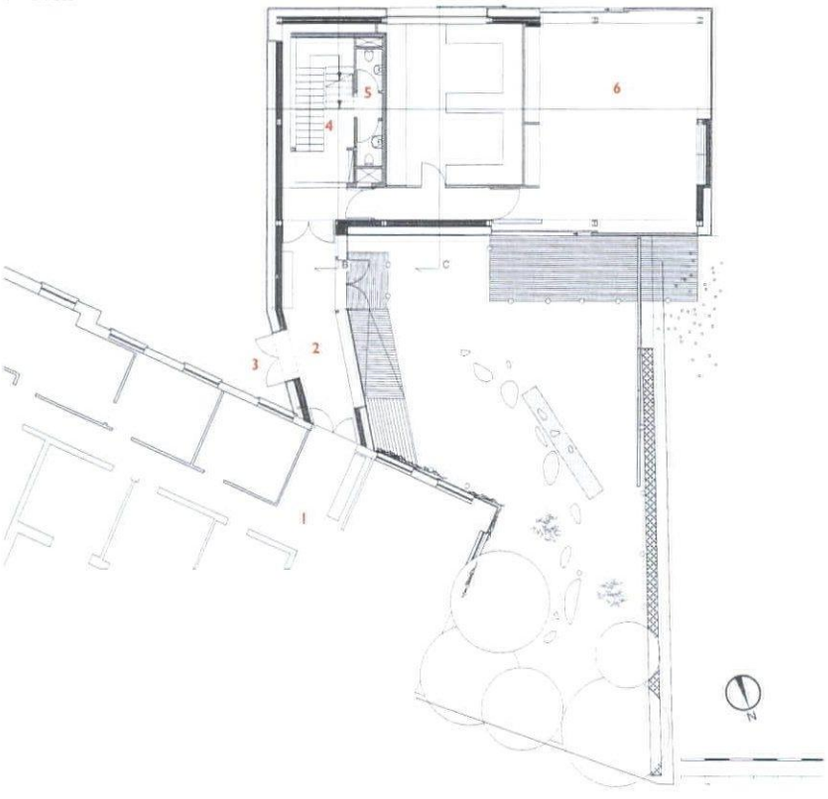


first floor plan

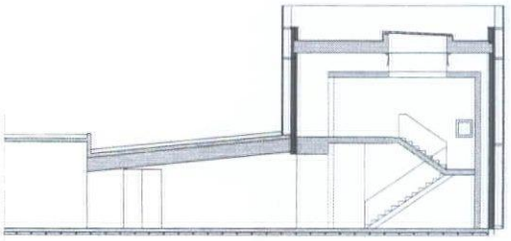


long section

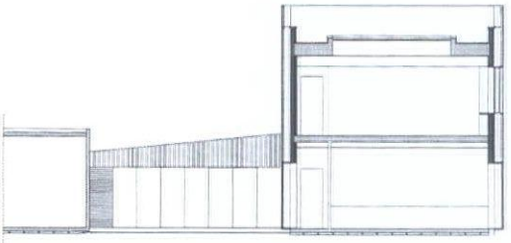
1 main department
2 link
3 entrance
4 circulation core
5 laboratory
6 canteen
7 offices



ground floor plan (scale approx 1:250)



cross section



cross section

4
The crisp cube. Horizontal and vertical cedar strips will weather in slightly different ways.
5
Internal Japanese-style garden and link to the main department (left).
6
The coloured circulation core.



PHYSICAL THEATRE

Drawing inspiration from the physical grace and power of dance, a new student theatre at the University of Arizona is a bold new campus landmark that enhances cultural life.

The University of Arizona (UA) came into being in the late nineteenth century at a time when college education in the USA was neither common nor an especially high civic priority. In 1885, when Tucson was named the site of Arizona's new university (rather than its capital, state prison, or insane asylum), residents were thoroughly dismayed. As no one was willing to provide land for the new institution, the city was on the verge of returning the $25 000 funding to the state legislature, but a pair of gamblers and a saloon-keeper saved the day by donating 40 acres of land to the east of town. Classes convened in 1891 with 32 students, six teachers and two departments, agriculture and mines, all sharing one building, which is still in use.

From such frontier beginnings, UA has grown to a lively and respected regional institution. Today it has over 36 000 students, the vast majority drawn from Arizona and the American South-West. Its Dance Division, which forms part of the College of Fine Arts, is particularly popular and is one of the top ranked arts educational programmes in the US. Rigorous training in ballet, modern and jazz dance is underscored by an emphasis on live performance and UA student ensembles have toured extensively to great acclaim. Paradoxically, for such a prestigious course, facilities for performance on the campus were limited, but with the recent inauguration of the new Stevie Eller Dance Theatre, the university now has a venue that not only matches the ambitions of its students and teachers, but also adds to Tucson's wider cultural life.

Phoenix-based Gould Evans were commissioned to design the new theatre which forms a landmark and gateway at the eastern end of the campus. At the heart of the building is a 300 seat theatre with a full flytower, orchestra pit, scene and costume shops, lobby and outdoor stage. These performance spaces are augmented by a rehearsal studio that forms the project's public face as a big box teeteringly supported on (apparently) randomly angled pilotis that rise up from the theatre lobby below. The huge vitrine of the dance studio overlooks the university's main mall, revealing tantalizing glimpses of activity and animation as the students go through their paces. At night, the studio is transformed into a softly luminous box as light percolates through an external carapace of rusted woven wire panels that are kinked and cranked like powerfully rippling muscles.

Rusted metal has become something of a South-West signature material, enthusiastically employed by an emerging generation of architects to evoke a sense of the region's vernacular tradition. Rusted steel farm buildings and structures are a common sight in the Arizona countryside, yet because of the hot, dry climate, the steel weathers quickly but does not rust through, so it is rarely necessary to use costly proprietary types of oxidized steel cladding. Here the metal scrim is held well clear of the main building envelope, dematarializing and subverting the orthogonal mass of the dance studio and theatre, which in turn forms a dark, neutral background for the callisthenics of the external skin. Capable of accommodating projections of light and images, the scrim can also function as an eye-catching theatre billboard.

The irregular form of the outer envelope is carried through into the intimate, cavern-like, interior of the theatre. The two principal



1

DANCE THEATRE, TUCSON, ARIZONA, USA

ARCHITECT

GOULD EVANS



4



5



6

Dance theatre, Tucson, Arizona, USA

ARCHITECT

Gould Evans

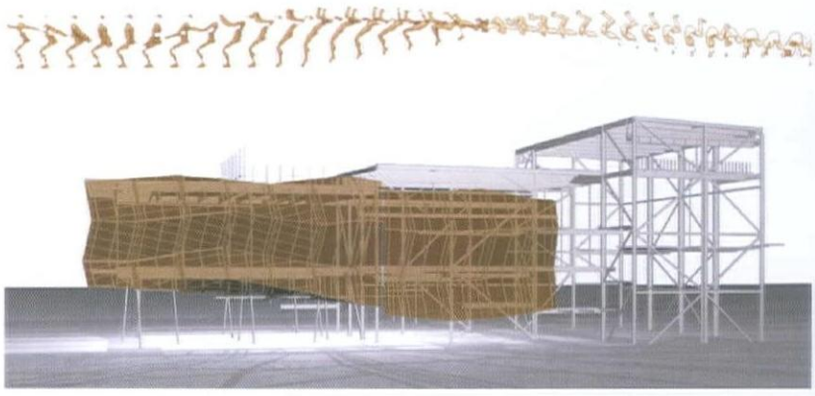
3
Light percolates through the fine metal mesh.
4
Supported by slim, angled columns, the dance studio is poised above the theatre foyer.
5
Glazed vitrine of the dance studio forms the building's public face.



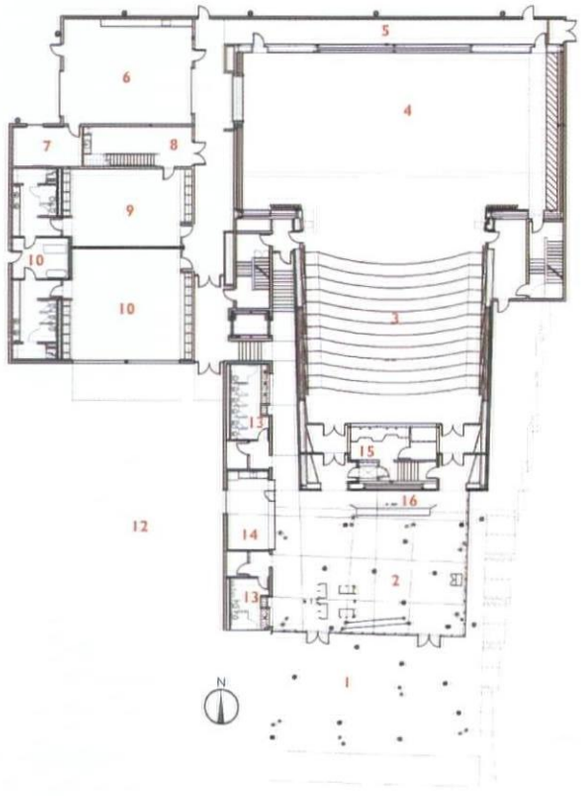
long section



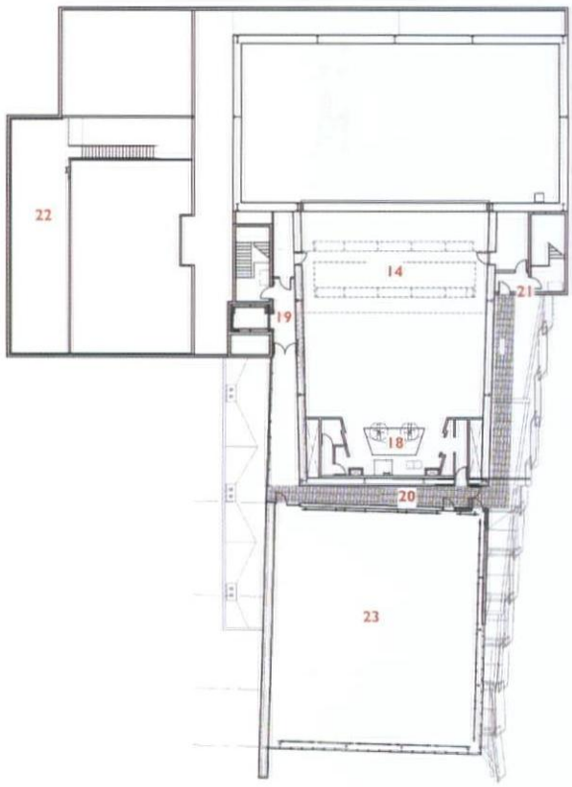
site plan



perspective of structure



1 exterior foyer
2 interior foyer
3 300 seat theatre
4 stage
5 crossover corridor
6 scene shop
7 technical office
8 costume repair
9 men's dressing
10 women's dressing
11 movement/massage therapy
12 courtyard garden
13 wcs
14 green room
15 control suite
16 lobby 'crack'
17 catwalks
18 follow spot location
19 dance corridor
20 upper lobby 'crack'
21 external catwalk
22 storage
23 dance studio



 ground floor plan (scale approx 1:750)

first floor plan



1
The theatre forms a new landmark at the eastern end of the campus.
2
Cranked like rippling muscles, a rusted metal scrim articulates the building mass.

volumes of dance studio and auditorium are necessarily separated (for acoustic and circulation purposes) by a narrow cleft-like corridor, lit by a glazed slot incised into the east facade. Nestling underneath the hull of the dance studio, the public lobby is a fluid, permeable space. Support functions such as dressing rooms, costume store and scene dock are arranged on the east edge of the auditorium, forming a link between the new building and the existing faculty. Male and female dressing rooms are separated by a roll-up divider on performance nights, but the two rooms can also be connected to form a single studio space for Pilates classes. A pair of garage doors allows the studio to extend outside into an adjoining courtyard garden.

As well as efficiently accommodating the various elements of the programme, the project is also an exploration of how to interpret the movement and physicality of dance in built form, reconciling the apparently incompatible intangible, fleeting qualities of movement with architectural solidity and permanence. Key to this process was an investigation of graphic representation of dance or Labanotation, a system of written symbols developed by Hungarian choreographer Rudolf Laban in the 1920s, that records and describes dance performances in the manner of a musical score. Jory Hancock, head of UA's Dance Division, suggested that the architects look at the Labanotation of *Serenade*, the first piece that George Balanchine (founder of the School of American Ballet) created for his students. The plans of the starting positions for each movement of *Serenade* were used to create a matrix from which emerge a grid of tilted columns that support the dance studio. The pervading impression is of mass gracefully poised and rendered almost weightless by the balletic slenderness of the columns and the supple contortions of metal outer casing.

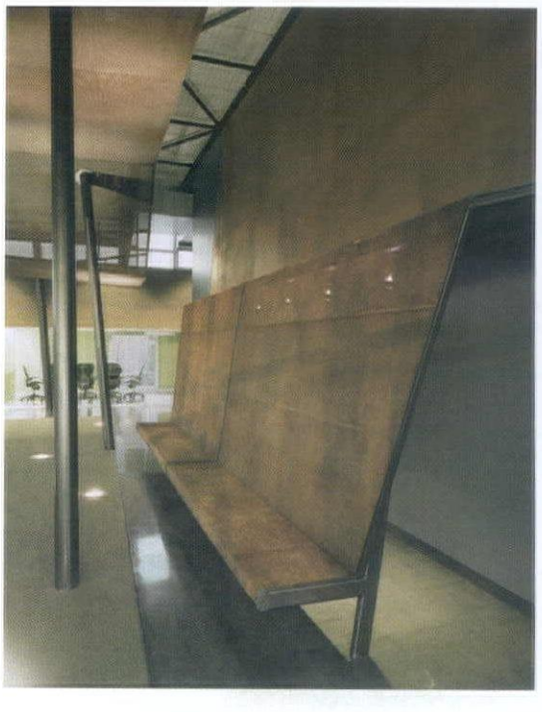
In a satisfying artistic twist, the students are due to perform *Serenade* later in the spring, as part of a gala event commemorating the centenary of Balanchine's birth. Having lived and worked in a building inspired by the piece, the students will extend this lyrical fusion of dance and architecture through the act of performance. C. S.

Architect
Gould Evans Associates, Phoenix, Arizona
Project team
Trudi Hummel, Donna Barry, Jose Pombo, Kyle Houston, Jason Boyer, Jay Silverberg, John Cooper, Adam Odgers, Kari Smith, John Dimmel, Jennifer Little, Tamara Shroll, Krista Shepard, Betsy Lynch, Jorge Colon, Barbara Hendrix, Shane Hawkins, Brian Avery
Structural engineer
Rudow + Berry
Electrical engineer
Associated Engineering
Photographs
Timothy Hursley



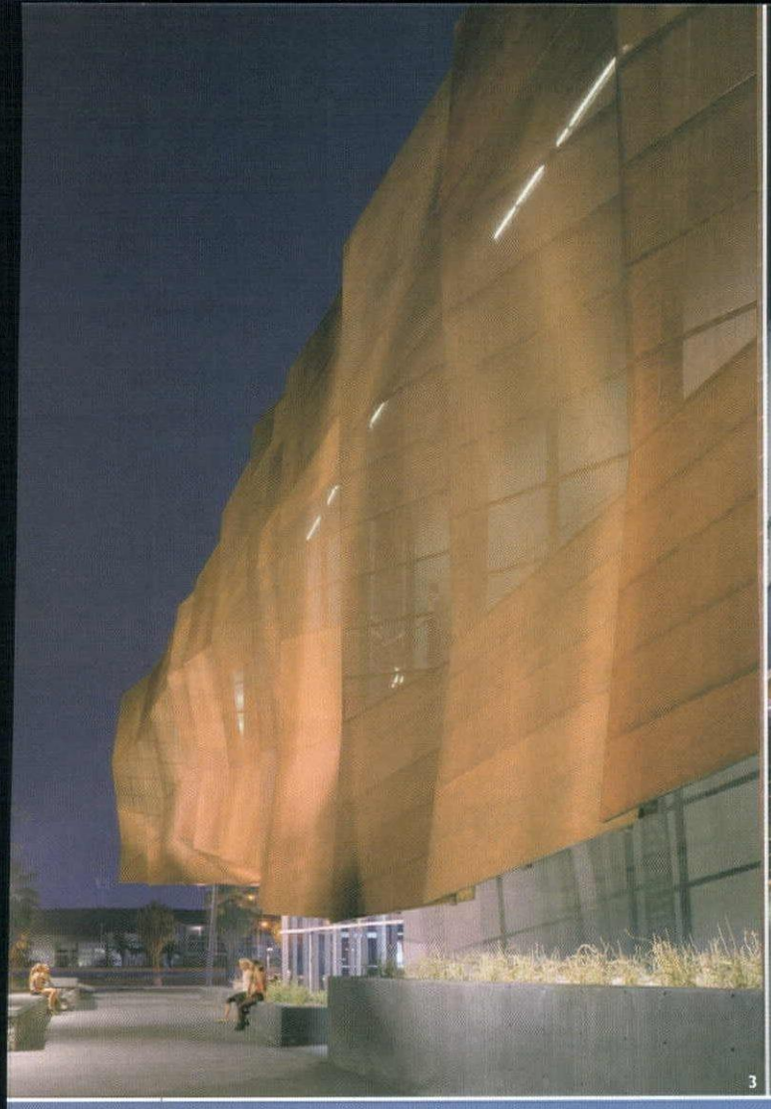
6

6, 7
The fluid, luminous space of the theatre foyer. Column positions were based on the Labanotation of Balanchine's *Serenade*.
8
A narrow chasm separates the theatre and dance studio.
9
Rehearsing in the studio.
10
Inside the 300 seat theatre. Public performances by the students add to Tucson's cultural life.



7

DANCE THEATRE, TUCSON, ARIZONA, USA
ARCHITECT
GOULD EVANS



3



4



5

UNIVERSITY LIBRARY,
MAGDEBURG, GERMANY
ARCHITECT
AUER + WEBER

Located on the river Elbe, Magdeburg's Otto von Guericke University is slowly but steadily establishing an enviable collection of contemporary architecture. New work for the 10 000 strong campus began in 1995 to a masterplan by Berlin-based architects Hufnagel, Pütz and Rafaelian. Peter Kulka's elegantly understated Faculty of Science was the first new building, soon followed by Sauerbruch Hutton's candy-striped Research Institute (AR January 2002) and Gunter Henn's design for the Max Planck Society.

Last autumn these were joined by another outstanding contemporary addition, the new university library by Auer + Weber. Within Germany, the Stuttgart and Munich-based partnership has established a notable reputation dating back to the time when its founding members collaborated with Günter Behnisch on the design of the Munich Olympic Stadium roof. Today, Auer + Weber are known for a refined approach to form and space, and an inventive, economic use of materials. Recent projects include a hotel for European astronomers in Chile's Atacama Desert (AR June 2003).

The site boundary for the new library reflects the pre-war era when the area was a thriving bourgeois housing quarter. Flattened by Allied bombing raids, little remains apart from the street layout. However Auer + Weber respected the old city grid and, for instance, resurfaced the adjacent Ludlof Strasse with cobblestones. Despite this historical reference, all other aspects of the architecture clearly allude to the twenty-first century. Christoph Lueder, chief designer and project architect, developed a modern and visionary response to the 1998 competition brief: a continuous strip of concrete folded six times, each fold creating a new level on the triangular site.

The main entrance turns away from the street, facing north towards a courtyard defined by the uniform blocks of a lecture hall, computing building and the refectory. Here in the courtyard, visitors initially encounter the strip of concrete which becomes the first fold. This concrete pavement extends into the building and takes you up a straight ramp, partly covered by an elegantly sweeping timber staircase. The first level is synonymous with the second fold.

On this level, with its generous, bright, daylit spaces, you become aware of the particular qualities of the architecture. Looking up and down the central atrium, traversed by diagonally intersecting floors and walkways, its compositional rigour and strength are evident. The eye follows the floor lines and you begin to understand the inherent logic of the stacked floorplates. In structural terms, long and slender reinforced-concrete columns support the floors in an unobtrusive



1

UNFOLDING KNOWLEDGE

The latest addition to Magdeburg University's campus is a new library with a generous, dynamic interior.



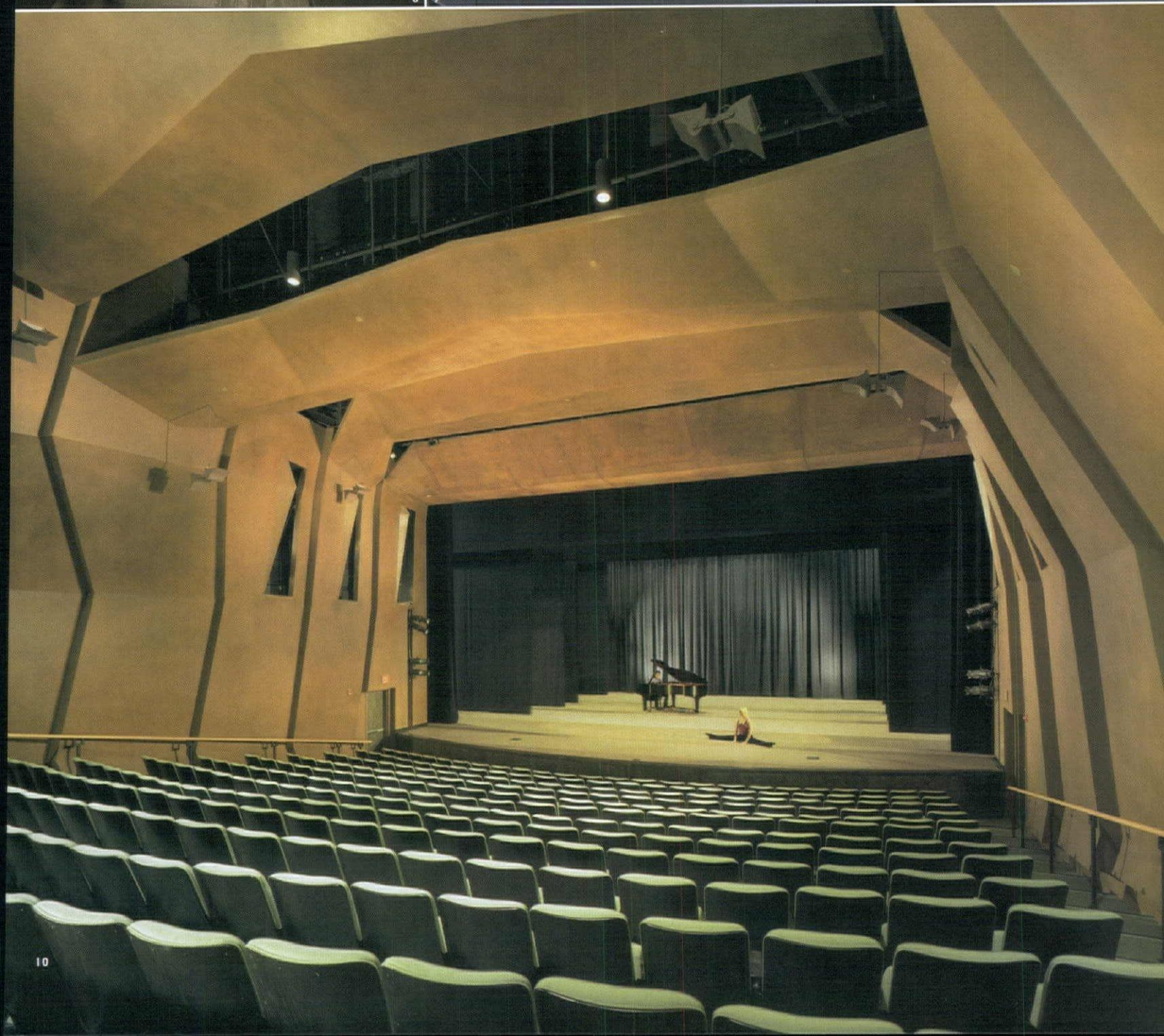
location plan



8



9



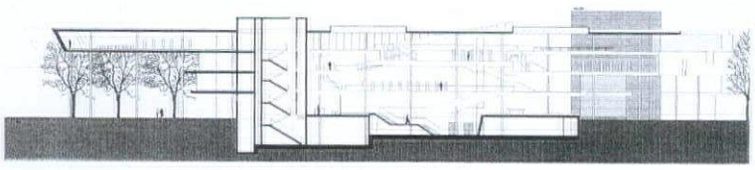
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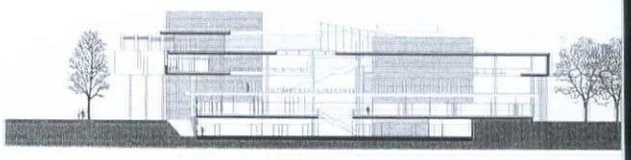


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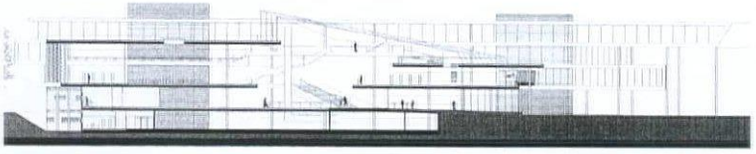
1
Set on a triangular site on Magdeburg's growing campus, the new library is a series of long volumes sliding under and thrusting over each other like folded paper.
2
Main street facade. Pilotis give the building a permeability, with views through to the campus beyond.



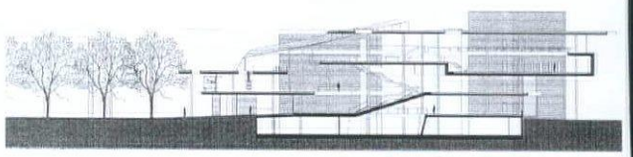
cross section looking north-east



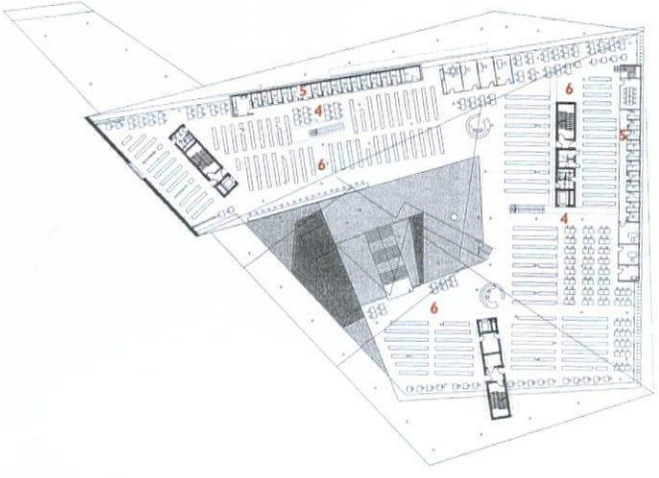
cross section looking west



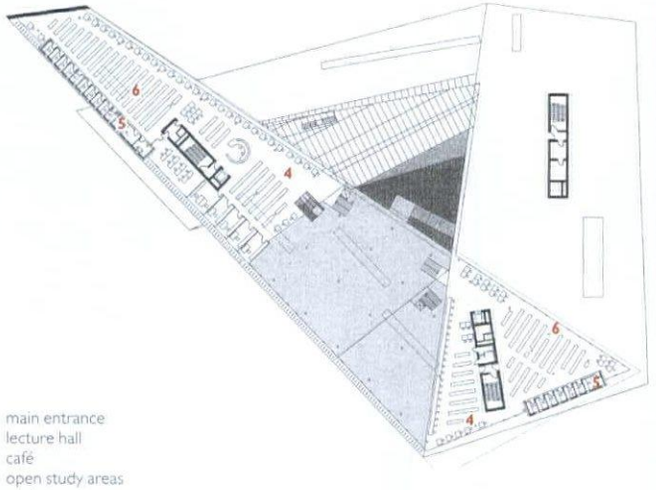
cross section through atrium looking south-west



cross section through main entrance looking north-east

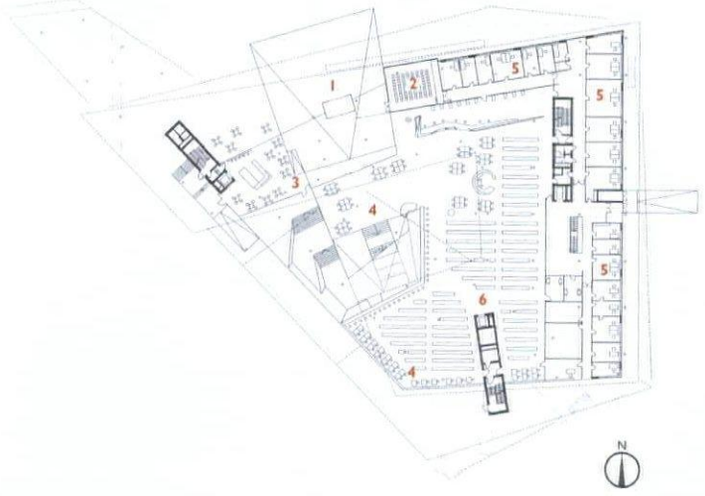


first floor

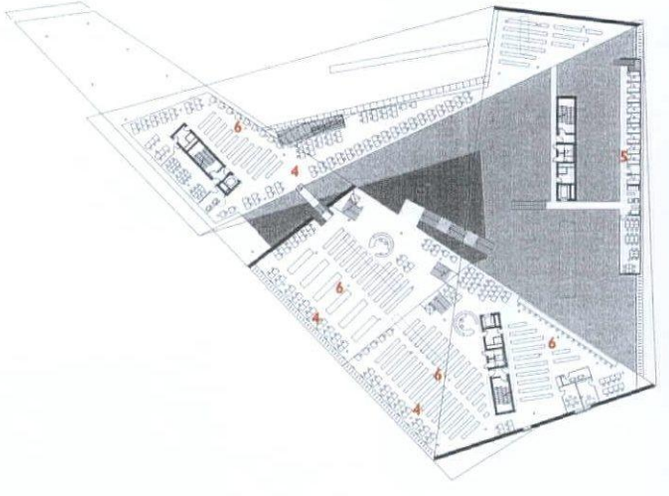


1 main entrance
2 lecture hall
3 café
4 open study areas
5 study rooms
6 bookstacks

third floor



ground floor plan (scale approx 1:1500)



second floor

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AUER + WEBER

8.4m grid. Otherwise three independent cores stabilize the daring construction. The challenging geometry of the folds gives rise to the unconventional spatial configuration of the terraced spaces, and the generous, dynamic layout evokes memories of Scharoun's iconic Berlin Library.

The 'library as a landscape' is a succinctly organized microcosm in which each fold has been given over to one faculty consisting of a service core, book storage space, reading tables and carrels which can be booked for individual studying. In total there are spaces for 600 students and 150 desks with computer points. The library has 800 000 books on open storage with a further 400 000 in the basement magazine. The lucid spatial concept is also followed through in terms of detailing, with ceilings free from clutter, exposing the bare concrete. The 300mm floor slabs have a 250mm raised floor, sufficient to house all electrical and data cabling as well as providing room for displacement ventilation. A specially designed free-standing funnel sucks in hot air directly from under the sloping glazed roof of the atrium.

Conservation of energy was as much a preoccupation of the original designs as the constructive and extensive use of natural light. Instead of screening out daylight, Auer + Weber employ the latest Siemens prismatic technology to filter the sun's rays. Adjustable two-storey high louvres of acrylic-glass prisms protect parts of the south-west facade. The same technology filters the sun on the glass atrium roof. So students can enjoy studying in broad daylight, free from glare and reflections.

Throughout the interior, materials are used simply but elegantly. Bright concrete walls, ceilings and columns predominate, cast using white sand from the nearby river Elbe. All steelwork (including the bookcases and window frames) is dark grey. Floors on the entrance level and the public part of the basement are concrete and parquet, and study areas have light grey carpets. All staircases and walkways are made of laminated wood. Bold reds and greens animate the timber shuttering of the cores, and, together with the saturated yellow of the carrels, these punctuate and enliven the facade.

Both from inside and out, the new building reads as a paradoxically big but slender structure, with its slim floor lines zig-zagging across the facades, the calm rhythm of the columns and the large floor-to-ceiling windows. At no time does the drama of the fold appear as a shallow hype. Instead, Auer + Weber's bold yet intelligently judged building is now the new jewel in the crown of Magdeburg University's evolving campus. CHRISTIAN BRENSING

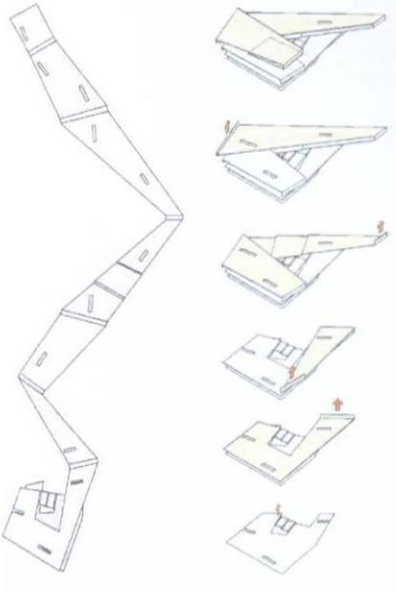


5



6

5
The Scharounian library landscape, with cascading terraces and flying stairs.
6
One of the many study spaces.
7
The central atrium is bathed in natural light screened by the latest prismatic technology to cut out glare and reflections.



folding plane diagram

Architect
Auer + Weber, Stuttgart
Project team
Götz Guggenberger, Christoph Lueder, Svetlana Curcic, Armin Kammer, Jürgen Weigl, Christoph van Heyden, Holger Schurk
Structural engineer
Leonhardt, Andrä & Partner
Mechnical engineer
Ebert Ingenieure
Photographs
Roland Halbe/ARTUR

University library, Magdeburg, Germany

Architect

Auer + Weber

3
Main entrance. The building reads as paradoxically big yet with a relatively slender structure.
4
Floor lines zigzag animatedly across the facades.



3



4





University campus,
Gloucester, England
Architect
Feilden Clegg Bradley
Architects

1

WORK REST AND PLAY

After years of absence, a new university campus brings access to higher education back to the city of Gloucester.



Walking around the University of Gloucestershire's new campus with Peter Clegg, it is immediately apparent that architects Feilden Clegg Bradley passionately believe in, and profoundly understand, the significant contribution that education brings to our lives – not only in terms of architecture and regeneration, as a group of architects who love to build, but far more holistically. Education is undoubtedly in FCBA's blood, and while their extensive 25 year portfolio includes excellent arts, housing, and community projects, the fulfilment of the practice's priorities is perhaps most explicit in their work for education. FCBA design as users, and when designing places where people seek education, they repeatedly draw on collective personal experiences as students, parents, and teachers. So, a practice internationally known for its pioneering innovations in environmental sustainability and energy efficiency, gives more by reflecting on an equally significant commitment to the broader issues of economic and social sustainability.

For more than 12 years, the UK's higher education sector has offered FCBA scope and opportunity to innovate, becoming a staple and producing significant buildings for Sunderland and Aston Universities, the Open University and London's Imperial College. However, despite such individual successes, richer results seem to have come when the practice has been engaged in long-standing client relationships, such as those with King Alfred's College in Winchester, and here in Gloucestershire; both of which have been nurtured since the early 1990s. By relying on a culture of learning and innovation, universities and colleges have historically acted as laboratories for architectural experimentation, and while commercial realities exist, academic institutions tend to prioritize long-term investment over quick-fix, fast-buck incentives – as has been FCBA's experience in Gloucestershire.

Under the ambitious stewardship of the University's Vice Chancellor Dame Janet Trotter, the University of Gloucestershire has become one of the West Country's more committed architectural patrons, commissioning FCBA's award-winning intervention within the gothic revival quad of Francis Close Hall Campus in 1994, Edward Cullinan's Art Media and Design facilities at Pitville campus (AR April 1994), and most

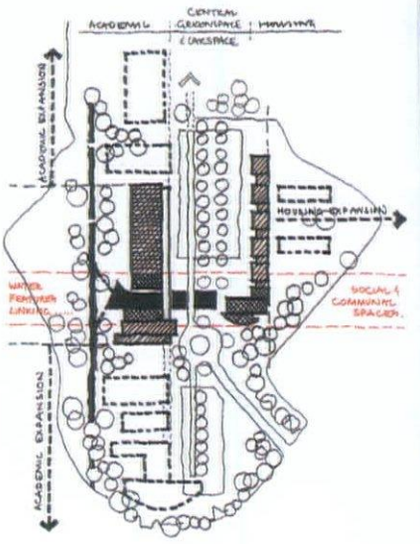
1
With its lofty atrium and generous glazed link, Feilden Clegg Bradley's new facilities building gives Gloucester's new campus stature and presence.

recently with its new Sport and Exercise Sciences campus in the heart of Gloucester.

On college land formerly occupied by a 1950s training college, the new campus was built to redress the uneven distribution of the county's higher education facilities, which since 1992 had been solely within Cheltenham. In 1996, FCBA were appointed to review the potential of the site, and to co-ordinate a long-term campus strategy.

As the first stage, building stock was evaluated to see if any of structures from the previous five decades of development could be re-used. But, after considering flexibility of use, options for upgrading (particularly in terms of energy conservation), organizational efficiency, site distribution, and architectural quality, FCBA somewhat reluctantly concluded that demolition was the most feasible option. A decision that may have been regrettable in terms of embodied energy, but which increased opportunities to develop a high density, centralized strategy. This, while offering scope for expansion, would create sufficient critical mass within a modest first phase to give the fledgling campus its own identity and sense of place. So phase one, which was completed for the student intake of October 2002, included a new learning resources and teaching centre, sports science facility, and refectory, which collectively form a north-south armature that acts as the campus' heart and spine. Parallel to this sits another north-south terrace of 180 study rooms, all with private bathrooms, which terminates in a student common room and bar. It forms a communal cluster that, when linked to the facilities building by an east-west landscaped body of water, creates an entrance threshold for the site.

Organizing buildings on this axis was central to the campus' environmental strategy, avoiding bleak north-facing study bedrooms, enabling both the learning resource centre and the sport sciences building to exploit diffuse north light (reducing dependency on artificial lighting), and optimizing the performance of the EU and DTI funded photovoltaic array recently installed onto the sport sciences building's distinctive tick-section roof. (An installation

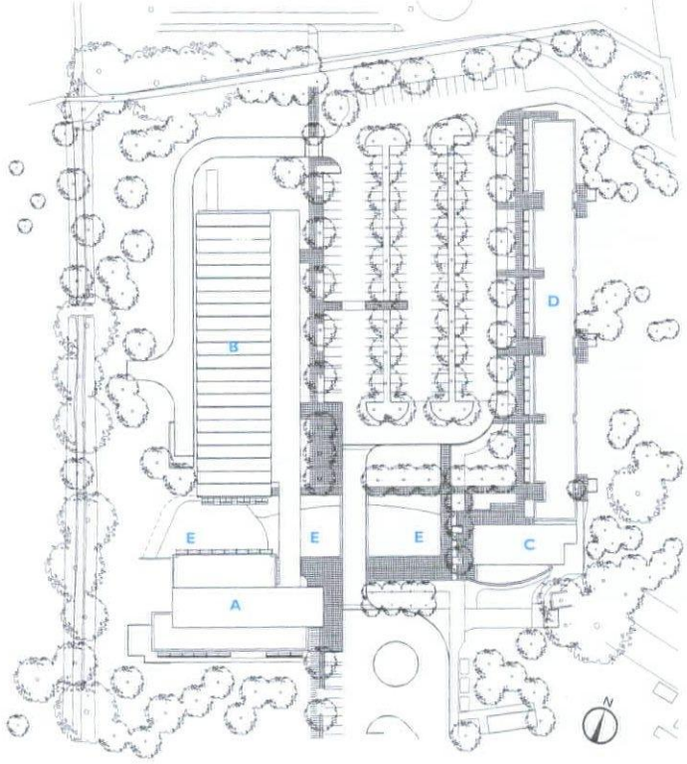


masterplan concept

UNIVERSITY CAMPUS, GLOUCESTER, ENGLAND

ARCHITECT

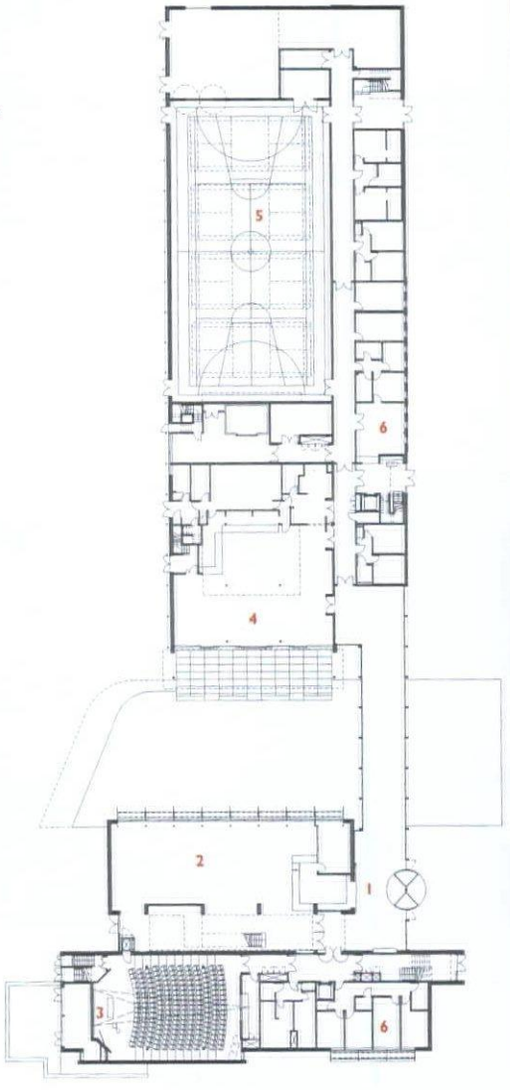
FEILDEN CLEGG BRADLEY ARCHITECTS



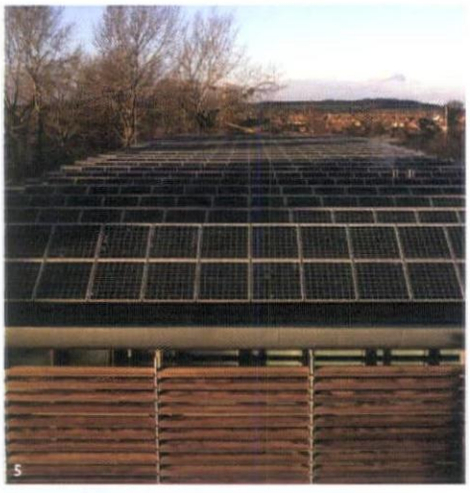
A learning centre
B sport sciences building
C common room and bar
D student housing
E landscaped pool

site plan (scale approx 1:2000)

1 reception
2 learning resources centre
3 lecture theatre
4 refectory
5 sports hall
6 staff offices
7 teaching rooms



ground floor plan (scale approx 1:1000)



estimated to meet 50 per cent of the sport sciences building's demand, equivalent to 30 per cent of the precinct's combined load.) With this in place, attention focused on the most complex environmental problem: the internal conditioning of the learning resources centre.

With the dramatic increase in IT provision in education, there are now many environmental variables to consider when seeking to create stable comfort levels. Learning from experience gained on the Martial Rose Library in Winchester, FCBA again adopted a hollow core displacement ventilation strategy: a system that responds well to the most onerous conditions during winter months, when maximum occupancy levels demand high air change targets without throwing away the free heat benefit that computers and people provide.

Using standardized building components, the TermoDeck system converts a humble hollow-core precast concrete floor slab into a fully integrated circuit of thermal batteries: a modular structural system that contributes to the visual order of the spaces and which operates in a number of modes to provide seasonal environmental stability. In summer, night purging charges the ventilation circuit with coolth to temper incoming air, while exposed soffits are chilled to absorb surplus heat gains. In winter, trickle charge heating of the thermal mass warms a steady supply of fresh air, which gently heats the soffits and provides displacement ventilation through the floor. Heat recovery systems are also employed with a thermal wheel preheating incoming air, and exhaust air is discharged into the foyer to reduce uncomfortable down-draughts in the otherwise un-tempered glazed link.

While budget limitations denied lavish materials, a degree of finesse has been achieved through the careful placing of finer quality materials, such as timber acoustic panelling in the atrium, and a Siza-esque limestone plinth in the foyer. The main disappointment, however, has been how security measures have denied users the permeability between the learning and teaching spaces as originally designed, resulting in the central atrium and core being isolated rather than a dynamic place of interaction. Still, this operational decision is clearly reversible.

On the whole, the University is delightful to visit, and as more students move in, and when vegetation matures to soften the impact of the somewhat disappointing hard landscaping, it will undoubtedly host a thriving student community. FCBA's most significant achievement has been an ability to create a place with just three basic moves, producing a solution credited by the RIBA for being 'gimmick free' and offering 'a serious welcoming handshake for a new age HQ'. On choosing to invest in the higher education sector, FCBA have responded well to the strategic changes that have been implemented over the last 15 years. So, if Richard Feilden's prediction of an equivalent shift in secondary education over the next 15 years is correct, we look forward to seeing how FCBA re-apply their expertise to the UK's new generation of City Academy schools. 'We love designing schools,' says Feilden, with a smile that exhibits a slightly mischievous pleasure. A pleasure and optimism that seems to imply that regardless of what decisions central government may take, FCBA will be there to get under the skin of legislation, funding and targets to help produce the best schools that money can buy. After all, designing the building is only part of the battle, and FCBA fully understand this. Regardless of the practice's technical and theoretical competence, they have never adopted a highbrow architectural position. Instead, with sustained integrity, their investment in clients and long-term aspirations has brought them increasing popularity: a deserved reward for choosing not to engage in the architectural pageantry that tempts so many other practices away from the essence of longevity that all architects should pursue. ROB GREGORY

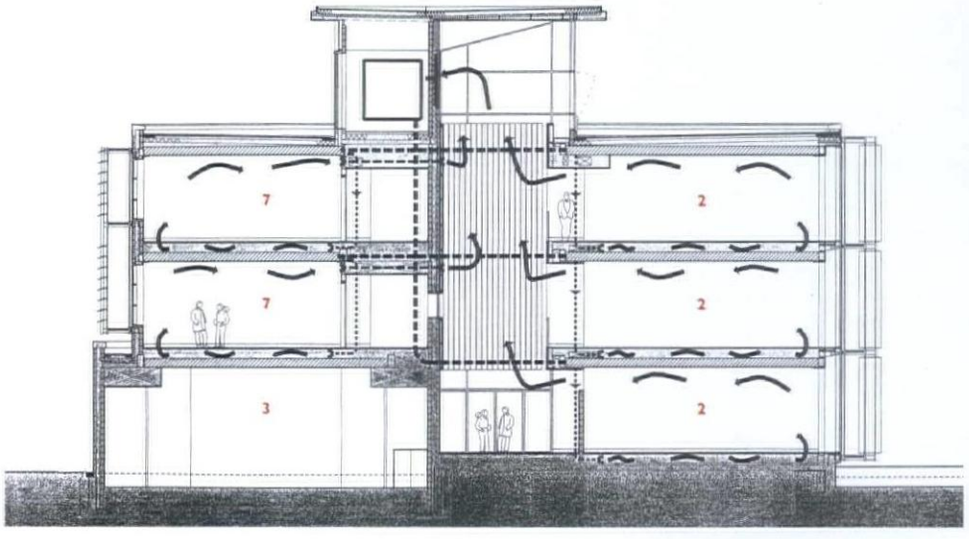
Architects
Feilden Clegg Bradley Architects, Bath
Project team
Peter Clegg, Bill Gething, David Stansfield, Matt Somerville, Toby Lewis, Elena Marco Brugete
Project manager
Burnley Wilson Fish, John Burnley
Structural engineer
Whitby Bird & Partners
M&E engineer
WSP
Photovoltaic consultant
ESD and PV Systems
Facade consultant
Montresor Partnership
Landscape consultant
Mitchell Harris Partnership
Photographs
Mandy Reynolds

UNIVERSITY CAMPUS, GLOUCESTER, ENGLAND

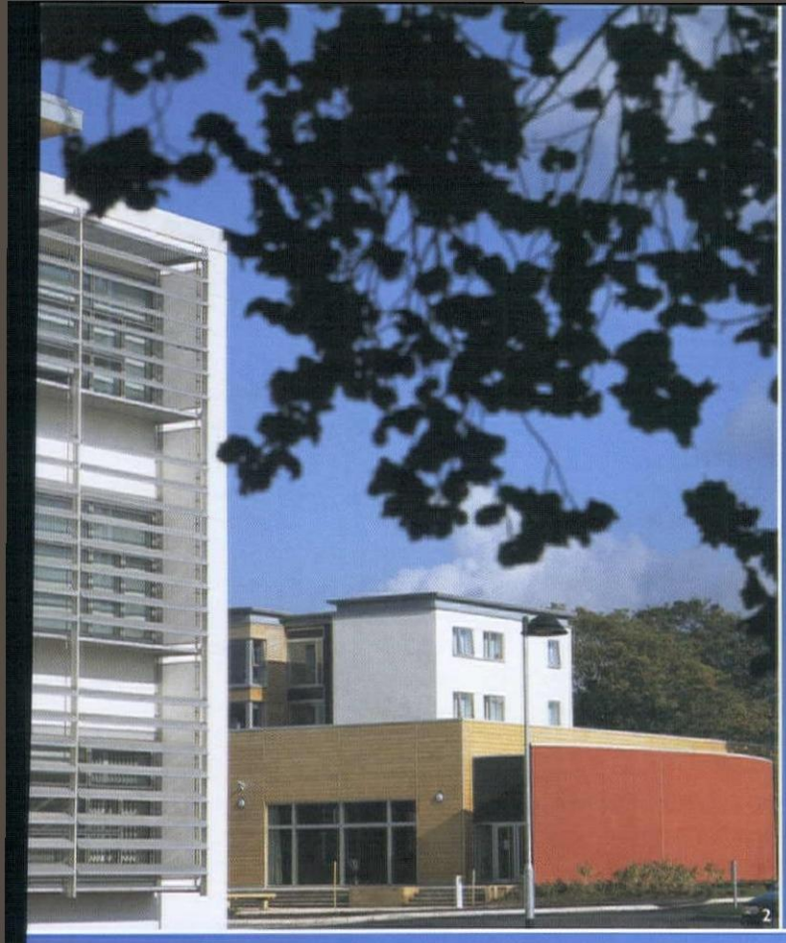
ARCHITECT

FEILDEN CLEGG BRADLEY ARCHITECTS

5
The campus's distinctive razorback northlights support the college's 490m² photovoltaic array.
6
Even during the winter months, the café's sheltered terrace provides a welcome place of rest ...
7
... from the physical exertion of serious play ...
8
... and the mental stimulation of sport sciences work.



section through lecture theatre, seminar rooms, atrium and learning resources (scale approx 1:250), see key p70







2
From the south-west approach, this modest collection of buildings creates an impressive flagship campus for the University of Gloucestershire.
3
Louvres on the southerly facade eliminate direct sunlight from the principal teaching rooms.
4
With the first of five student accommodation blocks behind, the student bar and common room help create a defined campus gateway.



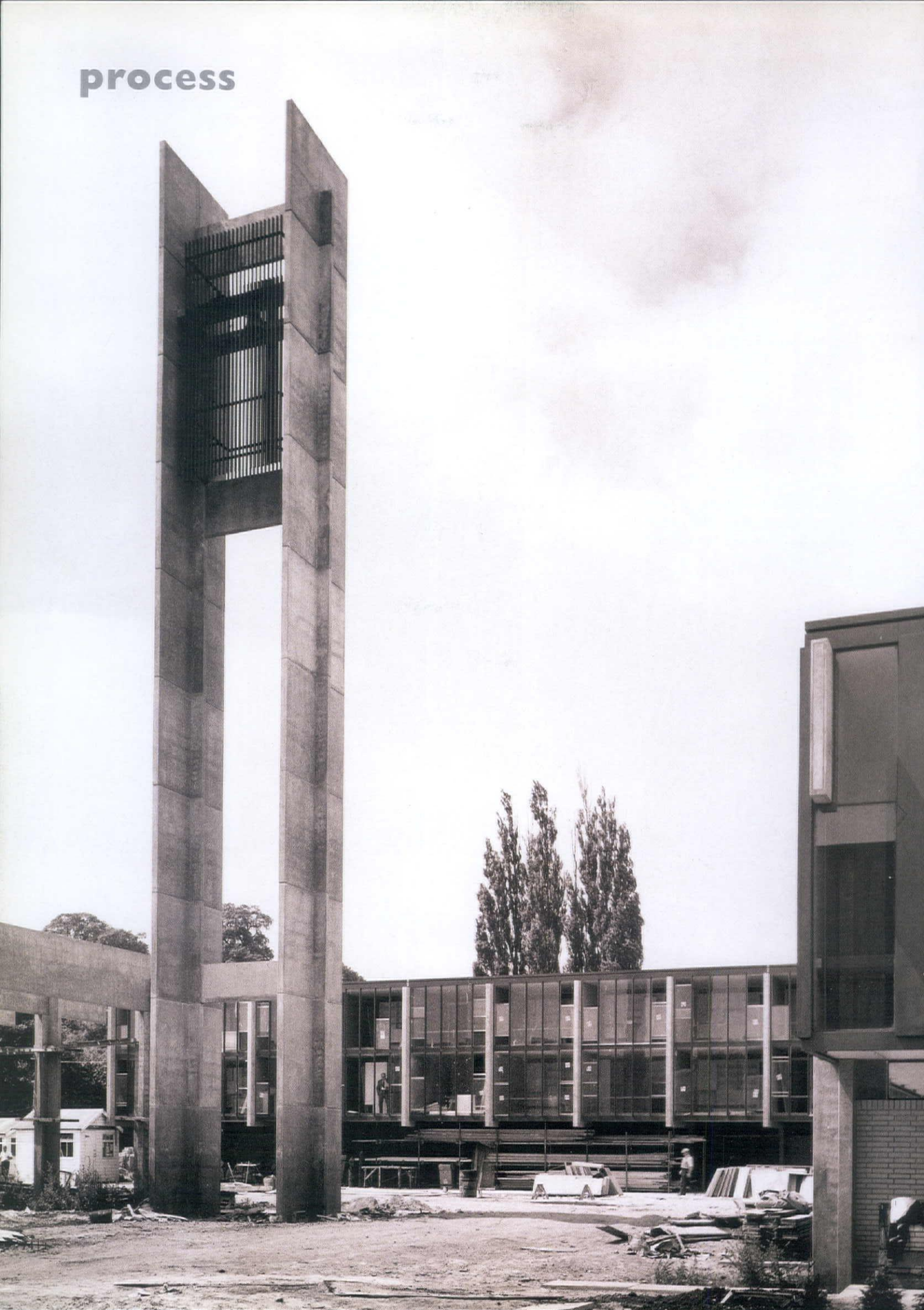
6





8

process



'On Jacobsen's ideal platform, an absolute architectural morality prevails – there can be no mistakes and no excuses, no afterthoughts and no escape clauses, about the siting of the individual components of the scheme. No room for improvization, no exploiting the happy accident – and no room for growth.' Reyner Banham

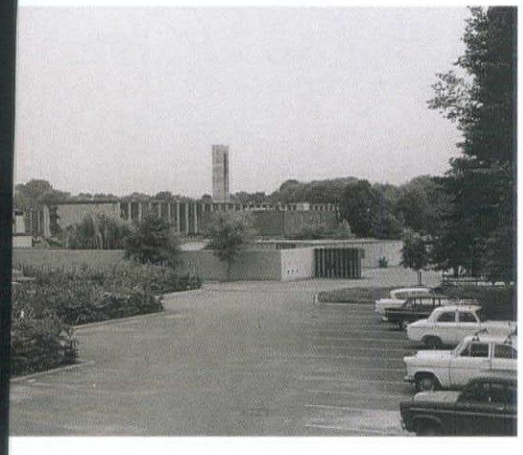
In his 1964 review, Reyner Banham may well be forgiven for arguing so forcibly that Arne Jacobsen's St Catherine's College in Oxford was complete. In his critical account for The Architectural Review – in which he somewhat provocatively described St Cat's as 'the best motel in Oxford' – Banham was as clear in his criticism as Jacobsen was in his vision. St Cat's could, he stated, be understood in a single sweep of the eye. It was, he observed, an exercise in elementary composition, the footprint of which was more a logical outworking of architectural proportion than a constraint of the site, which, as a reinterpretation of the closed courtyard, had made a valuable contribution to British collegiate architecture.

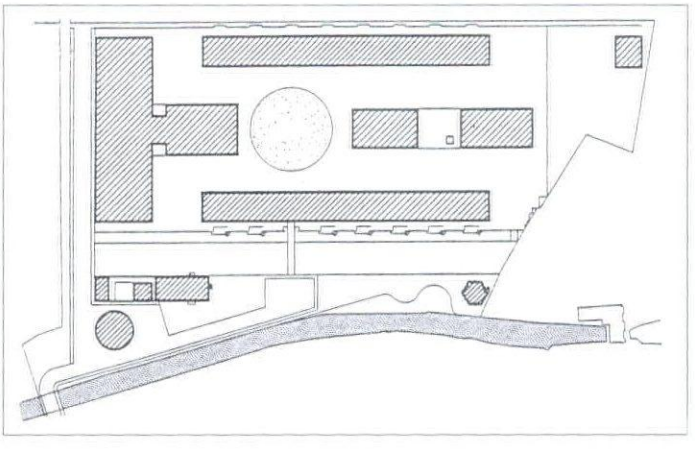
But that was forty years ago. Today, when considering the subsequent lives of St Cat's, what would Banham, and perhaps more importantly Jacobsen, think of the college's ongoing expansion?

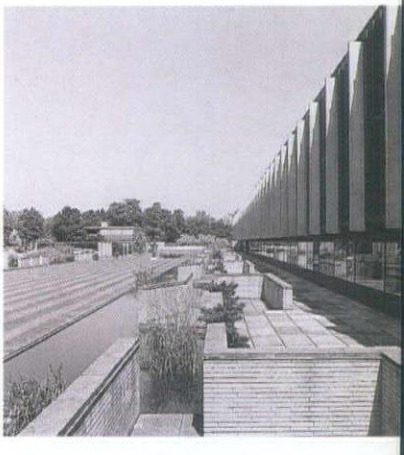
Banham's appreciation of St Cat's completeness was in hindsight somewhat misplaced. Not least on a practical level as the skeleton of the lecture hall and bell tower's fine concrete structure sat in sublime isolation for a number of months, but more generally because no work of architecture on this scale can ever truly be considered complete, regardless of its compositional purity. In sustaining living communities, collections of buildings such as colleges and campuses, as microcosms of the city typology, always need to grow. Adolescence, maturity, decay and (we hope) rebirth, form an inevitable cycle, which when let to run its natural course will reveal much more of the measure of an architect's success. Few structures ever deserve to be set aside and preserved in isolation, especially so early in their life, a fact that even St Cat's could not escape. Over subsequent years, several additions have been made to Jacobsen's work, such as the Alan Bullock and Mary Sunley buildings by Jack Lancaster, and Sir Philip Dowson's reconfiguration of the college's external entrance spaces. However, the most significant work to extensively upgrade and expand the college has been the responsibility of Manchester-based architect, Hodder Associates.

Following his highly publicized success in 1992, when he won the Royal Fine Art Commission / Sunday Times Building of the Year Award with his first ever building, Stephen Hodder was the surprise winner of an invited competition to build 50 new study bedrooms. At the age of only 35, having beaten significant entries by Chipperfield, MacCormac and Dixon Jones, the pressure was certainly on.

By his own admission, Hodder has on occasion struggled with expectations levelled on him following his early success – a feeling that was further compounded when he went on in 1996 to win the first ever Stirling Prize for Architecture (the annual British prize for an individual building). For a young architect leading a fledgling team, early comparisons with more established practices may well have been counterproductive, resulting perhaps in his recent and notable (and some may say wise) withdrawal from the architectural limelight. This

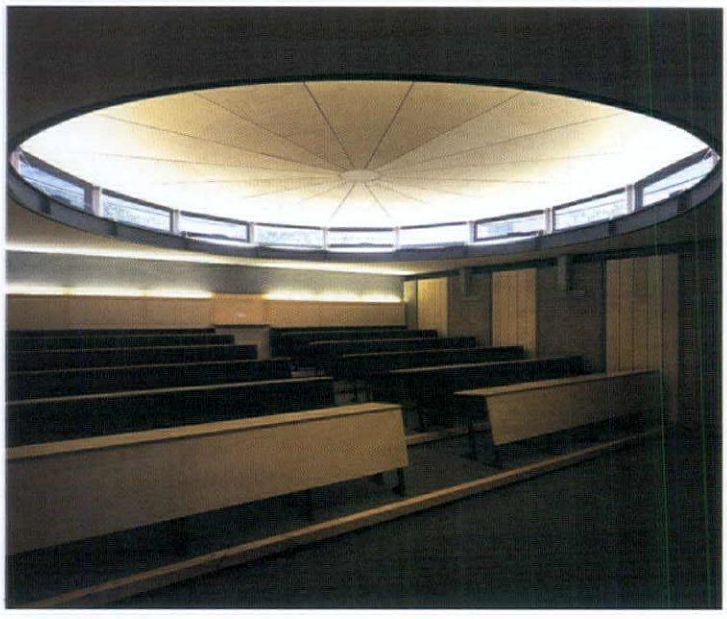


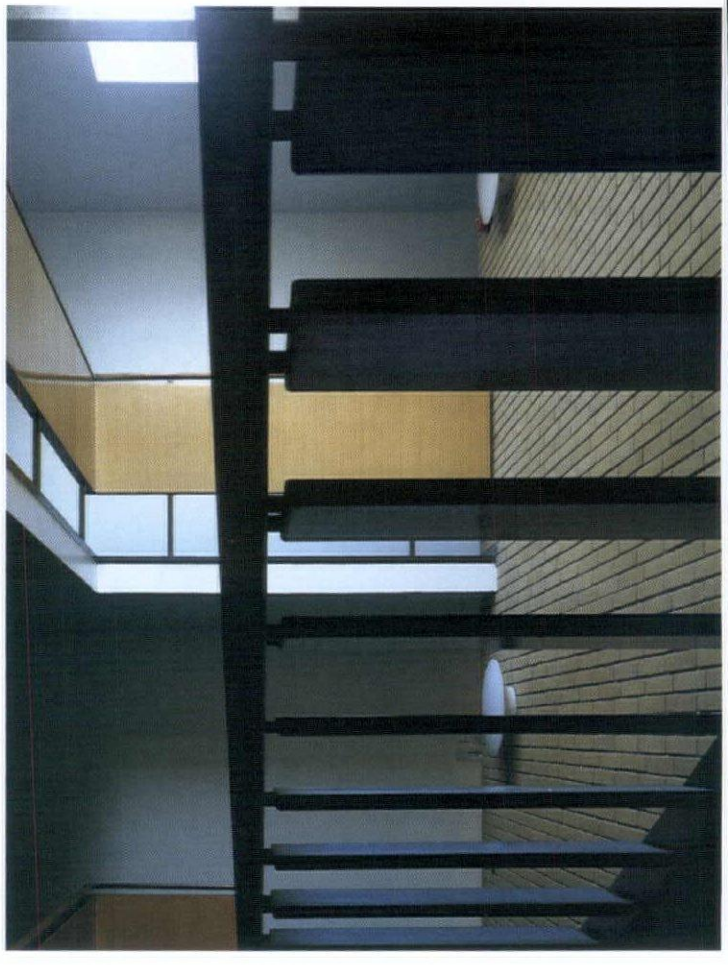




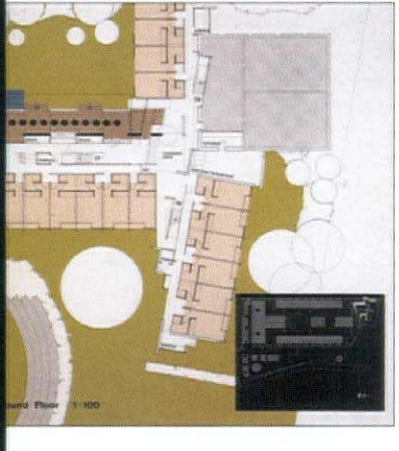
TEACHING AN OLD CAT NEW TRICKS

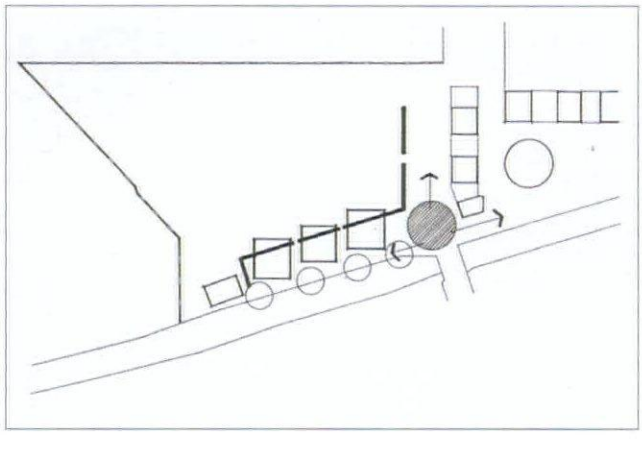
When working in the physical and theoretical shadow of Jacobsen and Banham, within a masterplan that was alleged not to be able to accommodate any more residential accommodation, how do you add to a modern masterpiece?

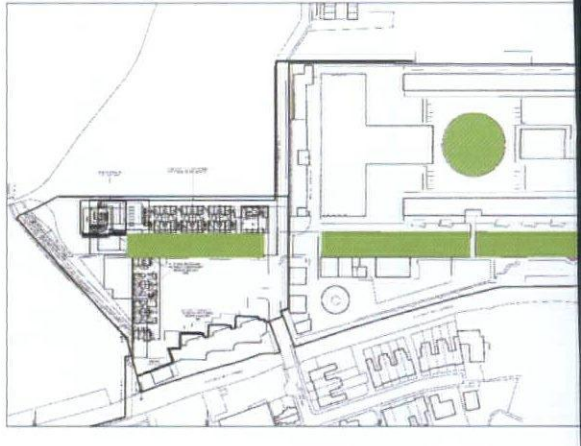




While working within Jacobsen's original buildings, with a series of discrete interventions such as the JCR lecture room (above) and the ongoing bedroom and stair cluster renovation programme (right), Hodder Associates' more extensive expansion plans have been developed since 1993: from the original competition scheme (below left), to the finalized two phase strategy (below right).







said, Hodder's ongoing 11-year appointment with St Cat's can be seen as an important lifeline, affording him the time to work more reflectively on a significant body of conservation, installation and new-build projects that may well produce his most accomplished work to date.

Marked development can be seen between Hodder's relatively complicated competition scheme and the more refined phases of finalized proposals which embody many lessons learnt from his restoration of Jacobsen's work (an ongoing appointment that includes phased remodelling of original study rooms to include private bathrooms, upgrading of junior common room facilities – including the delightful integration of a new lecture theatre – and replacement of Jacobsen's original cladding with double glazing, which is soon to start on site.)

The choice of Hodder's 1993 competition-winning scheme was a surprising one, regardless of his youth. With an intrusive adaptation of the squash court building to the south of the site, his approach seemed to break every rule set by Jacobsen, and flew in the face of Banham's observation that the site held no room for improvization. In a context where no two elements ever collide, where buildings and structural components are articulated with an awesome delicacy, Hodder's three-pronged collision with the squash court now seems wholly inappropriate. Yet, something in his approach must have impressed the judges, and when re-worked on a peripheral site the practical outcomes of his designs have been far more successful.

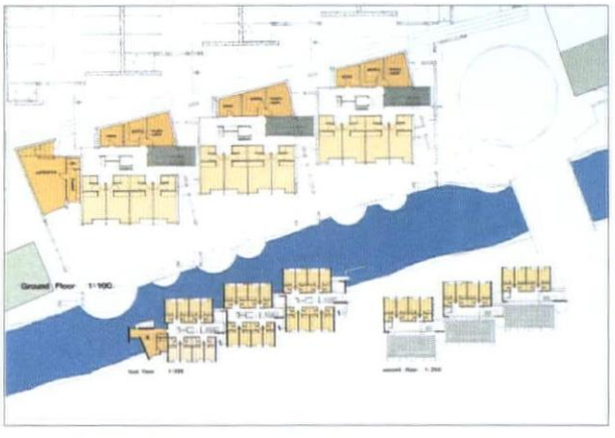
While Jacobsen's original scheme was considered by many to be finite, it was never conceived as a sealed courtyard solution. External elevations and spaces were as important as those on the interior, and with controlled views out through open corners and a number of discrete pavilions set within a broader landscape, the building's command

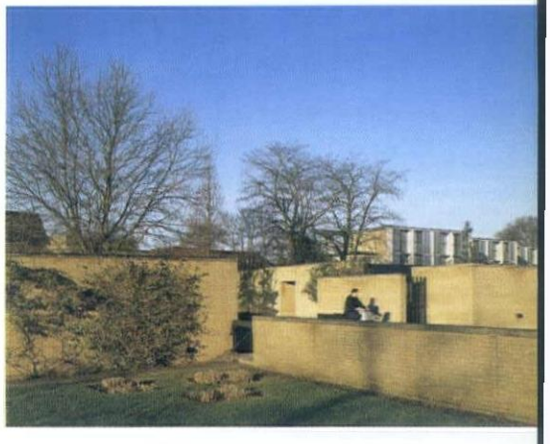




In addressing the Hollywell Stream, Hodder Associates' phase one scheme sought to re-apply lessons learnt from Jacobsen with 54 new study bedrooms organized around three new communal stairs (above and right). The new terrace, while geometrically distinct from Jacobsen's linear originals, forms a new college gateway and sensitively extends St Catherine's peripheral landscaped gardens (below).





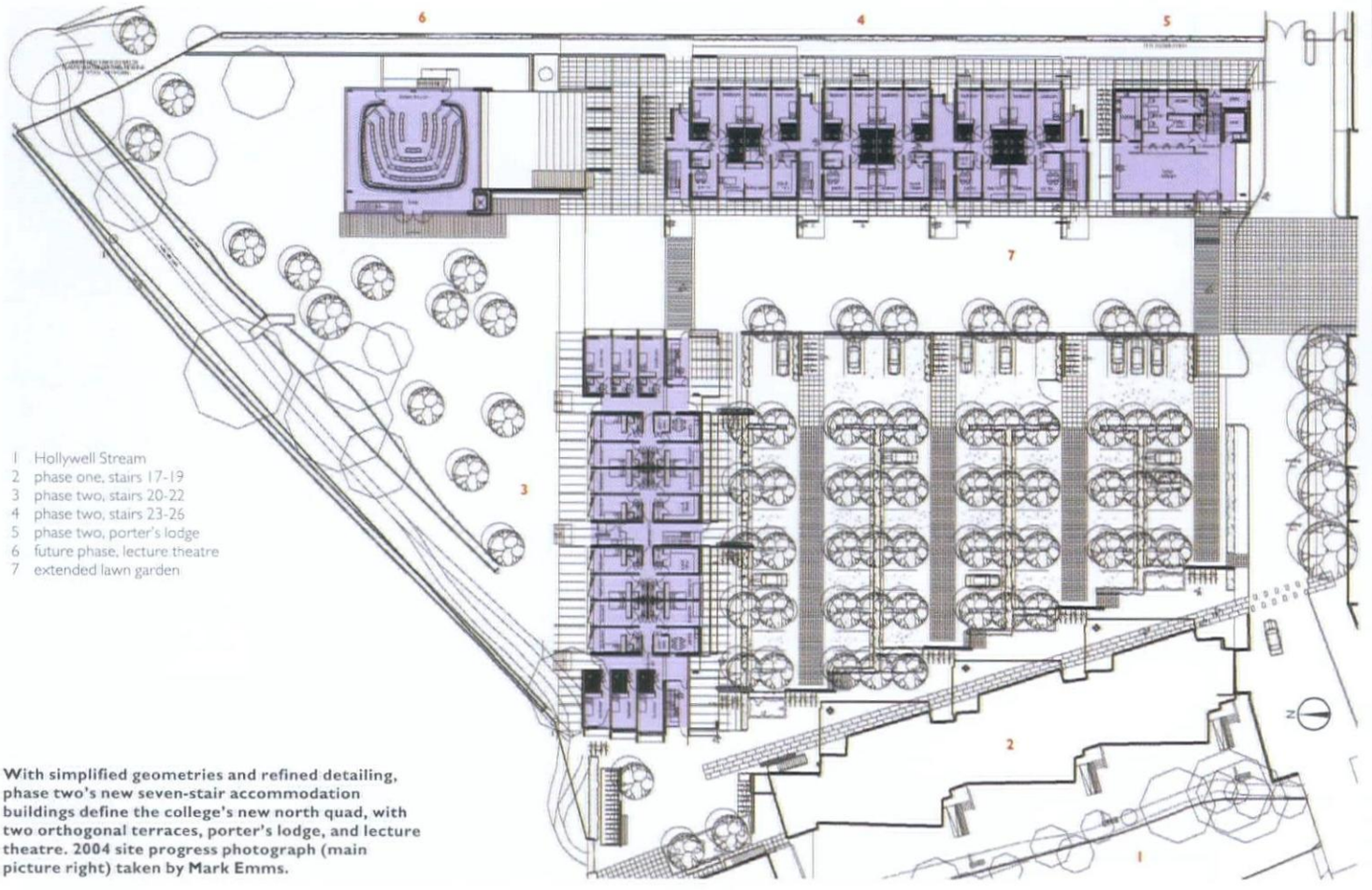


over the peripheral spaces was as significant as the more celebrated internal courtyards. So, in his reworked scheme Hodder rightly chose to preserve the formal autonomy of Jacobsen's open-air interior, pursuing instead a solution that extended the westerly landscape beyond the bounds of the original rectangular footprint; producing a more sophisticated strategy that would create a new quad and rationalize the arrival sequence that had become confused over time.

In 1995, the first phase of the expansion programme was completed with 54 bedrooms being built to the north of the site. With a new terrace, Hodder followed the collegiate tradition of grouping rooms around communal stairs, by adding three new staircases to Jacobsen's original 16. In respectful recognition of the original buildings, the terrace reapplies certain Jacobsen details, such as the 2 inch / three-quarter lap brick bond and the vertically proportioned fenestration. However, in its disposition, it responded quite differently to its immediate locality, using the 30 degree shift between the Hollywell Stream and Jacobsen's grid to generate dynamic internal and external circulation spaces, and by incorporating a new guest suite to anchor it to the previously solitary punt-house.

While the scheme has been extremely well received, without phase two it has always felt isolated. So, as work progresses on site today, the full effect of Hodder's intent will soon be felt, with two terraces of accommodation and a new porter's lodge completing the quad.

As early plan diagrams indicate, Hodder's initial intention was to create a necklace of pavilions along a garden wall, physically and notionally extending the garden pavilions that Jacobsen more loosely distributed to the west of the site. However, as plans developed, this strategy was reoriented and enlarged to make a more direct connec-

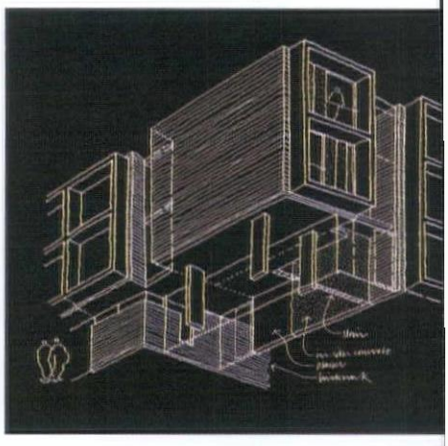


1 Hollywell Stream
2 phase one, stairs 17-19
3 phase two, stairs 20-22
4 phase two, stairs 23-26
5 phase two, porter's lodge
6 future phase, lecture theatre
7 extended lawn garden

With simplified geometries and refined detailing, phase two's new seven-stair accommodation buildings define the college's new north quad, with two orthogonal terraces, porter's lodge, and lecture theatre. 2004 site progress photograph (main picture right) taken by Mark Emms.



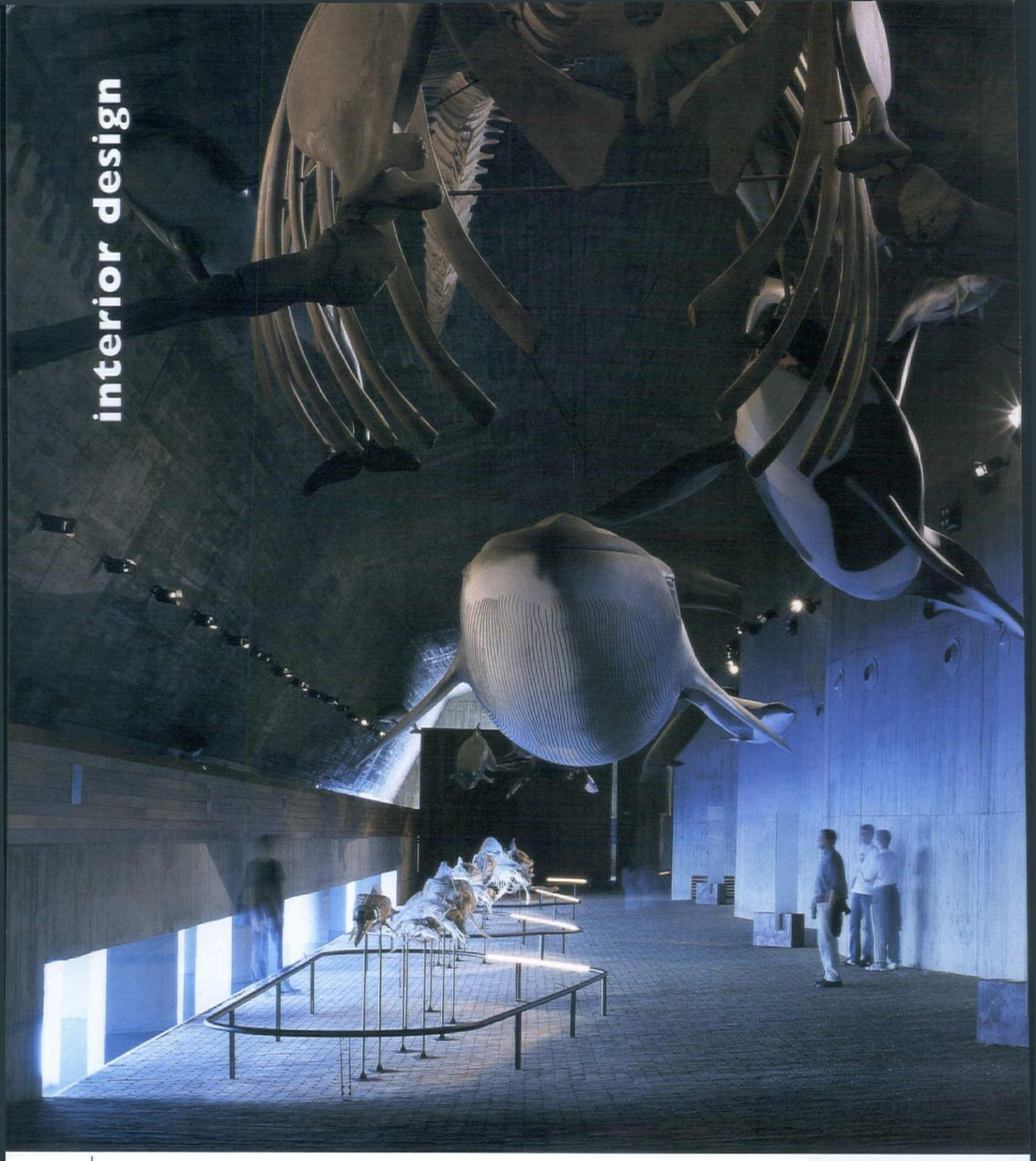




tion with Jacobsen's linear lawn; a delightful landscaped strip that, when extended, will tie the two precincts together. So, following the resolution of a number of complicated greenbelt and land ownership issues, which led to the scheme being involved in a full public enquiry, work on site began in June last year.

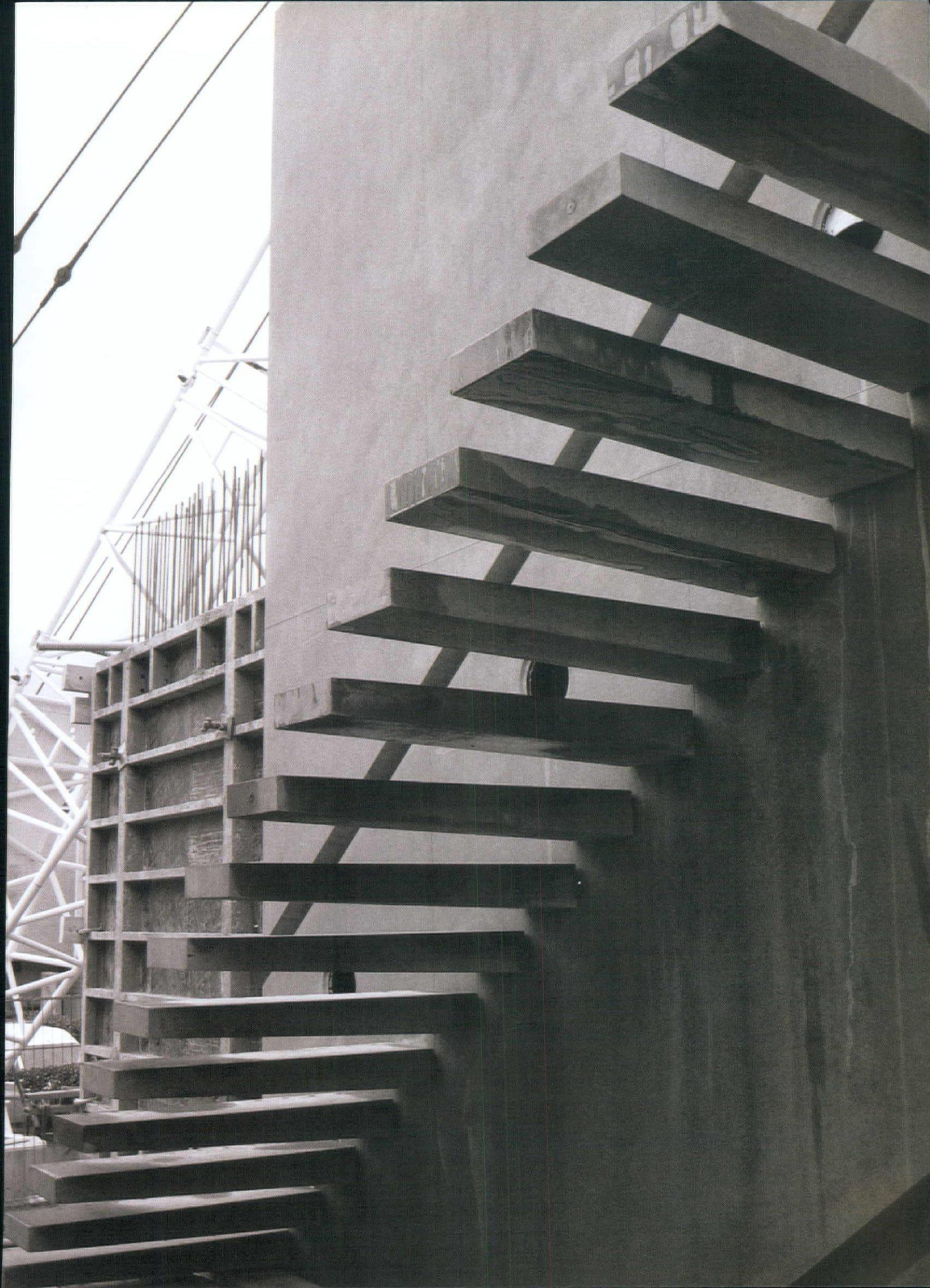
While Hodder is rightfully fond of his earlier work, when describing the progress on site, he maintains a thoughtful level of critical reflection. Today, phase one represents a period in his career when he held what he now considers to be a 'young architect's fascination with clashing geometries' – producing some well resolved but rather forced details. So, in the detailed resolution of staircases 20-26, the terraces of phase two are far calmer in their articulation, which is perhaps an indication of Jacobsen's sobering effect. This being said, however, there are still one or two playful Hodder-esque devices that could not be resisted – such as the staggered guest rooms that create a new punt-house courtyard, and the egg-in-a-box lecture theatre that is to be built when funding is available. So as work rapidly progresses on site some forty years later, while Hodder Associates are left to battle with the harsh realities of design and build, we watch with interest as another chapter unfolds in the many lives of St Cat's. ROB GREGORY

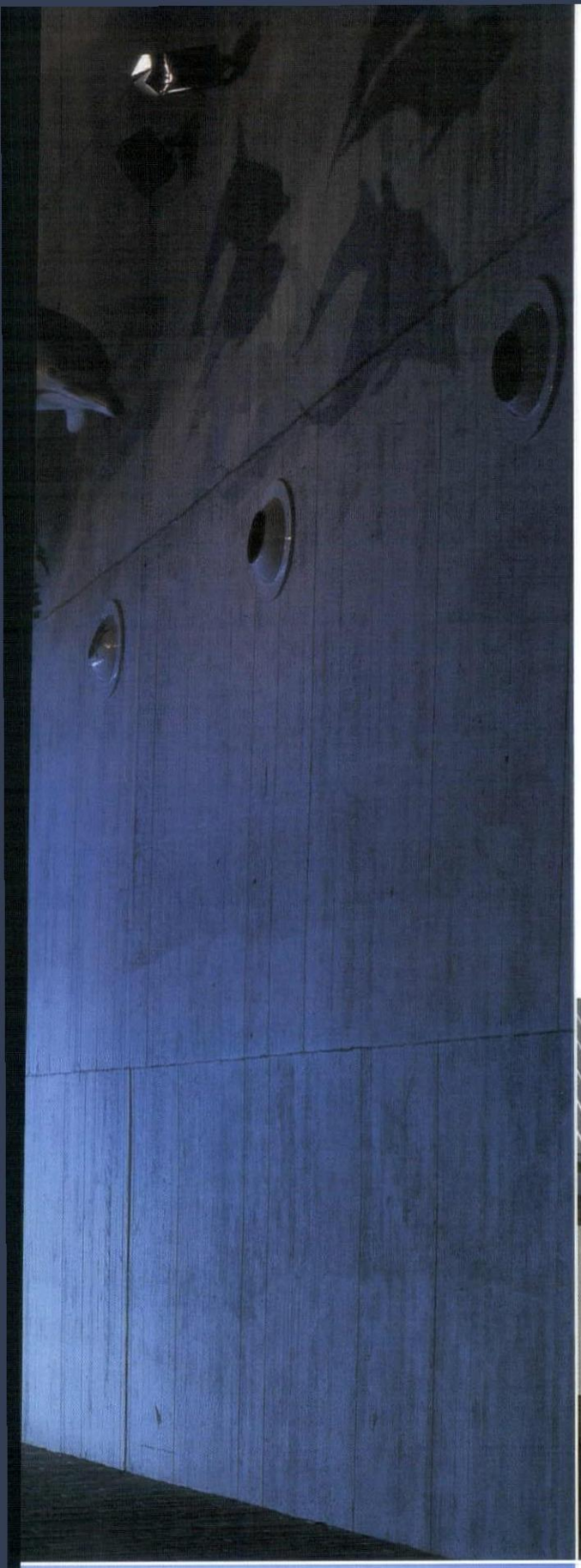
Architects
Hodder Associates, Manchester
Stephen Hodder, Mark Emms, Stephen Jones, Nick Daccus, Andy Snow, Matt Dawson, Mike Cunniff
Structural and civil engineer
Anthony Hunt Associates
Services engineer
Max Fordham and Partners
Project manager
Buro Four Project Services
Contractor
Galliford Try Construction



Marine world

Set within a Spanish national park, this natural history museum is a dramatic concrete grotto.





Lying on the south-west Atlantic coast of Spain, the vast and richly diverse Doñana National Park has been described as Europe's last wilderness. Spread over the delta of the river Guadalquivir, the area was originally set aside as a royal hunting ground in the thirteenth century and is now a World Heritage Site. Its disparate ecosystems encompass wetlands, lagoons, forest, scrubland and sand dunes. The central area of the park is strictly protected as a nature reserve but some limited development – mainly agriculture and tourism – is permitted in a buffer zone around its edges.

Andalucía is a popular tourist destination and the pressure to attract visitors to the region surrounding the Doñana has often given rise to unsustainable projects, such as hotels and golf courses, which can deplete precious reserves of ground water. Recently, however, the Seville-based partnership of Cruz and Ortiz was commissioned to design a different sort of visitor attraction, a building that explores the marine world in an attempt to foster a greater understanding of the planet's ecology.

The site lies on a network of rolling sand dunes, separated from a nearby beach by a 30m high plinth of sand. Low slung and bunker-like, the new museum is an almost topographic presence in the dunes, merging and melding with the landscape. Yet the impassive, minimally articulated exterior of plain rendered walls and ribbed zinc roof conceals an intriguing and dramatic internal realm.

Organized around a linear spine, the interior resembles a murky, subterranean cavern, with walls of rough, board-marked concrete and

SEA LIFE CENTRE,
HUELVA, SPAIN
ARCHITECT
CRUZ AND ORTIZ



3



2

1
The mysterious, cavern-like volume of the main spinal hall.
2
Museum merges into sand dunes, almost becoming part of landscape.
3
A reflecting pool runs along the south edge.

Sea Life Centre, Huelva, Spain

ARCHITECT
Cruz and Ortiz



4

paved floors. The spine is a long double-height hall, its tall volume animated by full-scale models and skeletons of marine life suspended from the ceiling. For visitors walking below them, the effect is rather like being on the ocean floor, the drama heightened by the sparse, raw textures of the materials and carefully choreographed artificial lighting which casts eerie shadows of the creatures on the concrete walls. A shaft of light also seeps into the hall from a horizontal slot cut into the external wall at floor level, its effect magnified by a reflecting pool set in a long enclosed courtyard that runs parallel with the south edge of the building.

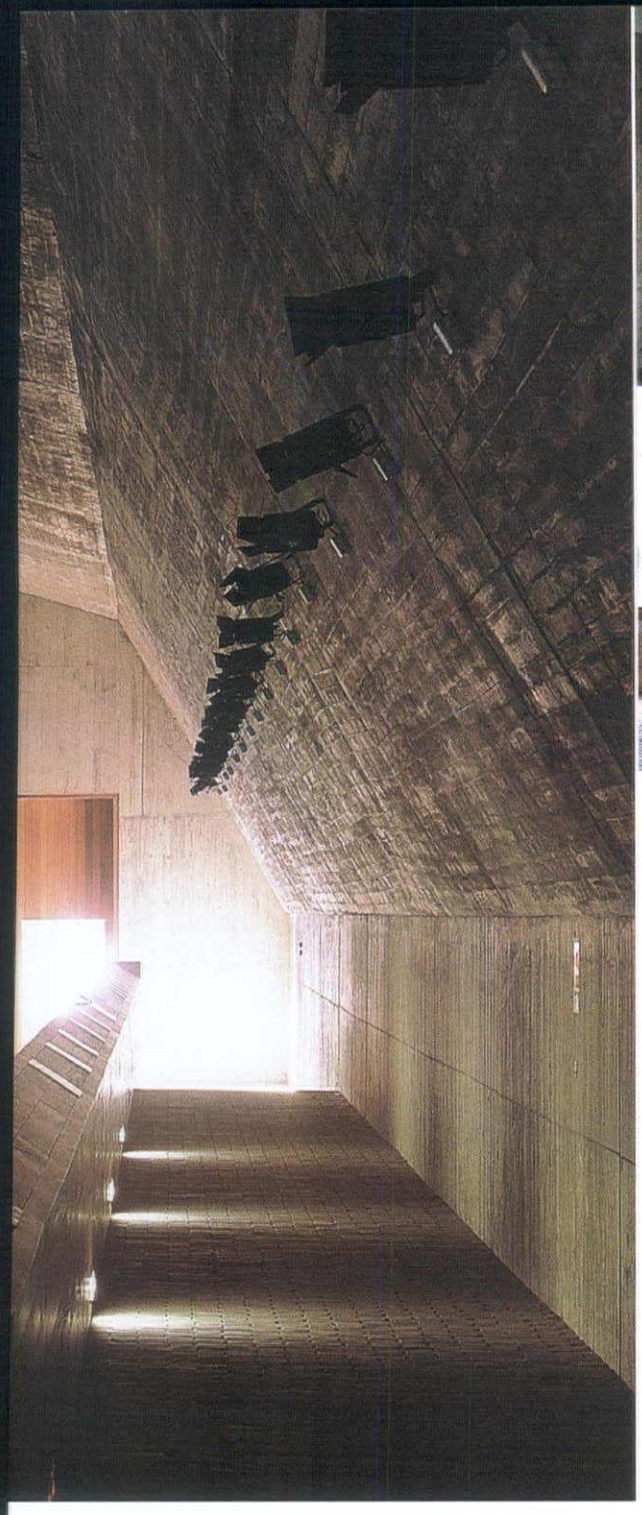
On the north side, the gently sloping roof of the main hall cascades down to embrace and enclose a series of smaller secondary exhibition spaces, each different, each trapezoidal in plan, strung along the spine like chunky beads or stumpy fingers reaching out into the dune landscape. Ancillary spaces are contained in irregularly-shaped gaps between the fingers. At key points, such as the entrance hall, the interior's *béton brut* severity is softened and warmed by planes of iroko timber.

Respectful of its fragile setting, yet imbued with a strong sense of drama that manages to avoid the cheesy theatricality of many modern natural history museums, Cruz and Ortiz's building thoughtfully connects with the natural world on both a rational and romantic level.

CARLA BERTOLUCCI

Architect
Cruz and Ortiz
Project team
Antonio Cruz, Antonio Ortiz, Belén Rivera Romero, María Arboledas Cique
Cost consultant
Manuel Delgado Martín
Structural engineer
TEDECO
Photographs
Duccio Malagamba

4
Subtle lighting emphasizes the drama of the space.
5
Entrance hall.





5

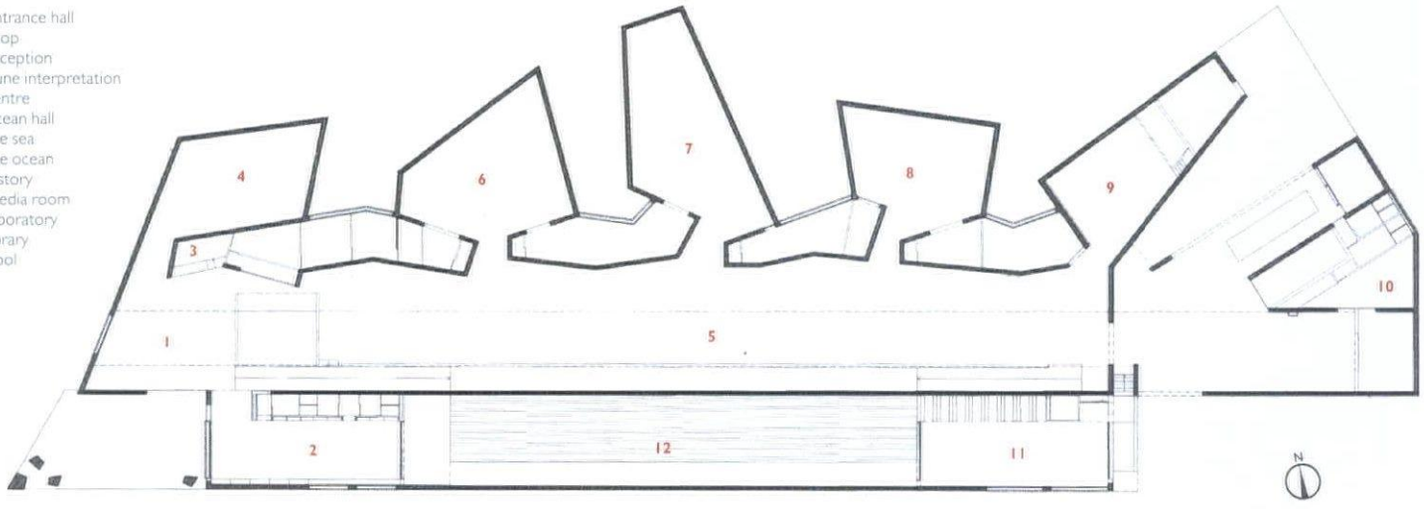


cross section



cross section

1 entrance hall
2 shop
3 reception
4 dune interpretation centre
5 ocean hall
6 the sea
7 the ocean
8 history
9 media room
10 laboratory
11 library
12 pool



ground floor plan (scale approx 1:1000)

HOUSE, SINGAPORE
ARCHITECT
WOHA ARCHITECTS

The two partners of WOHA Architects, Richard Hassell and Wong Mun Summ, met while working in the offices of Kerry Hill in the early '90s and have since gone on to become one of the most imaginative young practices in South-East Asia. Their growing portfolio is mainly residential, ranging from condominiums to individual houses, but also includes a first prize in an open international competition for two Singapore MRT stations, in which they saw off much larger established firms such as Arup, Foster and SOM.

One recent notable residential project is the Hua Guan House, a north-facing, two-storey, semi-detached dwelling on a corner site. The site is also relatively long in the east-west direction, so avoiding the sun's glare at dawn and in the late afternoon. Like all the practice's projects, the design is based on a strong conceptual diagram that anchors subsequent formal and spatial development. Here, the house is divided into four distinct zones. The first is a circulation spine consisting of a 2.5m wide, 20m long gallery that extends along the southern boundary. This is entered from the west end and is punctuated by two dramatic double-storey lightwells, with the second storey illuminated by continuous clerestorey glazing. Next is a habitation zone that runs through both storeys. At first floor level this comprises a study, living room, dining room and breakfast/kitchen arranged in a linear fashion facing north. Immediately above are the master bedroom, family room and three children's bedrooms (democratically exactly the same size for each child).

All rooms have a single aspect into the third zone, a two-storey high, 3m wide verandah, with a thin flat roof carried on slim stainless-steel circular columns. The remaining space is given over to a recreation zone and this too is rigorously linear, with a 25m long pool and poolside gazebo shoehorned into the widest part of the site. The remaining narrow strip has been

1
The house turns its back on the street ...
2
... and instead opens up as a sensuous suburban oasis around an internal courtyard and pool.



Tropical rigour

This family house in a Singapore suburb is an elegant response to a tropical climate.

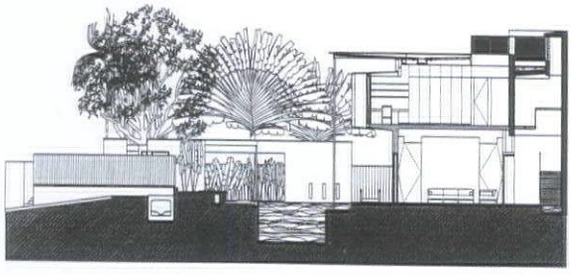
heavily planted to protect the privacy of the outdoor area.

The thoughtful investigation and implementation of a strong concept is evidently one key to the success of WOHA's maturing oeuvre. On such increasingly densely developed suburban sites they also employ a number of well-tried gambits. One is to 'invert' the house, in the sense that the majority of the large opening windows are at first-storey level and open out on to private space. Upper-storey windows generally overlook private areas for, as Wong remarked of an earlier house, 'It is quite impossible to control the view out; what today may be a tract of unspoiled forest may tomorrow be a multi-storey office.' Here, bedroom and family room windows face inwards over the swimming pool and have folding timber louvred screens. The generous roof overhang ensures they can be opened even in the monsoon season.

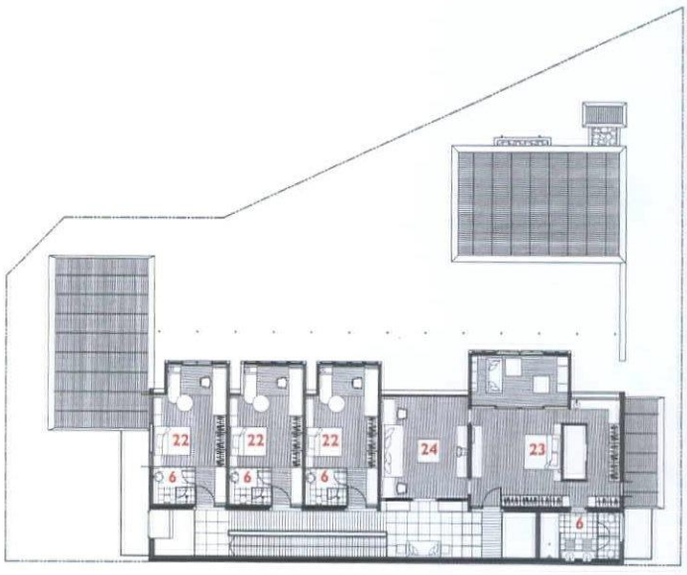
In a 1987 essay, Wong wrote of his admiration for Herman Hertzberger's 'energetic emphasis on detailing and reinterpretation of tectonics and syntax.' The two partners also admire Scarpa's approach to detailing, though Hassell considers that in the work of both architects: 'The parts are more than the whole, whereas at WOHA we attempt to create an architecture where all the parts contribute to the whole'. In the Hua Guan House, the consistently high quality of detailing adds to the overall clarity of the architecture. For this critic, it is an evolving transcultural language that effortlessly integrates the principles of Modernism with traditional responses to a tropical climate. ROBERT POWELL

Architect
WOHA Architects, Singapore
Photographs
Tim Griffith

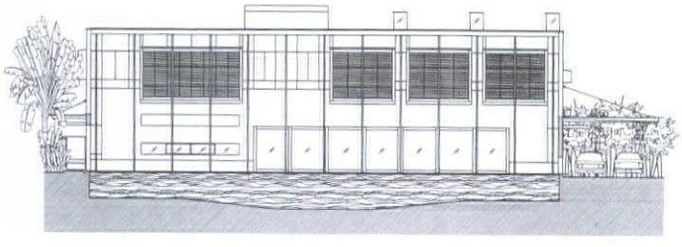
1 car port
2 entrance
3 water garden
4 gallery
5 koi pond
6 wc
7 study
8 living room
9 dining room
10 store
11 kitchen
12 laundry room
13 maid's room
14 maid's bathroom
15 verandah
16 pool bridge
17 pool
18 gazebo
19 pool bathroom
20 pump room
21 side entrance
22 child's bedroom
23 master bedroom
24 family room



cross section

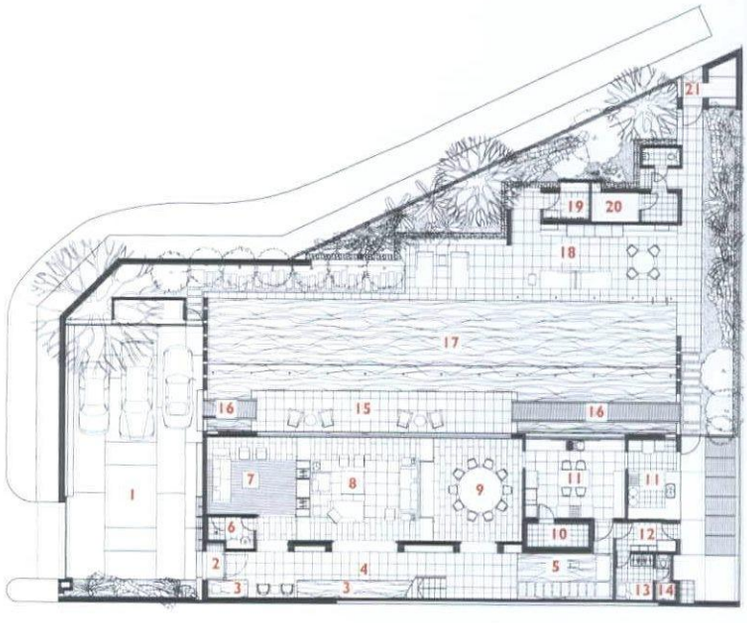


first floor plan



long section through internal courtyard

3
The generous overhanging roof is supported on slim steel columns.
4
Folding timber screens filter light and views to the bedrooms above.
5
Spaces are linked by a circulation spine and long staircase.
6
Detailing is elegant and assured.



ground floor plan (scale approx 1:500)

HOUSE, SINGAPORE
ARCHITECT
WOHA ARCHITECTS


ar house



3



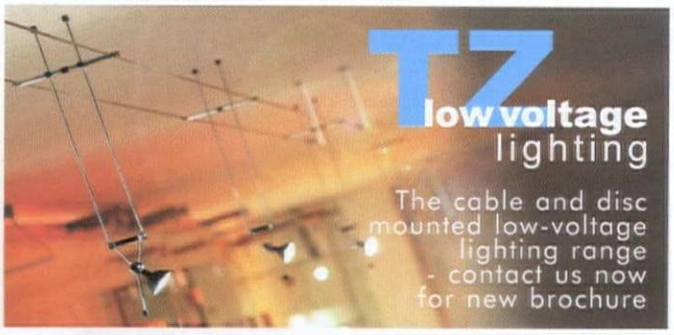
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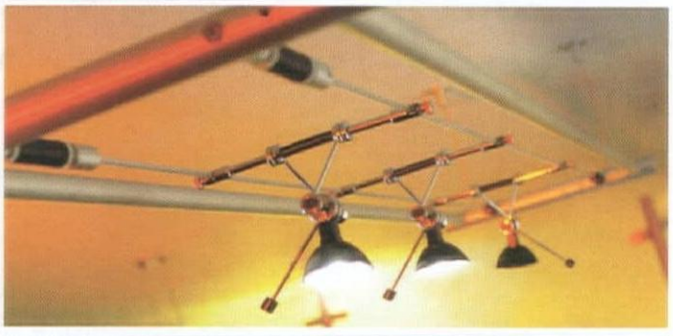


5



6







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Architectural project competition

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Branch at The Hague

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Applications to arrive by Monday, March 8, 2004. For application form and detailed information, see www.phase1.de/epo

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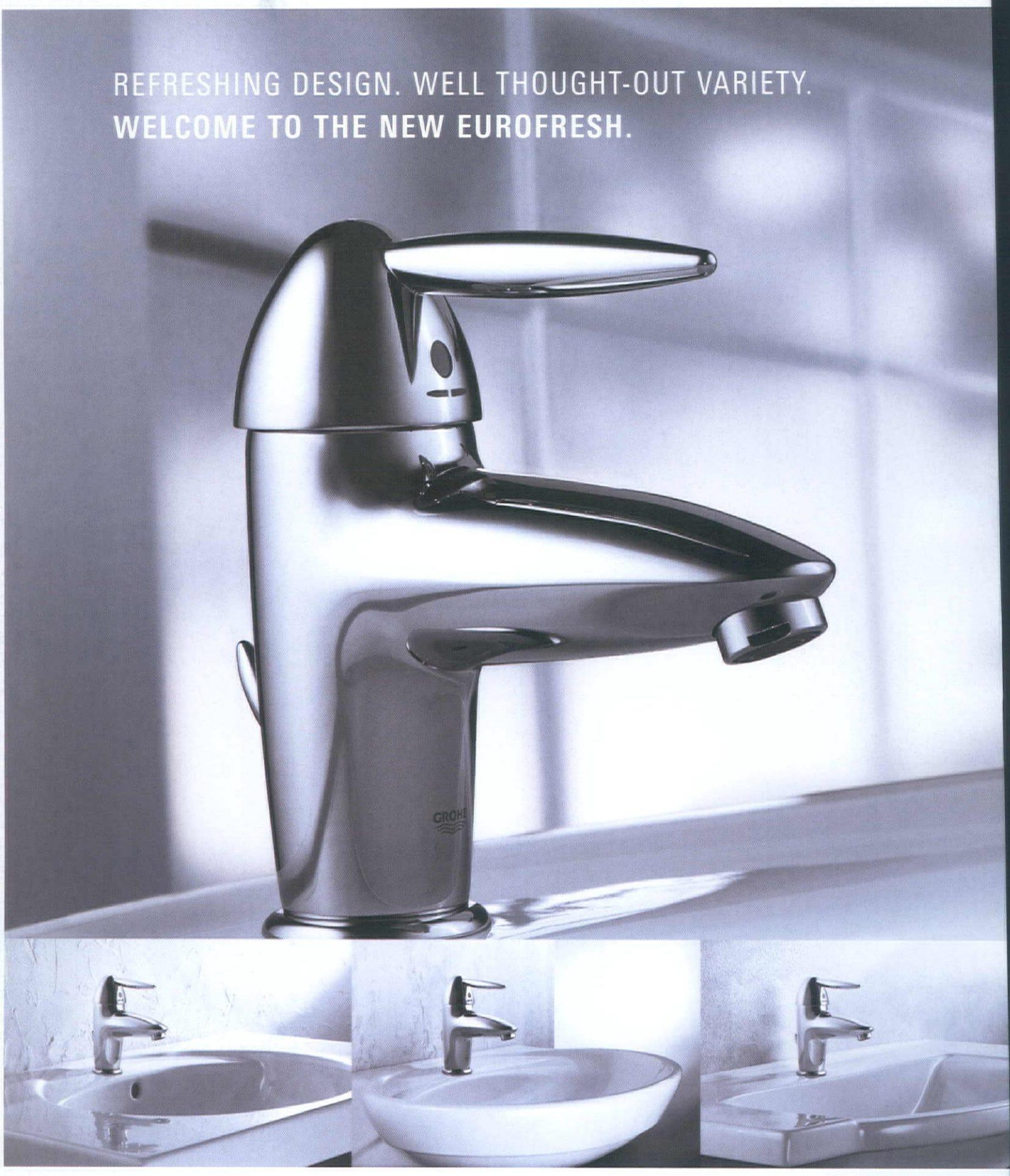
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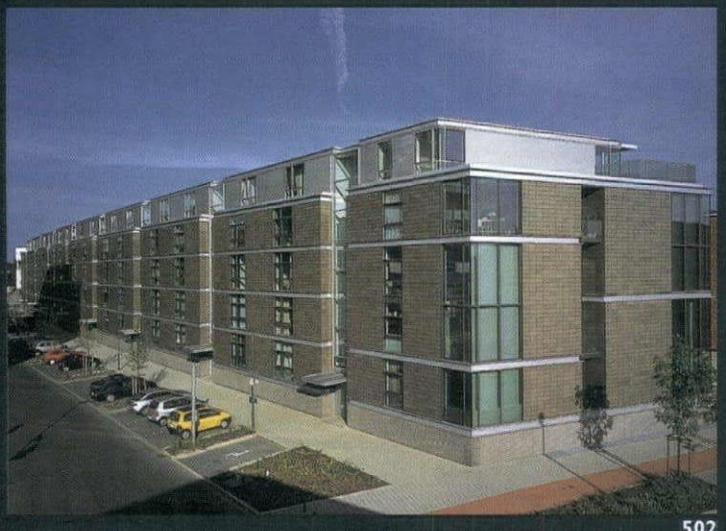


501

501 OKALUX
As an expression of the building's principal internal organizational device, the facade of the new Dutch Embassy in Berlin by Rem Koolhaas features a unique mix of glass, steel and aluminium components, assembled in dynamic relief. As the labyrinthine promenade weaves its way through the structure's eight levels, the facade is articulated by a series of sculptural windows that cut through a backdrop facade that features 250 sq m of insulating glass panels by Okalux set within deep channelled aluminium mullions. The expression of this sinuous trajectory, which is revealed at key moments on the surface of the building's cubic form, has produced a unique and distinctive facade recently recognized with a BDA Berlin Award for Architecture.

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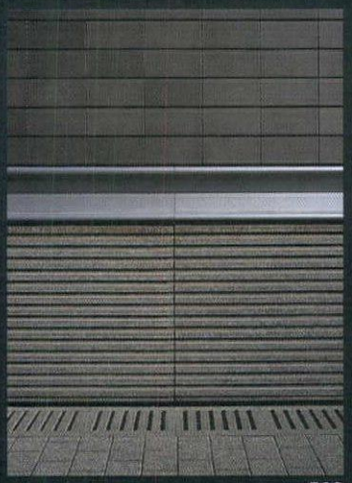
Rob Gregory unwraps the latest cladding innovations.



502

502 MOEDING
As part of their 1991 Duisburg masterplan, Foster and Partners have recently completed a collection of 68 low-cost apartments, which feature rain-screen cladding from Moeding. The flats are north-south orientated, with living and dining areas located on the south side and the bedrooms to the north. While the southerly spaces open out onto a terrace, balcony or verandah, the northerly elevations are more enclosed, being clad in solid areas of ceramic tiles in a colour that matches the bricks of the existing grain store buildings opposite.

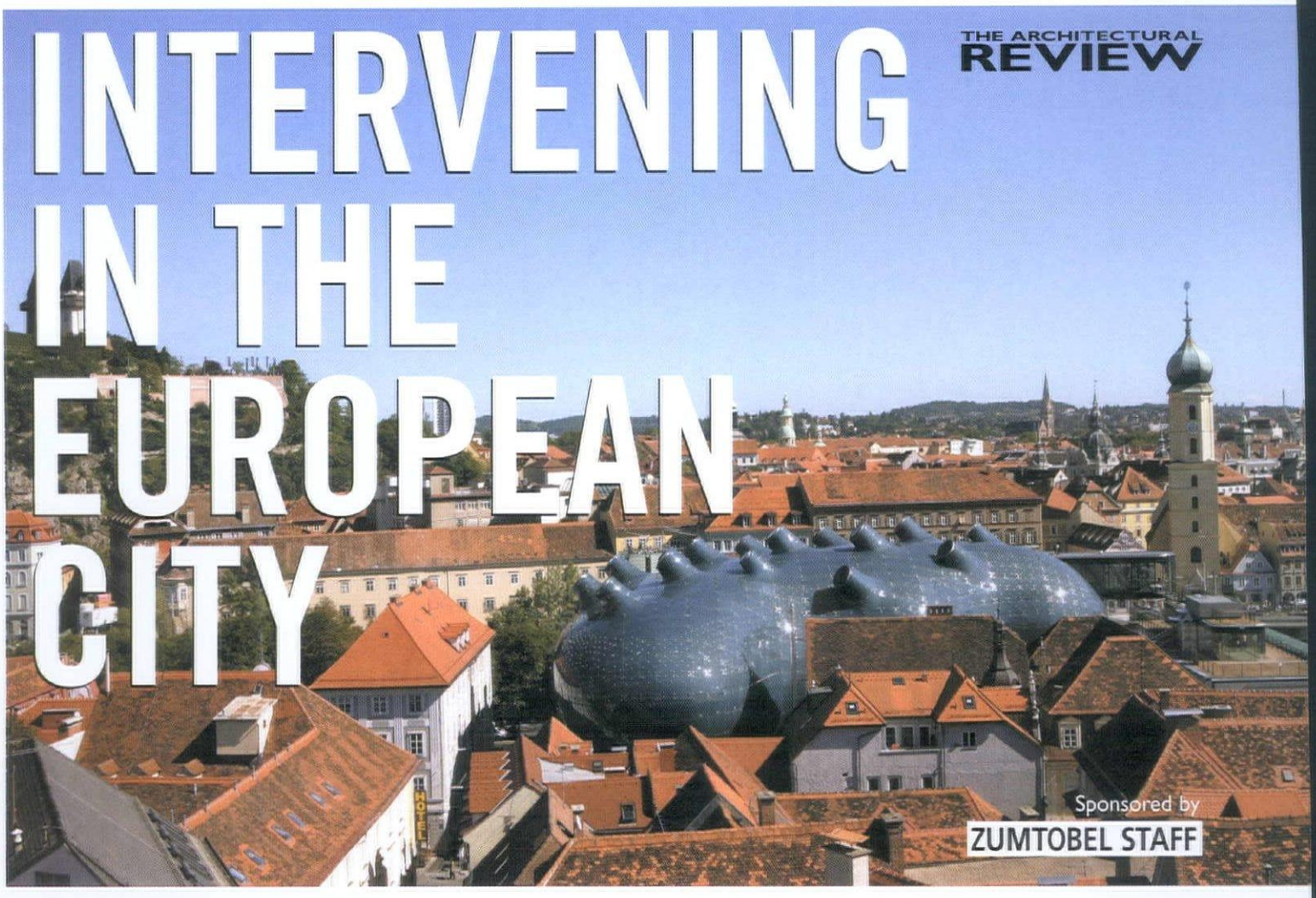
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502

INTERVENING IN THE EUROPEAN CITY

THE ARCHITECTURAL REVIEW



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16 March 2004, RIBA, 66 Portland Place, London, W1

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VENUE: RIBA, 66 Portland Place, London W1

Contact: Jo Roberts on +44 (0)207 505 6745
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Or post to: 151 Rosebery Avenue, London EC1R 4GB UK

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503 PHP GLASTEC SYSTEME

The recently completed residential tower, No 1 Deansgate, has brought 84 fully glazed luxury units to the heart of Manchester city centre. Each apartment features an external sky garden enclosed by an unsealed single skin of clear-glazed louvres. Designed by Manchester-based Ian Simpson Architects in collaboration with php glastec Systeme from Germany, the louvre system is operated electronically by individual occupants, except in extreme weather conditions, when wind and rain sensors connected to the central override system will instantaneously close the entire 5000 sq m envelope.

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503



504

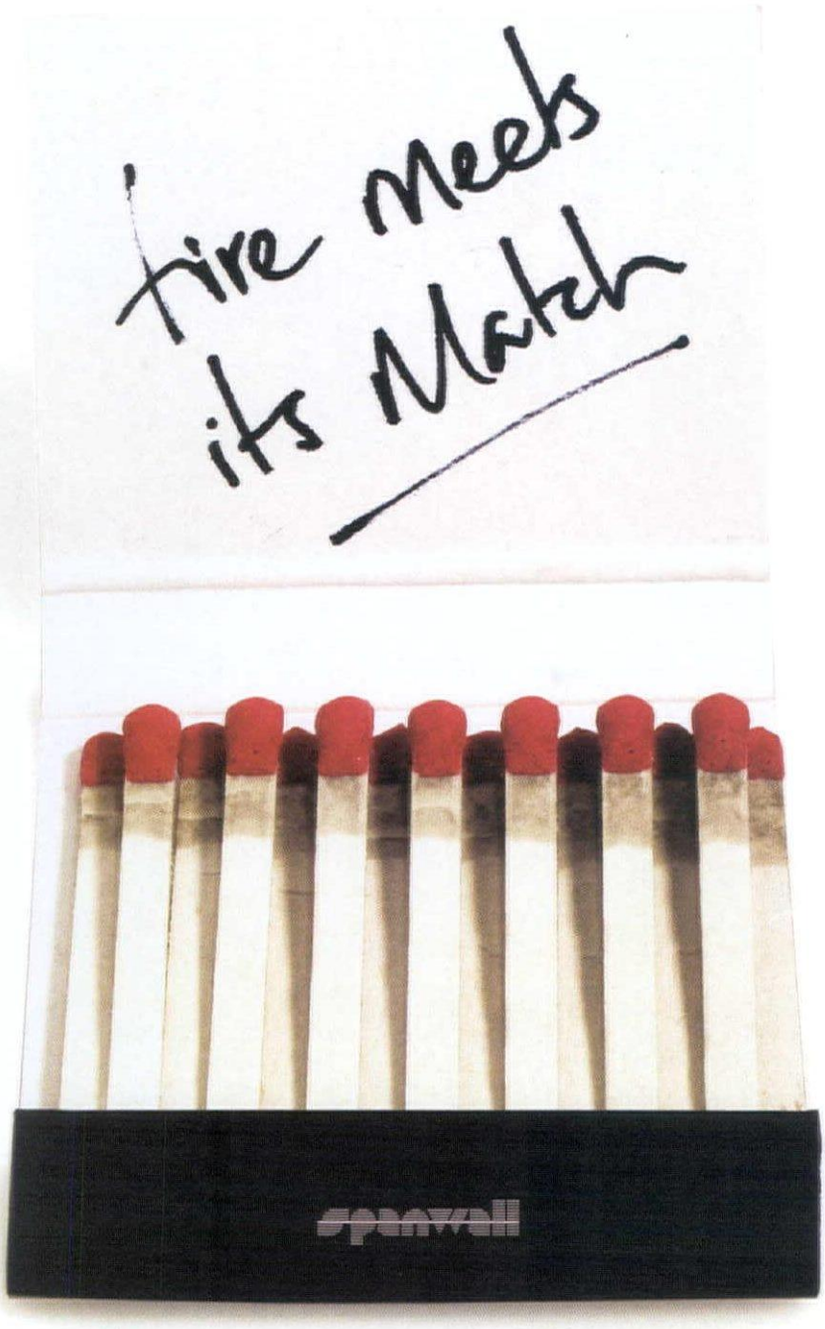


504

504 TECHNAL

Curtain walling systems by Technal have been installed by Saint Gobain Solaglas on two recent projects in the south of England. As part of the refurbishment of Sir Basil Spence's Southampton University Students Union Building, the MC Trame system was chosen for its verticality, with no visible horizontal mullions. Finished in satin black, the installation includes Technal's CD commercial hinged doors at ground level, and supports cedar brise-soleil above. Bournemouth Library features large spans of Technal's specially adapted MC curtain walling, which incorporates special caps that accentuate the verticality of the sections. The system holds large 3900mm x 1700mm low E units, and supports silver mesh screens above the main entrance and brise-soleil above the ribbon glazing to the south elevation.

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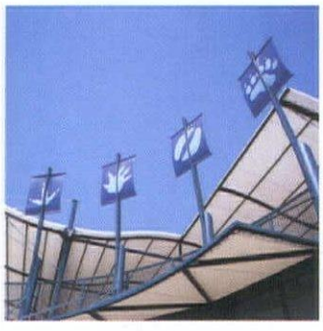
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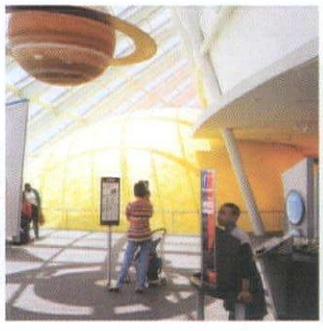
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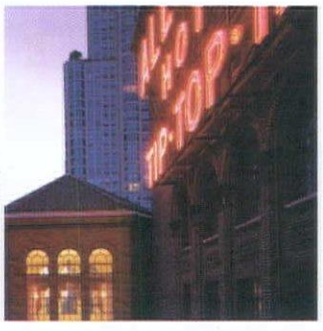
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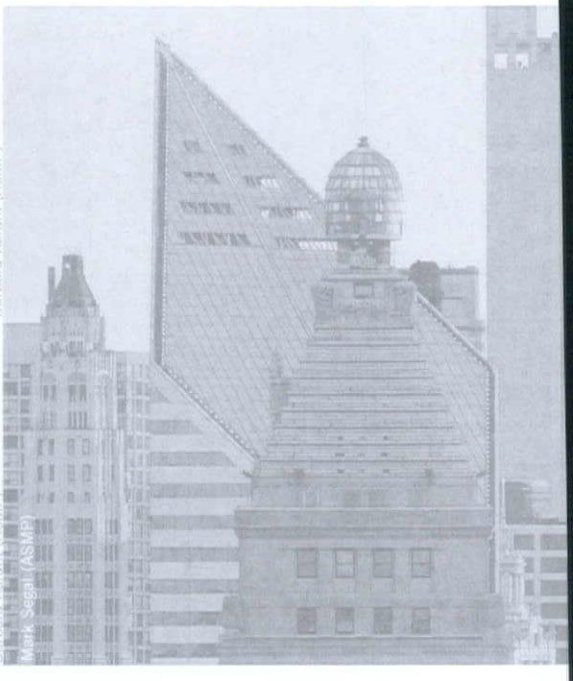




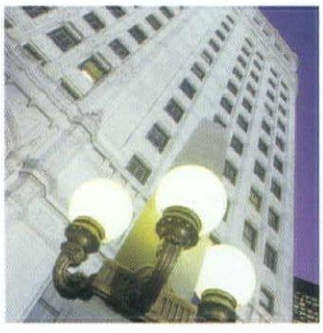
Barbara Kerant (ASMP)



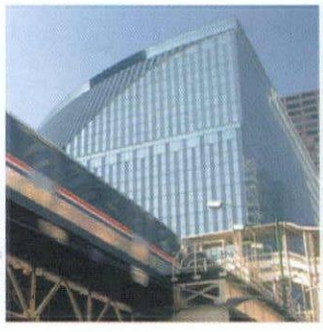
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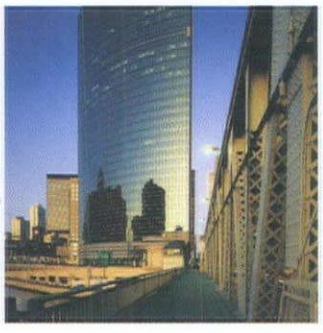
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John Sydney

John Sydney has teamed up with Braemore Properties at its exclusive Park Rock development of 38 apartments at Castle Boulevard. It has supplied the Elite Thermostatic Dual Control Shower Mixer with Fresh Multi Mode Fixed Shower Head shower for both the ensuite and main bathrooms, suitable for low and high water pressure. All John Sydney products are guaranteed for ten years and comply with WRAS guidelines. For more information visit their recently revamped website www.johnsydney.com.

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Wright Style

Wright Style has become one of the world's leading suppliers of high-quality and innovative curtain wall and roof glazing systems – with a range of systems that continue to push the design envelope further. The firm has now published a comprehensive guide to its curtain wall and roof glazing systems, a guide developed to help architects incorporate the latest innovations in steel glazing technology into their designs. The guide illustrates how the simplicity of a modern steel glazing system can be combined with the aesthetics of glass to provide highest-possible levels of safety.

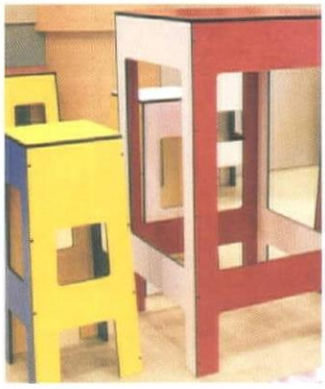
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DuPont

In the newly renovated Kindergarten St Hildegard in Dachau, Germany, a laminated glass balustrade has recently been installed incorporating 'Seeds of the Future', a composition in DuPont™ Sentry Glas® Expressions™ decorative laminated glass. Quicker, easier and more cost effective than the established screen printing techniques, the installation was ordered, manufactured and installed in less than six weeks, with simple desktop scanned images being transferred digitally directly to DuPont on compact disk.

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Formica

Formica is showing its exciting range of products on Stand M23 at The Surfaces Show between 31 March and 1 April 2004. The stand will feature an eye-catching bar, and seating and table area, all utilizing the extensive range of surfacing materials from Formica. Also on display will be winning entries of the Formica Design a Laminate Competition. Formica will also be participating in the CPD seminars in the show.

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Robinson Willey

With the introduction of four revolutionary wall-mounted landscape gas fires – Expression, Reflection, Impression and Inspiration – leading manufacturer Robinson Willey, in conjunction with sister-company, GrateGlow, is again at the forefront of gas fire design innovation and technology. Suitable for homes without a chimney, each model can also be adapted for use with suitable chimneys or even incorporated into a false chimney breast, courtesy of a unique balanced flue concept – each available with full remote control operation.

904 www.arplus.com/enq.html



O'Donnell

O'Donnell Design have recently completed the manufacture and supply of casegoods for 210 bedrooms In London's Docklands. As the latest addition to the Holiday Inn portfolio, this hotel has been designed to cater for business travellers, conference delegates, and exhibition visitors. Featuring walnut veneers, leather padding and integrated data and comms trunking, the workmanship exhibits meticulous attention to detail, bringing the highest possible quality to each room.

905 www.arplus.com/enq.html



Neaco

Neaco – the architectural aluminium and stainless-steel specialist – is continuing its success as a major supplier for Wimpey Homes Manchester, following the installation of the company's Spectrum balustrading at The Lodge development in Didsbury. The nylon coated aluminium system was chosen for its practical and aesthetic qualities and was used on stairwells and balconies, where Wimpey's sensitively planned mix of new build and conservation features a stylish range of apartments, town houses and detached homes.

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Lindapter

Lindapter fixings have provided safe access to the ongoing maintenance work on Sydney Harbour Bridge. The Lindapter girder clamps were selected as they provide a dependable system of steelwork fixing with guaranteed safety loads, which most importantly eliminate the need for drilling and welding – which are not permitted on the bridge. In providing a complete steelwork fixing service, Lindapter is now better equipped than ever to handle unusual or non-standard applications.

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CORBUSIAN SOCIETIES

LE CORBUSIER AND THE CONCEPT OF SELF

By Simon Richards. New Haven & London: Yale University Press. 2003. £27.50

This book is principally about the kind of people Le Corbusier had in mind for the slabs and towers of his urban visions. They were to live in societies run by technocrats, devoid of any kind of public participation in politics, and thus Corb designed for them cities with no public space and no recognizable urban typologies. They were to become isolated to the point that they forged a new selfhood born of solitude, inspired by the type of atavistic visual symbolism that Purist painting provided. And this new selfhood would result in what Richards calls the 'renaissance of the collective', which in Corb's case was allied to his adopted French nationalism. With ideas drawn from Blaise Pascal, and which were to some extent shared with Corb's contemporaries Camus and Bataille, the architect-hero pursued a rocky political path, supporting one promising fascist group after the next in pre-War Paris. Disillusioned time after time, he eventually embraced the Vichy regime only to find that once again his political heroes were merely sloganizing reactionaries.

With long quotations and a great deal of repetition, all the above falls (just) into the 'quite interesting' category for anyone who is not a Corb obsessive. The Arts and Humanities Research Board, the primary UK body funding postgraduate research in the field of architectural history and theory, is funding Richards' current research, and it would be fascinating to know on what basis it distributes its fellowships. I fear it aims to contribute to the flood of scarcely readable pseudo-scholarly jargon-infested claptraps which people have to publish nowadays to build themselves an academic career. As if to add insult to injury, a prominent AHRB board member recently published to great acclaim among literary people a biography of Christopher Wren in a ghastly romantic-novel style, thus further reinforcing the impression that architectural history is only valuable to society when it is dressed up as something else. As the imminent closure of Cambridge University's Diploma School so vividly indicates, the current academic establishment is out of step with the real needs of architects, let alone architectural historians.

TIMOTHY BRITTAIN-CATLIN

PLACING NON-PLACE

NETZSTADT – DESIGNING THE URBAN

By Franz Oswald and Peter Baccini. Basel: Birkhäuser. 2003. € 46.26

Netzstadt, literally 'network city', is the product of a long-standing programme of research and teaching carried out by its authors at the Swiss Federal Institute of Technology (ETH) at Zurich. In essence, it brings interdisciplinary methods to bear on the analysis and interpretation of the contemporary city. Oswald is an architect, who held the Chair of Architecture and Urban Planning at ETH, and Baccini, a natural scientist, was head of the Department of Rural Sciences and Geodetic Sciences. These disciplines fundamentally determine the nature of the work described in this book and invest it with a scope that is both original and relevant.

At the outset the parameters of the work are clearly stated. The domain of the study is urban development outside traditional urban centres – the ever expanding, unstructured territories that sprawl across the landscape of most developed countries. 'Netzstadt' is presented as both a model of this kind of urbanism and as a set of methodological tools by which it may be analysed. At its heart the project is rooted in a long tradition of objective urban analysis to which figures such as Alexander, Castells, Hillier, Lynch and Webber have contributed. But it extends this lineage in two directions, first, by locating contemporary analysis in a broad historical context and, second, by addressing the emerging issues of sustainable resource utilization.

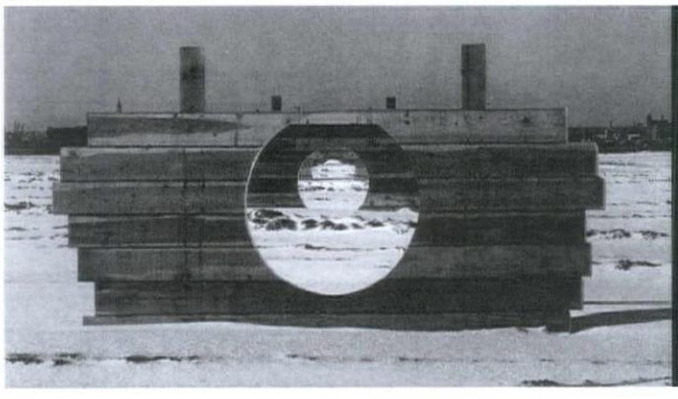
The Netzstadt model proposes criteria of urban quality – identification, diversity, flexibility, self-sufficiency and resource efficiency and relates these to specific categories of activity in the urban system. The Netzstadt method makes a distinction between, on the one hand morphological tools, that describe the spatial characteristics of a territory, and, on the other, physiological tools – these refer more specifically to processes. The application of both model and method is demonstrated in a study of Wigger City, a region located at the interstices of the established locations of Zurich, Basel, Bern-Mittelland and Central Switzerland. This shows how the method effectively identifies the existence of a non-place that is becoming a place.

A second theme of the book refers to the question of participation in urban development. Under the heading of 'Synoikos', an exercise in public consultation by the authors that preceded and, in some respects influenced the development of the Netzstadt method is outlined.

The point of the whole project is to provide a basis for the development of design proposals. This is demonstrated through studies made by ETH students for the Lucerne North region, in which a string of small communes to the north-east of Lucerne have expanded to a point where they now constitute an identifiable, if ill-structured urban entity. The students' projects suggest how, using the Netzstadt concept and method, strategies for a more coherent, historically-based and sustainable future might be achieved. This is the proof of the pudding and is successful to a degree. Five alternative proposals are made and these provide a basis for critical evaluation of both the method and its outcomes. But this is pursued with less rigour and detail than the exposition of the method itself. Part of the problem lies in inadequacy of presentation of designs. The book is graphically delicious, but the small scale and, in all probability, selective reproduction of images compromises a proper appreciation of its content.

In spite of these caveats, Netzstadt will repay the careful attention of academics and practitioners who are concerned about the future of urbanism. It articulates issues that are both specific and generic and should be high on the agenda of both education and practice.

DEAN HAWKES



The Battery Park Landfill Project, New York, by Mary Miss, 1973, one of the earliest works (sadly temporary) by the revolutionary land artist, whose œuvre is splendidly covered in *Mary Miss*, Princeton Architectural Press, New York, 2004, $85. Black and white images reveal the often almost hypnotic power of her work.

ARUPS APOTHEOSIZED

TRANSPORT, ENGINEERING AND ARCHITECTURE

By Hugh Collis. London: Laurence King Publishing. 2003. £50

This beautifully illustrated book written by one of Arups' staff, the late Hugh Collis, covers their role in the field of transport engineering and architecture. A concise description of the historical relationship between engineering and archi-

tecture is followed by chapters on airports, railways, bridges and special projects finished between 1987 and 2002. Three outstanding schemes are omitted. There is no reference to Arups' role as conceptual designers with Renzo Piano at the Kansai airport with Peter Rice (AR November 1994) although there is a photograph. Nor to the roofs of the Lille TGV station of 1991 and the one over the Chur bus/rail station of 1988, again by Peter Rice and in association with the French firm of RFR. Size is what this book is mostly about. Projects show Arups' skill in dealing with more than structures but also services and management of giant projects. The small projects are footbridges and extensive coverage of the Hanover tram stops by Despang Architects (which rightly won an AR Emerging Architects Award in 1999), although it is hard to see where Arups contributed. Notable among footbridges is Hodder Associates' elegant glazed link between two Manchester stores (AR June 2000) and Foster and Caro's Millennium Thames footbridge (AR April 2000) with a very frank description of the wobble problems and how they were solved.

On railways, surprisingly no mention is made of Ian Ritchie's fine Bermondsey station on the Jubilee Line with its important structure. Arups' inspired alternative route for the Channel Rail Link from Ashford into London is discussed, though the stations shown at Ebbsfleet and Stratford, not credited to any architect, appear to be without interest. Shown also is the astonishing station built for Sydney Olympics capable of handling 55 000 passengers an hour – though the architects Hassell & Partners are not credited.

Really a page of credits hardly does justice to a book which covers so much ground. Perhaps the names of the lead engineers would have helped, together with short pieces from some of the architects and their role with Arups. This is a book to be placed in all of Arups' reception areas rather than on the shelves of an architectural library. BRIAN RICHARDS

RESISTANCE IN LOSING BATTLE

ASIA'S OLD DWELLINGS: TRADITION, RESILIENCE AND CHANGE

Edited by Ronald Knapp. Oxford: Oxford University Press. 2003. £22.50

This book is a collection of 18 essays on the old dwellings of Asia edited by Ronald Knapp, Professor Emeritus of Geography at the State University of New York. The essays are the individual or collaborative work of 21 academics from a variety of disciplines, mainly geographers. Seven of the contributors are based in the US, five in Australia, four in Hong Kong, and one each in Korea, Philippines and Indonesia. The diversity of disciplines represented and the cultural background of the writers is both a strength and a weakness of the book. The strength is that each writer has a close affinity with the specific culture they are writing about. The weakness is that the scope, methodology and focus of the essays vary widely so that for example there are essays on Indian, Chinese and Indonesian dwellings that attempt to cover the whole of these huge countries and by contrast essays on Singapore and Sri Lanka that deal with a specific typology like the Singapore row house or 'shophouse' and the Sinhala House to the exclusion of other typologies in those two countries.

Thus the reader has to jump from the general to the specific and both can be frustrating. More detail than can be conveyed in the broad overview of the Indian sub-continent is needed, but equally the focus of some of the case studies is sometimes restricted. Most authors bemoan the fact that traditional houses are everywhere beleaguered and under assault from the market economy, rapid urbanization, and declining craft skills. At their best, the essays offer a glimmer of hope for the incorporation of tradition within modernity, but almost all authors portray a losing battle in some isolated pockets of resistance.

Some essays are exemplary. For instance, Marc Askew writing on Ban Thai is informative and gives a particularly critical review of the commodification of tradition in the so-called 'Thai Style' publications, in state-promoted evocation of Thai traditional culture and in the burgeoning commercialized nostalgia industry. But the book does not offer any concrete ideas on the question that is at the core of architectural practice in many parts of Asia *ie* how to synthesize tradition and modernity – yet that was clearly never the editor's intention.

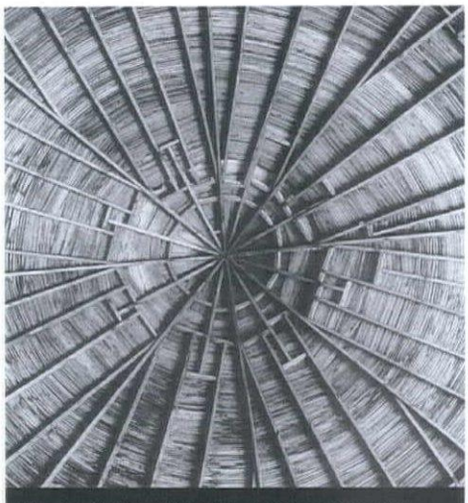
The book is nevertheless a rich source of information and its 300 illustrations give endless pleasure. Probably not to be read at a single sitting the individual chapters are the starting point for further investigation. ROBERT POWELL

DESIGNS FOR DEATH

LAST LANDSCAPES: THE ARCHITECTURE OF THE CEMETERY IN THE WEST

By Ken Worpole. London: Reaktion Books. 2003. £22

The subtitle is misleading: Worpole's book is concerned less about architecture than with meaning in landscapes and with problems of commemoration after Modernism failed to rise to the challenge (and indeed, for the most part, ignored it). After all, the Modern Movement aggressively promoted the obliteration of the past. Regimes such as those of Soviet Communism and National Socialism realized how important was communal memory to a culture: that is why in the Soviet Union so many burial-grounds were deliberately destroyed, and why, during the Holocaust, industrialized cremation was an added obscenity to mass-murder.



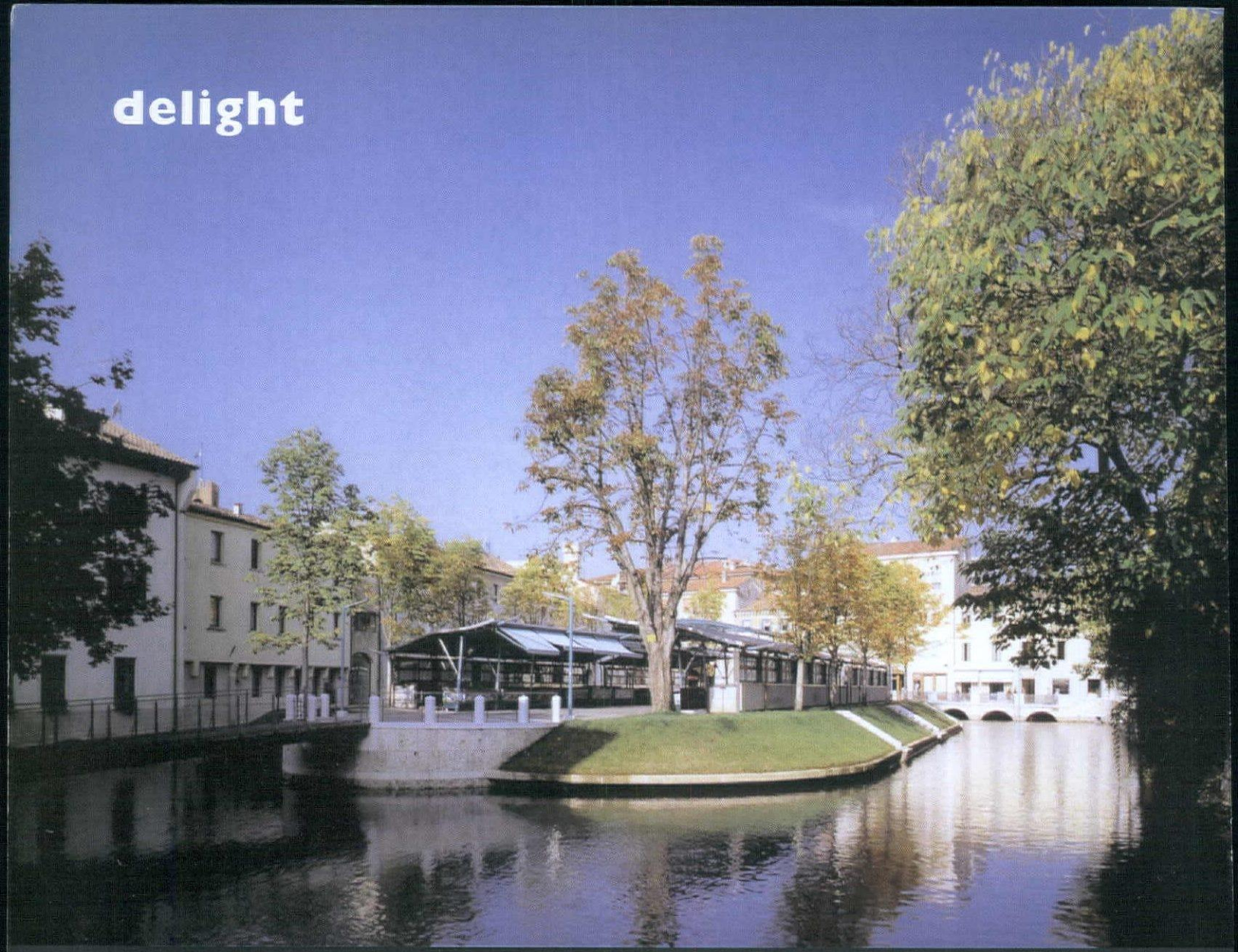
Barn roof, Osceola County, Michigan taken by David Plowden from his remarkably evocative *The American Barn*, London/New York: W .W .Norton, 2003, £42, $50 – a black and white picture book in the great tradition of the exploratory eye, worth comparison with the work of John Piper and Gyorgy Kepes.

Yet Architecture began with the Tomb. Today, perhaps in contemporary Britain more than anywhere, death has been marginalized (except for purposes of entertainment), and cremation prevents an architectural response to the mysteries of death, because British crematoria are designed to pretend to be anything but what they are, and mourners are denied a ceremonial climax. Furthermore, there is usually no connection between crematorium buildings and landscapes, and entire ensembles are feebly suburban and meaningless. Worpole touches upon the importance of meaning in the disposal of the dead from early times to the present day, and his wife's photographs often evoke something of what is lacking in the banalities of contemporary British celebrations of death.

Last Landscapes would have gained in authority if more care had been taken over the proof-reading. One historian, often mentioned, has his name recorded correctly only occasionally, and there are other errors (the German is confused with the Austro-Hungarian Empire) as well as a poor Index. However, it contains many truths and insights on which to ponder, and could help to stimulate much-needed changes in the way we design for death. JAMES STEVENS CURL

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delight



THE CENTRE OF TREVISO FORMS ONE OF THE MOST DELIGHTFUL LITTLE TOWNS NORTH OF VENICE. ITS RIVERSIDE QUAYS HAVE NOW BEEN FOCUSED ON A NEW FISH MARKET THAT DOUBLES AS AN URBAN PARK.

A fish market has occupied a river island in Treviso, a small town north of Venice, since 1841. The setting had become decrepit and there was talk of demolition, but the commune decided on renewal. Architect Toni Follina gently reshaped the island in a form reminiscent of a barge, repaved it with local stone which can be hosed down easily, and provided new shelters with tiled roofs on each side for the fish stalls.

Live fish are kept in baskets in the river, made accessible to stall-holders by several flights of steps. The central fountain provides cleaning water as well as giving a ceremonial focus, and a lightweight glass roof gives a strong sense of centre. Outside market hours, the island serves as a park with trees and green banks round the edge, while bridges at both ends allow a promenade across it.

PETER BLUNDELL JONES



