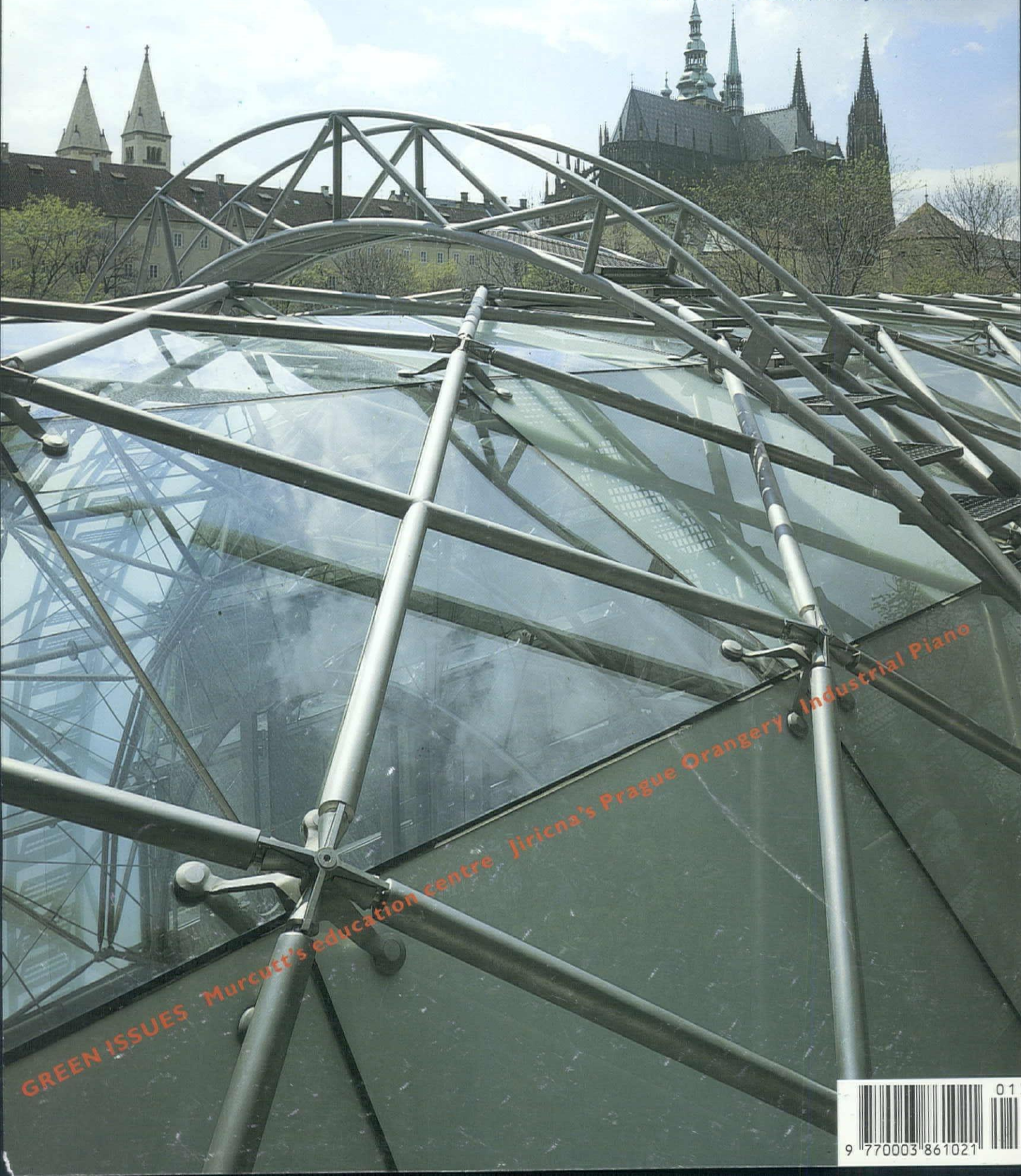


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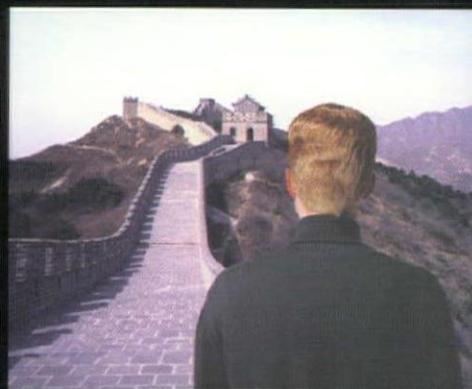


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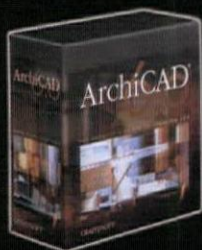


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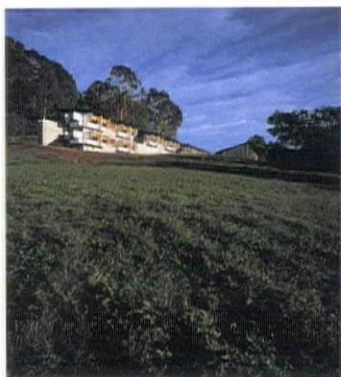
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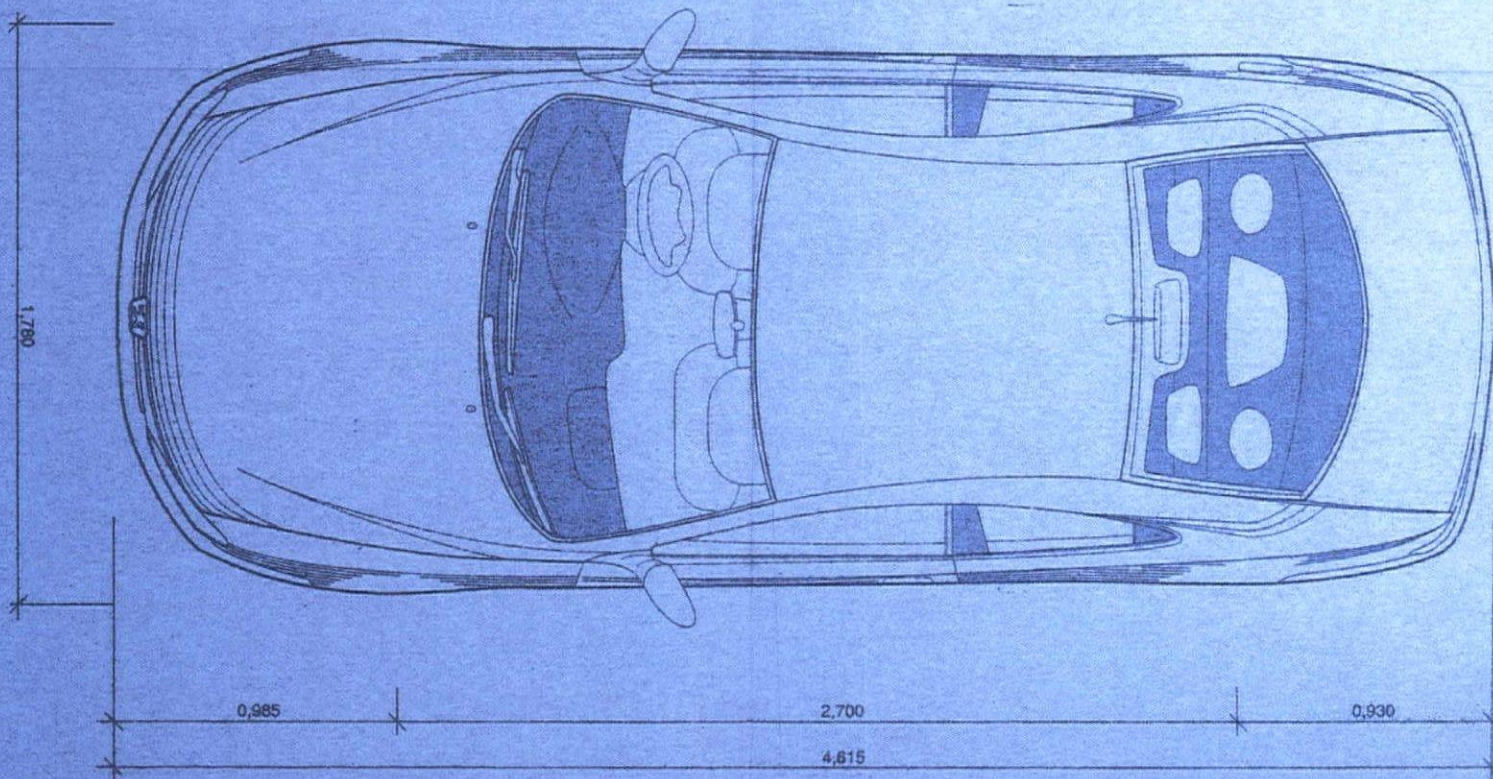
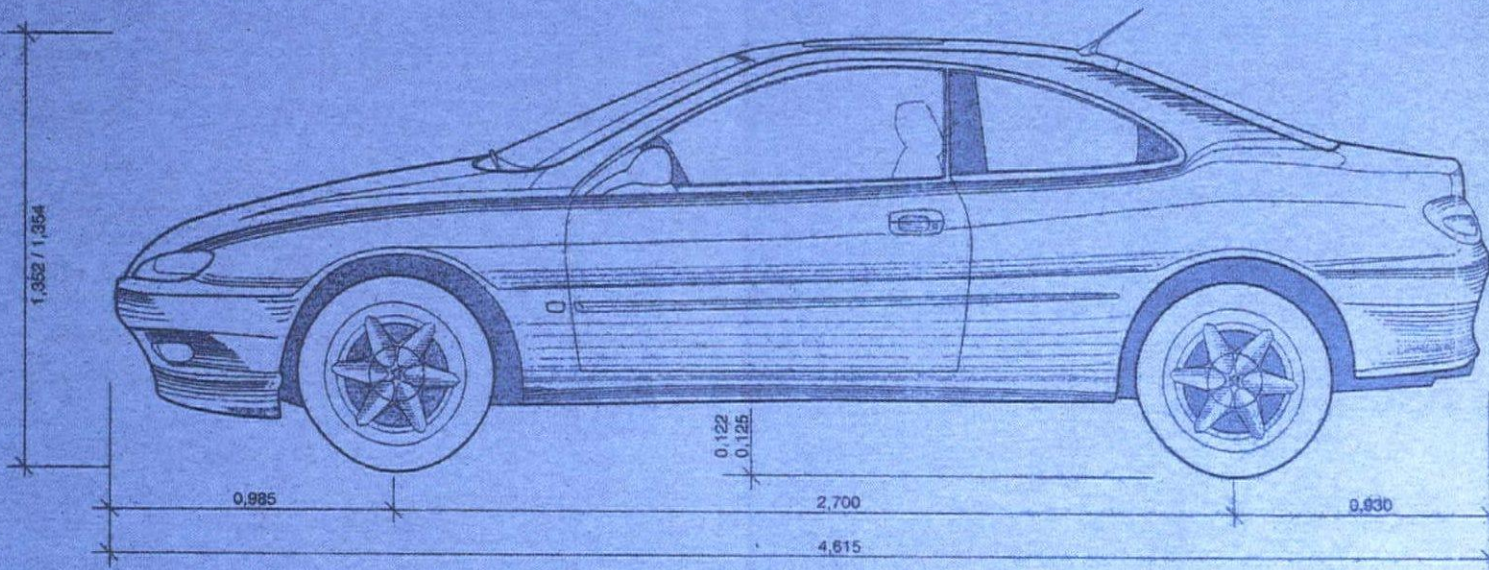
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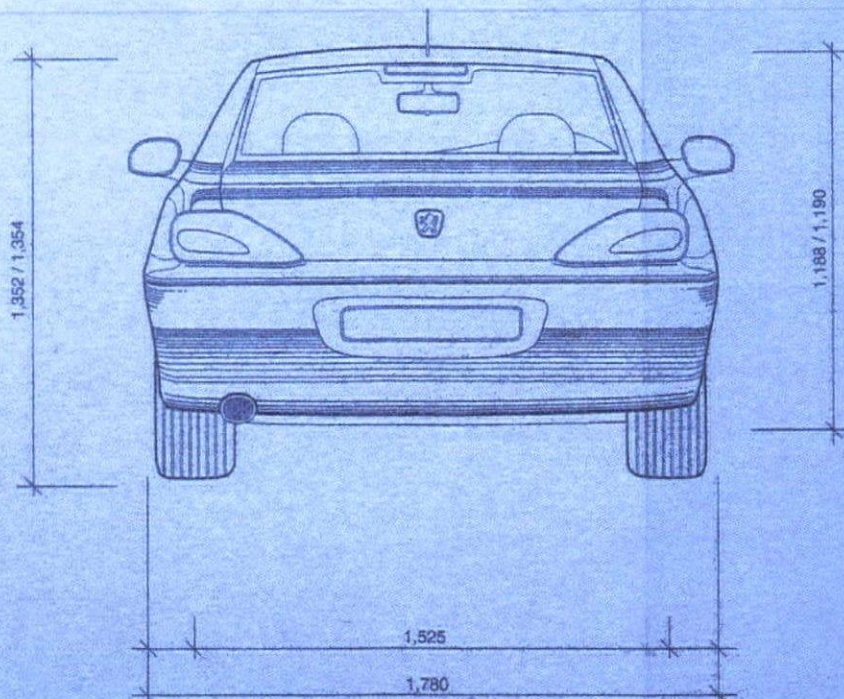
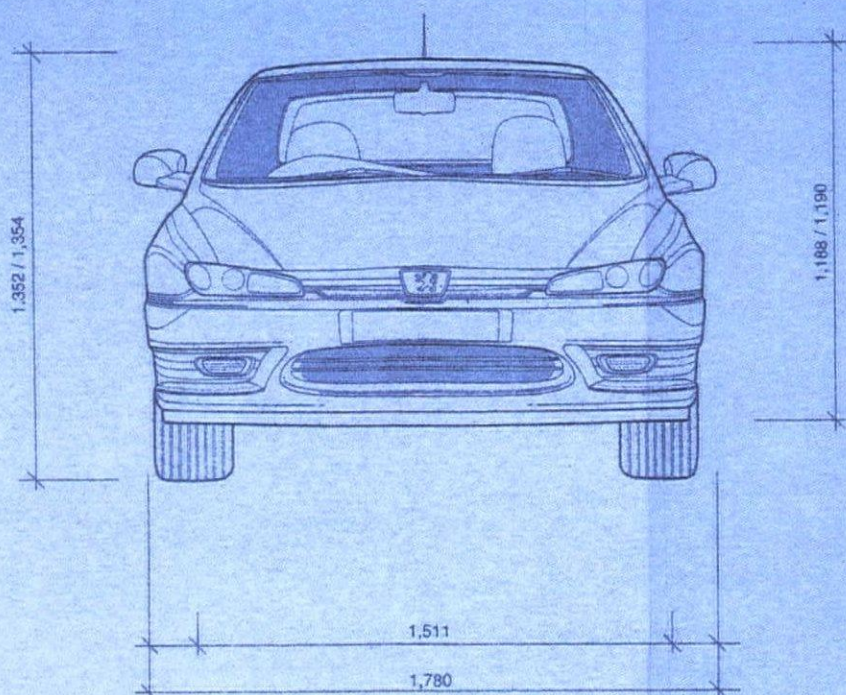
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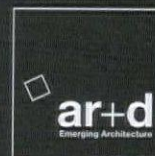


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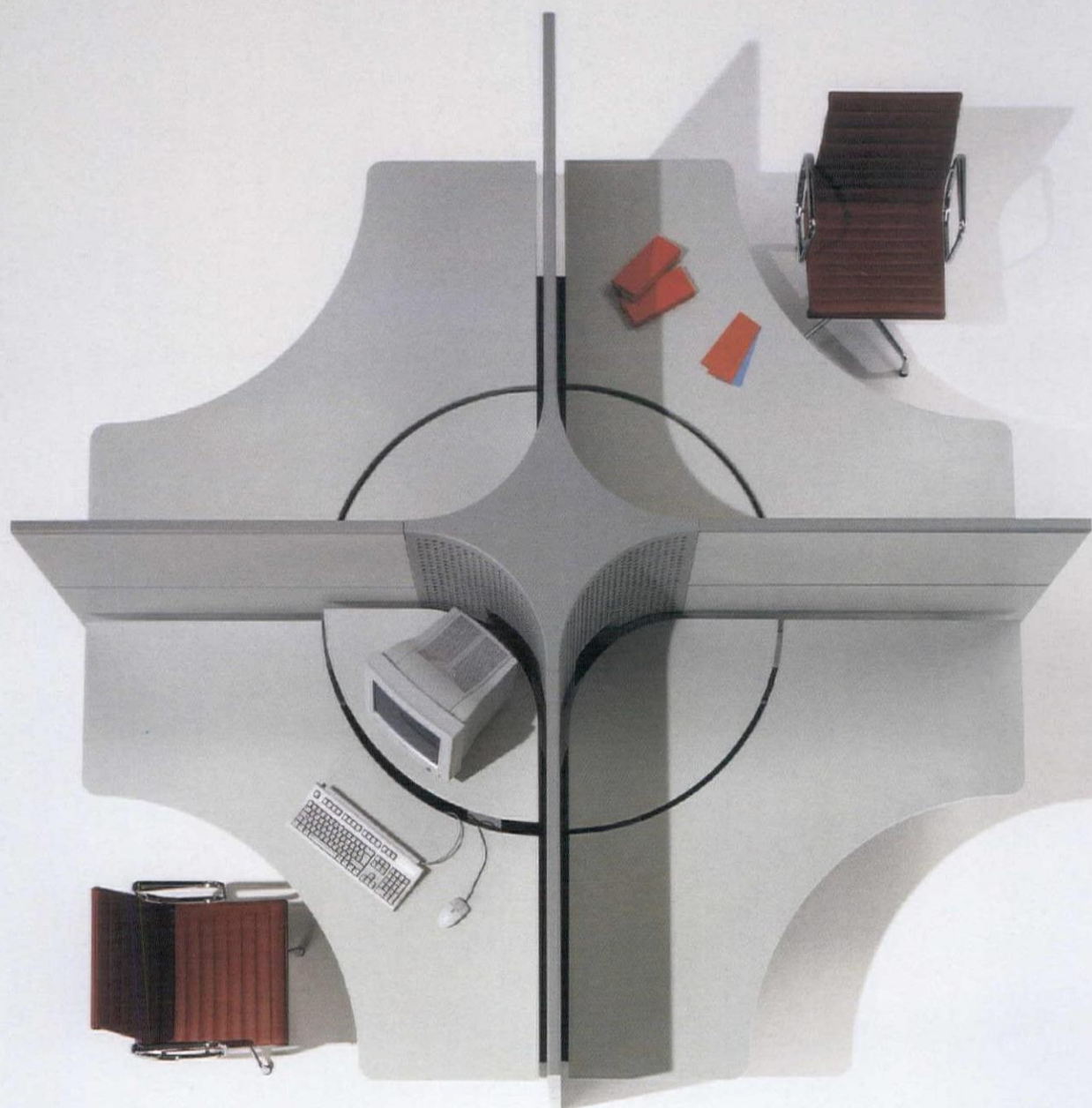


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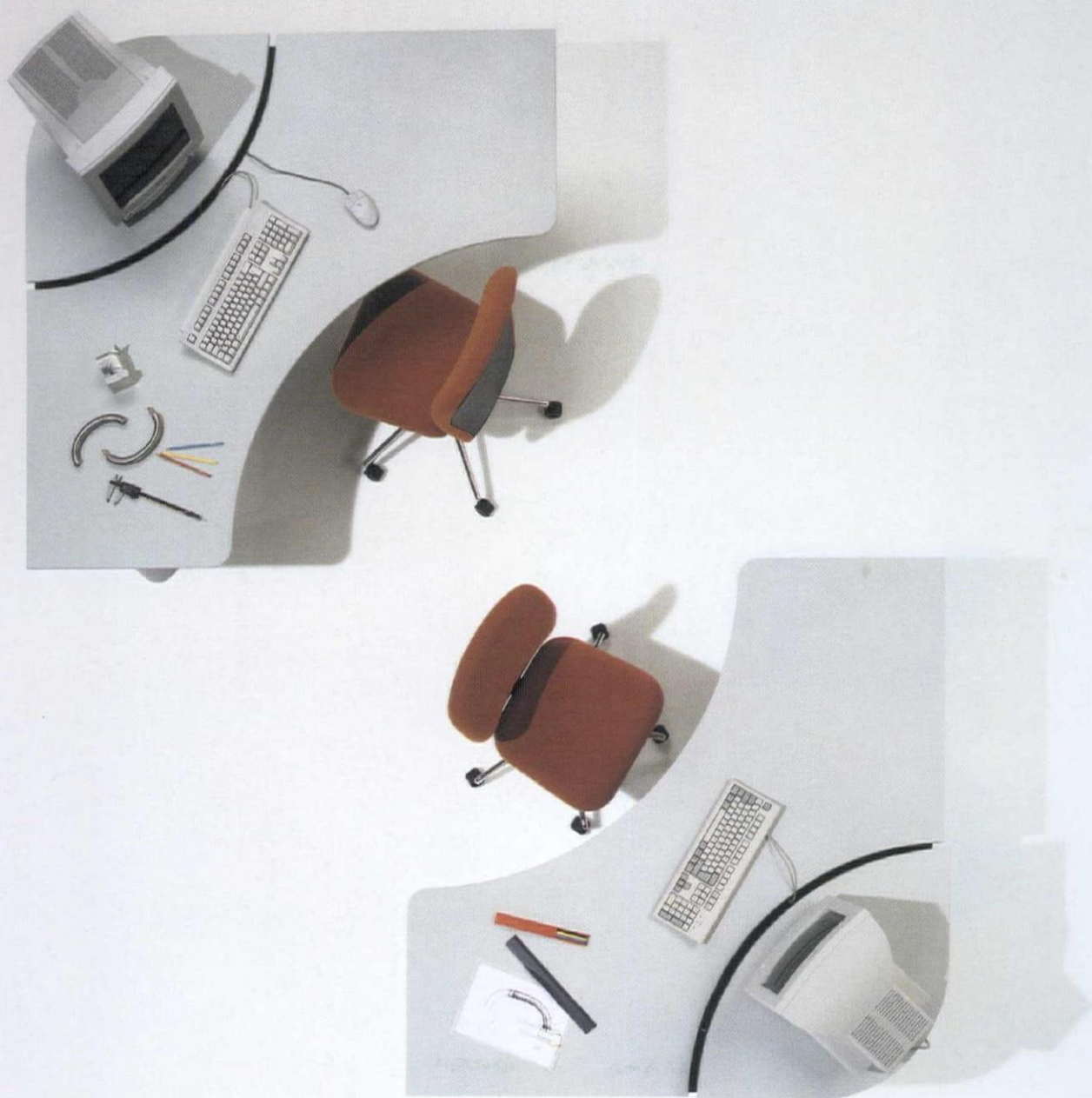
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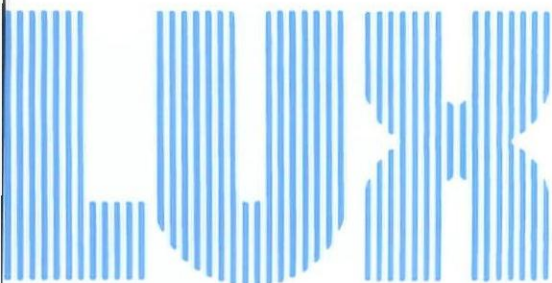
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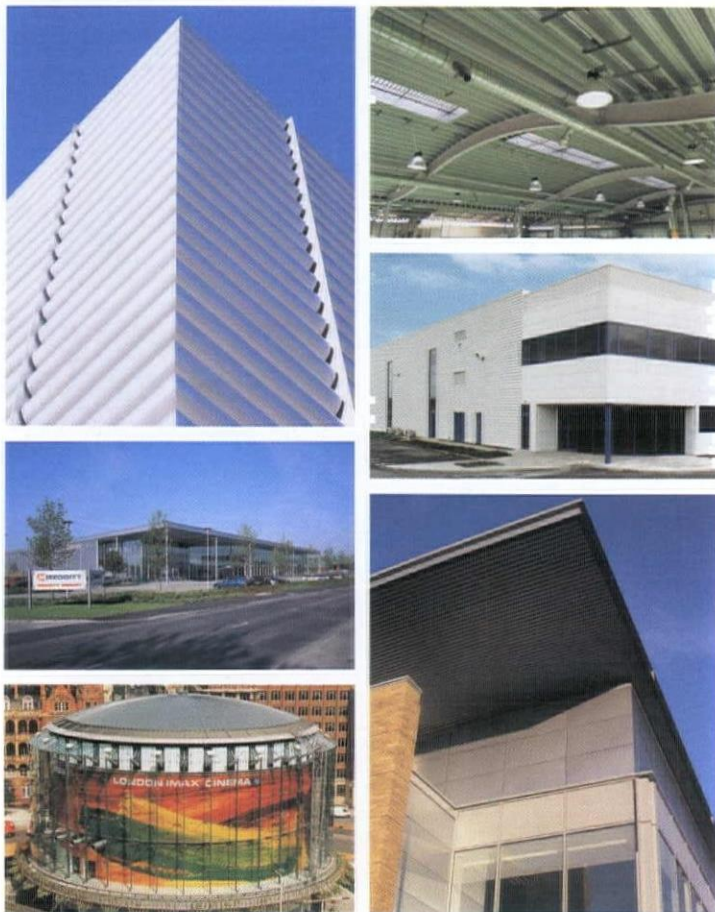


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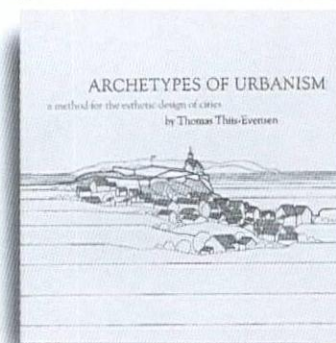
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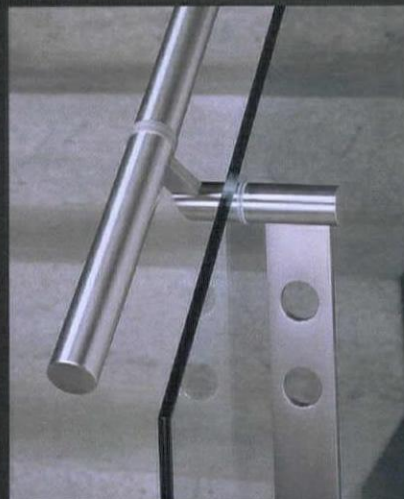
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As we stumble into the new millennium, responding to the threat of environmental catastrophe remains the most urgent issue facing humankind. In response to this, issues of sustainability are redefining architecture.

IN THIS FIRST ISSUE OF A NEW CENTURY AND A NEW millennium, we return to themes of architecture and sustainability. These are fundamental issues at the core of our precarious relationship with the planet. Despite differences in definitions, perspectives and priorities, sustainability remains a critical challenge. For the developed world, the predicament is how to maintain reasonable consumption and living standards while reducing greenhouse gas emissions. For emerging nations, the problem is how to meet basic need, transcend conditions of marginality, and improve levels of economic sustenance without generating the damaging pollution prevalent in industrial societies. The consequences of complacency will fuel the future degradation of our ecosystem and an environmental apocalypse capable of matching the direst medieval imaginings.

Addressing these goals means developing better, more responsive ways of managing shelter, infrastructure and built spaces. Current conceptions of sustainability are rooted in the 1987 Brundtland Report, *Our Common Future*, which defined this form of development as 'Meeting the needs of the present without compromising the needs of future generations to meet their own needs'. This serves as a starting point, but it hardly suffices as an analytical guide or policy directive. In many areas of the world, priorities are still shaped by the dual imperatives of survival and endurance. Clearly, sustainability is only partly about evolving new concepts of built form. More essential are the political and social changes needed to make sense of our increasingly divisive and relentlessly urbanizing world.

Since the Industrial Revolution, but more particularly in the present century, the twin phenomena of more widely diffused wealth and cheaper energy have resulted in a greater prevalence of energy use. Historical comparisons are revealing. The cost of maintaining a high efficiency artificial light source, for instance, is one thousandth of that which a tallow candle represented 100 years ago. Such reductions in proportional cost and affordability apply not only to energy, but also to materials produced or transported using energy. Until the oil crises of the 1970s shocked the developed world out of its apathy, it had seemed unnecessary and irrelevant to make connections between design and energy use, as the cost of making and maintaining buildings was relatively low. However, buildings currently constitute the single largest energy-consuming human creation, with the simple consequence that the sustainability of the built environment has a major impact on the global ecosystem. In response to this, new agendas are evolving. Instead of energy-consuming, static environmental receivers, buildings are being recast as energy-generating, dynamic environmental controllers. Critical work is also being done at all levels, from the re-evaluation of patterns of human settlement and strategies of urban development, to the reconfiguration of large- and small-scale building

projects. The most significant issue driving these initiatives is an expanding and interactive macrocosmic notion of sustainability.

On microcosmic level, a language of sustainable design is developing which relies on complementary ways of learning and evaluating. These represent a synthesis of tradition and technology. First, through an intuitive understanding of the innate qualities of architectural forms and materials as these manifest themselves in different building types and climates, reinforced by awareness of vernacular tradition. Second, through empirical knowledge derived not only from measurement but also from direct experience of buildings. Third, by abstract modelling and simulation, which are means of informing design and assessing buildings in practice. Together these serve as criteria for evaluating environmental performance.

IN ARCHITECTURAL TERMS, this has engendered a re-opening of the inside-outside relationships in buildings, with both physical and experiential consequences. Devices such as solar shading, screens, balconies, *brise-soleil*, and shutters add layering and complexity to the external envelope. Many buildings now display different degrees of enclosure, which may be inhabited more flexibly, with potential to respond to changes in the external environment. As a result of this rediscovery of the relationship between outside and inside, we have a greater opportunity to be aware of both being in and being part of the environment. This touches on primal human experience. As Roger Stonehouse observes 'In part this is an argument for phenomenology and physics; it is an argument for the living room which enhances the snowy day, with Frank Lloyd Wright's "fire burning deep in the masonry of the house itself"; for lying in bed on a hot sunny afternoon, the curtains swaying in the breeze, the dappled light, the sound of leaves rustling and distant voices and the scent of blossom through the window; the physics of heat and air flow expressed through and exploited through the forms of the buildings, which are the places of our dwelling in the world. It is an argument for dwelling with rather than against the environment.'¹

Two thousand years ago, Vitruvius composed the *Ten Books on Architecture*, which form part of every architect's education. To the triad of firmness, commodity and delight, we might postulate the addition of a fourth ideal: *restitutas*, or restitution, restoration, whereby the act of building enhances its local and global environment in an ecologically responsible manner.² As we address the new millennium, sustainability should not be seen simply as a corrective force, but as a new mandate for architecture. CATHERINE SLESSOR

¹ *Dimensions of Sustainability: architecture, form, technology, environment, culture*, edited by Andrew Scott, London, Spon, 1998, p127.

² For an elaboration of this idea see *A Green Vitruvius: principles and practice of sustainable architectural design*, various authors, London, James & James, 1999. Sponsored by the European Commission, it is intended as a working primer for sustainable architecture.

view

BERNARD TSCHUMI EXTENDS HIS OWN UNIVERSITY IN NEW YORK WITH AN INTERVENTION WHICH COMBINES DARING AND CONTEXTUALISM. BEIRUT BECOMES BATTLEGROUND FOR URBAN IDEAS. RADICAL BRIDGE DESIGN. CUBA RECONSIDERS HEROIC PHASE OF REVOLUTIONARY ARCHITECTURE.

TSCHUMI BUILDS COLUMBIA

Bernard Tschumi has been Dean of the architecture school at Columbia University, New York for over a decade, and he has now made a major built contribution to the university and surrounding city – his first substantial building in the US. Paula Deitz reports.

In 1983, Bernard Tschumi invented a new iconic form with his fire-engine-red, shiny metallic follies scattered throughout the Parc de la Villette. These cubic structures in the style of Constructivist sculpture were full of personality with multifarious appendages as well as angled walls, ramps, landings and curlicue spiral stairways. At that time, Tschumi already had a foothold in New York teaching at Cooper Union.

His romantic almost cinematic view of cities remains integral to his designs and is an important element in his concept for the Alfred Lerner Hall Student Center, Tschumi's first building in the United States recently completed at Columbia University, where, since 1988, he has been Dean of the Graduate School of Architecture, Planning and Preserva-

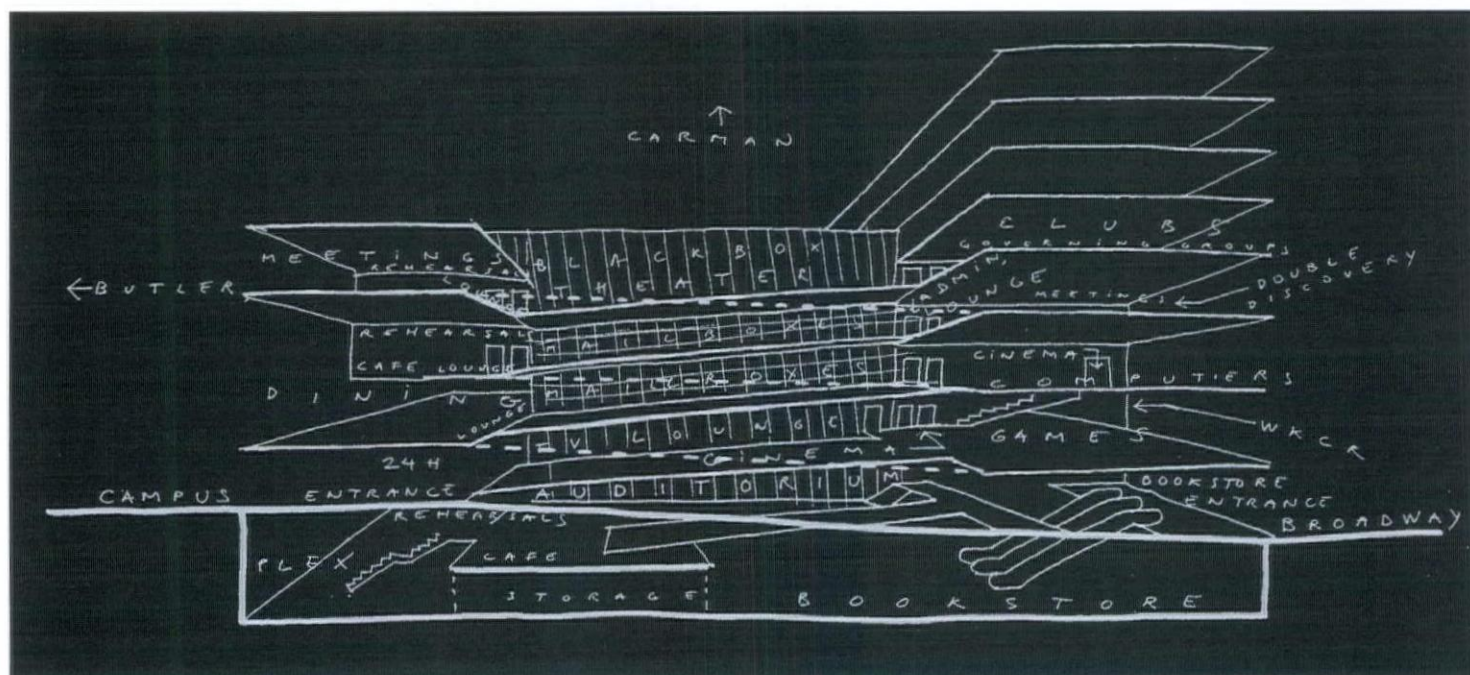
tion. Little more than a century has passed since Charles Follen McKim submitted to the Columbia trustees the 1893 McKim, Mead & White masterplan for the university on Manhattan's Upper West Side. By enclosing a campus from city streets with an irregular wall of brick and granite Italian Renaissance-style buildings, McKim created an interior landscape, a kind of Athenian agora. Student centres at most American universities are indistinguishable from airport lounges, cluttered with food services, shops and loud music. Fortunately, from the central glass court to the basement bookstore, Lerner Hall is refreshingly though not deadeningly quiet, since activity spaces are behind closed doors, most of them glass. One can see the computer rooms, lounges, cafés, theatre spaces, cinema, concert hall and student organization offices without being thrust into their midst.

Tschumi, who designed Lerner Hall in association with New York architects Gruzen Samton, has imported many of the forms and materials that make the Paris follies so playful and memorable. One of McKim's original ideas was to repeat the outer circle of buildings in an inner one with courtyards separating the two. Tschumi took this concept of solids and

voids to heart by designing two high structures, eight storeys on the Broadway elevation and five storeys of the campus side, and joining them by a glass inner court as an extension of the adjacent courtyard.

This five-storey Great Court, accessed by a suspended network of translucent glass ramps weaving back and forth along a solid glass wall, creates a new perspective on the campus with the kind of glamorous New York interior so prevalent in the film world of a certain period – like those glass penthouses that overlooked the city at night. The Columbia campus, with its majestic buildings and greenswards and students crisscrossing the plazas, makes for fine viewing day or night. It might not displease Tschumi to say that you can easily imagine Fred Astaire and Ginger Rogers dancing along the glass and steel ramps at night, when they are tinted with blue light, while outside the campus is magically aglow. Seeking an all-weather version of the Low Library steps, which serve as a general meeting place for students, Tschumi designed the circulation system as a social space.

By lining the inner walls on two floors with six thousand metal mailboxes – a utilitarian but still decorative element – he ensures each stu-



dent's coming to the ramps once a day for four years. When time is of the essence, there are staircases linked to the ramps and an intermediary balcony called the Sky Lounge for a conversational pause. But mostly, the Glass Court is like a garden folly in the sense of being a fantasy world, a floating environment or promenade deck, allowing the imagination to inhabit the inner-outer space with a pleasure that goes beyond the quotidian experience expected in a student centre. In addition to the sleek transparency of the mullionless double-glazed facade – the largest in America, they say – the steel claws and gravity arms, trusses, brackets and wire cables under tension create a silvery filigree that was fabricated, not unsurprisingly, by the French company Eiffel Constructions Metalliques which engineered the Eiffel Tower, the paramount romantic industrial form. Although Tschumi is not considered a contextual architect, he adhered closely to the McKim, Mead & White elevations on Broadway with Flemish-bond brickwork and Vermont granite trim but introduced subtle differences like a bullnose string course in glass brick to correspond to the granite one of neighbouring Fernald Hall.

Inside, light filters through this channel of glass brick to the corridors. The sightlines of ceilings and doors off the Great Court may be skewed by the sloping surfaces of the ramps, but such basic materials as wood, cinder block, glass and acoustic panels give the interiors a subdued atmosphere. Once the building opened, the central columns of the Great Court seemed to be transformed into Parisian kiosks festooned with activity announcements in riotous colours as if the students ran up their own flag to announce occupation.



Left: McKim's campus surrounded by wall of buildings – Tschumi being contextual. Above, his transparent wall to the Great Court with, below and sketch opposite, circulation as multi-use social space.



BEIRUT PLANNING BATTLES

The centre of Beirut, devastated by the Lebanon civil war, has become the site of intense arguments about the nature of urban planning and the relationships of built fabric to human life. A potentially comprehensive masterplan has been made, but it faces much opposition on many fronts.

Nowhere could have been a better forum for the Aga Khan Award conference on new architecture in changing Middle Eastern societies than Beirut late last year. A decade after the civil war ended, the old city centre is still only very partly redeveloped, though elsewhere the city explodes along the shore line and up into the foothills of the mountains with endless little high-rises and villas. Beirut has become the Los Angeles of the Levant, heartless, directionless and endlessly messy.

But plans have been made to give the city new life in the historic centre, much of which was destroyed in the civil war which ended 10 years ago. In the early '70s before the war, the old centre (on which layers of development have been deposited by everyone: the Romans, Byzantines, Ottomans, French) was still the Central Business District, based on the first foundation by the Phoenicians. But, as in many unplanned cities of the New World, secondary centres had begun to spring up among the sprawl. Of course, these have become the principal business foci in the last 25 years.

In an attempt to restore the centre to its former primacy, and to give the whole conglomerate mess some sort of heart, a private company, Solidère, was set up to plan and redevelop the centre. Half the shares were given to all who owned or leased property in the old centre in return for foregoing control of individual plots. The other shares were sold on the market.



In the least destroyed areas, restored mosques and tenements modelled on Paris jostle with ruins.

Angus Gavin, Planning Advisor to the Chairman of Solidère, explained the plan's principles. Though Solidère is private, half the total area will be in the public domain. To counter critics who argued that the planners have behaved like some in Europe after the Second World War, levelling far more than was needed to obtain a *tabula rasa*, Gavin pointed out that 300 buildings have been saved, 35 per cent of the whole. Development rights have been transferred away from areas in which buildings are to be preserved. But in many ways, the masterplan is intended to be 'flexible, market orientated, and a means of organic city-making'. One of its main aims is to have mixed uses: 'the Levantine pluralist ideal'.

Although the plan will change as it grows,

there will be what Gavin called 'street-wall control applied to all main streets in the historic core. High-rise elements will be set back from the street elevations'. There will be a new public park (previously unknown in Beirut); it is being created on top of a huge mass of rubbish thrown into the sea when public services broke down in the civil war.

Gavin and Solidère were criticized on many grounds. For all the commitment to mixed uses argued Jamel Abed (of the architecture department in the American University of Beirut), 'the Solidère scheme is isolated by a ring road and is arranged to be visually consumed by businessmen and tourists. Blue collar workers have been expelled'. Gavin replied that rents were to be held in middle range. Surrounding roads were there anyway, and traditional sea-facing centres of cities like Boston and Baltimore had been revived, even though they were partly cut off from the rest of the city fabric by urban motorways.

Abdel Halim Jabr (local architect and lecturer at the university), believed Solidère was necessary, and had produced 'a fine example of urban design' within too firm boundaries. But he argued that too many planning decisions 'were taken for marketing reasons'. It needs a boom to take off, he said, 'at present it is a site-and-services area for international companies which have not yet come'. Others argued that the new buildings will be examples of American international capitalist mediocrity. Gavin was robust: Beirut's centre will have 'an architecture of place and context, with extravagant exceptions'.

Clearly not everything is perfect in the Solidère area. There is no public transport (its economic and physical infrastructure was destroyed in the civil war) – no proper modern city can exist without it. Extra stories have been added to some of the fine remaining French-Levantine buildings; ancient finds will be lost; a change in government has blocked planning permissions (Jabr proclaimed that 'we are still playing out our war, but using urban development').

Yet for all the difficulties, the plan does have promise: flexibility and mixed development, yet attention to place-making; an attempt to control the car and the possibility of public transport in future; a sense of the public realm, so rare in the Middle East, which will be found in the boulevards and squares as well the new park. Gavin, perhaps optimistically, urged 'if Berlin can do it, so can Beirut'.

Someone criticized the plan for having no soul: 'We will give it one', he cried, not specifying how. But it seems, that with reasonable luck, Beirut's centre might grow a spirit of its own and the services of the soul transplant surgeon will not be needed. PETER DAVEY



Solidère plan is intended to define main boulevards and public spaces like park (right foreground). Remaining old buildings to be locked into new fabric.

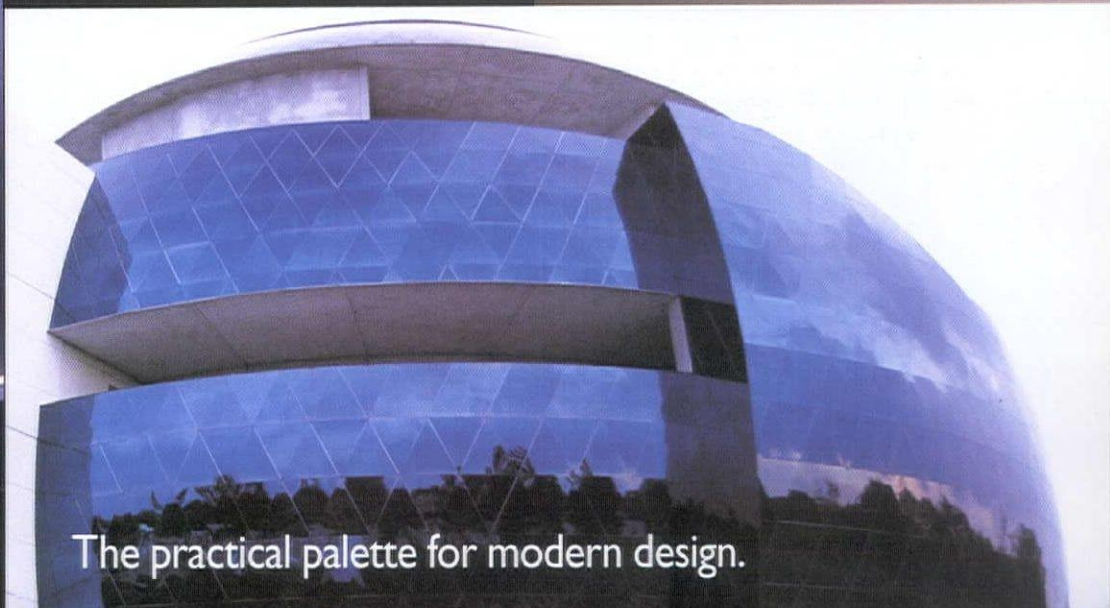


Restored tenements: Paris-Levantine flavour, but with added storeys.



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Multiplicity



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the browser

We cannot yet find websites which have the authority of books or magazines: they tend to focus on photographs or words to the exclusion of drawings. Here are some of the most promising picture collections.

AGRAM

www.bk.tudelft.nl/d-arch/agram

Agram is a collection of data-bases on (as yet) a few master architects on a site run by the architecture department of the University of Delft. Data is largely visual, photographs, not drawings. Each entry has summary information about the project and, usually, several decent photographs from named sources. Pictures of each project are shown as a miniature catalogue and each can be enlarged on the screen in the normal way. Sorts are possible (in English) by name and date of design, and searches by name are possible, but not with Boolean operators. A very short biography is appended to each database. So far, the only architects covered are Le Corbusier, Duiker, Jujol, Loos, Schinkel and Melnikov. The format and choice of subjects has been approved by a distinguished board: Wiek Rüling, Max Risselada, Kenneth Frampton and Beatrice Collonna.

Clearly a site with much potential, both for inclusion of

other architects, and for including further information (particularly drawings), but useful now, none the less. For instance on the Corb site www.bk.tudelft.nl/d-arch/agram/corbu/INDEX.HTM, Pessac is shown in the state when it was adapted by the inhabitants, and as renovated now. Chandigarh's entry has pictures of selected main spaces which would be difficult to get without going there.

The Digital Imaging Project

www.bluffton.edu/~sullivanm/index/index.html

The project (run by Mary Anne Sullivan of Bluffton College) provides digital images of European and North American architecture from Classical Greek times to Post Modernism. Searches may be made by place, artist or architect or chronologically. Sometimes coverage is quite thorough – for instance of Wright's houses or Bernini's Four Rivers statue in the Piazza Navona, which have overall views and details. But architecture is at a disadvantage as there are no drawings, and though you might be able to put a sculpture together in your head from a few images, that is impossible in architecture except for the most primitive of huts.

This seems to be a lively site which is acquiring new material rapidly, but it has heavy biases. For instance a query about Ictinus raised no responses: in fact there are as yet no Greek buildings at all. The great majority of build-

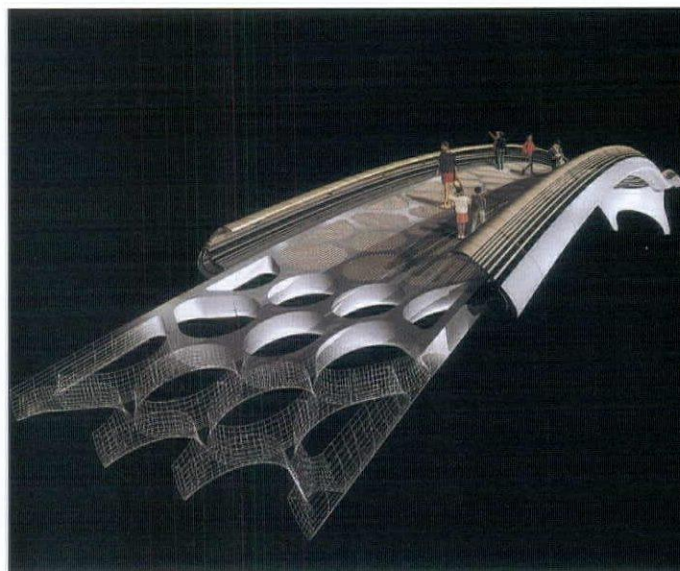
ings are from the US in this century, even to the point where Foster and Isozaki are represented solely by the odd building in that country. Patchiness is explained by the fact that, so far, all the images are taken by the web organizer herself. She hopes to add more of her own images, travel more and use pictures by others. We wish her well – and plenty of airline tickets.

Skew Arch

www.skewarch.com/index.htm

Skew Arch is a funny little site that (like many these days) could develop into something important and comprehensive. At the moment, however, it is pretty skimpy. It sets out to 'provide inspiration for your creative mind' and has entries on a list of Master Architects which are all twentieth century, and are represented by a potted biography, a few images (if you are lucky) and a note of recent publications. I was surprised to find that on my computer at least Aalto's biography ran out in 1940. Other architects in this category include Stephen Holl, Rem Koolhaas, Daniel Libeskind, Carlos [sic] Scarpa and Peter Zumthor.

There is another category called 'contemporary architects' (difficult to know what Holl, Zumthor and the rest would think about being moved into the historic monuments division). 'Contemporary architects' only has four entries, including Joon Park and Dominick De Angeles.



A team from Foster and Partners and Buro Happold has won the international young engineers' John Barrett Prize for a pedestrian bridge next to Abraham Darby's first ever metal bridge, in Coalbrookdale, England. Daniel Goldberg (Foster's), Jamie Hillier and Daryosh Gulparvar (of Happold's) proposed a gently double-curving lightweight structure of standard Y-shaped carbon fibre modular elements to form a deck perforated by large holes filled by semi-transparent timber-metal panels; through them will be downward views of the river. The structure, like that of its 220 year old cast iron neighbour, becomes more stiff as it consolidates compressively when it begins to deform under imposed loads.

A further small category is called projects, which covers an eclectic mix of work ranging from La Tourette to the Morphosis Studio at the Pratt. Included here are the drawings of a certain Gamal El Zoghby which, as he explains contain 'purely ethereal and personal imagery actualized in a subliminal series of split-second events'. If you feel the urge for this kind of rather fey stuff, Skew Arch is for you. There is an interactive bulletin board to which you can contribute.

competitions & awards

Latest international competitions for architects and students.

DuPont Benedictus Awards

Registration and submission: 6 March 2000

Prizes: Glass sculpture, publication of winners
Fee: none

Eligibility: open to registered architects; projects completed since 1 January 1995

Jury: Arthur C. Erickson, Thomas Phifer

Named after Edouard Benedictus, a French chemist who discovered the process for laminating glass, this established international architectural awards programme recognizes the innovative use of laminated glass in commercial and residential projects.

For further information and registration apply to:
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Washington
DC 20006
USA
Tel: +1 202 626 7446
Fax: +1 202 626 7425
Email: vierras@aiaemail.aia.org
Website: www.aiaonline.com

Opera House, Oslo

Registration and submission: 16 March 2000

Prizes: total 5 million Nkr;
first prize 2 million Nkr
Fee: 5000 Nkr

Eligibility: registered architects

Jury: includes Juha Leiviskä, Sigrun Aunuan, Kari Nissen and Anna Maria Indrio

The Norwegian parliament recently approved the con-

struction of a new opera house in Oslo, in a decision that represents a major political boost for opera and ballet in Norway. The site lies beside the fjord at Bjørvika, at the heart of Oslo's waterfront. At 35 000 sq m, the opera house will be Norway's largest building for the performing arts.

Further information and registration: Gaute Baalsrud
Norske Arkitekters
Landsforbund
Josefinesgate 34
N-0351 Oslo
Tel: +47 23 33 25 00
Fax: +47 23 33 25 01
Email: nal@mnal.no
Website: www.mnal.no

Future Vision Housing

Registration and submission: 31 July 2000

Prizes: 20 000 Euros

Fee: none

Eligibility: architects under 35 years of age

Jury: to be announced

Ideas competition for radical housing of the future, reflecting changes in mobility, technology, demographics and culture. Each participant is expected to define and explore individual themes relevant to the brief.

Further information and registration:

Architekturforum ÖÖ
Bernaschekplatz 8
A-4040 Linz
Austria
Tel/Fax: +43 732 711701
Email: aaf.oee@net4you.co.at

Commonwealth

Association of Architects Student Competition:

A Traveller's Hotel

Registration and submission: 17 March 2000

Prizes: first, UK£1200;
second, £500; third, £200.

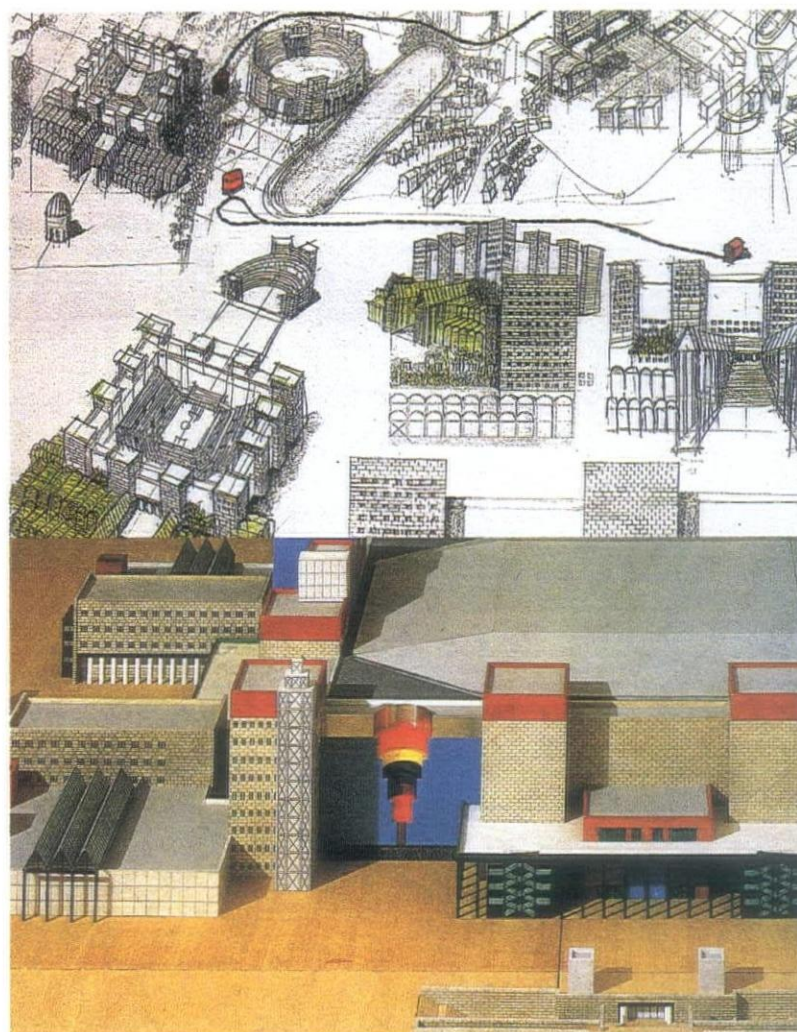
Special 1st or 2nd year prize: £200

Eligibility: students in British Commonwealth countries

Jury: Kenneth Yeang (Malaysia), Ian Athfield (New Zealand), Peter Davey (Editor of *The AR*)

Ideas competition for eco-friendly hotel catering for budget travellers.

Further details and registration: CAA Secretariat
66 Portland Place
London W1N 4AD
Tel: +44 171 490 3024
Fax +44 171 253 2592
Email: caa@gharchitects.demon.co.uk



outrage

Aldo Rossi was one of the twentieth century's most tender and thoughtful writers about the city, so it is a paradox that his urban work was often exceedingly tough, inhuman and un pitying.

Since his death in 1997, Rossi's ideas and buildings seem rather to have fallen out of architectural consciousness, but they are likely to become the focus of fierce debate again. Cecilia Cali writes from Milan urging that his Arena project should be the subject of this column. After over eight years, the Arena has been dusted down by the city council which intends to build after all. But Cali points out that 'although it was designed by one of the most famous architects in the past 20 years ... it is completely out of date from the functional point of view (the opinion of the majority of experts in sport and leisure facilities over 10 years ago when it was designed)'.

Rossi's typological theories caused him to forge the new building out of an amphitheatre set within a walled city with defensive towers, surrounded by a cluster of lower extra-mural subsidiary types. Rossi's usual austerity (either blank walls or masonry planes penetrated by the most rigorously regular grid of rectangular windows) is set off by what – for him – were joky incidents: red tops to the towers and other passages of intense colour. Rossi's heavy levity could sometimes be endearing, for instance in his delightful floating theatre in Venice. But here, it makes the buildings look as if they are built of giant Lego which, as Cali says 'expresses an absolute post-modernist kitsch'.

Save us Italians, she cries, from 'another example of post modernism which is destroying our cities'.

letters

CLASHING CERTIFICATES

SIR: The publication of two sets of architectural awards in one month was perhaps a coincidence, but one is struck by the contrast between the Stirling Prize (shown in the *RIBA Journal*) and your ar+d results. The winning schemes alone are astonishingly different: one, a glossy, expensive space craft landed in the middle of London to cater for cricket, an increasingly esoteric and unloved sport (at least in its homeland), the other a small and humble orphanage halfway up the Himalayas.

Comparisons may be odious, but they are certainly telling. The London building has, we are told, learned from the construction methods of the transport industries. The Nepal one draws on traditional techniques and materials, and the enthusiasm of the local community. On the one hand, it is difficult to see quite what the transfer of technology from transport will do for architecture – particularly when the ovoid upper part of the structure is made almost manually by a yacht manufacturer and attached to in-situ concrete legs (where are these normally used in the transport industries?) with junctions that are rather less than elegant.

On the other hand, the lessons of Nepal are clear and applicable to a wide range of buildings, not only in the Third World.

Yours etc

JANET HAYWARD

Amsterdam, the Netherlands

PC COMPATIBILITY

SIR: Your launch of the ar+d Awards undoubtedly does service to younger and relatively unknown architects around the world (though we had seen some before!). A provoking banquet was served up, but could the main dish, the Norwegian-Nepalese Orphanage, have been a little too overflavoured with the sauce of Political Correctness?

We look forward to further feasts, with slightly less conventional flavours.

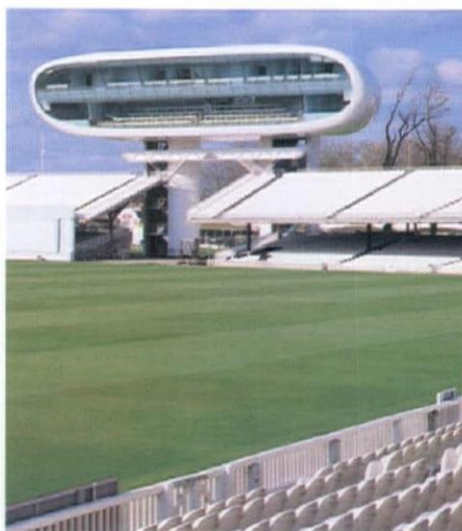
Yours etc

ENRICO JAMES

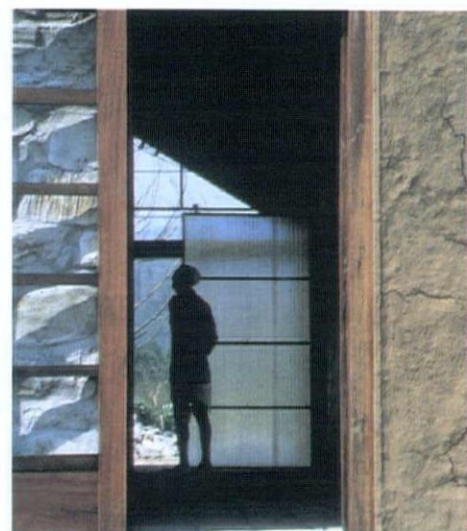
New York, USA

EDITORS BACKSTAGE PLEASE

SIR: A strange puzzle in AR October: a plea in your letters column (p34) to make buildings more human by showing people, or at least ways they might live sensibly – by having curtains at night. You present buildings as stage sets. But in a page or two, you were delighted to flaunt yourself, and your jury members in the act of deciding on the winners of your Award.



Contrasted awards: left, Lords Media Centre by Future Systems, given the Stirling Prize as best 1999 building in Britain; right, Himalayan orphanage by Hans Olav Hesseberg and Sixten Rahlff with Eli Synnevåg, winner of the ar+d Award.



Please try to get the balance right. People in buildings, yes – editors, writers and the rest in the background. Otherwise, you will end up like one of those trade American magazines, in which portraits of the protagonists seem as important as the buildings they try to show.

Yours etc

HERMAN BENZ

Cologne, Germany

CRACK AWAY

SIR: I disagree strongly with Simon Murray, who takes you to task for being superficial in your Outrage criticisms (AR November p34). Good buildings deserve thorough examination of all their parts, which you tend to do in your longer articles. But some are just so bad mannered, pretentious or coarse that they deserve thorough chastizing, no matter how well their innards work. Keep the cane swishing.

Yours etc

PHIL SWAINE

Sydney, Australia.

MONSTROUS MONUMENTS

SIR: Your leading article on architecture and housing (AR November) hits the chisel with force. You draw attention to how housing solutions used to be achievable which were both fine urban statements and liked by their inhabitants. This congruity of aim was because architects, developers and owner/tenants had things in common: wealth and the shared urban culture which flowed therefrom in days before the internal combustion engine. You don't often hear that housing of the poor in places like Bath or Boston made exemplary city patterns.

During the twentieth century, there has been a continual dichotomy between architects' desire to make formal statements and provision

for decent living conditions. A few have managed, in Germany during the '20s, in Sweden in the '40s, in Britain in the '50s. Even recently, one thinks of the work of people like Erskine and Behnisch, and some of the schemes that you showed in the issue. But the illustrations to your leader indicate that (at least in the Netherlands, and probably elsewhere) young housing architects have started to worship the monumental again with object tower blocks. What dreadful cost to urbanity and decency. Surely, in modern societies, there must be a vast area of design to be explored between such monstrosities of a would-be avant garde (outdated ideal surely) and the low grade productions of the developers which swarm across the landscapes of all First World countries.

Yours etc

HENRI LABONNE

Brussels

postscript

INTERBUILD GROWS INTERNATIONALLY

The international strength of Interbuild, the British building exhibition, grows apace. Relaunched to rival its great Continental contemporaries like *Bâtiment* in Paris and *Bau* in Munich, Interbuild is run as a joint venture between the AR's owners, Emap Business Communications, and the Montgomery Group, the founders of the century-old show.

To be held in Birmingham's National Exhibition Centre between 21 and 25 May next year, Interbuild already has agreements with over 1000 exhibitors, and a major effort has been made to attract leading international firms. The Doors, Windows and Facades section will include Schüco, Geze, Winkhaus, Hoppe, Yale Security and a host of others.



We believe in innovation

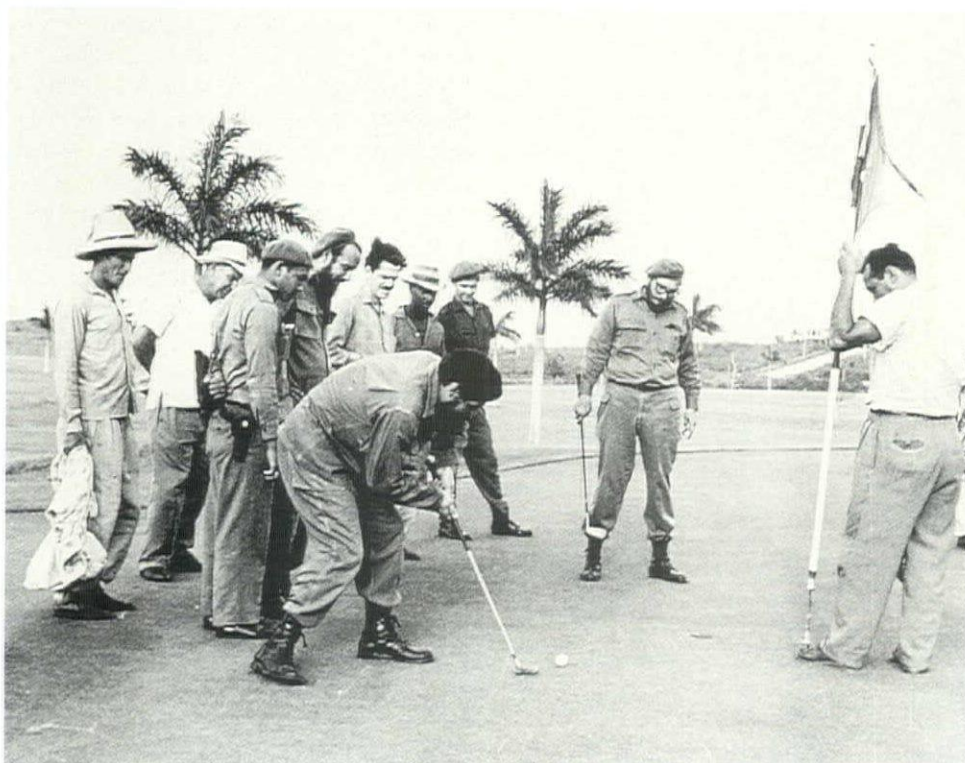
Cocoon, a new jacquard upholstery in new wool, 22 colours, design Georgina Wright

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One of the more bizarre moments of the early revolutionary years, a time of liberation before the regime became much more authoritarian: Fidel Castro and Che Guevara still in uniform playing a round of amateur golf.

letter from ... CUBA

In the introduction to *The Havana Project 1996*, a collection of theoretical insertions in Havana by such luminaries as Eric Owen Moss, Thom Mayne and Coop Himmelblau, Fidel Castro wrote 'Cuba has no need for monuments'.

This may have been a tacit warning to foreign, mainly Yankee, architects, not to presume to apply their brand of monument to Havana. Or it may simply have been a declaration of Castro's long-standing commitment to a collectivist, socially useful building programme which has, since the revolution, produced acres of utilitarian building but little of beauty.

Havana today is architecturally as great, as perplexing and as depressing as everything else about Cuban culture. It has a remarkably unaltered but largely decaying urban core. In it are splendid Spanish Baroque buildings, some fading like the ghosts of grand dowagers, others newly primed models of the famed restoration of La Habana Vieja. There are tumbledown movie theatres, apartment and office buildings in luscious tropical variants of Art Nouveau, Art Deco and Streamline Moderne; and sassy Morris Lapidus Modern hotels – hotels that were discredited after the revolution because of their association with US exploitation and are now state-owned, refurbished (without casinos)

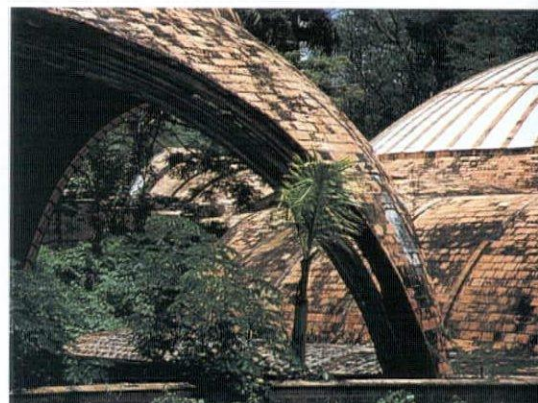
and, poignantly, back in their old role as tourist hotels. Then, on the fringes of the city are two dismal, albeit useful, kinds of development: estates of concrete slab housing and industrial buildings built in the '60s and '70s, and post Cold-War International Bland hotels and convention centres.

In the late '60s, Castro stopped commissioning poetic architectural monuments, soon after he called to an abrupt halt the construction of one of the greatest in postwar Cuba. This was the National Arts Schools, a complex of five organic buildings, once ripe as mangoes in their sensuality and revolutionary spirit and even now, as they are engulfed by a sea of tropical vegetation, so striking you wonder how they fell off the international radar screen. (They were brought to North America's attention recently by architect and historian, John Loomis, who produced a book and travelling exhibition about them.)

The Schools of Modern Dance, Plastic Arts, Dramatic Arts, Music and Ballet were designed by three architects, Ricardo Porro, Roberto Gottardi and Vittorio Garatti, and located on what had been Havana's most exclusive country club, in the garden suburb district of Cubanacán. They were personally commissioned by Fidel Castro who, after playing a last game of golf there with his *companionero* Che Guevara, declared the site should be an international art school that would cultivate a new art for a new socialist culture. To give form to this visionary idea, lead architect



Cuba's National Arts Schools: to be restored.



Leaking and encrusted with tropical growth: the present state of the National Arts Schools.

Ricardo Porro took inspiration from the much neglected Afro-Cuban culture on the island. His voluptuously plastic School of Plastic Arts makes reference not only to late Corb, but also, in its bulging Catalonian brick domes and vaults, to an African village and to the goddess of fertility and creativity herself, woman. I wanted, declared Porro in an interview in Los Angeles earlier this year, to create 'a city of breasts'. The other schools were different but equally inspired, sharing the brick curves, in situ concrete and a raw, organic style.

But for a variety of reasons – political and practical construction of these schools, considered now by many Cuban architects the zenith of Cuba's fledgling quest for its own brand of Modernism, was stopped in 1965 before completion. The fate of the schools reflects the decline in stature over the last 30 years of architecture and architects in Cuba. After the revolution, architects who chose to remain (about two-thirds of the architects in Cuba left, including most of the best, as did many good craftsmen) had to give up private practice and work for state firms. On monthly salaries of, now, approximately £10 (\$15), they became answerable to the new Ministry of Construction, not the Ministry of Culture, which oversaw the other arts, and were assigned to the construction of prefabricated schools, housing, industrial and agricultural buildings.

Since Cuba was opened to foreign investment after the end of the Cold War, architects (reportedly 90 per cent of them) have found



Ricardo Porro's 'city of breasts'. Roberto Gottardi, the only one of the original architects who stayed on the island, is to direct the restoration: a hopeful start to the new millennium for Cuba's under-appreciated architects and architecture?

themselves working, often in association with foreign investors who call the shots, on state tourist buildings. Most are as dreary and devoid of Cuba's rich sensibility as the utopian housing. But, in the last couple of months, the situation has started to change, with thawing international relations, and with the emergence of a younger architecture generation that is more enquiring and vocal than their Cold-War forbears. A few architects are managing to put a personal stamp on some state projects. This month sees the completion of a

lively bank remodel on the 5th Avenue in the swank Miramar district by architects Antonio Choy and Julia Leon, and another couple Oscar Garcia and Teresa Martin. Its yellow sloping panels and tapering roofs offer a cheerful nod to the experiments with form going on overseas.

As project architects for a state firm, Maceo, Garcia and Martin have also been given the go-ahead for the Packard Hotel, a \$20 million hotel on a prime location at the end of the nineteenth-century boulevard, the Paseo del Prado,

on the Havana seafront. It promises to bring modernity to the old district in the shape of a sleek steel and glass penthouse atop restored Neo-Classical lower floors, complete with huge ceramic mural by a leading Cuban artist on one flank. And Roberto Gottardi, architect of the School of Dramatic Arts, recently designed A Prado Y Neptuno, a restaurant on the ground floor of a late nineteenth-century building in La Habana Vieja. His modest homage to his favourite designers and artists – Frank Lloyd Wright, Philippe Starck, Charles Rennie Macintosh, Carlo Scarpa, Roy Lichtenstein, Louis Kahn – is considered by Emilio Castro (no relation to Fidel), who designed graphics for the restaurant, to mark a turning point for architects in the city.

Meanwhile, a once influential architecture magazine, *Arquitectura Cuba*, has been relaunched and is now edited by Eduardo Luis Rodriguez (who has written several wonderful books on Havana architecture, including the forthcoming *Havana Guide: Modern Architecture, 1925-1965*). Some architects are also agitating: for the restoration of Havana beyond the old district (La Habana Vieja); for a ban on the cheap, mediocre graphics on their local burger chain, Burgui; and for the restoration of the arts schools.

And this last dream seems to have been answered. Last month, Fidel Castro announced the five arts schools are to be restored. The project is to be directed by Roberto Gottardi, the only one of the three original architects who remained on the island. This is grand news indeed, and portends a hopeful start to the new Millennium for Cuba's long under-appreciated architects and architecture. FRANCES ANDERTON

february 2000

The AR's February issue is devoted to urban issues, and provides a world-wide review of the latest best ideas in urbanism and urban building. Coverage ranges from the regeneration of the North Harbour, Helsingborg, a major reworking of the city by Danish and Swedish architects to Wu Liangyong's thoughtful reinterpretation of Beijing's traditional courtyard housing, so much of which has been thoughtlessly destroyed. Housing is an important element of the urban mix and other residential projects shown in the February issue include Michael Hopkins & Partners' student housing in Nottingham, England, and Günther Behnisch's scheme for Ingolstadt, Germany. Major urban interventions range from Jan Söderlund's new newspaper offices, which complete the jigsaw of a

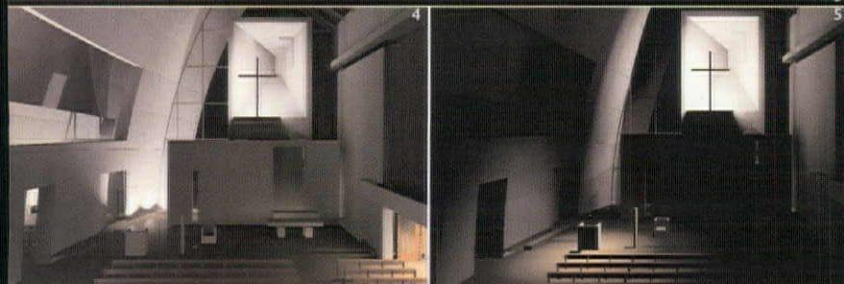
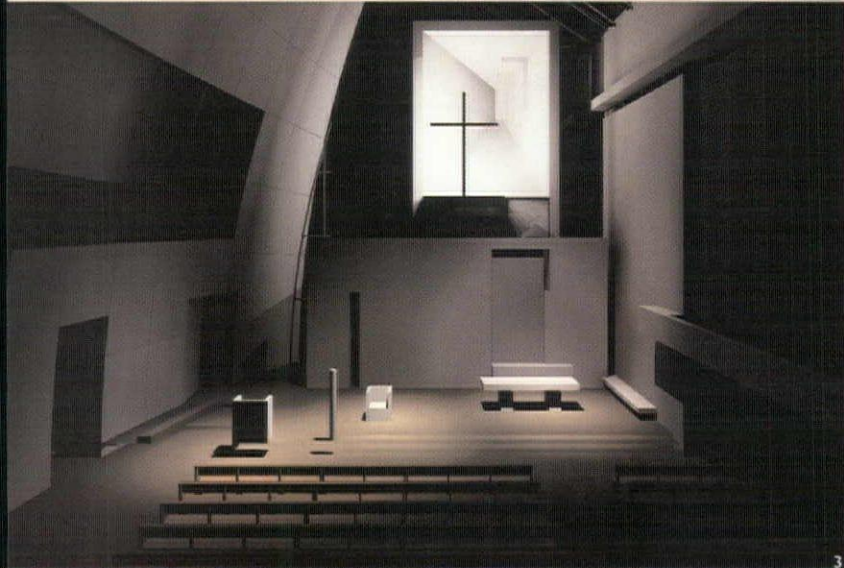
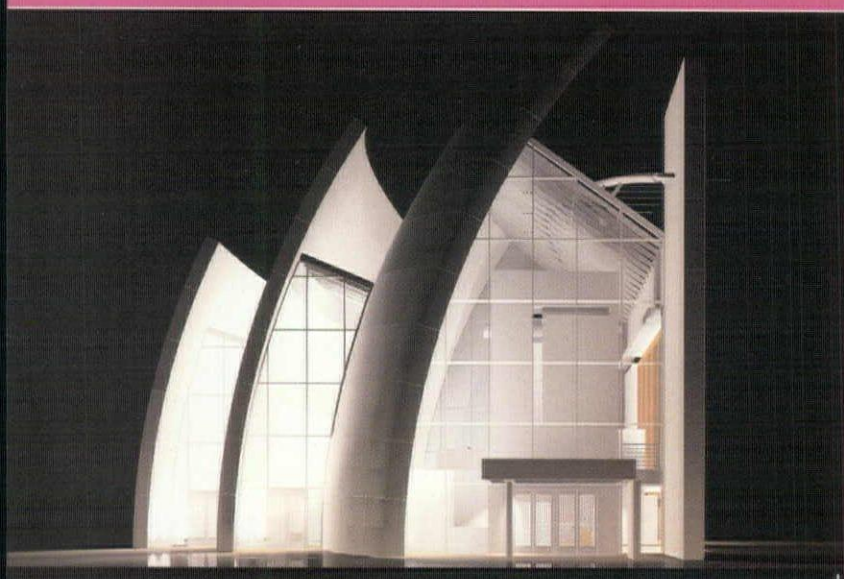
previously neglected part of central Helsinki to Alvaro Siza's gentle reconstruction of the Chiado district of Lisbon which was destroyed in a great fire. Cities have to have movement systems for life, and we look at types as different as Agnes Couvelas-Panagiotatou's pedestrian route at the Apollo Temple at Naxos, Greece and the architectural handling of the Melbourne City Freeway by Denton Corker Marshall (shown right).

In addition to the urban theme, we shall have our regular features, including reviews of architectural websites, books and international competitions, Interior and Product Design, View From, Design Review, Outrage and Delight.

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design review



Designing with light has always been an important element of architecture, yet the ways in which architects can visualize this intangible building material have hitherto been imprecise. More than ever, the integration of natural and increasingly sophisticated artificial lighting offers potential for spatial, material and functional expression and there is great demand from architects and designers for increasingly realistic light simulations that go beyond photographs and product catalogues. In response, German lighting manufacturer Erco has developed an ingenious 3D CAD program which visualizes efficiently and realistically the effects of light in space. Now available on the Internet, this recent innovation reproduces exactly the photometric properties of various Erco luminaires in conjunction with daylighting, so that designers can accurately assess how light penetrates, modulates and animates different sorts of spaces.

Developed in collaboration with Autodesk, the visualization program creates an accurate tool for analysis and design. Lighting conditions in both completed buildings and those at project stage can be very precisely anticipated. The 3D luminaire models enable photorealistic visualization from various angles, as well as taking account of physical data about light and its atmospheric

effect on rooms. The quantitative analysis of the lighting conditions provides information about the brightness at every point in the space and the degree of reflection of the walls and objects around the space. Real time simulation of observers around the space is also possible. So light can be experienced much more accurately and lighting designs can be modified and evaluated in response to the simulations.

A large proportion of Erco's product range is already available in the form of virtual luminaires on the Internet. Architects and designers can integrate these virtual luminaires into their own building simulations directly from the Internet through a drag and drop technique. In this way, they can test and analyse light conditions and define particular lighting effects. The possibilities and benefits of the system have already been explored in projects such as Richard Meier's competition-winning design for Chiesa 2000, in Rome (AR September 1998) and an office block by Schneider + Schumacher in Frankfurt. These simulations draw on experience accumulated by Erco from lighting systems installed in recent major projects, including the Reichstag, the new Louvre and Guggenheim Museum in Bilbao. C. S.

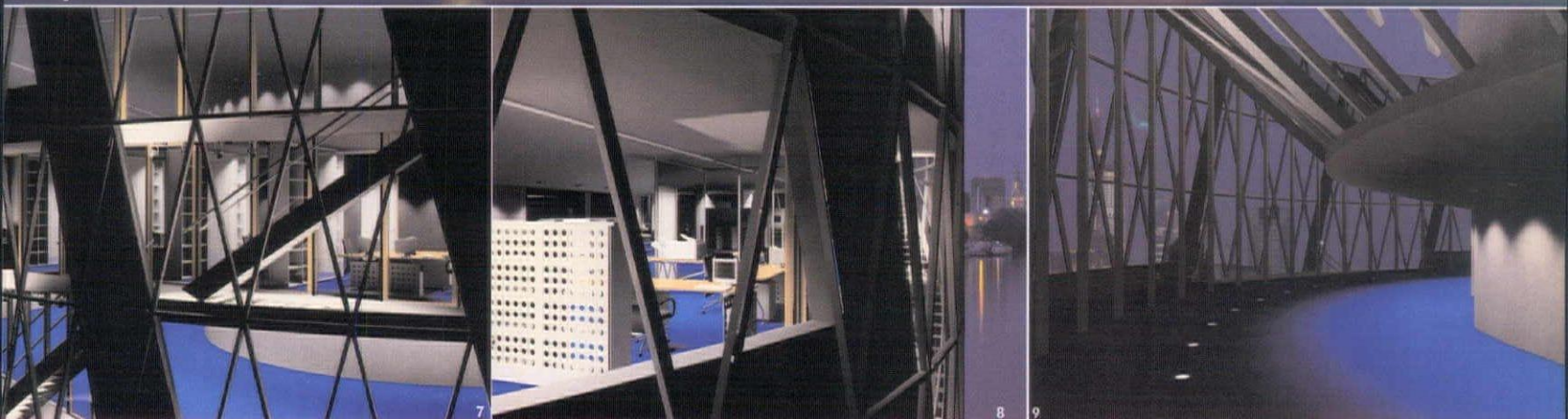
For further details www.erco.com

An ingenious new computer-generated visualization program from German lighting manufacturers Erco enables the effects of light to be very precisely assessed.

Shadow play



6



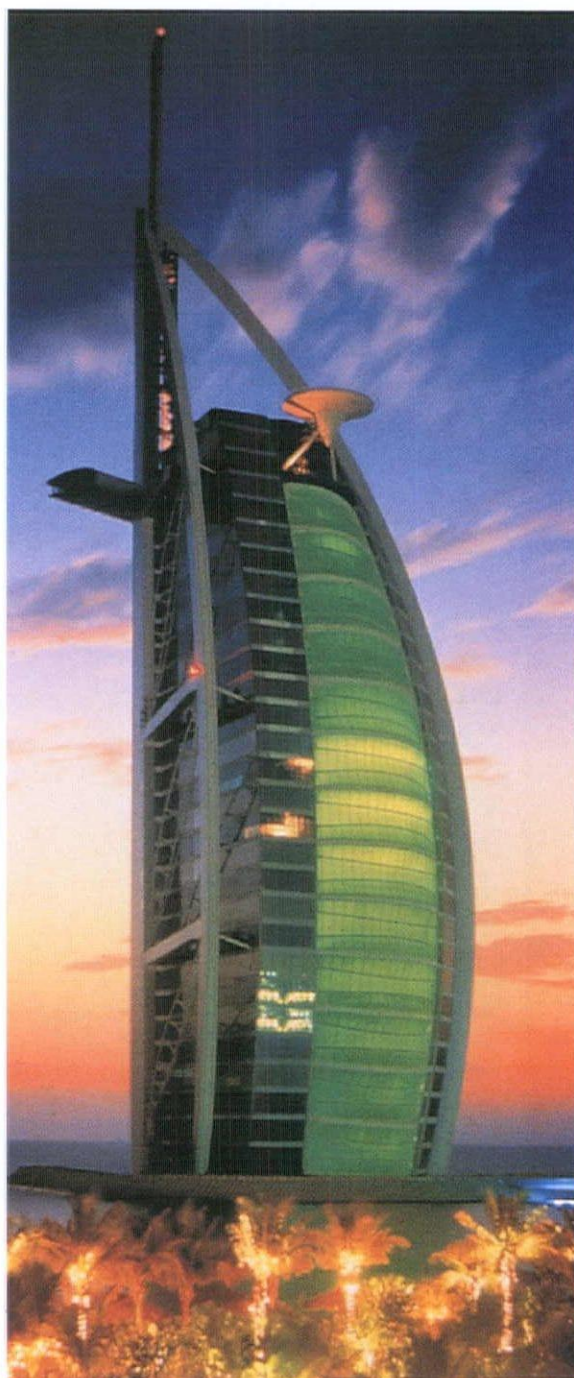
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8

9

1 Model of Richard Meier's competition-winning project for Chiesa 2000 in Rome, a church for the new millennium that forms part of the city's Jubileo 2000 celebrations.
2-5 Simulations of various lighting conditions inside the church using Erco's light visualization program. The effect of different sorts of artificial and natural light can be precisely gauged and used to develop designs.

6 Computer generated image of a new office block in Frankfurt, by Schneider + Schumacher.
7-9 Interior simulations. The program is calculated to take account of different types and positions of luminaires, the varying effects of natural light sources and the degree of reflectance of internal surfaces. Further details of the program are on Erco's website: www.erco.com



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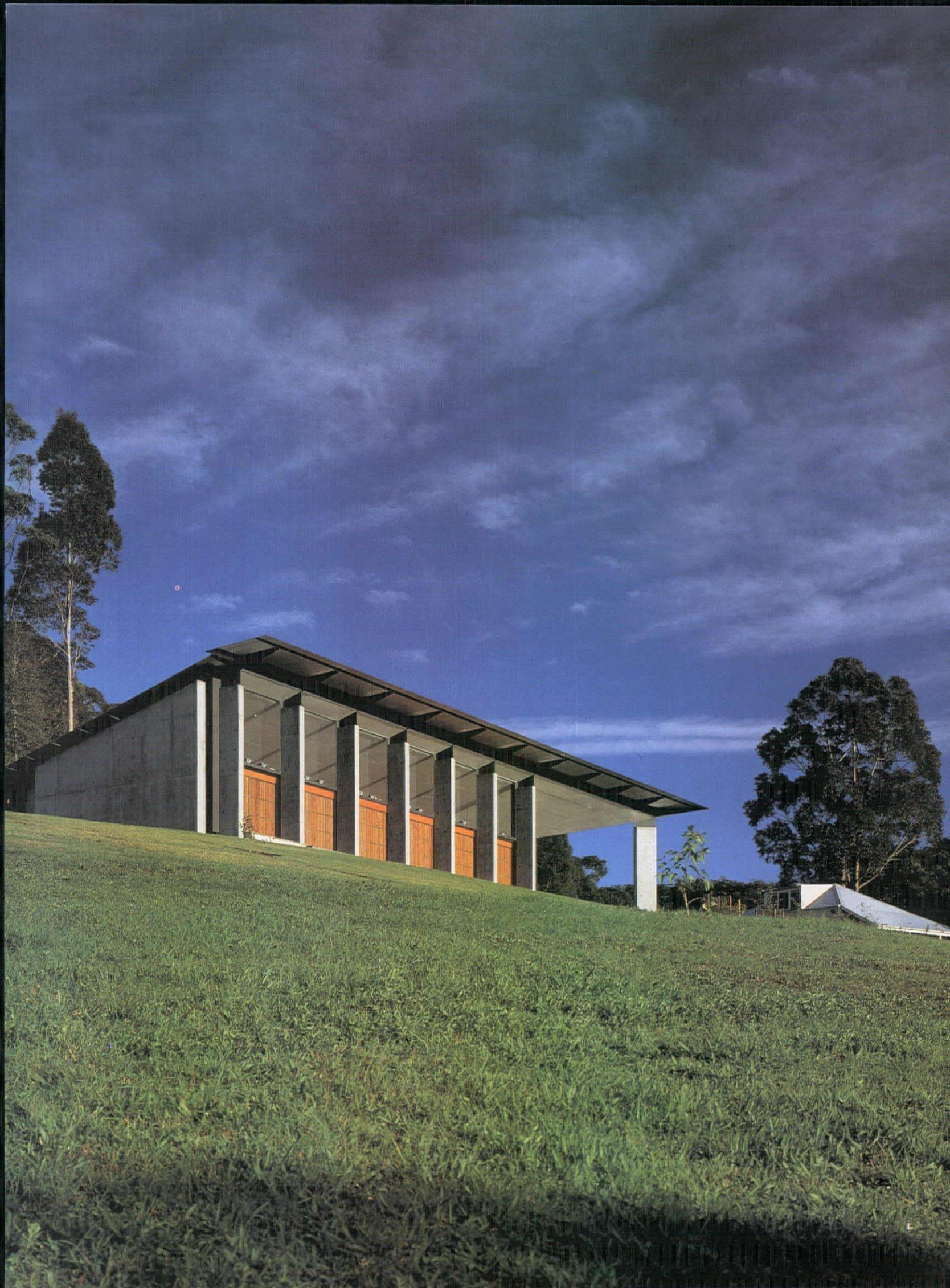
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EDUCATION CENTRE, WEST CAMBEWARRA,
NEW SOUTH WALES, AUSTRALIA

ARCHITECTS

GLENN MURCUTT, WENDY LEWIN
& REG LARK



SENSE OF PLACE

Designed to make a minimal impact on the local eco-system, Glenn Murcutt's latest building has an intuitive feel for place and nature.



1 Powerfully rooted in the landscape, the building's silent monumentality recalls Nordic Modernism.

2 Dormitory accommodation is contained in a long range at the southern end of the complex.

3 The centre overlooks a valley from the elevated vantage of a hillside site set above flood level.



4 Exploiting the natural features of the site, the building is conceived as a revelatory voyage of discovery.

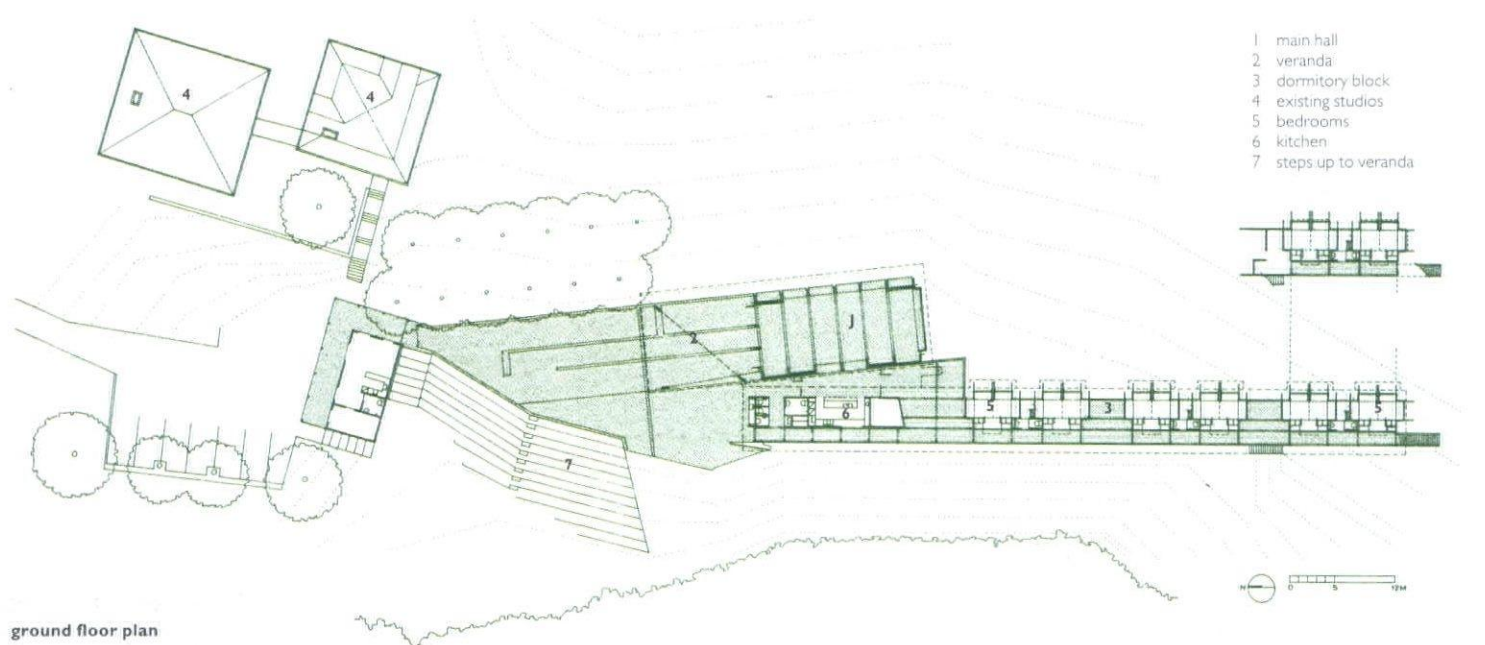
5 The loggia of the great hall tames and frames the landscape.

6 The dormitory range dramatizes the drop in ground level and emphasizes the slope of the site.

With two Sydney colleagues whom he taught as students and who have both worked with him on several occasions,¹ Glenn Murcutt has just completed his first public building since the Kempsey museum.² As with Murcutt's houses, it is wedded to the site. Riversdale is an isolated private estate bounded by the river Shoalhaven near Nowra, three hours' drive from Sydney; it was formerly owned by the artist Arthur Boyd,³ who went there to imbibe the Australian wilderness – one of his principal sources of inspiration. Three rural buildings stood on this large tract of agricultural land, including the barn Boyd used as his studio. Skirted by the bush, open grassland slopes down to the river. The brief required an open art-teaching centre with accommodation for resident

artists and 32 young students both from Australia and round the world.

Picking up on the notions of initiation, discovery and experience of the landscape emphasized by the teaching programme, the building is conceived in terms of an itinerary revealing the place bit by bit. Playing on the natural features of the site, the arrival sequence from the only access point is laid out as an oblique, linear, uphill approach route, to delay the moment the centre first comes into view. The two main functions – communal activities and dormitories – take distinct forms: refectory and veranda are grouped beneath the roof of the lofty great hall, with north and east elevations giving onto the view, while bedrooms and washing facilities are aligned in a long, thin range



ground floor plan



east elevation



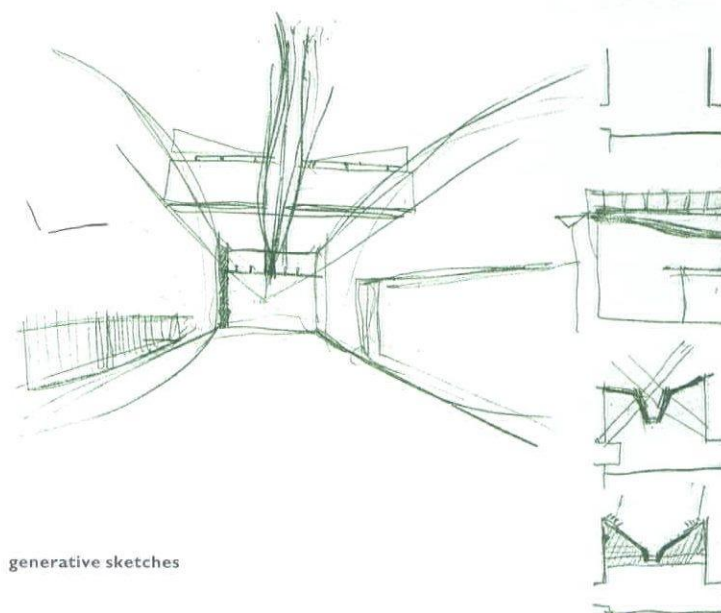
west elevation



cross section

originating behind the hall, to which it is linked by the kitchen. The complex dominates the valley from a flattened area above the flood level, at the intersection between the cultivated and the natural landscape. It is separated from the existing buildings by a terrace where the future 350-seat amphitheatre is to be sited, giving axial views of the river. A transition between the scale of the landscape and that of the living quarters is provided by the white soffit of the inverted roof slope, which signals the gap leading to the bedrooms at the rear. The itinerary continues south along this passageway, terminating in a spectacular flight of steps with concrete flank walls which momentarily cut off the view and compress the visitors before immersing them in the landscape 3m below.

By skilful framing of views, the building provides an instrument for reading the landscape. Conversely, the dormitory range highlights topographical variations: at the southern end, it dramatizes the drop in ground level and draws attention to the slope. Verandas slotted between rest-units act as open-air studios – vantage points where people can meet and work in osmosis with the panorama. Windows, bays and the great hall capture the different scales of the near and distant landscape. Separated in plan, the residential units are united by a shared roof; the continuity of the range is punctuated at regular intervals by verandas, recessed bathrooms and the shaft of light upon which the roof floats. Consistent dissociation of the various elements – building from roof, living quarters from



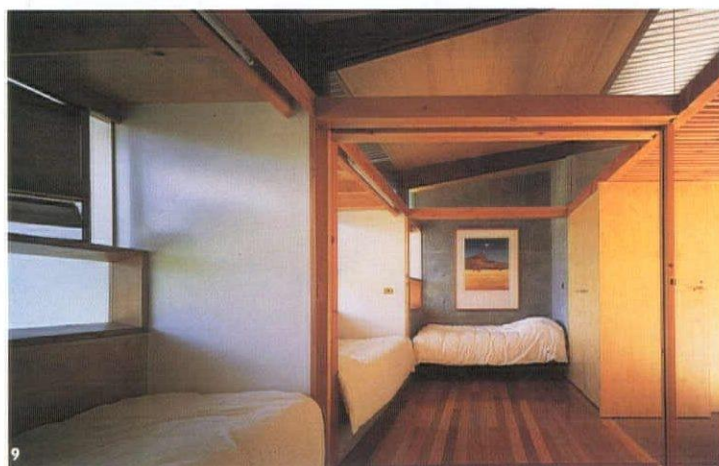
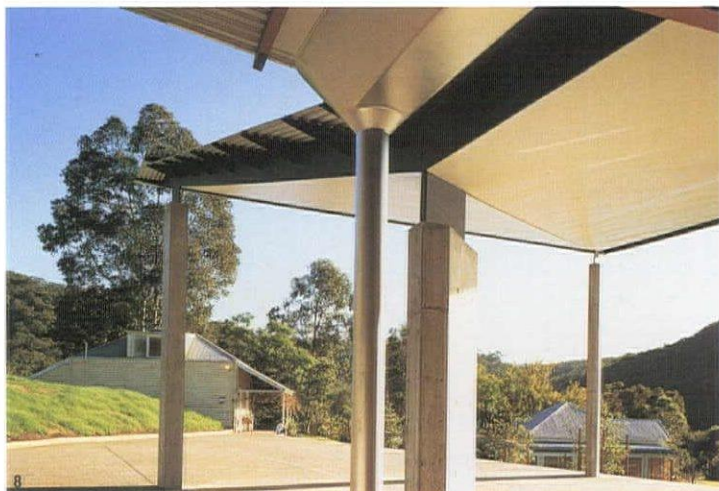
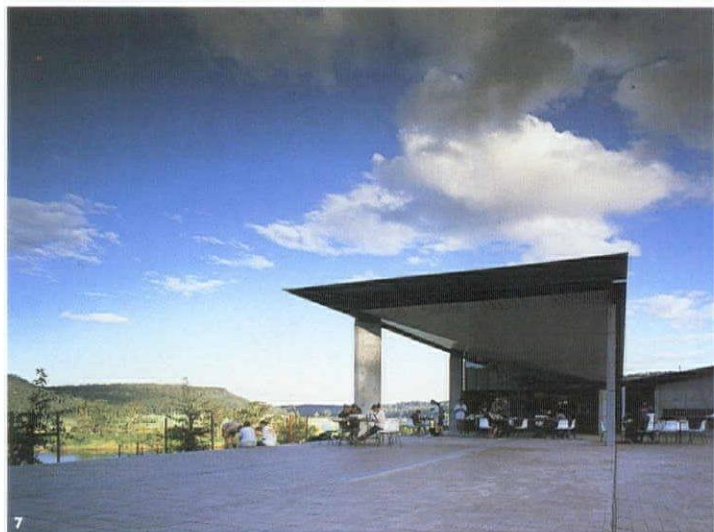
generative sketches

**EDUCATION CENTRE, WEST CAMBEWARRA,
NEW SOUTH WALES, AUSTRALIA**
ARCHITECTS
**GLENN MURCUTT, WENDY LEWIN
& REG LARK**

EDUCATION CENTRE, WEST CAMBEWARRA,
NEW SOUTH WALES, AUSTRALIA

ARCHITECTS

GLENN MURCUTT, WENDY LEWIN
& REG LARK



- 7, 8
Roof canopies form interstitial
inside/outside spaces between the man
made and natural.
9
Typical dormitory interior.
10
Raw concrete adds to the richness of
surface texture.
11
Overhangs shade the dormitories.
12
Walkway, protected from the climate,
yet still connecting with landscape.

circulation, open from enclosed areas – gives a measure of transparency through the building linking the grassland landscape to that of the bush.

To institute this dialogue between scales, the architects have modelled the interstices as much as they have the volumes, by exploring relationships between the unity of the building and the discontinuity of its parts. And they have sought to make the building limits dematerialize progressively at the interface with the natural environment: the finely honed roof structures, the sunbreaker fins projecting from the walls of the dormitory range, the hovering thin metal roof-covering. Elements of this peripheral order define a transitional layer between the interior and the outside – a virtual threshold between nature and intimacy. The building is contained at each end by two major events: the sculptural triangular concrete staircase and, above all, the entrance canopy to the great hall, the silent monumentality of which is reminiscent of Asplund and Lewerentz's chapel at the Woodland Cemetery or, indeed, Utzon's canopy for the Kuwait parliament building. Murcutt and Lewin freely acknowledge their Scandinavian references and their deep affinity for a Nordic Modernism, combining functional rigour, plastic expression, the cult of nature and a taste for materials and detail with the total experience of place.

Their concern to express orders of construction is reflected in the choice and distribution of materials. Concrete, which none of them had used before, was required to achieve fire separation between the bedrooms. Cast in situ and left exposed, it contributes the richness of texture, the brilliance of surface and the unity of mass sought to

create a physical presence in this immense site. Yet the building is designed to make as little impact as possible on the local eco-system. Pile foundations allow the ground to drain naturally, all sewage and rubbish is treated on site and the effluent channelled away from the centre through an irrigation system. Rainwater is collected and stored in a concrete reservoir in the basement and, where appropriate, recycled timber has been used – the structural members are of recycled native Australian hardwoods, for example. The building has neither heating nor air-conditioning. As with most of Murcutt's projects, the location and orientation of glazing, sunbreakers and canopies, combined with natural ventilation achieved by over-door openings and slatted wall planes, are designed to allow the building to breathe and to create comfortable conditions adapted to the climate.

FRANÇOISE FROMONOT

Translation by CHARLOTTE ELLIS

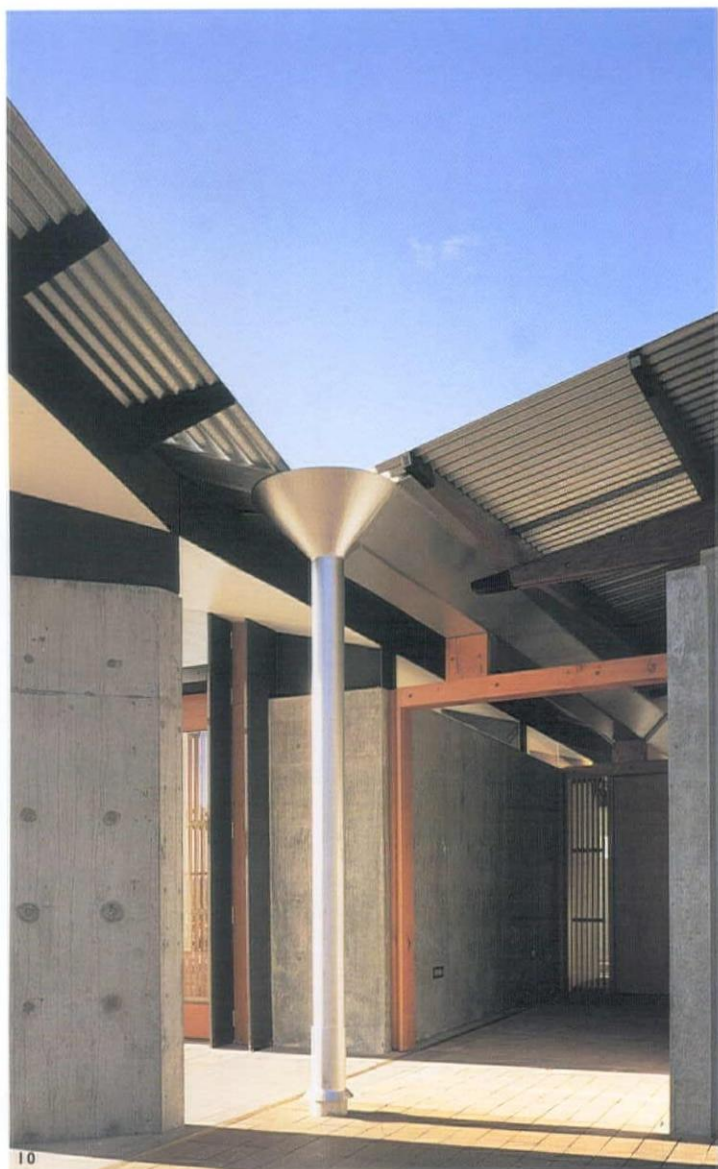
- 1 Reg Lark was Murcutt's assistant for the Broken Hill Museum project (1987-1989, unbuilt) and the Done House (1991). Wendy Lewin became Murcutt's associate five years ago, in connection with a project for the renovation of the Sydney Customs House (1993-1994, unbuilt), and for the design of the Opal Mine Museum at Lightning Ridge (in progress).
- 2 Nearly 20 years, if calculated from the first phase of the museum (1979-1982), and over 10 years if calculated from the second phase (1986-1988). Murcutt has been involved with very few other public projects and none has been built. In October 1999, the Boyd Centre won the Sir Zelman Cowen Award for Public Buildings – the RAIA's most prestigious federal award.
- 3 Boyd died on 24 April 1999, when building works on his Foundation had just been completed. Born in 1920, Boyd came from a famous family of Australian artists. He was a potter and a painter and divided his time between Australia and England. Murcutt, Lewin and Lark's client was the institution in charge of managing Boyd's legacy to the State.

Architects

Glenn Murcutt, Wendy Lewin & Reg Lark

Photographs

John Gollings/Esto



ORANGERY, PRAGUE CASTLE,
CZECH REPUBLIC
ARCHITECT
EVA JIRICNA ARCHITECTS

FRAGILE STATE

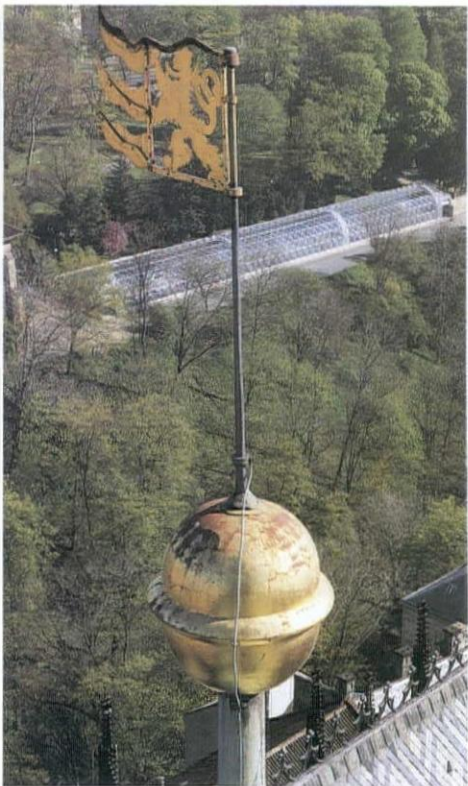
A horticultural greenhouse in the grounds of Prague Castle refers to historical precedent and is a shining addition to the city's buildings.

Prague Castle has had an orangerie since the middle of the fifteenth century. Built on the south side of the royal gardens, at the edge of the moat dividing them from the citadel, it was protected from the extremes of climate by a stone wall. Orange trees, insulated with straw and wooden beams, managed to survive the winters (when temperatures can sink to -20 degrees Celsius) and their nurture continued until the First World War. Then, deprived of care, the trees died and the Orangerie fell into disrepair.

After the Second World War, there was renewed interest in the idea of a horticultural greenhouse. A simple structure with a glass roof was built to house plants and trees but this slowly deteriorated and by 1996 this too was derelict.

The new Orangerie by Eva Jiricna Architects is a consequence of having an asthmatic and dramatist in power. After he became President of the Czech Republic in 1989, Vaclav Havel was in the habit of retreating to the greenhouse, elevated above the polluted city, for relief from his asthma and to write plays. He conceived the idea of an international competition to build a new and permanent glasshouse on the same site, which would at the same time forge a historical link and be a shining example of twentieth-century architecture.

Developed with Matthew Wells of Techniker, Jiricna's winning design was of a delicate cylindrical vault of glass and stainless steel. In its poetic expression of engineering virtuosity, the building is a clear relation of



the series of magical glass and steel staircases for which the practice is famous. As a response to the historic site and context, to the requirements of modern hothouses and to climate, it is both sophisticated and thoughtful. Undoubtedly it will help to change perceptions of architecture in the Czech Republic.

Initially, the business of constructing so refined a building presented apparently insuperable problems until a Czech subsidiary of Seele, the German company, agreed to manufacture the components and act as contractor.

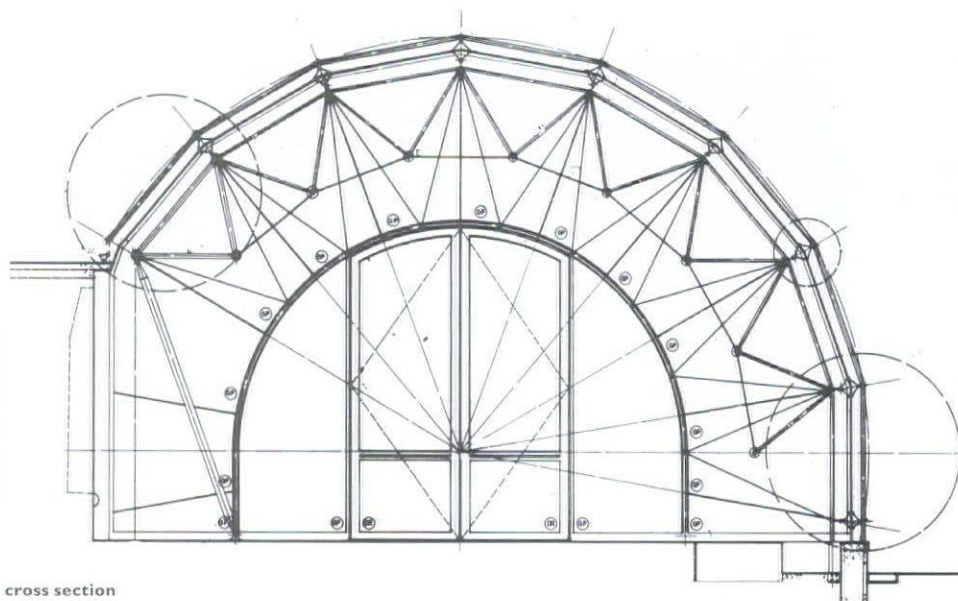
Some alteration to the site proved necessary. The sixteenth-century wall at the back was retained, but the front wall which had no foundations and was of relatively



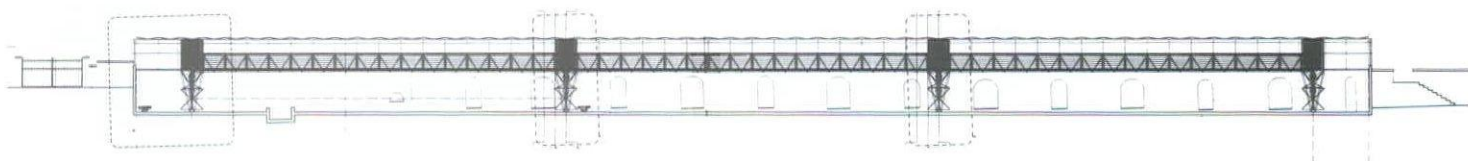
- 1 Diagonal grid of Orangerie's structure echoed in roof pattern of St Wenceslas Cathedral.
- 2 North side of Orangerie and historic wall.
- 3 Interior with glazed cross walls dividing climatic zones and roller blinds.



**ORANGERY, PRAGUE CASTLE,
CZECH REPUBLIC**
ARCHITECT
EVA JIRICNA ARCHITECTS



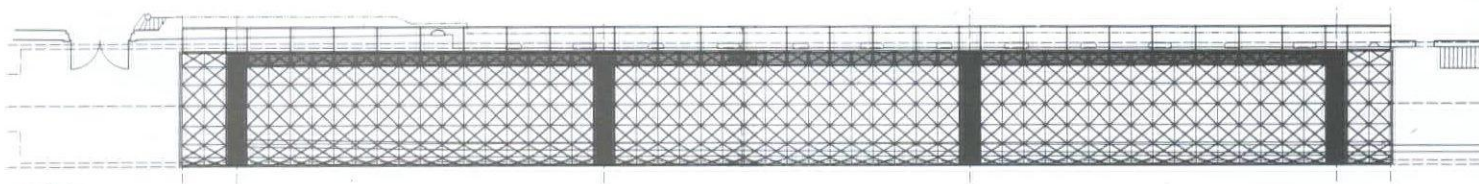
cross section



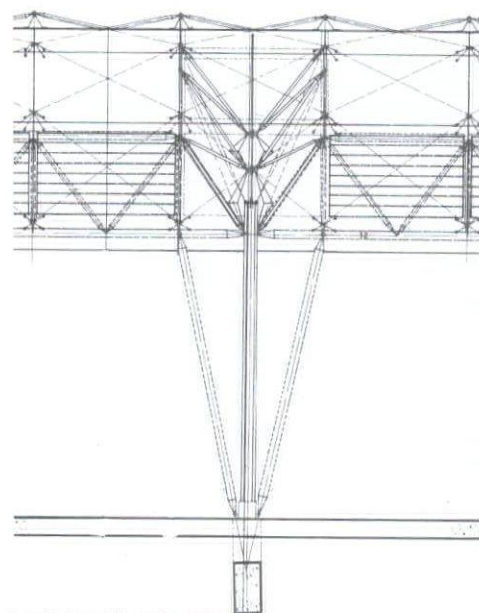
long section



ground floor plan (scale approx 1:300)



roof plan



detail through node connection



- 4
West end of Orangery and gardens.
5
Detail: welded crosses connected by mechanical
fixed nodes.
6
East end of Orangery.

Architect
Eva Jiricna Architects
Project team
Eva Jiricna, Duncan Webster
Structural engineer
Techniker
Structural consultant
Czech Technical University,
Faculty of Civil Engineering, Prague
Project manager
Glockner Praha
Glazing
Seele
Photographs
Pavel Stecha



6

recent construction, was demolished. Jiricna's structure, conforming to the plan of the original building, could not spring directly from the rear wall for this too had no foundations, but from a tetrahedral space-frame girder running above it along its length. Angled legs prevent the arch from flattening and the structure is further braced by four cross frames which also accommodate cross walls. Sliding joints capable of 30mm movement accommodate extreme changes of temperature.

The cylindrical form of the toughened laminated glass shell gives an efficient volume-to-surface ratio and cuts down heat loss. It is suspended from an exoskeletal structure, a lightweight diagonal steel mesh of stainless-steel tubes, 48mm in diameter. For strength and stability the tubes are short (the site's difficult access anyway inhibited

use of large building components), and the mesh made up of welded crosses connected by mechanical fixed nodes with four solid ends. Tubes are clamped top and bottom to the node ends by plates designed to be held by a single countersunk screw. Glass panels hung beneath the diagonal grid are point fixed by spider castings and silicon sealed.

The vault, enclosed at either end by glazed shutter doors, is stiffened internally by the glazed cross walls dividing three climatic zones: one for decorative plants and trees, one for young plants and one for seedlings.

Essential heating is concealed in the floor slab, under stone paving, in the brick retaining wall, and behind roller blinds which, silvered on the outside, provide shade in summer and insulation in winter. Pipes suspended from the structure spray the plants with a fine vapour. Horizontal louvres at the base of front and

back walls, and butterfly vents within glass panels at the apex, provide cross ventilation.

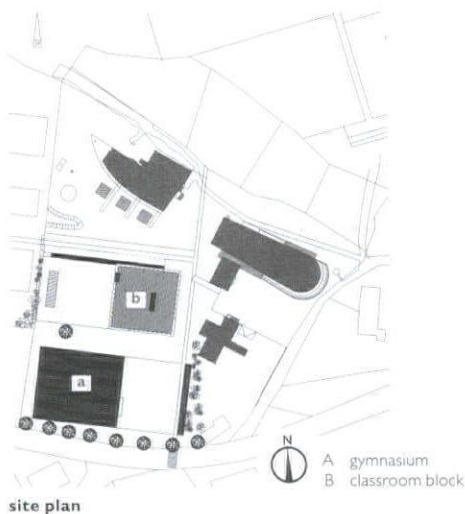
Jiricna's empathetic response to her clients' wishes, her concern for the interior of buildings and the way they function, is extraordinary. A concomitant of this are the demands she makes on structure, insisting on extracting the most from the most minimal. Such exacting habits have resulted in a collection of truly original structures, to which the Orangerie is a remarkable addition. Here, structural efficiency has produced clear volumes and expanses of delicate filigreed shell without sacrificing functional efficiency. In its arboreal surroundings, the building is a knock-out; and visitors wandering along the new path from Klarov to Powder bridge can experience the delight of seeing how this modern building sits so lightly on its historic site. P. M.



SEE-THROUGH SCHOOL

A little Austrian school in which economical planning is enclosed within an elegant climate-modifying skin.

SCHOOL, MÄDER, AUSTRIA
 ARCHITECT
BAUMSCHLAGER & EBERLE



Vorarlberg, on the western edge of Austria, is the country's smallest province, and after Vienna, the most densely populated. Historically, the region embodies a strong rural identity, evident in its landscape, its vernacular architecture and a continuing tradition of building in wood. Yet more recently it has experienced intensive industrialization, with a consequent suburbanizing of the countryside.

Roughly halfway down Vorarlberg's upper Rhine valley lies the town of Mäder, on the Swiss-Austrian border. The town has been the subject of modest urban initiatives to create public squares and buildings. As part of this programme, the Austrian partnership of Baumschlager & Eberle were asked to design a secondary school incorporating principles of ecological responsiveness. The school joins a social centre by the same practice

completed in 1995. Typical of an emerging younger generation of Austrian and German-speaking Swiss architects, Baumschlager & Eberle's work is distinguished by a precise and sober tectonic spirit. Underpinned by a concern for materials and construction, the partnership seeks to reinterpret traditional regional forms and archetypes.

The new school consists of a main classroom block and gymnasium, which is partially sunk underground to mitigate its mass. The gym reads as two horizontal bands of raw concrete and glass wrapped around a low-slung box. A thin concrete canopy cantilevered over the entrance forms the sole articulation in an otherwise inscrutable external skin. The clear glazing admits generous daylight into the main gym hall below, transforming the huge space into a welcoming, luminous cavern.



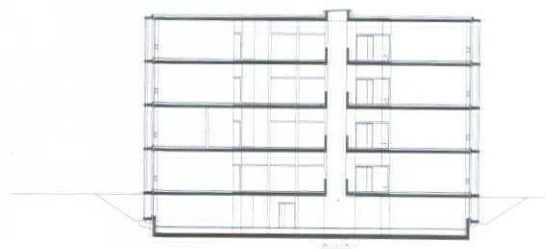
1
The classroom block is a shimmering transparent cube that seems to dematerialize in the landscape.

2
Vertical overlapping fins of glass act as rain screen. A ventilated cavity separates the two layers of the external skin. The internal layer of glazing has openable windows.

SCHOOL, MÄDER, AUSTRIA

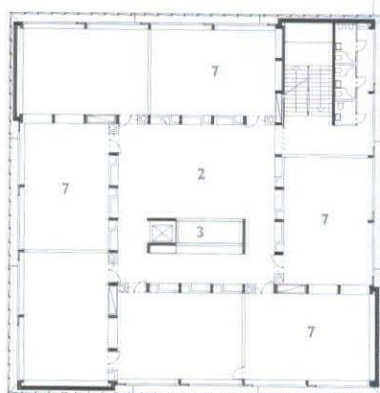
ARCHITECT

BAUMSCHLAGER & EBERLE

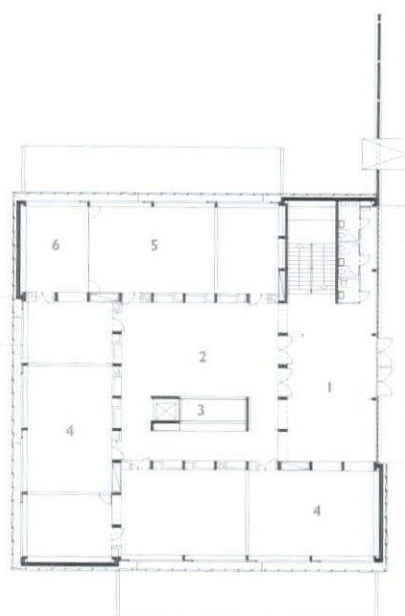


section

- 1 foyer
- 2 internal court
- 3 void
- 4 workshop
- 5 assembly
- 6 kitchen
- 7 class



typical floor



ground floor classroom block (scale approx 1:600)

- 3 A wafer thin concrete canopy marks the entrance to the classroom block.
- 4 Gymnasium (left) is partially sunk underground to minimize its mass.
- 5 Classroom block elevations are crisp, geometric interplays of transparency and opacity.
- 6 Typical classroom.
- 7 Internal courts on each floor are lit by strips of clerestory glazing and a glass lightwell that penetrates the building.
- 8 The luminous cavern of the gymnasium.

On the north side of the gym lies the main four-storey classroom block, a crisp cube clad in a shimmering transparent glass membrane. An outer layer of vertical glass fins acts like a rain screen, protecting an internal skin of glass and walnut panels with openable lights. In between is a 600mm ventilated cavity. Held in place by slim stainless-steel point fixings, the glass fins of the outer layer overlap slightly like transparent fish scales (similar to the stair of Peter Zumthor's Kunsthau in Bregenz, AR December 1997). From a distance, the elevations read as bold, geometric interplays between glass and wood. On hot days, white roller blinds in the interstitial cavity are employed to diffuse heat and glare.

Based on a 27m square floorplate, the plan is the essence of simplicity and economy. On each level, seven cellular classrooms form a perimeter ring around a generous internal court that acts as a breakout and circulation space. Light is brought into the deep plan through a narrow glazed shaft running vertically through the building, and by strips of clerestory glazing on partition walls separating the classrooms from the internal court. Throughout the building there is a palpable sense of care and refinement in the way things fit together and the choice of materials. Such elegant economy induces the building to transcend both its modest programme and unremarkable context. C. K.

Architect

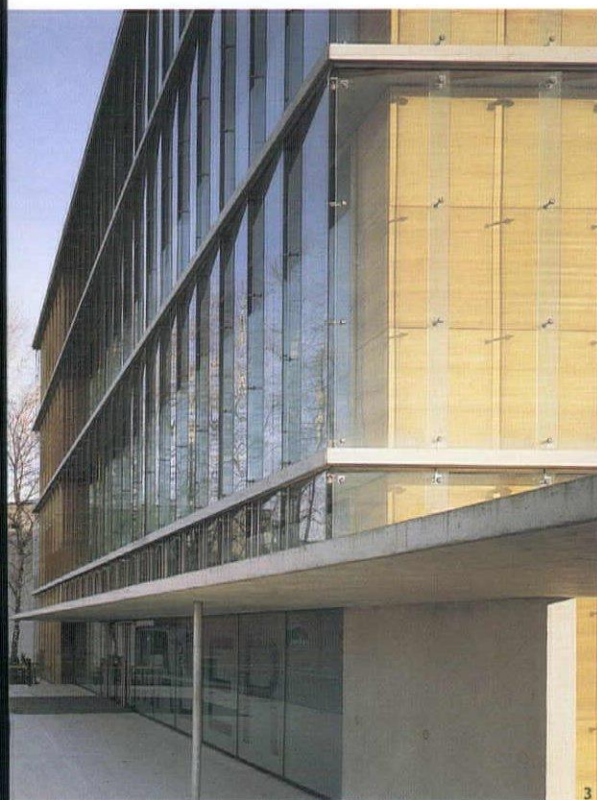
Baumschlager & Eberle, Lochau, Austria

Project team

Carlo Baumschlager, Dietmar Eberle, Rainer Huchler

Photographs

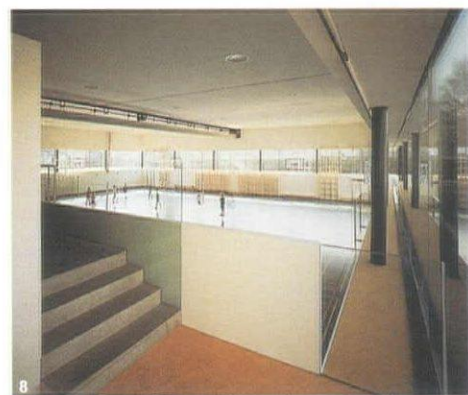
Christian Richters



3



4



**VISITORS' CENTRE, CAPE TOWN,
SOUTH AFRICA**
ARCHITECTS
GAPP ARCHITECTS AND DAVID B. LEWIS



2



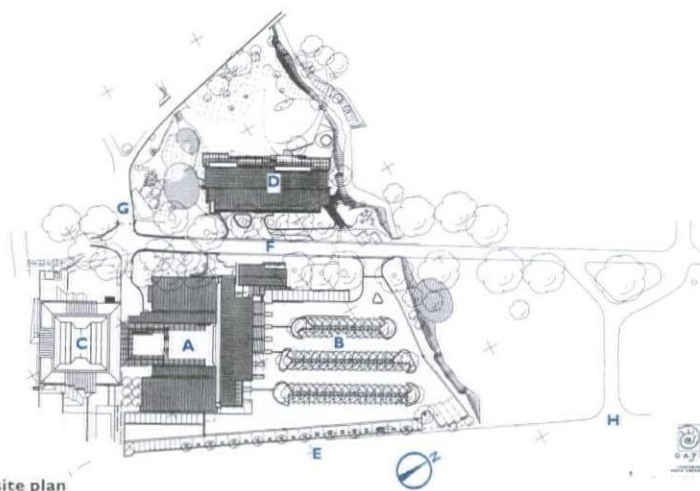
GARDEN GATEWAY

New visitors' facilities for Kirstenbosch Botanical Garden sit lightly and elegantly in the landscape.

Stunningly encircled by mountains, the lush expanse of Cape Town's Kirstenbosch Garden constitutes the greatest botanical landscape in southern Africa. Yet reconciling the needs of a growing body of visitors with those of nature has always been a delicate balancing act. Following intensive research over a number of years, the National Botanical Institute of South Africa decided to consolidate and enlarge visitor facilities which had long proved incapable of meeting demand. Designed by David Lewis and GAPP Architects, the new visitors' interpretation and information centre joins a

restaurant by the same architects and recently completed greenhouse on a sloping site in the lower garden precinct. The complex defines an eastern edge to the garden and is intended to limit development within Kirstenbosch itself. An area for car and coach parking was reclaimed from a waste swamp and deliberately restricted to encourage the use of public transport.

Contained in a series of low-rise pavilions, the new visitors' centre forms a civic gateway to the garden. The complex houses a range of information, retail, conference and administrative facilities together with external



site plan

1 Set against a breathtaking backdrop, the new visitors' centre tactfully mediates the transition from street to garden. Robust walls and corrugated metal roofs evoke the potting sheds and nursery buildings that originally occupied the site.

2 Rustic pergolas wrap around the building's internal courtyard.

3 An imposing new glasshouse dominates the south end of the site, forming a focus to the complex.

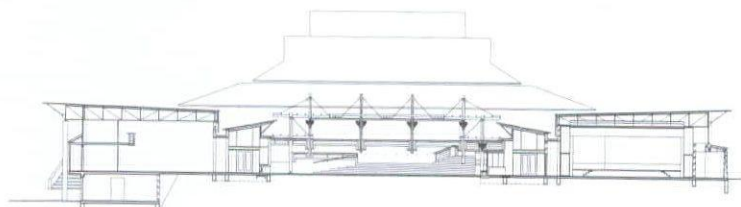
4 Entrance concourse to the visitors' centre. Fluid, topit spaces lead into the internal courtyard beyond.

- A visitors' centre
- B car park
- C glasshouse
- D restaurant
- E Rhodes Drive
- F Ficus Avenue
- G original 1912 entrance
- H new entrance

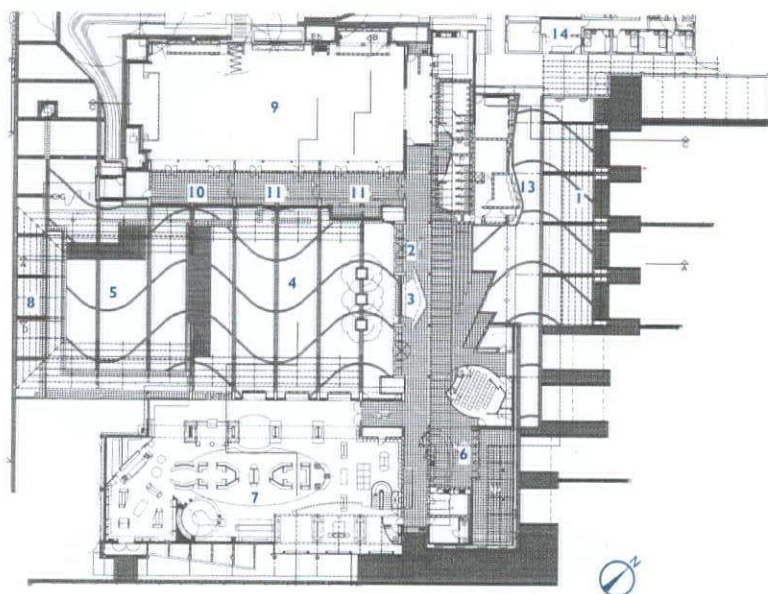




visitors' centre longitudinal section



visitors' centre cross section



visitors' centre ground floor plan (scale approx 1:1000)

- 5 Built from local stone, the solid walls of the restaurant form a counterpoint to the floating timber roof.
- 6 The enveloping monopitch roof recalls a traditional African stoep or veranda.

public spaces. Planning has a formal elegance and economy, yet also generates a sense of intimacy, enclosure and human scale in the awesome landscape. The various elements are arranged around a stepped courtyard, with the monumental glasshouse presiding at the head of the composition. Views of the garden bowl and mountainside frame the angular roofscape. Basking in the dizzying light of vast African skies, the presence of the garden is palpable. A pavilion addresses the car park, signifying entrance. Slim, arboreal columns and roof beams allude to the ficus trees that run along the western boundary of the site. Extending out from the pavilion is a large loggia, which in time will be colonized by deciduous local vines, forming a green gateway.

The pavilion on the east side of the courtyard contains a café

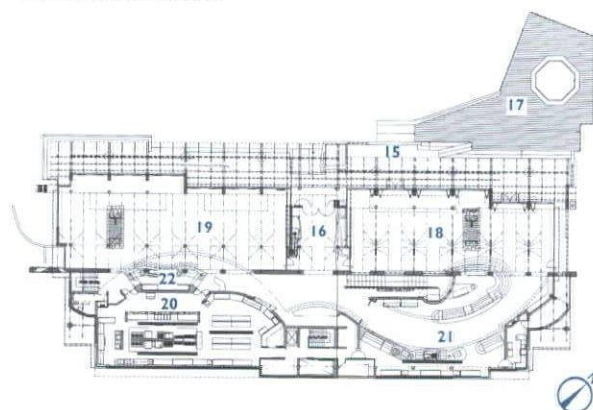
and shops, including a Botanical Society bookshop, linked by an internal street. On the west side, a trio of exhibition foyers connects with a 350 seat conference hall. The glazed west wall overlooks a sheltering canopy of huge golden ficus, under which the building gently nestles. Water is channelled around the perimeter of the upper level courtyard, soothing the senses and mitigating the blare of traffic on nearby Rhodes Drive. Timber pergolas bound both upper and lower courts, forming a support for more indigenous greenery. A network of steps and ramps leads up through the courtyards to a wrought iron gate marking the original point of entry when the garden first opened in 1912.

The architectural language of sturdy walls and corrugated steel roofs evokes the potting sheds and nursery buildings that

- | | |
|-------------------|----------------------|
| 1 entrance loggia | 12 small auditorium |
| 2 concourse | 13 ticket office |
| 3 information | 14 staff quarters |
| 4 inner courtyard | 15 restaurant |
| 5 sculpture | 16 terrace |
| 6 café | 17 entrance |
| 7 shops | 18 timber deck |
| 8 glasshouse | 19 self-service |
| 9 veranda | 20 à la carte dining |
| 10 function halls | 21 kitchen |
| 11 meeting room | 22 food hall |
| 12 foyer | 23 bar |



restaurant cross section



restaurant ground floor plan (scale approx 1:1000)

formerly occupied the site. This spare functionalism is continued in the restaurant, located on the western edge of the visitors' centre. Supported by timber trusses and arboreal columns, the restaurant's great monopitch roof recalls the traditional African stoep or veranda. Nature is brought closer through full-height glass walls. Plaster tinted to match the colour of the soil and local rosa stone gives the entire complex an immemorial, rooted quality, as if it had always been part of Kirstenbosch's remarkable landscape. C. S.

Architects

GAPP Architects and David B. Lewis, Cape Town, South Africa

Project team

David van den Heever, David Lewis, Lynne Doyle, Simone Le Fevre, Carol Pym

Structural and civil engineers

De Villiers & Hulme

Photographs

Ronnie Levitan

VISITORS' CENTRE, CAPE TOWN,
SOUTH AFRICA
ARCHITECTS
GAPP ARCHITECTS AND DAVID B. LEWIS



EDUCATIONAL CENTRE, UBATUBA,
BRAZIL
ARCHITECT
RUY OHTAKE

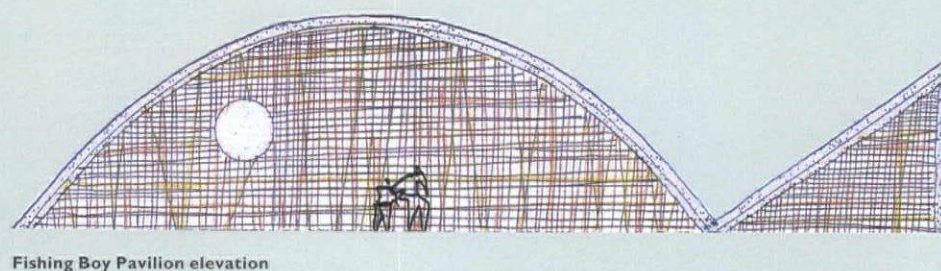
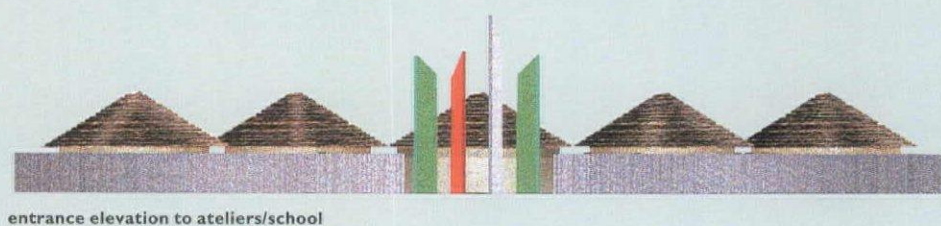
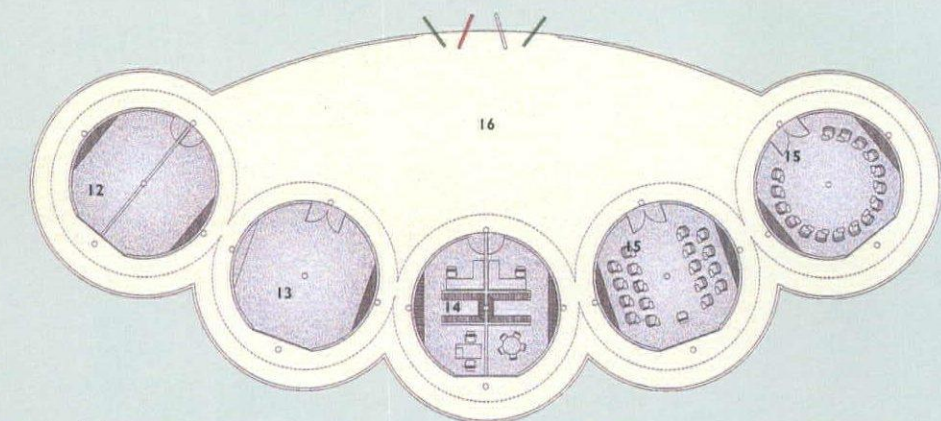
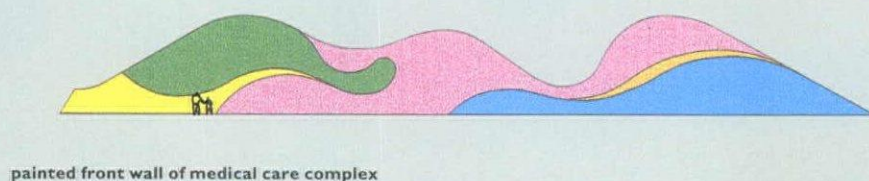
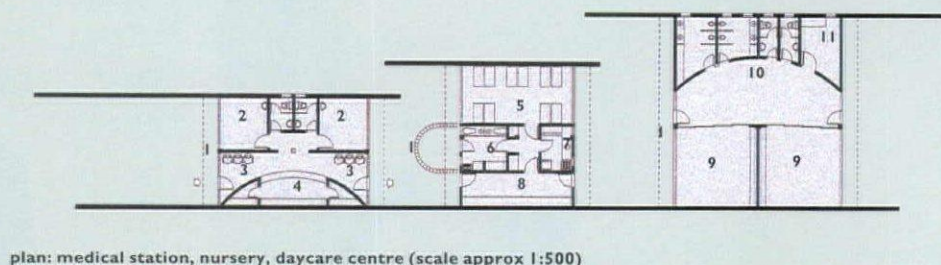
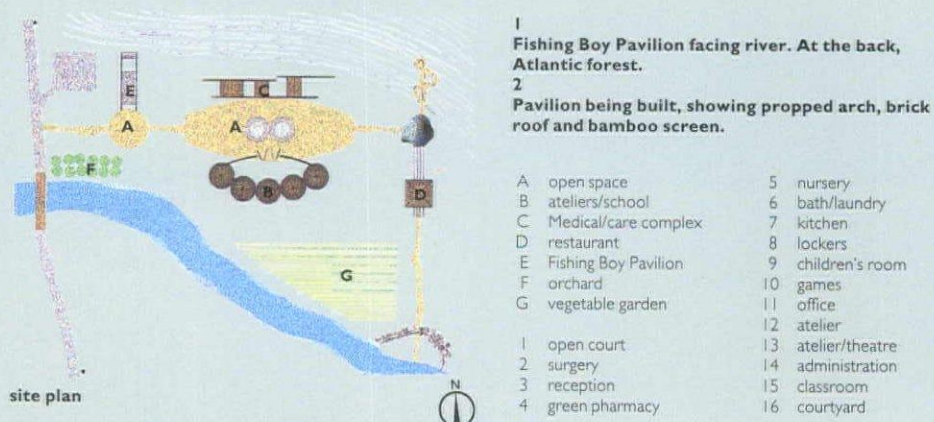
GREEN DIGNITY

An educational centre on Brazil's
Atlantic forest coast will nurture
some of the country's lost children.

Renowned Brazilian Modernist, Ruy Ohtake is building for some of Brazil's forgotten children. Using local materials and crafts, he has designed an educational centre for the orphans and children of destitute families of Ubatuba to the north of São Paulo, on the spectacular Atlantic forest coast. The centre's name, The Child and the Sea, conveys the narrative delight with which he has invested its component parts. Structures use basic materials like brick, concrete, grasses and bamboo, combined into forms to catch and nurture childish imagination.

Administered by a charity, the centre will teach children indigenous crafts like weaving, joinery, fishing and gardening, encourage self expression through theatre and dance, and provide them with basic literary skills.

The plan has an open space with a small arena at the heart. To the north is a medical station, nursery and daycare centre; to the south, a curve of thatched pavilions with workshops, theatre, offices and classrooms. On the east, a path leads to a restaurant and vegetable garden. On the west, another path takes you to The Fishing Boy Pavilion, for exhibitions, parties and meetings. Partly completed and 6m wide, 23m long and from 2.4 to 5m high, it is fish-shaped in long section with a concrete base and propped concrete arch framing a brick vault. On each side, bamboo walls in ochres and yellows, made by local artisans, allow air to circulate under the solid sheltering roof and let chinks and stripes of light criss-cross the polished concrete floor. Two round plates of blue glass inset with fibre optics provide a touch of nocturnal magic. Ohtake hopes 'this scheme will encourage today's destitute children to become citizens of tomorrow, with dignity'. P. M.





INDUSTRIAL BUILDING, RELLINGEN,
GERMANY
ARCHITECT
BRT ARCHITEKTEN

A new headquarters for a German lighting manufacturer combines offices and workshops in a sleek, energy-conscious tube that enlivens a dreary public realm.

INDUSTRIAL REVOLUTION

Franziska and Tobias Grau founded their lighting design company less than 15 years ago and now export light fittings to over 30 countries. To expand their operations they decided to relinquish their rented property, buy a site and build their own headquarters. For this they organized a private architectural competition. BRT Architekten, a Hamburg-based partnership of Jens Bothe, Kai Richter and Hadi Teherani, presented a sleek tubular solution that the clients felt best reflected their products. The design is an elegant, spaceship-like pod of laminated structural timber portal frames clad in aluminium panels. From here Tobias Grau serves a worldwide network of agents supplying contract fittings for new and refurbishment projects.

Tacked on to a village outside Hamburg, Rellingen industrial estate has all the features of first generation European light industry enclaves. On either side of a spine road, long low shoebox sheds of drab brick or metal offer dreary prospects. Almost invisible from the service road, the Tobias Grau building forms part of the second phase of Rellingen's development. The site's main attraction for the Graus was the availability of space for expansion. (Plans for an identical oval tube, to be attached parallel to the present

building by a single-storey connecting block, are already complete.) Rellingen's other advantage is its close proximity to a main north-south autobahn, so avoiding the congestion of Hamburg's city centre.

The company has 30 employees engaged in a mixture of blue and white collar functions: workshop assembly, design engineering and administration. At ground level a concrete stairway with glass balustrade leads up from a double-height foyer into the open plan design studio and offices. Management and employees sit together with little hierarchical variation in workspace facilities. At the south end of the studio-offices is an employees' dining room with pantry and bar leading to a covered balcony. The rest of the ground level is given over to storage and a workshop, with parts delivered for assembly and shipped out to order by a side service entrance. Although necessarily more sparse and functional, the workshop is light, warm and airy. North-facing glazing directs maximum daylight on to island workbenches where assembly work is carried out.

At between 2000 and 3000DM/sqm, building costs were well within the range of similar industrial and office developments.

1 The sleek oval tube of Tobias Grau's new headquarters is a surprising presence in a nondescript industrial park.

2 Prototype solar collecting panels on the short south end generate enough energy to supply the building's electrical needs.

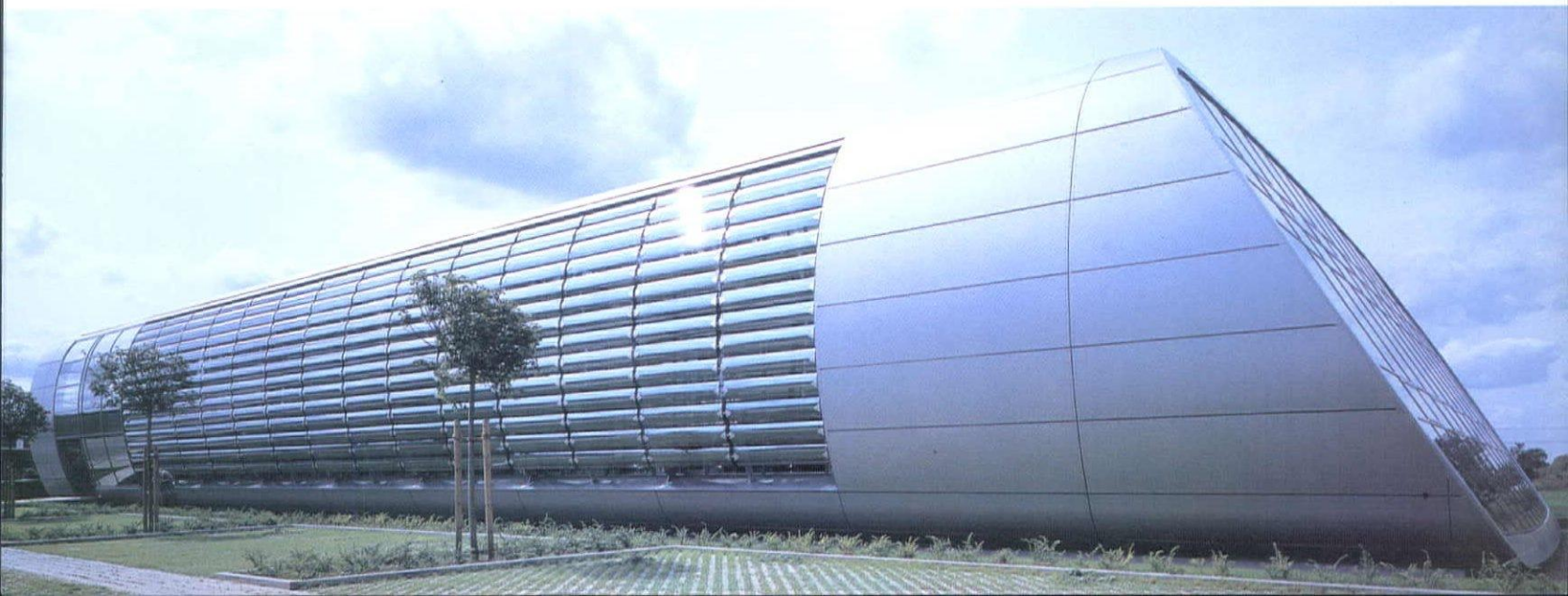
3 The tube is crisply chamfered at its north end. Adjustable glass louvres emphasize the horizontality of the sides.



site plan



2
3



The elimination of a basement reduced construction cost and time and the project was completed within two years. But despite relative economy of means, the building has bold tectonic presence. Laminated timber portal frames bolted to a concrete raft slab on strip foundations are spaced at 5m intervals. The portals span 20m and support aluminium sandwich panels which form the external skin. Externally smooth and internally corrugated, the appearance is reminiscent of early aeronautical construction and the 1939 prototype for Citroën's 2CV car. The first floor slab is supported by a central block of reinforced concrete walls enclosing a connecting stairway, wash rooms and machine rooms at ground level. In the first floor offices, cross bracing between the laminated arches is exposed. Angled oak columns provide additional roof support.

Adjustable glass louvres emphasize the horizontal flanks of the tube and reduce light infiltration by half, permitting computer screen working while cutting out glare and direct sun. On the first floor, two internal courtyards bring more daylight into the office. In summer they make pleasant patios. On the south side, 54 sqm of a prototype structural glazing with integrated solar collecting panels forms part of the elevation. The energy produced serves all the building's electrical needs, including a 24 hour lamp testing laboratory in the design studio. Underfloor heating within the concrete slabs leaves the working volumes free of obstruction. The heavy concrete structure also acts as a heat reservoir. Exploiting north light for close work assembly and the south for solar collection, the building's orientation forms a key part of its environmental control strategy.

The interior is distinguished by a sense of lightness and simple, purpose-designed furniture. Employees are always aware of outside weather changes and light levels. In the first floor offices oak parquet flooring and silver aluminium roof make a soothing, neutral interior.

Enlivening a featureless industrial estate and creating a humane working environment, the Tobias Grau headquarters joins a lineage of other notable German projects such as Stirling's factory for Braun at Melsungen (AR •December 1992) and the exemplary Vitra at Weil am Rhein (AR December 1994) in its dignified and democratic approach to the workplace. LAYLA DAWSON

Architects

BRT Architekten, Hamburg, Germany
http://www.brt.de

Building technology

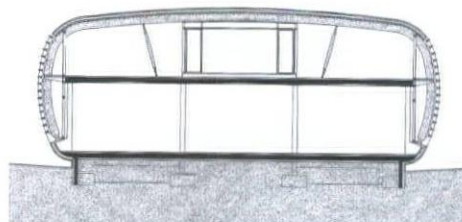
Ridder Meyn

Sun shading

PBI-Heinrich van Heyden

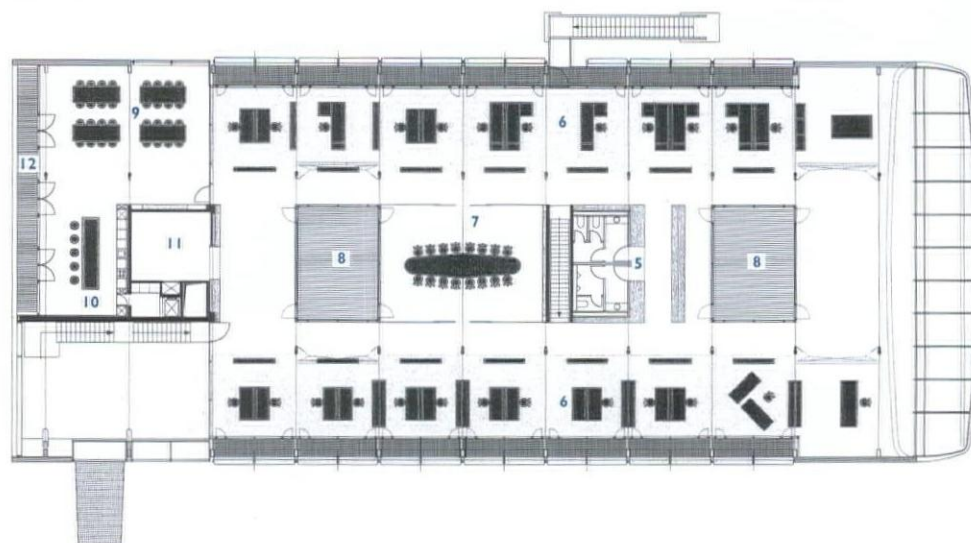
Photographs

Klaus Frahm/CONTUR

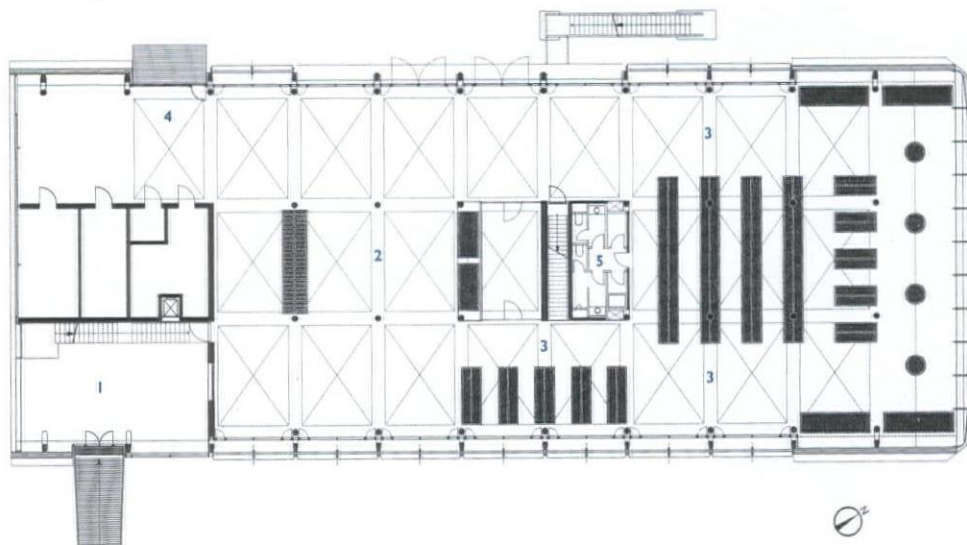


cross section

- | | |
|-----------------|----------------------|
| 1 entrance hall | 7 meeting room |
| 2 storage | 8 internal courtyard |
| 3 workshops | 9 canteen |
| 4 loading bay | 10 bar |
| 5 wcs | 11 servery |
| 6 offices | 12 balcony |



first floor plan



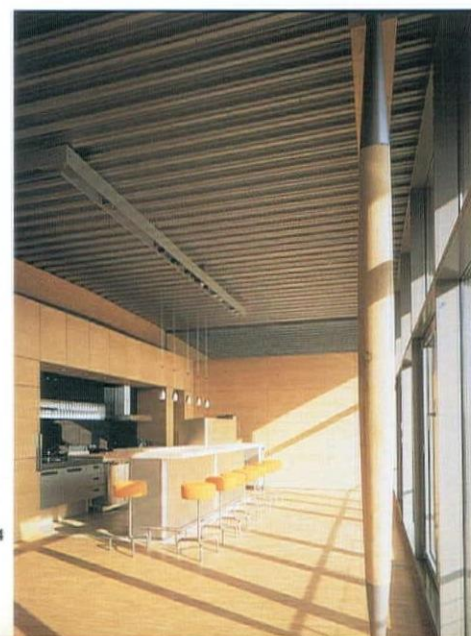
ground floor plan (scale approx 1:500)

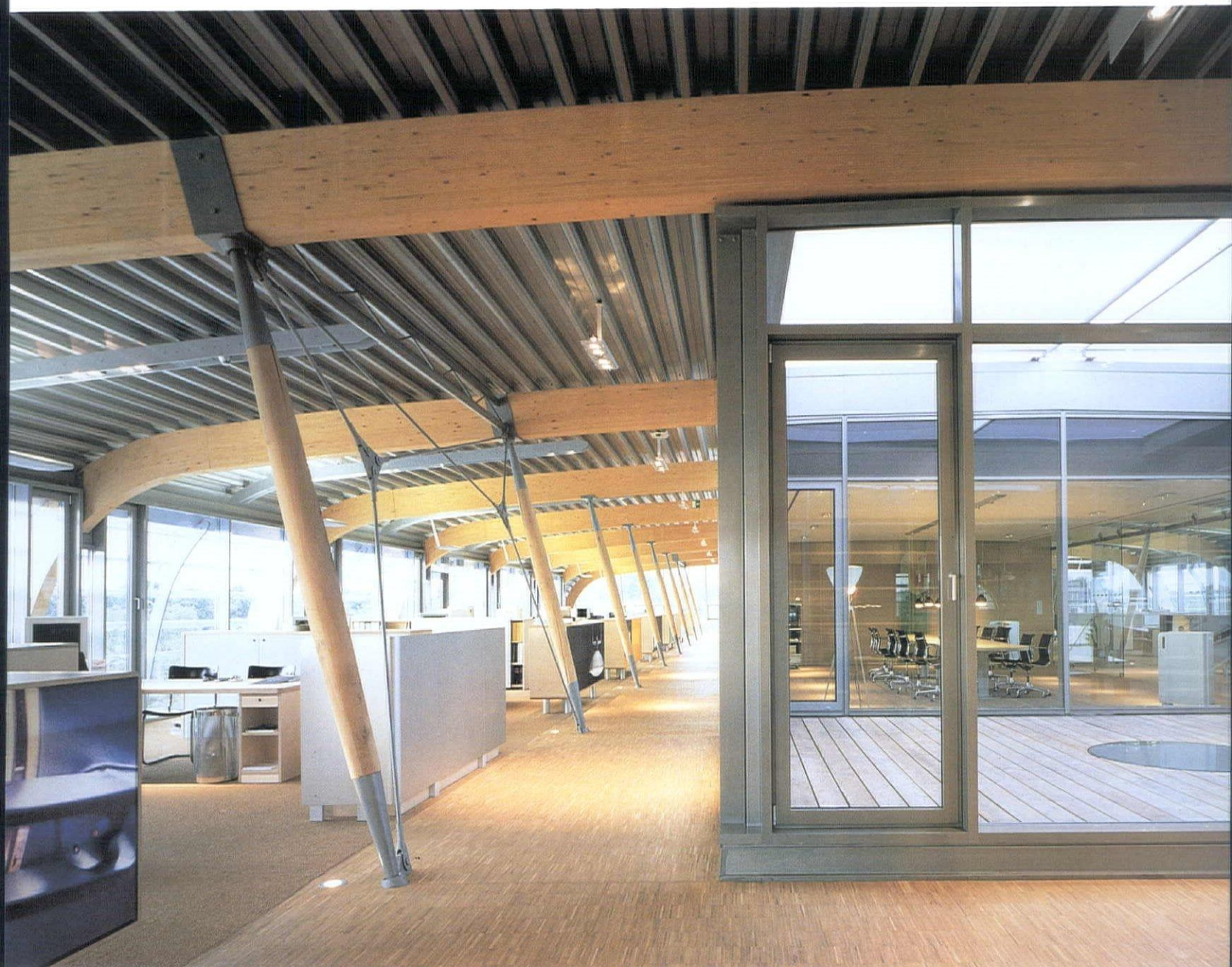
4 The employee's canteen and bar. The bar leads on to a small balcony on the south elevation.

5 Internal courtyards bring light into the office floor and also make pleasant sitting out areas in the warmer months.

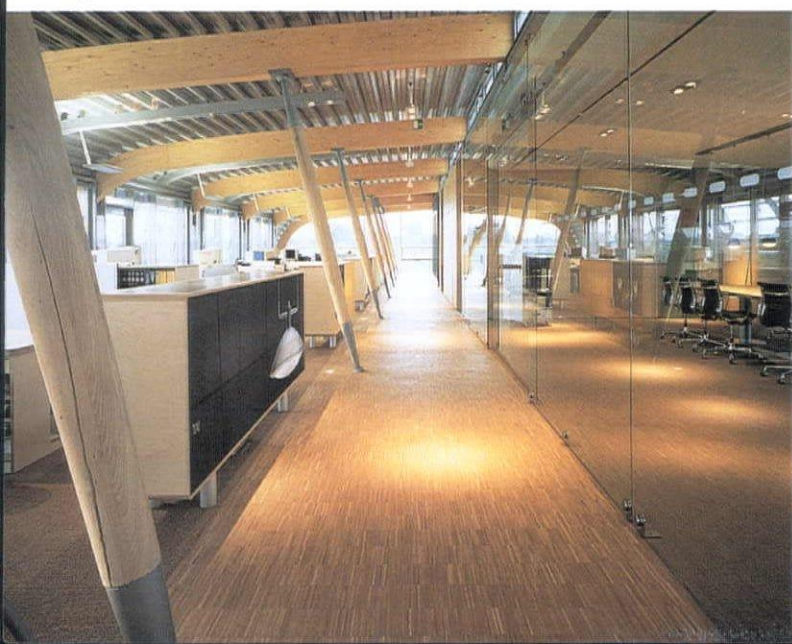
6 Typical office, with democratic rows of workstations and meeting rooms enclosed by glass partitions.

7 Workshops are functional yet light and airy.





5
6



7

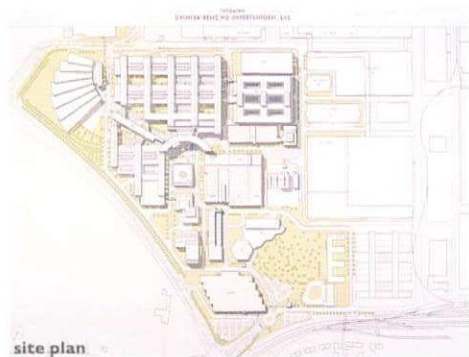


TOROID AFFAIR

The design department of a giant car company has been gathered into one building; its expressive form sets it apart from the rest of the works.



- 1 Double curving roof segments sliced off the same section of a toroid. Here, glass panels admit cool northern light to illuminate the presentation hall.
- 2 Cantilevered glass walls prevent glare and reflection on northerly side of building.
- 3 Building under construction with structural bones clearly seen.
- 4 North-west face of shortest finger.



site plan



roof plan



Renzo Piano's new Design Centre for Daimler Chrysler is part of the company's huge new works (more tightly planned town than company plant) in Sindelfingen, south-west of Stuttgart. The works concentrates 18 divisions, previously scattered about the district, and covers an area said to be the size of 150 football pitches. Several thousand people work in administrative and engineering buildings and workshops, distributed according to a masterplan by Christoph Kohlbecker.

Described as the 'prime creative focus' of the complex,¹ the Design Centre accommodates about 300 people on a site within a large curve on the works' periphery. The design department was previously housed in four different places inside and outside the Sindelfingen works and bringing them together obviously made sense. The designers needed more space but the

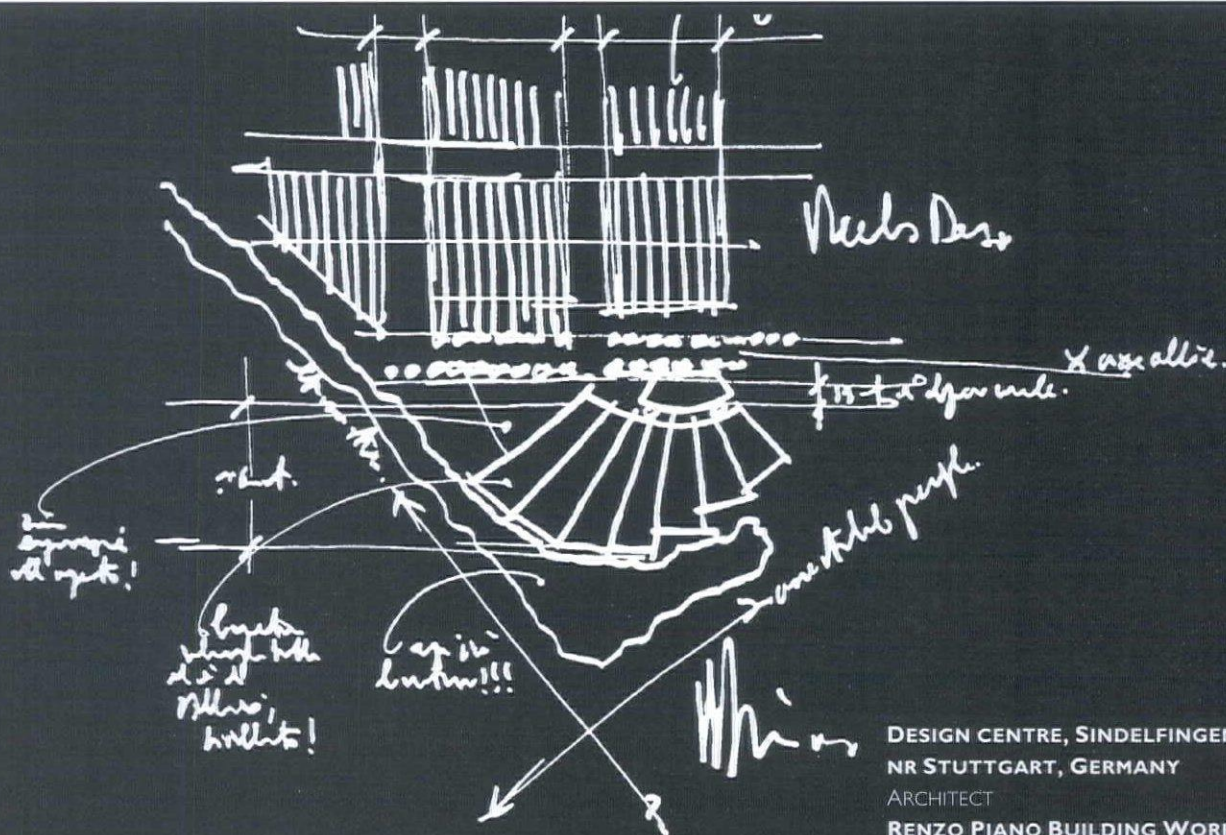
company also wanted to provide an environment that would stimulate communication and creativity. A wider consideration was that the designers would have easy contact with about 5000 or so colleagues in the firm's development and testing department and with 3000 more working in nearby Untertürkheim on development of engines.

The silvery fan-shaped Design Centre stands apart from the gridded orthogonal buildings that make up the rest of the works. Its expressive form was suggested by the shape of its site, but developed more invisibly from an analysis of functional logistics and the working environment, and the need to protect the work from industrial espionage.

It is difficult, observes Piano, for an outsider to imagine the extent to which espionage is feared in the car industry. 'A model in the process of being developed is

surrounded by the kind of security measures you might expect from the military. The logistics of a styling centre call for the isolation of the designers not only from the outside world, but also from the rest of the company for which they work. At the same time, these precautions should not impede internal communications, which are essential to the circulation of ideas'.

Piano describes the building as a 'simple factory, made up of sheds', or one shed 'shaken up by a gentle earthquake'.² Embraced by the curving periphery of the site, it is composed of seven shed-like fingers which radiate from the same point at a constant angle of nine degrees and increase in length from south to north. All the fingers face north-west through canted glass walls onto a common garden surrounded by an immense barrier. This makes a secluded place in which to examine new cars in

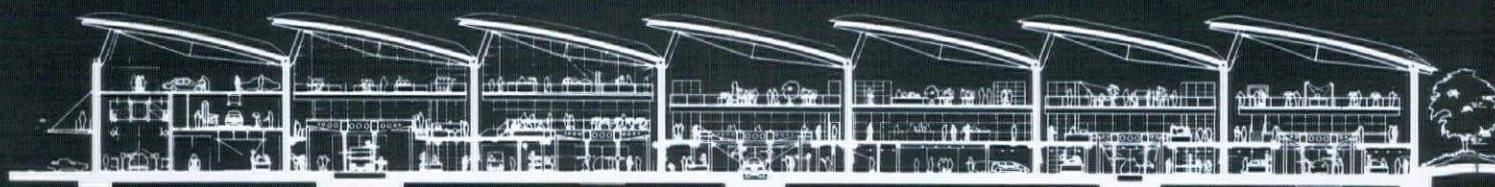


plan diagram: we are not allowed to show proper plans for security reasons

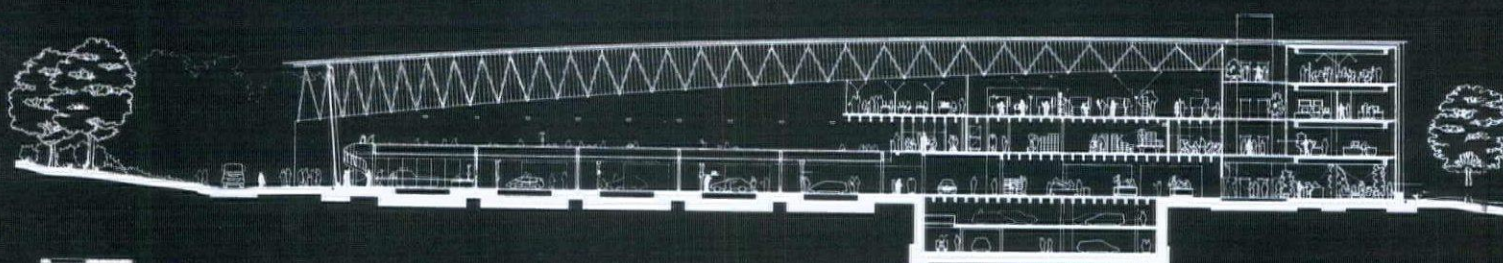
DESIGN CENTRE, SINDELFINGEN,
NR STUTTGART, GERMANY

ARCHITECT

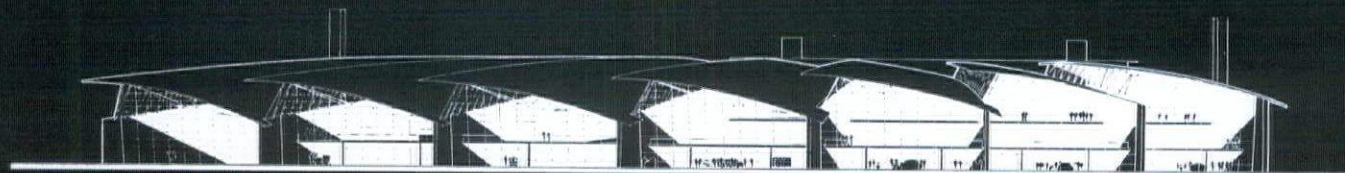
RENZO PIANO BUILDING WORKSHOP/
CHRISTOPH KOHLBECKER



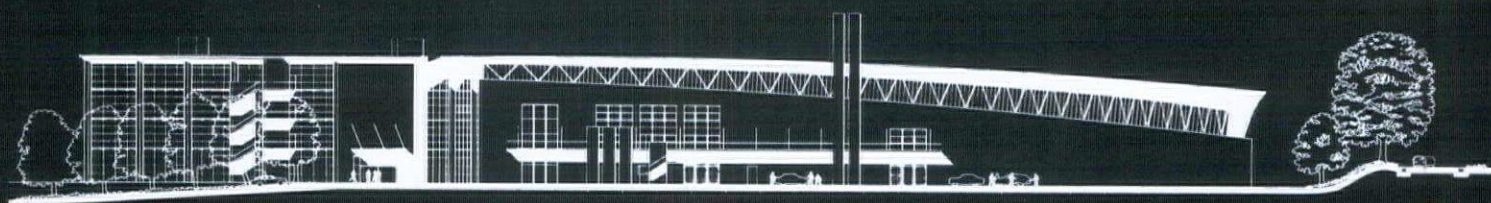
south-west/north-east cross section



north-west/south-east long section



north-west elevation



long section through office building and northerly shed

daylight. Transparency along the north-west side also makes it impossible for intruders not to be spotted.

Memory of Kansai Air Terminal (AR November 1994), coinciding with concern for security and comfort, influenced design of the shed roofs. (Peter Rice made an early contribution.) Each one, curved in two directions, is a slice off the same part of a toroid, with the seven slices tilted around their long axes and arranged in a series of loosely overlapping shells. Roofs are constructed of two outer layers of steel and an inner one of thick insulation; and held up by a system of supports, joints and tie beams keeping the curves in tension. Horizontal interstices between each shell are filled with clerestoreys which admit light into the studios but not prying eyes. Cast concrete walls are faced on the outside with special aluminium panels mounted onto a polythene support so that they are perfectly flat. In long section, it can be seen that the walls, as well as the roofs curve

Car design involves a large number of collaborators: car body and engine designers, technicians, textile designers, model builders, computer specialists, marketing people and so on. Internally, Piano's building ensures that sections requiring close cooperation are next to each other. There are no enclosed cells; instead, in sheds devoted to design of cars and commercial vehicles, open galleries look over studios and designers can talk to model-makers directly. Other sheds accommodate sophisticated plant for cutting maquettes by remote control, for measuring, scanning and painting. Offices are in the glass base of the fan.

At the east end – the base – of the three shortest fingers is a dramatic hall, an immense luminous volume, where new models are presented for critical, sometimes public, inspection. The quality of lighting was important: there could be no direct sunlight, no shadows and no reflections. So, though the geometry of the roof remains constant, steel has been replaced by glass panels

incorporating a grid which initially cuts down dazzle. Natural light pouring through is further regulated and made diffuse by enormous opalescent screens, lens-like in section, which give the upper reaches of the hall a milky sub-aqueous quality and ensure an even distribution of light. Because the hall is semi-public, it has been set apart from the rest of the complex and is accessible from the adjacent service block.

Piano's concern for sustainability is habitually incorporated into his architecture, becoming an almost invisible constituent of it. Here his concern coincides with that of his client. Throughout the Daimler Chrysler works, including the Design Centre, air-conditioning and lighting are largely provided by natural methods. The result has been a 70 per cent reduction in energy consumption compared with more conventional building.

VIOLET GORE

1. Jürgen Hubbert, *Design-Gebäude, Daimler-Benz, Sindelfingen*.
2. *The Benz Building*, London: Thames & Hudson, 1976.

5

Office interior before occupation.

6

Designers' gallery, naturally illuminated by day, with direct visual contact with models on ground floor.

7

Presentation hall: big mobile louvres adjust light.

8

Visible roof structure over designers' gallery and model building studio.

**Architect**Renzo Piano Building Workshop/
Christoph Kohlbecker**Project team**Renzo Piano, E. Baglietto, G. Cohen, J. Florin,
A. Hahne, S. Ishida, F. Santolini, with D. Guerrisi
(CAD), C. Leoncini, S. Nobis, M. Ottonello,
C. Sapper, L. Viti, M. Bassignami (models)**Structural and mechanical engineering (preliminary project)**

Ove Arup & Partners

Structural consultant

IFB Dr Braschel & Partner

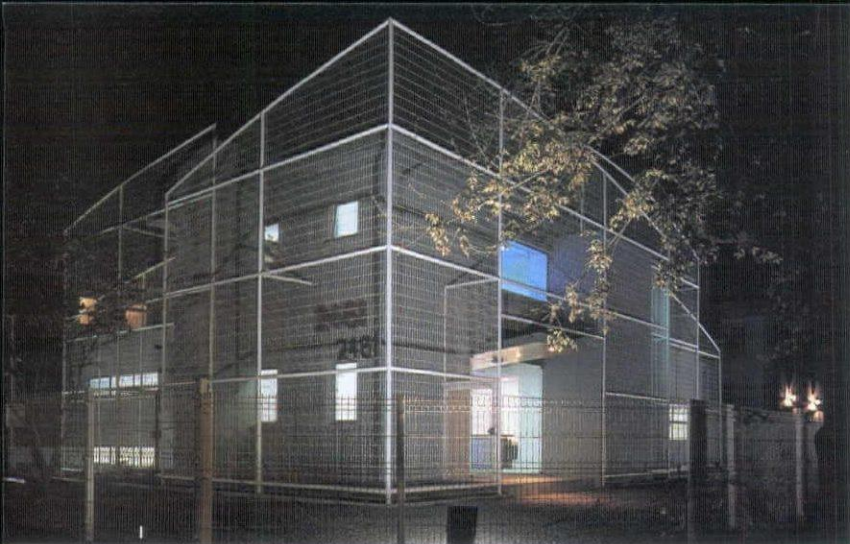
Mechanical engineering

FWT Project und Bauleitung Daimler-Benz

Acoustic engineering

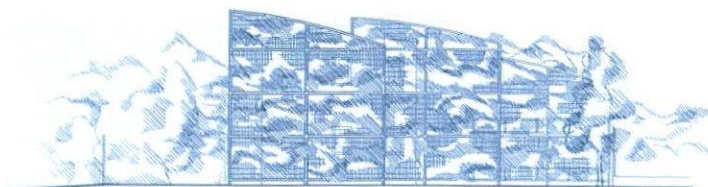
Müller BBM

ContractorsZüblin-Baresel-Hochtief (reinforced concrete);
Greschbach (metal structures); Friess (glazing)**Photographs**Oliver Heissner, Peter Horn,
Berengo Gardin, Christian Richters**DESIGN CENTRE, SINDELFINGEN,
NR STUTTGART, GERMANY****ARCHITECT****RENZO PIANO BUILDING WORKSHOP/
CHRISTOPH KOHLBECKER**



CLIMBING FRAME

Using planted pergolas to modulate climate, this house in a Santiago suburb has been inventively recolonized.



north-west elevation showing planting established

From the dense nineteenth-century grid that forms its core, Santiago sprawls languidly east to the foothills of the Andes. Its suburbs conform the low density American model of villas on plots, their architecture generally anonymous and undistinguished. Enrique Browne acquired a large house in Providencia, a suburb to the north-east of the centre, and has converted it into an office for his practice. Although modest in scale, the project encapsulates various concerns that continue to inform Browne's architecture – the re-use of buildings, the nature of light and the integration of vegetation as a natural shading device.

Browne's use of greenery revives the Hispanic tradition of *parrones*, or plant-covered pergolas, to diffuse light, soften elevations and create shade. In Santiago's intensely hot, dry

climate, the *parrones* add a cooling layer of lush visual and physical texture. Browne's offices for Consorcio-Vida (AR February 1999) showed, crucially, that such a technique could also be applied to much larger buildings. At Consorcio-Vida, a wedge-shaped block is magically and simply transformed into modern Babylonian hanging gardens, with environmental benefits.

For this project, the scale is obviously reduced, but the effect is the same. The remodelled house occupies a corner plot, facing north-east towards the hills of the Parque Metropolitano. The basic L-shaped plan wraps around a patio courtyard in the internal corner of the site. The original cellular organization has been gently prised apart to create a reception area, meeting rooms and a long private office on the



1

The refurbished house is enclosed by mesh screens which will eventually be covered in greenery, forming a cooling organic layer.

2

New studios wrap around a hermetic, internal patio.

3

A ramp connects the house with the new studios, forming a leisurely *promenade architecturale*.

ARCHITECT'S OFFICE,

SANTIAGO, CHILE

ARCHITECT

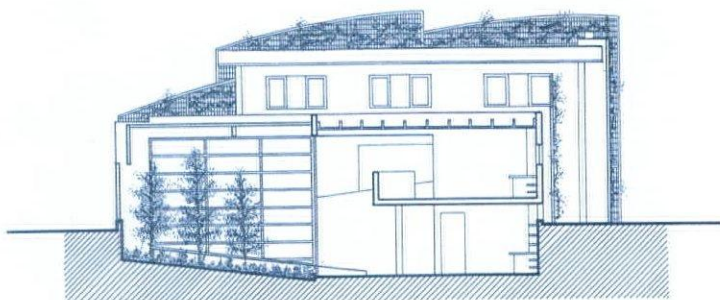
ENRIQUE BROWNE



**ARCHITECT'S OFFICE,
SANTIAGO, CHILE**
ARCHITECT
ENRIQUE BROWNE

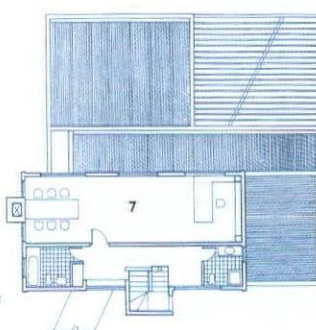


4
The austere patio is reinterpretation of a traditional Hispanic form. Browne's architecture intelligently synthesizes traditional devices with contemporary programmes.
5
Changing coloured light animates and enlivens the interior.

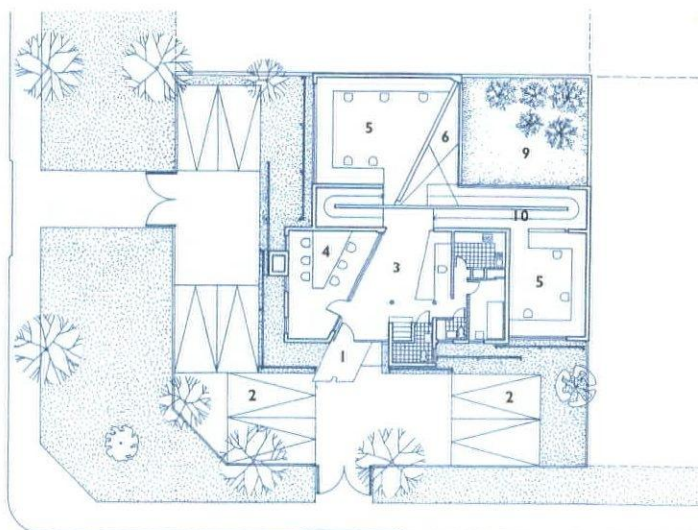


cross section through patio and studios

- | | |
|----------------|------------------|
| 1 entrance | 6 void |
| 2 parking | 7 private office |
| 3 reception | 8 storage |
| 4 meeting room | 9 patio |
| 5 studio | 10 ramp |



first floor plan



ground floor plan (scale approx 1:250)

first floor. Only the kitchen and bathrooms were preserved. Sunk partly underground, to maintain the domestic scale, a block has been added to the north-west side, housing architectural studios on basement and mezzanine levels. New and old are connected by a narrow ramp that threads its way up through the building, unifying and revealing the various studio, meeting and office spaces in a leisurely *promenade architecturale*. The ramp also serves as an informal space for project reviews and correcting drawings. Walls facing onto the internal patio are fully glazed, bringing light into the ramp and the subterranean studios. A slatted roof over the whitewashed patio casts rippling reflections through the spaces. Changing artificial light, from soft golden yellow during the day to intense blue at night, also animates the interior.

The lightness of the internal spaces forms an evocative contrast with the hermetic exterior. North and west

elevations (those most susceptible to heat gain in the southern hemisphere) are wrapped in a series of layered metal mesh screens. Although slightly daunting in their raw state, these form pergolas for planting, which when fully established, will generate a luxuriant covering of greenery, so that the house merges with the landscape. As well as the obvious environmental advantages, the planted pergolas also provide acoustic isolation and security. Browne's sensitive reinterpretation of traditional Hispanic forms and shading devices speaks of an innate rapport with his country's history and climate, yet it is also intelligently reconciled to the modern world.

CATHERINE SLESSOR

Architect

Enrique Browne

Project team

Enrique Browne, Mariano Chillier,

Felipe Browne, Clara Guzman, Igor Torres

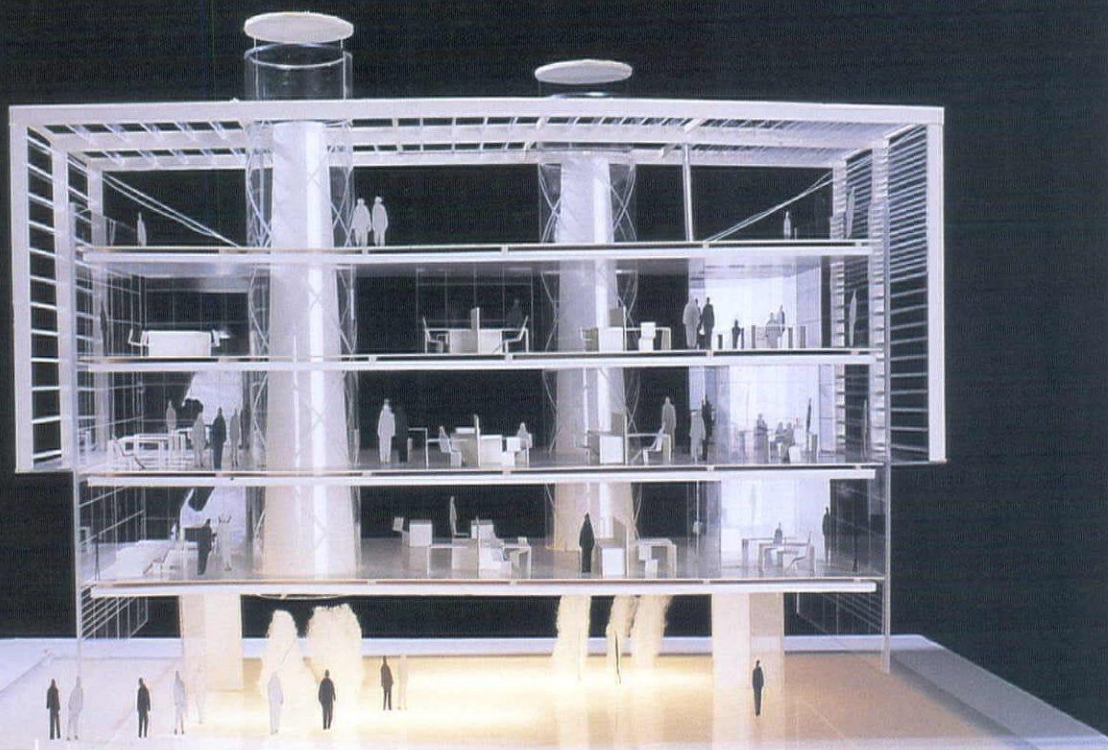
Structural engineers

Harmut Vogel & Rodrigo Mujica

Photographs

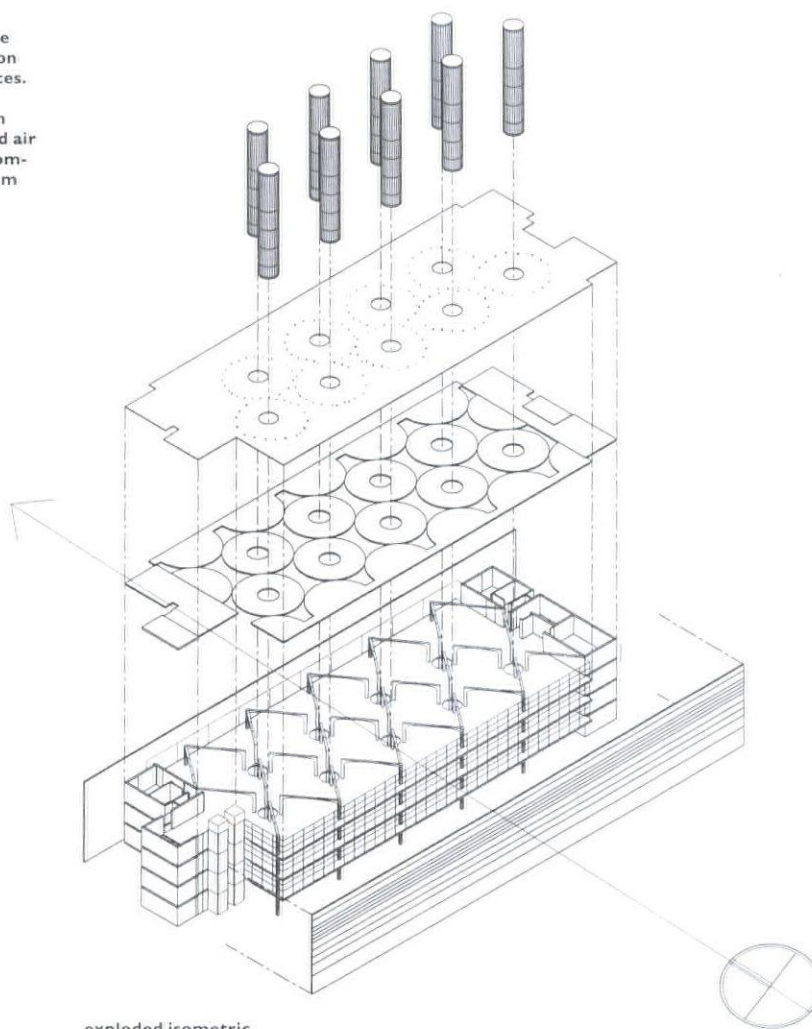
Guy Wenborne

**PROJECT FOR OFFICES, CATANIA,
ITALY**
ARCHITECT
MARIO CUCINELLA ARCHITECTS



1
Section through model showing the relationship between the ventilation towers and surrounding office spaces.

2
Perspective of interior. Ventilation shafts are glazed, bringing light and air into the office floors. The mushroom-shaped structure follows the rhythm established by the shafts.



exploded isometric

Passive downdraught evaporative cooling (PDEC) is a traditional means of environmental control that has been used for centuries in parts of the Middle East, notably Iran and Turkey. It operates on the premise of windcatchers guiding external air over porous pots filled with water, inducing evaporation and lowering air temperature before it enters the interior. Recent applications include the 30m high towers at the Seville Expo (AR June 1992) which employed high pressure water misting nozzles to induce downdraught cooling. Compared with air conditioning, the benefits of cooling buildings in this way include lower capital, maintenance and energy costs and the elimination of refrigerant. But the use of PDEC also has architectural implications, especially in the provision of transitional space to circulate the cooled air around the building.

Italian architect Mario Cucinella is a partner in a multi-disciplinary research group exploring the application of PDEC in non-domestic buildings. Funded by European Commission's Joule programme, the research aims to investigate how this historic, passive cooling technique could be applied to modern institutional and commercial buildings in the hot, dry regions of southern Europe. Cucinella's work has been consistently informed by a concern for energy use and passive environmental control – for instance the headquarters for iGuzzini lighting in Recanati (AR February 1999) sought to maximize daylighting and natural ventilation.

The current research programme has studied three main issues: experimentation and monitoring, architectural design studies and building performance assessment. To evaluate environmental performance, Cucinella designed a full-scale experimental rig of a downdraught tower and linked office space. Wind tunnel tests were carried out on different forms of windcatchers to find the most efficient conduit for air

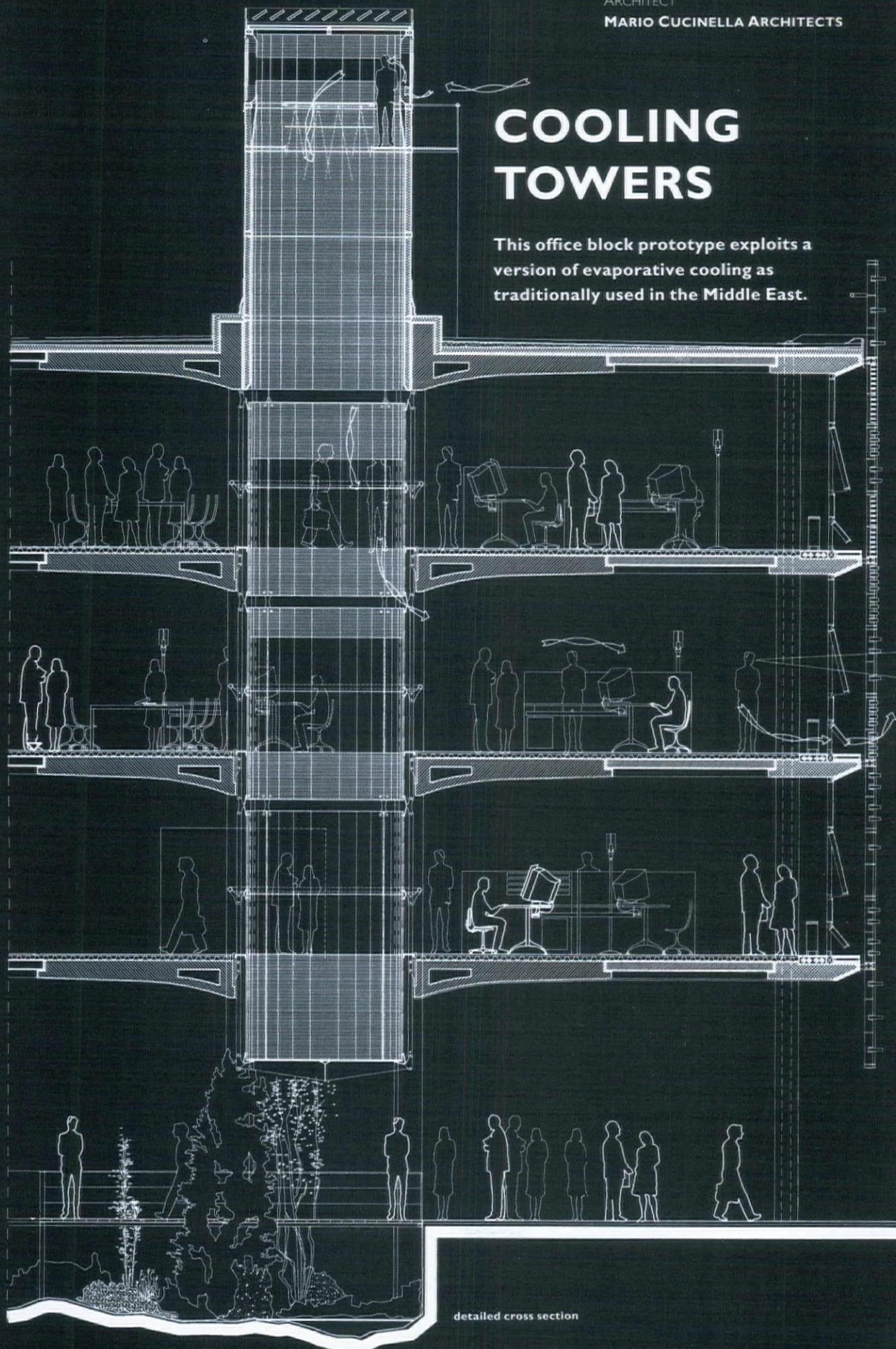
PROJECT FOR OFFICES, CATANIA,
ITALY

ARCHITECT

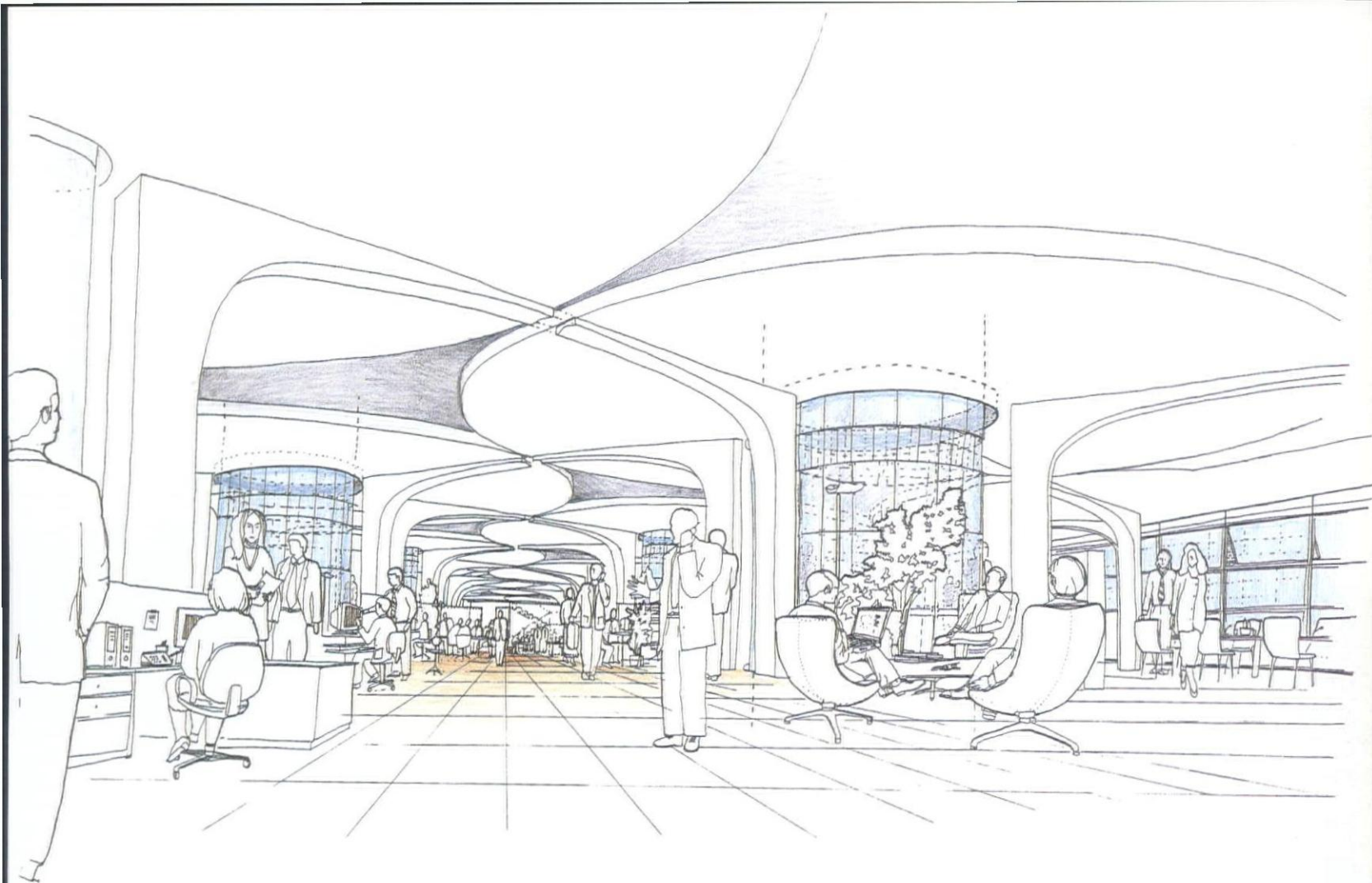
MARIO CUCINELLA ARCHITECTS

COOLING TOWERS

This office block prototype exploits a
version of evaporative cooling as
traditionally used in the Middle East.



detailed cross section



2

flow. The research conclusions were then applied to design studies involving refurbishment and new build projects. These include the hypothetical refurbishment of the Pavilion of the Americas at the Seville Expo site, and two new office buildings for sites in Seville and Catania, Sicily. The latter also exploit another advantage of PDEC for urban locations; since air is taken in at high level, the external skin can be sealed against noise and pollution.

The design for the Catania office block evolved from an initial proposal for a building with a large atrium at its core, to a design with a more evenly distributed approach to PDEC. The energy required to cool a large volume of air in a single atrium and then circulate it around each floor is too high to be considered a fully passive strategy, so Cucinella reduced the size of the atrium and reconfigured it as a series of fluted towers that run vertically through the building. The tapering, conical form of each

tower responds to the way in which cooled air flows when generated by an evaporative system. Each tower cools the immediate surrounding area. Towers are also used for night ventilation and to bring daylight into the deep plan through glazed walls, which break up and animate the office floors. Micronizers are located at the top of each cone.

Cucinella's research suggests that under this system, peak cooling loads could be reduced by a third compared with the original single atrium design (58 W/sq m compared with 82 W/sq m). Further investigations into daylighting aim to reduce the loads generated by artificial lighting, enhancing the economic and environmental potential of this intriguing prototype. C. S.

Architect

Mario Cucinella Architects, Paris
www.easynet.fr/mca/

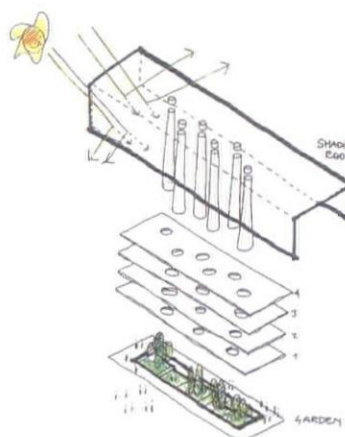
Research project partners

Brian Ford Associates, SDT Microlide, Conphoebus, De Montfort University, Universidad de Málaga

Model photograph

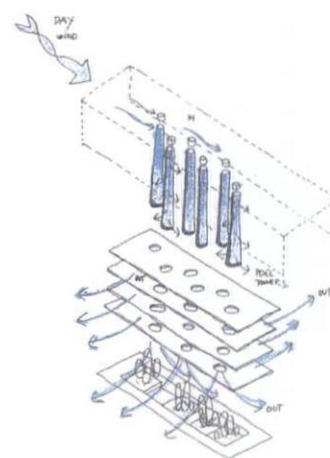
Jean de Calan

thermal mass study

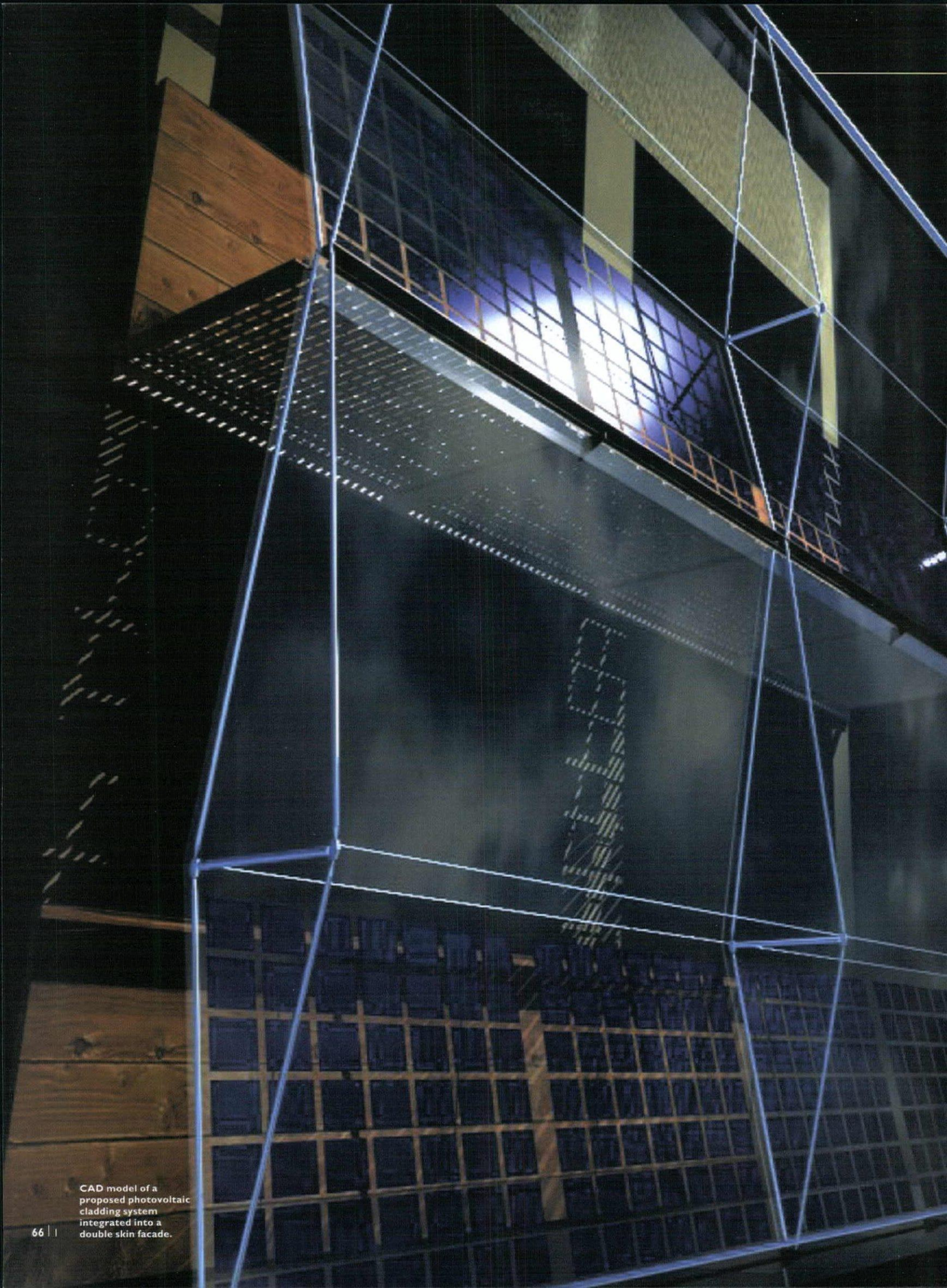


shading strategy

night ventilation through stack effect



cooling strategy



CAD model of a proposed photovoltaic cladding system integrated into a double skin facade.

INTEGRATING PHOTOVOLTAIC CELLS into buildings is a satisfying idea: the building produces electricity as well as using it, so saving running costs and contributing to a reduction in greenhouse gas emissions. At some point, improved cell performance and economies of scale will solve lengthy payback problems, manufacturers will have engaged fully with the needs of the building industry, and electricity companies will have become enthusiastic about buying as well as selling electricity. All new buildings will then either integrate panels or be designed so that they can be fitted at a later date.

First, PV systems need to become more efficient. The PV industry must continue to investigate concentration technologies and develop standards for mechanical stability, building integration details, watertightness and durability. Cost is arguably the greatest barrier to investment in PVs at present, but volume production will bring about reductions.

The effect of PVs on architectural imagination will be minimal unless people start to think differently about risk and the use of PV systems. Concerns about panel reliability linger. Other risk perceptions are a lack of sufficient sun (changing), safety problems with live panels and the safe disposal of panels when they reach the end of their working life.

A big problem seems to be reluctance of some electricity companies to buy back surplus electricity at an economic price. Without this, the PV revolution will not happen. At present, small-scale individual producers have no power to negotiate. Bulk contracts for neighbourhood developments or major buildings could establish incentive. Or developers might choose to rent wall or roof space to electricity companies. Power generation would become a significant incentive in design.

Governments should encourage PV use and actively favour green development through tax systems. Grants for experimental PV installations are not enough. Developers could be given tax breaks to include PVs as part of a low energy building strategy and, in the interests of consistency, should be penalized if the running costs of new buildings exceed an agreed



The Peabody Trust had European funding to install photovoltaic panels in a £70m mixed-use development on a 10 acre former gasworks site, West London.

level. Absurdly, running costs can be offset against tax but a green specification cannot.

Low energy design should be seen as co-ordination of many factors. Development of building concept and environmental strategy ought to be part of the same process. The object is to produce a building in which orientation, zoning and structure – including thermal mass and facades – work with environmental systems to achieve optimum efficiency and comfort. PVs have the potential to be a key aspect of low energy designs.

As architects explore new ways of using the technology, it will be increasingly important for engineers to gain experience and technical capability in PV system design. This is one of the objectives of a building-integrated PV design study that engineers Whitby & Bird have recently completed on behalf of The Energy Technology Support Unit for the Department of Trade and Industry under the UK Solar Programme. The focus of the study has been a mixed use development for the Peabody Trust on a brownfield site in Kensal Green, West London (architects CZWG in succession to Cartwright Pickard). The project is a demonstration of the use of renewable energy in an urban setting and will include one of the largest uses of PV panels in Europe.

Both residential and commercial buildings will incorporate PV panels where possible, replacing 1500m² of conventional cladding material on roofs and facades. On sunniest

days, the system will generate 200kW, meeting all electrical requirements of the site. A site-wide energy management system will move power between buildings to meet local demand. Annually, 15 per cent of the development's total electricity needs will be panel-generated, which will have the added benefit of reducing carbon dioxide emissions by 200 tonnes.

Whitby & Bird's remit was to address issues of module integration and examine energy generation and use. They have also considered the distribution of energy over the 10 acre site. The objective is an autonomous community (on sunny days at least), which is more worth while than autonomy for individual buildings. This project concerns itself with issues of replication – it is not a theoretical study.

As cell efficiency increases, unit size will decrease and greater variety and subtlety emerge. The future should therefore show designers not having to make such obvious trade-offs between how buildings perform and how they look. PVs, as highly efficient bespoke glass laminates, will be part of the vocabulary of energy efficient design without dominating it. Facades and roofs will become increasingly viewed as sites on which to hang units, although there is already competition for space between PVs and glazing or shading elements. Combination of structural shading and PVs into a single system can be particularly elegant. In future, will transparent PVs be integrated into glazing?

There are major challenges for architects and engineers in the next few years. First, to keep up to date with the technology. Second, to encourage the use of PVs so that the technology becomes increasingly demand led. Third, to ensure that new buildings are PV-friendly wherever possible, by routinely assessing possibilities for appropriate orientation, panel siting and structural integration of fixings. Fourth, to work with the manufacturers of PV modules, curtain walling and glazing systems to drive the production of the integrated systems of the future.

Duncan Price is a physicist working in the Building Physics group at Whitby Bird & Partners developing low energy concepts and analysing building environmental performance.

Efficiently harnessing the sun's power through photovoltaics remains a tantalizing ideal for all those concerned with sustainable development. Duncan Price looks at how the technology is evolving and its future potential.

exploiting the potential of
PHOTOVOLTAICS



Dome of Discovery by Ralph Tubbs,
and Skylon by Powell & Moya.
Unforgettable Picturesque events
made of aluminium with latest
postwar engineering techniques to
demonstrate Modernity.

HEROISM *versus* EMPIRICISM

In the month when the Rogers Millennium Dome opened at Greenwich, London, it seems appropriate to look back on the last time the British organized a major architectural celebratory event: the Festival of Britain, 1951, which marked peace after the Second World War. Robert Gregory analyses its aesthetic origins and intentions.

WITH HINDSIGHT, THE FESTIVAL OF BRITAIN CAN BE seen as the first round of a fight between Corbusian Heroism and Swedish Empiricism. While this conflict may not have been obvious to people visiting the Festival, afterwards it became increasingly public. For example, in 1952 Colin St John Wilson, then with the LCC, and Hugh Casson engaged in a debate in *The Observer*. Wilson's attack on compromise and Picturesque planning was met with deflationary mockery by Casson.¹

To investigate how different these two tendencies were, it is important to understand the architectural context from which they developed. The belief that Modernism could build a clean white world, had developed in pre-war Europe following the bloody mess of the First World War.² Many nations became obsessed with the idea of cleaning society, and started the process of wiping the slate clean, to create a *tabula rasa* for an ideal society. While a few artists were haunted by memories of the trenches, most chose to reject the past, and to search for modern forms of expression, in a period of experimentation in art that included architecture. The Weissenhofsiedlung in 1927, for example, demonstrated Modern architecture as a livable reality, whereby the emerging 'international style', and social ideals obsessed with health and hygiene became one. Shiny linoleum and pure white stripped interiors, were to replace the bourgeois dusty architecture of heavy curtains and stuffed armchairs.

Having announced his 'Five Points of a New Architecture' at the Weissenhof, Corbusier's work increasingly promoted a modern way of living which he believed would give every citizen of the state 'moral power'. Turning his attention to the city, and with his metaphor of health, he proposed surgery to cut out the cancer of the city with a life-saving scalpel. In his vision for the 'City of Tomorrow' he wrote, 'Our World, like a charnel-house, is strewn with the detritus of dead epochs. The great task incumbent on us is that of making a proper environment for our existence, and clearing away from our cities the dead bones that putrefy them'.

To the young generation of British architects who interrupted their training to fight in the war, Corbusier became a hero. Having been introduced to his work through the writing of J. M. Richards and Nikolaus Pevsner, they returned from a War where they had fought to make the world safe, with a similar heroic world-changing spirit.

It was at this point that many realized that they had returned to a very different architectural environment. During the War both Richards and Pevsner, had, in the eyes of the younger generation, fallen foul of the English habit of compromise and sentimentality. Seeming to have lost their enthusiasm for the heroic Continental Modernism of Corbusier, both had begun to support the revival of the English Picturesque tradition. Through their work for *The Architectural Review* they had switched from Corbusier to Sweden and

'The New Empiricism'.³ Learning from the Stockholm Exhibition of 1930, rather than searching for new forms, they advocated a Modernism that was derived from the specific British milieu, which for them was the Picturesque tradition.

The Stockholm exhibition of 1930 represented the culmination of two artistic tendencies. 'Swedish Grace', which had earned Sweden world recognition for its fine handicraft and industrial design, and 'New Objectivity', which called for a commitment to the social ideals.⁴ But despite the popularity of Swedish Grace following the Gothenburg exhibition of 1923, and the Paris Exposition of 1925, Gregor Paulsson as the commissioner did not exploit this tradition. In his manifesto of 1928 he stated, '“New objectivity” signifies an intellectually and morally honest relationship to artistic problems, which feels doubly refreshing after the worship in recent years of veiled idols, which carried the beautiful but false museum labels of National Tradition or Classical Beauty. The belief that one could create the architecture and furnishings of a modern culture through resuscitation of bygone artistic styles and ways of life reveals a lack of insight into the values arising from artistic creation'.⁵

Paulsson's attitude towards 'New Objectivity' concerned many people who saw it as a mediocre, imported, and anti-traditional style, mechanically dry, and based on a false objectivity. The dispute that ensued resulted in a compromise whereby the ideals of Functionalism and the forces of tradition would be exhibited together. This decision caused Corbusier to decline the appointment as exhibition architect and thereby separated 'Stockholm 1930' from the growing Modernist tradition.⁶ With the Modernist theory that everything from chairs to spoons were building blocks of the modern society, the decorative Swedish crafts represented the superfluous, meaningless, bourgeois, dust-collecting clutter that Corbusier and Weissenhof had so clearly rejected. As a result, Gunnar Asplund was appointed, and went on to attempt to bring the two tendencies together in a new Modernism.

ASPLUND'S AIM OF bridging the transition from machinery to decoration, while seen by many as a compromise to both, received admiration from the *AR*. He had begun the task of taming the machine that would give British architects an alternative to follow from the Franco-German style. It would seem that this aim in itself was enough, regardless of the compromised results. P. Morton Shand concluded his criticism of the exhibition for the *AR* by saying, 'Nothing ... has really entirely found itself, or seems quite sure of its footing in the world. Some artists have followed Asplund, the chief architect, in boldly taking the plunge; others are still cautiously preparing to dive in; most are only beginning to undress. Let them take their time and choose their stroke, even if the latter should prove to be a crawl'.⁷

Above all Asplund's 'Stockholm 1930' was to initiate the development of a popular nationalistic Modernism, not an International Style. It was this 'crawl' that became 'New Empiricism'. When writing for the *AR* the Chairman of the Anglo-Swedish Society wrote, 'Sweden is tackling every problem in a modern spirit, she is leading. How can we bring Sweden nearer to England. Sweden is the only country which can combine traditionalism with modernity. Let us not be too proud to learn from them'.⁸

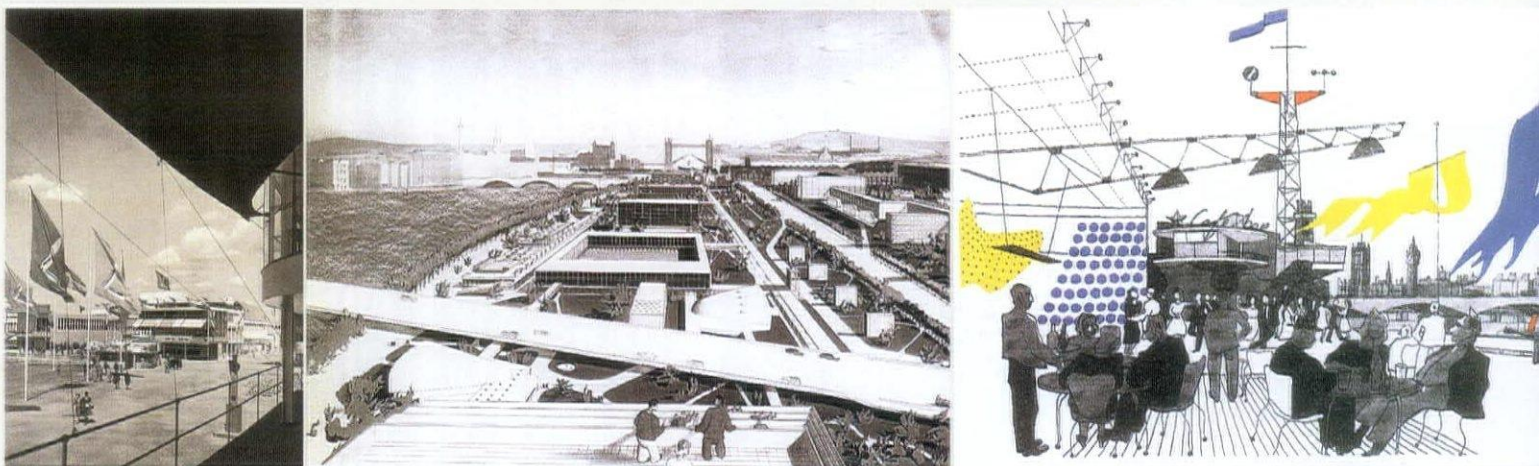
While Corbusier's followers may have seen Swedish 'New Empiricism' as a compromise, there can be no doubt that Asplund and Paulsson were committed to architectural progress. Similarly it is hard to believe that such writers as Richards and Pevsner would revert to pure revivalism, having both written with considerable authority of Modernism's specific place in a historical context. What was seen following Stockholm throughout Sweden (and later in Britain through the *AR*) was a development of a Modernism that built upon each country's specific cultural milieu, instead of the *tabula rasa* approach. Neither Sweden nor Britain wanted to break from the past. As plans to redevelop London began to emerge, even members of the Modern Architectural Research Group (MARS) questioned the extent to which continental Modernism should 'control'.

In January 1949, the forces of Heroism and Empiricism were to meet almost prophetically in the pages of the *AR*. Before Casson's plans were finalized the editors published their own proposals to show how the South Bank should be developed after the Festival when the crowds and the fireworks had gone. [Presumably Casson helped.] Through Gordon Cullen's *Bankside Regained* publication they hoped to strengthen the site's relationship to the river.⁹ As a marriage of the Thames and the Thames-side, Cullen's proposals were a romantic Picturesque reinterpretation of pre-war seaside resorts where people

of the city with a Picturesque landscape, the character of the South Bank can be seen as a development of Stockholm's neighbourhood parks. The South Bank became an expression of Gordon Cullen's Townscape philosophy, seen as an update of Camillo Sitte's *Town Planning According to Artistic Principles*.¹¹ The lack of traditional monumental devices on the South Bank represented a rejection of the arid monumentality of the 1924 Empire Exhibition at Wembley and the 1937 Paris Exposition.¹² This reinterpretation of the traditional picturesque English village green was appropriate to the purpose of the Festival as a demonstration of a belief in the British way of life.

DUE TO THE need to rebuild cities and to re-establish national identity, in September 1948 the *AR* held a symposium to discuss the need for a new monumentality, and the means by which to achieve it. Seven of the world's leading architects and architectural philosophers: Gregor Paulsson, Henry-Russell Hitchcock, William Holford, Sigfried Giedion, Walter Gropius, Lucio Costa, and Alfred Roth, were invited to come 'In Search of a New Monumentality'. At this symposium, Paulsson gave a new definition to civic monumentality that clearly influenced Casson's approach to the Festival planning. Paulsson believed that monumentality was anti-democratic, and should be omitted from the architectural vocabulary. 'Pseudo monumentality', achieved through the application of dignified features such as Classical porticoes, as was common with Swedish Grace, was the symbol of the small dictators of the democratic society: the banker and the politician. Rejecting monumentality as an expression of civic power, he argued that architects should rechannel the symbolic possibilities of buildings to promote democracy.

'Let us give the word monumentality the meaning of strong emotional impact, let us reduce its sphere and widen its content and let it



Left: origins – the Stockholm 1930 exhibition, a Modernism which built on specific national characteristics. Middle: riposte – Clive Entwistle's Corbusian 'Alternative Plan for the South Bank', a much more radical approach to redesigning cities than the Festival's Picturesque vision. Right: precursor – Gordon Cullen's *AR* proposals for developing the site.

could walk, play deck tennis, eat, dance, and even swim in a new pool. Influenced by Stockholm's parks, and cafés, published by the *AR* two years previously, Cullen's evocative sketches portrayed the informal public resort that he felt the LCC plans had failed to attain.¹⁰

Through Gordon Cullen's emerging Townscape and the promotion of Swedish urban landscape, the *AR* demonstrated a commitment to the Picturesque, which influenced proposals by Hugh Casson and his team. Casson made an early decision that the South Bank would not be laid out with the formality of previous exhibitions with grand vistas and avenues. Instead, as a development of Stockholm 1930, the Festival would be a modest and informal complex of interlocking neighbourhoods. Each neighbourhood would have its own character, promoting a collective communal approach, rather than alienating Classical grandeur. In replacing the darkness

mean the emotion in general in its artistic expression. Intimacy not monumentality should be the emotional goal'.¹³

The call to create an environment which would celebrate and stimulate the emotions of the individual represented a new attitude towards urban space – the Socialist ideal of the democratization of space. Through this, planning was to be seen as a liberating social tool, rather than a boring discipline where statistics and zoning controlled and organized people. When arriving at the South Bank, people were greeted by an urban environment of an elegance and gaiety unknown in Britain. Casson created a 'brilliantly inventive' layout, which gave a striking impression through generous but efficient use of external space.¹⁴ It was an environment where the people and their freedom as individuals was central to the concept. As John Allwood recently commented: 'At last the crowd had become an

important part of the architectural concept and not a nuisance to be carefully left out of the official architectural record photographs'.¹⁵

The Picturesque grouping was the jam on the pill of the extremely prescriptive story, devised by Ian Cox, that was to be read as a sequence. While appearing casual, the layout cleverly controlled circulation by providing an interesting and varied juxtaposition of people to buildings. This was strengthened by the Swedish treatment of the ground plain, that had influenced Gordon Cullen's publication *Legs and Wheels*.¹⁶ The route was subtly defined by split levels, water features, exterior furniture, and by the careful modulation of ground materials including concrete, cobbles, and grass.¹⁷ The route linking the 27 pavilions was essential to the success of the exhibition's narrative displays, and most people were obedient observers. The Festival Committee, however, thought it necessary to underline the visitors' right to roam. The *Official Exhibition Guide* stated. 'This is a free country; and any visitors who, from habit or inclination, feel impelled to start with the last chapter and zig-zag their way backwards to the first chapter, will be as welcome as anyone else'.¹⁸

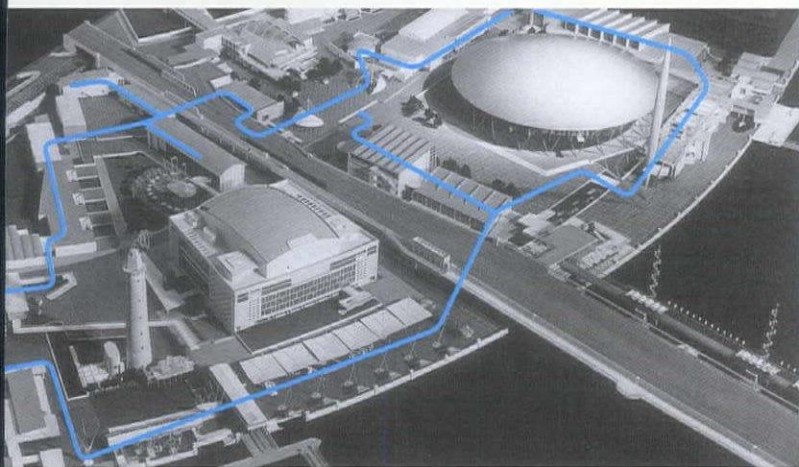
The seemingly haphazard arrangement of pavilions was a contrived effect, it can be seen as a stand against the Beaux Arts tradition. Views and surprises made an essentially tight site seem generous and spacious. Just as Camillo Sitte had said, 'the architect should compose the city like a Beethoven symphony; it should become a great, dramatic experience to walk through a sequence of urban spaces pulsating in scale on either side mixing new with old, monuments with parks, all unfolding on a series of axes and contained vistas into exploding crescendi'.¹⁹

Townscape had been realized and demonstrated the superiority of modern planning in comparison with Victorian mess. While the festival did not include the heroic restructuring and zoning of

The need to design a coherent and consistent whole was the key to the image of the Festival. Despite the large number of architects employed, there was a remarkable consistency of style. Richards saw this as a 'tribute to the single-mindedness and diplomacy of the coordinating architects Hugh Casson and Misha Black'.²² Using materials that had been developed during the War, like laminates, plastics and aluminium, the designers were able to challenge older concepts of solidity and massiveness as an indicator of strength and durability. For example, in almost every possible object, metal was used to demonstrate the possibilities of lightweight structures. With new paints, dyes and synthetic fabrics, bright bold colour was avidly adopted in all aspects of design. Such developments were seen as the long awaited discovery in the search of modern ornament and decoration – a modern ornament that would induce Paulsson's 'strong emotional impact'.

The search that had begun with Stockholm 1930 and Gunnar Asplund had made progress. New materials and processes were available to make modern ornament, and give personality to utility. While continental Modernists such as Corbusier considered ornament superfluous and irrelevant to Modernism, Casson and his team, just like Asplund, were desperate to decorate the machine. Ornament was considered so important that a Festival Pattern Group was formed to search for new forms.²³ Crystal structures, microscopic organisms, bacterial forms and molecular models all became inspiration for patterns.

The consistency and coherence of Casson's exhibition was distinctive, and seemed to express the prevailing public mood for relaxation from a decade of privation. The heroic phase of postwar history was over and social change moved on from questions of structure to questions of style.²⁴



Left: site model with superimposed official (optional) route which was intended to both control circulation and provide varied juxtapositions of view. Right: following Sitte, the site, though constrained, was to be a dramatic experience to walk through: a sequence of interlocking urban spaces and volumetric events unfolding on a series of axes.



Corbusier's *Ville Contemporaine*, which may have been impossible on an isolated 27 acre site, it did share one central concept. Placing object buildings within a landscape, and the consideration of civic open space and pedestrianization were significant achievements. The site became a spectacular memorable image of 'strong emotional impact', that can only be adequately explained by those who visited it.²⁰

The South Bank was transformed into a world beyond the drabness of the austerity years. As at Stockholm, where objects such as bandstands, kiosks, and plant containers were designed as parts of the whole, there was a belief that the urban landscape would benefit from carefully considered details.²¹ On the South Bank, any item from a chair to a pavilion became a vehicle to demonstrate new technology and modernity.

It was through the contemporary style that Casson and his team were to tame the machine. Yet, as at Stockholm in 1930, the architecture at the South Bank was largely unremarkable. In contrast with the Townscape which was brilliantly inventive, individual buildings were of ephemeral mediocrity.²⁵ Anyone who had seen the architecture of Stockholm, or the 1949 Milan Fair, Reyner Banham said, would have seen 'seemingly irrefutable evidence of blatant plagiarism'.²⁶

The exhibition was seen as Britain catching up with European Modernism, which was considered positive by members of CIAM, who were in England at the time. The fact that they had seen it all before did not disappoint. It was enough to see Britain promoting a Modern attitude to design. The architecture of the Festival did not live up to Casson's expectations as presented to the RIBA in 1950. There he proclaimed that exhibitions represent 'a bold pioneering

pathway hacked by adventurers through the Jungle', and that through history have been, 'the laboratory of architecture, the nursery of new ideas, the testing ground for experiment'.²⁷ After the exhibition he conceded that 'there is nothing outrageously new in the South Bank Exhibition'.²⁸ While this may be seen as an admission of failing to pioneer, the nursery of new ideas can be seen as the paternalism of leading the nation gently into the future. The contemporary style removed the visionary heat of Modernism from the exhibition, and replaced it with a cajoling warmth.²⁹ It was the machine needed to be decorated to eliminate the dichotomy between the theory of the intellectuals and the sensibility of the 'cloth capped masses'.³⁰ What was new at the Festival, as Casson continued, was that 'to the layman for the first time, modern architecture has been seen not as a series of isolated structures, but as a new environment, in which buildings, landscape, street furniture, sculpture, lettering and colour all speak the same language'.³¹

As a complete visual experience, the exhibition was extremely popular. *The Architects' Journal* reported: 'The really encouraging and delightful fact is that modern architecture, the contemporary style, call it what you will, is overwhelmingly popular'.³²

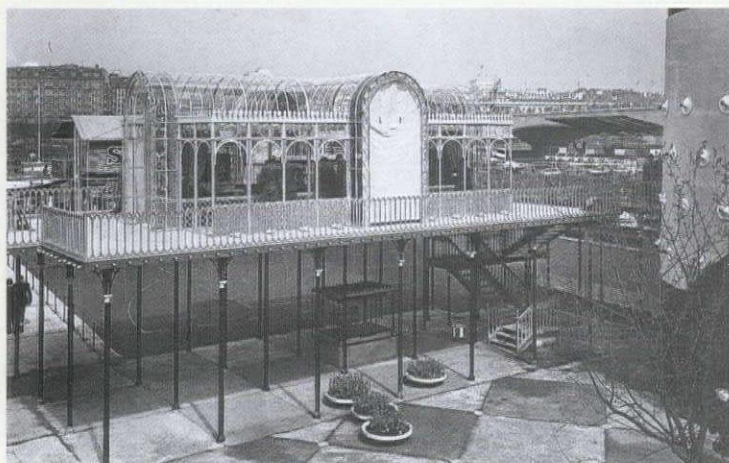
The architectural quality of individual pavilions was virtually ignored by the critics. Just as few people can recall individual buildings from Stockholm 1930, few pavilions stood out from the whole. Even the *AR* had trouble finding anything positive to say about them, beyond commenting on their ingenious integration into the route of the story.³³ In fact, Richards attempted to justify the irrational, superfluous multiplication of decorative elements that confused the otherwise pragmatic functionalism of structurally expressive pavilions. 'The interior of the Lion and Unicorn pavilion is immensely rich, almost to the point in some places, of being visually indigestible.'

In stark contrast, as a riposte to their own populist romanticism, in the same year, the editors of *The Architectural Review* published Clive Entwistle's unashamedly Corbusian 'Alternative Plan for the South Bank'.³⁶ As the translator of Corbusier's *Vers une Architecture* Entwistle was devoted to the cause of Heroic Modernism and viewed Corbusier as the 'emperor of all optimists'. In his proposal, Entwistle took the *tabula rasa* philosophy which showed aspects of Corbusier's Ville Contemporaine, with few concessions to the *genius loci*. This 'alternative' was dismissed by the *AR*'s editorial, as a meaningless irrelevance. 'It exemplifies, brilliantly, an aesthetic approach which ... is totally at variance with English aesthetic tradition in town planning and landscaping. Nevertheless, all efforts are welcome'.³⁷

STOCKHOLM FOCUSED the desire to develop a Modernism that would fit into Britain's historical context. At the time of the Festival, the attitude of the conventional majority was expressed by Reginald Blomfield who as their most articulate spokesman said, 'The new architecture is essentially Continental in its origin and inspiration, and it claims as a merit that it is cosmopolitan. As an Englishman and proud of his country, I detest and despise cosmopolitanism'.³⁸

As the product of a nation whose taste and sense of beauty was considered to be more akin to that of Britain than of any other nation, Asplund's work demonstrated that it was possible to combine traditionalism with modernity.³⁹ While New Empiricism was an attempt to demonstrate the 'Swedishness' of Sweden in Modernism, Pevsner and the *AR* emphasized the 'Englishness' of England in his work on the Picturesque. Having demonstrated Picturesque elements in the work of Corbusier and Gropius, Pevsner and the *AR* established the populist 'Contemporary Style'.

This is a slightly altered extract from a thesis presented to Bath University in 1996.



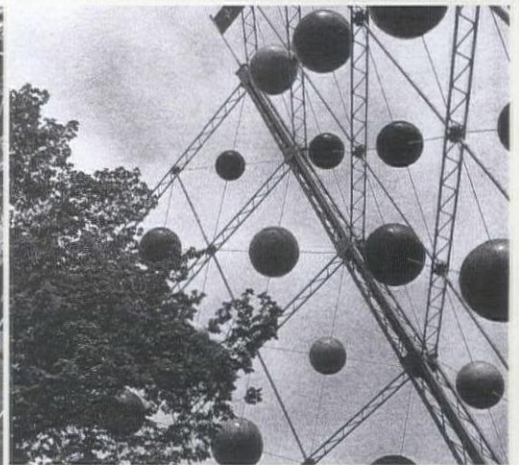
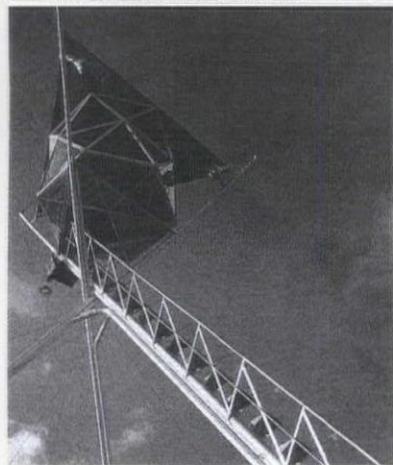
Individual buildings (apart from Dome of Discovery and Skylon) were not very original or memorable. Left: Centenary Pavilion by Hugh Casson (light-hearted and flimsy recollection of the Crystal Palace 100 years earlier). Right: Lion and Unicorn Pavilion by Gordon & Russell, described at time as 'immensely rich, almost to the point ... of being visually indigestible'.

But since this building deals with abstract ideas, the designers had more of an excuse than most to indulge in a multiplication of decorative conceits'.³⁴

This whimsical, fussy over-decoration and repetition, while adding to the unity of a new urbanity, was to mislead people into thinking that architecture was styling. Gerald Barry, in spite of his fundamental involvement in the exhibition, had to admit, 'The South Bank quickly deteriorated into a cliché for every coffee bar or renovated pub. The trouble is that it seems to have got stuck – design has not gone forward from where the South Bank left off'.³⁵

While the contemporary style gave the exhibition and the South Bank an identity, providing people with a coherent civic space, it distracted the architects from real creativity.

- 1 Banham, R. *The Revenge of the Picturesque. Concerning Architecture*, The Penguin Press, 1968, p265.
- 2 Stonor Saunders, F. *Clean White World*, Hidden Hands London: Channel Four, 1995.
- 3 For 'New Empiricism' see *The Architectural Review*, January 1947.
- 4 For 'New Objectivity' see Frampton, K. *Modern Architecture – a Critical History*, Thames & Hudson, 1980, pp130-142.
- 5 Ahlin, J. *Sigurd Lewerentz Architect*, The MIT Press, 1985, p11.
- 6 Ahlin, J. *ibid*, p11.
- 7 Shand, M. 'Stockholm 1930', *The Architectural Review*, August 1930, p68.
- 8 Wernher, Sir Harold. 'Progress', *The Architectural Review*, August 1930, p52.
- 9 Cullen, G. 'Bankside Regained', *The Architectural Review*, January 1949, pp15-24.
- 10 Clark, H. F. 'Space Between Buildings – the Landscaping of Stockholm's Parks', *The Architectural Review*, December 1949, pp189-198.
- 11 Jencks, C. *Modern Movements in Architecture*, Middlesex: Pelican, 1973, p246.
- 12 Chitty, A. M. 'The South Bank Reviewed', *RIBA Journal*, June 1951, p316.
- 13 'In search of a New Monumentality', *The Architectural Review*, September 1948, pp117-128.
- 14 Jackson, A. *The Politics of Architecture*, London: The Architectural Press, 1970, p177.



Top: changes of level, interlocking spaces, formal and volumetric events to form Picturesque sequence. Below: throughout, an attention to detail, a stress on new materials like laminates, plastics and metal – lightness challenges solidity and mass in attempt to evoke new modern ornament with strong emotional impact, appreciable by all.

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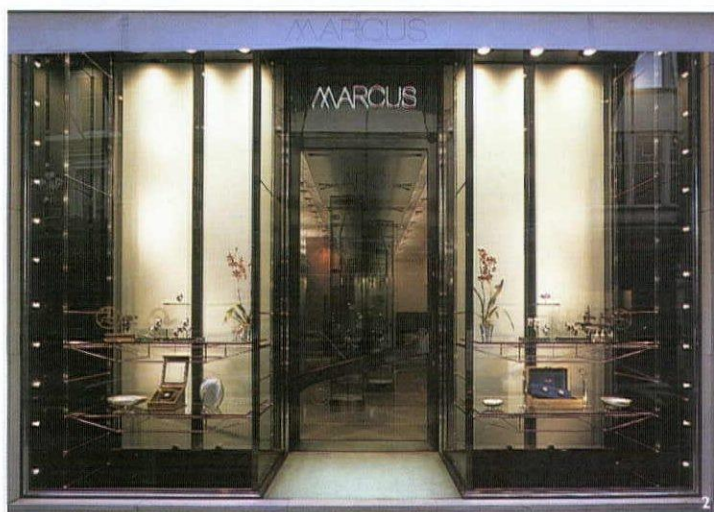
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**JEWELLERY SHOP,
NEW BOND STREET,
LONDON**
ARCHITECT
EVA JIRICNA ARCHITECTS

Modern times

Exquisite miniaturist skills in the design of a new showroom on New Bond Street.



- 1 First floor cabinets.
- 2 Shop window of 4m high panels of toughened laminated glass.
- 3 Ground floor gallery: glass columns under glass ceiling, and glass veil screening stairs. At back, lift shaft.

At the south end of New Bond Street, next to the famous old firm of Aspreys, a watchmaker and jeweller called Marcus has opened in premises designed by Eva Jiricna Architects. They occupy five floors and basement of a late nineteenth-century building, part of a listed terrace of Italianate houses.

After crude conversions, little remained of the building's original interior, except for some door architraves, cornices and a graceful staircase, brutally divided from the main space by a fireproof partition.

The building was stripped down to its bones and the facade onto New Bond Street restored. A side entrance to the old stair lobby was sealed off, and one main entrance off the street

established in a shop front. Internally, original details were restored and the staircase retained, cleaned, and made part of the main space. An extension was built at the back with a lift to the fourth floor.

Given the domestic character of the building, the client wanted the feeling of a private house, with each floor having its own ambience. Accordingly, sales rooms on the ground and first floors give way to increasingly private quarters as you rise up the building. On the second floor, a games room – set with backgammon tables – and sitting room, imply more leisurely transactions; they are succeeded on the third by a bar with kitchen and wine store, and a dining/conference room. Above

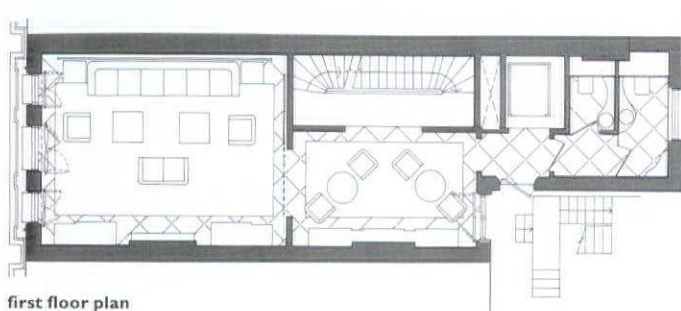
interior design



**JEWELLERY SHOP, NEW BOND STREET,
LONDON**

ARCHITECT

EVA JIRICNA ARCHITECTS



first floor plan

are offices, and at the top of the building under the eaves is the watchmakers' studio.

This scheme, devoted to the watchmaker's miniaturist skills, is the most sustained exercise by Jiricna so far in inventive detailing; it has been driven by constraints imposed by security, by the long narrow plan of the building and listing of its interior.

In general, the architects' highly controlled insertions impinge as little as possible on the original fabric, the lightness and transparency of the new held in tension against the solidity of the old. At the back of the building, where the extension houses main services, the solid insertion of the lift tower is expressed by a coating of polished plaster – rust coloured on the ground floor, subtle greys above.

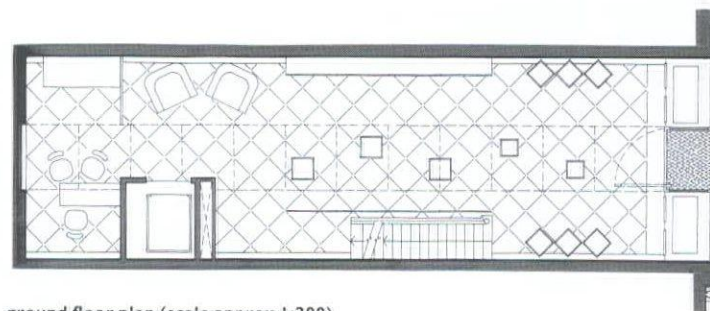
Apparently in defiance of security, the ground floor has been conceived as a public gallery

of extraordinary transparency. It begins with the shop front, through which you can see a gauzy luminous interior.

The gallery, paved in pale limestone, runs back to the red lift, its length measured overhead by a suspended plane of translucent glass. This conceals a stainless-steel trough carrying cabling and uplighting which diffuses luminance over the white ceiling 1 m above. The long peripheries of the room are lined by sand-blasted glass screens. One veils the stairs, the other forms the face of glass cabinets reaching to the ceiling.

Design of the various cabinets satisfies security needs. Elegant and inventive, all are in effect strongboxes, made of toughened laminated and bonded glass. Detailing, minutely worked out, is beguiling.

Cabinets are incorporated into transparent glass columns down the length of the room.



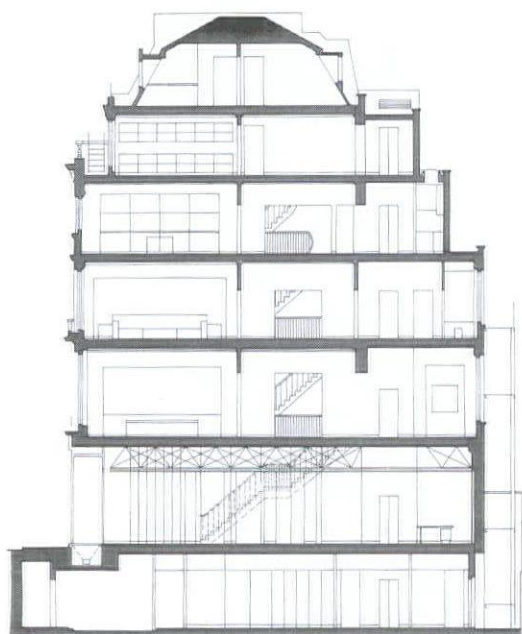
ground floor plan (scale approx 1:200)

Square on plan, 3 m high and stabilized by the glass plane above, the cabinets display watches that on rotating glass lathes sparkle under fibre optics and seem almost to float in space. Cleverly, the columns are set in staggered rows so that each one remains transparent. On entering, you are confronted by a field of glass in which the proportions of the room are veiled rather than obscured and perception of space takes on an aqueous quality. A second contrivance consists of four cabinets fixed to the wall behind big glass screens pinned at the centre by a big stainless-steel star. To get at the cabinets you insert a key into the star's centre and turn it so that the whole screen assembly rolls smoothly out on castors towards you.

Some devices, materials and motifs are recurring. Throughout the building,

skirtings and door frames are of sand-blasted nickel-plated brass, windows are screened by aerofoiled screens of white silk, and floors paved diagonally with pale limestone or covered with cream-coloured carpet. Sand-blasted glass is used to divide space without blocking light, to make a decorative illuminated screen against a sales room wall, or line the walls of lavatories, the changing patterns of the glass generating different degrees of opacity.

Against this background there are elegant pieces of furniture that make each room individual. The sleek bar has a glowing glass top on a textured, stainless-steel base; the dining room an exquisite screen of thin onyx panels which lit from behind emits pearly light. Onyx forms the centre of the red lacquered dining table. Supported on glass, the surface looks as if it too is floating in space.



east-west section

- 4 Second floor sitting room veiled by sand-blasted glass screen. Aerofoiled silk screens veil windows.
- 5 Red lacquer dining/conference table with onyx centre on glass base and onyx wall screen.
- 6 Bar counter with textured stainless steel base, illuminated glass top against stainless steel wall.

Architect

Eva Jiricna Architects

Design team

Eva Jiricna, Alan Hills, Pablo Abellan, Natalie Bergvall, Christine Humphreys, Jon Tollit, Adrian Welch, Geoff Whittaker

Structural engineer

Techniker

Historical and building consultant

Feilden & Mawson

Fibre optics

Howard Easton

Furniture

Hemsley Associates, Tecno GB, Aram Designs

Glass (showcases, glass trees, tables, shop front)

Peter Collins, Hourglass

Glass (sliding doors, screens, veils)

Techniques Transparenters

Stone floors

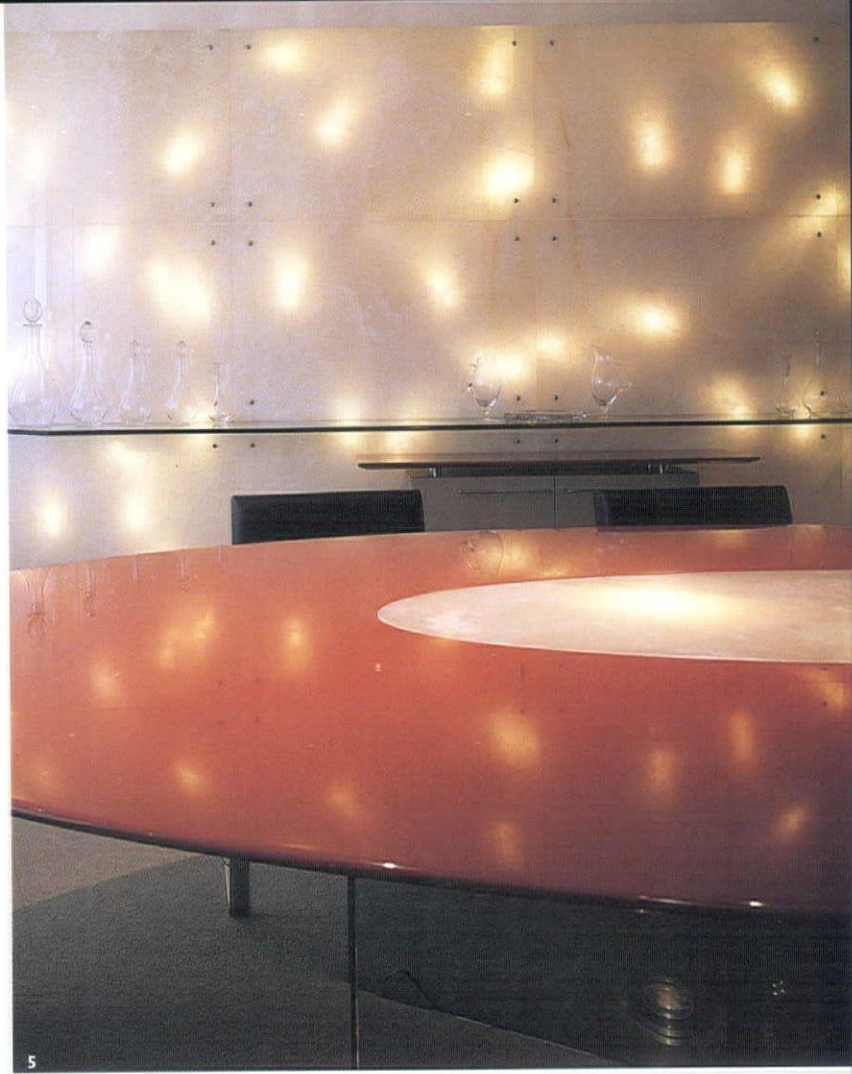
Stone Age

Polished plaster

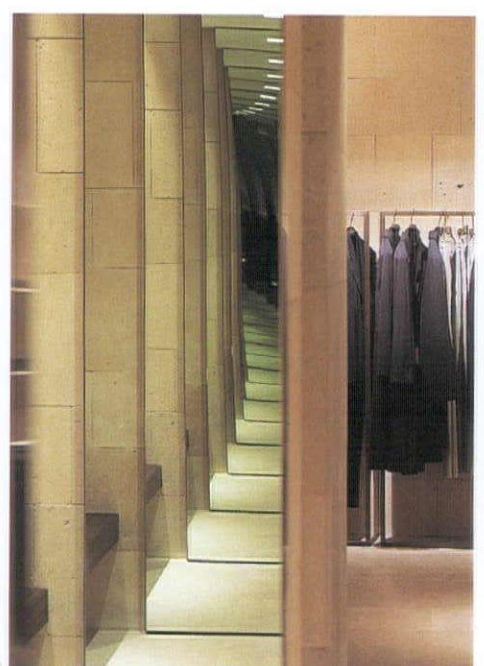
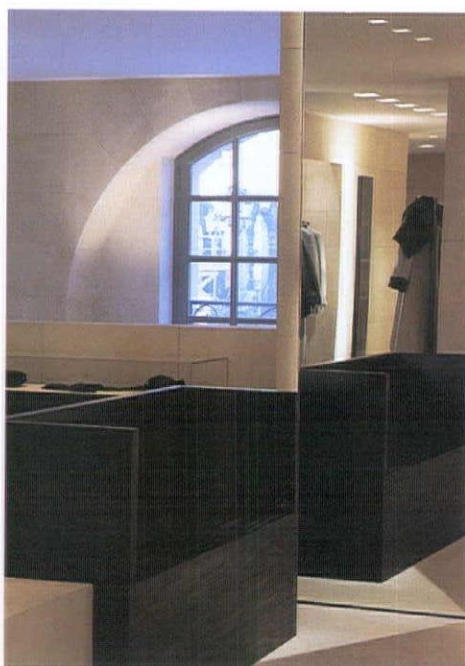
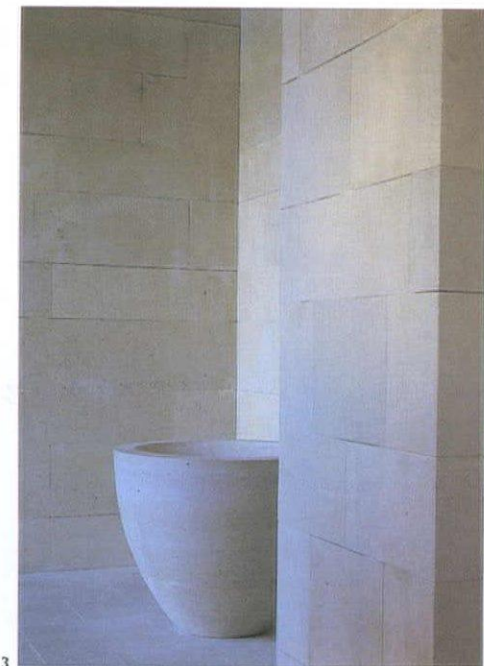
Peruchetti

Silk screen blinds

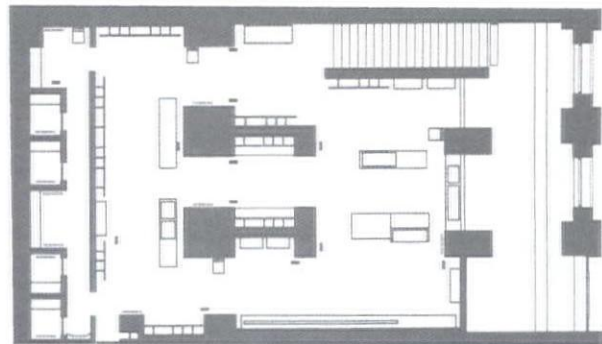
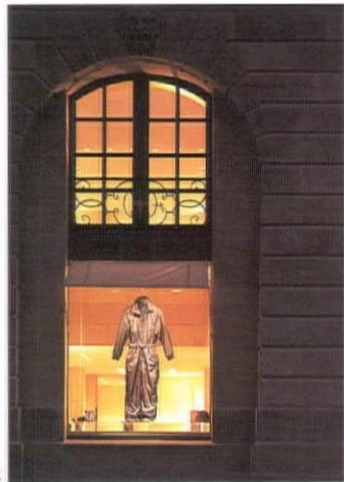
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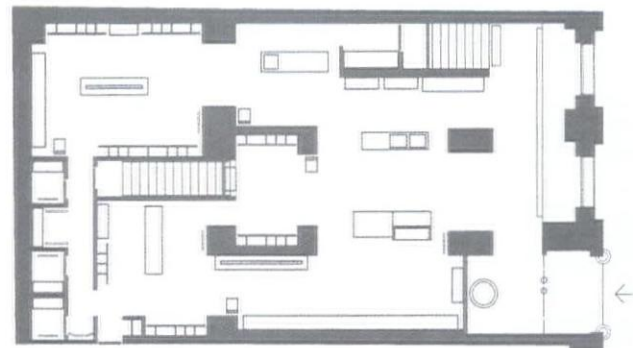
interior design



- 1 Interior lined with stone against which the ebony furniture stands out in stark relief.
- 2 Handsome facade and arched windows restored to the original.
- 3 Double-height entrance and stone urn.
- 4 First floor and entrance void.
- 5 Changing room reflections.



first floor plan



ground floor plan (scale approx 1:680)

Stone simplicity

Design of a new shop in Paris recasts in a modern way the austerity of the nineteenth-century monastery that once occupied the site.

Claudio Silvestrin's design of the Giorgio Armani shop in Paris recalls the spirit of the nineteenth-century monastery that was once here in the Place Vendôme. The site, already occupied by Armani, consisted of two floors with shop windows giving onto the historic square. Quite remarkably for any client, but particularly one so careful of its image, the firm gave Silvestrin carte blanche to do as he wanted.

The handsome nineteenth-century stone facade was restored. Stonework was repaired and cleaned, and arched openings, which had been obliterated by the insertion of modern shop

windows, were revealed. Inside, ground and first floors were stripped back to the original fabric to create simple rectangular spaces linked by stairs and divided by strategically placed furniture. Long walls at the back on each level protect changing rooms from public view. To celebrate entrance, the first floor was cut back to create a stone-lined void, 7m high.

Silvestrin has always been remarkable for the classic simplicity of his work (see his Graz menswear shop, AR December 1993 and Calvin Klein shop in Paris, AR September 1997). Characteristically, his interiors possess a monumental quality, appearing as if carved

out of the solid. In the Armani shop, Silvestrin has refined his already purist sensibilities, eliminating the inessential and modelling the interior with pale limestone and light.

All walls and floors are of stone, the texture and colour of which react to light which changes as you move from daylight entrance to interior. Inside the shop, free-standing planes of oxidized brass emit soft luminance from concealed halogen and fluorescent lamps. Elsewhere, recessed lamps create glowing squares of light at the base of walls or diffuse it over white ceilings.

The few pieces of furniture consist of tall backed chairs,

benches, tables and counters, all made of African ebony. (Armani, who bought a licensed supply, were persuaded by Silvestrin to treasure the inevitable cracking.) Furniture and brass planes are dark counterpoints in the symphony of pale stone. Designed by Silvestrin, the stark simplicity and proportional harmony of these objects recall the architect, AG Fronzoni, under whom the architect once studied. PENNY MCGUIRE

Architect
Claudio Silvestrin Architects
Design team
Claudio Silvestrin, Joanna Eade,
Simona Pieri, Douglas Tuck
Photographs
James Morris



BACK TO NATURE

This weekend house in a dense Japanese forest embodies a poetically rustic communion with nature and the seasons.



ar house

HOUSE, NASU, JAPAN

ARCHITECTS

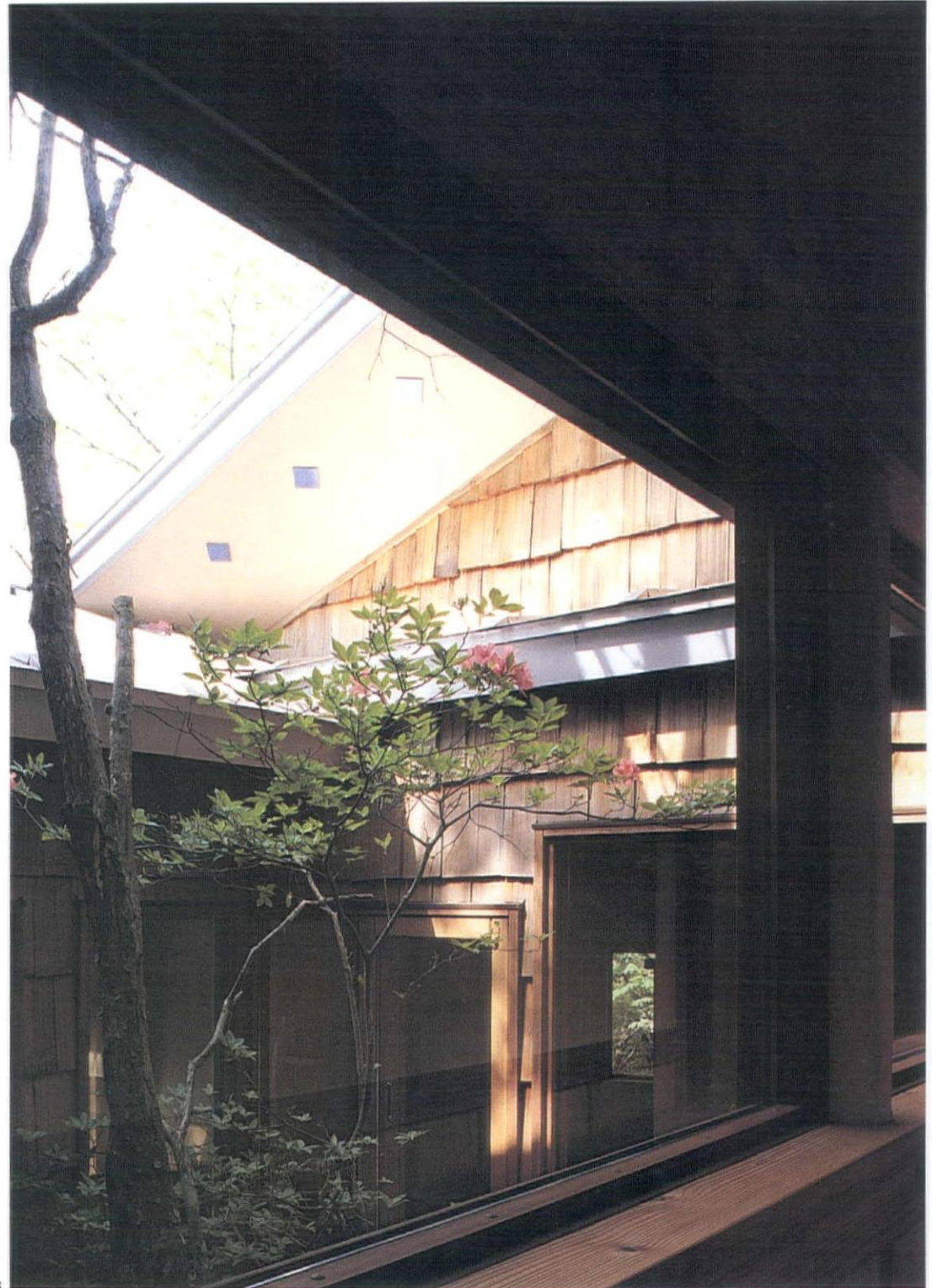
TAKAYUKI MURAKAMI

& MIRA A. LOCHER

Two young architects, Takayuki Murakami and his American partner Mira A. Locher, who spent their formative years working in Tokyo under the architect Kinya Maruyama at Team Zoo's Atelier Mobile, have recently established a practice of their own. Their first project is a weekend house in Nasu, Japan. A resort area north of Tokyo where the Emperor has his summer palace, Nasu is known for its mountainous terrain.

Continuing Team Zoo's philosophy of seeking architectural solutions through teamwork, they also followed another principle of not separating the architecture from the landscape. Seeing the site for the first time – a steep slope covered with deciduous trees near a mountain top – they decided to configure the house within a grove of trees without destroying any of them. The challenge was to design a mountain retreat that felt like it had simply grown out of the site.

After sketching the trees onto the plan, the form of the house emerged. Several trees, mainly oak, maple and silver birch, are incorporated in the design. Two grow up through a raised deck; for others, the rooftops are notched to allow for the sway of trunks and future growth. A lone mountain cherry at the centre is encased in an inner courtyard. Glased in and open to the sky, this courtyard around which the two-storey house revolves can be perceived as a still life or a scroll of the changing seasons; from cherry blossoms and sprigs of mountain azalea in spring to snow drifts in winter.



1 Designed as a weekend retreat, the house merges with the landscape.

2 A carapace of cedar shingles envelops an irregular plan form, designed to disturb the forest as little as possible.

3 The house encloses a central courtyard and mountain cherry tree.

HOUSE, NASU, JAPAN

ARCHITECTS

TAKAYUKI MURAKAMI
& MIRA A. LOCHER

4

Rustic shingles evoke nature. The central courtyard forms a microcosm of the changing seasons, emphasizing the sense of the house as having grown out of the landscape.

5

An external deck wraps around part of the house.

6

Glimpses of the landscape are framed throughout the house. The interior reflects a rustic pragmatism, with hand-built furniture made from rough hewn wood.

7

Trees penetrate the external deck. The plan carefully takes account of existing vegetation.

8

Womb-like living room with its bulbous fireplace. The buttery glow of ochre plaster warms the interior.



composite plan and sections (scale approx 1:500)



In summer, the thick tree canopy acts as a cooling device, providing deep shade. In winter, the south-facing house is open to angled sunlight in all rooms through large double-glazed windows as well as through clerestoreys under the roof line. All these windows and openings are aligned so breezes circulate freely through the spaces.

Exterior walls of rustic cedar shingles are insulated with an air space to protect the interior from extremes of heat and cold. As the shingles weather to a deep grey, the house appears from a distance to disappear into the forest. Under the staggered rooftops of a silvery metal that dip down into the courtyard, the eaves are plastered pink and inlaid with Mexican tiles.

The steep site contours gave the architects the opportunity to design the interior on two levels, with private bedrooms and bath along a corridor on the upper level, and the open public space, combining kitchen, dining and living areas, below. A staircase on either side of the courtyard accomplishes the level change. While the house is compact and efficient in the Japanese style, nothing has been spared for comfort. Within the voids of the structure, ample cedar storage spaces have been inserted.

While both master bedroom and guest room at either end are furnished with Western-style beds, natural light is regulated by traditional *shoji* screens and the electric light shaded with paper lanterns made famous by the artist Isamu Noguchi. A built-in desk and bookcase make a private preserve of the master bedroom away from the conviviality of weekend guests. Wood brings a warmth to all these spaces.

Throughout the corridors and stairwells into the main living area, Murakami & Locher have treated the walls with the rough surface of ochre plaster mixed

with straw and sand reminiscent of mud or earthen wall construction in ancient Japanese structures, notably in teahouse architecture. Its buttery glow blends with the veneer plywood wainscoting and the rich cherry floors below. The cedar battens that cover the joints in the wainscoting are typical of the way in which the architects create elegant ornamentation out of practical detail. Earth architecture has been a focus of their recent travels to India and China, and the bulbous shape of the chimney for the fireplace, built first in a wooden frame and then rendered, is influenced by the forms of adobe dwellings.

To incorporate the kitchen into the living area represents an innovation for a Japanese house, but here the rough hewn logs and wooden slabs for the eating counter and high stools, designed by Takayuki Murakami himself, introduce a sculptural element that adds to the practical rusticity of the interior.

A further incline in the site made it possible to design a sunken living room with a low built-in bench around the perimeter where family and friends congregate around the fireplace after meals. Windows are brought down to the level of the seating to take advantage of views to the south over the tree tops to the mountains. Upon entering the house into the *genkan* or vestibule, a very small deep-set window in an interior wall overlooks this living area for a preview of the inner spaces. At the centre always is the courtyard, a visual reminder of the seasons contained within the house just as the house itself is contained within the natural grove of trees in a perfect union of landscape and architecture.

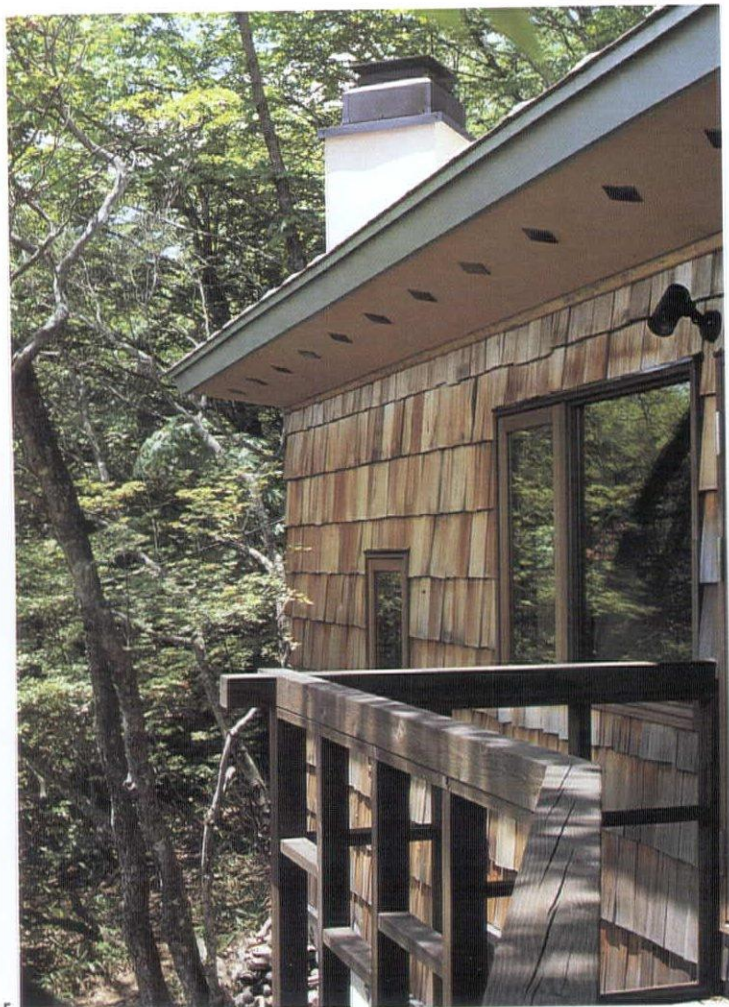
PAULA DEITZ

Architects

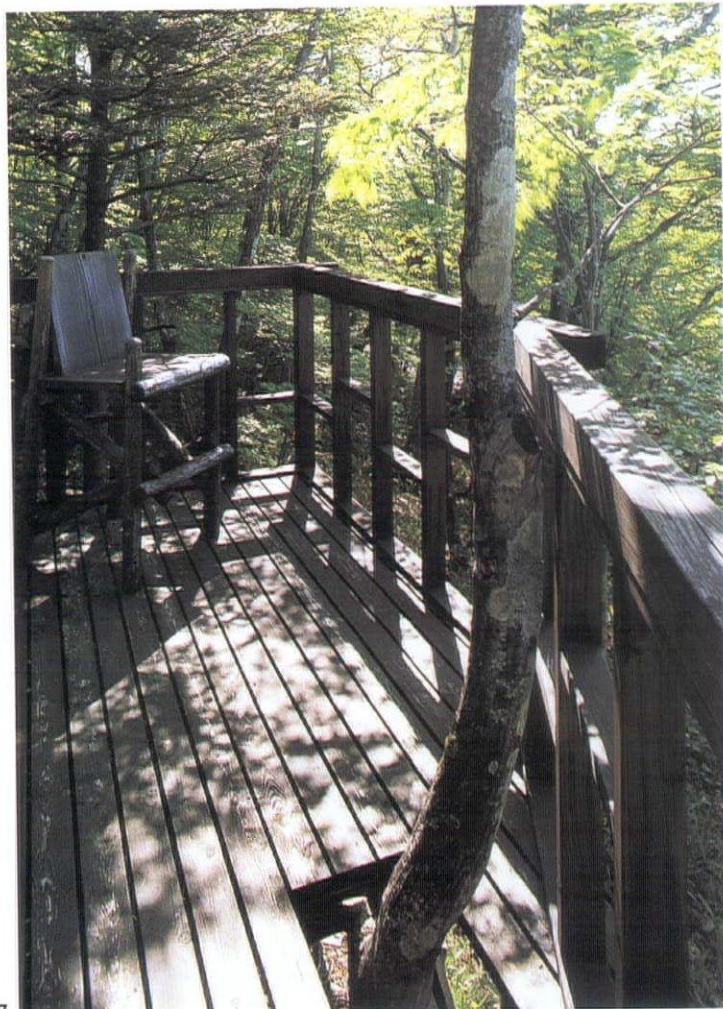
Takayuki Murakami & Mira A. Locher

Photographs

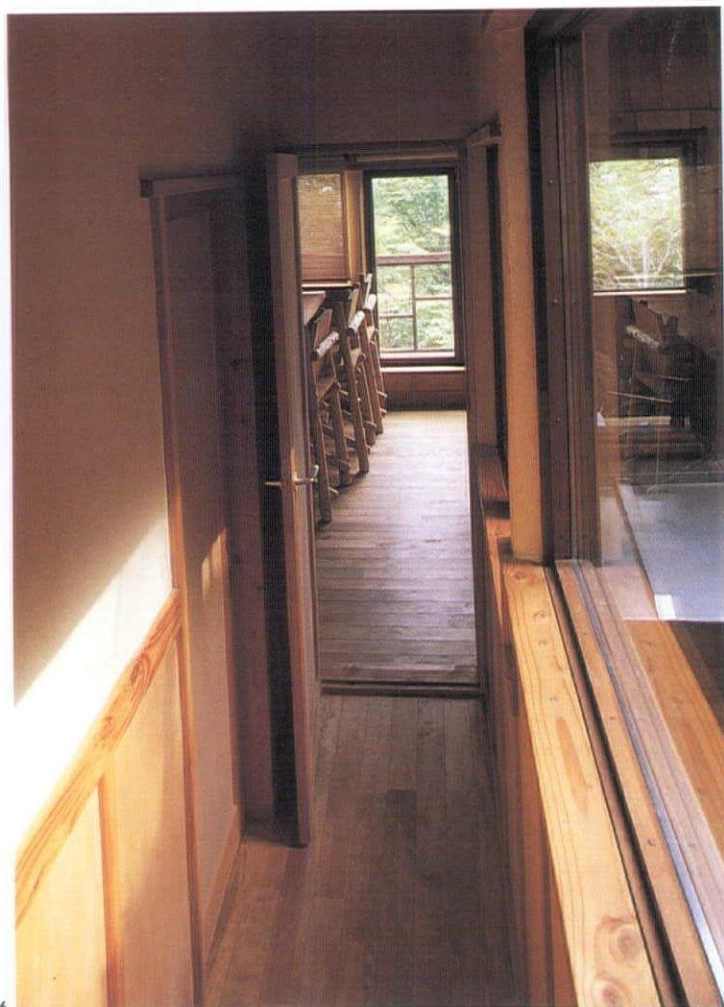
Dana Buntrock



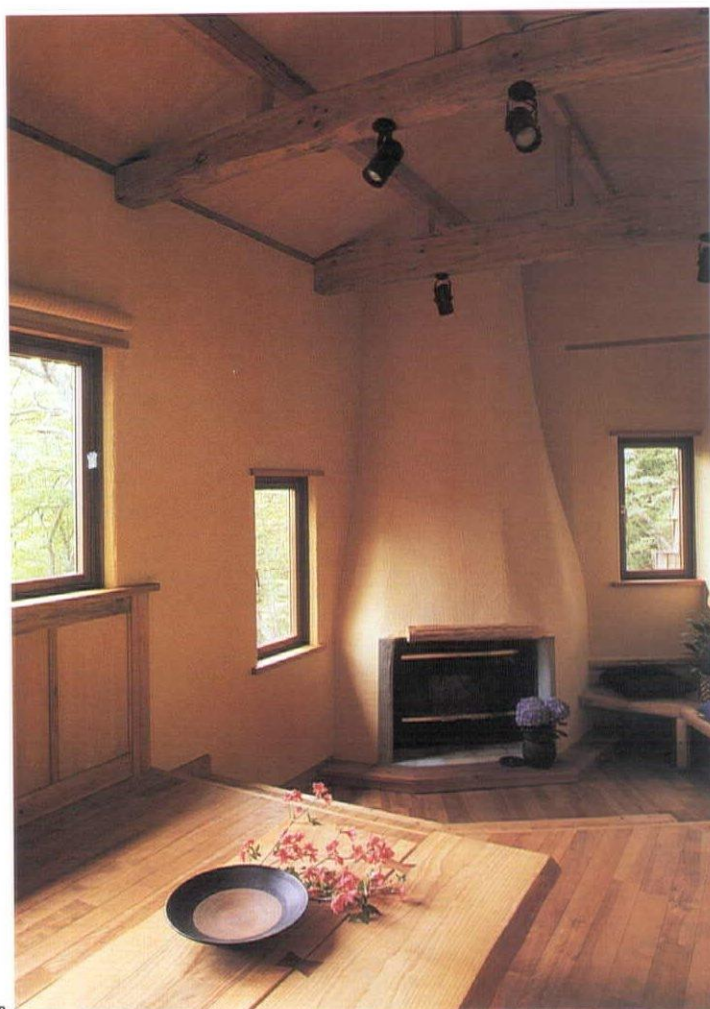
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7



6



8

lighting

COLOUR

Use of colour in lighting design is becoming increasingly refined, according to Arnold Chan of Isometrix. As head of one of the most inventive lighting firms in the world, he is well placed to comment. The Isometrix team carries out continuous research into new lamp technology and the firm was one of the earliest to see the potential of scene-setting systems.

As Chan points out, luminaires for producing variable coloured light have been available for some time. Originally intended for theatrical lighting, they were – and are – bulky and expensive, requiring much maintenance.

In response to the problem, Isometrix came up with the

Colourwash luminaire. Small enough to be concealed by architectural details, it paints pure coloured light onto white walls. When concealed in the ceiling, the luminaire emits light through a slot at the ceiling's edge which is directed down onto the wall by mirror.

Colourwash mixes varying intensities of primary colours, using a patented optical system, to produce washes of solid saturated light. A rotary controller allows scrolling through the full range of colours but the device can be made automatic. The luminaire has no moving parts and has a lamp emitting light for about 4000 hours, so maintenance and noise are kept to the minimum.

Chan's design of lighting at St Martin's Lane Hotel, London (the latest addition to Ian Schrager's collection of hotels by Philippe Starck), is an inseparable part of its image and ambience. From delicate primrose yellow in the entrance lobby to changing colourwashes in bedrooms, the place glows with colour. Chan and his team worked with Starck and Schrager from the outset, experimenting with lighting full-size interior mock-ups. One result of their experiments are bedroom walls inclined at the base, to catch the light better.

Each bedroom has a colourwashing device for guests to play with. When functioning, the colours emitted from the rooms turn the back wall of the

hotel into a glowing multi-coloured screen that transforms a dull back street into magic.

Elsewhere, Isometrix has been equally inventive. In the residents' bar of St Martin's Lane, four voids rise 8m into the ceiling. Isometrix' Curtainwash uplighters – of tungsten halogen reflector lamps, dichroic filters and lenses – are concealed in coving at the base of the voids flooding them with intense, even colour. To accentuate depth and increase luminance, voids are tapered on all sides and painted to match the colour of the light.

Design

Isometrix Lighting + Design

Design team

Arnold Chan, Jonathan Coles, Gary Campbell, John Lau

A brighter future

Drawing on advances in technology and refining the techniques of theatrical lighting, designers strive to make the illumination of buildings and objects more magical.



1,2 Each bedroom is equipped with light change controls.

3 Residents' bar with light voids where colour is intensified by paint.

4 Back face of St Martin's Lane Hotel, London.







5



6

Front light of Ford O21C with red LEDs; rear light is of white ones.

Instrument panel and dials backlit with red LEDs.

LIGHT EMITTING DIODES

Conventional LEDs are custom made low pressure discharge lamps, containing neon or argon gases and emitting a coloured glowing light by means of an electrical discharge. LED technology has been around for 30 years or so, in digital watches, luminous advertising and computer and hi-fi indicators.

Recent advances in technology have made production of luminous radiation that is perceived by the human eye as white light and that can replace conventional light sources. The advantages of LEDs include a life of over 100 000 hours, no ultra-violet radiation, insignificant heat radiation and glare, and shock resistance.

One of the most innovative uses of LED technology recently is again by Isometrix in the design of front and rear lighting

of a prototype car. The Ford O21C, presented in Tokyo last year, is what the firm calls a 'concept car', designed by Marc Newson and built at Ghia, Ford's coachworks in Turin.

Conventional car lighting has a number of elements – headlamps, indicators, brake lights – in set positions. Newson wanted to blur the boundaries between these positions.

LED technology was seen as the ideal lighting source to produce an even array of light within restricted depth. Isometrix' answer was a single electronically controlled lamp, front and back, to meet all requirements.

The front light includes over 2000 high output white LEDs from Japan, which are the brightest available at the moment. Orange indicator LEDs are interlaced through the panel with an array of fibre-optic points which create headlamps.

Fibre optics are fed light from two projectors within the engine compartment.

The rear light incorporates red LEDs distributed over the surface at a set intensity. When the brake is applied the light increases in brightness, depending on brake pressure. Orange indicators work in the same way as in the front light. A moulded lens decorated with the Ford insignia protects each panel. Inside the car, instrument panels are backlit with white LEDs which also illuminate a circular lens for eye ball Speedo dials.

Car design

Marc Newson for Ford

Lighting design

Isometrix

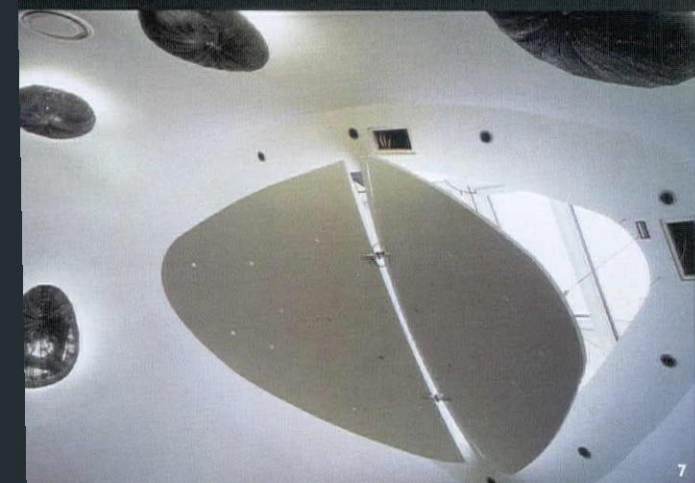
Design team

Arnold Chan, Jonathan Coles

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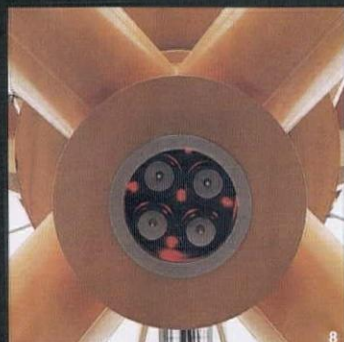


7

Pad fittings by Joanna Turner create a halo of light around skylight.

Eye ball luminaire at base of mast at Greenwich Dome.

Lord's eyeball luminaire at Media Centre.



8



9

SPECIAL EVENTS

Despite the number of lighting suppliers and the plethora of luminaires and lighting systems, there is an increased demand for fittings tailored to the building – a consequence of the seemingly growing number of architectural eccentricities.

Future Systems, architects of the new Media Centre at Lord's Cricket Ground, London, specified Concord Lighting as lighting consultants. The selection was accompanied by a request for a 'futuristic but retro' luminaire that would accord with the architectural spirit of the building and light the difficult interior. Concord's specials department designed an eyeball device fitted with a concentric louvre, capable of adjustment to the Centre's sloping ceilings and of providing glare-free light.

Employing high intensity LED

technology, the same department designed the cluster luminaire at the base of the 12 massive masts supporting the Greenwich Dome. Behind four spotlights there are five red LED clusters giving off a red glow so masts look like rockets.

Also, Störmer's Peckham Library, London, is due to open this month. Inside the double-height library hall are three enormous bulging forms on stumpy legs containing meeting rooms. Two are enclosed, lit by skylights screened by hinged pairs of plywood shutters. Around them, providing a halo of light are fittings by artist, Joanna Turner. Called Brillo Pads, they are made out of cushions of fine coiled aluminium mesh over compact fluorescent lamps.

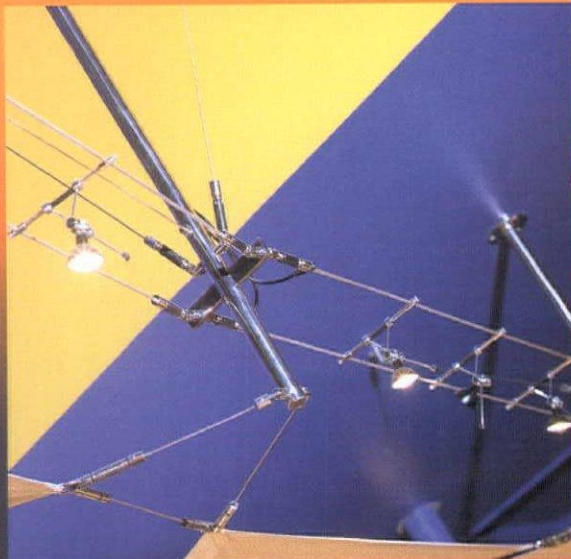
With acknowledgments to Janet Turner, designer and lighting consultant who assisted with this article.

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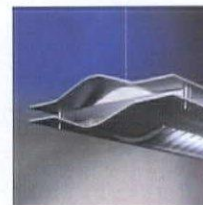
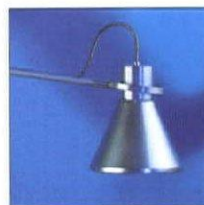


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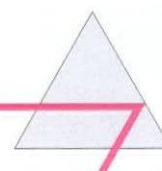


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Design: Mads Odgård



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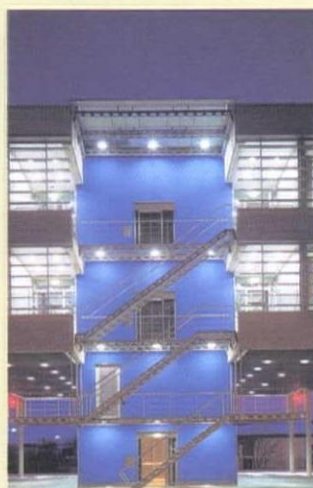


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502 ZUMTOBEL STAFF

The new head office of Mabeg, the German signage company, designed by Nicholas Grimshaw & Partners, is lit by the Zumtobel Staff series RTX and Copa.

Tel: +43 5572 390-690

Fax: +43 5572 390-610



503 ERCO LIGHTING

Jilly: new halogen spotlight from Erco Lighting, mounted on Minirail low-voltage or Erco's three-circuit track. In cast aluminium, white or silver powder coated.

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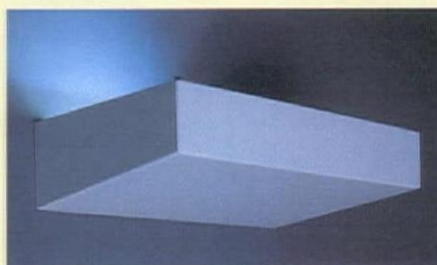


504 FAGERHULT

Art: range of spotlights with electronic ballast and compact fluorescent lamps for lighting walls and shelves. Adjustable reflector that washes walls. Shade can be fitted with black enamelled barn doors.

Tel: +46 36 10 85 00

Fax: +46 36 10 87 70



505 TARGETTI SANKEY

Uffizio: wall-mounted fitting for discharge lamps and supplying diffused light. Designed by Antonio Russo for the Sale dell'Accoglienza in the Grandi Uffizi, Florence.

Tel: +39 055 3791217

Fax: +39 055 3791266



506 MULTILINE-LICHT

Conical and Pyramidal: suspended spotlights with shade in dark blue glass.

Tel: +32 11 45 02 60

Fax: +32 11 45 02 70



507 HESS FORM + LICHT

Canto G: street luminaire with a bent pole. Part of the firm's Meridian Collection.

Tel: +49 7721 920 0

Fax: +49 7721 920 250



508 ARTEMIDE

e.motional: adjustable, energy saving, desk luminaire by Ernesto Gismondi, part of the firm's e-light range by the same designer. Head and base in coloured polycarbonate, perforated aluminium reflector, telescopic arm.

Tel: +39 02 935181

Fax: +39 02 93590254



509 LOUIS POULSEN

Kipp: street luminaire by Alfred Homann accepting a variety of lamps. Shot-blasted or lacquered aluminium head with polycarbonate shade and globe.

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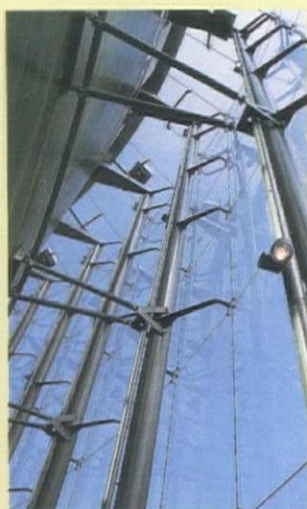
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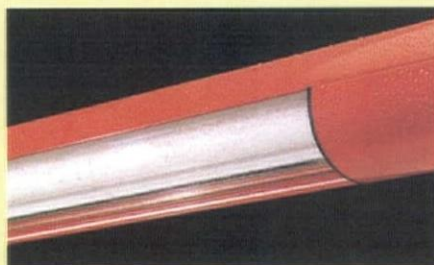


For more details enter 29 on AR enquiry card



510 SE'LUX

Tubular Lighting System 90, attached to the mullion of the glass wall at the Imax cinema, near Waterloo station, by Avery Associates. Supplied with energy-saving T16 lamps, the system has six different corner couplers to permit flexibility.
Tel: +44 1926 833455
Fax: +44 1926 339844



511 DIL ILLUMINAZIONE

Roller 85: fluorescent luminaire emitting direct or indirect light that is suspended or mounted on the wall, designed by Ufficio Tecnico DIL. Reflector in white painted sheet steel, body of extruded aluminium. Special joints allow the unit to be swivelled through 355 degrees.
Tel: +39 035 34 33 11
Fax: +39 035 34 31 78



512 ING.

CASTALDI ILLUMINAZIONE
Clock: robust luminaire for public places, by Paolo De Lucchi and Geert Koster. Designed to be unbreakable and watertight, it can house compact fluorescent or halogen lamps.
Tel: +39 02 44 54 374
Fax: +39 02 44 56 94699



513 JAKOBSSON

Madison: standard luminaire with conical head emitting indirect light. Shade of clear uv resistant polycarbonate and glass lamp enclosure.
Tel: +45 75 36 16 11
Fax: +45 75 36 15 29



514 DELTA LIGHT

Cabrio and Targa: adjustable spotlights, wall and surface mounted respectively.
Tel: +32 51 27 26 27
Fax: 32 51 21 04 83



515 DIJKSTRA LAMPEN

Via: oval luminaire, by Ben Lubbers, for energy efficient compact fluorescent lamps. Made of extruded aluminium and powder coated with uv resistant polycarbonate diffuser.
Tel: +31 23 5289980
Fax: +31 23 5280097



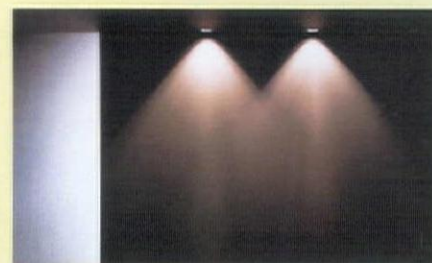
516 ILLUMA LIGHTING

Rocket: pendant spotlights, in white or black, for PAR halogen and reflector lamps, with switched track adaptor for one- and two-circuit tracks.
Tel: +44 1509 601050
Fax: +44 1509 601036



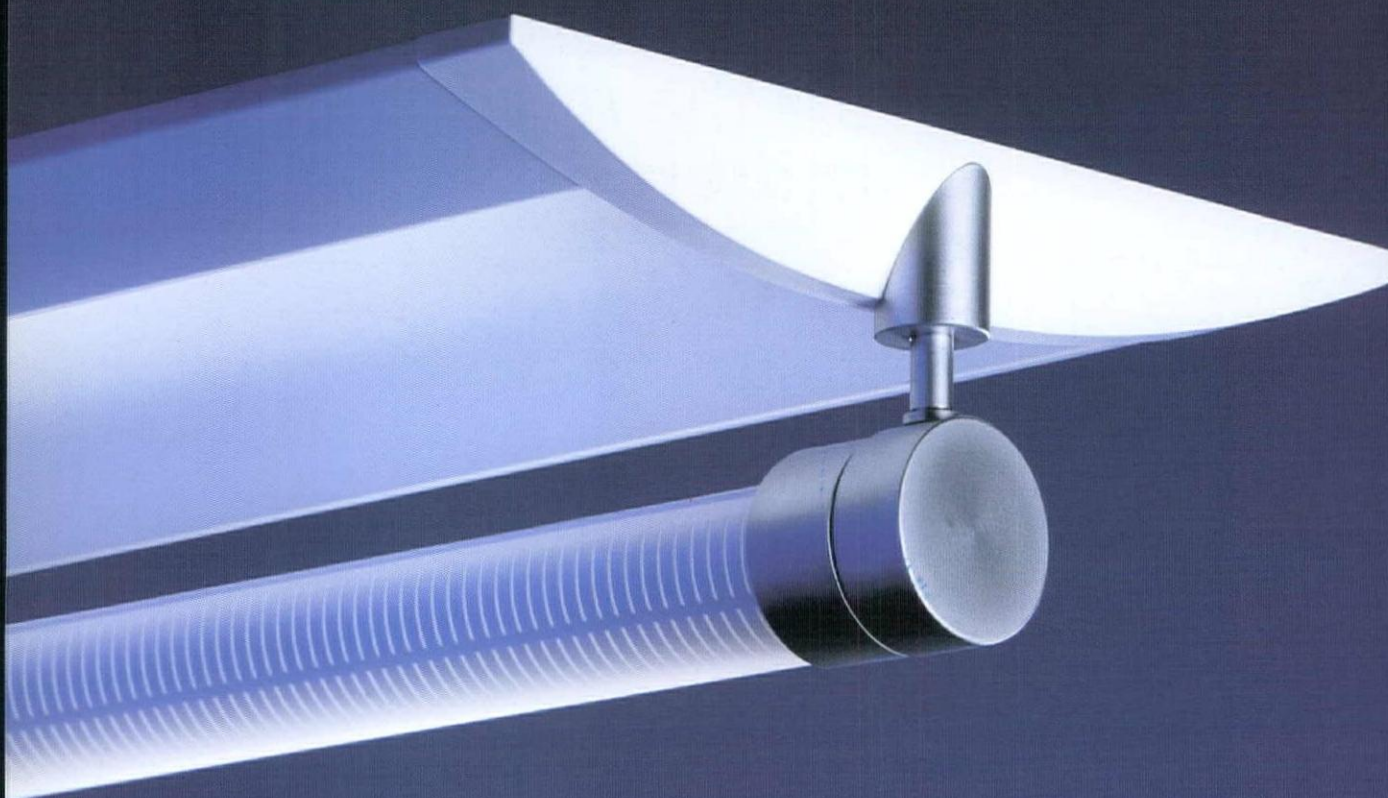
517 TRILUX-LENZE

Trilux bollard luminaire, in heights of 800mm and 1200mm. Body in die-cast aluminium lacquered grey, with impact resistant diffuser and a variety of lamps.
Tel: +49 29 32 301 0
Fax: +49 29 32 301375



518 ANSORG

Lucino: range of recessed luminaires generate a soft-edged light beam which can overlap adjoining beams or have a shadow border.
Tel: +49 7031 65 60 15
Fax: +49 7031 65 15 28



The product: CENERA

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The company: TRILUX-LENZE

TRILUX-LENZE is internationally recognised as a leading technical luminaire manufacturer, based in Germany and equipped with long-established production and sales facilities world-wide. Our presence as an international player allows us to offer you the service where and when you require it.

TRILUX – See. Perceive. Experience.

TRILUX LIGHTING LIMITED

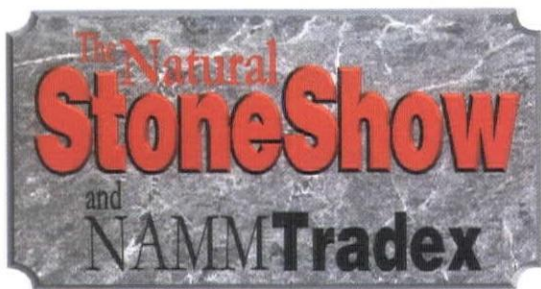
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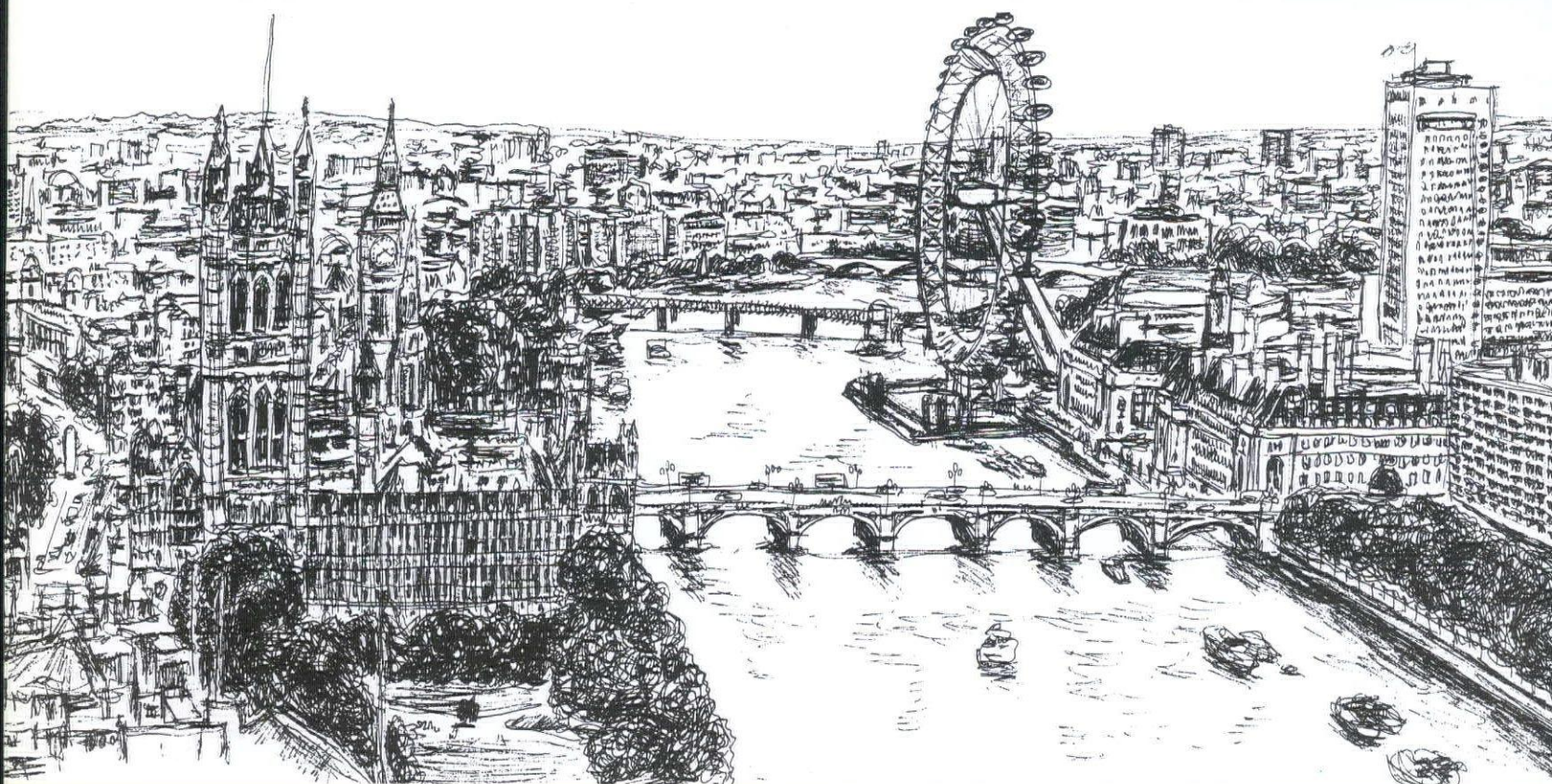
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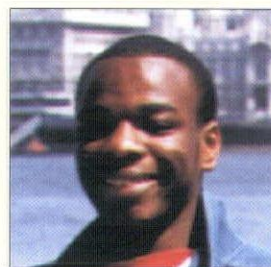
21-25 May 2000
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aj the architects' journal

**THE ARCHITECTURAL
REVIEW**


alumasc
THE ART OF BUILDING

TELEPHONE: 01952 580590



Stephen Wiltshire the autistic boy who amazed art critics with his ability to draw buildings after only a glance has long been a favourite with architects and designers. His talents have been showcased on television, books and exhibitions throughout the world. Stephen recently made headlines again for extraordinary musical talents. The combination of both artistic and musical talents are almost unknown amongst autistic savants.

For more details enter 27 on AR enquiry card



519 REGIOLUX

Nivis: family of pendant, wall and standard luminaires by Luciano Pagani and Angelo Perversi. Hand blown glass bodies with a satin matt finish on both sides and a structure that provides uniform, glare-free light.

Tel: +49 95 25 89-0

Fax: +49 95 25 89-374



520 Z-LINE BELGIUM

Z-Disk: suspended luminaire, designed by Will Van Roosmalen. Part of the firm's extensive range of Z-Lighting.

Tel: +32 381 21 97

Fax: +32 2 381 22 33



521 MODULAR LIGHTING INSTRUMENTS

LAB inox: a surface-mounted luminaire with glass cylinder on or between two aluminium cylinders. For outside.

Tel: +32 51 26 56 56

Fax: +32 51 22 80 04



522 BRUCK LICHTSYSTEME

Pin III: part of a range of Uni-Lights that work with any of the firm's seven lighting systems, ceiling plugs or Uni-Plug transformers. A glass diffuser is available.

Tel: +49 23235910

Fax: +49 2323591100



523 THORN LIGHTING

Swing I40: range of surface and recessed downlights for compact fluorescent and discharge lamps, with various accessories.

Tel: +44 20 8905 1313

Fax: +44 20 8967 6343



524 REGGIANI ILLUMINAZIONE

Window: adjustable and fixed recessed luminaires, by Fabio Reggiani, for high energy saving lamps.

Tel: +39 039 20711

Fax: +39 039 2071 999



525 WEVER & DUCRÉ

Safari Kubos: exterior luminaire with transformer base.

Tel: +32 51 23 24 40

Fax: +32 51 22 97 03



526 BUSCHFELD DESIGN

System LightLight: wall mounted track system for hanging and lighting pictures, shown with ART-P2 ceiling washer.

Tel: +49 221 9 37 64-0

Fax: +49 221 9 37 64 79



527 IGUZZINI

Linealuce: discreet wall luminaire for exterior lighting, by Jean-Michel Wilmotte, which diffuses a soft even light. Ideal for monuments, church interiors and arches of grand buildings.

Tel: +39 071 75881

Fax: +39 071 7588295



528 SPECTRAL

Flachleuchte-2: slim suspended aluminium and acrylic fitting gives even light distribution and facilitates VDU operation.

Tel: +49 761 4 5242-0

Fax: +49 761 4 5242-52

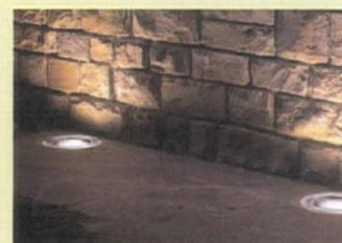


529 CONCORD LIGHTING

CDM-T Projector: new addition to the firm's Control Spot range. It provides almost three times the output of the white SON version which it replaces and is available in black, white and new silver finishes.

Tel: +44 1273 515811

Fax: +44 1273 611014



530 TARGETTI EXTÉRIEUR VERT

Dedalo: buried exterior luminaire in polished stainless steel with silicon gasket around tempered glass.

Tel: +33 04 94 47 62 47

Fax: +33 04 94 47 62 21

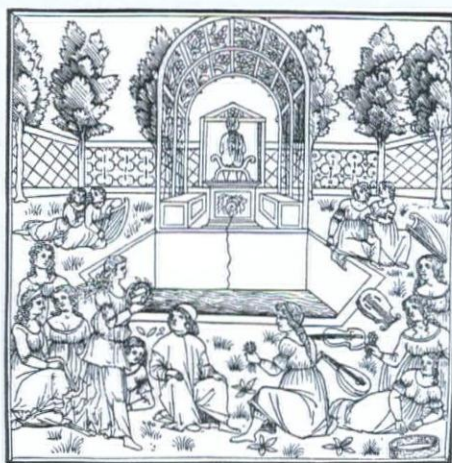
ARCHITECTURE AND EROTICISM

**HYPNEROTOMACHIA POLIPHILI:
the strife of love in a dream**

By Francesco Colonna. Translated by
Joscelyn Godwin. London: Thames & Hudson.
1999. £42

Published in 1499 by the renowned Venetian printer Aldus Manutius, the *Hypnerotomachia Poliphili* quickly cast a spell over humanists and architects. John Soane described the book as 'of extraordinary merit', while Alberto Pérez-Gómez recently used it as a basis for a critique of technology. Its enigmatic tale of the quest for love by a hero named Poliphilo, set in a landscape of antique temples, arches and tombs whose harmonic properties are illustrated in the beautiful woodcuts, explained the poetic richness of antique architecture in a way in which the later more orthodox treatises by Serlio and Palladio could not. Its authorship is a mystery, thought by most to be a Dominican, Francesco Colonna, following the cryptic sentence made by the first letters of each chapter, but such is the work's power that recent (somewhat implausible) claims have even been made for Alberti.

The historic influence of the *Hypnerotomachia* has been despite its text, in an arcane form of Italianized Latin, while the anonymous English translation of 1592 is of a reduced version. Hence it is with no small delight that we can now for the first time read a full English translation, published to mark both the book's 500th year and Thames & Hudson's 50th birthday. Printed in the same size (folio) and format as the original, this is a beautiful edition, fluently



Poliphilo meets his love in the garden. An original 1499 illustration from *Hypnerotomachia Poliphili*.

translated in an accessible style and accompanied by a short introduction (which accepts Colonna's authorship), glossary and original woodcuts. 1499 was celebrated as the eve of a new era. On the eve of a new millennium, Poliphilo's enchanted world should remind us all of the potential of architecture to seduce.

VAUGHAN HART

MODERN CHAMPIONS

**THE NEW MODERNIST IN WORLD
ARCHITECTURE**

By Patricia M. and Richard W. Snibbe. New
York: McGraw-Hill. 1999. \$79.95 (£63.99)

The Snibbes – she a designer and he an architect, a former associate of Edward D. Stone – have done a bold thing: they have produced an old-fashioned picture book of Modernism as a

gesture of defiance against what they call 'a deluge of Postmodernism propaganda', which they believe to be devaluing architecture in the US. The result is touchingly nostalgic: many years have gone by since I have seen so heart-felt a championing of, for example, John Carl Warnecke & Associates' Hennepin County Government Centre in Minneapolis of 1977 – a vast, stolid and at first sight charmless construction if ever there was one. Even the colours of the photographs here are often like those in old American magazines.

I regret that there are quite so many mistakes. But to dwell on technicalities is to miss the point. A flood of admiration for old-fashioned idealism and for simple delight in new forms and spaces is projected through double page spreads and very abrupt sentences (it took me a moment to figure out the meaning of 'Great Calder, a current addition – at entry'), and out of some 90 projects from throughout the world, organized by building type, there is not much distinction between the wonderful and the less than wonderful. There are nevertheless some pleasant surprises: there are architects here, most noticeably ABK and Powell & Moya, who have never received the critical attention they deserve for their later work, and it had not crossed my mind that either of them would ever be held up as a model for architects in the US.

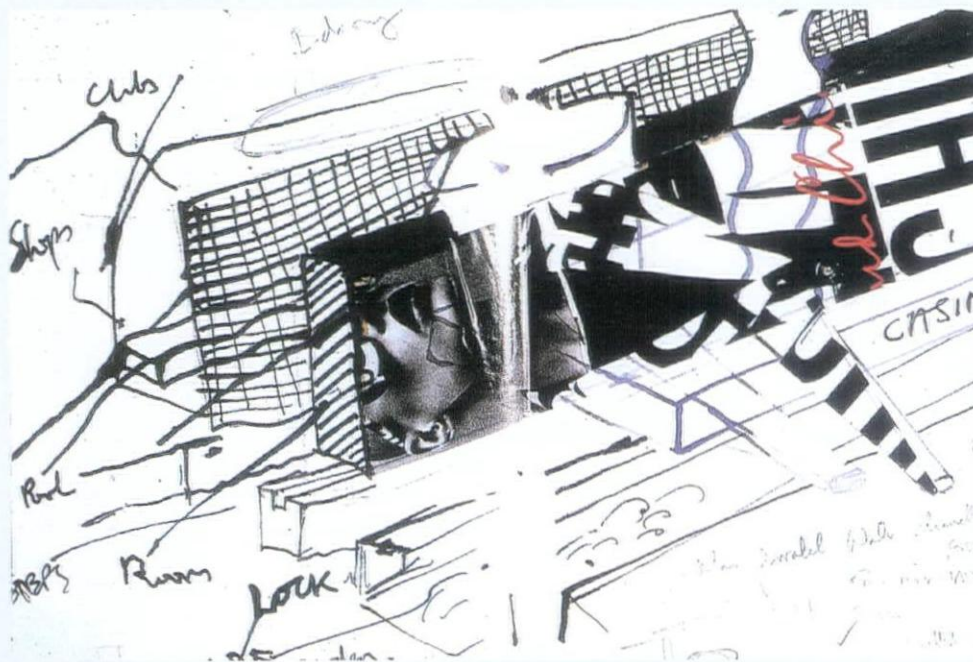
The Snibbes are naïve if they think that they can counter the great pretentious racket generated around Postmodernism with this highly personal effort: but, with the necessary corrections, it would be a fun and healthy book for a beginner. TIMOTHY BRITTAIN-CATLIN

NO NO PALLADIO

**AN INSULAR ROCOCO: architecture,
politics and society in Ireland and
Britain, 1710-1770**

By Timothy Mowl and Brian Earnshaw.
London: Reaktion Books. 1999. £45

Mowl is unusual for writing many books which are not offered as the last word on their subjects but as irreverent, amusing squibs, serving an intellectually stimulating role because they take nothing for granted. Arguing that Rococo should have been the prevailing decorative style between 1710 and 1770, he and Earnshaw condemn eighteenth-century Palladianism as a cultural disaster imposed on a chauvinistic ruling class. Burlington and his followers crippled the development of Rococo with a 'retrograde' style whose 'internal decor was based on memories of ruined Roman baths or the improvisations of itinerant Italo-Swiss stucco workers'.



Clyde Weir Competition, painting by Will Alsop, 1997, from *Alsop & Störmer, Selected and Current Works*, Images Publishing, and the Antique Collectors' Club, 1999, £35 – a brisk but informative canter through the firm's major buildings and projects which goes some way to showing how the paintings relate to the buildings.

This is a harsh way to write off Robert Adam, but this is a 'what if' book, full of challenging rebukes, threats, and warnings. At Saltram House, Devon, 'the walls are thick with lost opportunities', while William Paty's Christ Church, Bristol, is the Rococo church 'which Sir Robert Taylor should have built'. Of Bristol they write that 'as a pineapple can be persuaded to bear fruit in a hot-bed of manure, so the Rococo flourished unexpectedly in that unlikely city'. It also flourished in Ireland where, they claim, craftsmen and artists were better trained than in England.

Like Betjeman, they ruthlessly describe places as they are: thus the setting of Claydon House, Buckinghamshire, the finest Rococo fantasy in England, is a 'cultural sink in which successive governments have been able to drop prisons, borstals, army camps and sinister experimental institutions'. At Claydon the book abruptly ends, without the comfort of a conclusion.

DAVID WATKIN

CREATIVE ACCOUNT

THE CREATIVE OFFICE

By Jeremy Myerson and Philip Ross. London: Laurence King. 1999. £45

This luscious book should become part of the library of all office designers. Forty case studies are generously illustrated with photographs and drawings. Neat descriptions encapsulate the nature of the organizations, their aspirations and how these were fulfilled. Details with floor area, staff numbers and total cost indicate that the capital cost of space per person generally ranges between four and 12 thousand pounds (though some figures do seem suspect).

A concise introduction brings together most of the current thinking on workplace design, and explains the four categories into which projects have been grouped: team, exchange, community and mobility. Like most efforts at labelling, these don't quite work, especially with highly cellular layouts – like those at Nokia – coming in the section on interiors which 'allow free exchange of ideas'.

The examples, which are nicely balanced between the UK, Europe and the USA (though with just four from Asia/Australasia), provide an exciting overview of the best that has developed in the recent past. However, as there is the usual lack of people in the photographs, so there is the feeling that what is described is the official view, untampered by user feedback or enough critical consideration.

This book is a joy for us designers, but it would be more useful still if it had been rather more rigorous in its approach. Not all is quite that rosy in the cordless garden.

SANTA RAYMOND

The panorama, invented on Calton Hill, Edinburgh in 1787 by Robert Barker, achieved the height of its popularity in the nineteenth century. Cities were painted in a long strip taking in the full 360° horizon. This *trompe l'oeil* was arranged round the interior of a drum, and visitors could examine it from a central platform. What panoramas remain to us (like this fragment of Ludovico Caraccio's Rome, 1824) give astonishing portraits of cities frozen in time. Many are excellently shown in *The Panorama* by Bernard Comment, London: Reaktion Books, 1999, £45.



BEIJING REDIVIVA

REHABILITATING THE OLD CITY OF BEIJING: a project in the Ju'er Hutong neighbourhood

By Wu Liangyong. Vancouver: UBC Press. 1999. \$75

This long awaited and scholarly book by Wu Liangyong contributes to fulfilling the immense dearth of literature on the traditional and contemporary architecture and city planning of China. The book first discusses the historical development of the City of Beijing and its morphology and grid-form city pattern, particularly in relation to the generic ancient Chinese concept of the 'ideal form of the royal city'.

Having established this context, Wu proceeds with a critical evaluation of the renewal of the traditional courtyard house fundamental to the Chinese city, followed by a description of his preference for the 'organic approach' to renewal and rehabilitation of the old City of Beijing. He gives a thorough historical and formal analysis of the traditional Chinese courtyard house, which then leads to his own ideas and design proposals for a mid-rise new prototype courtyard house for contemporary conditions. The prototype was built in the experimental and award-winning Ju'er Hutong project in Beijing. The book concludes with an instructive post-occupancy evaluation of this project followed by a useful discussion on the lessons to be learnt.

This book is vital for those interested in Chinese architecture, in what can be learnt from Chinese housing and in the immense possibilities that the traditional Chinese courtyard built form can offer by adaptation for today's housing solutions. The book is profusely illustrated with beautiful line drawings, accompanied with statistical data. Wu Liangyong is a seasoned and consummate academic and architect. More of his books should certainly be translated into English for the worldwide dissemination of his ideas and work.

KEN YEANG

IDEALISTIC GLAZING

INTELLIGENT GLASS FACADES

By Andrea Compagno. Basel: Birkhäuser. 1999. DM98

Twenty-five years ago glass facades to buildings were regarded as architecturally *passé* and ecologically irresponsible. Now they are seen as the natural skin for urban buildings and, when properly designed, as the best for environmental control as they can harness the energy gain from solar radiation. So that glass facades may be worthy of their new status, they must be well designed, hence the importance of a book like this which sets out the issues simply.

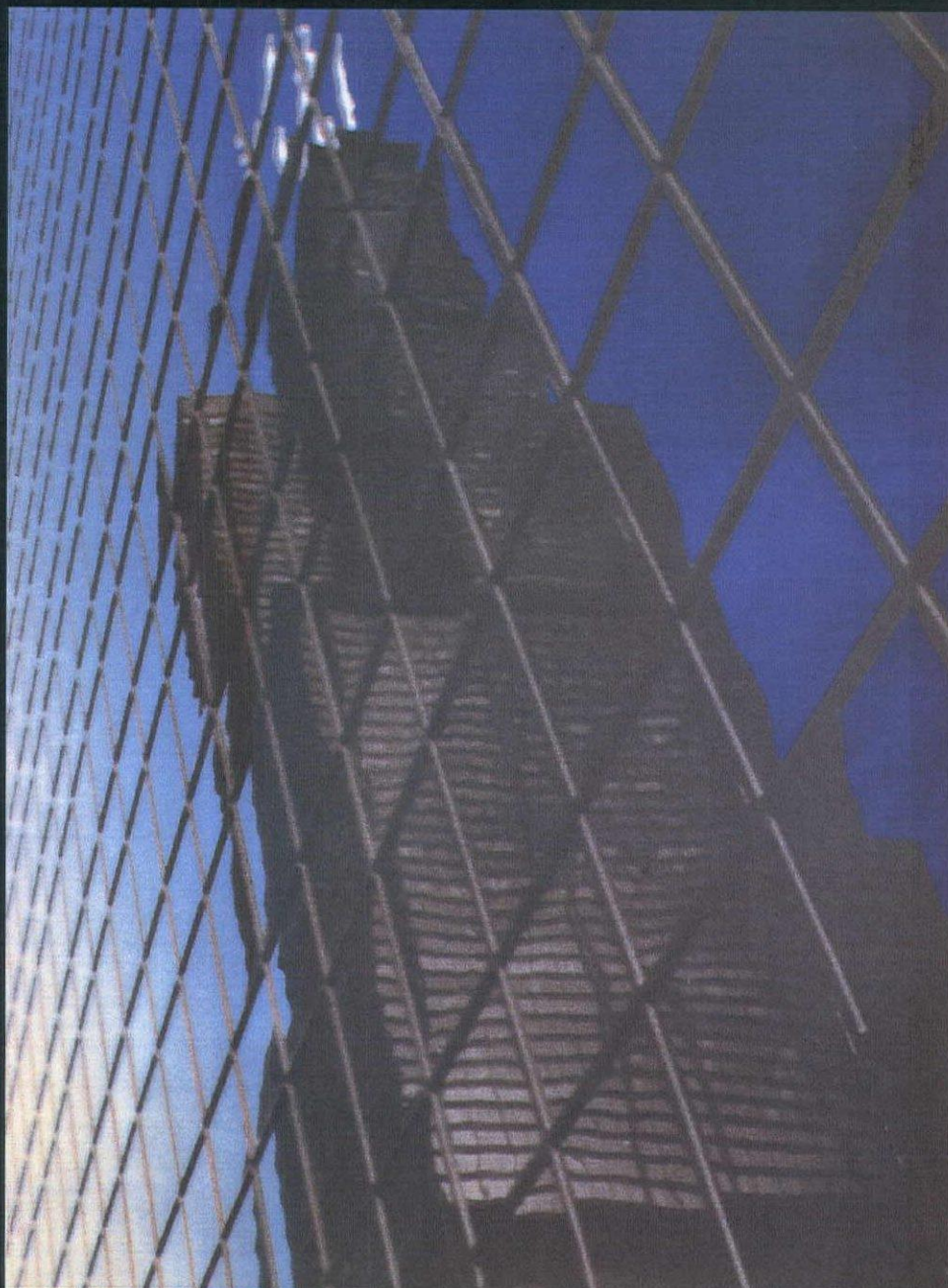
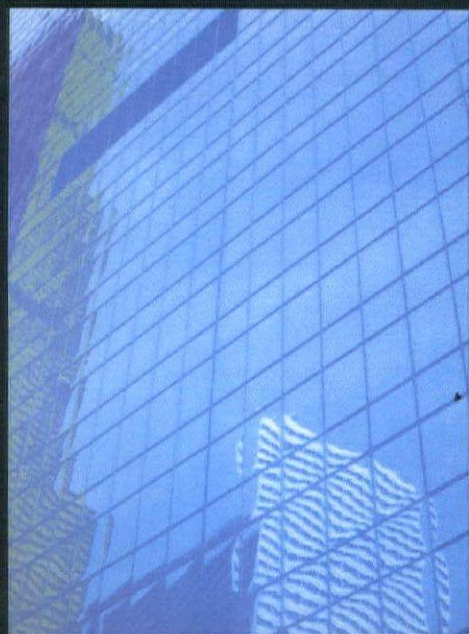
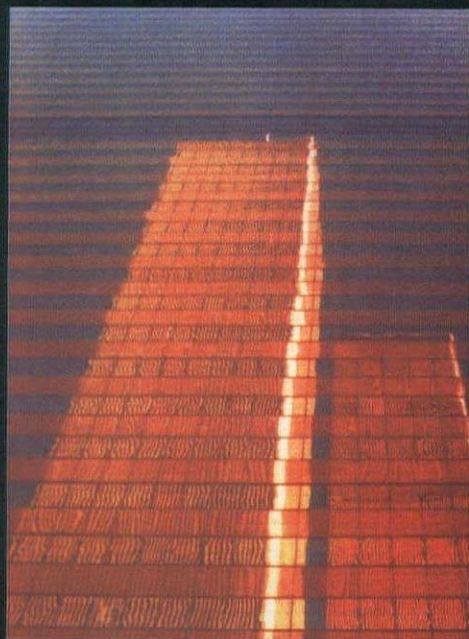
The first edition of this book was published four years ago, but the technology is developing fast, and this new edition has new buildings and new projects.

The book is in six sections; the first deals with glass as a material, followed by the glass pane, laminated glass, insulating glass, facades and finally intelligent glass facades. Most architects will head for the last chapter. It soon becomes clear that designing a building to reduce energy consumption is a complicated business, involving the whole building, not just the facades. It also becomes clear that many of the most effective ways of reducing energy consumption are expensive to install and operate and the owners will never recoup this cost through lower fuel bills. So the motivation behind some of the elaborate facades in this book must be idealistic, not financial. The science still has some way to go, but we should all be grateful that so many building owners are willing to pay so that the technology can advance towards the economical, environmentally-friendly buildings that we all need.

JOHN WINTER

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



THESE HUGE, LUSTROUS SCREEN PRINTS OF AMERICAN SKYSCRAPERS BY SCOTTISH ARTIST JOHN MACKECHNIE REINTERPRET THE HARD-EDGED URBAN REALM AS A RICHLY SENSUOUS, ABSTRACT FUSION OF LIGHT AND COLOUR.

John Mackechnie is a Scottish printmaker whose observations of the built environment form the basis for a series of compelling and sensuous works on paper. In particular, Mackechnie has been drawn to American cities and the effects of reflection and distortion on the glass skins of towering skyscrapers. Mutated architecture and warped grids form abstract yet somehow familiar representations of the city, crystallized and amplified through an artist's critical gaze.

Mackechnie first became intrigued by urban landscapes on a photographic expedition to America in 1982. In New York he shot the Chrysler Building reflected in its surroundings and made a monochrome etching based on the photograph. Recently he has returned to this theme and using current techniques of computer manipulation produced a series of large-scale screen prints based on his photographs of buildings. In Mackechnie's lush geometric assemblages of shimmering colour and texture, famous landmarks such as Chicago's Sears Tower and the World Trade Center in New

York become dematerialized ciphers in a surreal cityscape.

The process of realization is complex; photographic images are manipulated by computer and the resulting print-outs used to make film negatives. These form the basis for the silk screen prints. The outcome is a series of lush geometric assemblages of gleaming colour and light. The softly blurred, photograph-like images glow with a hypnotic intensity that recalls the texture of watered silk.

Since 1983 Mackechnie has been director of the Glasgow Print Studio, which encourages and promotes printmaking in the West of Scotland and instigates collaborations with artists. Entitled 'Urban Myth', these latest prints were created over the past year. Mackechnie plans to extend the series and increase the scale of the works – the subject matter seems to demand it.

CATHERINE SLESSOR

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