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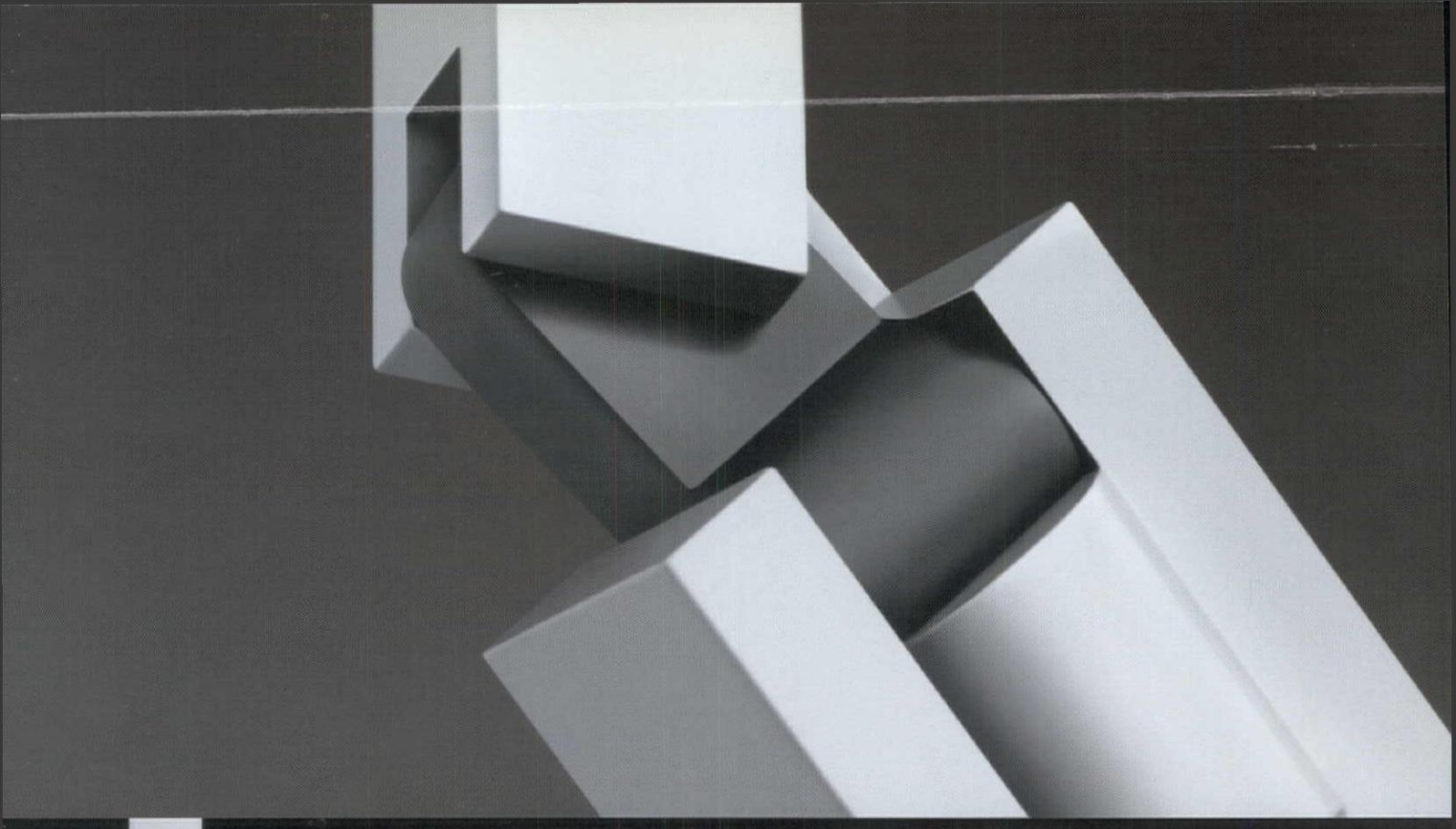
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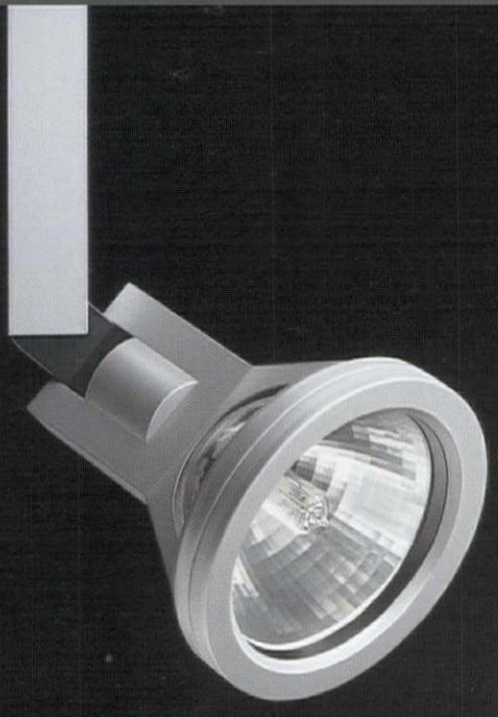
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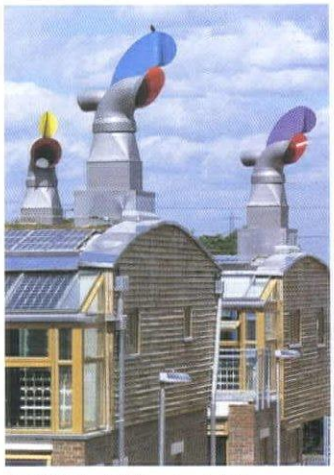
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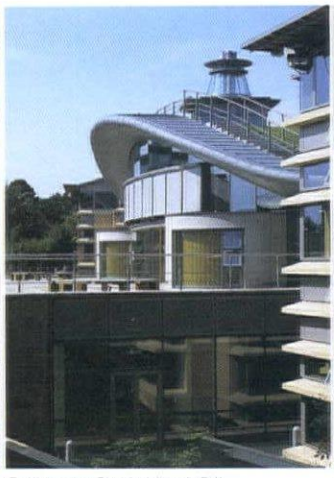
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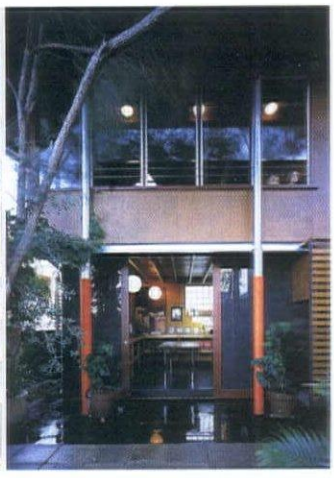
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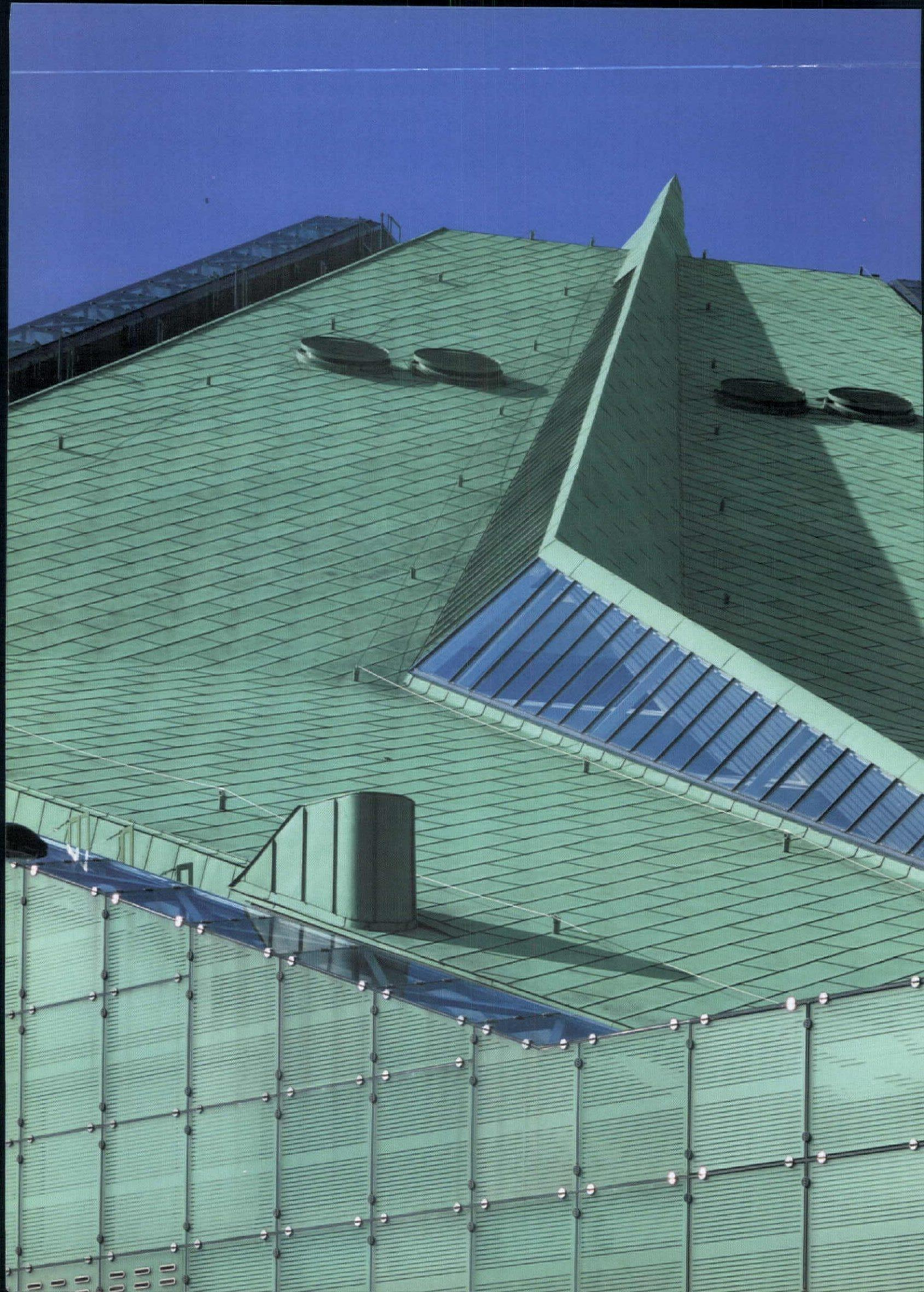
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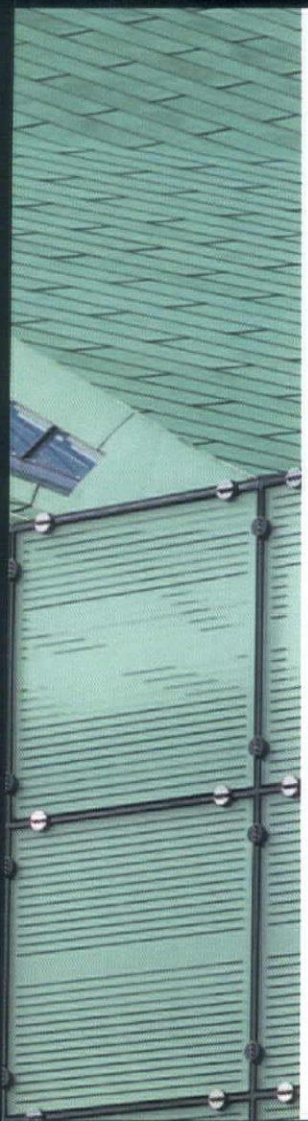


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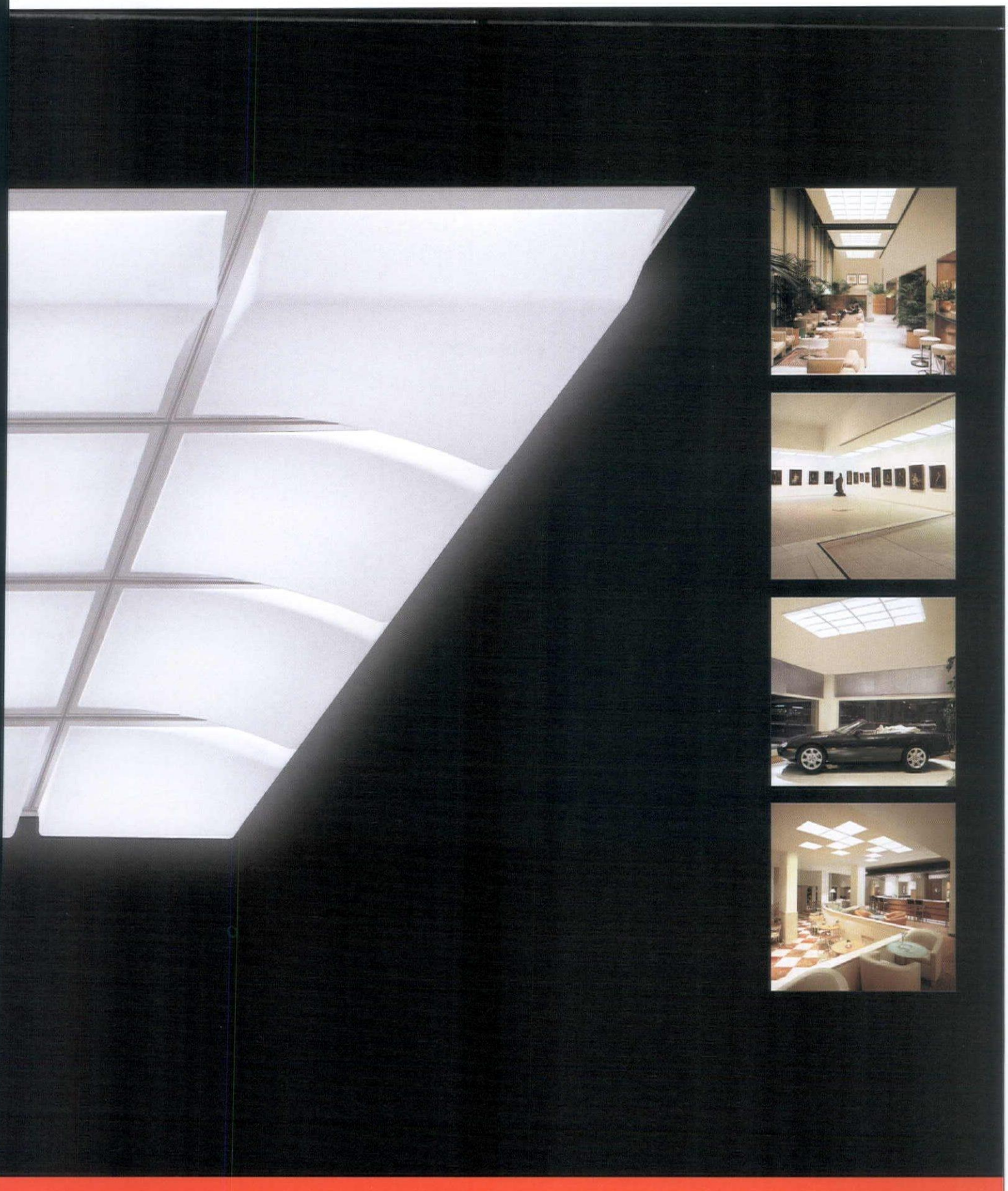
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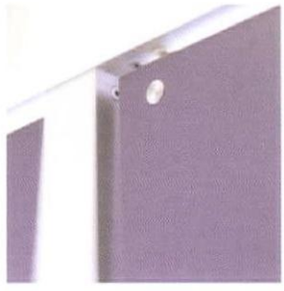
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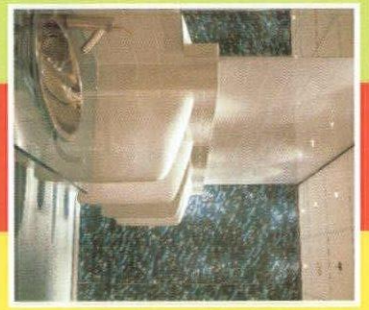


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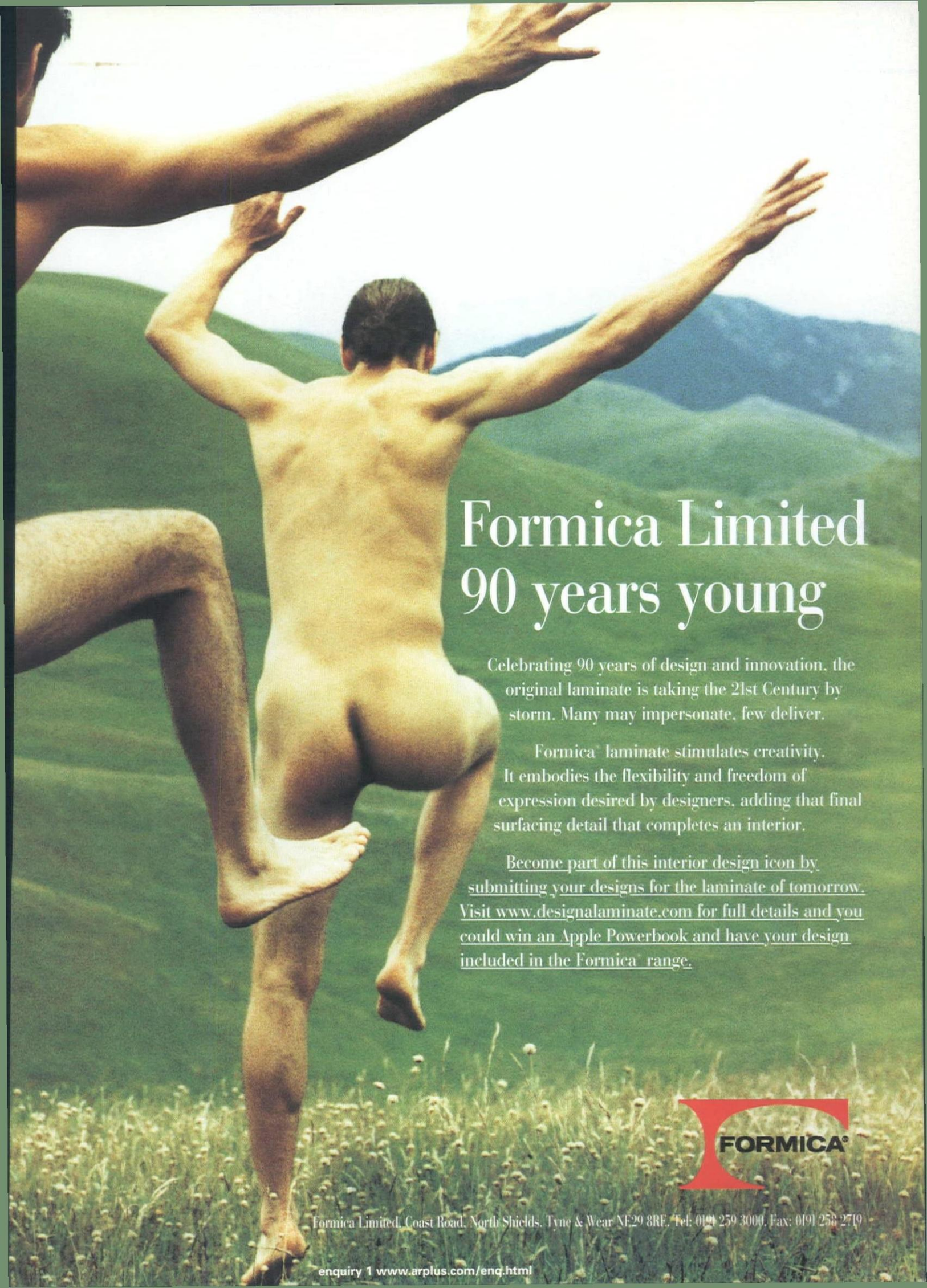











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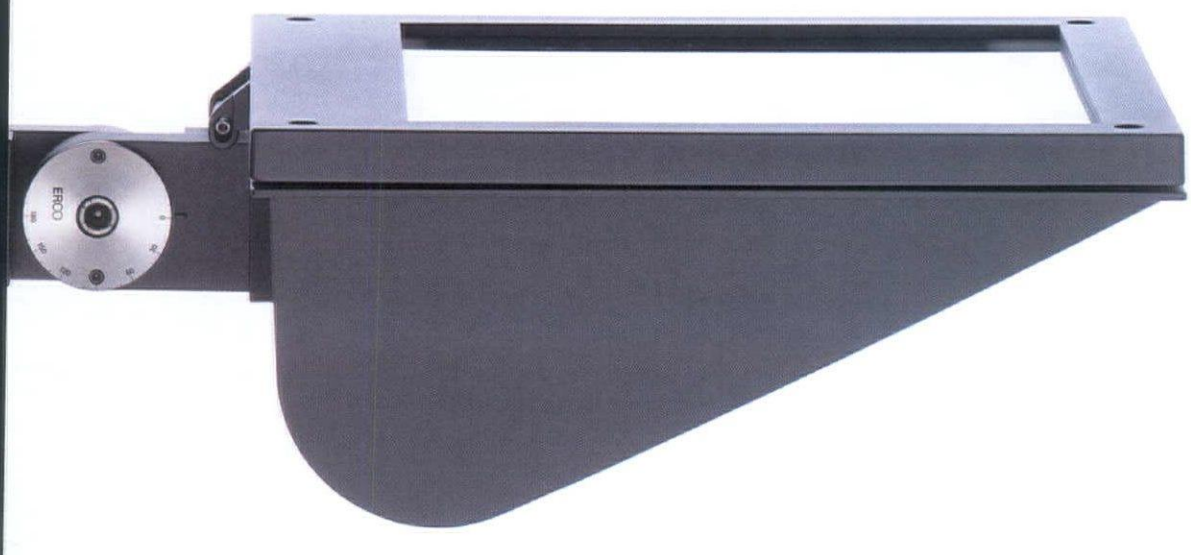
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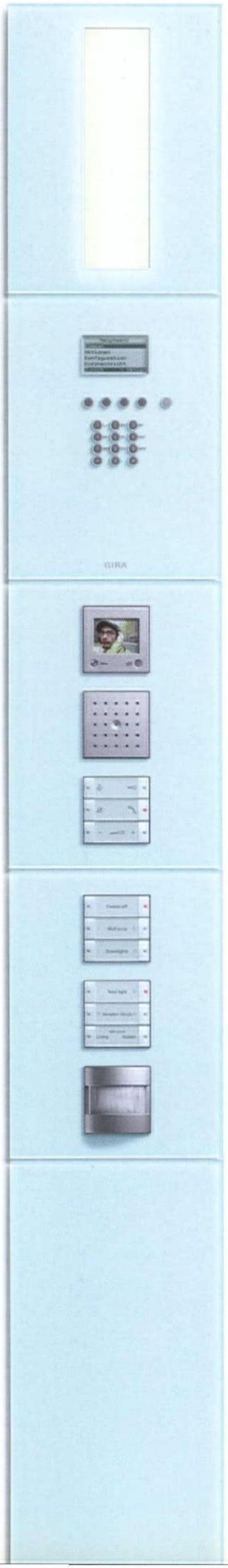
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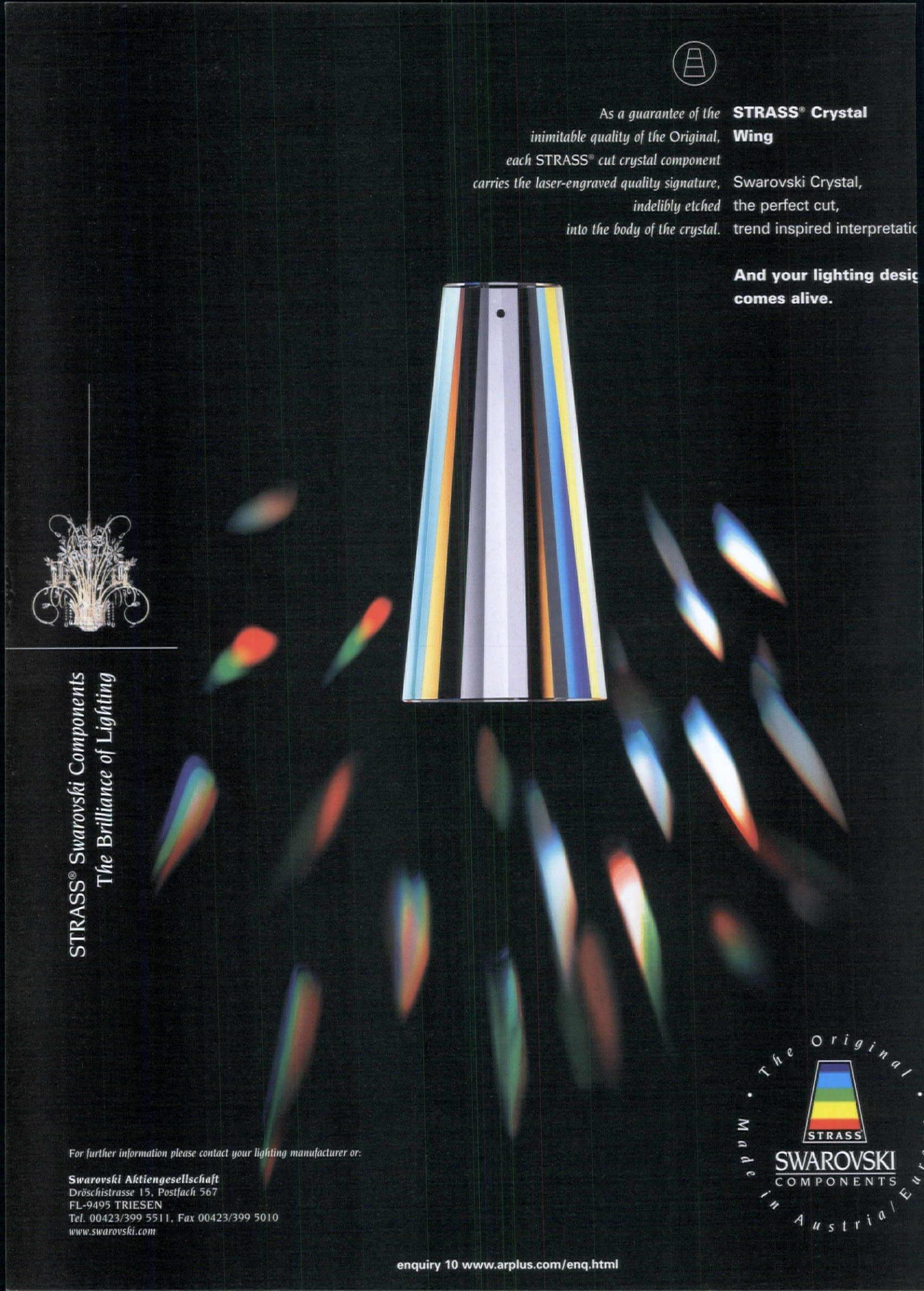
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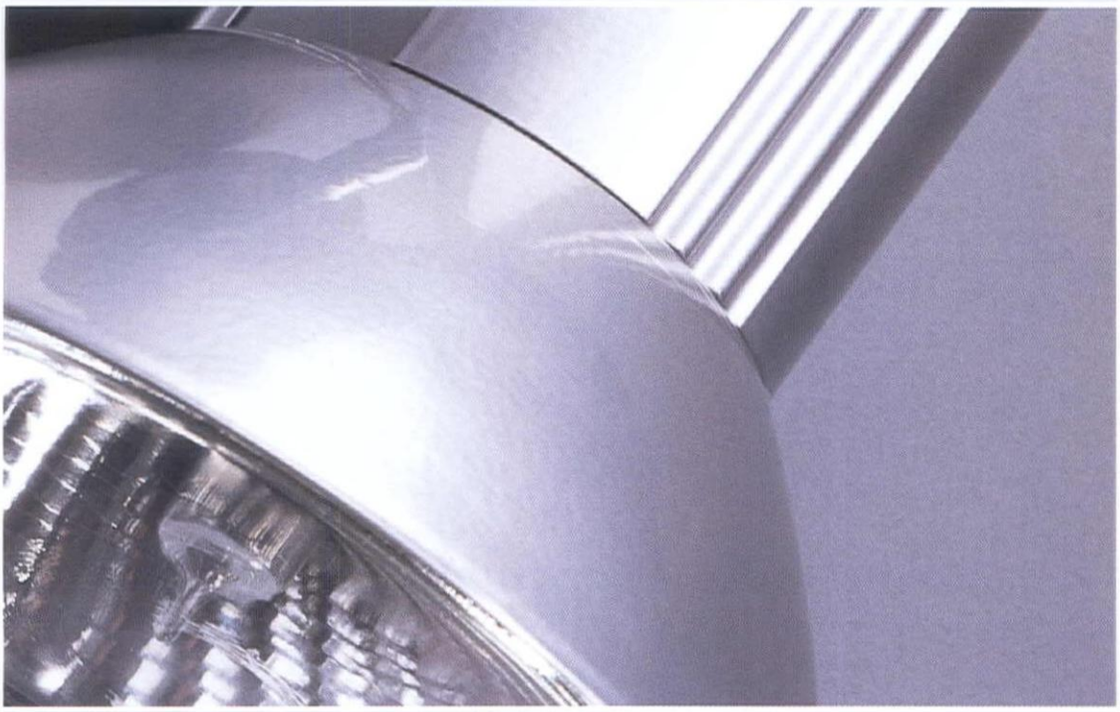
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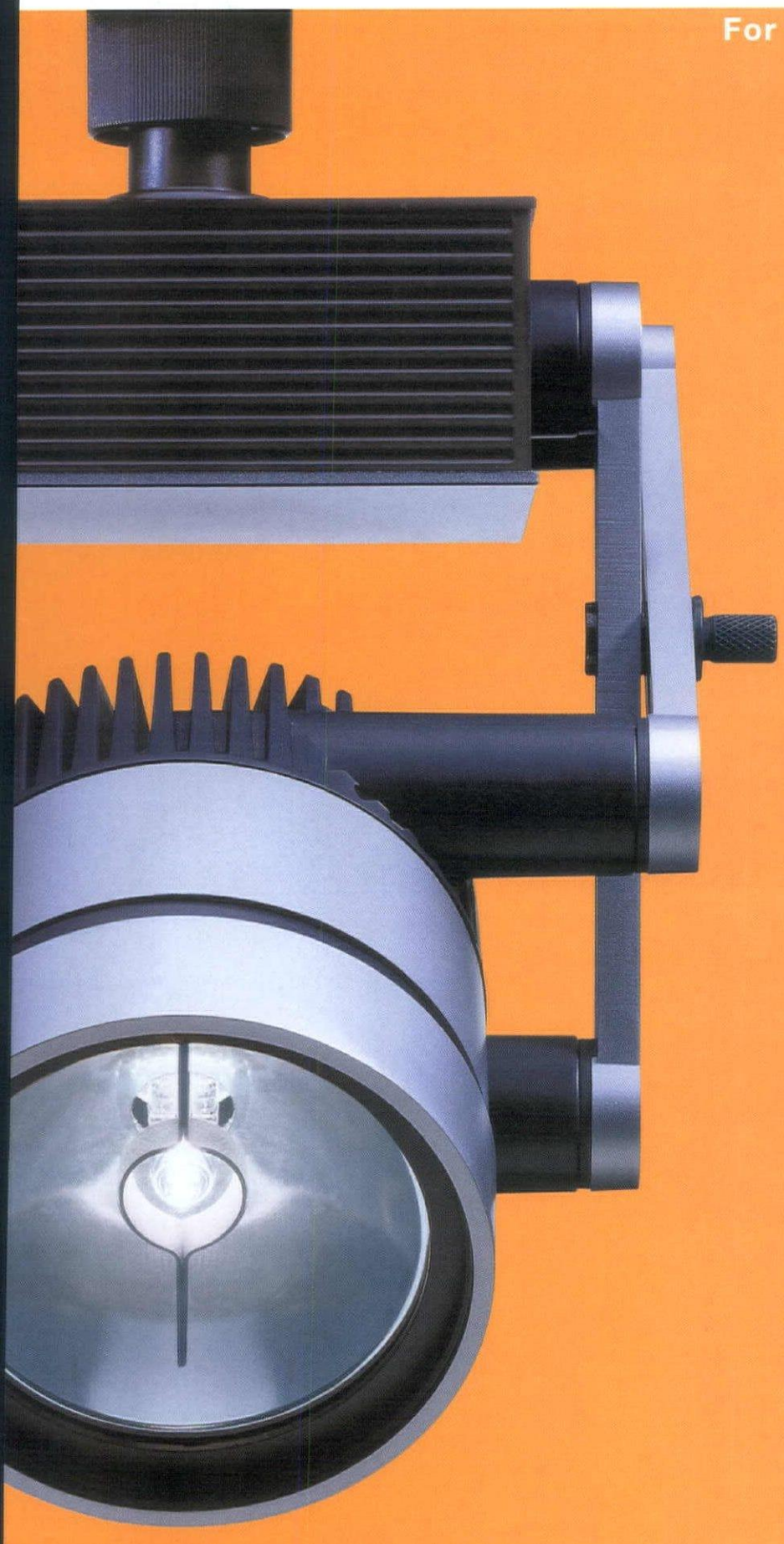
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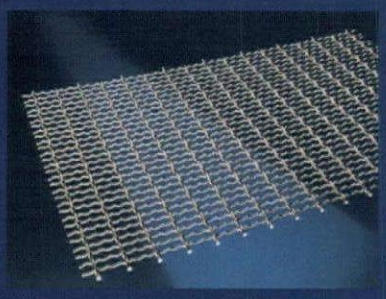
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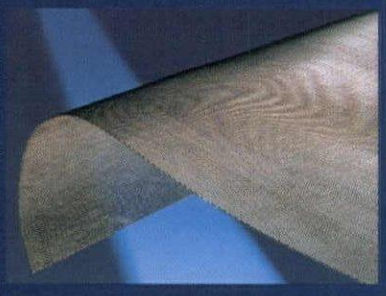
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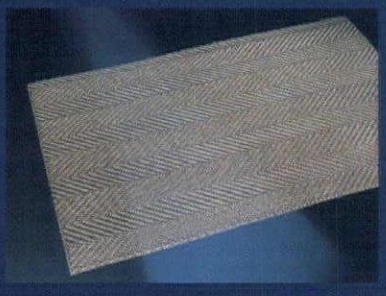
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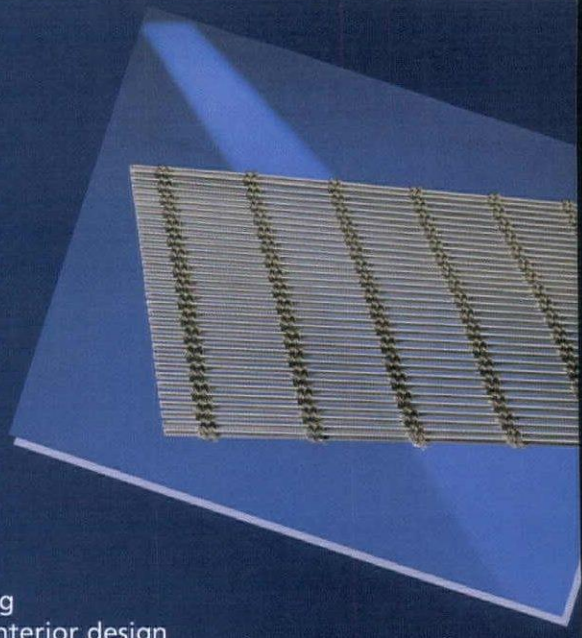




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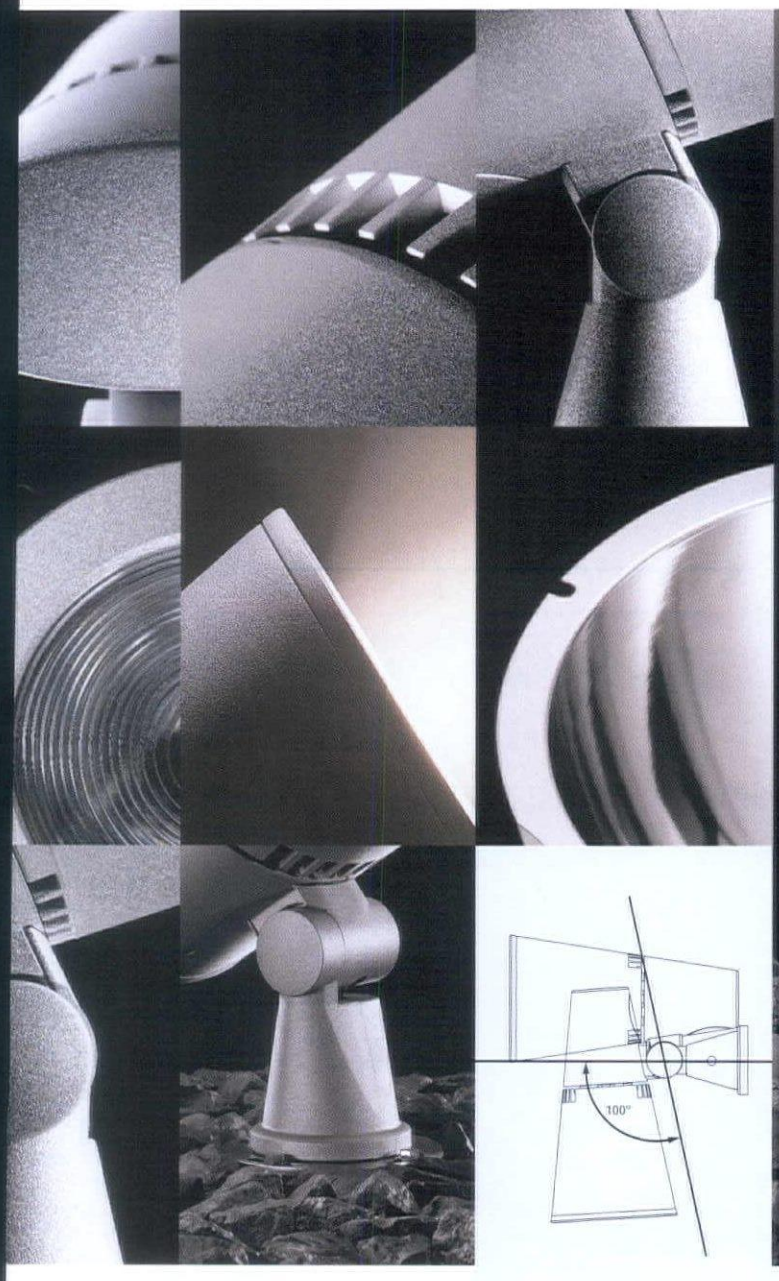
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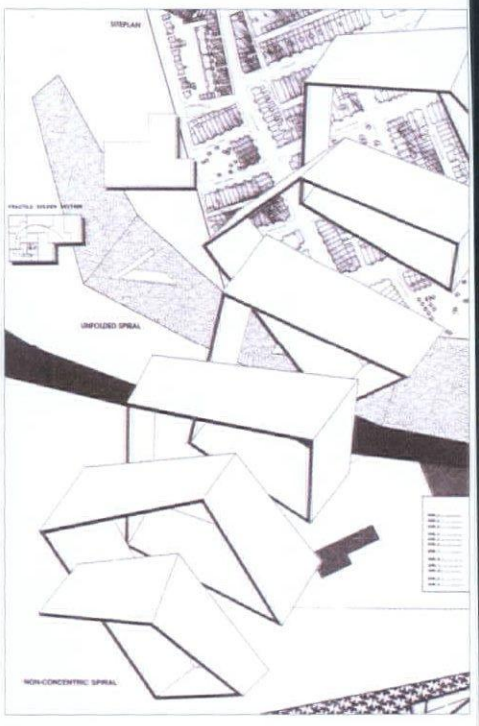
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LIBESKIND'S GOODBYE TO BERLIN

Daniel Libeskind is moving to New York: a retrospective of his work is on in Berlin.

For 13 years Daniel Libeskind lived in Berlin where he built the Jewish Museum which founded his reputation as a hero of international architecture. Since the beginning of this year he has moved to New York to realize what will most certainly be his most significant commission, the masterplanning of Ground Zero and the new World Trade Center. It is therefore appropriate to celebrate Libeskind's departure from the German capital with a retrospective of his work in the space of his own Berlin masterpiece. Matthias Reese, once Libeskind's project director for the Jewish Museum, has designed a generous and elegant 600 sq m exhibition around 15 of the best known works.

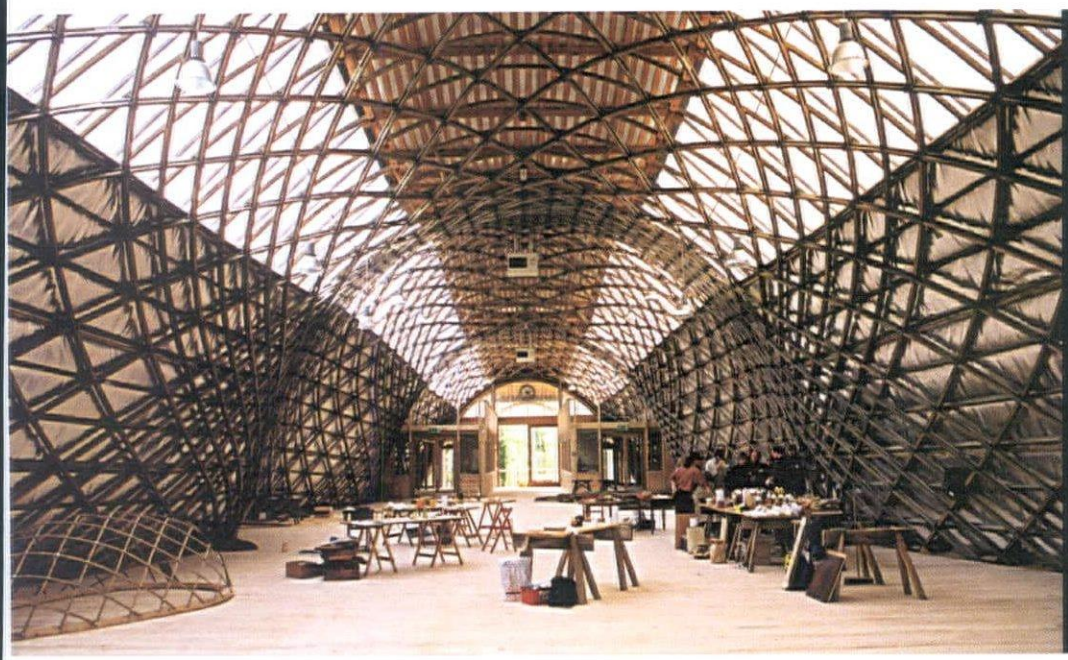


Libeskind's development sketch for the Spiral extension to the Victoria and Albert Museum, London.



Libeskind's competition model for the World Trade Center: the job that caused him to move to New York.

Beginning with Libeskind's graphic work Micromegas (1979) and Chamberworks (1983), half of the projects are dedicated to his early concepts and projects in Germany. Libeskind's first ever completed building, the Felix-Nussbaum-Museum in Osnabrück (AR April 1999), and his revolutionary designs for two of Berlin's most prominent squares, Potsdamer and Alexander Platz, are included. British projects (the London V&A, AR July 1996, and Manchester's Imperial War Museum, AR January 2003), are also given ample space, all as a kind of prelude to the gigantic American commission in Manhattan. In fact, Counterpoint is the first European showing of the World Trade Center scheme and the Ground Zero masterplan and without doubt they stylistically hark back to Libeskind's symbolic and historical interpretation of Berlin's cityscape. So the transition from the Spree to the Hudson River



The innovative green oak gridshell structure for the Weald and Downland Museum has won the overall Gold Award in the UK Wood Awards for 2003. The aim of the awards is to recognize and encourage outstanding design and craftsmanship in timber structures and joinery. This year there were over 200 category entries from 157 projects. Designed by Edward Cullinan Architects and engineered by Buro Happold, the Weald and Downland gridshell explores new techniques in greenwood timber construction. Both visually elegant and holistic in its environmental impact, the undulating shape is made up of a series of continuous curves, so that the entire structure works in concert as a rigid form, providing a clear span volume 12-15m wide to house the activities of the museum's conservation workshop. The gridshell was built by contractors E. A. Chiverton, with carpentry supplied by the Green Oak Carpentry Company. Other category winners were the National Trust visitors centre at Sutton Hoo by van Heyningen & Haward Architects, the Moat Bridge repairs at Tattershall Castle by Arthur Wood & Sons, and a new pavilion at Wissington in Suffolk by Knox Bhavan Architects. Full details on www.woodawards.com

could be interpreted as a logical transition in Libeskind's architectural evolution.

Counterpoint is a pragmatic and forthright showing of Libeskind's oeuvre and Matthias Reese does well in limiting the objects on show in the huge whitewashed rooms of the old Prussian court building which now functions as the historical entrance to the Berlin Jewish Museum. The projects appear very generously displayed with only a maximum of two in each room. Models sit on enormous and slanting plinths covered in black sandpaper and grey, diagonally suspended sails highlight the dynamic forces even further. Apart from the models, only a few plans and quotations appear on the walls.

Throughout the show, video clips are projected directly on the wall planes relaying interviews or statements on Libeskind's work, for example, by Charles Jencks, Cecil Balmond or Michael Blumenthal, director of the Jewish Museum. It was Blumenthal who seized the opportunity to celebrate his museum's second anniversary of its opening with a retrospective of its architectural creator. It is also the first collaboration of the museum with another cultural institution, the London Barbican, where the exhibition will be on show during the autumn of 2004. Libeskind's farewell to Berlin is measured and reassured, giving every reason to believe that he can respond to the challenge of New York. CHRISTIAN BRENSING

Counterpoint – The Architecture of Daniel Libeskind, *Jüdisches Museum, Berlin, until 14 December 2003* www.jmberlin.de

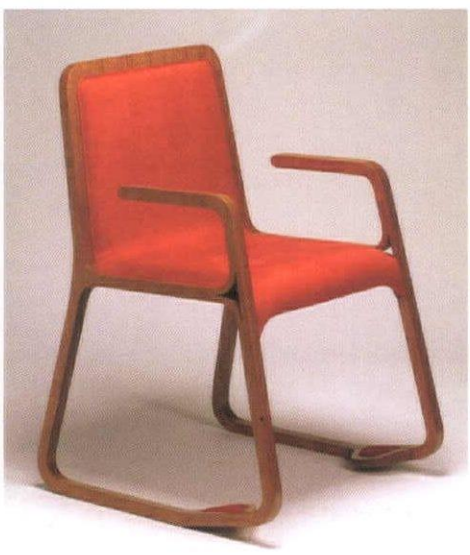
THE LAND OF CHAIRS

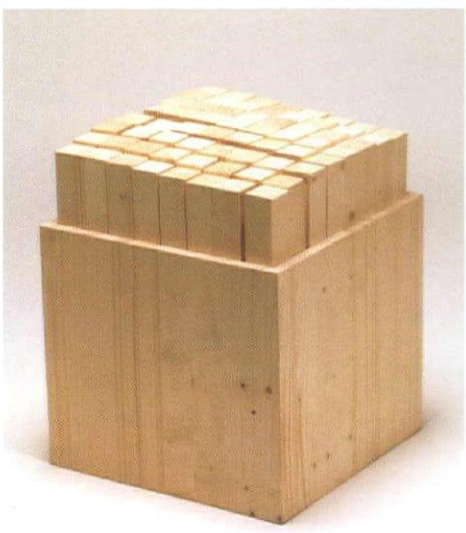
An Italian competition for young furniture designers had mixed results.

Friuli-Venezia Giulia is the most north-easterly Italian province, with Slovenia to the east and Austria to the north. It is often overlooked by tourists unaware of the charms of its geographical complexities and social diversity. The province also plays a large role in the economic success of northern Italy. The chair industry is a major contributor to this. With a production of 44 000 000 chairs every year, 30 per cent of all factory-manufactured chairs in the world are made in Friuli. Nearly 1200 chair-related companies employ over 14 000 people, in what is known as the 'chair triangle', so the district naturally lends itself to the world's only annual chair show. The International Chair Exhibition held in Udine, and organized by Promosedia, has been growing in size and momentum since its inception in 1977. The show has 198 exhibitors, with over 6000 chairs and chair related products. As well as local talent, there is an increasing international presence, with exhibits from all over Europe.

Annually, the Caiazza Memorial challenge competition is awarded at the show to recognize young furniture designers and encourage emerging talent. The competition is open to anyone under 40 years old residing in Europe. The first three finalists receive a cash prize, but more importantly the seven finalists and the three specially invited young designers have their designs turned into prototypes, manufactured by companies within the chair triangle and exhibited at the show. Overall winners were Chris Jackson and Peter MacCann (United Kingdom) for their LTO chair, a chair that allows natural positioning of the body when the chair is leaning towards a table or desk. The second prize went to Sakura Adachi's Foo-Sha chair (UK), for skilful use of laminates and use of industrial technique. Third was Austrian Claudia Pfleger's spring loaded stool, which was premiated for simplicity of design in allowing the seat to follow the contours of the body.

PELHAM DAVEY





First (left) and third (right) prizewinners in the Caiazza Memorial competition, International Chair Exhibition, Udine.



outrage

Bradford, in the heart of what was once England's industrial north, used to be a rather impressive little city, with a Victorian centre of neo-Italianate warehouses and offices built on a poky, picturesque Yorkshire plan. Then, in the 1960s and early '70s, manic civil engineers and perverse planners decided to demolish a great deal of the centre to make way for free-flowing traffic. The splendid Kirkgate Market, the main arcade and the Mechanics Institute with its giant Doric pilasters were the most outstanding of the demolished landmarks, but much else was obliterated by roadworks and really second-rate late neo-functionalist rubbish. Of course the city centre declined, and has an 'oversupply of property with low values'.

Now, there is a new plan by Will Alsop for the centre which promises much. It will tidy up a few of the dreadful postwar mistakes and celebrate some of the remaining fine Victorian buildings. But it also promises some really rather frightening things. Alsop's passion for blobs is modified only by his love of squiggles and thrusting rectangles. Everything new in the proposal shouts, and much of the low value property is to be demolished to allow the new buildings enough space to boom in.

The poor Neo-Gothic Town Hall (partly by Norman Shaw) is left, dwarfed, on a promontory in a new lake, in which it is supposed to be reflected. New scaleless blocks radiate out from the lake, jutting, wriggling and writhing, often with no-man's lands between. These buildings are carefully positioned to collect winds from the hills that form a bowl round the centre, and to focus them on the lake, picking up litter on the way and turning the water into a species of municipal cesspit.

The plan is now open for public comment until Christmas. Citizens must surely be fed up with having their town ripped to bits with grandiose schemes. In a few years' time, this one will look as dated as the '60s civil engineers' efforts. Surely the time has come for gentle repair, upgrading, and careful insertion of fine new elements. Let the past speak to the future, not be obliterated by grandiose versions of what might be. P. D.



Members of the jury at work on ar+d entries. Left to right: Bucheery, Sorkin, Moussavi, Ban, Davey.

JURY MEETS

The ar+d jury met last month to select award-winning and commended schemes from the over 700 entries to this year's competition. Members were Shigeru Ban (Japan), Ahmed Bucheery (Bahrain), Françoise-Hélène Jourda (France), Farshid Moussavi (London), Michael Sorkin (USA) and Peter Davey (Chairman and editor of the AR). Full results will be published in the December issue.

AR AWARDS AT MIPIM 2004

The Architectural Review is mounting its second project awards scheme at next year's MIPIM property show, to be held in Cannes from 19 to 21 March. Our awards, for as yet uncompleted schemes, are open to all architects, consultants and their clients world-wide. Entries are called for in six categories: offices; retail, hotel and leisure; urban communities and sustainability; urban masterplanning; residential and tall buildings. The international jury is looking for excellence in each category, and awards will be given to the most interesting work in all six, from which an overall winner of AR MIPIM Awards 2004 will be chosen. All submissions will be displayed in an exhibition at MIPIM in March, and all will be illustrated in a catalogue to be given to every delegate (last year the event attracted 16 000 people from the professions and the whole spectrum of the property industry). Closing date for entries is 6 December this year. For further information and an entry form see The Architectural Review website at *www.arplus.com* or the MIPIM site *www.mipim.com*. Email enquiries to TimBattle@btconnect.com.

CAUGHT ON THE WEB

The Architectural Review has a new international product guide on its website *www.arplus.com*. It joins our site-based information services on competitions and awards, exhibitions, events (conferences, lectures, colloquia and so on), books, and details of all architects, designers, photographers and artists who appear in the magazine. Like those parts of our site, the product guide is international and constantly updated.

browser

Ducking and diving like a seal, Sutherland Lyall navigates the waters of the web.

Modest conviction

Dutch architects have been en vogue for the last decade so we happily acceded to the request of Snelder+Snelder+Snelder to take a look at its site at *www.snelder.com*. The Snelders are Janneke, Michiel and Wim and they make up just less than a third of the 10-person practice which could be tough for the rest in the middle of a family row. I'm not sure what to make of this but the site lists the people who once worked for the practice.

You can't not like the site: there's no archispeak, the Snelders understand the difference between ambitions and reality and take them both seriously; they like craftsmanship; they do budget control, specification and energy calculations and, you'd be surprised if they didn't, do personal attention. Happily all this is stated just about as baldly and clearly as that. The news is that they've just finished a stylish KINZO factory in north Holland, there are A5 booklets which you can buy about them and two of their projects – and you can email, fax or phone them in their home town Bussum just to the east of Amsterdam and north of Hilversum. (I checked that out on the atlas).

Rapidly-changing images in four boxes rep-



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resent the practice's completed projects. So irritating is the pace of image change that you soon notice the building-type index on the left and click on, say schools. Peace at last – until two images slide in from left and right and then from the bottom. Whatever, this is, with the exception of the frenetic introductory project images, a pretty good model for small and medium practices: simple to navigate; convincing; modest. Its clear and mercifully brief text assumes that an architectural practice doesn't need to go on with a lot of market-speak, because most sensible clients assume architectural practices are honest, will do the best they can, will design what they want them to and will try not to go over budget. You can also just about work out what kind of architecture you will get – largely orthogonal, skinny sections, horizontal forms and quite a lot of elegance.

Trippingly upon the tongue, er

I recently came across this delightful bit of floss on the Web: 'an experiential, interactive and fluid trajectory creating a compelling professional simulation'. Here was part of a critical evaluation of the website of the New York Institute for Architecture and Urban Studies (IAUS) at *www.institute-ny.org*. Critic Erik Hemingway and several others were making the second Entablature architecture website awards at *http://www.entablature.com/awards.htm*. Following recent stern but fair Browser comments about historical revisionism on the Venturi website at *www.vsba.com* it is pleasing to see that Entablature awarded this site its gold medal for 2003. I'm indebted to reader Richard Pain for the tip-off.

But what of Hemingway's 'fluid trajectory' and the IAUS? The latter, you will remember, evaporated in the mid 1980s so this is plainly an attempt to reinvent it. There is a board of trustees, an executive director and a board of great and good advisors. There has, however, been an ominous dearth of news since last December when the web page went online, but it is remarkably simple and direct in construction and its language is clear and happily unexperiential.

The source

Entablature's own website is at *www.entablature.com* and subtitled 'A Gathering Place for the Architectural Community'. It is actually an architectural information website and is a straightforward commercial-style site. It is laid out with a 'Connections' column down the left and book and product ads down the right, with stories and features down the double-width middle column. Most of these stories are actually links to other story sources such as local newspapers – but there's nothing wrong with that. There are several chat rooms (known here as discussion boards), competitions and exhibitions, links to architecture, interior design and landscape schools around the world and to resources such as architects, career education and the like. It's a compact, competent website which seems to be updated daily. The site seems to have been going since its copyright was established in 2000 and its editor is Kris Pettersen. But try as I might, I couldn't discover who or what is behind Entablature. Given the vanity of most website owners, this may represent a refreshing change.

Slow, slow, quickish ...

The other websites which the Entablature judges liked included that of Add Inc (*www.addinc.com*) whose special effects, silhouette wipes, bouncy arrowheads, controllable panning across thumbnails and sound was almost up to the standard of Rice Daubney (at *www.ricedaubney.com.au* whence I'm happy to report that last month Carolyn had a baby and the firm has merged with di Carlo Potts). Another Entablature awardee, the Stoss landscape and urbanism site, has this demented line of tiny blue italic type that runs across the middle of the page from left to right, so jerkily that no-one here could at first read more than the odd word – which, after much scrutiny, combined to suggest that 'Stoss' probably means something like 'a kick in the pants'. Who couldn't not like such a site. Its menu of subsidiary pages is scattered across the right hand side of the page. A taxonomist might demur at the chalk and cheese nature of the keywords – from specific projects to the founder's biography and mug shot to ftp and email information. But there are few enough of them for this not to matter.

Quick

Many of the sites given 'honour awards' deploy the device of a little loading gauge to encourage you to stay on board while the images upload. It just about works but probably not when everybody does it. Sound can help here as Colombia student and gold medal winner, Bobby Wei, knows. His site is *www.bb8.net* and starts off with a bang. Actually it's the opening bar of a huge pounding bass rhythm which comes with the visual choice of connection type: broadband, network and 56K modem. There follows some terrific animated graphics, you click on Wei's mug shot, up come some project titles and ... then it falls flat. Although the graphics are zippy and the sounds incisive, the pictures are so dim and the text so unreadably miniature that all this terrific presentation stuff, and especially the speed with which everything happens, is wasted. You simply can't get at the content largely because you can't change the type size. A real pity – but easy enough to fix.

Cashing in

And finally here's an idea, a bit tacky I admit, for turning a buck during long weeks between house extensions. Your model is the Frank Lloyd Wright Preservation Trust Architecture Fantasy Camp, at *www.wrightplus.org/events/#camp*. This is, the blurb runs, 'For adults who dream of designing a room or building of their own ... Within the magical drafting room of Frank Lloyd Wright's Oak Park studio, participants work with accomplished architects to plan and design a structure of their own creation. The workshop concludes with the execution of an expertly crafted blueprint drawing.' Insert your own local historic/vaguely famous architect, rent some plausibly historic office space by the week and spend a lot of time hunting out old blueprint frames, linen tracing paper and pounce (powdered talc). If memory serves me correctly, the old guys with their smocks and T square used to expose their blueprints in the sun. So the only down side is the weather.

Sutherland Lyall is at sutherland.lyall@btinternet.com

letters

BIRMINGHAM'S BLUE BLOB

SIR: In the architectural debate here in Birmingham, I try to detach the serious discussion of design standards from the sometimes fevered rebranding, marketing and hyping of this city through its new architecture. For this I am not always popular among those who have a vested interest in the selling of 'the product'. Yet, while agreeing with your assessment of the new Selfridges (AR October pp24.25), I felt a twinge of pain when you loaded the blame for it on to the cultural history of 'poor old Birmingham'. We didn't ask for the blue blob! Unlike the Inner Ring Road (on which, incidentally, there never was motor racing – that was elsewhere), it's not our fault! The spaceship has happened to land on the edge of the Bull Ring; it could have chosen to land in any other city (and would have been equally out-of-place). Admittedly, some council leaders, press and marketing people are uncritically gushing in their admiration of the Emperor's new Paco Rabanne coat. But their obsessions with not being seen as second-best causes them to welcome any novelty that gets Birmingham headlines in the national and international press.

Yours etc

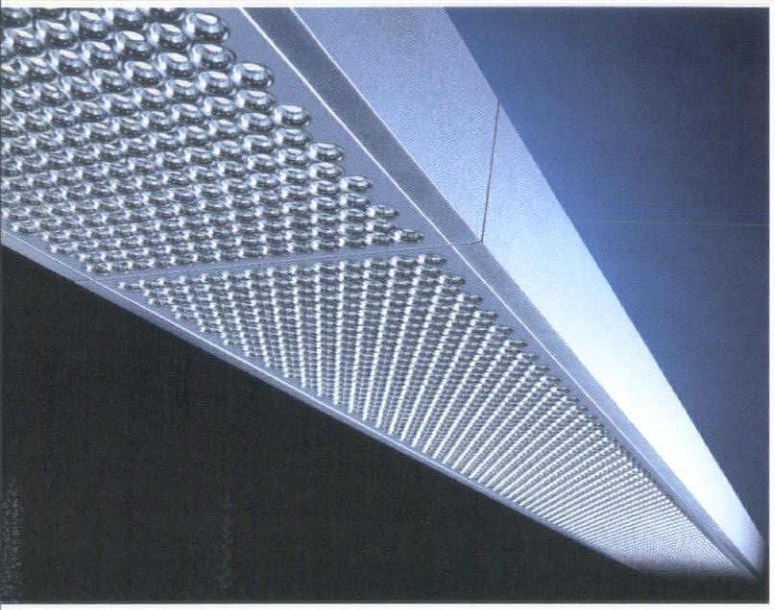
JOE HOLYOAK

Birmingham, England

OUTRAGED BY OUTRAGE

SIR: Your bitter 'P. D.' was not allowed to expand on why, in his view, the Selfridges

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Diary

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Louisiana Museum of Modern Art, Humlebaek
Pop Art's biggest daddy of them all gets a major show of work spanning from 1961 to 1996.
www.louisiana.dk

FINLAND

THE EARLY TAPIOLA – A TOWN IN A PARK

Until 7 December
Museum of Finnish Architecture, Helsinki
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www.mfa.fi

GERMANY

CONTENT – REM KOOLHAAS/OMA/AMO

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Neue Nationalgalerie, Berlin
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http://www.smpk.de

SWITZERLAND

GEORGIA O'KEEFFE

Until 1 Febnuary 2004
Kunsthaus, Zurich
Rare European showing of paintings, charcoal drawings, watercolours and sculptures by American artist Georgia O'Keeffe.
www.kunsthaus.ch

UK

HEATH ROBINSON

Until 18 January 2004
Dulwich Picture Gallery, London
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USA

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department store at Birmingham is an 'Outrage'. I would have expected from a writer with his powerful knowledge of epithets to explain this more convincingly, as so far, the rest of the architectural press had totally different views on this building.

We are used to agreeing with most of your 'outrage' cases. Here I think was badly missed your checking of what goes out in print, the building is not a 'passé blob' and so far is very successful with the young people, who I hope will be there to witness for us its success in the future.

Yours etc
MARIANA TWEEDIE
London SW15, England

WAKE UP CALL

SIR: The last sentence, on p24 of AR October (Outrage), is the best I have read since *Finnegan's Wake*. Great stuff!

Yours etc
GORDON BENSON
London, England

PRISON SENTENCES

SIR: New ideas on prison design are always welcome, but the model scheme by Buschow Henley proposed in AR October 2003, pp78-81 does present some challenging questions.

There are two aspects: the idea behind the design and the design itself. I absolutely agree that a prison should be designed to support a programme of learning and rehabilitation. Judge Stephen Tumin put forward, a few years ago, his ideas for Industrial Prisons to support a programme of training and work. But such regimes can actually be carried out in most traditional prisons, admittedly not so easily and requiring adaptation, but regimes are almost entirely dependent on the quality of the prison staff and instructors, less on the buildings. The ideas presented in the AR (and in the booklet which inspired the article) generate many practical management and control implications. Has anybody gone through the day-to-day running of the prison and discovered how it will actually work?

It is difficult to relate the design to the proposed regime. Another worry is the claim (in the booklet) that such a prison can be built on a very restricted site: 396 prisoners on a one hectare site, with 11 three-storey 'pods' containing 12 cells each per floor. This might be useful on a very restricted town site, but should be a corollary to the basic design, not the inspiration for it. It would be terribly claustrophobic, and could be difficult to supervise and control.

There will be a lot of people inside and around: 396 prisoners plus possibly 150 staff and visitors – anything up to 550 people and associated vehicles at any one time.

The level of violence, homosexual bullying, and the prevailing drug culture in prisons is horrendous, and the various cell blocks would need very careful selection of prisoners, which means an overprovision of cells to inmates to cater for fluctuations. This would not happen.

Another problem relates to the current PFI method of running prisons based on the principles of Design, Construct, Manage, and Finance (DCMF). What do the private prison providers think of the design. They will be taking the risks for the following 30 years – they are in business to make money and satisfy their shareholders.

It is the small details, and especially the relationship between prisoners and officers, and between officers and management, that will decide the success or failure of any institution. My doubts remain.

Yours etc
LESLIE FAIRWEATHER
Balcombe, England

CREDIT WHERE CREDIT'S DUE

SIR: Re Sutherland Lyall's note on Robert Venturi and PoMo (AR September, p36), I worked for Venturi & Rauch towards the end of the 1960s. (I write this sitting under an RLM lamp rescued from the wreck of Grands Restaurant.) To the extent that the firm had a non-architectural source of inspiration, it was the highly graphic art of that time. The only label I ever then heard applied to Bob's work – both inside and outside the office – was 'Pop'.

The office was small. The designer with whom Bob interacted most closely was Gerod Clark. Gerry, who was also a talented graphic artist, was probably more closely attuned to the art world than was Bob. Gerry was the sole or primary designer of several of the firm's well known early projects, including the Football Hall of Fame or Bill-DING-Board, and he created its most distinctive collage type presentation graphics. (The office's characteristic drawing style, done with ordinary #2 primary school type pencils, was Bob's.)

In those days Bob was scrupulous about fully crediting Gerry – and appropriately crediting everyone in the office. Opening the VSR website I was disappointed to find Gerod Clark's name totally absent, even from the Football Hall of Fame page. He died, tragically, in the early 1970s.

Yours etc
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Brookline, Massachusetts, USA

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San Francisco Church, Convent and Plaza, dating from 1535, and built with the help of the Devil, allegedly.

View from Quito

Occupying a narrow valley in the Andes, Quito's evolution from colonial outpost to modern city has been shaped by legend, myth, topography and a rising population.

Very few cities in the world can claim that the Devil built one of its churches, but such is the case of Quito, capital of Ecuador, whose San Francisco religious complex is said to have been built by the stonemason Cantuña with the assistance of Satan himself. Poor Cantuña's soul was saved only by leaving his chapel one stone short of completion, thus fooling the Prince of Darkness.

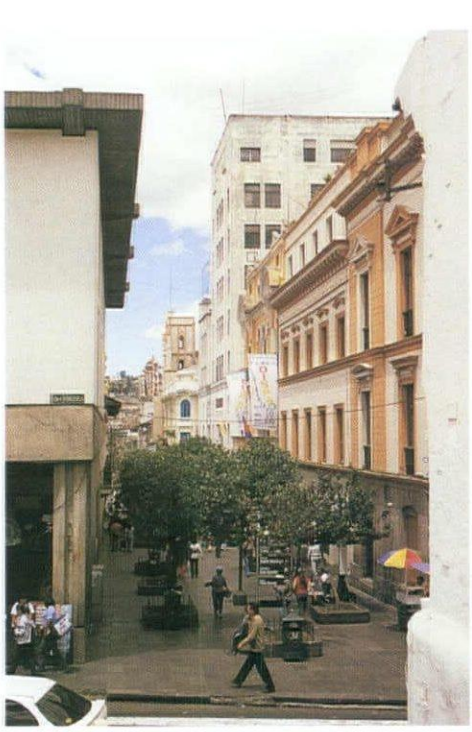
Such myths and legends constitute an integral part of the idiosyncrasy of the Quitoan people, creating monuments to their collective memory in almost every corner of the Old City. But Quito is more than the graceful remains of colonial planning and the Beaux-Arts and Neo-Classical architecture of the early Republican period. It is a thriving, growing metropolis of 1.6 million inhabitants who go about their lives with such legends buried deep in their psyches, even if they have not had the chance or the curiosity to look beneath the surface of their home town.

Below this surface is an intricate system of underground vaults and arches that supports an urban model imported from Spain in the sixteenth century and stubbornly laid over the ravines coming down from the Volcano Pichincha. Despite its inappropriateness to the landscape, this urban core functioned efficiently for more than 400 years, surviving well into the twentieth century.

Historically, the city went through a natural population segregation, with the more affluent neighbourhoods creeping to the north of the historic core and the industrial and working-class settlements sprawling to the south. Now, over two thirds of the population live in the poorer south and on land invaded in the surrounding hills. Public services and utilities reach a decent percentage of the population, but the topographical layout of the city, which occupies a narrow Andean valley, demands special planning for transport, mass transit systems and waste management. Quito has made great strides on this front, constructing two routes for ecologically-friendly trolley buses that travel along special lanes. The trolley stations are also strategically located, and a network of buses links the system to outlying areas. Unfortunately, the old buses continue to belch their black smoke along these routes, their status protected by strong political pressure from transport unions.

Nonetheless, the city retains a large degree of charm. UNESCO chose Quito's historic centre as the first member of its World Heritage List, and the 25th anniversary of that selection is being celebrated this year. The current city administration has also made revitalization of the area (which includes roughly 5000 inventoried buildings spread across 343 hectares) its largest municipal project. In fact, the city's masterplan calls for transforming Quito into a tourist destination, with a full range of services for visitors and locals alike.

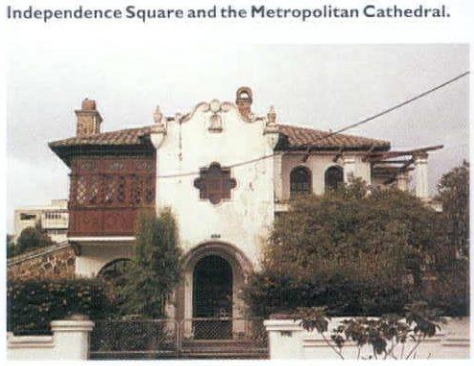
Several organizations are working to preserve the colonial area, which would form the focus of any tourism scheme. In the aftermath of a 1987 earthquake that damaged the old city, the Quito Restoration Fund (FONSAL) was set up to manage, fund, and conduct the restoration of the city's monumental architecture. Years later, the Corporation for the Development of the Historic Centre (ECH)



Dialogue between old and new in the Old City.



Independence Square and the Metropolitan Cathedral.



Typical early twentieth-century villa.



Latin American Baroque of La Compania de Jesus Church.



State of disrepair of buildings in the Old City.



Early twentieth-century Central Bank building, now restored as a museum and mediatheque.

was formed to create and manage an all-encompassing development plan for the district, focusing mainly on the restoration of residential architecture.

The city's best architecture remains concentrated in this colonial core. In modern times, the nation has seen few bold, breakthrough projects, and fewer yet in the public realm. Instead, most of Ecuador's best contemporary architecture can be found in private residences custom designed for wealthy families. The public architectural projects that do exist have sprung up along the axes of development that run toward the wealthy north, as well as in the affluent suburbs of the eastern valleys. Rafael Vélez Calisto, Arteta Arquitectos and Constructiva are among the most sought-after and prolific architects and firms.

Unfortunately, since most projects are privately commissioned and funded, the public has no way to satisfy an ever-growing demand for better architecture; only a select few have access to the works of up and coming architects like Verónica Holguín, Alejandro Núñez, María Samaniego, and Adrián Moreno.

One publisher has made efforts to improve the situation, however. Trama Ediciones, an architectural and graphics publisher that printed Ecuador's sole architectural magazine (now only active online), has produced well-documented and delightfully designed books on Latin American – and, particularly, Ecuadorian – architecture. Titles such as *The Modern Ecuadorian House*, now in its third volume, and *Ecuadorian Country Houses* promote local architects and give some notion of the status of the profession. Local architects can also show their ideas and interact with international professionals at the Quito Biennial (BAQ) which awards prizes for built projects, student projects, publications, essays, theory and history, and research, among other categories.

Unfortunately, all these efforts aim at and reach a very small percentage of the population, few of them outside the profession. Architecture is not yet on the map in Ecuador as it is elsewhere in South America. The success of architects in neighbouring countries such as Mexico and Colombia is based on the fact that they embrace their national identities and abstract traditional architecture and materials. The resulting work stands out not so much because it pushes the limits of fashion and function, but because its cultural character makes it distinctive in an increasingly globalized world.



City Plaza complex by Rafael Vélez Calisto.



New trolley bus station for the city's eco-buses.



New buildings at the Catholic University of Ecuador.



Sleek office towers by Diego Ponce.

JAIME IZURIETA-VAREA

design review

Wind power mast prototype
Architect
Samyn & Partners



Catching the wind

This prototype for a new form of wind mast makes elegantly economical use of materials.

As wind power evolves into a more widely acceptable source of green energy, so more attention is being paid to the form of the wind masts, which tend to be dominant presences in the landscape and often the source of unfavourable public reaction. There is also an inherent contradiction between the aim of producing green energy through wind power, and the often huge quantity of material used for the construction of masts and their foundations. Typically, these consist of a large and heavy tubular steel structure resting on a thick concrete slab supported by massive in-situ concrete piles.

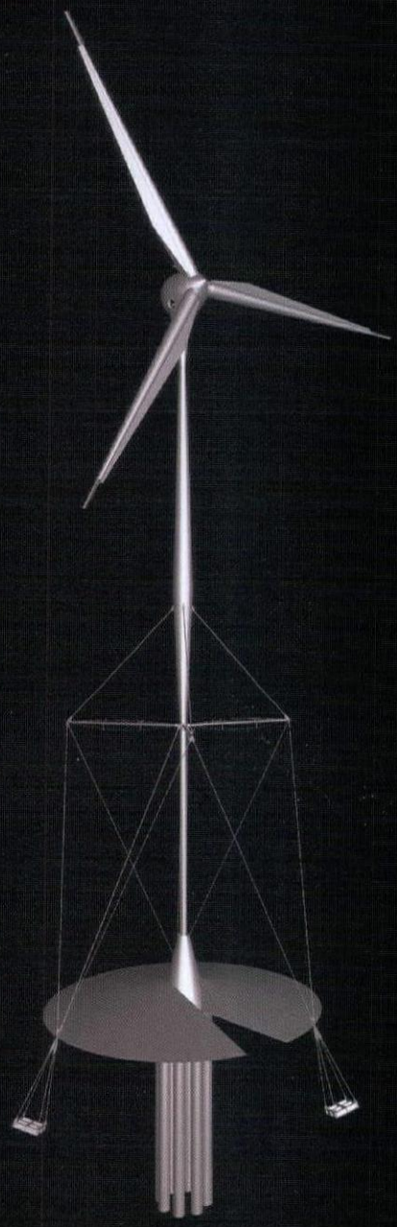
Some time ago, Belgian architects and engineers Samyn & Partners were appointed by Groupe Fabricom, a leading Belgian company involved in the electromechanical industry, to develop a prototype for a lighter and more ecologically conscious wind power mast. Instead of using heavy foundations, Samyn's lightweight version is braced by a network of tensile cables. Three pairs of studded cables are moored just under the propeller and arranged in a 120 degree star-like configuration in plan. The cables splay out at a 45 degree angle linking the shaft to the studs and then run vertically to the ground. A more complex cable configuration increases torsional stiffness for structures in offshore locations. In both cases, three additional cables link diagonally, and in vertical planes, the connecting points of the studs with the mast penetration point in the ground.

This form has many advantages over more conventional designs. Apart from being a lighter structure (Samyn estimates that the weight of a 100m high mast will be halved), the cables can be used to raise the mast vertically, so eliminating the need for heavy hoisting equipment and allowing generators to be installed in remote locations. It also reduces the size of the foundations, requiring only smaller prefabricated prestressed concrete piles which can be easily removed and have less long-term impact on the environment. At ground level, cables are anchored by concrete discs made up of radial segments buried underground weighed down by soil.

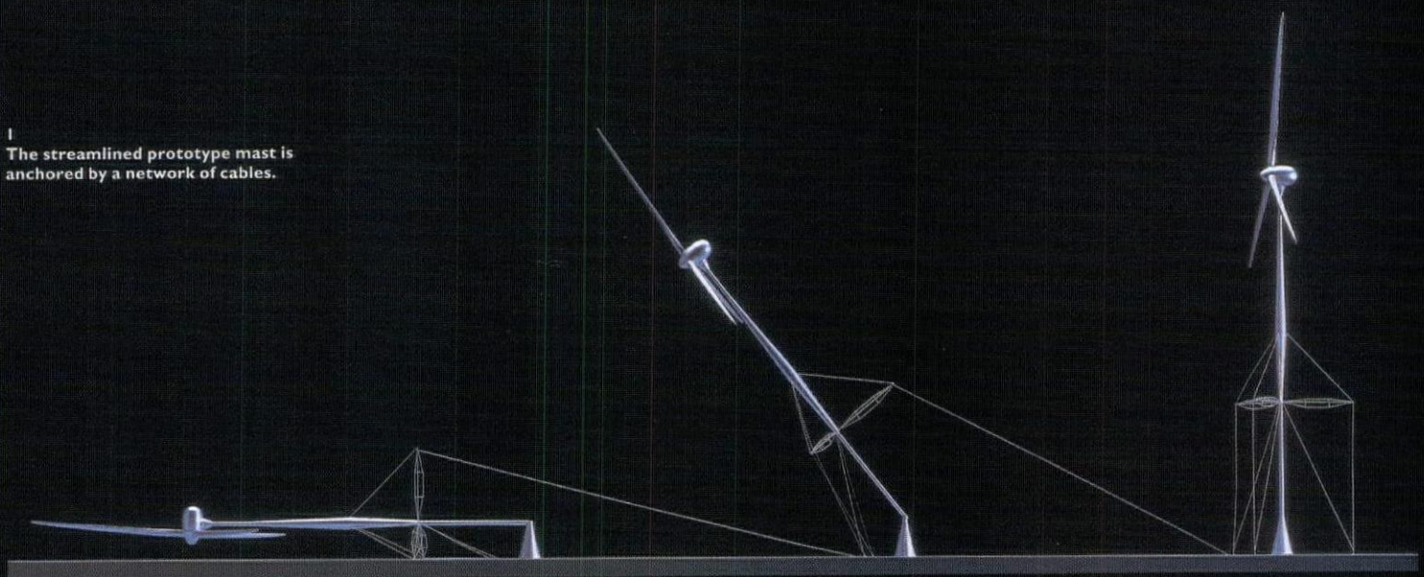
At present the patent for the system is pending and it may be taken up by the Italian national electricity supplier ENEL for two wind farms in southern Italy. Given the abundant nature of wind as a potential energy source, it must surely be only a matter of time before it is exploited on a more intensive scale all over Europe and wind masts become as commonplace sights in the landscape as electricity pylons.

CATHERINE SLESSOR

Architect
Samyn and Partners, Brussels
Photographs
Courtesy of the architects

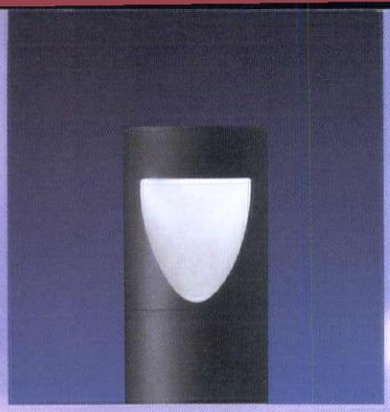


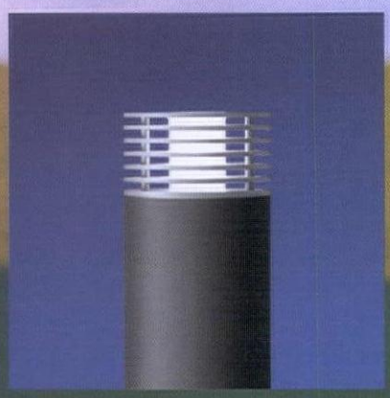
typical mast and foundations



1
The streamlined prototype mast is anchored by a network of cables.

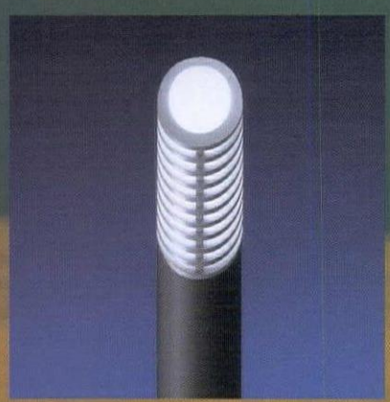
mast erection sequence



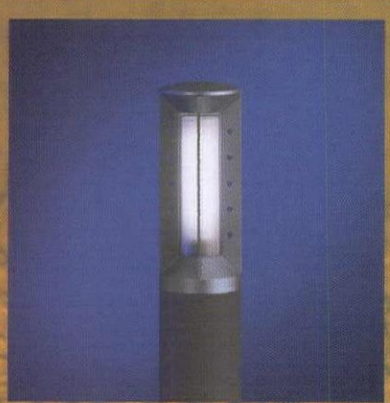


Pathway luminaires 88···

Beyond their original function of providing light, pathway luminaires also shape the character and appearance of urban architectural environments.



The new TRILUX pathway luminaires, available in four design variants, ensure orientation, provide lighting and set design accents. Pathway luminaires, wall-mounted luminaires or pillars offer designers and lighting consultants the perfect way of integration and harmonisation with the natural or built environment.



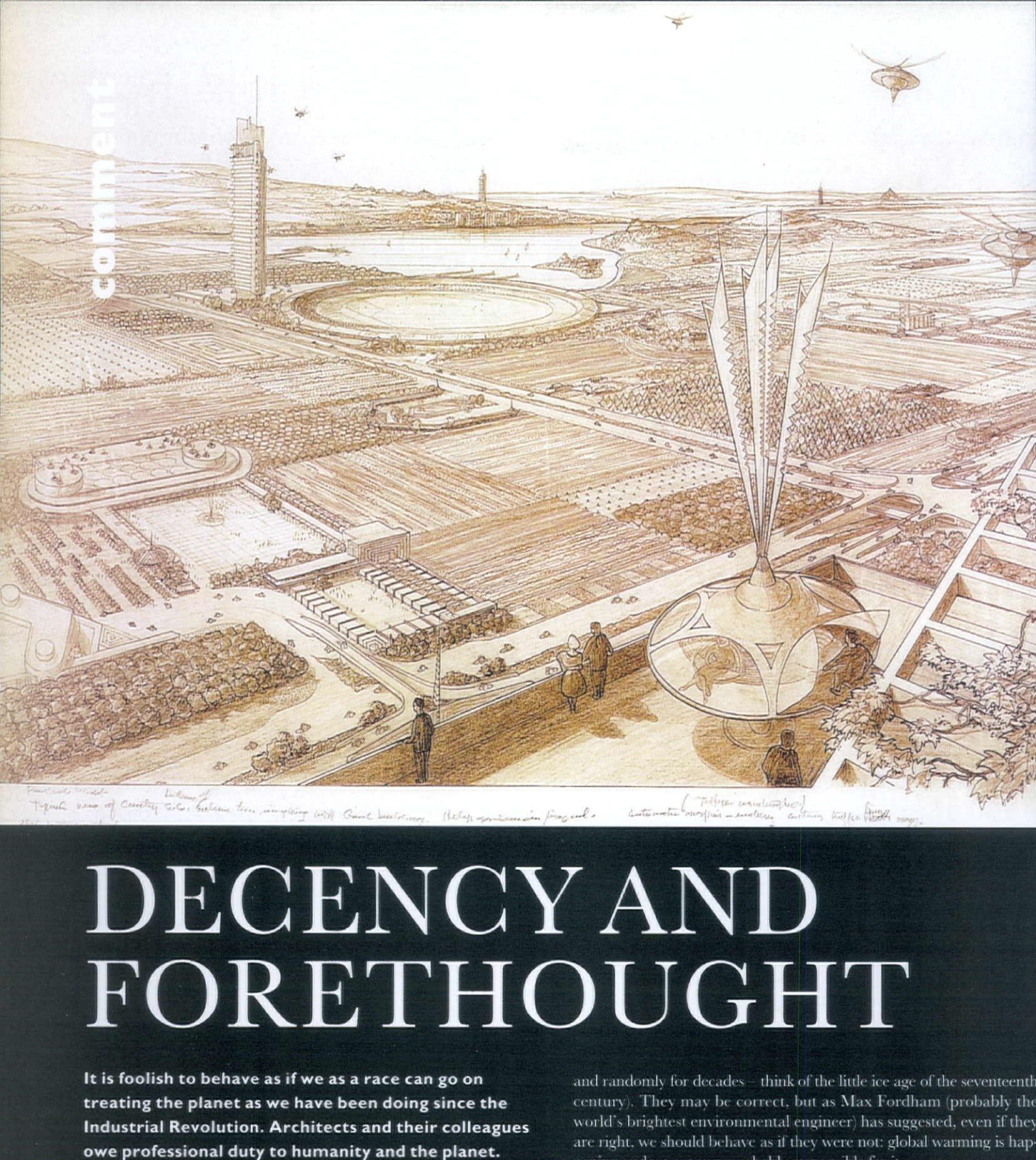


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DECENCY AND FORETHOUGHT

It is foolish to behave as if we as a race can go on treating the planet as we have been doing since the Industrial Revolution. Architects and their colleagues owe professional duty to humanity and the planet.

Another issue devoted to green building? Why is there one, or even more a year?

In fact, every issue of The Architectural Review is, we hope, green, but some are greener than others, because we must regularly review the latest exploratory work in an area of activity which is of vital importance to humankind. Buildings take up rather more than half of all our energy use: they add more to the pollution of the atmosphere than transport and manufacture combined.

Some people believe that global warming is a natural phenomenon. Undoubtedly the world's climate is changing, but they argue that this might be a very short term effect (the climate changes quite radically and randomly for decades – think of the little ice age of the seventeenth century). They may be correct, but as Max Fordham (probably the world's brightest environmental engineer) has suggested, even if they are right, we should behave as if they were not: global warming is happening and we are very probably responsible for it.

Further, some would argue that it does not matter at all that the world is heating up: to them, the submersion of Pacific coral islands, the deforestation of the Himalayas and the Andes, and the aridation of areas like the southern United States and the southern Mediterranean is unimportant – the market will provide solutions. Will it? To most of us (apart from the most committed total devotees of the market system) it seems highly unlikely that the quantities of carbon dioxide and fluorocarbons we are pouring into the atmosphere from the buildings we design are not having some effect on the climate. Every generation since the Renaissance – the beginning of modernity – thinks that it has unique problems to cope with. Of course it does not (all human problems remain the same), but it is clear to

IS
luminaire variable
ke a rainbow skin



tinating like an iris: iridescent to uni white, blue, yellow, black and silver-gray.

anslucent power cable suspension
ansparent housing
sible circular electronic ballast
rfect lighting technology due to ultra-pure aluminium
etallisation and microprism structure.
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Winner of the international IF-Design Award 2002

This luminaire is available as pendant, mountable and in-built ceiling luminaire.
The interplay of the various colours of the iris can be adjusted by inserting coloured films into the housing ring.

Design: M. Kocks, P. H. Neuhorst

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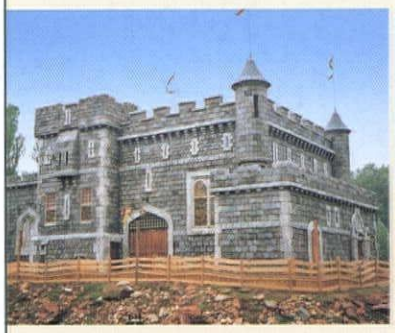
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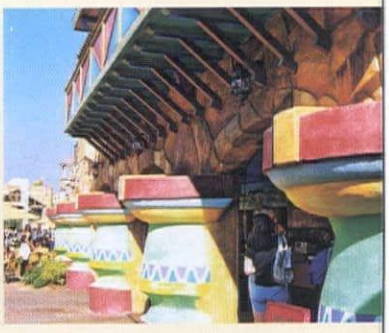
B E S T



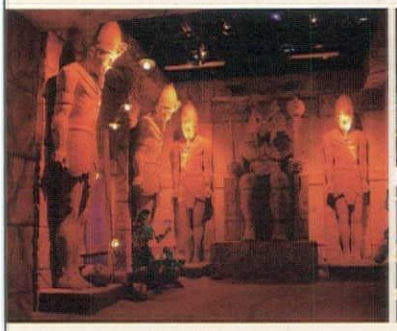
Steel Facade:
Legoland, Germany



"Rockwork" Castle:
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most that we are doing far more potentially to alter the nature of the planet than any of our predecessors.

We, and our colleagues in the engineering professions, must rally to make really responsible professional and inventive efforts to reduce the deleterious impact of our work on the world. It is absurd and immensely destructive to build standardized buildings from the Arctic to the Antipodes. We desperately need a new sense of regionalism, based on climate and topography: one in which each building will respond to context, breathe gently on the world, and use the abundant supplies of ambient energy the universe provides. Of course, we cannot close down the power stations, the electric grids (that alarmingly in the US and Italy are apparently beginning to break down), or the dams and irrigation systems that have so distorted the delicate ecologies of many of the poorer parts of the world.

Proper professional roles

But we have to invent systems that will add to the infrastructure we inherit, and be capable of sustainable growth. For the imagination to achieve this, we must rely on the professions. There is an absurd notion, being promoted stridently by both the RIBA and the AIA, and virtually every government in the developed world, that the architectural profession is merely part of the building industry. Certainly it is. But the professions have much more important responsibilities. Imagine doctors being described as a branch of the pharmaceutical industry, or lawyers as a division of stationery manufacturing. We would never go to a clinic, nor make a will. A profession should offer the possibility of using its arduously won knowledge to benefit society as well as individual clients.

Professional people are not only called to their life by ability to draw and count, cut kindly into bodies or make amazingly agile arguments. They are trained at great expense in traditions that are distilled from the work of their ancestors. All professional people have a wider responsibility than trousering their fees. In architecture, we should have an oath, similar to the Hippocratic one, which most graduating medical students swear some version of on joining their profession. Our oath should be based on the Bruntland Commission's definition of sustainability: that we will build in a way which 'meets the needs of the present, without compromising the ability of future generations to meet their needs'.[1]

In everyday terms, this would have profound effects on the ways in which we design. For instance, we should build to recycle and with recycled elements; we should try to source materials locally to cut down on transport emissions (which can be measured in product miles);[2] we should standardize building parts that we cannot touch and feel (yet devote more craftsmanship to the bits with which we make direct contact). The traditional virtues of the thermal properties of mass, proper response to sun orientation, and natural ventilation are essential parts of good design. But as important is the need to keep our eyes open and seize the opportunities offered by technologies not directly related to building. Nanotechnology's possibilities may give amazing new potential to buildings: instant response to climatic change; flexible reconstruction to cope with function alteration; instant modification at the whim of the owners. But such developments are at least a generation away.

Imagination and invention

Yet much is at hand. In a recent book, Brian Edwards and Peter Smith point to numerous technological developments that can be adopted now.[3] They suggest for instance that we are only beginning an exploration of the properties of phase change materials for storing energy. Sodium sulphate for example (a very cheap substance) can be used as an energy sink, for it melts with heat and solidifies in cold and, in so doing, latent heat is released or captured. Quite a small reservoir of sodium sulphate can act as thermal flywheel for a sizable building.

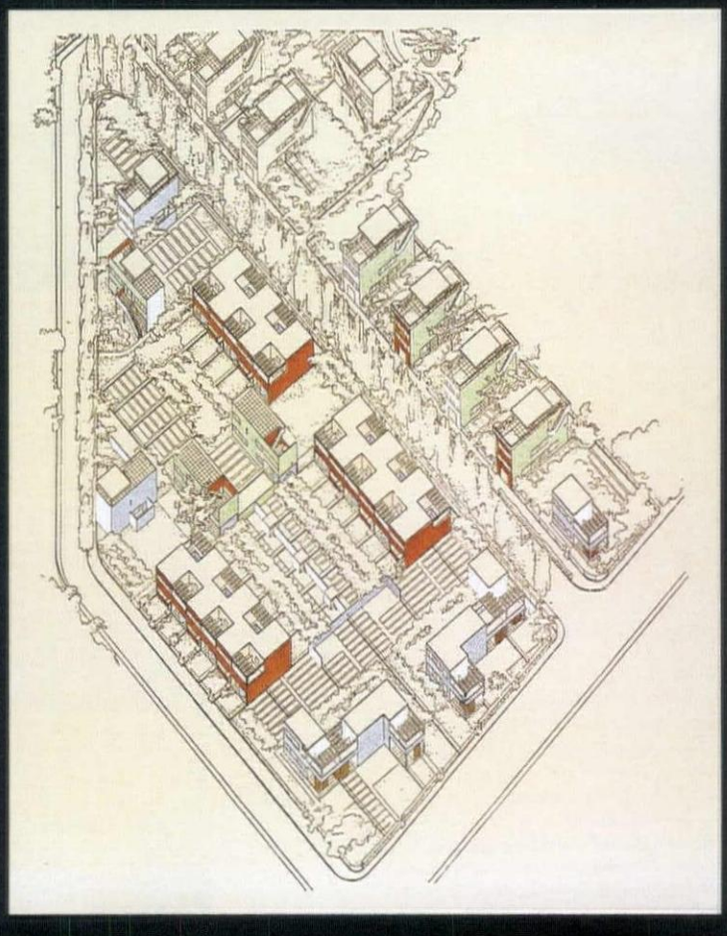
Light emitting diodes (LEDs) are at last being used a bit in buildings after their first glimmering some fifty years ago in primitive electronic devices. LEDs can produce light with far fewer watts per lumen than conventional incandescent or fluorescent lamps. Why are we not using them much more extensively? Why are we not using solar cooling, particularly in hot countries. It is ironic that some of the warmest places on earth like Saudi Arabia and Indonesia have been blessed with huge resources of fossil fuel. If it were not for their oil wealth, such countries could undoubtedly be in the forefront of using their abundant solar radiation to cool buildings as well as warm them up. At last, there is some hope that we may be able to evolve architectures that properly respond to climate, but clients in such countries are often deeply wedded to the appearance of buildings a decade before last, so air-conditioned PoMo still reigns in the Gulf, to the great detriment of the planet.

In more temperate climates, wind energy could be much more extensively used. Already, Denmark derives a quarter of its power from the wind; Britain would reputedly be able to provide a third, with suitable infrastructure. New developments in design of wind powered generators may make them less obtrusive and noisy.

Hydrogen technology offers hope of a way of living decently with the planet. But it has to come of age. We have yet to evolve effective ways of generating large quantities of hydrogen from water and distributing it without burning large quantities of fossil fuel. Again, harvesting ambient energy offers wonderful possibilities if used in electrolysis of water.

There is so much to learn; so much to explore. Instead of messing about with blobs and similar formalistic stupidities, we should be inventing a fruitful and generous future based on decency and forethought for our successors. P.D.

1 *Our Common Future*, World Commission on Environment and Development, 1987.
2 A term used by Brian Edwards in *Green Buildings Pay*, Spon, London and New York, 2nd edition, 2003, p8.
3 *Ibid*, pp194-208.



Modernist visions of living in harmony with nature: left, Frank Lloyd Wright's Living City (a late development of Broadacre, 1958) and, right, Le Corbusier's 1925 design for the ideal settlement of Pessac near Bordeaux. Both are developments of the Garden City ideal.

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I

SPECIAL BREW

Reusing existing buildings makes good environmental sense. In Madrid, this redundant brewery has been converted into a regional archive and library.

By its very nature, the reuse of historic buildings is an act of environmental awareness, calculated to conserve materials, energy and land compared with a new structure. In densely populated European cities, with their large legacies of old or redundant building stock, the potential for reuse is particularly fertile, but it often requires a leap of political and architectural imagination to coax life back into individual buildings and urban areas.

In Madrid, the Arganzuela district is undergoing a gradual renewal, in a now familiar pattern of a former industrial district close to the city centre gentrified through residential and commercial development. Key to this process has been finding a new use for the El Águila brewery, a heroically scaled industrial complex lying close to the Atocha station in the south-east part of the city. In the mid '90s, the site was the subject of a competition to house an arts and cultural centre that would extend the Prado Museum axis southwards, but this foundered and the programme was redefined to become the city's regional archive and library, eventually executed by the local Madrileño partnership of Mansilla & Tuñón.

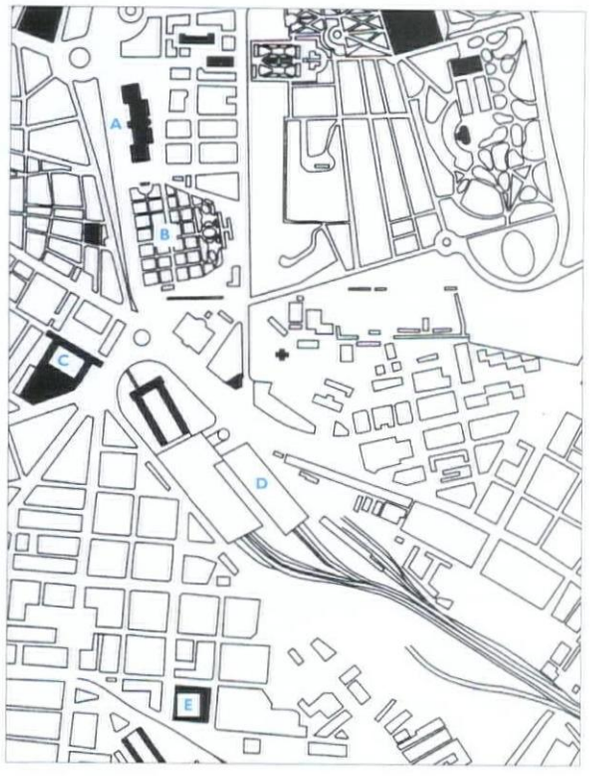
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The west street side of the archive and library complex: a lively mixture of old and new, dominated by the silo cluster.



Occupying an entire city block and dominated by a cluster of twelve monumental metal silos, El Aguila dates from 1912, when its offices, malthouse, brewery and cellar were erected, built of brick in the Neo-Mudéjar (Moorish) style. A refrigeration plant was added in 1925, followed eight years later by the barley storage silos, which in their soaring scale and stark geometry have become familiar urban landmarks. The new centre encompasses a 30 000 sq m archive, for the preservation and storage of books, records and documents relating to all aspects of civic history, and a 10 000 sq m library for their consultation and study by the public.

Within this self-contained industrial campus, Mansilla & Tuñón have sought to tactfully renovate the existing buildings and add a series of new pieces to the jigsaw. With their tautly detailed skins of white concrete, aluminium louvres and translucent glass, the new orthogonal volumes are legibly contemporary additions that take their formal and material cues from the industrial functionalism of the silo cluster rather than the more robust, ornamented brick structures of the earlier era.

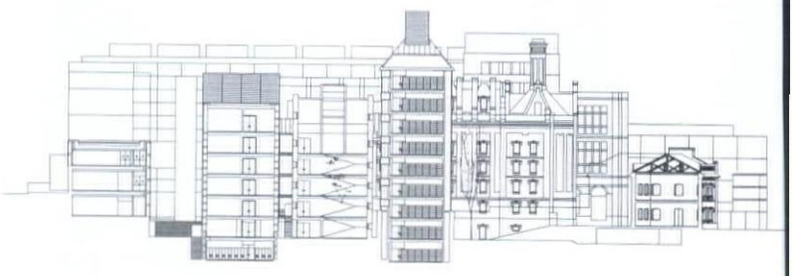
In some ways they resemble modern factory buildings, being impassive, neutral containers for the efficient processing of a commodity (in this case, knowledge). Individually they might seem elegantly understated (an inevitable hallmark of architects who graduated from Rafael Moneo's office), but this project is not about singular gestures, more about how the complex is read and experienced as a whole and the resonance generated between new and old. A six-storey archive on the eastern edge of the site is the largest intervention, linked at right angles to a smaller volume housing workshops for document restoration and preservation. With 85 000 linear metres of bookstacks, the archive is essentially a big, simple giant of a building, its facade of vertical strips of translucent glass evoking the hypnotic repetitiousness of an Andreas Gursky photograph. Inside, all is climate controlled calm, but perimeter access spines are colour coded according to floor, thus assisting user orientation. Now remodelled as offices and a reading room, the old brewing hall in the centre of the site forms the third element in the triumvirate of archive buildings.



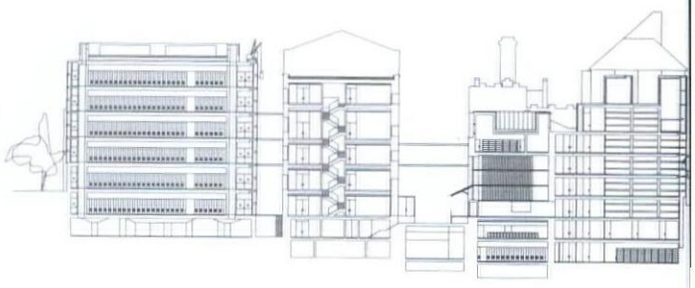
location plan

A Prado Museum
B Botanical Gardens
C Reina Sofia Art Museum
D Atocha Station
E Regional archive & library

2
New parts are crisp volumes clad in a mixture of translucent glass, white concrete and aluminium louvres.
3
A low wall wraps around the south side of the site.
4
Entrance courtyard and cafeteria.
5
Bridges link the now remodelled brewery buildings.

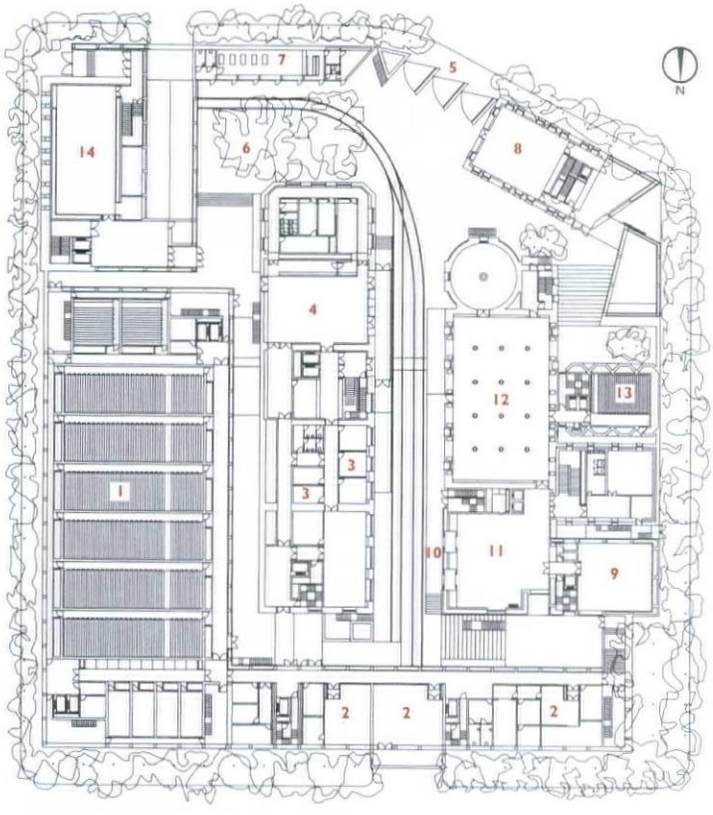


long section looking eas

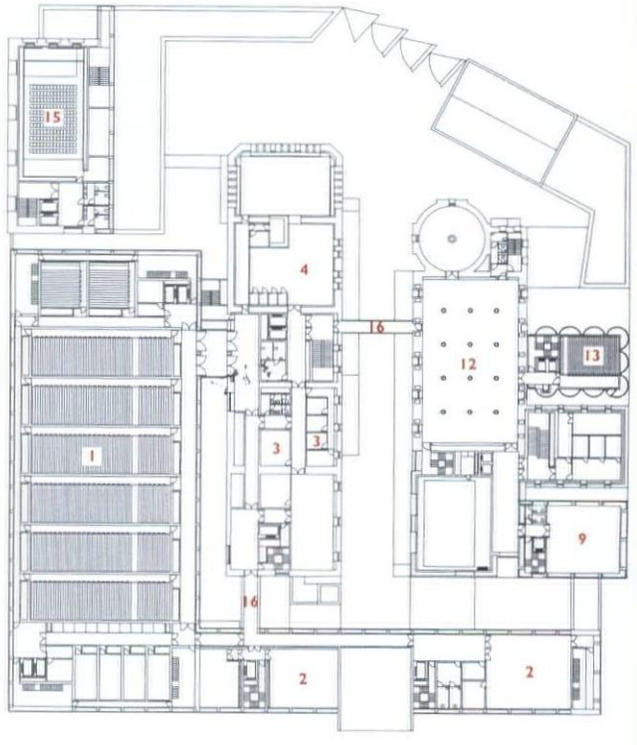


cross section looking south

1 main archive
2 workshops
3 archive offices
4 archive reading room
5 site entrance
6 entrance courtyard
7 cafeteria
8 legal deposit
9 technical processing
10 library entrance
11 library foyer
12 library reading room
13 book deposit
14 exhibition space
15 lecture theatre
16 bridge link



ground floor plan (scale approx 1:1250)



first floor plan

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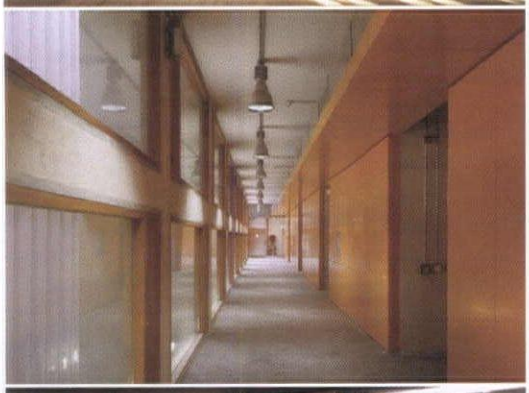

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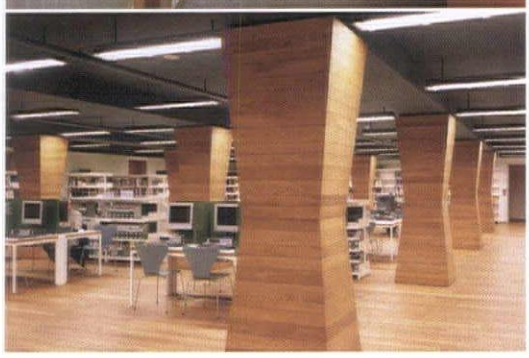
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6



7



8

The regional library occupies the west side, and with the exception o a small technical processing building, makes inventive and sympatheti use of existing structures. Reading rooms are inserted into the old malthouse, its paraphernalia of brewing – vats, cylinders, hoppers and the like – retained as a slightly surreal backdrop and reminder of the complex's original function. Protected by a metal canopy, the reading room entrance is located under a former loading bay, leading to a dramatic triple-height foyer lined with the same panels of translucent glass used on the exterior of the main archive building. The silo cluster now houses the book deposit, its hermetic volume adapting readily to its new role.

On the south-west corner, the block containing the brewery offices has been converted to become the library's legal deposit, where newly published books are received and catalogued. Drawing expressive power from the contrasts between history and modernity the west side is more heterogeneous, alluding to the brewery's accretional development. The west street frontage reads as a diverse conflation of styles and eras (silos, brick malthouse and two new volumes), but each part is clearly distinguished in its own right as well being a varied and vital urban landscape.

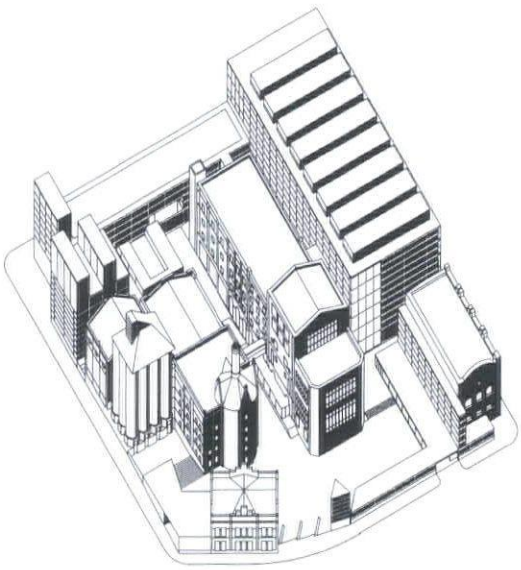
On the south side, a low wall wraps around the site embracing a new single-storey cafeteria overlooking a minimally landscaped entrance courtyard. The courtyard is enclosed by the archive reading room to the north and an exhibition space and lecture theatre to the east, carved into the former refrigeration plant on the south-east corner. Throughout the site, courtyards and external spaces frame views, assist navigation and encourage dialogue between existing and new elements. Elevated walkways connect the network of buildings and help rationalize circulation.

Executed with great sensitivity to both past and present, Mansilla & Tuñón's thoughtful transformation of El Águila gives an industrial monument an invigorating new lease of life and shows what can be achieved with an apparently difficult and disconnected set of buildings. It also seems especially appropriate that a complex devoted to documenting the history of a particular place should itself be part of that history. CARLA BERTOLUCCI

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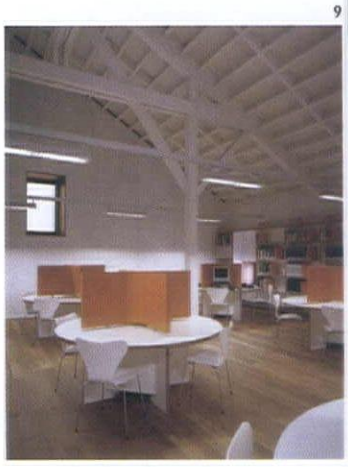
MANSILLA & TUÑÓN



11 axonometric projection of entire complex

Architect
Mansilla & Tuñón, Madrid
Project team
Emilio Tuñón, Luis Moreno Mansilla, A. Prats, M. Peralta, O. Fernández-Aguayo, J. Gimeno, A. Regueiro, S. Hernán, J. C. Corona, F. García-Pino, M. Linares, D. Nadal, R. Reininger
Engineering consultants
J. G. Asociados, Alfonso Gómez Gaite
Graphic design
Gráfica Futura
Furniture
Fritz Hansen
Lighting
Louis Poulsen
Photographs
Roland Halbe

9



6
The scale of the original buildings is exploited to dramatic effect.
7
Perimeter access spine in the main archive building. Colour is used to differentiate floors.
8
Library reading room.
9
Library mediatheque in the brewery's former malthouse.
10
Entrance hall in the library, lined with translucent glass.





1

This scheme should need little introduction. But apparently it does. While the aspirations of BedZED (Beddington Zero Energy Development) have been well documented[1] (AR June 2001), 18 months after the first residents moved in it is time to think beyond the statistics that qualify its conception. This is, let us not forget, a piece of radical architectural design, and deserves to be seen within a wider context as a model for future volume housing.

Beyond reducing energy consumption to 10 per cent of similar suburban homes built to 1995 regulations, it is a model of place making, and of high-density suburban urbanization. A model of architectural imagination and mixed-use integration. And above all of optimism and progress. But before this, it is perhaps equally pertinent to state what BedZED is not. It is not a high budget, highly refined show piece. It is certainly not architectural wallpaper. It is instead an exemplary working experiment: the kind of mega-prototype essential to test issues concerning future housing generations. So those who criticize the eccentricity of some of its details clearly miss the point. After all, with over ten years as a key associate of Michael Hopkins and Partners, Bill Dunster graduated from one of the best schools of architectural refinement. Since leaving MHP however, he now chooses to prioritize other broader facets of architecture, of which there are many.

Meeting him on the BedZED site recently, where he runs his own design studio (ZED Factory), Dunster constantly draws parallels between BedZED and the adjacent development, the likes of which he sees as obsolete. Here he plays developers at their own game, adopting their language and their currency – that of economy. Through an integrated approach, BedZED provides the same dwelling density as the adjacent speculative development, but with a 35 per cent increase in space allowance. This in turn provides valuable revenue earning benefits in the form of additional live-work units, and community facilities such as surgery, a community hall and a bar. It also results in a vastly improved public realm, with a reduction in naked tarmac and virtually no unused (and therefore unloved) residual space. This is a principle that Dunster describes as using planning gain to facilitate carbon trading. In other words, not only does mixed use bring the social and environmental benefits of a



2

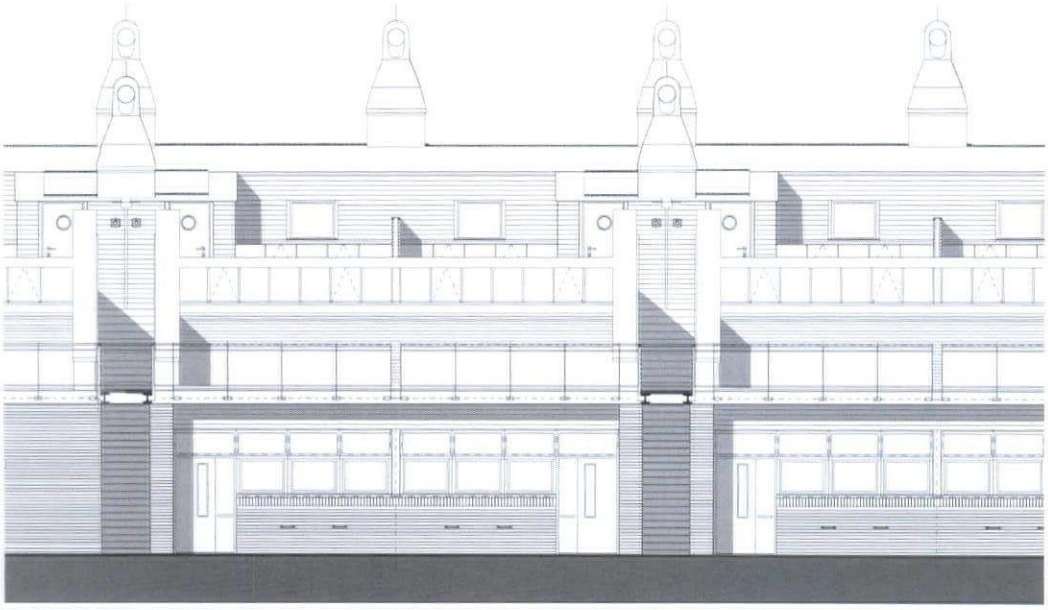
HOUSING, SUTTON, ENGLAND
ARCHITECT
BILL DUNSTER ARCHITECTS



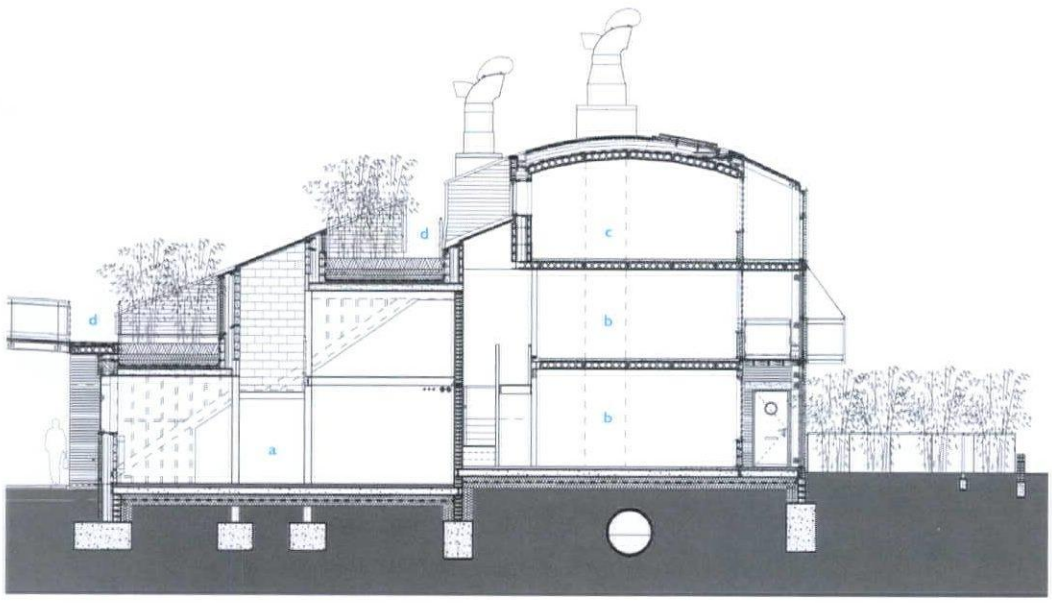
site plan

WAKE UP CALL

As governments around the world struggle to provide sufficient affordable homes in cities, BedZED has much to teach architects, developers, and residents alike.

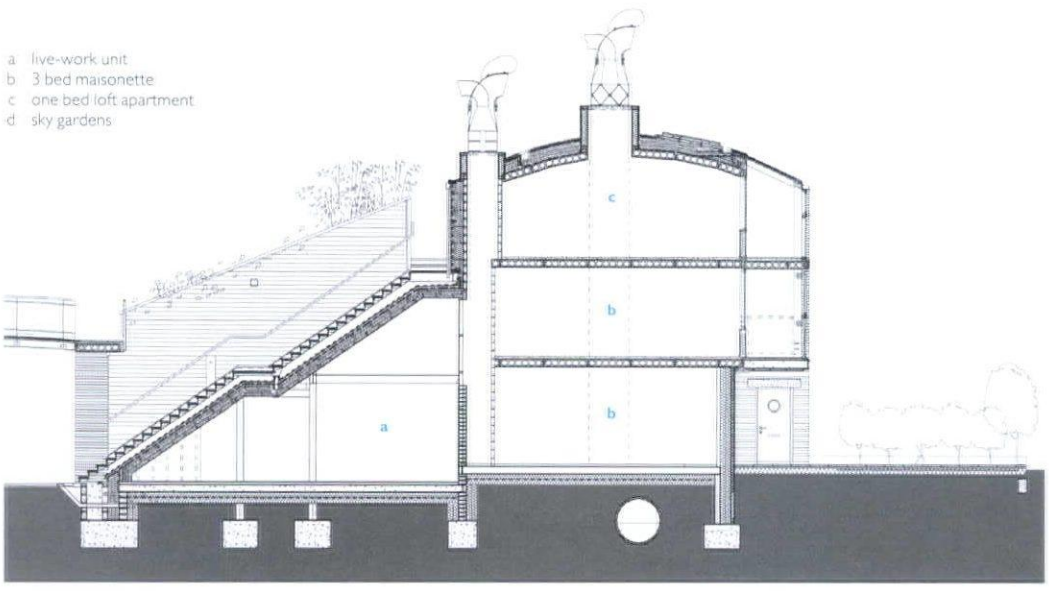


typical north mews elevation showing ground level live-work units, access stairs to loft apartments, sky gardens and bridges



typical cross section

a live-work unit
b 3 bed maisonette
c one bed loft apartment
d sky gardens



typical cross section through loft apartment access stair and ventilation shafts (scale approx 1:200)

24 hour operation that sustains diverse communities and balances energy loads around the clock but, most significantly, the increased commercial revenue relative to the cost of the land can be offset against the necessarily front loaded costs of producing a carbon neutral development.

Improved density is achieved through the resolution of Dunster's integrated cross section. Defined by solar access criteria, a few simple ground rules dictate that all dwellings face south while workspaces face north. This in turn generates four variant terraces, the cross sections of which combine spaces from up to four self-contained units, each with their own entrance and external garden. By interlocking live-work spaces with maisonettes, loft apartments and two sky gardens, the central terraces achieve a density in excess of 100 homes per ha, providing 400 rooms and 200 jobs per ha, and 26 sq m of private garden compared with 8 sq m of public space per home. A target that if replicated would reduce urban sprawl to about 25 per cent of the projected footprint over the next 100 years, resulting in all our housing needs being achievable on brown field sites.

Following Tom Dyckhoff's stirring review in the national press, Dunster's ZED Factory has been inundated with people wanting to do a ZED (a zero energy development). With a list of over 700 people it is clear that BedZED is responding to a real need, and when sufficient clusters of people emerge other developments will be built.

It is for these reasons and many more[1] that it is especially disappointing that BedZED did not win the recent RIBA Stirling Prize for Architecture; Britain's premier award, that being broadcast on national television, has the potential to send a

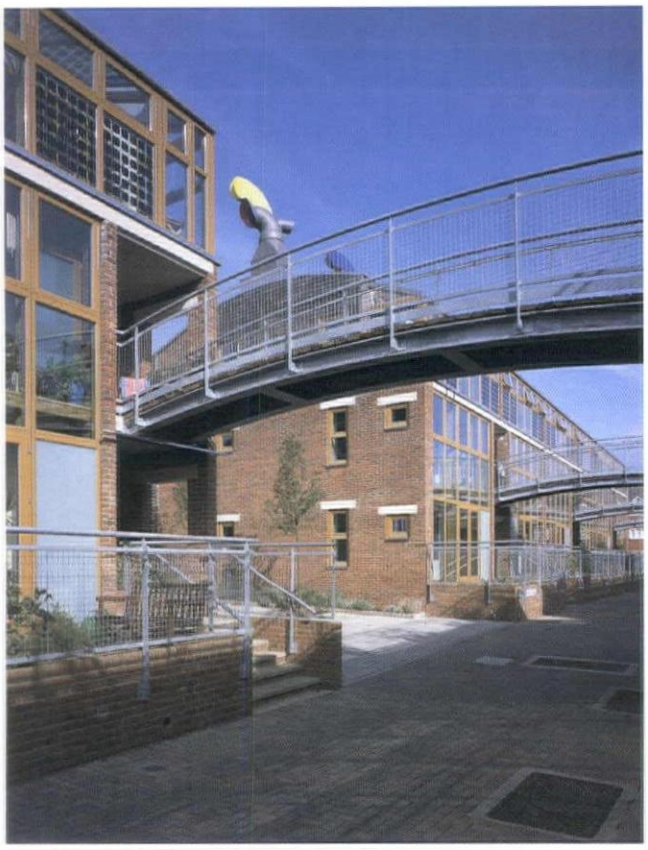
4
While perimeter 3 bed maisonettes have more conventional front gardens and balconies ...
5
... mews maisonettes access their sky gardens via bridges that lead from first-floor living rooms.



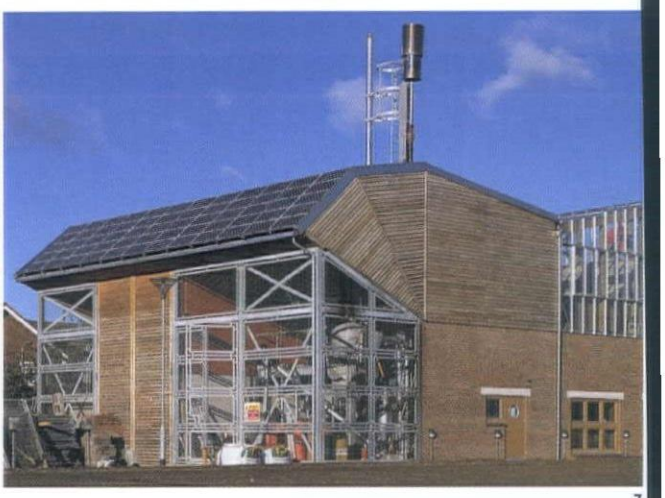
1
With south-facing sun spaces, BedZED's terraces establish an alternative suburban prototype ...
2
... a stark contrast to the low-density, car-dominated streetscape of the conventional existing housing.
3
Each one-bedroom loft apartment has its own entrance and sky garden, set within the site's distinctive roofscape.







6



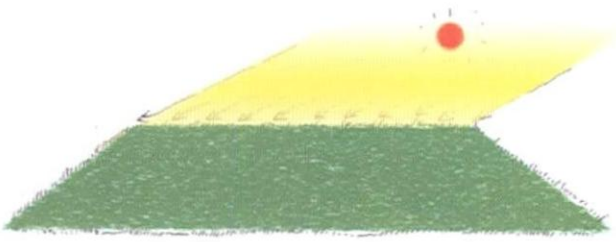
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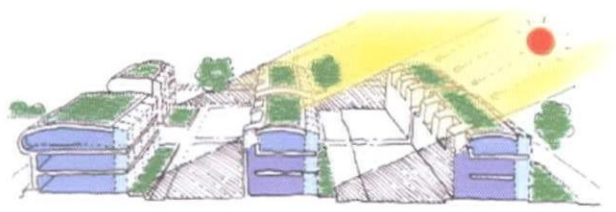
message far beyond the limitations of the architectural world. While the winner, Herzog & De Meuron's Laban Centre is truly exquisite, it is with respect just another beautiful building, highly refined in both its conception and detail, in response to a gift of a brief. But, as we are faced with an international housing crisis, we must see that BedZED is so much more than a collection of well intended green houses, and if we really want to break down the marginalization of green isues, it certainly should have won more than a specific sustainability award.

So it comes down to us. If you are reading out there, here is a call to duty for Messrs Mass Housing: take next week off, and spare us the thousands of soulless houses that you could build during that time. Put down your speculative house plan pattern books and consider the genuine potential of your productivity and profitability. Invest in front end design and invest in diversity. Without you, little will be achieved, as you alone have the means to radically improve the landscape of our built environment. So, go to BedZED. Then wake up and help us all live the dream. ROB GREGORY

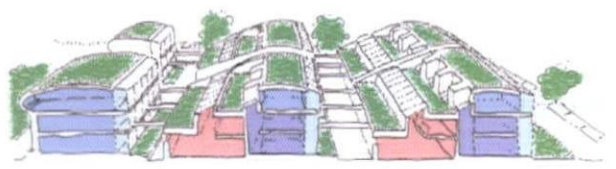
1 For further detailed analysis *www.zedfactory.com*
BedZED (2002). BRECSU Best Practice Programme. Crown Copyright.
Sustainable Urban Design – An Environmental Approach (2002). Randall Thomas, Spon Press.

HOUSING, SUTTON, ENGLAND
ARCHITECT
BILL DUNSTER ARCHITECTS









Architect
Bill Dunster Architects, London
Client
The Peabody Trust
Environmental consultants
BioRegional Development Group
M&E and building physics
Ove Arup Partners
Structural and civil engineer
Ellis & Moore
Quantity surveyor
Gardiner & Theobald
Photographs
Dennis Gilbert/VIEW

6
Mews streets prioritize pedestrians over the car.
7
Centralized CHP plant is a prominent on-site feature.
8
75 sq m live-work units, ideal for small start up businesses.



8

OFFICES, ETTLINGEN, GERMANY
ARCHITECT
BEHNISCH, BEHNISCH & PARTNER

Behnisch, Behnisch & Partner's recently completed headquarters for Entory AG extends the practice's distinguished lineage of humanely conceived, environmentally responsive workplaces. Though not as big a project as the mammoth North Regional Clearing Bank in Hanover (AR August 2002), it still sets challenging architectural and environmental standards for what can often be a dreary and dislocated building type, the edge of town office.

With a staff of 350, Entory is a subsidiary of the banking and financial services group Deutsche Börse and needed a new headquarters with different kinds of offices – individual, group and open plan – to foster different ways of working, as well as a central social space for its employees. Five German architectural practices were invited to take part in a limited competition for a site on the edge of Ettlingen, a small town just south of the main regional conurbation of Karlsruhe. The area is rural, with fruit orchards to the north and the gentle slopes of the Black Forest to the east, and the site forms part of the transition from densely built-up town to the bucolic open spaces of the countryside.

With its predominantly permeable aspect and office wings reaching into the landscape, Behnisch's winning scheme responds sensitively to its setting and engages with its surroundings. Two five-storey volumes are arranged in a rough L-shape around a fulcrum of foyer spaces and a staff canteen, but floors are pushed and pulled in the manner of desk drawers





RADIANT STAR

These new headquarters for a German finance company are a creative reinterpretation of the edge of town office.

1
The new headquarters sits on the edge of Ettlingen, where fields and orchards meet the town.
2
Behnisch's bucolic idyll.

sliding in and out, and over and under each other. So what might have been an unremarkable composition has a punchy, animated irregularity, its volumes teeteringly poised like a precipitously stacked pile of books. Here, tiers of floors step back like a ziggurat; there, part of another floor shoots out to be caught and propped up on slim tubular pilotis. Behnisch's characteristic layering of facades and use of colour (overseen as usual by Christian Kandzia) enhances the spirit of animated bricolage, breaking up the building mass and subverting notions of corporate decorum. External blinds shade and screen the glazed envelope and subtly coloured cladding made of a specially developed translucent, photosenstive material changes hue with changing light, like strips of chameleon skin.

On the non-street side, the two wings enclose a semi-public landscaped garden and pool overlooked by the staff canteen, enabling workers to dine al fresco on fine days. Parking is sensibly concealed in a basement, so that visitors enter at a first floor *piano nobile* level by a sweeping, almost papal, staircase that traverses a small moat on the street facade. But because of the site topography, this entrance floor becomes the ground level on the garden side.

Individual office wings are connected by the fulcrum of the luminous foyer, which is surrounded by informal breakout areas, meeting spaces and conference islands. Penetrated by an open stair that dips and swirls up a central void together with a network of galleries and bridges, the foyer is the social heart of the building. Elsewhere, offices are conceived as distinct places, rather than arid, impersonal prairies, with cellular and open plan spaces interspersed to create a varied and changeable internal landscape.

In terms of energy use and environmental control, the building is equally responsive to its users' needs, employing a system based on the principles of thermal mass, natural ventilation and water borne radiant cooling and heating delivered by plastic pipes cast directly into concrete ceilings. Radiant heating and cooling delivers a high level of thermal comfort and avoids the problems of draughts that sometimes beset air driven systems. Heating and cooling are supplied by a combined heat pump and chilling device. The building rests on 150 reinforced concrete piles 8m in length, which act as heat store and exchanger. Water circulates through pipes in the piles and is warmed or cooled depending on seasonal requirements. Heat can be stored in the surrounding ground and when ground temperatures do not match the needs of the building, the heat pump or chiller kicks in to make necessary modifications.

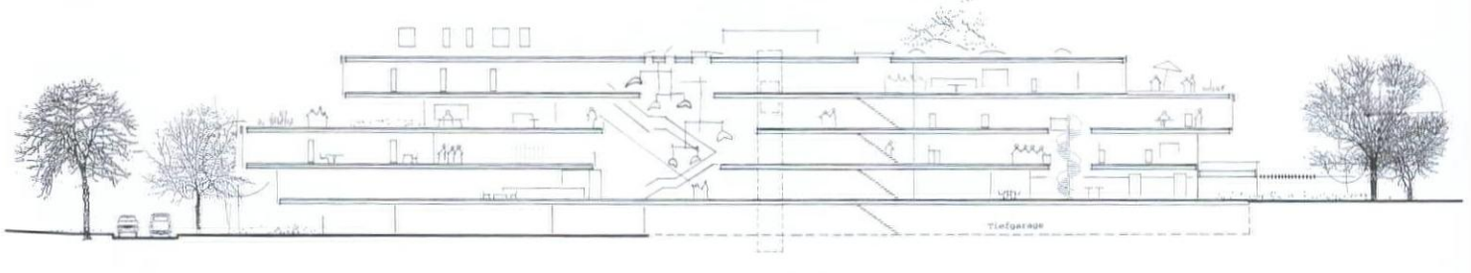
Apart from in the meeting rooms, canteen and entrance hall, there is no need for a



site plan

OFFICES, ETTLINGEN, GERMANY
ARCHITECT
BEHNISCH, BEHNISCH & PARTNER

3
The building reaches out into the landscape to engage with its surroundings.
4
Volumes are pushed and pulled around like desk drawers.
5
A sweeping staircase marks the building's main entrance.
6
Staff restaurant overlooks a pool on the garden side.



 east-west cross section looking north



3

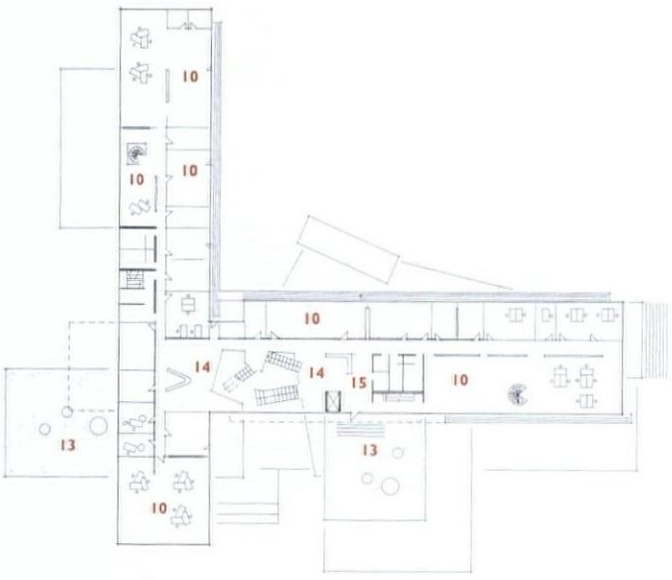


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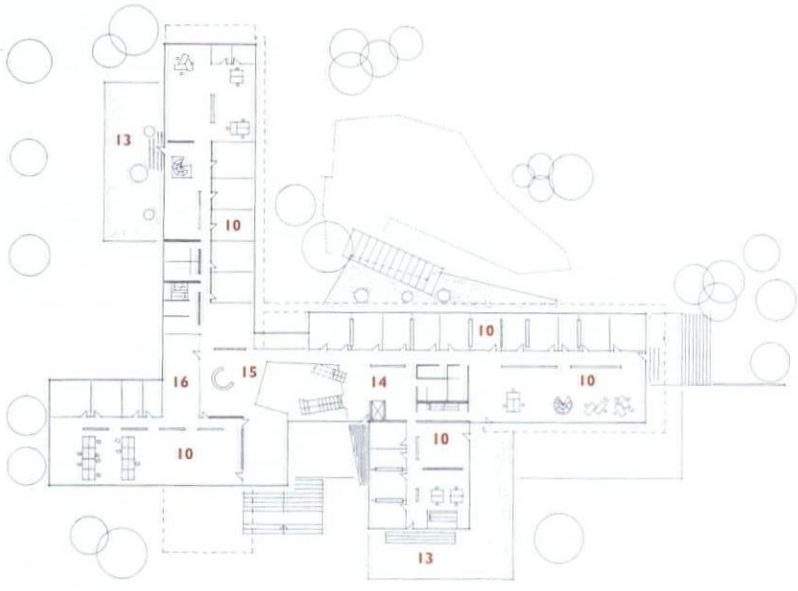




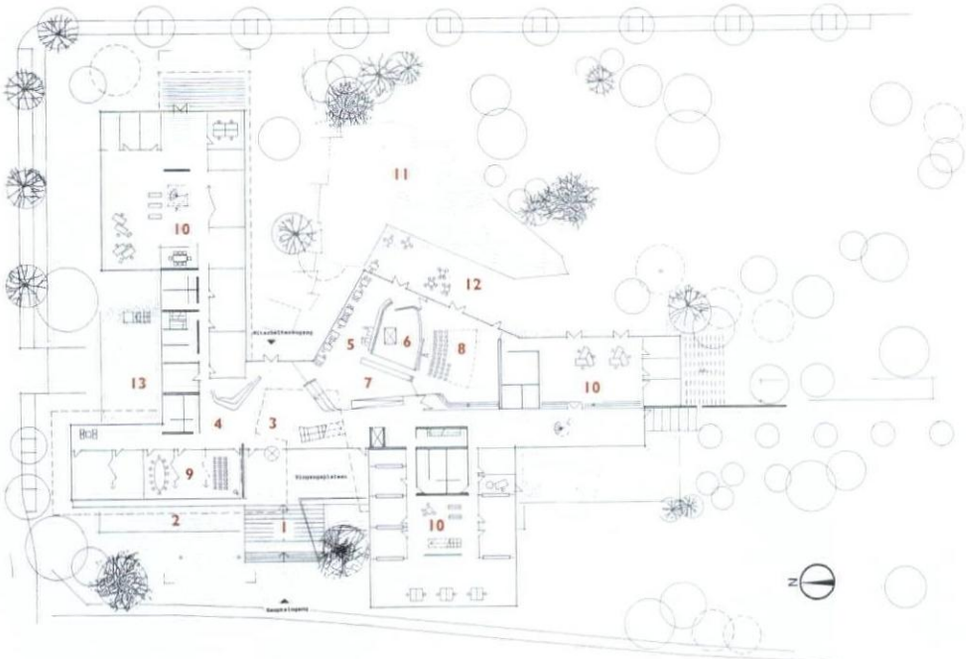
6



second floor plan



first floor plan



52 | 11 entrance level plan (scale approx 1:1000)

1 main entrance
2 moat
3 foyer
4 reception
5 staff canteen
6 kitchen
7 servery
8 conference space
9 seminar room
10 offices
11 pool
12 garden
13 roof terrace
14 meeting point
15 tea and coffee point
16 archive

mechanical air supply. All office spaces are naturally ventilated with openable windows, which saves on expensive mechanical systems and reduces the building volume (due to low floor-to-ceiling heights because plenum space is not required).

One problem with a thermal slab system is that it can be slow acting (because of the huge mass involved), and excessive heating and cooling may occur if weather conditions change suddenly. In this case, a control unit takes account of meteorological forecasts and adjusts the system accordingly, enabling it to respond more dynamically to external conditions. Backed up by building simulation software, the control unit is fine tuned to avoid excessive heating or cooling without loss of overall thermal comfort. Compared with a similarly sized building, Entory's architects and engineers predict that its energy consumption will be considerably reduced, but its success, as with other Behnisch office projects, also lies in the way it humanizes and civilizes the environment of the corporate workplace.
CLAUDIA KUGEL

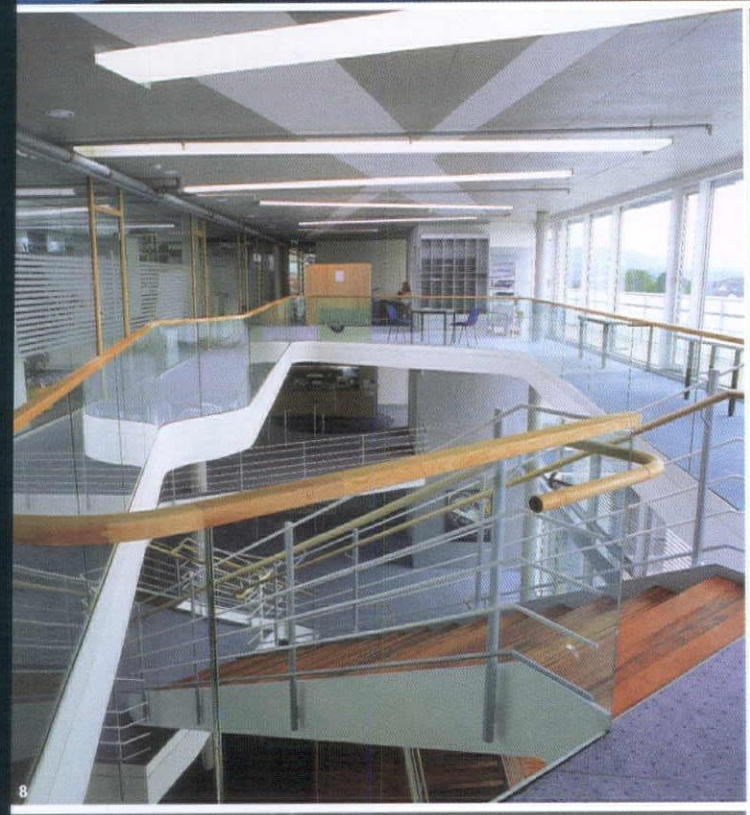
Architect
Behnisch, Behnisch & Partner, Stuttgart
Structural engineer
Buschlinger & Partner
Environmental engineer
Schuler
Landscape consulant
Stötzer & Neher
Office furniture
VS Vereinigte Spezialmöbelfabriken
Uplighters
Waldmann Lichttechnik
Photographs
Christian Kandzia

7
Foyer space at entrance level.
8, 9
A staircase swoops and dives around a central space which functions as the building's social fulcrum.
10
The office landscape, a mixture of cellular and open-plan areas, with spaces for informal interaction.
11
Staff restaurant.

OFFICES, ETTLINGEN, GERMANY
ARCHITECT
BEHNISCH, BEHNISCH & PARTNER



7



8



9



10



11

Mathematical academics work in many different ways: sometimes intensely privately; at others in lectures and colloquia, so the new Cambridge University Centre for Mathematical Sciences[1] had to provide a complex lattice of spaces, ranging from almost hermetic cells to formal theatres, and to spaces in which people can meet casually and chat.

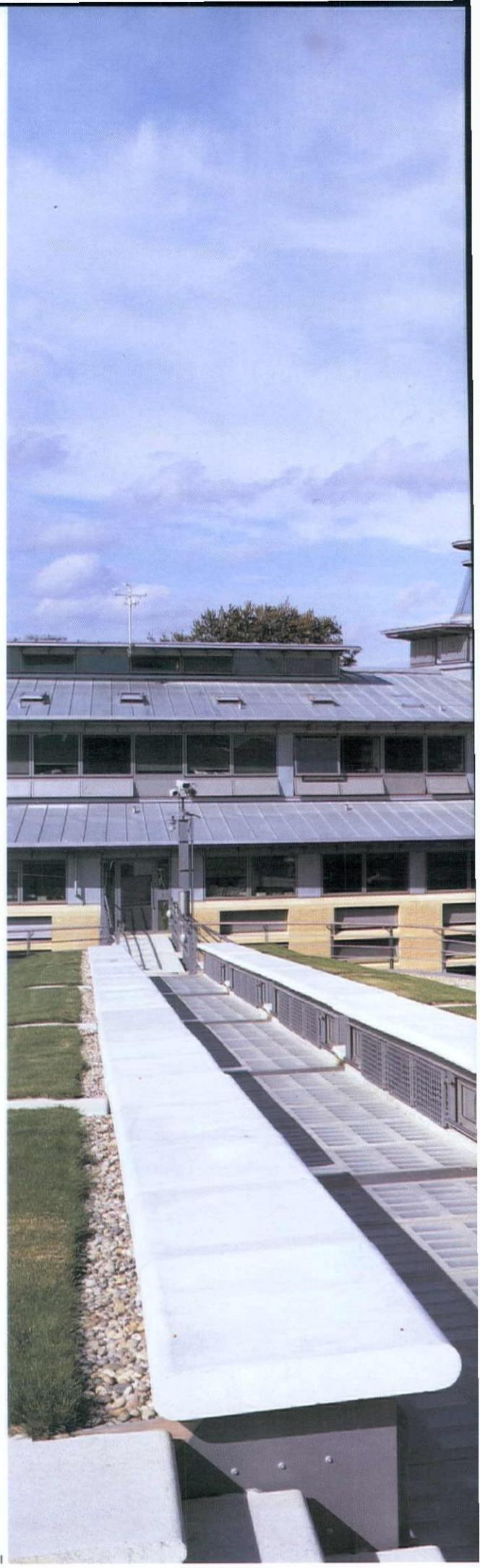
The other main determinant of the Centre's design was its site and its neighbours. West Cambridge is an area of grand villas set in their own grounds. It was largely built in the second part of the nineteenth century when the university's dons were allowed to marry for the first time. They built a marvellously diverse collection of houses that offers an unrivalled compendium of upper-middle class domestic styles that starts with Queen Anne revival, goes through Arts and Crafts and ends with the Wrenaissance. Different though the styles are, the houses have scale in common, and when the idea of developing a seven acre field in the middle of the suburb as a new faculty was launched in the early '90s, people who owned surrounding properties were (rightly) vociferous in demanding that the mathematics centre should not be overwhelming, and that it should respond sympathetically to its location. It has.

Cullinan's were appointed as architects in 1992, but fundraising, and distillation of the requirements of clients, planners and neighbours meant that the first phase of the Centre could not be started until 1998; the last phase was completed earlier this year. In essence, the plan consists of seven pavilions linked by a common centre. As well, there is a gatehouse and the circular Betty and Gordon Moore Science and Technology Library – the Centre is almost entirely funded by private donations, mostly from former students (reading maths at Cambridge seems to lead to a lucrative later life). Everything, including the perimeter car parking bays, is subtly brought together by Livingston Eyre's landscaping that knits into the bosky suburban setting.

The envelope of the pavilions was generated by those of the surrounding villas. Their separation as individual blocks was partly determined by a planning notion that the street edges should be maintained visually, while preserving views across the site and some notion of a parkland setting, for, of course, the field had seemed to be a park in the middle of the suburb. Breaking down the whole into discrete parts allowed the Centre to be built in phases to relate to the flow of funding (which turned out to be far faster than anticipated: the target was to collect funds over 20 years; it was achieved in 10).

MATHEMATICAL PARADOXES

Big, high-powered academic centre lands in west Cambridge suburb with scale and energy credentials.



1
Calm green place between the grey zinc roofs of individual pavilions. Beneath grass and glass block walk is main social space of centre.



Centre for Mathematical Sciences, Cambridge, UK
Architect
Edward Cullinan Architects



Just as important in determining the pavilion parti was the need to give scholars' cells a degree of individuality. Traditional Cambridge colleges, modelled on monastic cloisters, consist of courts surrounded by walls of individual rooms. The mathematical centre (which unlike the colleges is not residential) takes and subverts the archetype by surrounding the central space with independent blocks. Cells in each pavilion offer a range of divergent experiences and views, rather than the focused ones of the rooms surrounding the courts of the colleges. So the standard university 13.5 sq m office has a good deal of variation, with attic rooms, corner ones, and ones overlooking the central space or the green riches of the surrounding nineteenth-century context.

Six of the pavilions are, in effect, little scholastic towers made round the Cambridge tradition of the common academic stair (reputedly the source of innumerable serendipitous notions and relationships). Nowadays, each stair has been complemented with a lift, but the vertical circulation drums, partly toplit and enclosed by glass brick walls are luminous, far more than simple vertical circulation shafts. The seventh pavilion is double, and it terminates the complex to the west, containing in the middle the main lecture theatre in which speakers cover vast blackboards with (to the lay visitor) utterly incomprehensible hieroglyphics.

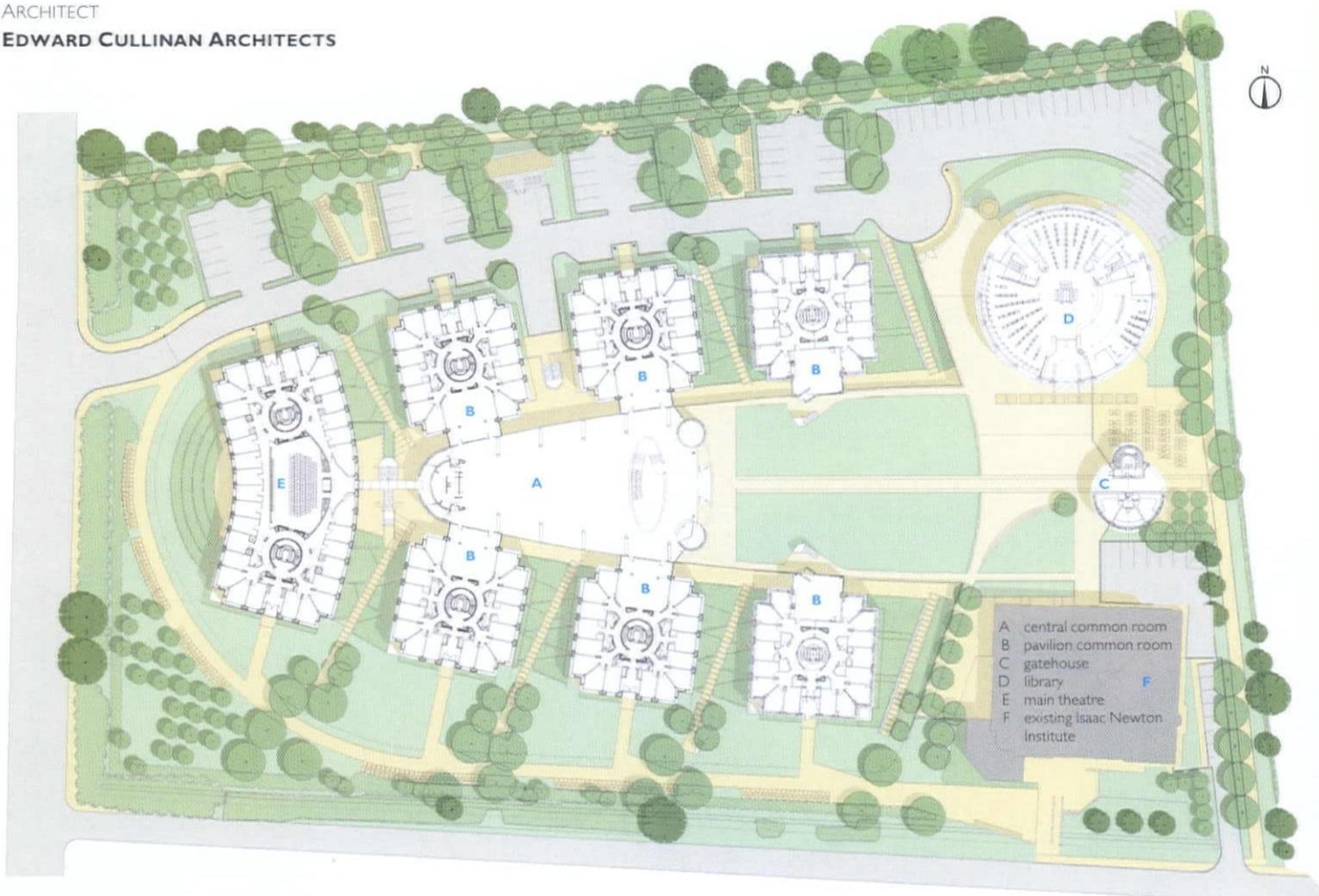
Each pavilion has a ground floor common room, where people can gather in groups or sit quietly chatting or reading journals. Four of the common rooms open into the main space of the Centre. This is a long low cave: a cafeteria, mess and the focus of the whole organization. Very slender and elegant precast concrete arches span the space to bear[2] on buttresses so massive that they provide alcoves off the big central space the social heart of the academic community. The fundamentally hangar-like volume is made genial, rather cheerful, with a slatted timber ceiling and a line of daylight that is brought down to the middle of the space through strips of glass blocks set in the apex of the curve.

Above, the glass blocks are the pavement of an inclined axial path that divides the curving grass-covered roof of the common room, over which look many of the studies in the surrounding towers. At the top of the gentle ramp, the towers cease to be tall, but become part of a general amiable formal conversation round the central green. When I was there on a sunny summer day, the court was already being used by students relaxing, studying and chatting: it works as it was intended to. From the highest part of the green, it is easy to see into the

CENTRE FOR MATHEMATICAL SCIENCES, CAMBRIDGE, UK

ARCHITECT

EDWARD CULLINAN ARCHITECTS



 plan at entrance level (scale approx 1:1700)



2
Battle fleet sailing in line astern?
3
Wide overhangs and shading devices, combined with mass, keep energy consumption low.
4
Circular library uses same geometry.

3



4



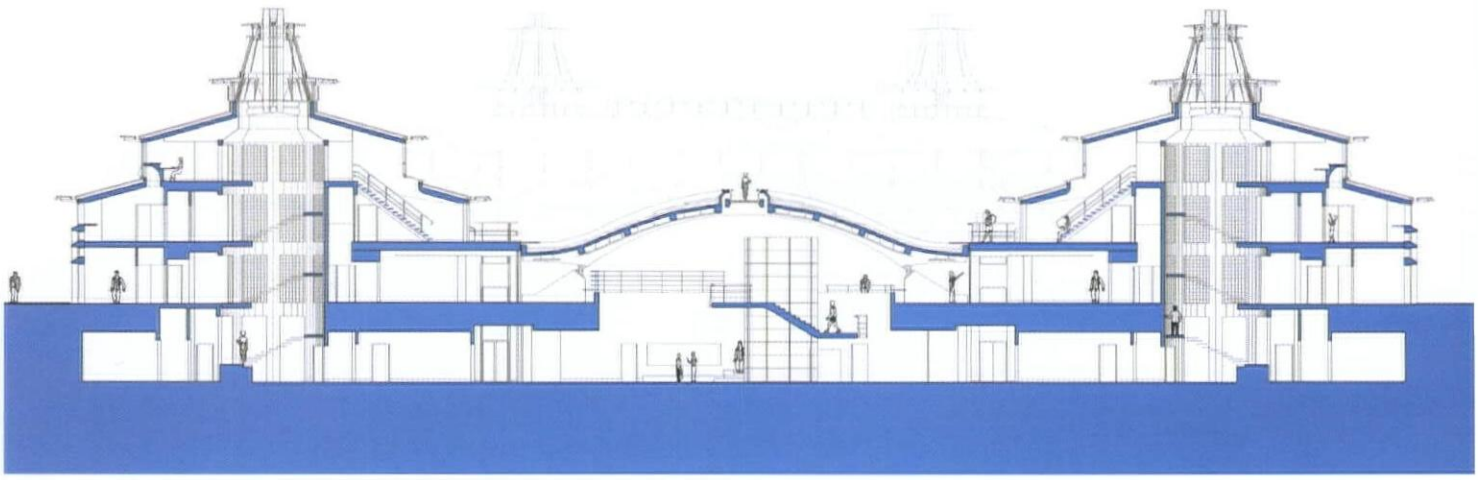
5

Centre for Mathematical Sciences, Cambridge, UK

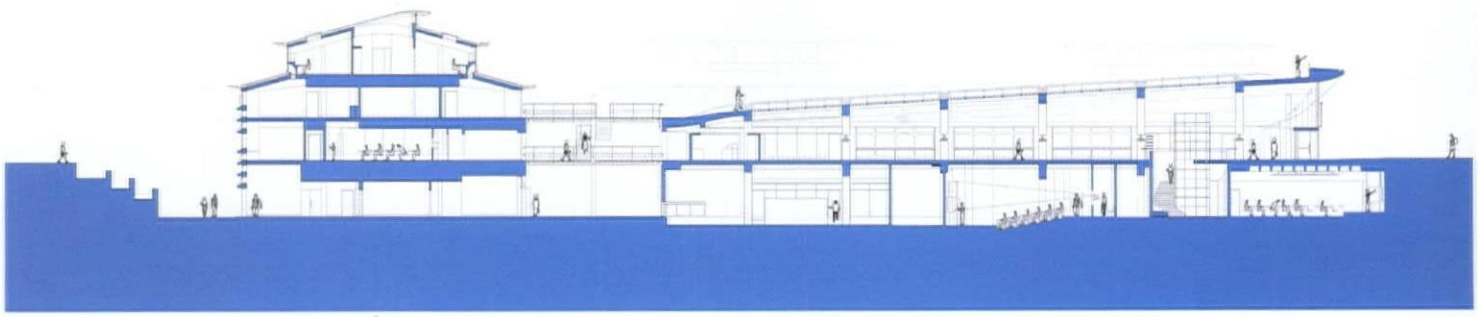
Architect

Edward Cullinan Architects

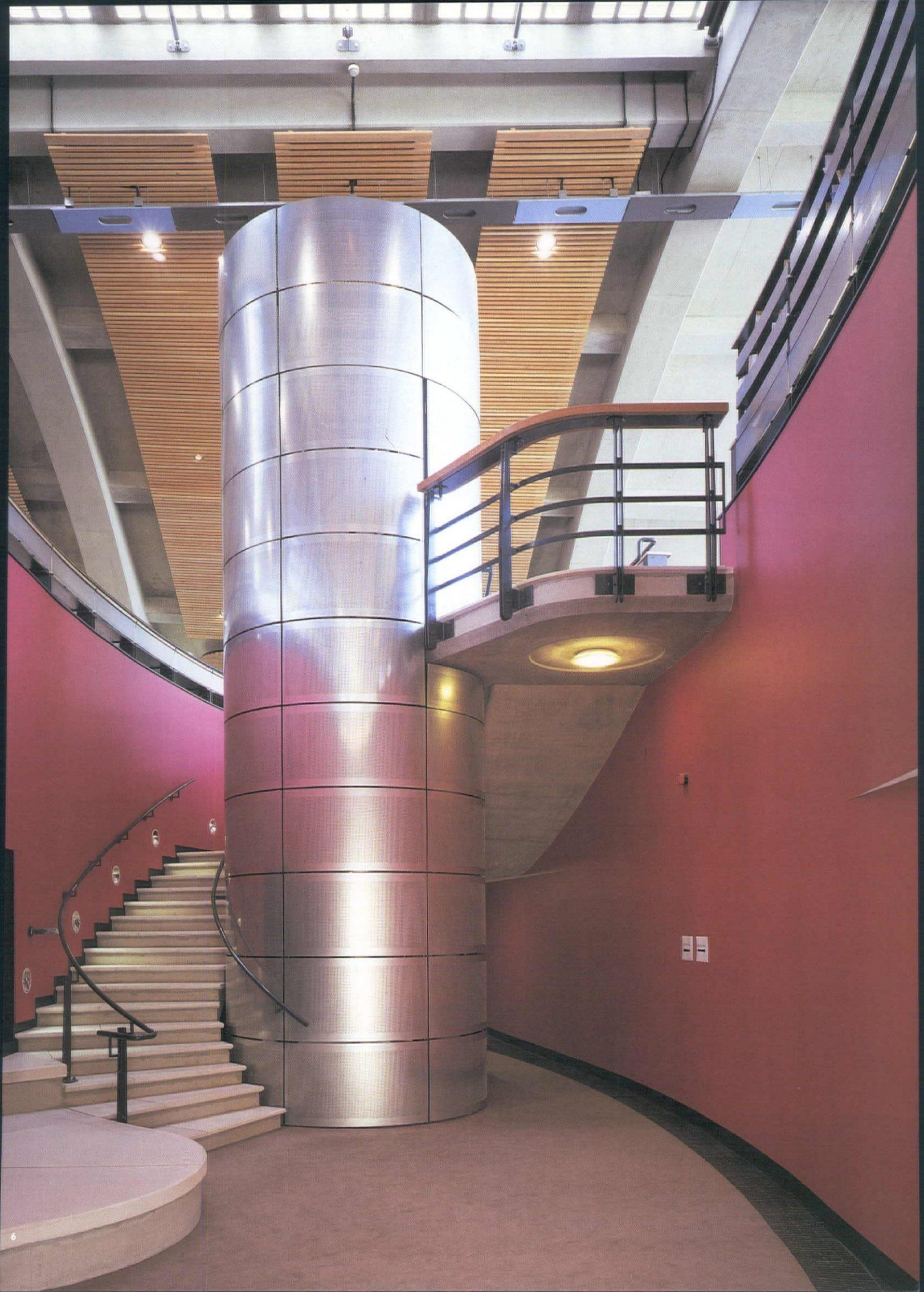
5
Great central space, with ...
6
... stair down to main lower lecture theatres.

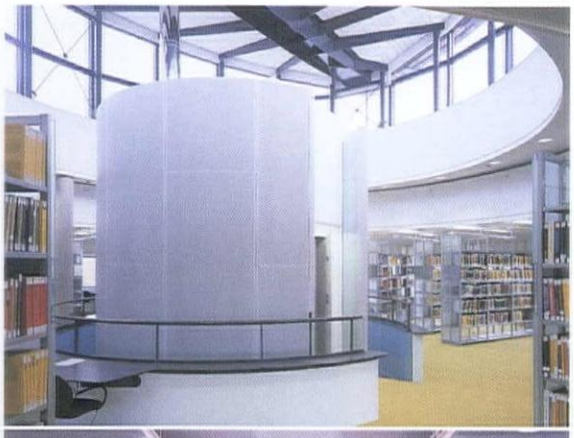


south-north section

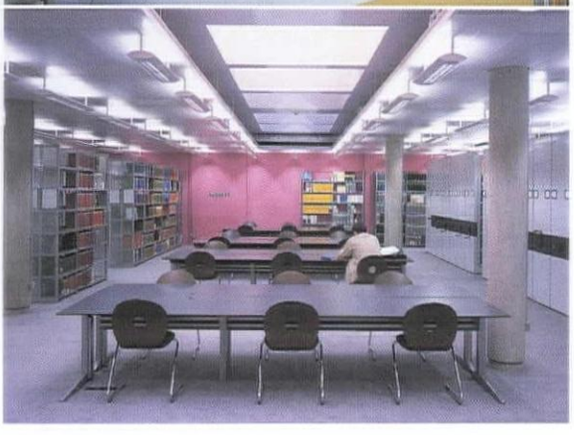


west-east section





7



8

surrounding rooms, and to understand the workings of the pavilions. Each of them is made of beautifully laid rough solid buff Cambridge-like brick with very precise precast concrete lintels and strings. Each is topped by an elaborate zinc roof with wide overhangs intended to reduce insolation. On top of each pyramid is a lantern that both brings light to the central stair of the pavilion and acts as a climate control mechanism.

Cullinan has experimented with climate control in lantern devices before, notably in the library for St John's College in the same university (AR April 1994). In essence, each lantern is a thermal chimney that allows every room in its pavilion to be naturally ventilated. The lanterns breathe with automatic systems for opening and closing vents. In the middle are stainless-steel flues that remove foul air from the lavatories and ventilate boilers and the fluid dynamics laboratory. With the thermal flywheel effect of the massive masonry walls and the recessed windows, the chimneys ensure that running costs (measured after occupation) are forty per cent lower than those of buildings of similar type and use. Soil for the grass over the common room adds to the thermal inertia of the whole.

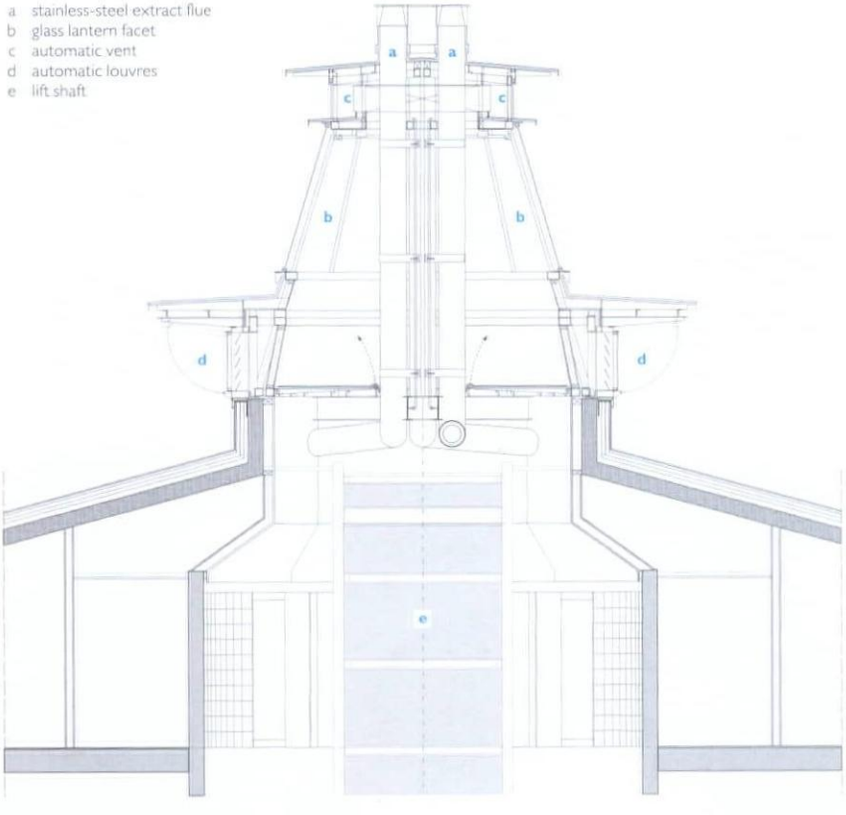
Leaving the green and going down out through the gatehouse, you turn back and look at the grey zinc roofs of what at first evokes a strange notion of the Grand Fleet with two squadrons of Dreadnoughts sailing in line astern to make a pincer movement on the Kriegsmarine. And you think again and remember the Salk, Louis Kahn's calm place in its idyllic desert-scented landscape that so peacefully overlooks the Pacific at La Jolla. The Centre for Mathematical Sciences has just as calm a heart, though it looks out onto the completely different verdant, moist gentle scene of west Cambridge. Yet at the same time, it almost aggressively evokes the awesome international power of a great academic institution. P. D.

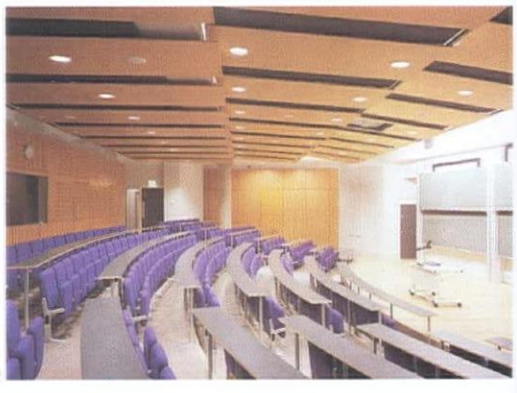
1 The Centre houses the University Faculty of Mathematics, which is divided into two departments: Applied Mathematics and Theoretical Physics, and Pure Mathematics and Mathematical Sciences.
2 Through clearly articulated stainless-steel pin joints.

CENTRE FOR MATHEMATICAL SCIENCES, CAMBRIDGE, UK

ARCHITECT
EDWARD CULLINAN ARCHITECTS

a stainless-steel extract flue
b glass lantern facet
c automatic vent
d automatic louvres
e lift shaft





9

Architect
Edward Cullinan Architects, London
Principal design team members
Dinah Bornat, Carol Costello, Ted Cullinan, Alison Farwell, Peter Inglis, Michael Kohn, Roddy Langmuir, Wen Quek, James Roach, Kristina Roszynski, Steven Western, Johnny Winter
Structural engineer
Buro Happold
Services engineer
Roger Preston & Partners
Landscape architect
Livingston Eyre Associates
Photographs
Peter MacKinven, VIEW

 section of lantern (scale approx 1:100)



', 8
Library: efficient but amiable.
)
Main theatre.
10
Each pavilion has central stair and lift.
Drum acts as ventilation shaft and
light provider.



1



2

COMPANY HEADQUARTERS,
OSLO, NORWAY
ARCHITECTS
NBBJ, HUS, PKA

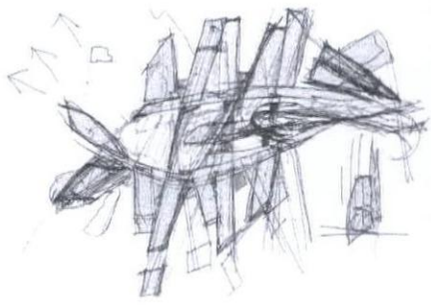
The most vibrant new community in Oslo may be an office complex – the Telenor headquarters – where 6000 people come together to work and socialize, indoors and out, in free-floating groups. On plan, the 138 000 sq m development (that's net; gross is 158 000 sq m) resembles a tree, with an elliptical piazza as the trunk, eight projecting wings as branches, and 30-person work pods as leaves. That image captures the organic quality of this bold steel and glass structure, and the shift of scale from expansive to intimate. Two 260m long arcs embrace the travertine-paved piazza; within, concourses link multi-level atria, the 200 work pods, shared meeting spaces, shops and cafeterias. On summer weekends, families stream through the piazza on their way to the beach. Abundant natural light and ventilation, frugal use of artificial lighting, and a net surplus on energy use, make the building a triumph of sustainability.

Telenor, the leading Norwegian telecommunications company, expanded rapidly as it was privatized over the past decade, and wanted to consolidate its 40 scattered offices. It was offered a site at Fornebu, the former airport on Oslo Fjord, which has been masterplanned as a residential community with high-tech plants. Telenor selected seven design teams to compete for the design of an 'office of the future'. It was to be an inspiring symbol of this cutting-edge company – open-plan, wireless, and paperless – where employees would interact freely, use work spaces as needed, singly or in constantly shifting combinations and communicate on laptops and cellular phones. The competition was won by a project team formed from NBBJ, the international Seattle-based firm, and two Norwegian offices, HUS and PKA. Peter Pran, a Norwegian-American architect who worked with Mies in Chicago and is now with NBBJ, was design principal.

Several hands contributed to the original concept, which remained unchanged, even as the details and materials were modified. Pran extols the four-year collaborative process of design and construction in which the tension between two cultures and three different firms, plus a visionary client and expert consultants, created an audacious, richly layered complex. It occupies the end of the main runway, which runs east-west towards the fjord, providing a poetic symbol for a company that brings people together, as the airport did in the previous century. It also serves as a platform from which the ground drops away on three sides, allowing the wings to step down into the landscape.

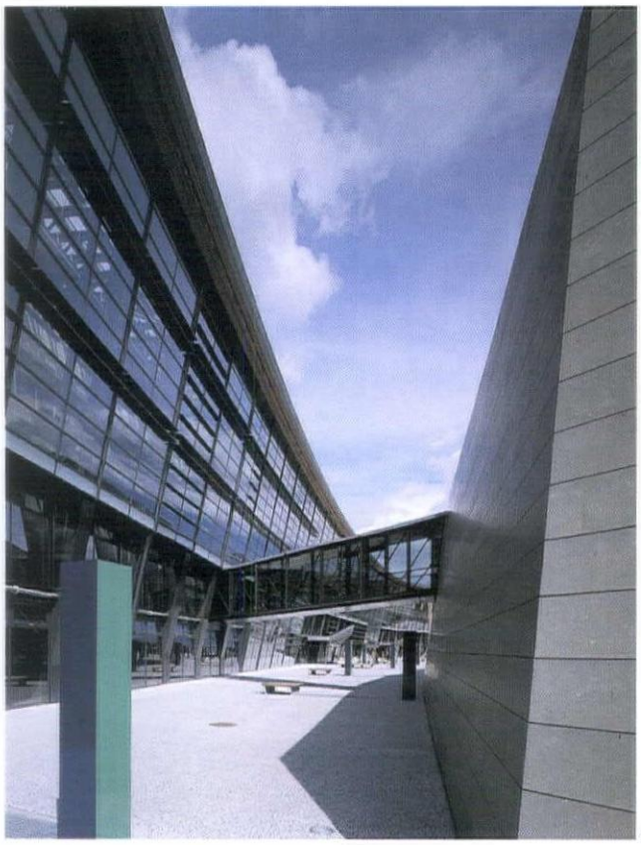
OFFICE OF THE FUTURE

This humane and environmentally responsive complex of work spaces for Norway's leading telecom company is an inspiring and enlightened vision of corporate life.



1
Office wings and work pods project into the landscape.
2
The eastern end of the complex, dominated by the angular prow of the customer centre.
3
Corporate informality and interaction in one of the dining spaces.





4

COMPANY HEADQUARTERS,
OSLO, NORWAY
ARCHITECTS
NBBJ, HUS, PKA

The principal facades front the piazza. The south arc rises three stories and is tilted back to draw in more light; the north arc is five stories high and tilted forward to cut glare. Two levels of parking are inserted below the piazza, though the 1750 places are rationed to encourage employees to commute by bus. A customer service centre and auditorium/classroom block punctuate the elliptical axis, which is half boulevard, half gathering space. Artworks by Jenny Holzer and Daniel Buren enliven the architecture.

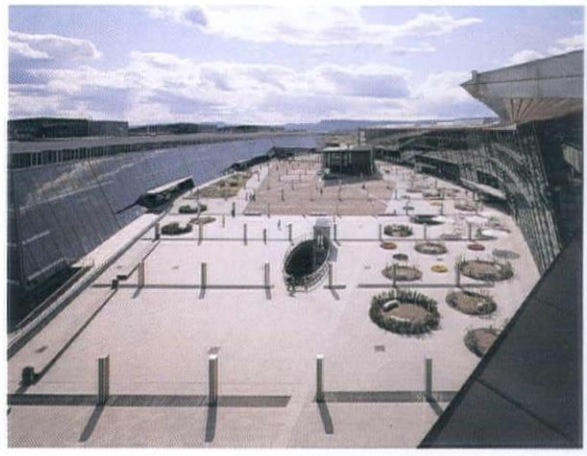
From afar, the fragmented perimeter of Telenor reads as a cluster of disparate structures rather than as a unified whole, and a lack of signage leaves first-time visitors searching for a point of entry. Project leader Scott Wyatt characterizes this as a 'typically Norwegian sense of understatement', but it's perplexing that so huge a structure should be hidden in plain view. It's the inevitable consequence of designing from the inside out and candidly expressing the product of that strategy.

Each of the eight wings has a separate entrance, though one has been leased to another company during the economic downturn that has compelled Telenor to trim its staff. You enter at a middle level, looking up and down into a glass-roofed atrium used both for vertical circulation and as a winter garden in the months when the piazza is covered with snow. The vertiginous drama of these skylit volumes might accommodate an open sushi bar or a meeting room enclosed by walls of poured concrete. Exhilaration, not awe, is the dominant feeling, as you gaze up at the sky or out to the fjord.

The programme called for 6000 workstations for 7500 employees: a generous allowance, since this is a virtual office in which employees are grouped by division but move freely within each pair of wings, using workstations as needed, but conducting much of their business on the move in casual encounters, sitting at a café table, or even at the beach. The pods can be reconfigured in two hours by a crew installing or demounting partitions on a 2.4m module to create a group work space or 30 separate workstations. Each pod has its own service and meeting areas and is largely autonomous. The Norwegian mandate that no one may work a full day more than 9m from natural light dictated the 15.6m width of the pods.



site plan



5

4
A glazed bridge links the north and south sides of the complex, via the learning centre.
5
The elliptical piazza, enclosed by the office wings.
6
North facade is tilted forward to reduce glare.
7
On fine days, the piazza is a social space; local residents also have access to the complex.



6



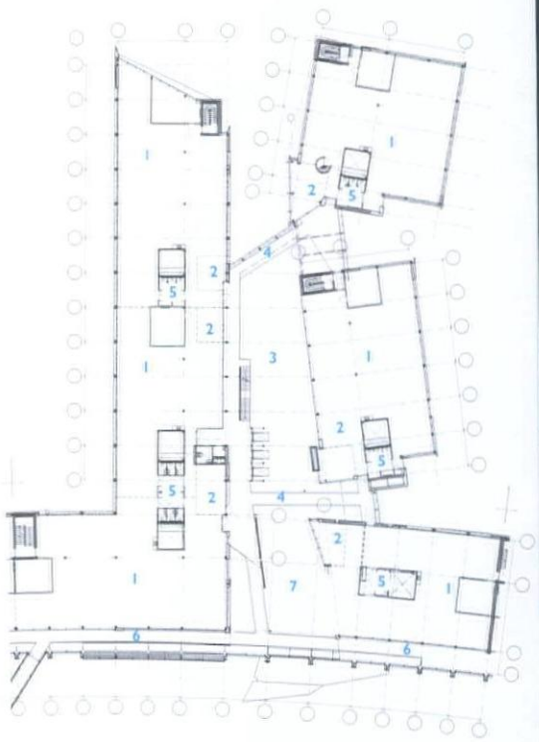
7

8
Vertiginous drama in one of the atria
9
Circulation spine on the north wing.
10, 11
Expansive views connect the huge complex with both the natural landscape and the man-made piazza.



1 main reception
2 offices
3 atrium
4 reception
5 learning centre
6 cafetena
7 fitness centre
8 Telenor shop
9 kiosk
10 customer centre
11 visitor parking
12 service road
13 access to parking
14 service yard
15 Villa Harelokken
16 piazza

piazza level plan (scale approx 1:5000)



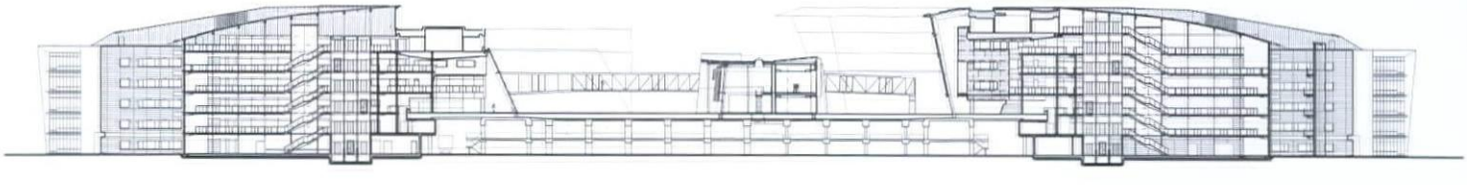
1 offices
2 meeting rooms
3 atrium
4 bridges
5 wc
6 boulevard spine
7 reception

typical office and atrium plan (scale approx 1:1000)

COMPANY HEADQUARTERS, OSLO, NORWAY

ARCHITECTS

NBBJ, HUS, PKA



cross section through piazza looking west



8



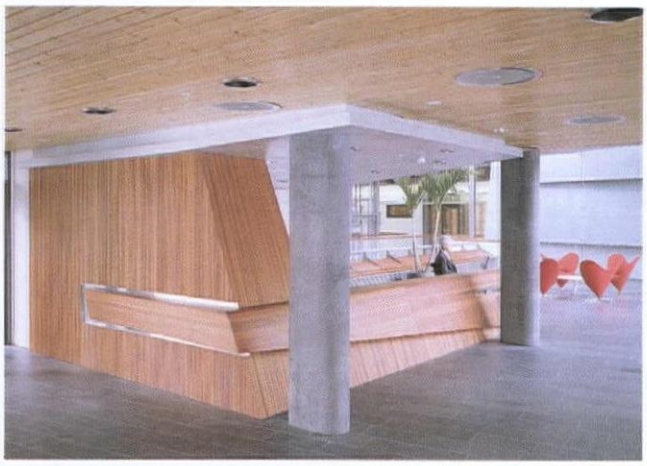
10



9



11



12



13

In a cold climate, heating is taken for granted, but protection from tl brief summer is something of a novelty. Much of the floor-to-ceiling glass the architects proposed in work areas as a way of connecting the interiors to the landscape was eliminated as an economy, but als because of the client's concern about heat build-up. Woven syntheti blinds installed behind frosted glass rain screens are computer-activated to cut glare. A convection system substitutes for air conditioning. Cool water is circulated through ventilation ducts, creating chilled ceilings that draw up hot air, and warmed water is re cooled by a heat-exchange system.

In winter, sea water is electrically heated and the steam is compressed as high-pressure vapour circulated through radiators. Lighting ('barely one light bulb per employee', according to management) and internal climate are controlled by a centralized energy management system, but staff can make minor adjustments with a few strokes on their keyboards. Construction costs were estimated at $400 million (£250 million) before the drop of the dollar against European currencies, which translates into a surprisingly low figure of $2000 (£1250) per square metre for offices, mechanical and parking areas.

The American half of the design team absorbed the spirit of place before the project began, and the client provided staff with 3D simulations of the new offices to avert unpleasant surprises. The outcome of this meticulous preparation and daring leaps into the unknown is a structure and spatial organization of great originality; a glimpse of the future that is bound to exercise a persuasive influence on other forward-looking corporations. The overwhelmingly positiv response from Telenor staff, the reduction in operating costs and increase in productivity are all evidence of the project's success.

MICHAEL WEB

COMPANY HEADQUARTERS, OSLO, NORWAY

ARCHITECTS

NBBJ, HUS, PKA

12
One of the reception areas.
13
Informal meeting space.

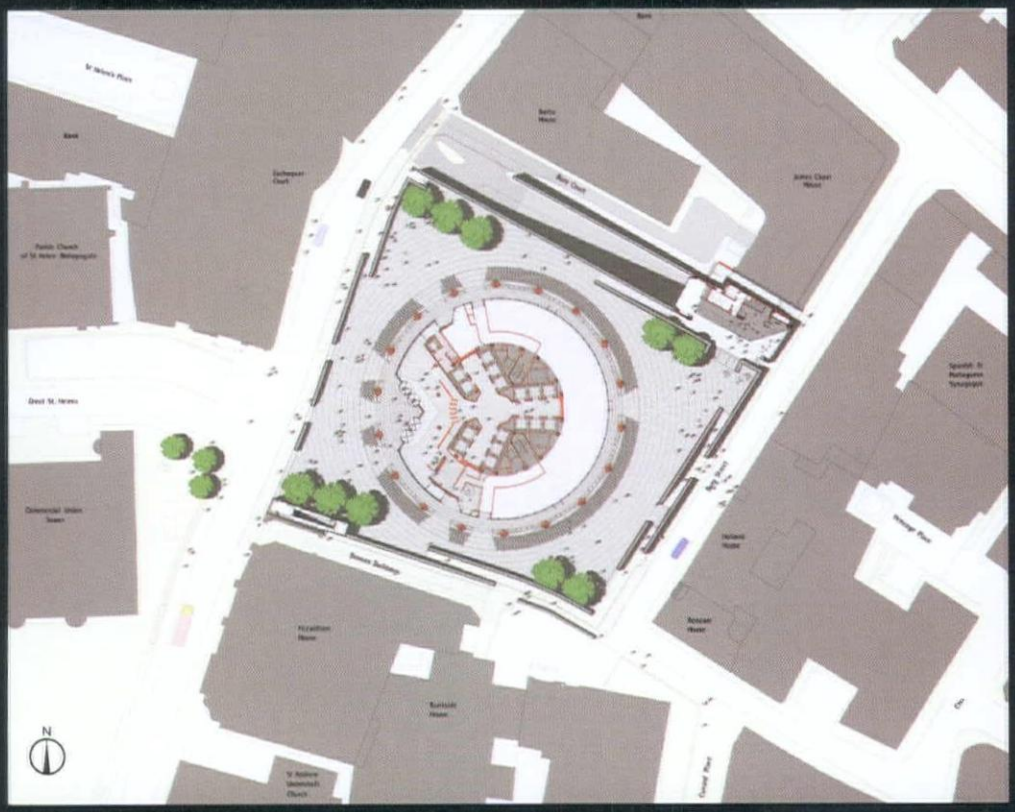
Architects
NBBJ, HUS, PKA
Project team
Peter Pran, Jan Storing, Jonathan Ward, Jin Ah Park, William J. Nichols, Thomas J. Morton, Erik Lind, Bjorn C. Sorum, Annema Selstrom, Christian Sundby
Structural engineer
Scandiaconsult
Mechanical engineer
Techno Consult
Landscape consultants
Asplan Viak, Hang Kjaerem
Interior architect
Spor Dark Design
Lighting
Vesa Honkonen, Julle Oksanen
Photographs
Christian Richters



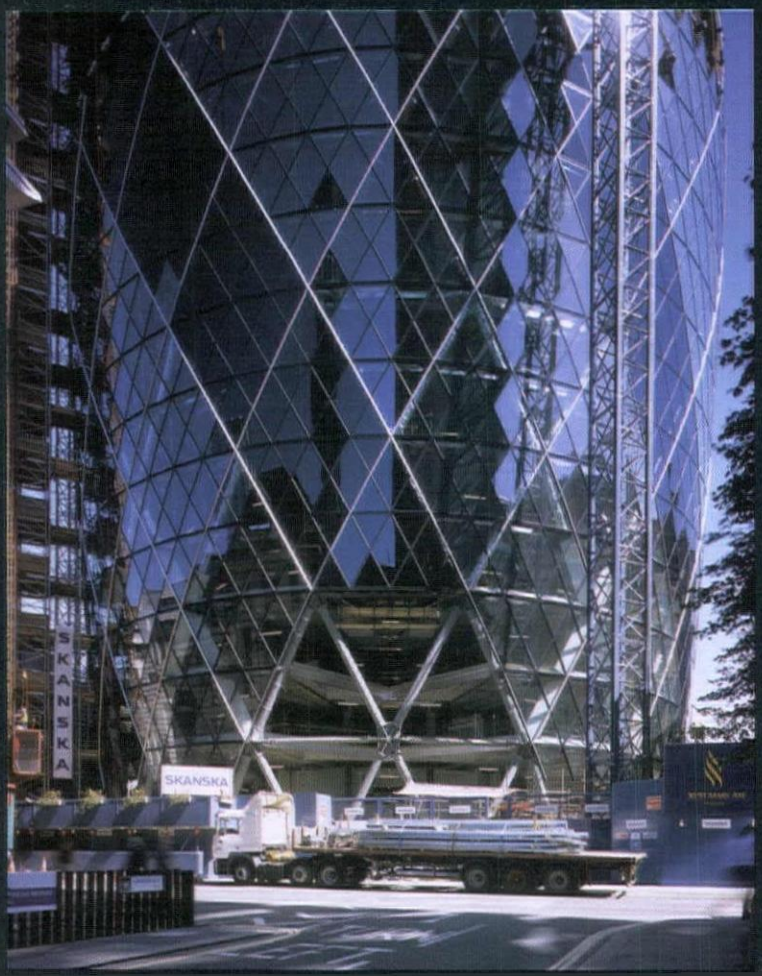
section through south facade



section through north facade



Against the grain; by occupying less than half of the site at ground level, the scheme seeks to optimize the amount of public space (scale approx 1:1500)



3

Axe is designed to be lettable on the open market. But it is unlike the norm, where architectural design effort focuses predominantly on the outermost six inches of the facade. With St Mary Axe, structure, form and fabric have been integrated, and Foster and Partners have produced one of the City's first large-scale office buildings which genuinely has the capacity to be passively ventilated.

The building's distinctive pattern is a direct reflection of its internal organization and its environmental strategy, where six orthogonal fingers of flexible office space are punctuated by radial atria: a series of two and six storey voids that spiral around the building, increasing perimeter desk space, and bringing light and air deep within the heart of the building's circular envelope.

In cladding the tower, Fosters were able to continue their innovative relationship with German cladding contractor Schmidlin, with whom they collaborated on London's City Hall (AR August 2002). Through parametric modelling techniques, deriving the critical co-ordinates of each panel mathematically rather than relying on traditional drawing techniques, Foster and Schmidlin demonstrate that material and component efficiency no longer rely on monotonous repetition. With emerging production line methods, where units are fabricated from palettes containing bar-coded precision cut components, it is no longer the case that incremental variations send costs through the roof. In this case, with the cladding geometry changing at every level as the floor plates increase from the 50m wide first floor to 57m on level 17, before diminishing to the 25m wide private dining room at the summit, an economic solution was reached. Within the principal diagrid established by the 36 steel columns that spiral around building (which form an independent self-bracing structure), each floor level is broken down into 72 five-degree modules. Within this subdivision

OFFICES, LONDON
ARCHITECT
FOSTER AND PARTNERS

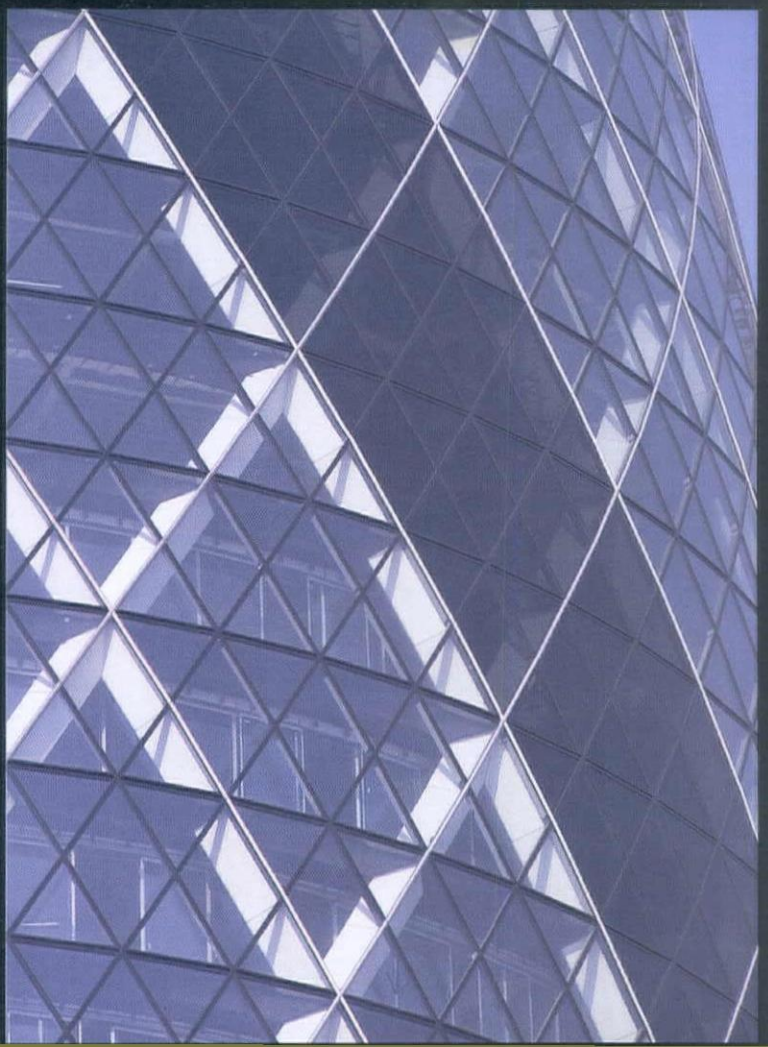


Wind sock

The integration of structure, form and fabric creates London's first environmentally progressive skyscraper.

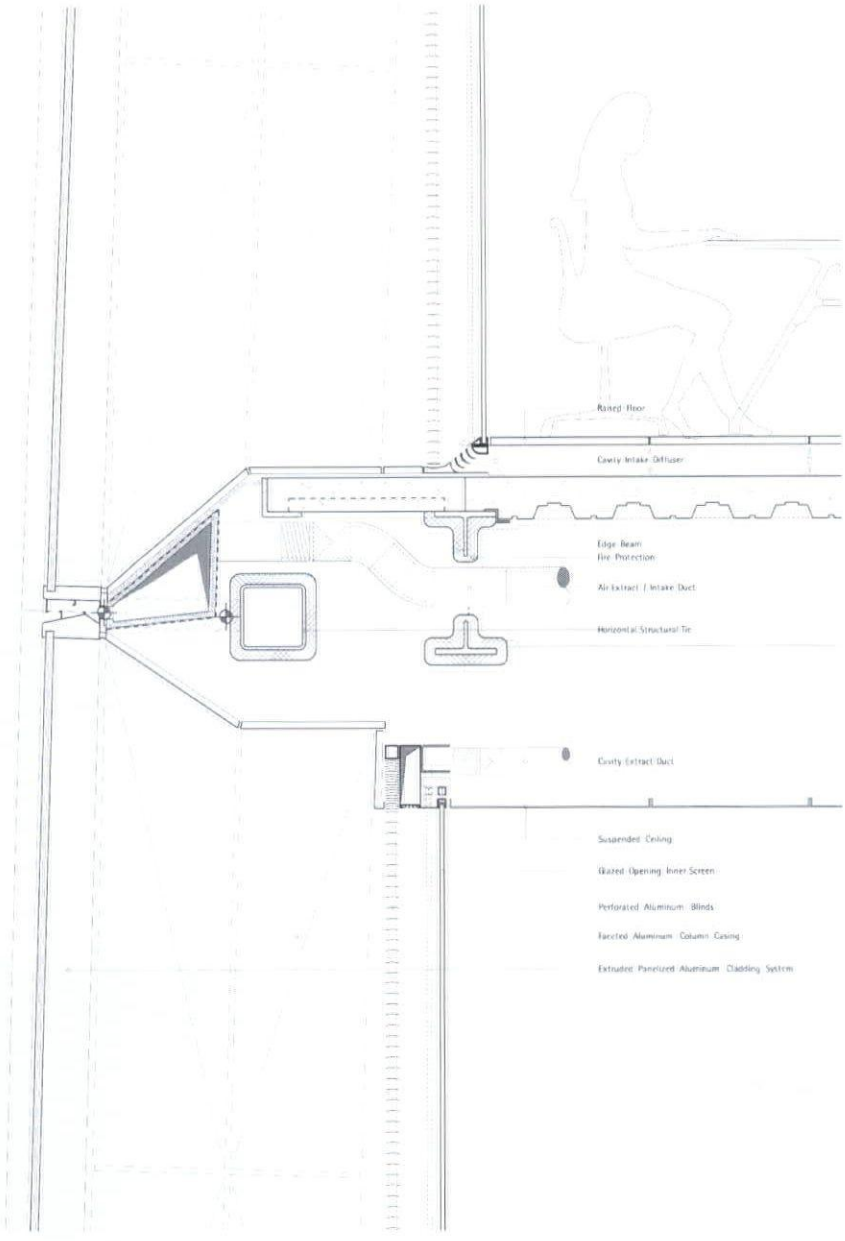
While Charles Jencks may state that big is boring in his theory that measures design tedium against floor areas (AR August 2002), it cannot be denied that Foster and Partners' 30 St Mary Axe is an impressive sight. Regardless of whether or not you agree with Jencks' proposition (which states that for every additional ten floors added to a skyscraper, the design becomes twice as tedious), as the first truly sky-scraping tower built in the City since 1979, this building cannot be accused of being a monotonous skin-deep icon. Clearly visible from far afield, most impressively perhaps from the M11 as you approach London from Cambridge, the more people you speak to, the more you realize that this is becoming one of London's more popular landmarks. While acquiring many nicknames, being likened to a fat banker in fish nets to the slightly more fitting city attire analogy, namely an Argyle sock, Foster and Swiss Re's environmental aspirations have been delightfully interwoven with its form (regardless of whether or not you believe the pursuit of these priorities preceded the form's rationalization).

As essentially a commercial office development, 30 St Mary

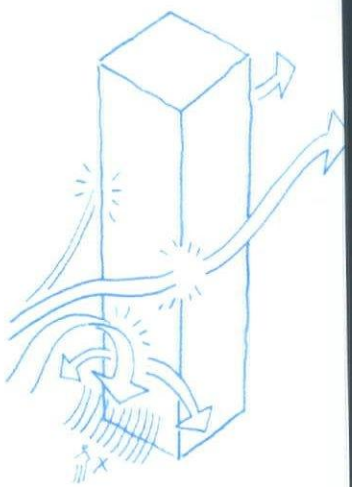


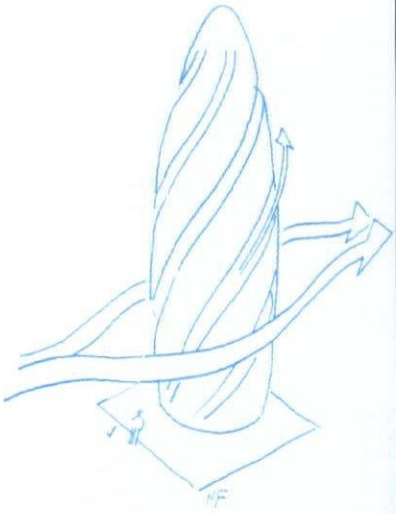
A new skyscape: at 180m high, 30 St Mary Axe is now a familiar sight on London's skyline ...

... with a distinctive pattern expressing spatial and environmental order within.



section through folded diamond cladding unit (scale approx 1:30)



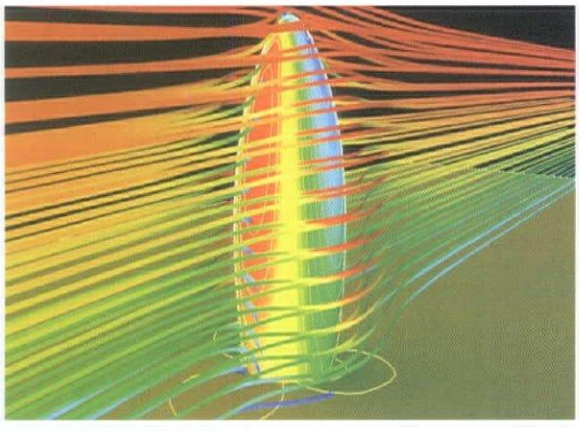


the curved form, it is argued, will minimize wind loads, maintain pedestrian comfort, and assist the internal ventilation strategy

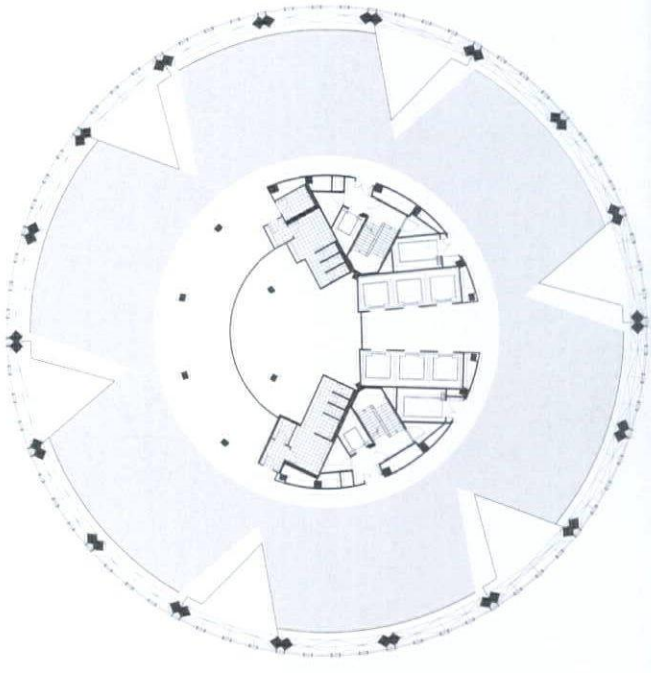
OFFICES, LONDON

ARCHITECT

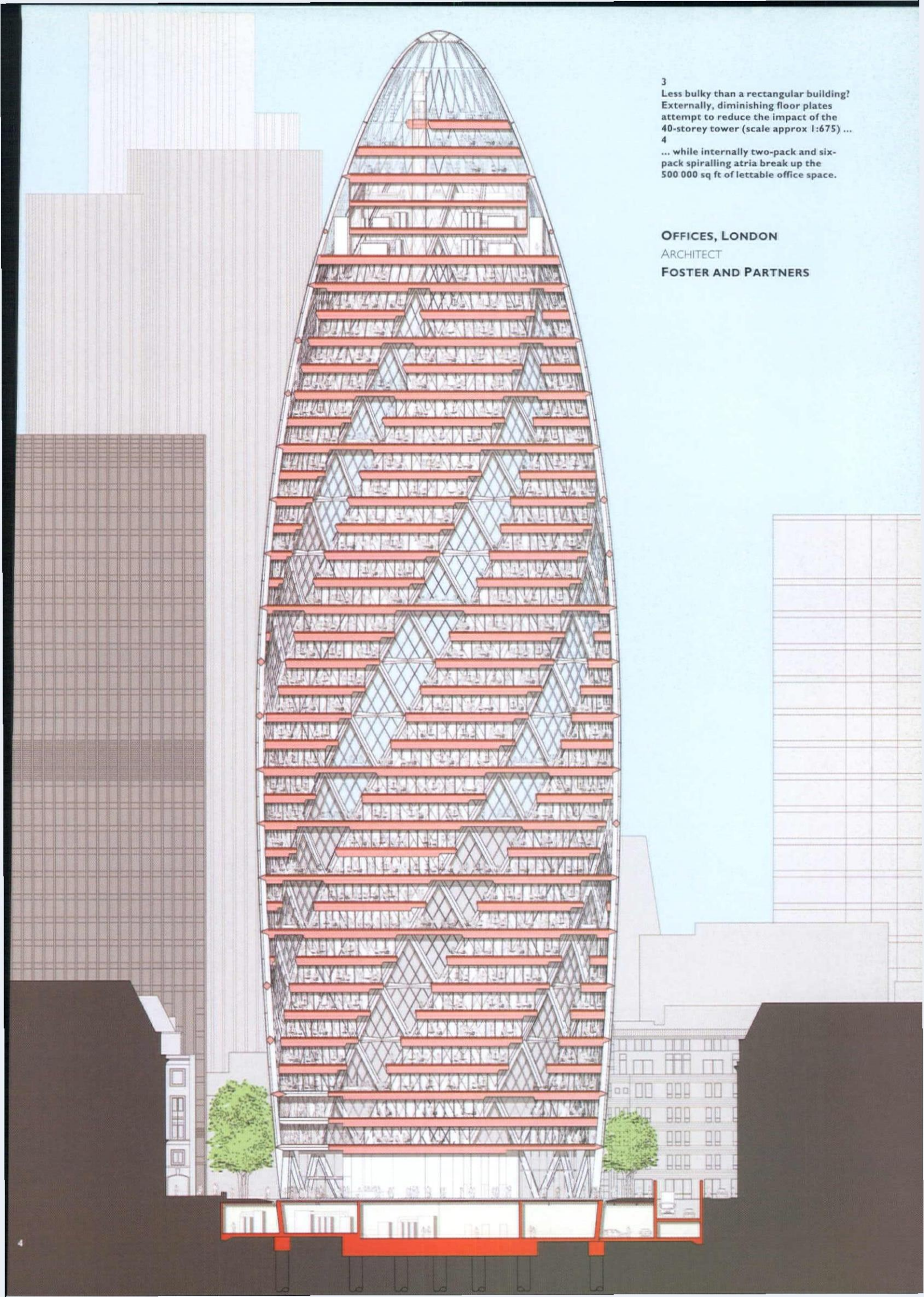
FOSTER AND PARTNERS



5



typical office floor plan



3
Less bulky than a rectangular building? Externally, diminishing floor plates attempt to reduce the impact of the 40-storey tower (scale approx 1:675) ...
4
... while internally two-pack and six-pack spiralling atria break up the 500 000 sq ft of lettable office space.

OFFICES, LONDON

ARCHITECT

FOSTER AND PARTNERS

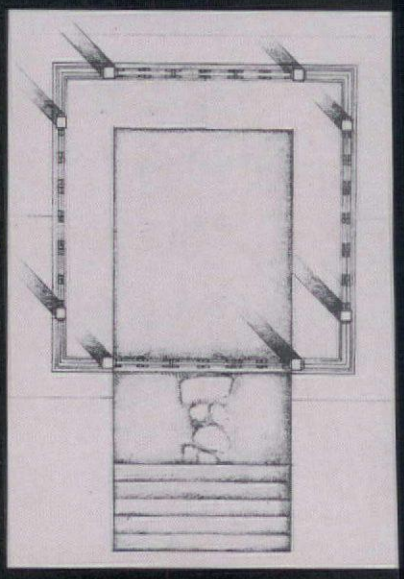
The Commonwealth Association of Architects triennial student competition was judged earlier this year in Bloemfontein, South Africa. A record of 222 entries from all over the British Commonwealth offered great range and variety. Jury chairman Peter Davey reports.

The jury* was impressed by the range and variety of the 222 submissions from all over the world which were entered for the competition to design a house for a writer. The number of entries was a record. Most students had thought very carefully about site and climatic conditions, local culture and principles of sustainability. Almost all entrants had carefully considered the needs and character of the author for whom they had decided to work, and most showed an interest in literature unusual in a notoriously ill-read profession.

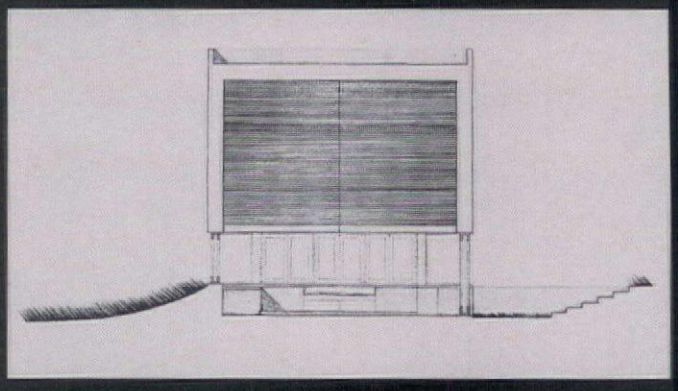
As a jury, we were (in the end) unanimous in our choice of the first, second and third prizes, and in selection of the best submission from a student in the first or second years. Honorary mentions have been made of entries to which we were unable to give a prize, though they were impressive and often inventive. All prize-winning and mentioned projects are, in very different ways, examples of placemaking and attempts to live in harmony with the planet. Shown here are all the premiated schemes with the jury's comments.

* Phillip Kungu (Commonwealth Association of Architects President, Kenya)
Patrick Stanigar (architect, Jamaica)
Mira Fassler-Kamstra (architect, South Africa)
Peter Davey (jury chairman and Editor of The Architectural Review, United Kingdom)

Commonwealth Association of Architects student competition



plan



section through entrance

First prize (£1200): Henry Williams, fourth year, University of Adelaide, Australia

The project is executed with great simplicity and clarity. It has an extraordinary sensitive relationship to its site, rolling downland studded with tress. Sensuous links between writer and the surrounding grassland were very carefully considered, with the house partly dug into the slope, so that desk and grass seem to grow together. It would undoubtedly be a calm and tranquil place to work in.

The work is very well detailed and beautifully drawn, so the textures and almost the smell of the materials are forcibly projected from the boards. It is always difficult to present the spatial, luminous and tectonic qualities of a minimalist design on paper in two dimensions yet the entrant has managed to do so admirably.

First prize



6



7

5
Wind models by BDSP demonstrate pressure gradients around the tower's distinctive curved form.
6, 7
With just two variant units per floor, cladding panels slot together with millimetre perfect accuracy.

the envelope on each level is then formed by just two variant diamond-shaped units; a flat unit that spans between floor plates, and a folded unit formed by two triangular panels, which neatly incorporate a floor plenum air intake slot.

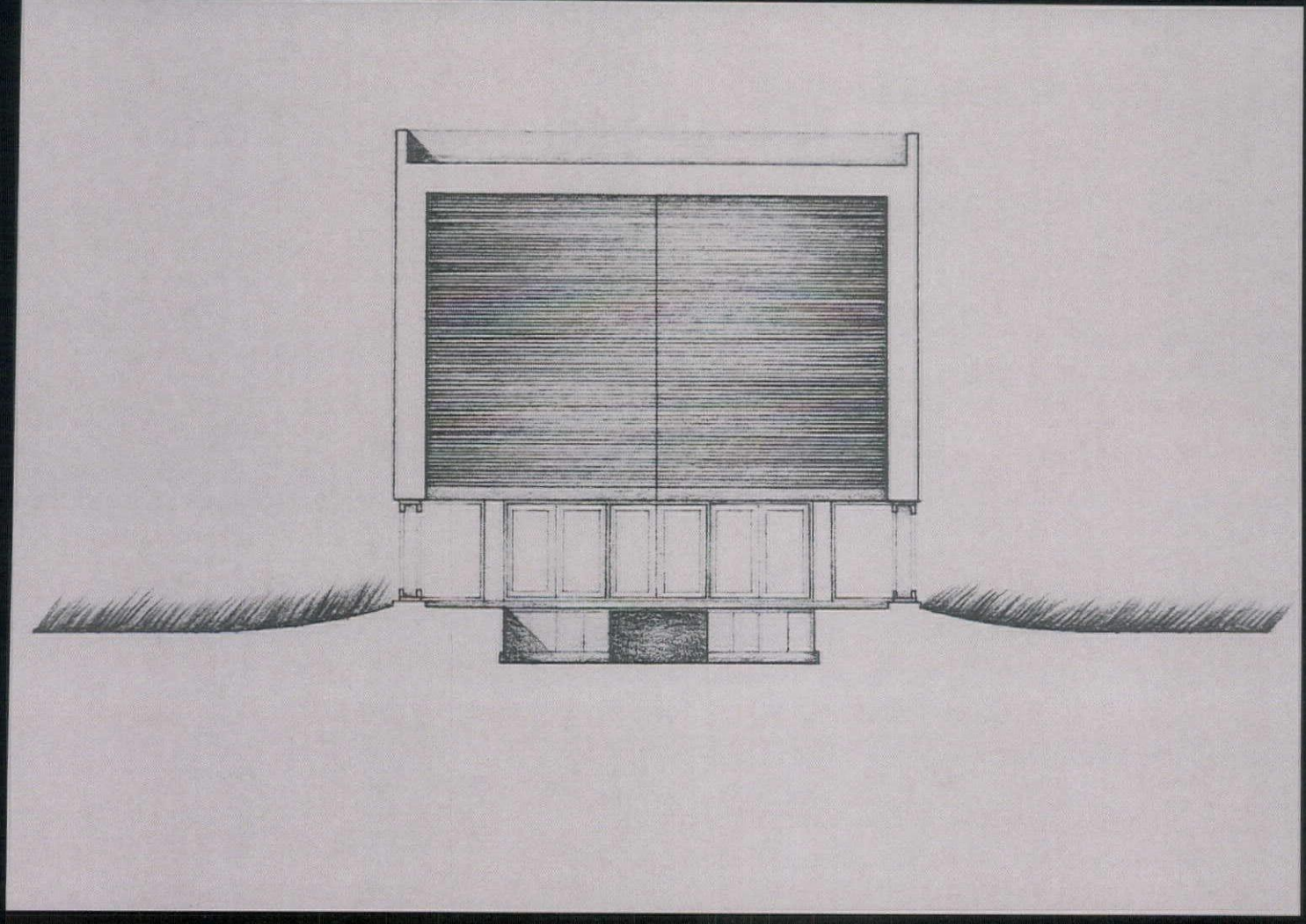
Unlike County Hall, however, St Mary Axe does not have an axis, and therefore has no north/south condition to respond to. So, environmentally the building had the inherent problem of a circular plan, in that the facade could not be orientation specific if a single cladding system is wrapped around all 360 degrees. The challenge was therefore to develop a solution which while working in all orientations would maintain a uniform external appearance.

The architect's response was to break the facade into its component parts, allowing each environmental control component to operate at its optimum performance when and where required. Instead of a high performance glass system throughout, the workspaces are glazed using standard clear low-E units, with a responsive retractable layer of blinds and secondary glazing that could be deployed internally. Conversely, the atria breathe through a clutter-free single skin incorporating opening lights, which has a high performance solar control glass that does all of the work all of the time. While clearly there is a degree of redundancy, as the solar control glass has little benefit on the northern section of the facade, visual continuity had to be prioritized. Clear glass within the workspaces exploits views and increases daylight levels, while the double skin forms a thermal cavity, within which, when deployed, blinds reduce glare, stop sunlight reaching the inner skin, and also assist air recirculation.

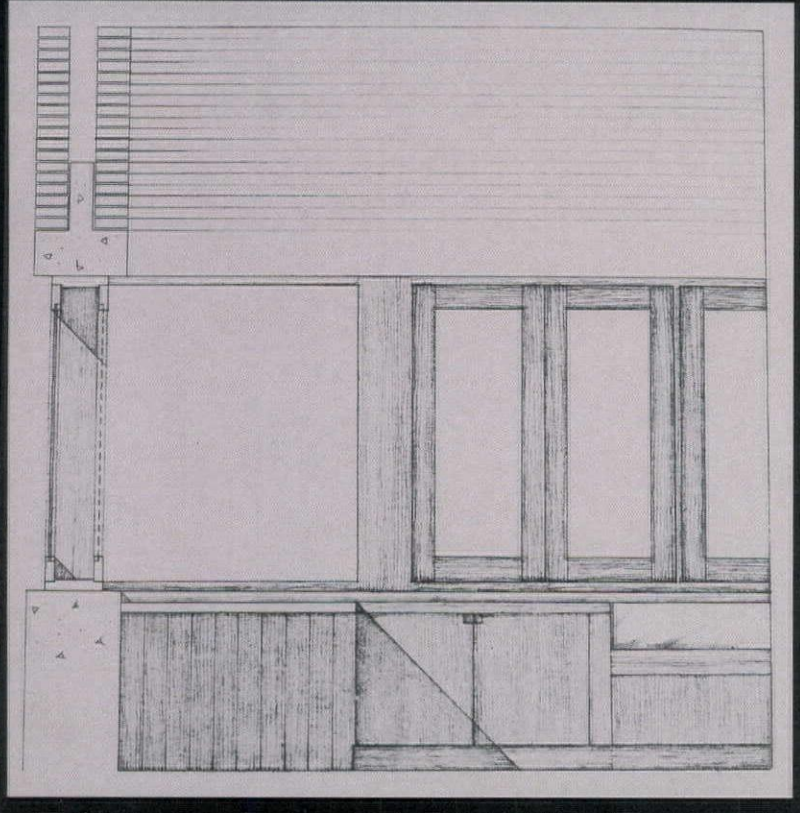
While for commercial reasons the building had to offer a base condition of mechanical ventilation, with provision made for ducting routes etc, it is hoped that tenants will choose to naturally ventilate their spaces. The natural ventilation mode was a significant driver in refining the building's form and skin, and following extensive CFD and wind-tunnel modelling it has been proved that, as the atria cut across the high and low pressure zones created by the curved form, a pressure gradient is created that will improve cross ventilation between two-pack atria, and boost the natural buoyancy of the stack effect through the six packs. As a result it is anticipated that the building could be naturally ventilated for at least 40 per cent of the year, setting the standard for other commercial developments to surpass.

ROB GREGORY

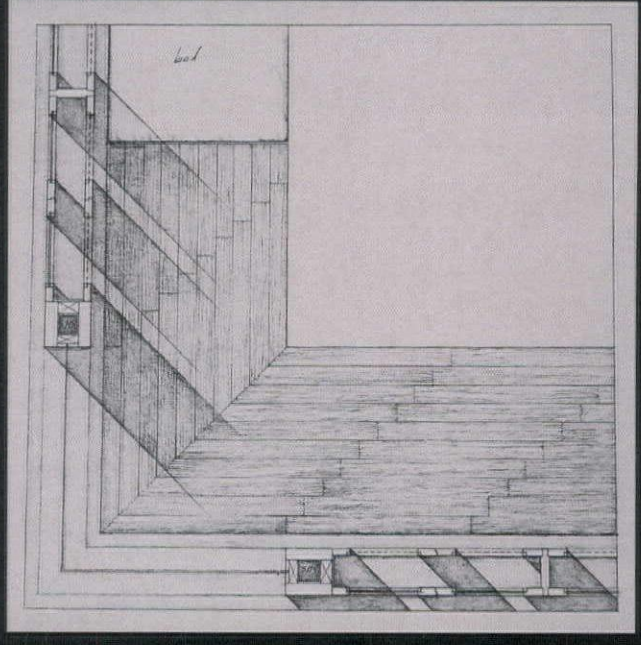
Architect
Foster and Partners, London
Structural engineers
Arup
Environmental engineers
BDSP Partnership
Mechanical and electrical engineers
Hilson Moran Partnership
Photographs
Nigel Young
Skyline view (no 1)
Smoothe



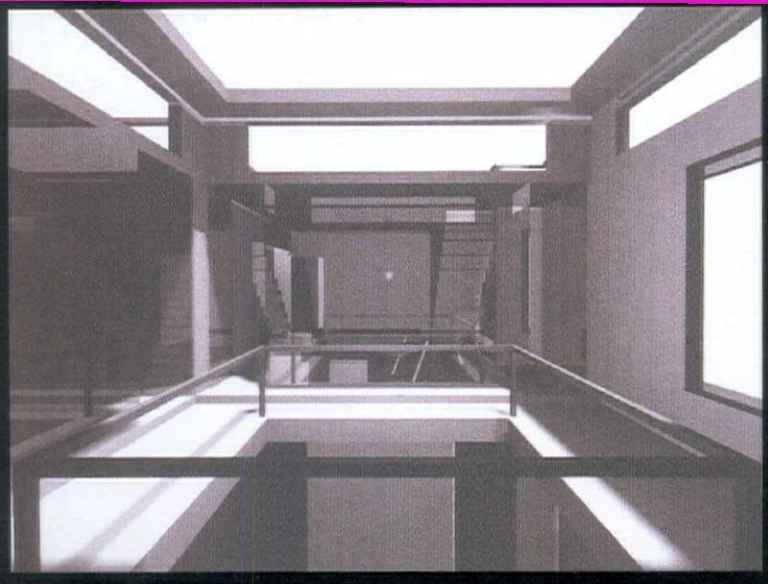
desk and grass seem to grow together



sectional detail



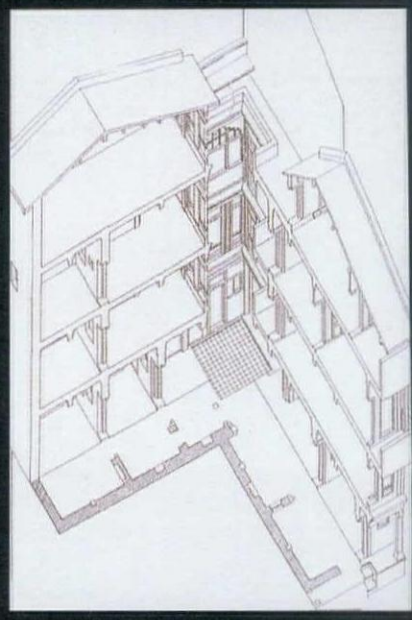
plan detail showing essential steel structure



flat on top of chowk



section through chowl



chowk axonometric

Second prize

Second prize (£500) and group work prize (£200): Ujjval Panchal + Sachin Soni, fifth year, School of Architecture CEPT Ahmedabad, India

In contrast to the rural setting of the first prize-winning project (and indeed the majority of entries), the authors of the second prize-winning scheme chose to reinterpret the dense texture of old Ahmedabad. The scheme takes its form from the traditional tenement, illuminated and ventilated by chowks: light wells penetrating the mass of the building.

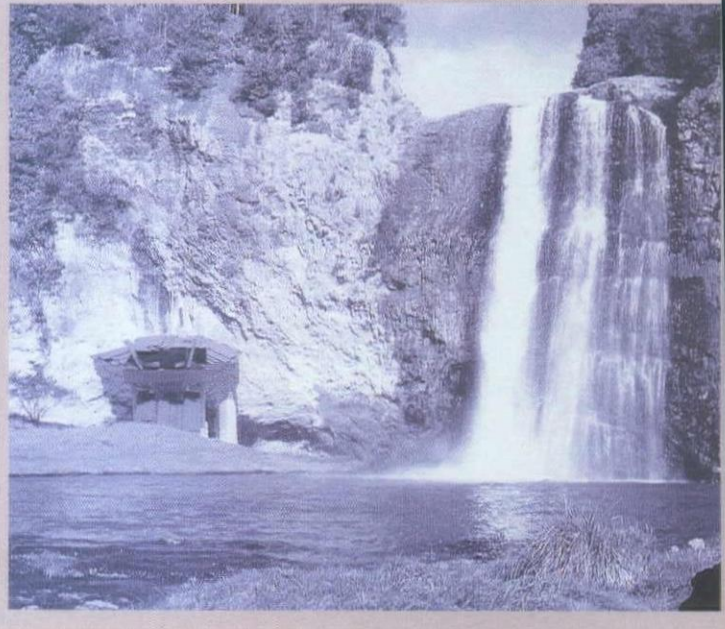
The jury was convinced by the excellent arguments for the design, and by the way in which the chowk of the tenement had become the focus of the new work, which shows sequences of space and light that are both appropriate to tradition and the city, and to the calm and quiet a writer needs. Some jury members were worried by the relative lack of technical and environmental information about the design.

Commended scheme

Prize for entrant in first or second year (£200): Stephen Lammas, second year, Unitech School of Architecture, Auckland, New Zealand

The affinity of this project to its magnificent site was thought by the jury to be exceptional. The brief was clearly and economically interpreted. Yet the design is far from minimalist, and it would undoubtedly provide a series of small but very varied and stimulating spaces for an active and fit writer.

Jury members were impressed in general by the number and quality of entries from first and second year students, so this prize was won against stiff competition.



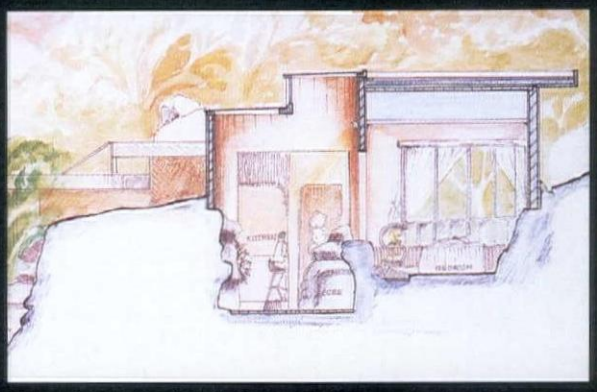
the amazing natural site

Third prize

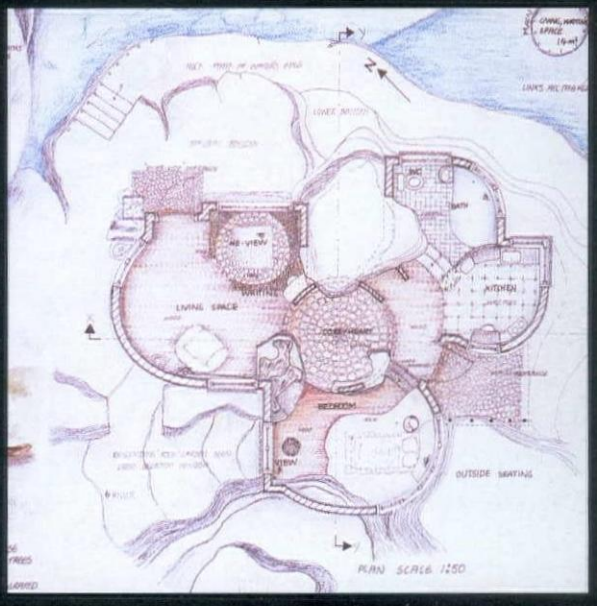
Third prize (£200): Vongai P. P. Pasirayi, third year, National University of Science and Technology, Bulawayo, Zimbabwe

The jury was impressed by the spatial and luminous qualities of the third prize-winning project. It offers both comfort and calm, and a great experiential range within a small compass. Relationships of interior spaces to the beautiful site were particularly well considered. The brief was carefully and inventively interpreted.

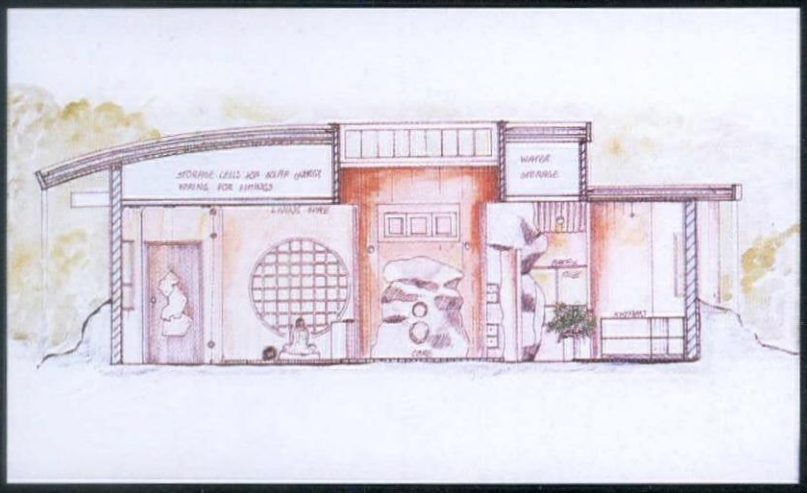
But some jury members had reservations about the external appearance of the house which, they thought, seemed naïve and clumsy. Nevertheless, the house would undoubtedly create a real and stimulating sense of place.



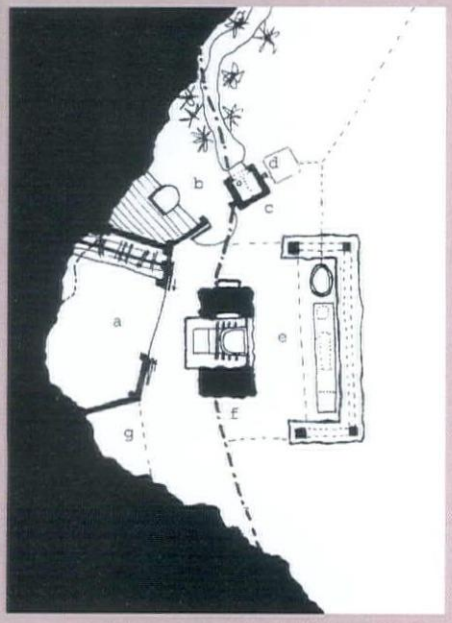
cross section



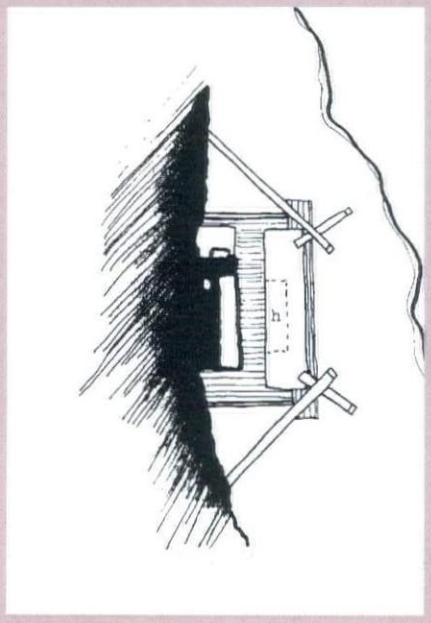
plan



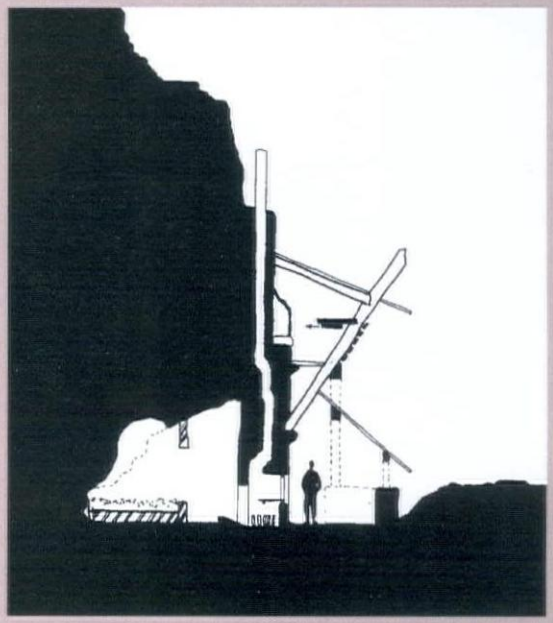
long section



lower level plan



upper level plan



section

Moscow nights

An exuberant interior, of solid wood, transforms a dull PoMo night-club in Moscow.

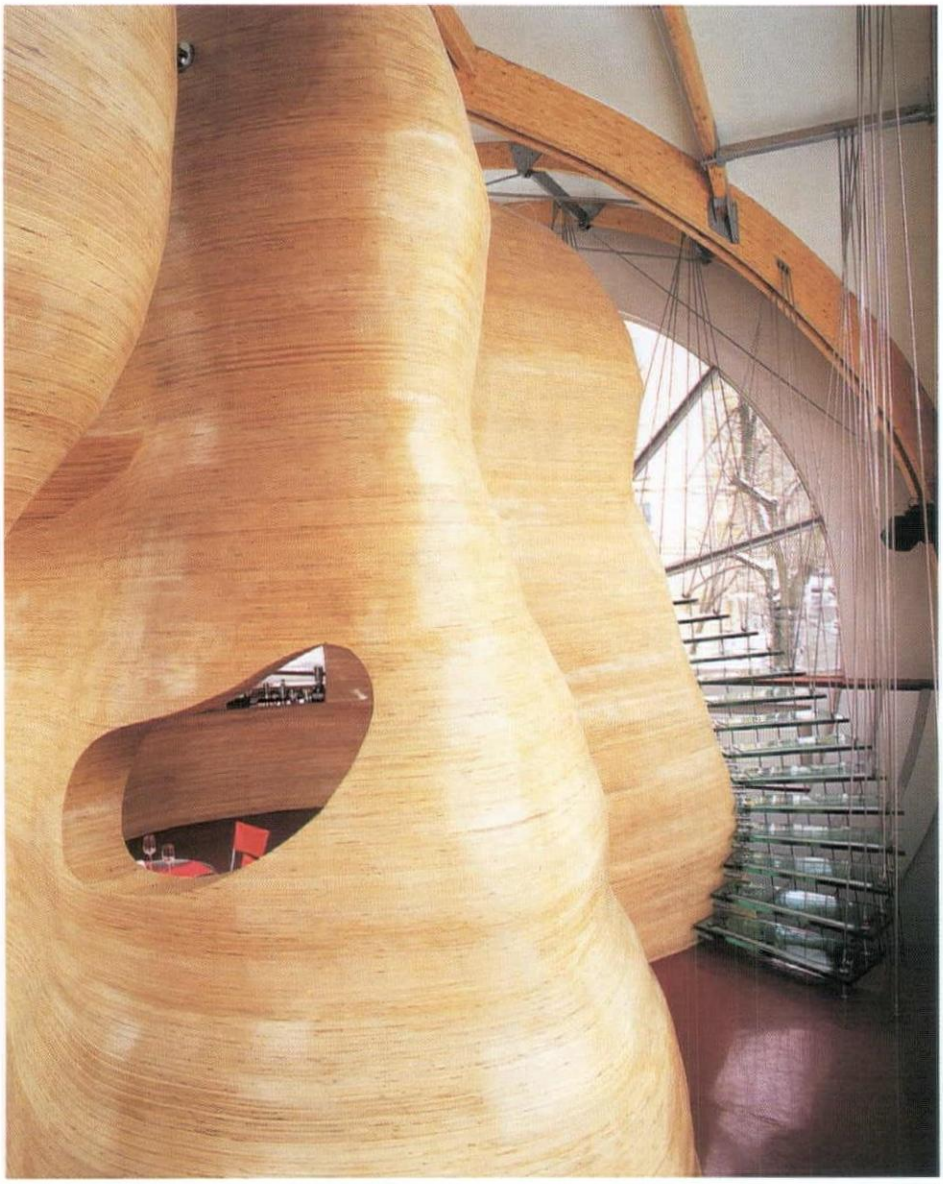
CLUB, MOSCOW, RUSSIAN FEDERATION
ARCHITECTS
VLADIMIR KUZMIN AND VLADISLAV SAVINKIN

The Cocon-Club has one of the weirdest interiors in Moscow, which is saying quite a lot these days, when you can find the most strange, disgusting and wild places in the world there. In a mid '90s PoMo building, the Cocon, a great three-storey artefact, writhes and bulges to accommodate warm, comforting spaces that provide a sense of security and calm in what can often be a very alarming city.

Once past the dumb exterior, you are welcomed by a huge mass of blond timber that seems to have been gnawed out of solid wood by a strange termite partnership between Aalto and Gehry, with Antonio Gaudí hovering somewhere overhead. The volume is generated from comparatively simple plan diagrams, in which circles nuzzle each other to form mythic shell- or womb-like spaces.

Architects Vladimir Kuzmin and Vladislav Savinkin decided to carve the internal volumes out of wood rather than plastic or plaster because of wood's relative ease of working and its empathic qualities. First, they built a one to ten scale model: a large object, which allowed them to work out the nuances of the form, and its spaces and lighting. Then, its shapes and apertures were formed by multiplying the computer-assisted design drawings by 10 to make templates for cutting out layers of thick plywood that were imposed one above another. The final, almost slippery smooth form, was achieved with an amazing amount of hard work with planes, rasps and sandpaper – Russia still has an economy in which fine hand labour can be afforded on a large scale.

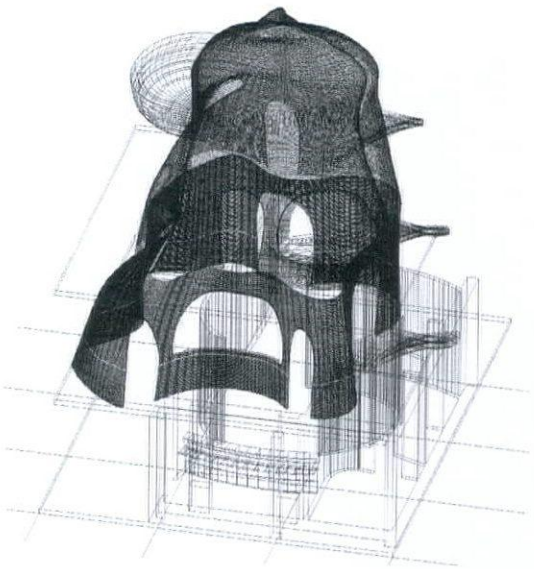
Ironically, the labourers are scarcely likely to be able to afford the prices charged by the Cocon-Club, but their efforts have



1
Glass stair joins three levels of existing building and winds round timber organs.
2
Conventional PoMo orthogonal interior completely transformed.



3

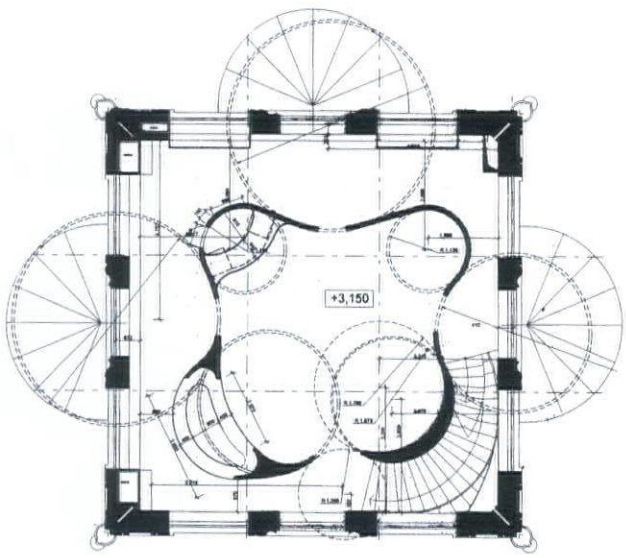


computer model of form

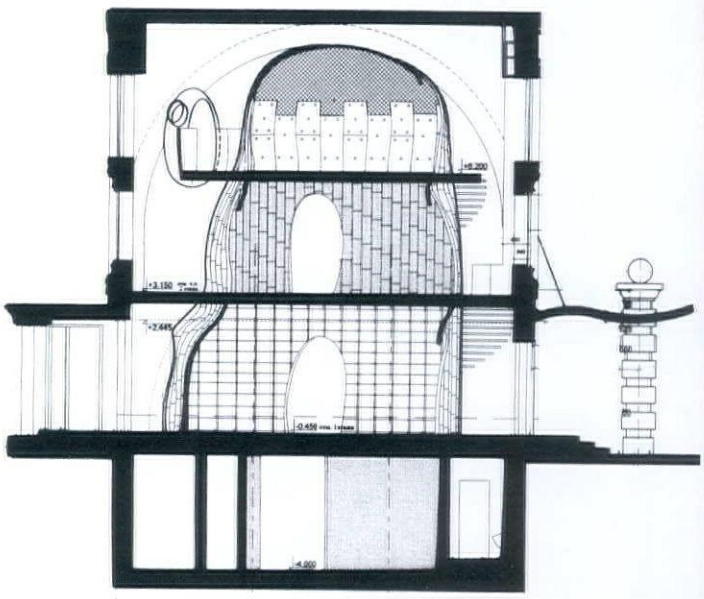
CLUB, MOSCOW, RUSSIAN FEDERATION

ARCHITECTS

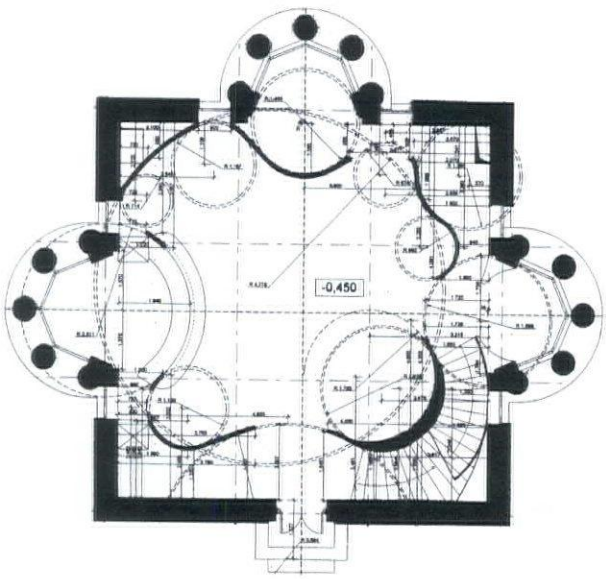
VLADIMIR KUZMIN AND VLADISLAV SAVINKIN



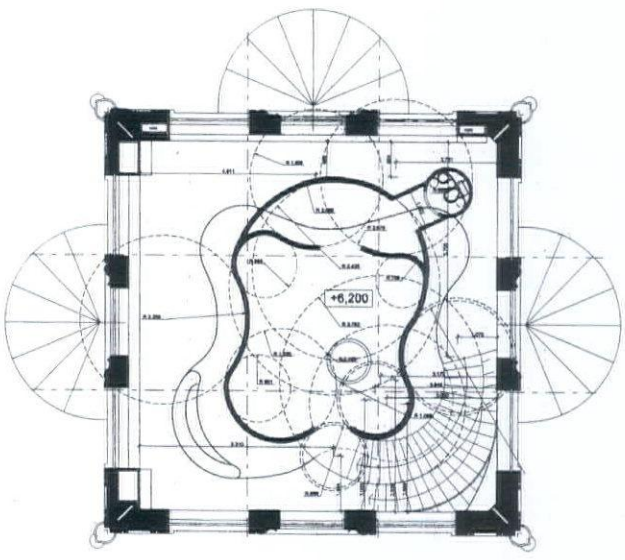
first floor



section through entrance

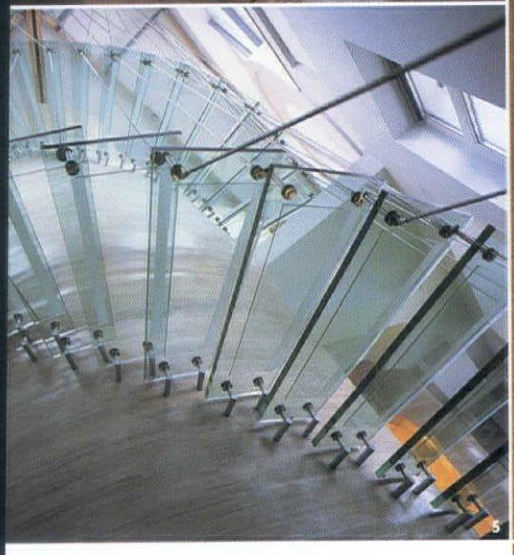


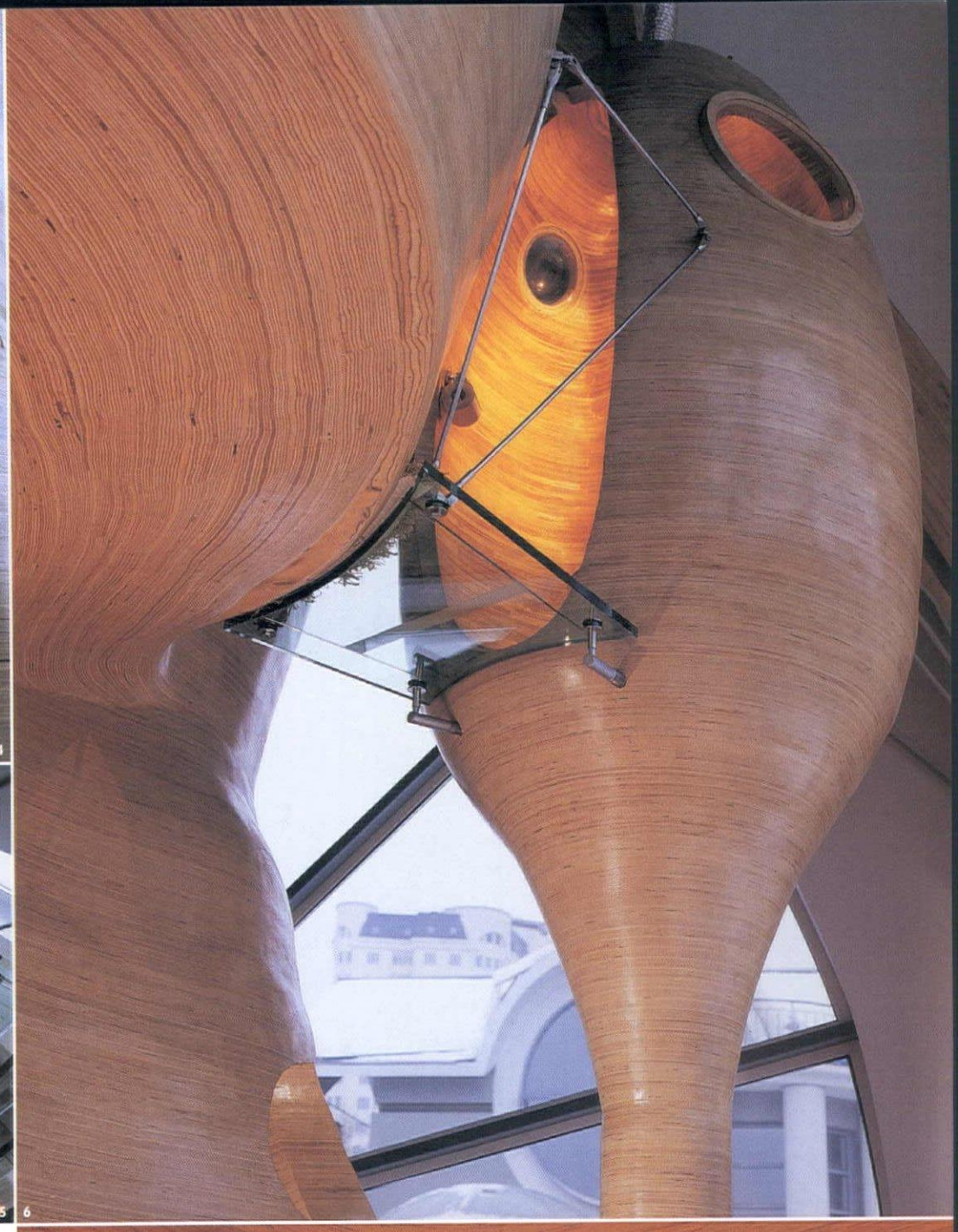
entrance level (scale approx 1:180)



second floor



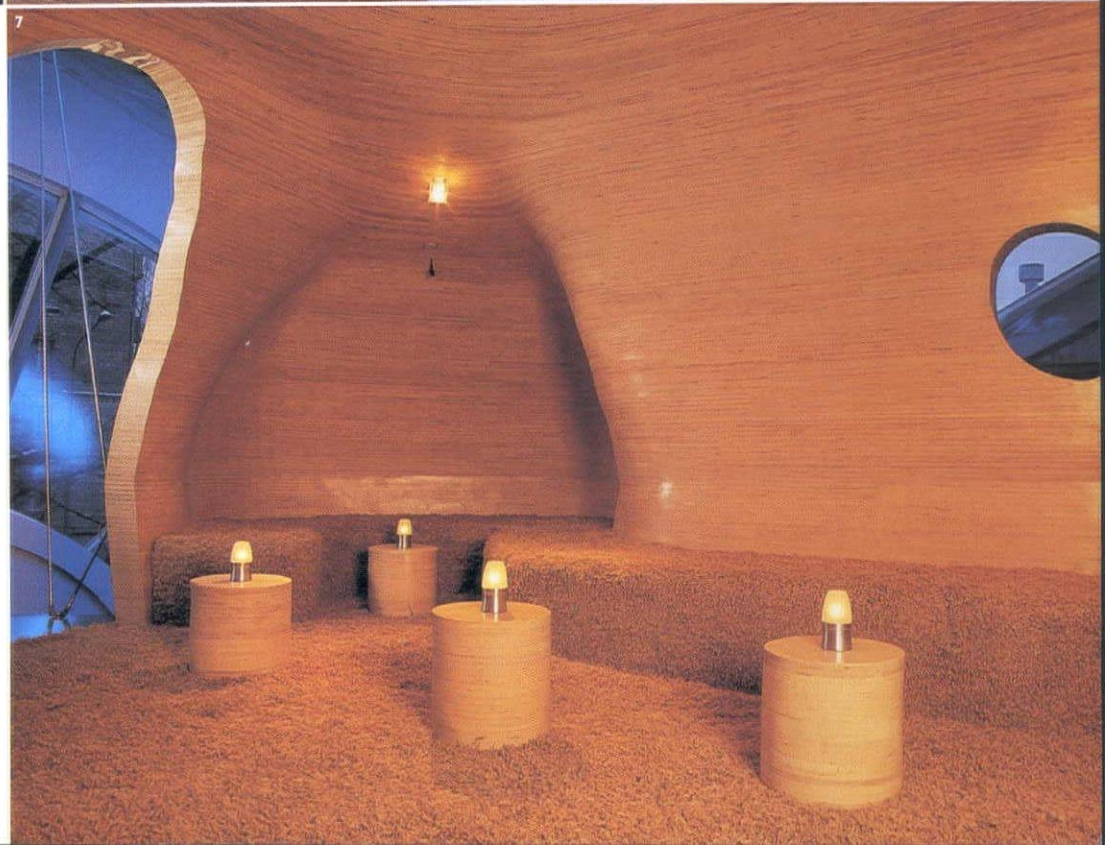


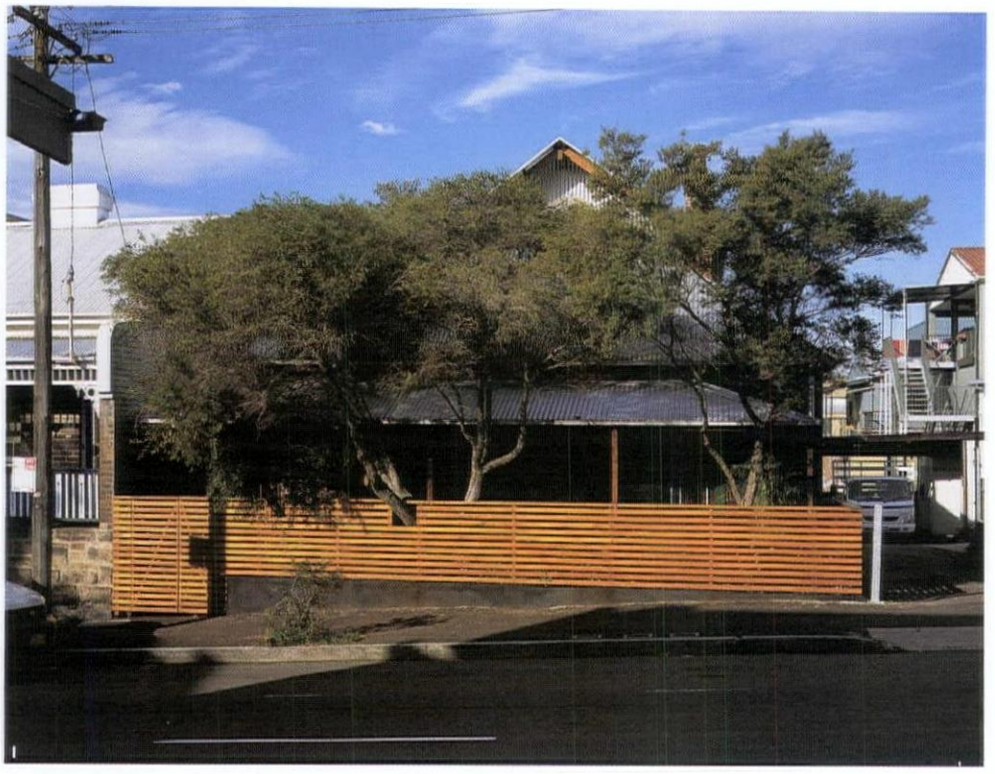


produced one of the most extraordinary and securely cheerful places in the city. A. M.

Architects
Vladimir Kuzmin and Vladislav Savinkin
Project team
Tatiana Tcheliapina, Dmitri Khromov, Anna Logacheva, Anna Novoselskaja, Eugenia Tikhonova
Photographs
Andrey Yagubsky, Alexey Naroditsky, Kirill Ovchinnikov, Vitaly Nefedov

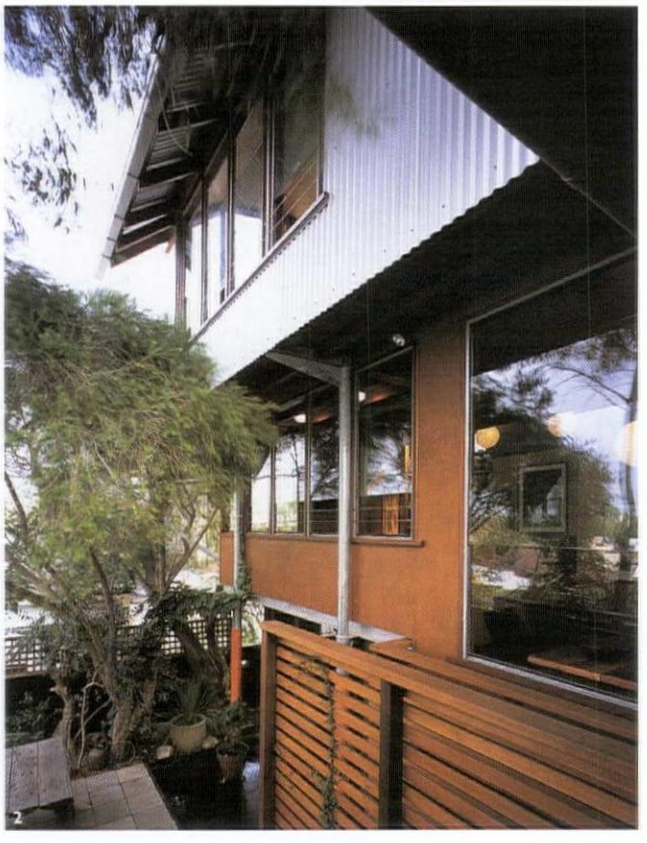
3, 4
Sensual details are formed by laminating layers of cut ply, then achieving smooth final forms by hand.
5, 6
Glass stair relates surprisingly well and unobtrusively to organic timber forms, which ....
7
... enclose informal, comforting spaces.





Out back

In a concealed Sydney garden, an extension brings new life to a small family home.

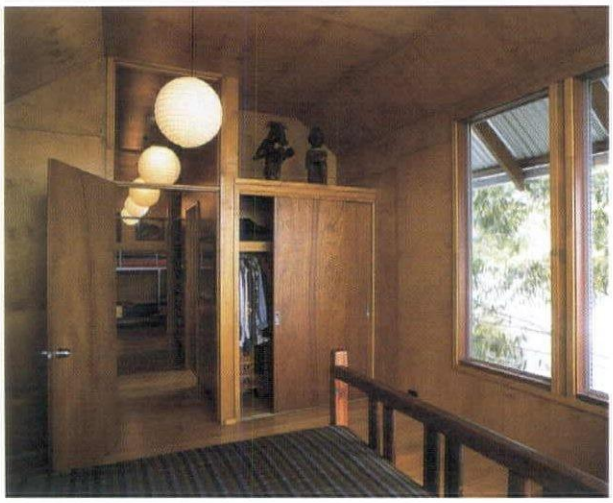


1
While little is revealed when viewed from the street ...
2
... a new triple-stage extension shelters the courtyard ...
3
... providing much needed space for work, rest and play.

Increasing the volume of a family home by three-fold is a tall order, especially on a tight urban site. Queensland architect Rex Addison faced this challenge when commissioned by Australian photographer Patrick Bingham-Hall to extend his family home in the somewhat unfamiliar territory of inner-city Sydney. With an established reputation for working with traditional house forms, Addison sought a solution that – to use his own musical analogy – would form a harmonious duet. A solution that would not attempt to sing the same words or follow the same tune, but instead would empathize with and take cues from the original structure in pursuit of a richer ensemble.

The original structure, a modest timber-framed cottage dominated by a pyramid roof, occupied the front half of a gently falling rectangular site. To this, a new verandah – originally conceived by Eeles Trelease Architects, but later executed by Addison – was wrapped around the cottage's three exposed elevations, leading to a new entrance at the rear of the site. As the lands falls away from the street, the verandah forms a raised entrance terrace behind the cottage, overlooking a sunken court neatly and intimately defined by the new timber and metal three-storey extension.

In response to the dominance of the original roof, and to celebrate the notion of roof forms as shelter, Addison's new spaces emerge from within the original form. On axis with the crown of the pyramid, a new pitched roof shelters the uppermost bedroom suite that runs along the site's southern boundary. This in turn shelters the living spaces on the entrance level which are set back, and the basement level photography suite which recedes even further behind the staged projections above. By adding these new forms, which while dominant in scale, yield to the prominence of the cottage, Bingham-Hall's house now exploits extensive views across the harbour. Conventions of front and back



4

HOUSE, SYDNEY, AUSTRALIA

ARCHITECT

ADDISON ASSOCIATES

are dissolved as the house turns away from the street to address the city beyond, with only the new blank gable being visible from the street above the existing trees.

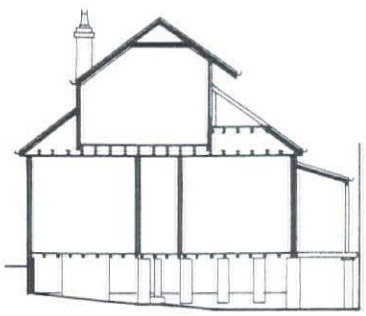
Internally, care has been taken to continue the notion of shelter and containment by moulding space to provide unique and intimate spaces. With warm tones of timber, Addison has worked within the geometric possibilities associated with the typological forms of gables, hips, eaves and valleys. Interlocking volumes exploit complexities that are derived from the constructional logic of making roofs and overhangs, rather than being forced and made to work. Light wells, alcoves, a fireplace and stairs all occupy residual space between the bedrooms and the boundary wall, and the chamfered gable end of the master bedroom resonates within the living room with a dropped ceiling providing a quirky twist – a slightly more reasonable gesture perhaps than the less convincing radiused sweep above the dining area. In reworking and elaborating this traditional house form with dynamic tilts and folds, new and old now comfortably co-exist.

ROB GREGORY

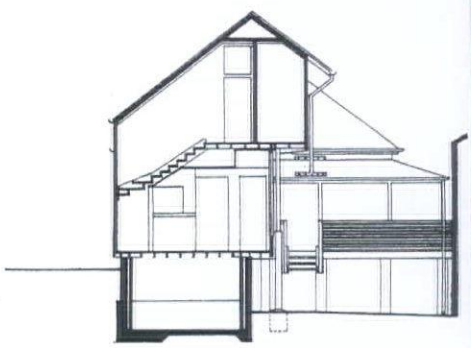
Architects
Addison Associates, Brisbane
Photographs
Patrick Bingham-Hall

4
Attic bedrooms turn to capture extensive city views.
5
New living spaces lead from the original cottage hallway ...
6
... while the master bedroom above defines the living room ceiling ...
7
... and stairs and light wells occupy the residual space between.

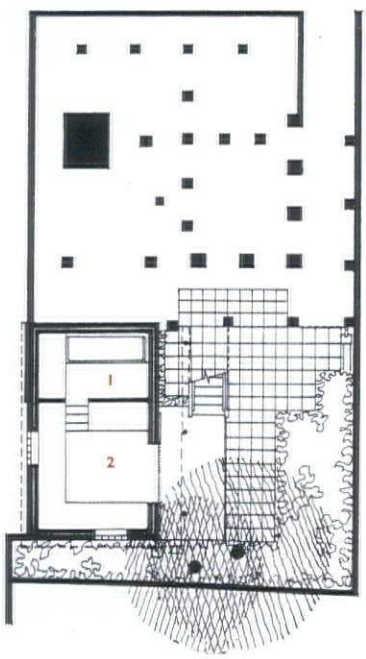
1 dark room
2 light room
3 entrance verandah
4 dining room
5 living room
6 kitchen
7 study
8 bedroom
9 master bedroom



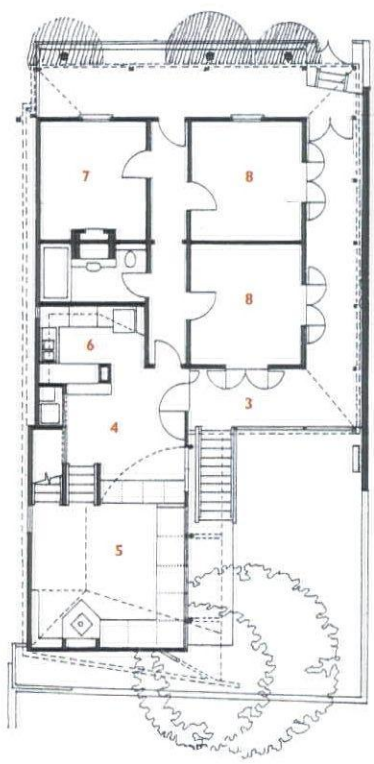
section through existing cottage



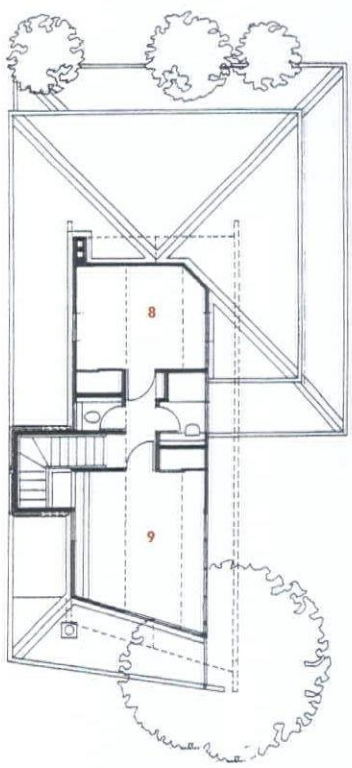
section through courtyard extension



courtyard plan



ground floor plan



roof space plan



ar house

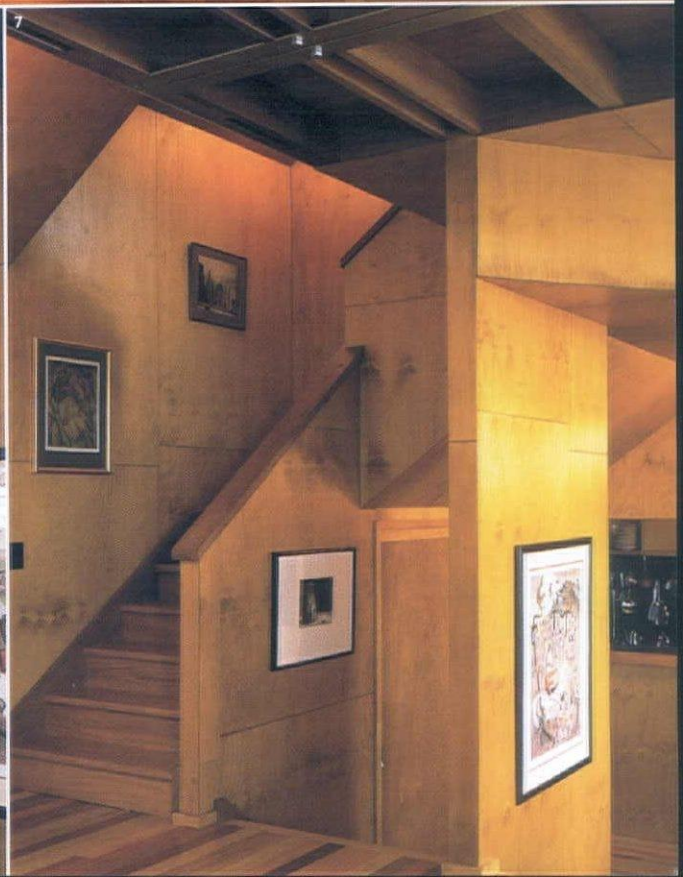
HOUSE, SYDNEY, AUSTRALIA
ARCHITECT
ADDISON ASSOCIATES



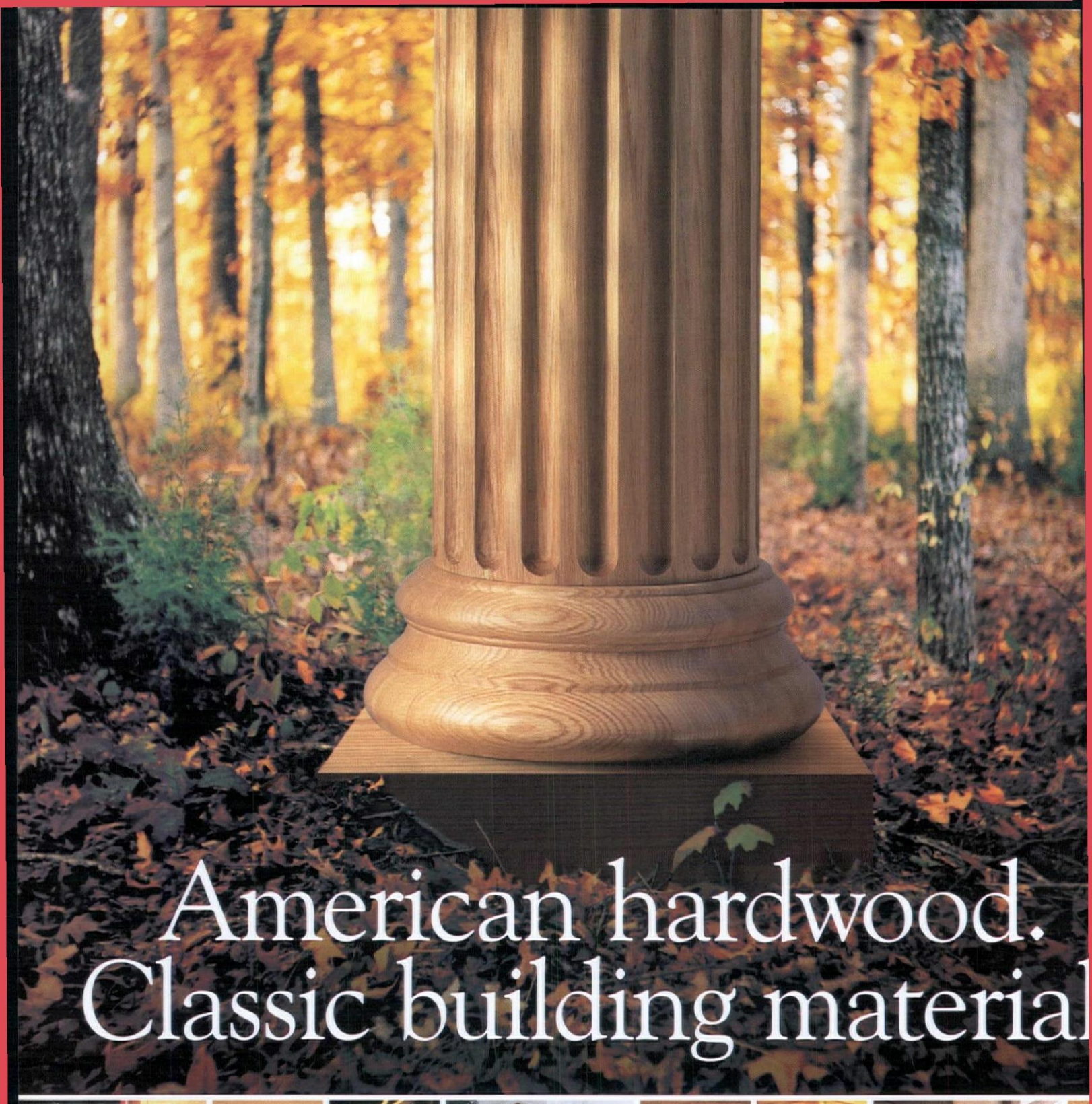
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6



7



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Wood and trees

Timber is the only building material that, properly used, positively benefits the planet and our relationship to it. Wood is indeed good and we should explore as many ways of using it in building as possible.

Our existence on the planet is ecologically intimately bound to the life of trees. The effect of forests on the atmosphere is undoubted, yet their role as the lungs of the world is sometimes exaggerated. Natural forests are close to environmental equilibrium: allowing for growth and decay, their net timber increment is negligible, and so is their contribution to the balance of oxygen and carbon dioxide in the atmosphere.

Indeed, it is sometimes argued by market-orientated ecologists that grassland prairie has just about the same properties in relationship to climate as natural forest. So it does not matter, they suggest, that large parts of the South American and Indonesian tropical forests are being destroyed to make way for grazing land. But managed forests can be made to become net absorbers of carbon dioxide by harvesting timber before the decay sequence sets in. In fact, most felled trees, particularly in tropical forests, are used as fuel by the poor, which immediately returns carbon back to the atmosphere, increasing the greenhouse effect and the planet's gradual overheating. Yet if the trees are used in building, the carbon they contain is constructively locked into a stable form that can last for many centuries. It is very important to realize that building with wood is a positive benefit to the planet.

Wood as a building material has the further advantage of being low in the consumption of energy needed in its processing, and hence in its overall impact on the biosphere. The conversion of a tree into kiln dried and preservative treated building timber takes 5.3 megajoules a kilo, but 35 MJ/kg are needed to produce a kilo of steel, and a staggering 145 for aluminium. Wood has roughly the same structural properties as steel or reinforced concrete, yet producing a cold rolled steel section equivalent to a 50mm x 300mm solid untreated softwood section of the same stiffness requires 19 times as much energy. Structural hardwood would show an even greater difference because a smaller section would have the same stiffness. Even in large-span structures, wood construction needs less than a quarter of the energy of concrete.

But before we become too starry-eyed about the wonders of wood, and the marvels of the managed forest, we must for a moment think of their problems. Boreal and tropical forests are being catastrophically destroyed, even in Scandinavia and Malaysia, in both of which there are official policies of replacing a felled tree by at least one newly planted sapling. Mono-cultures result from this process, greatly reducing the natural abundance of species of animal and plant life. It is clear that we need to preserve the great diversity of the natural forests, not least for our own interests. By destroying nature's abundance, we are irretrievably losing hundreds if not thousands of species, all of which could be useful to humanity.

Since the invention of plywood possibly millennia ago, we have been using adhesives to make wood go further and to exploit its natural strengths in untraditional ways. But the veneers used in plywood are too often from relatively large logs, and plywood made from hardwood veneers is one of the main uses of tropical timber, a cause of destruction of rain forests. (Though in fact it is probably less destructive than for instance Japanese chopsticks, which are used only once, then thrown away and are supposed to be, at least by many Australian environmentalists, one of the major reasons for the horrendous destruction of the Queensland forests.)

The concept of whole tree utilization, in which the trunk, branches and even roots of felled trees can all be made available in building, has become an important measure of our use of wood and our relationship to the forests. Admittedly, many of the products that stem from whole tree utilization and related approaches: laminated veneer lumber, wafer-board, mdf, orientated strand board and the like, are not very attractive to see and touch. Almost all of them lack the empathic qualities of natural wood, but they can perform essential tasks in construction and, as long as they are used in places you cannot touch and see, they should be employed whenever possible.

Wood is the only building material that has empathic qualities: we identify with wood from the cradle to the coffin. It is the only really sustainable building material. It is the only one which, properly managed and abundantly used, can actually improve the quality of life on the planet because of its ability to lock up carbon. We have a duty to use it, and to continue to do so with the highest degree of silvicultural, technological and architectural innovation and imagination. PETER DAVEY







The Rural Studio at Auburn University's College of Architecture, Design and Construction was founded in 1992 by the late Sam Mockbee (AR February 2002), with the aim of extending the study of architecture into a socially responsible context. Groups of students elect to live and work off campus in impoverished parts of western Alabama. The students design and, crucially, construct buildings that challenge convention in terms of methods, materials, and forms (AR March 2001), inventively scavenging and incorporating discarded objects and materials.

The Rural Studio's latest project is for the tiny Antioch Baptist Church in north-west Perry County. Commissioned by local parisioner Cedric Caddell, who declared that he wanted the 'Cadillac of churches', it replaces an original church which served four extended families, but lacked basic facilities such as a washroom and baptismal font, so was losing attendance. The timber-framed, asphalt shingle-clad building was also becoming structurally unsound, so it was decided to demolish it and build a new chapel.

The demolition bore unexpected fruit, as the students took care to salvage as much as possible for recycling in the new building, including lengths of 100 year old heart pine, roof and floor joists, wall panelling, and corrugated metal. Over three quarters of materials in the new church are salvaged, so the old building literally lives on in the new.

The revived church is a compact, angular volume that in its squat form and rustic simplicity evokes and reinterprets the region's rural vernacular. The geometry breaks down into two muscular, interlocking forms. One runs north-south to frame a soaring south wall, with a long glazed horizontal slot overlooking the adjacent cemetery; the other extends east-west to enclose the baptistery at the west end and the preacher's private room and washroom beside the east entrance. Baptist liturgy emphasizes preaching, baptism and communion, so the large baptismal font occupies a prominent position, sunk into the floor behind the pulpit. On the north side, a retaining wall wraps protectively around the chapel, diverting water that undermined the foundations of the original church.

Both salvaged and new timber is employed for the composite wood and metal roof truss structure and external cladding. The roof and north wall are clad in galvanized aluminium sheeting. With its walls, floors and ceiling lined with strips of pine and wooden pews, the interior is a sensual, timber womb, sheltering and nurturing its congregation, as the new church embraces its revived role in local rural life. C. S

Architect
Rural Studio, Auburn, USA
Project team
Samuel Mockbee, Andrew Freear, Bill Nauk, Gabe Michaud, Jared Fulton, Marion McElroy
Photographs
Timothy Hursley

1
The original church – timber-framed, clad in asphalt shingles.
2
New church overlooks cemetery.
3, 7
Simple forms recall rural vernacular.
4
Students on site.
5
The timber-lined interior uses pine salvaged from the original church.
6
The large baptismal font.

CHURCH, PERRY COUNTY, ALABAMA, USA
ARCHITECT
RURAL STUDIO

WING AND A PRAYER

This new church for a small rural community makes inventive use of salvaged materials, especially timber.

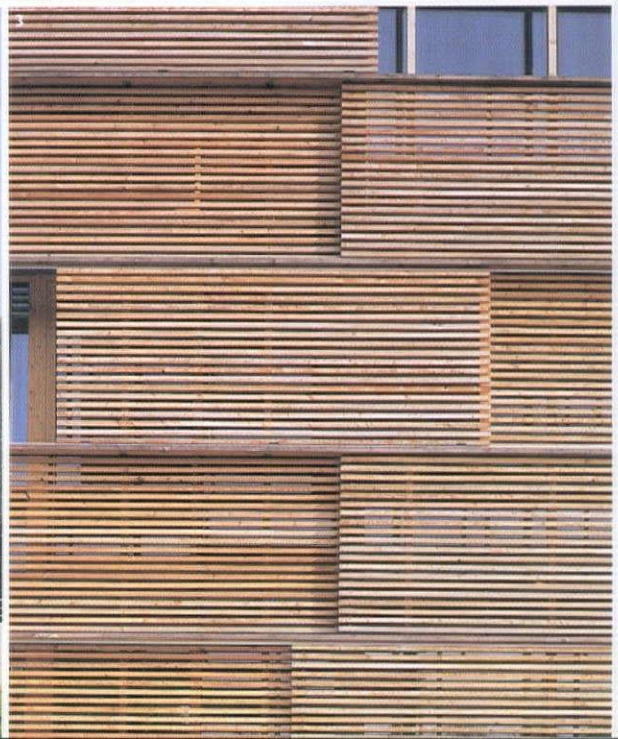




1



2



3



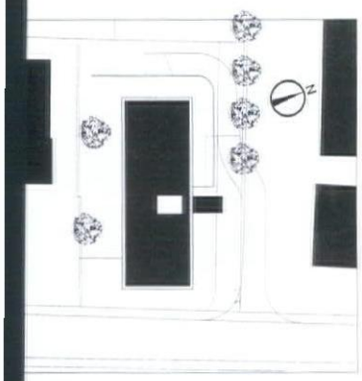
5



6



7



site plan

Whether conscious or not, timber's associations with folksy domesticity tends to inhibit its use in commercial contexts. Baumschlager & Eberle were asked to design a small commercial building in the Vorarlberg village of Wolfurt and responded by employing timber as a precisely detailed external screen that does the usual jobs of filtering light and providing privacy, but also imparts a subtle, organic warmth and texture to a basic box.

Vorarlberg, on the western edge of Austria, is the country's smallest region, and after Vienna, the most densely populated. Historically, the area has a distinct rural identity, evident in its landscape, its vernacular architecture and a strong (and continuing) tradition of building in wood. Characteristic of an emerging generation of German-speaking Swiss and Austrian architects, Baumschlager & Eberle's work is distinguished by a sober tectonic spirit that also to reinterpret regional traditions and archetypes.

The client wanted a building that could accommodate the local bank at ground level, with three upper floors that could be used either as flats or as offices. The architects responded to this unedifying inexactitude by designing an utterly simple glazed rectangular box, with a stair tower pulled clear of the main volume on the north side. So far, so conventional, but the inspired move was to enclose the building in a timber screen, elevating a plain box into a tactile, mutable, sensual object.

Fabricated from square sections of indigenous Austrian larch, the external skin is made up of a series of horizontally slatted sliding screens mounted on a timber sub-frame. The larch lattice filters and diffuses the light, casting shimmering shadows through the interior. It also combats glare and heat build-up, provides privacy when required and gives the facades a degree of pleasing rather than dreary homogeneity, for the timber screen encloses the entire building, apart from the bank frontage at street level. Within the apparently uniform facade, however, the random movements of the screens generate changing, unpredictable geometries that dignify and enliven the public realm. C. K.

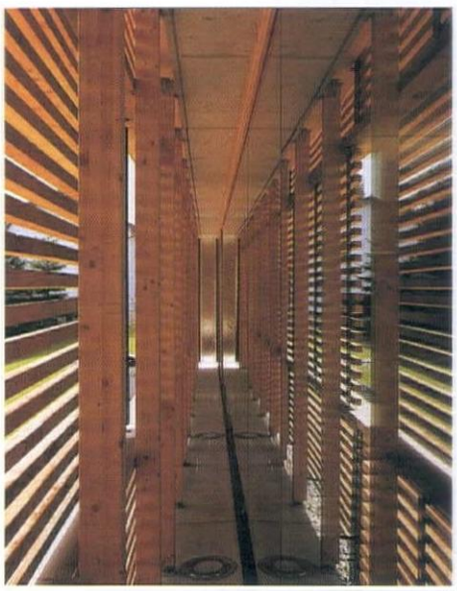
Architect
Baumschlager & Eberle, Lochau, Austria
Photographs
Edward Huebner

1
The glazed box is enclosed in an outer skin of slatted larch screens.
2
The sliding screens generate changing geometries.
3, 4
Detail of screens.

BANK, WOLFURT, AUSTRIA
ARCHITECT
BAUMSCHLAGER & EBERLE

LARCH VEILS

An ordinary commercial building is given great urban presence by an external skin of slatted larch screens.



4



ground floor plan (scale 1:500)

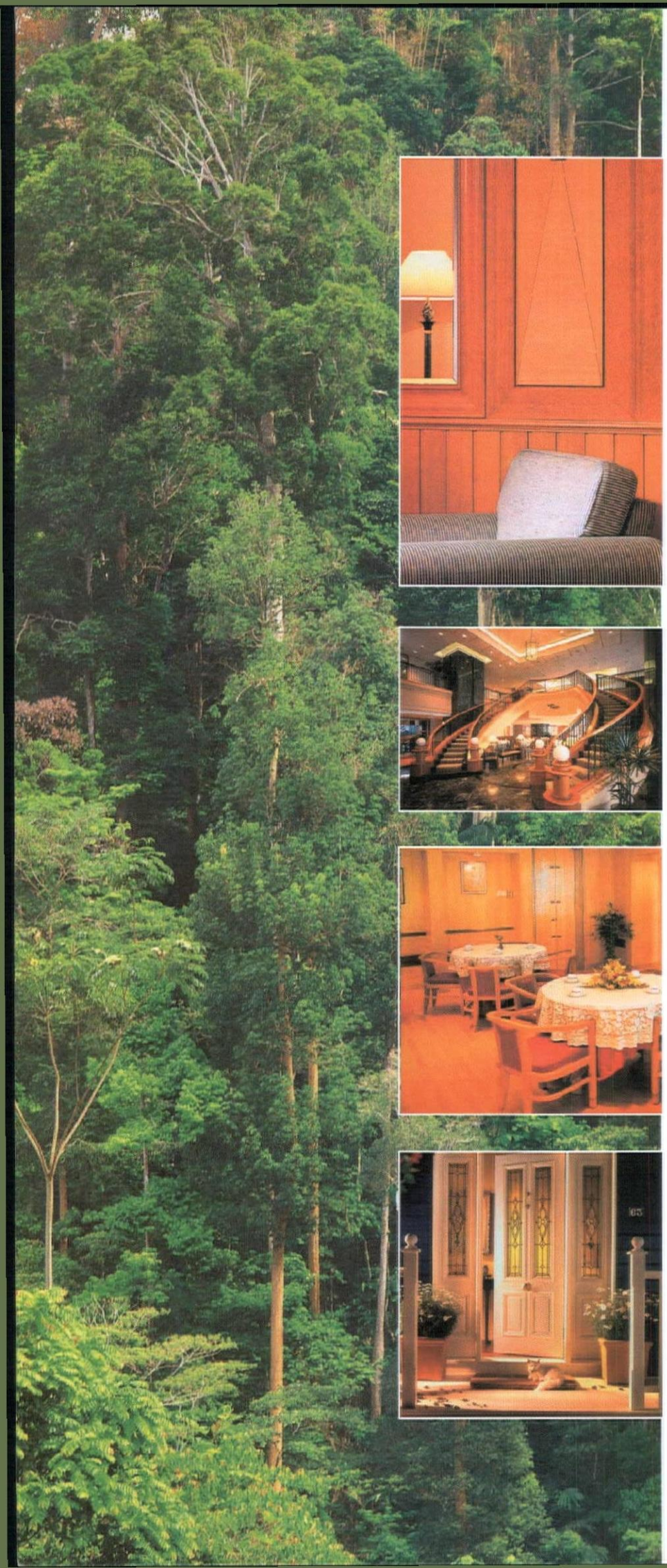


first floor

1 bank offices
2 stair
3 flats



cross section



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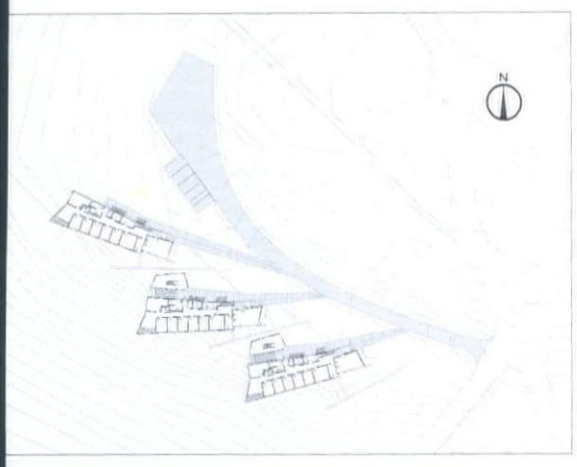
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layout (scale approx 1:2500)



1

Bennington College in Vermont has a campus that at first seems to be totally 1930s neo-Colonial, with a formal axis flanked by two-storey timber student residences. In fact, the more functional '60s and '70s teaching buildings of the liberal arts college are hidden to the north.

Bennington is expanding and asked Kyu Sung Woo to find accommodation for some hundred new students and two staff members. A site was chosen near the college focus overlooking a south-facing meadow that slopes down to a spinney, and three new three-storey blocks have been created at the top of the rise.

Students were asked what they liked about the '30s accommodation, and they identified for instance the mixture of single and double rooms, views of nature, and provision of common spaces to allow for different kinds of social interaction. Such elements were incorporated in the new houses, each of which accommodates 35 students in south-facing rooms. The almost identical new houses are entered from the east with a common room to the left and the main stair right.

Externally, the houses are very woody, like their neo-Colonial ancestors. South, east and west facades are clad in tongue and grooved cedar boarding with clear anodized aluminium windows and trim. North facades are in random width shiplap cedar siding stained red, green or grey. These otherwise rather daunting north walls are relieved by external fire-escape stairs intended to become informal social spaces in the hotter months. The galvanized steel stairs are clad in delicate cedar grilles, which offset the largely impervious walls behind.

A. W.

Architect
Kyu Sung Woo Architect, Cambridge, Mass
Structural engineer
Lim Consultants
Photographs
Timothy Hursley, Wayne N. T. Fujii

1
All student rooms face south.
2, 3
Escape stairs with delicate cedar grilles are intended to be social spaces in summer.

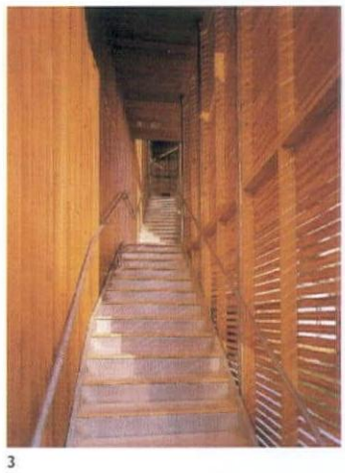
HALLS OF RESIDENCE, VERMONT, USA
ARCHITECT
KYU SUNG WOO

STUDY IN CEDAR

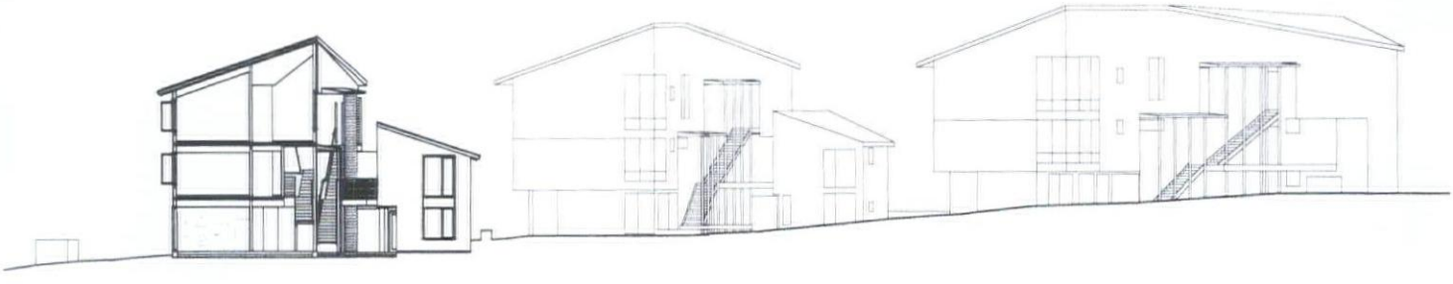
The textures and scents of cedar permeate the new halls of residence at Bennington.



2



3



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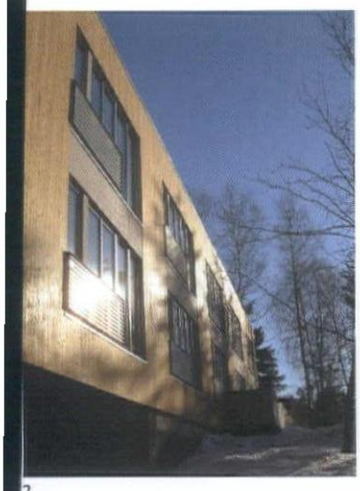
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2

FLATS, NESODDEN, NORWAY
ARCHITECT
CODE: ARKITEKTUR

Norway has a programme for providing affordable housing for young people, and one of its more ingenious recent products is the little scheme for 12 flats at Nesodden, near Oslo. Code, a young practice, won the competition for a site between a '60s suburb and a green common that overlooks the fjord.

Fundamentally, the scheme is no more than a two-storey terrace of 43 m^2 flats. The main structure is of steel to avoid bearing internal walls, but all the rest is of timber, except where the ground slab (to which the RSJs are fixed) projects over the falling land to the north, propped on four concrete columns.

A simple, even dull parti is given dynamism by the handling of the east front. Here is a large gallery at first floor level that acts as access to the upper flats and which is hoped to provide a social space for all users. In plan, the gallery is cut to allow light down to the east-facing windows of the ground floor.

Gallery structure is larch in long and slender laminated pieces braced with thin flat galvanized steel bars. On the gallery, roof and balcony cladding is corrugated polycarbonate sheeting that in winter becomes opaque under its thick carpet of snow, and sparkles in the long slanting sun of autumn and spring.

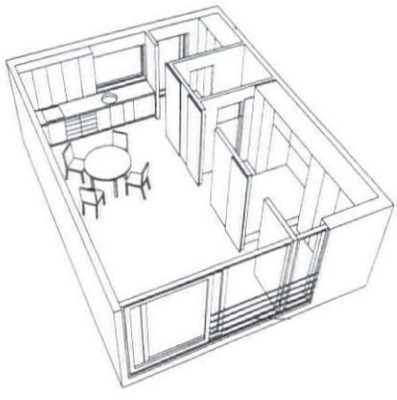
Larch is used to clad the flats, so that the whole will gradually weather grey together. Internally, the flats are divided in two by a wall with green sliding doors and partitions. A service strip includes entrance, bathroom and bedroom (the latter with inbuilt storage and double bed). In the wider living strip, the kitchen area always faces east. To the west, full-height sliding glass panels provide splendid views and scents of the landscape, magnificently expanding the compressed living spaces. H. M.

Architect
Code: arkitektur, Oslo
Project team
Henning Kaland, Ole Einejord, Gaute Stensrud, Bjarne Ringstad, Julian Lynghjem, Halvor Weider Ellefsen, Ellen Haukås
Structural engineer
Reinertsen AS
Photographs
Henning Kaland/Code:

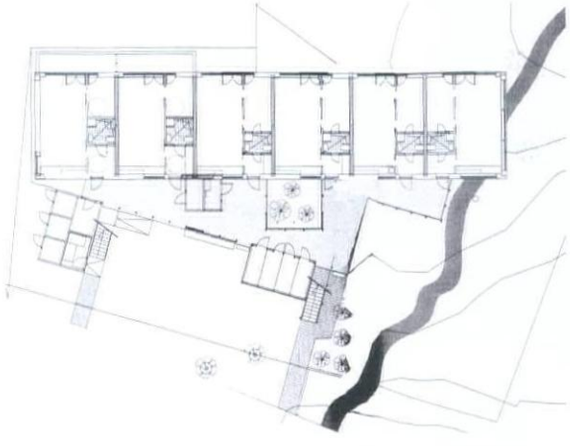
1
East front with slender laminated larch columns supporting gallery.
2
All living rooms look west over forested landscape.

NORSE CODE

Lapped in larch, this terrace will gradually grow into harmony with the surrounding forest.



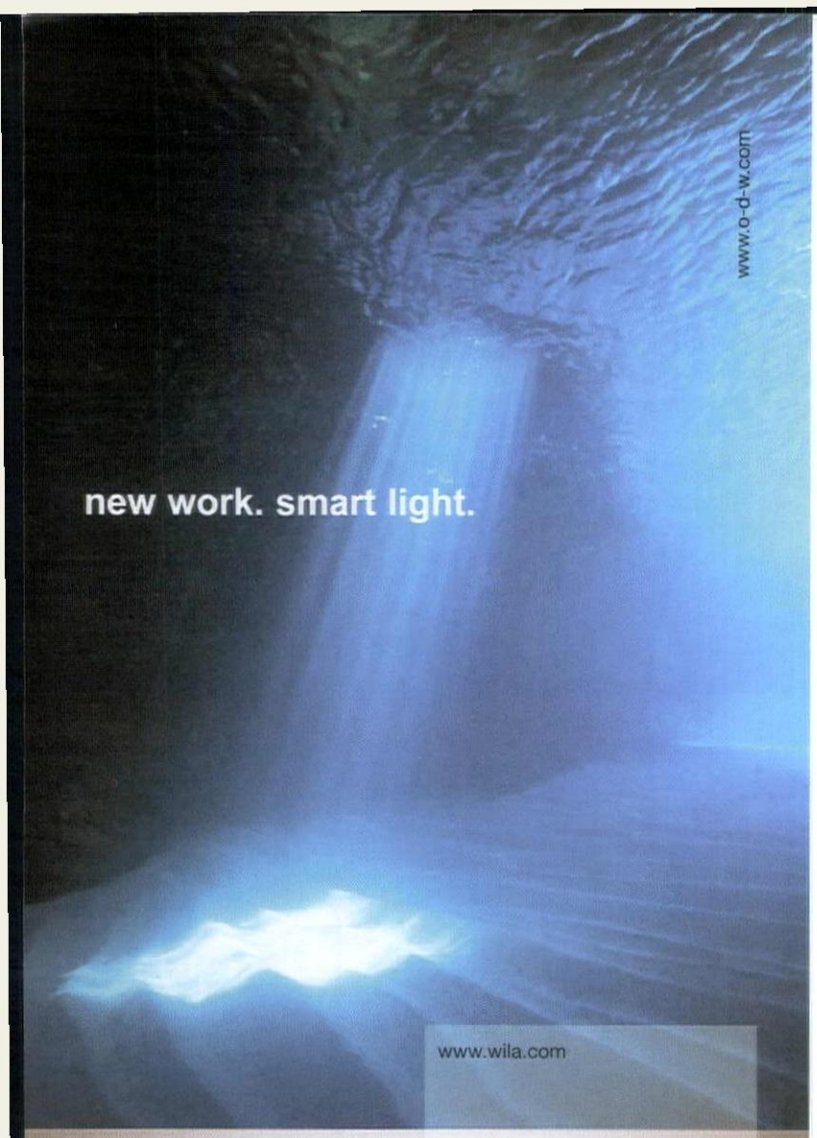
typical flat

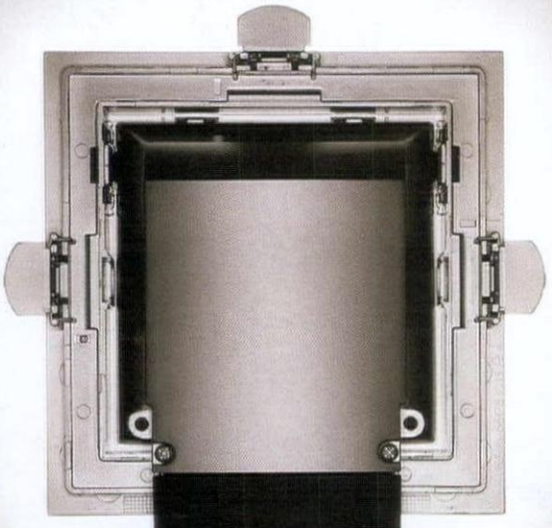


plan at first floor level (scale 1:575)

1



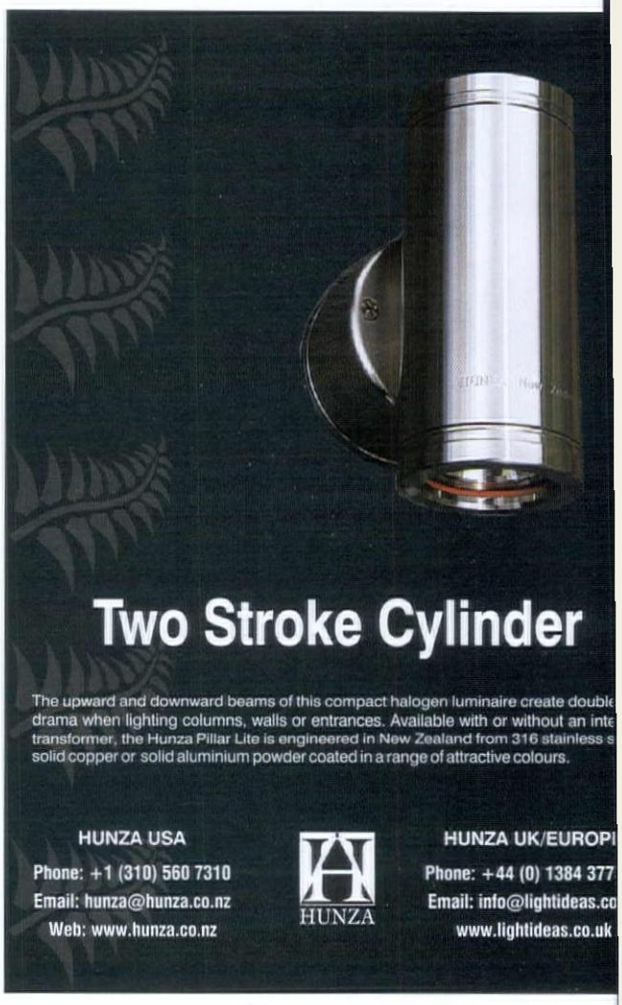




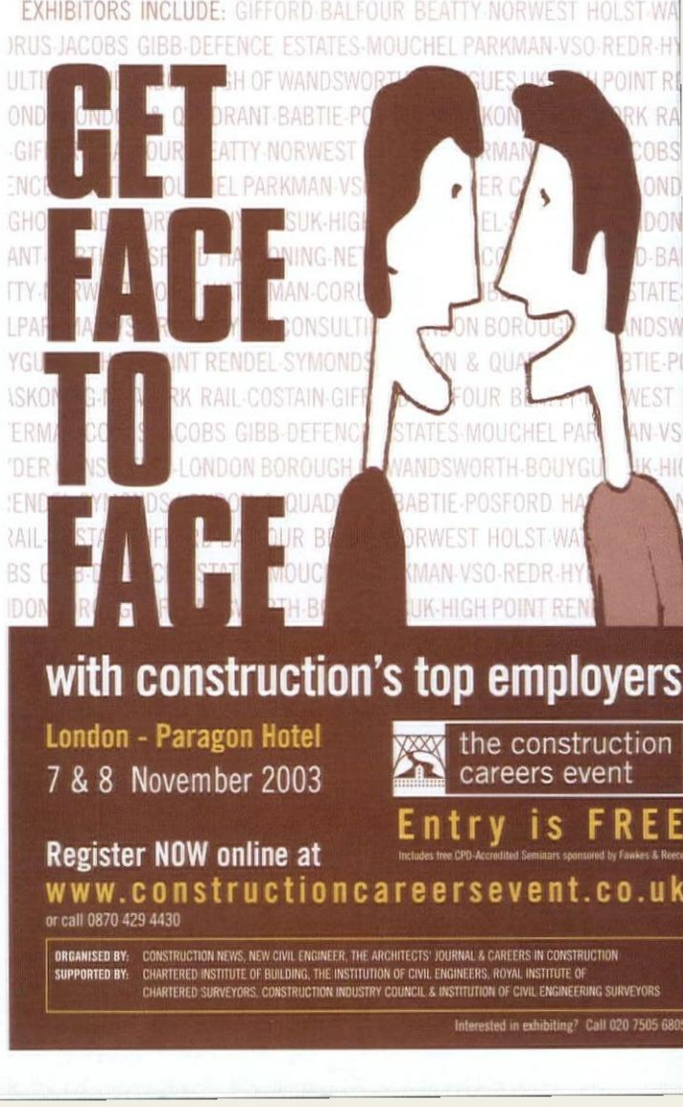
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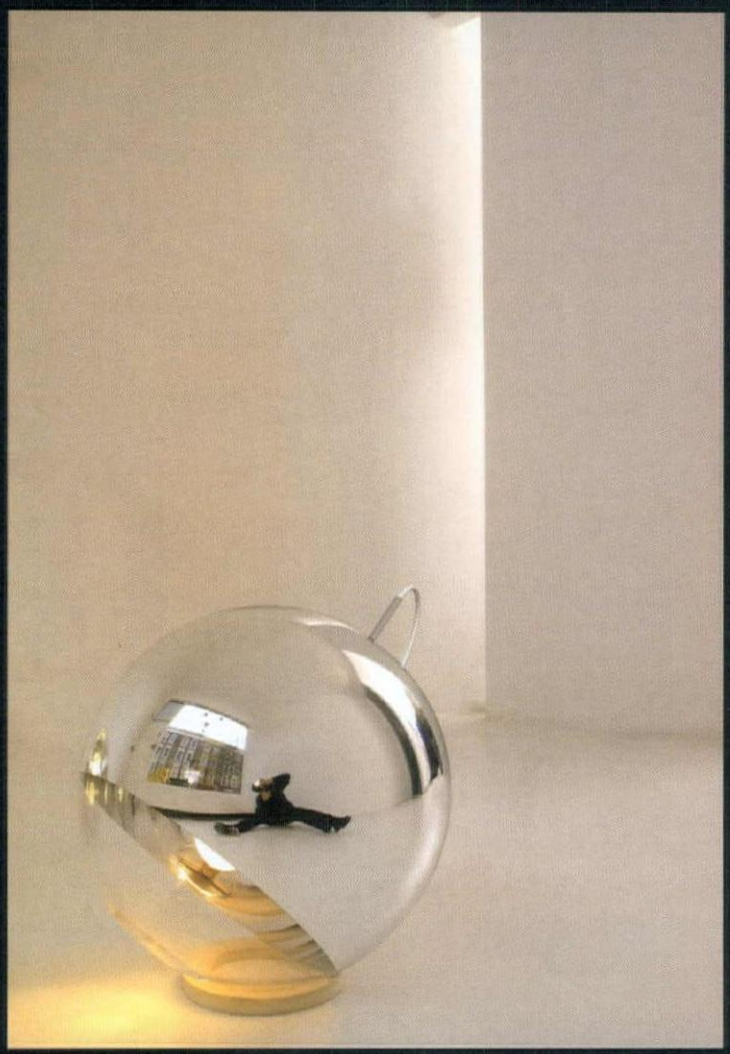
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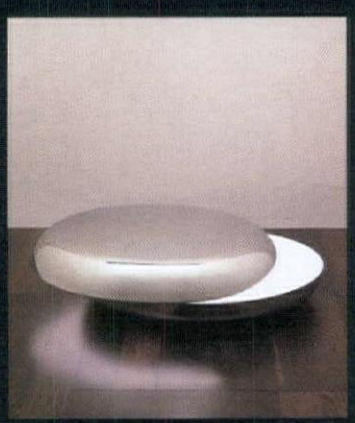
Rob Gregory seeks illumination.

501 TOM DIXON
Mirror Ball, by Tom Dixon, is a multi-functional plastic globe light. Available in three sizes, 200, 400 and 600mm, the plastic globe has a metallized mirror finish and can be used as a pendant fitting, mounted in a stand, or simply left lying on the floor.

Enquiry 501 www.arplus.com/enq.html

502, 503 FONTANA ARTE
Fontana Arte's 2003 range of lamps offers curvaceous new forms; Loop (**502**) is a delightfully conceived table lamp in which light is held between two shells. Available in either stainless steel or painted nickel, by rotating the uppermost section light is released from within. Pax (**503**) designed as a tribute to Gio Ponti, is a light sphere made from glass discs separated by polycarbonate spacers. And Pelota is a blown glass scoop available in either black or white.

Enquiries 502, 503 www.arplus.com/enq.html



502



503

504

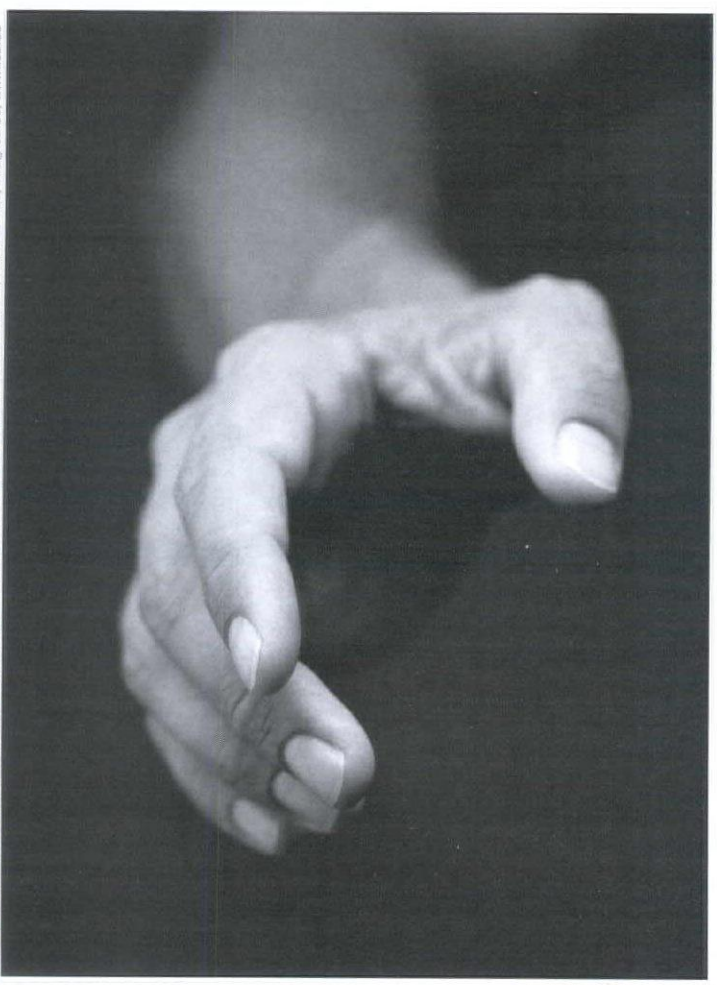


504 CASTALDI
Sosia, the classic range of industrial light fittings, popularized by architects such as Richard Rogers and Massimiliano Fuksas, has recently been developed to include a range of finely satined opal diffusers. These now give users opportunities to choose between a soft diffused light, or the more intense direct light typical of the original aluminium reflector range.

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Gripping Culture



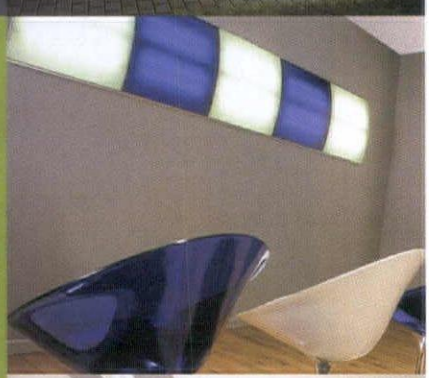
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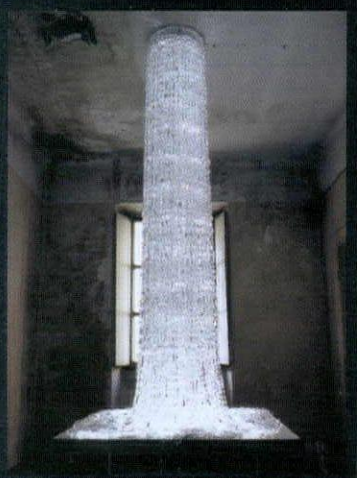
505

505 SITECO
Vistosa is a new low-voltage tabletop lamp that features a unique adjustment mechanism. The patented Vistosa® spring technology is fully integrated into the lamp's distinctive design, and gives up to 700mm of movement. The flexible metal band gives graceful and effortless movement which, when combined with the 360 degree base rotation and the three stage tilt action, offers complete freedom to users.

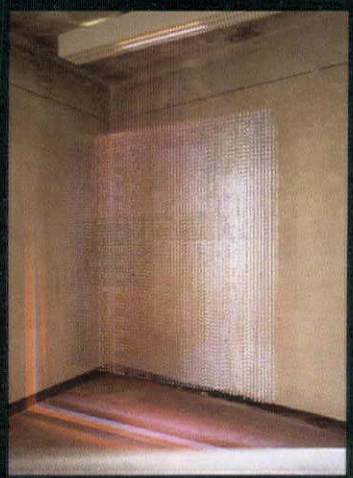
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506, 507 SWAROVSKI
Swarovski crystal offer new possibilities for contemporary chandelier designers. With a full range of components, exciting and innovative designs can be executed, such as those exhibited in a recent project 'Crystal Palace', which included Cascade by Vincent Van Duysen (**506**) and Piouette by Marcel Wanders (**507**).

Enquiries 506, 507 www.arplus.com/enq.html



506



507

508



508 FABBIAN
Kobra is a new laser-cut aluminium table lamp by Fabbian. Within an articulated head, Kobra uses only three LEDs to provide over 100 000 hours of reading light, equivalent to 11 years of uninterrupted use. The fitting benefits from a metal core printed circuit board, which eliminates the need for wires by printing the circuit directly onto the aluminium support arm. The LEDs are then welded directly onto a support arm, adding to the simplicity and lightness of this elegant new lamp.

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509

509 ANSORG
At the base of Bonn's recently completed Post Office Tower – (Murphy/Jahn, AR August 2003) – 1500 Ansorg Lichtpunkt LED light fittings have been used to create an exciting landscape lighting installation. Set within perforated stainless-steel sheets, seven shifting parallelograms create an apparently random field of light at the foot of the tower. 160m below Ansorg's prominent LED display set within the building's structural crown. Benefiting from a fully integrated design process, Parisian lighting designer Yann Kersale has been able to provide lighting spectacles for both users and more distant viewers.

Enquiry 509 www.arplus.com/enq.html

510, 511 LAMPAS
The Danish lighting manufacturer Lampas has introduced fittings for both interior and exterior use. These include the recentl luminaire series L95/L96 (**510**) and L701/L702 (**511**), consisting of pole and bollard luminaires. While the L95/L96 luminaires are manufactured in square steel profiles and are available in various lamp configurations, colours and materials, the L701/L702's functional indirect lighting technique combines the aesthetic expression and choice of materials typical with the Lampas product range.

Enquirie s510, 511 www.arplus.com/enq.html

510



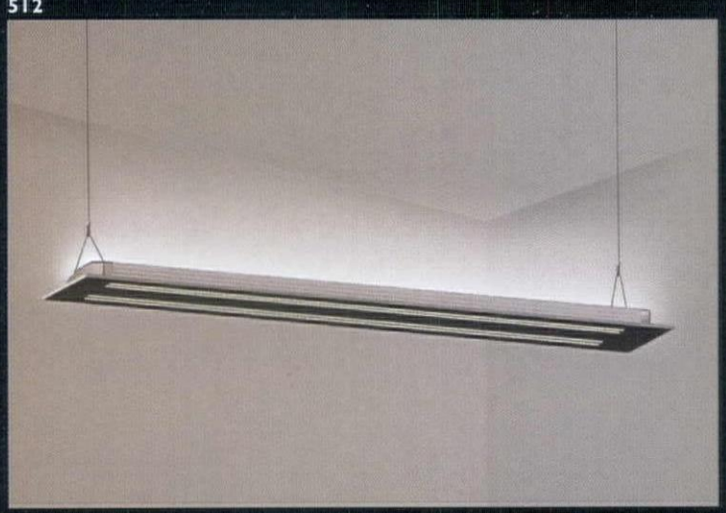
511



512 TRE CI LUCE
Stripe is a new slim-line light fitting by Tre Ci Luce that can be used in two forms. By being suspended or wall mounted it will provide indirect diffuse and feature lighting, and it is available in several different lengths and can be operated in a linked installation.

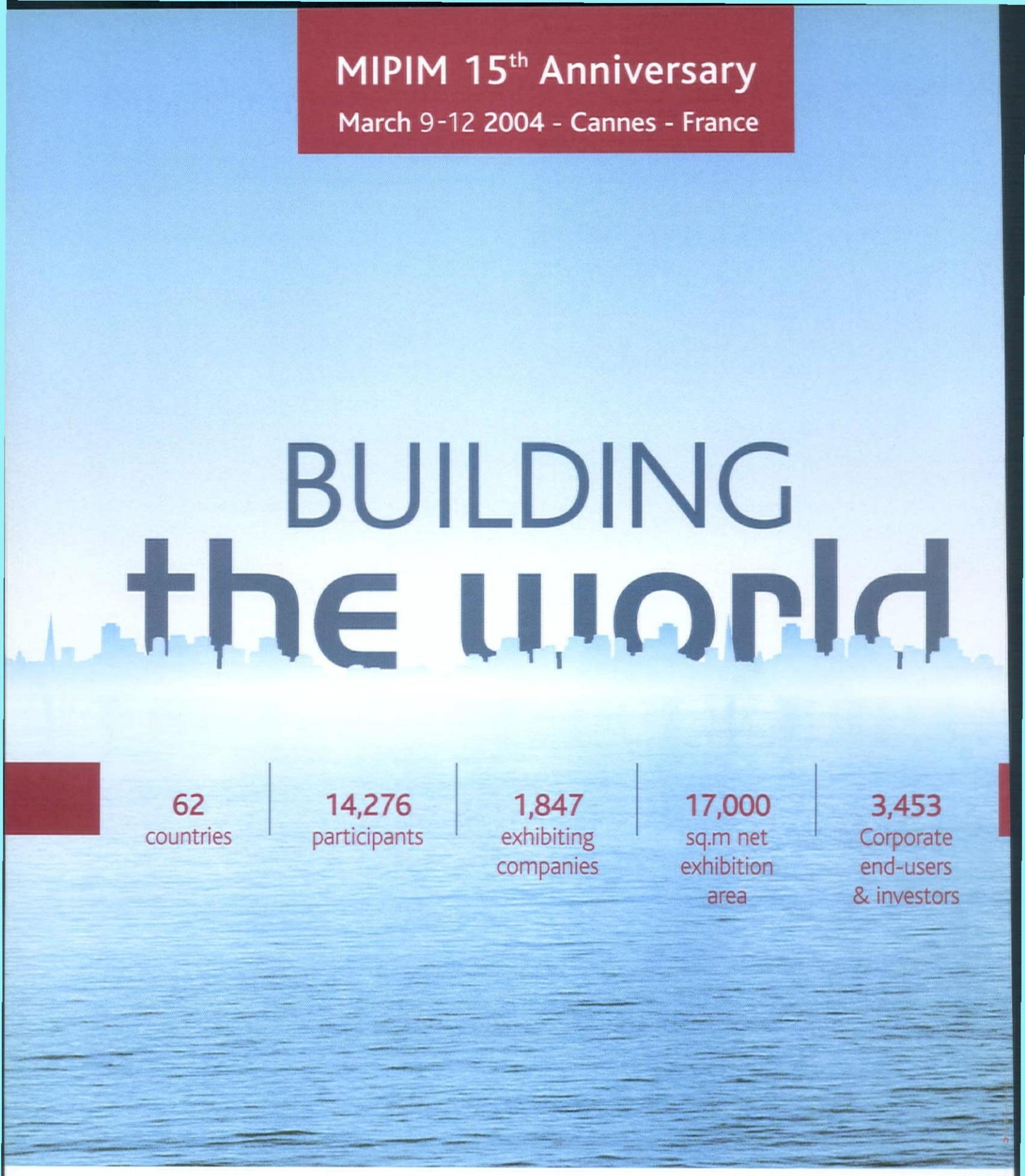
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900 www.arplus.com/enq.html



Copper in Architecture

The brand new www.copperconcept.org website is now live. The pan-European website give architects and specifiers the perfect starting point for inspiration and information about the use of copper in architecture. The website is part of a wider campaign which, as a joint venture between the International Copper Association and European copper manufacturers, aims to promote the longevity, flexibility, versatility and design appeal of this distinctive building material.

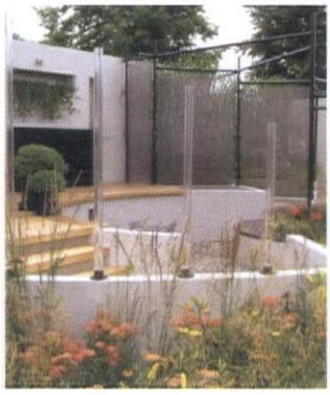
901 www.arplus.com/enq.html



Vetrotech

A new slimline solution has been launched by Vetrotech Saint-Gobain. SGG Swissflam Structure has been developed to give architects a new option to incorporate fire glass into their designs. As each sheet requires only the slimmest of connections, it is especially useful for internal applications such as shop fronts or partition walls. In the event of fire, the interlayer will turn opaque to form a fully insulated heat shield, providing at least 30 minutes of fire resistance.

902 www.arplus.com/enq.html



Potter & Soar

Architectural mesh from Potter & Soar, the UK's leading manufacturer, was a key element of the Gold Medal winning garden at the recent Hampton Court Flower Show. Used in large screens, Potter & Soar donated 13 square metres of their latest Michigan mesh to Mark Ashmead, the designer of the 'Private Entertainer' garden – a garden which was designed to have a particular appeal to young professional couples, being contemporary in its form and low maintenance in its specification.

903 www.arplus.com/enq.html



Wright Style

A new development in curtain walling and roof glazing technology is being launched by Wright Style, the UK-based supplier of steel glazing systems. The Davex system comprises a range of facade profiles that can be perforated to an individual design – representing a completely new and significant advance in the aesthetics of curtain walling and roof glazing. The Davex system allows architects to incorporate real individuality into this aspect of their building designs, without compromising the overall mechanical strength of the glazing structure.

904 www.arplus.com/enq.html



E-Motive Display

EAVIS from E-Motive Display is the next generation in LCD lift display technology. It allows building managers to offer customers complete floor directories, TV feeds, video clips, animations, still ads, stock market information, fixed and variable messages, as well as the time, date and temperature readings – all automatically updated. Thanks to E-Motive Display, getting stuck in the lift will never again seem so bad.

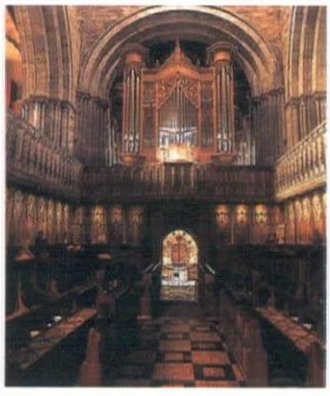
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Future Designs

EDGE Series from Future Designs is a state of the art collection of luminaires designed and developed for the LG3 amendment 2001. The luminaire has 4 lamps located around the perimeter of the luminaire with asymmetric reflectors designed to control the lamp performance. The perforated drop frame assembly allows light through for direct illumination, whilst the combination of the asymmetric reflectors and the curved profile of the suspended frame allows uniform sideways light distribution onto the surrounding ceiling and walls.

906 www.arplus.com/enq.html



Absolute Action

Fibre-optic lighting from Absolute Action has been used to subtly highlight part of St David's Cathedral in west Wales. The ornate but flammable timber panelling of the cathedral's choir stalls benefited from fibre-optic lighting's heat and UV-free qualities. 60 miniature downlights, finished in antique bronze to complement the dark hardwood panelling, were powered by just four Spectralux 6000 light sources.

907 www.arplus.com/enq.html

SHOCK OR COMFORT?

THE FAMILIAR AND THE UNFAMILIAR IN TWENTIETH CENTURY ARCHITECTURE

By Jean La Marche. Champaign: University of Illinois Press. 2003. $34.95

This is a book about the architectural 'subject', defined as 'the person that architects imagine experiencing their architecture'. The subject used to be thought of as an individual with a single, unchanging identity. He or she was, for example, either a he or a she, and usually a he. Now the subject has become more complicated. It can be singular or plural, of uncertain gender, its identity unstable as it struggles with all the contradictions of modern life. The subject has also become a subject in the other sense of an area of academic enquiry. Jean La Marche refers at one point to 'the importance of subject research in architecture' and obviously intends his book to be a contribution to the furtherance of that research.

La Marche's main interest is in the subject's capacity to be shocked (or stimulated) by the unfamiliar, and comforted (or bored) by the familiar. Twentieth-century architects can be divided into those that tried to shock and those that tried to comfort. Early modernists like Frank Lloyd Wright and Le Corbusier used unfamiliar forms to shock their subjects into an awareness of the strangeness of modern life and help them to come to terms with it. Later in the twentieth century, Aldo Rossi tried to recover traditional forms that everyone could live with, while Venturi, Scott Brown Associates made an architecture out of the familiar images of popular culture. The trouble was, of course, that the intentions were usually misinterpreted. Corb's strangeness seemed merely personal, Rossi's familiar forms looked disturbingly surreal, and VSBA's populism was all too obviously elitism in disguise. Only Wright managed to tune in to his subject's unspoken desires and make the unfamiliar familiar.The lack of communication between architects and their subjects is surely the most important aspect of 'subject research'. La Marche does not emphasize it, however, preferring instead to submit familiar buildings and familiar texts to a straightforward, slightly plodding analysis. This book is short, easy to understand and thought provoking but rather unadventurous, drawing its raw material only from the established architectural canon. It might have benefited from more unfamiliar examples.

COLIN DAVIES

HOW THE LAND LIES

THEORY IN LANDSCAPE ARCHITECTURE

Edited by Simon Swaffield. Philadelphia: University of Pennsylvania Press. 2002. £19.50, $27.50

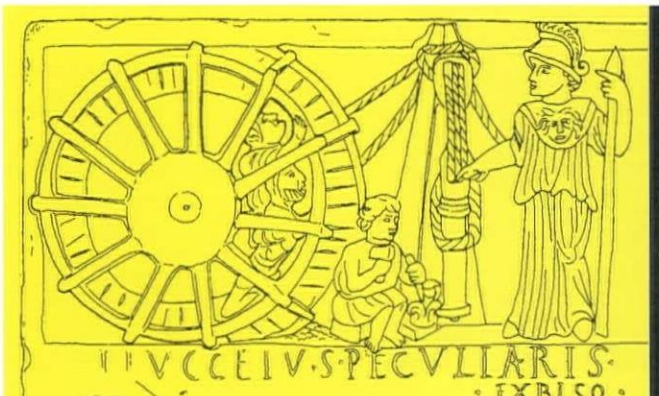
This is a really important book for landscape design because it gives the lie to the notion that landscape theory has mainly to do with technical things like plant taxonomy or hydrology or, on the design front, a weak affection for 'naturalism'. The collection of texts in this book knock that firmly on the head which is why so many landscape designers might feel it a good idea to read it.

Compiler Simon Swaffield is landscape professor at Lincoln University, New Zealand. He explains his two objectives. The first is to provide 'a teaching resource ... which introduces students to a range of concepts and authors and situates them within the discipline'. The second is 'to explore the proposition that there exists a coherent core body of theory in landscape architecture'.

Swaffield succeeds pretty well on both counts. And calling him merely a compiler is to diminish the importance of his engagement with the issues. For this is his own construct of the modern state of thinking and writing about landscape design. For reasons of space and because they are quite well covered elsewhere, he excludes theories of environmental perception and behaviour and landscape ecology. H concentrates on design theory rather than plan ning or management theory because he take the view 'that "design" captures best the distinc tive activity of configuring landscape which lie at the heart of landscape architecture'. Wit that nailed to the mast you want to read on.

There are five sections. The first discusses th nature of landscape theory and starts off with 1950 extract from Garrett Eckbo's 'Landscap for Living' and ends with a difficult and some what self-important 1992 piece by Elizabet Meyer called 'Situating Modern Landscap Architecture'. The second section is about th discipline's procedural theory from the early problem-solving approach to a more curren fine art approach and the slightly mystical lin of Bernard Lassus whose 'The Obligation o Invention' concludes the line of thought. The third section is to do with that long-discussed theme of the interrelationships between form meaning and experience and art from such peo ple as the Jellicoes and Nan Fairbrothe through Peter Walker via an amusingly bitchy and nicely observed essay from practitioner Marc Trieb, 'Must Landscape Mean?'. His edge is that he can talk the structuralist and decon jabber although he takes, one feels, too grumpily against some of the nicer and wackier work of his contemporaries. The fourth section is about the representation of landscape which includes such issues as the idea of landscape as language and the notion of 'reading' landscapes. The final section is titled 'Ecological Design and the Aesthetics of Sustainability' which Swaffield thinks is 'one of the most significant shifts in the theoretical orientation of the discipline'. It implicitly raises that old issue of beauty arising naturally from fitness to purpose. And, if you follow Robert Thayer towards the end of the collection it is positive: 'sustainable landscapes are likely to express a unique sense of visual and spatial pluralism ... there may be no distinct style, since "style" itself necessarily separates surface from core'.

As in all good collections, there is a great cross section here which is to say there are writers you agree with, some you don't feel much at all about and some you absolutely hate. There has been a change over the last half century from the somewhat missionary yet sub-architectural writing of the 1950s through to the remarkably diverse positions of the present. Inevitably in academic writing, some of it will be primarily directed at the academic appointments market rather than being much concerned with clarity – using landscape architecture without understanding very much about it as a vehicle to deal with something completely different. That is true for a small selection of the texts here. But it is not some-



Funerary relief from Capua showing treadmill crane lifting column shaft. From *Roman Builders: A Study in Architectural Process* by Rabun Taylor, Cambridge University Press, 2003, £18.95. Classical building technique thoroughly and insightfully explained with numerous drawings both ancient and modern of buildings and the machines that made them. Clear perceptive text.

ning which should detain the reader. Swaffield as a last word: 'While there are many horizons et to explore and tangled thickets, barren fields nd perilous areas within the intellectual landcape, there is also, to my mind, an emerging tructure. Much interesting exploration awaits s over the next fifty years.'

SUTHERLAND LYALL

GREEN AGENDA

BIG AND GREEN: TOWARD SUSTAINABLE ARCHITECTURE IN THE 21ST CENTURY

Edited by David Gissen. London: Princeton Architectural Press. 2003. £28

This is the book of the movie, or more precisely, the catalogue of the exhibition 'Big and Green: Toward Sustainable Architecture in the 21st Century' held at the National Building Museum, Washington, DC.

We know what 'Big' is but what is 'Green?' 'Environmentally responsible Architecture' is one response. But the definition is so all encompassing that a number of buildings which I had never considered to be 'green' before have found their way into the book. On its own this isn't too serious, the future being more important than the past, but more clarity would help us all. Fifty buildings and urban projects (most of which have been constructed and many by famous architects) from around the world are described and well illustrated in colour. Brief comments are made under five categories of Energy Generation: Light and Air, Greenery, Water and Waste, Construction and Urbanism.

Interspersed with these are a number of thoughtful essays and interviews which allow development of some of the concepts behind the steel, glass, concrete and timber.

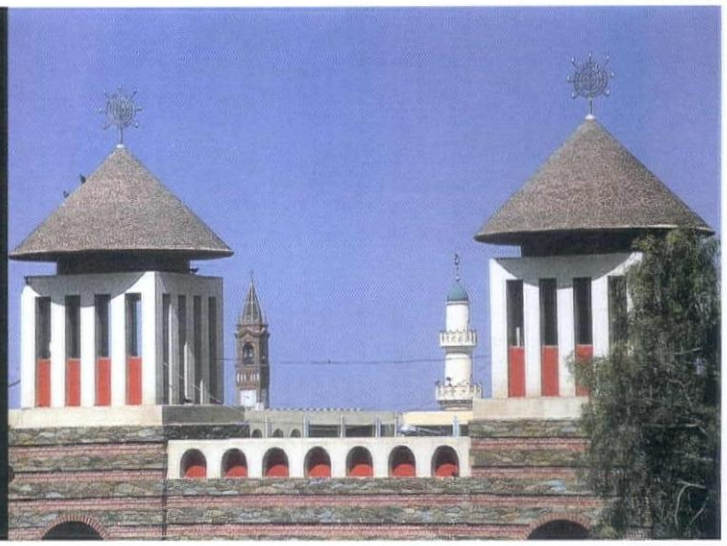
Often 'big' is synonymous with tall. So, if we judge by the book, what will the skyscrapers of the future be like? The shape will have been tested in a wind tunnel to ensure that it is at least partially naturally ventilated. Some will have single skins and some will have double with the decision being made on an ill-defined mix of climate, calculation and the respective personalities of the architects and engineers. Plants will find their way into atria or onto balconies – or, depending on the budget, window boxes. Part or all of the rainwater and wastewater will be treated within the building.

And what will the cities of the future be like? Probably a mixture of 'big green', 'baby green' and 'medium-sized green' with the land designed to maximize the solar potential (sun and wind). Between the buildings there will be parks, pedestrians and efficient public transport systems. Water and waste will be carefully managed and this will include extracting energy from waste.

I liked the variety of projects but my favourite was the as yet unrealized Ventiform building, a variant of 'Madonna's bra' with wind turbine added. And this wasn't because I was greatly convinced by the likely output of the windmill. Rather it was the imagination that the project showed, and its sensual forms, reminding us that we should design in 'green' without preconceptions.

The engineer in me would have liked a bit more science in the book. The pragmatist in me, looking at such a variety of options kept asking questions like 'Does this make sense?' and 'Are some of these things better than others?'

RANDALL THOMAS



Orthodox Cathedral, Asmara. From *Asmara, Africa's Secret Modernist City* by Edward Denison, Guang Yu Ren and Naigzy Gebremedhin, Merrell, London and New York, 2003, £35.00. Loving and extensive exploration of miraculously preserved mainly Italian colonial architecture in the capital of Eritrea. Italian African Modernism had extraordinary range: Art Deco to Moorish.

ECOLOGICAL RETHINK

CRADLE TO CRADLE: REMAKING THE WAY WE MAKE THINGS

By William McDonough and Michael Braungart. New York: Northpoint Press. 2002. $25

Americans don't do guilt. Forget Kyoto and all those CO_2 emissions – guilt represents negative thinking, and the USA believes in positivism. They do get worried about toxins in the environment, however, which this book reminds us are abundant and ever present. The Germans are also attuned to the way we poison ourselves, and have introduced legislation to enforce corporate responsibility. Put together an American architect and a German chemist, and you are bound to produce a book that takes a radical and upbeat look at the way we make things.

McDonough and Braungart propose an alternative to the conventional 'cradle-to-grave' manufacturing model, not by signing up to the concept of 'reduce, reuse and recycle' but by suggesting that we actually eliminate the whole concept of waste. They redefine manufacturing as the temporary assembly of biological nutrients – those that are conceived by nature – and technical nutrients which are essentially pure man-made substances. Conventional recycling is seen more as 'down-cycling' with technical resources being devalued and polluted by endless manufacturing processes: we need to be thinking about the next use of the material within the current design process.

Time magazine called McDonough a 'hero for the planet'. Here is someone who, like Amory Lovins, has raised awareness of sustainability issues in the States by accentuating the positive – offering a technical solution that doesn't mean less economic activity and more regulation. McDonough and Braungart work with and for the corporate world – Ford, Nike and Herman Miller, in their pursuit of eco effectiveness, as opposed to eco efficiency.

There is convincing evidence presented of Braungart's impact on the chemistry of various product manufacturing processes. But what of McDonough's architecture? Anecdotes published here and illustrations elsewhere suggest that though it rises above the corporate common denominator it doesn't appear to have the theoretical rigour of his chemist partner.

The environmental movement needs theorists and salesmen to change our way of thinking about the world and this book does raise the next set of questions for architects which is less to do with how much energy does my building use, but what is it made of, where did it come from and where is it going? It's a pity the book couldn't offer better examples of the architectural implications of this approach.

PETER CLEGG

Book reviews from this and recent issues of The Architectural Review can now be seen on our website at www.arplus.com and the books can be ordered online, many at special discount.

delight







IN ROME'S TRASTEVERE, THIS EXTRAORDINARILY COMPRESSED AND DISTILLED FUNERARY CHAPEL OFFERS VISIONS OF THE WORLD OF THE SPIRIT THROUGH BRAVURA PERFORMANCE IN OUR MATERIAL SPHERE.

Santa Maria in Trastevere is a typical Roman basilica. Nothing could be more reassuring and comprehensible than its simple planning and construction. But an arch off the north aisle frames quite a different sort of architecture: the funerary Capella Avila, designed by Antonio Gherardi in the 1680s.

This must be one of the most frenzied 18 metres cubed of space to be found anywhere. A toplit, monochromatic double cube has been articulated to the point of its own dissolution. Four walls and a roof have become a Greek cross supporting a dome. This itself opens onto a vision of four angels carrying a little sunlit *tempietto*.

The altar wall houses another little building. Above, a bright upper chapel is glimpsed through a miniature balconied window. Below, a colonnade recedes in false perspective to the sarcophagus of the donor, bathed in light. But how much of this are we actually meant to believe? Why create a self-evidently false perspective? Why make a balcony only a midget could appear at? Are we really meant to believe that it's angels performing structural gymnastics up there?

Paradoxically, the pleasure we derive from an illusion is increased by our knowledge that it is an illusion – by the very fact that it doesn't work. This chapel invites us to marvel at the improbability of the world it implies, and to reflect upon its impossibility.

This is a tomb. The architecture of the chapel is a gateway from one world to another, from the irreducible world of statics and ergonomics and lighting studies to one in which no such rules need apply. This tiny building is the representation of another more heavenly one, never to be realized this side of the grave.

We may be living in an age lacking in such heavenly models, yet the Capella Avila still delights, not because it is fired with faith, but because it is so knowing about our lack of it. We peer through it into another world, while we applaud its bravura performance in this one. Real and illusion, it allows us both to believe and not to believe. EDWARD HOLLIS

Photographs by the author