

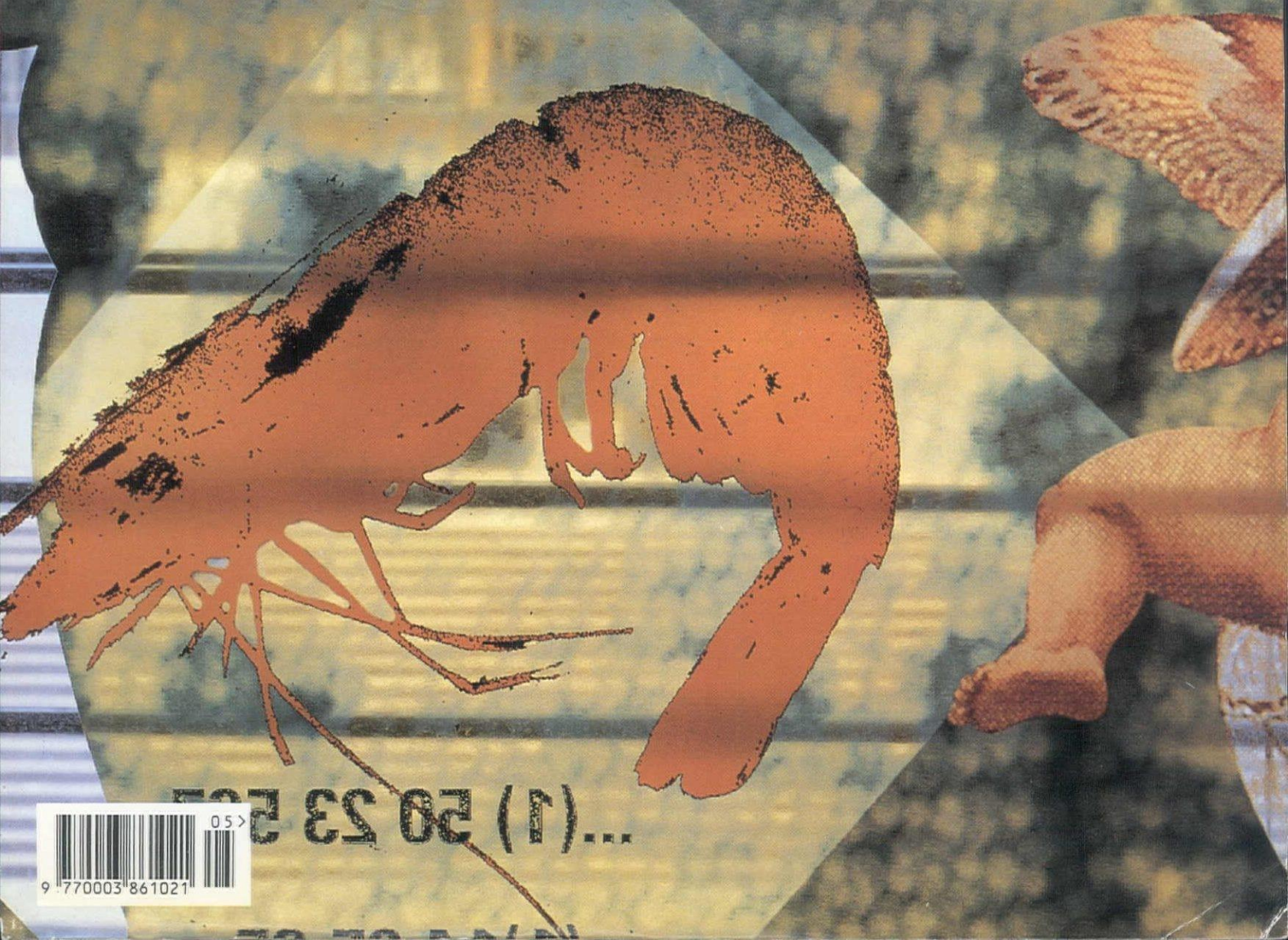
THE ARCHITECTURAL REVIEW

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Ritchie's Dordogne greenhouse



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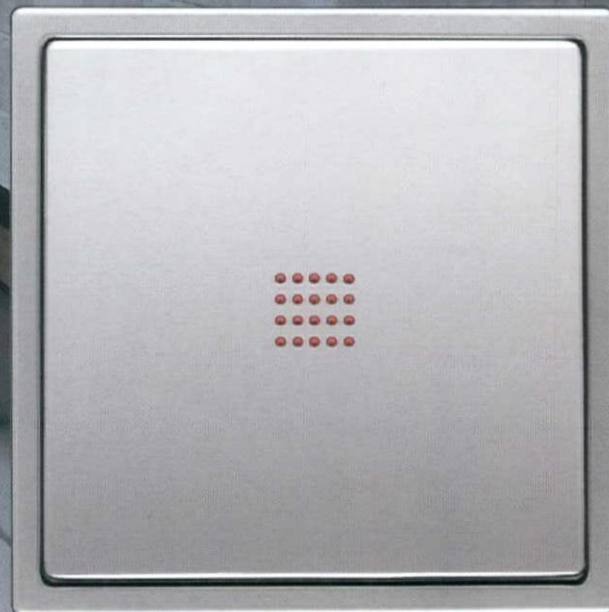
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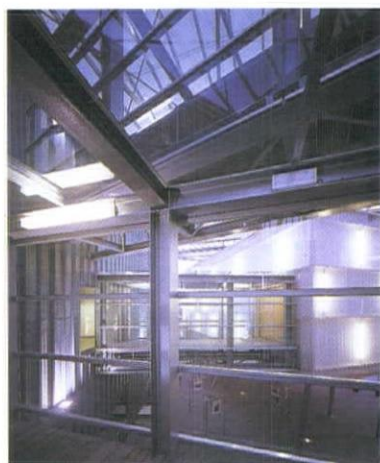
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Van Egeraat's School of Fashion (p53)



Sejima's exquisite Kumano Kodo Art Museum (p70)

GLASS AND TRANSPARENCY

COMMENT

- 4 Glass evolution

SURVEY

- 17 *The Architectural Review* in the Gulf

DESIGN REVIEW

- 32 House extension, Cornwall, England EVANS VETTORI

OUTRAGE

- 37 Trafford Centre, Manchester LEACH RHODES WALKER

THEME

- 42 Concert hall, St Pölten, Austria KLAUS KADA
50 Kindergarten, Kematen, Austria ERICH GUTMORGETH
53 School of Fashion and Graphic Design, Utrecht, The Netherlands ERICK VAN EGARAAT
58 Cinema, Rotterdam, The Netherlands KOEN VAN VELSEN
63 Apartment block, Paris, France FRANCIS SOLER
66 Cultural centre, Paris, France ARMSTRONG ASSOCIATES
70 Art museum, Nakahechi, Japan KAZUYO SEJIMA
74 Local government offices, Morges, Switzerland RODOLPHE LUSCHER
79 Greenhouse and park, Dordogne, France IAN RITCHIE ARCHITECTS
82 Chapel museum, Houston, USA FRANCOIS DE MENIL

INTERIOR DESIGN

- 87 Offices, King's Cross, London DEGWI
90 Offices, Turnham Green, London JESTICO + WHILES
93 Offices, Vienna, Austria CLAESSEN KOIVISTO RONE ARKITEKTKONTOR

PRODUCTS SURVEY

- 97 The office VITRA; FRITZ HANSEN

BOOKS

- 104 Tokyo; Behnisch; stations; the mosque and the modern world; perspective hinge

DELIGHT

- 106 Lights installation, Royal Pump Rooms and Baths, Leamington Spa, England DAVID WARD

COVER

- 63 FRANCIS SOLER Paris apartment block Photograph by Nicolas Borel

The invention of glass took place, it seems, almost by accident, around 4000 years ago in the eastern Mediterranean. Beneath an ancient pottery kiln, the fused silica of pots combined with the alkaline ash of the hearth below. By 1500 BC, moulded and pressed glass vessels were commonplace in Egypt and the skills to make them had spread to Europe. The northward expansion of the Roman Empire led to the establishment of a thriving glass industry in the provinces of Saône and Rhine, employing craftsmen from Syria and Alexandria. The Latin term *glesum* (from a Germanic word meaning transparent or lustrous) was used to describe the versatile substance.

Two thousand years passed between the initial serendipitous discovery and the appearance of blown glass, which led to the production of thin transparent sheets strong enough for windows. This marked the beginning of a symbiosis between glass and buildings. As Michael Wigginton notes: 'With this development, new conceptual languages in architecture became possible, which are still being developed and explored; from the simple provision of light and view without a loss of warmth, to the creation of conceptual and technical masterpieces which derived their essential quality from this wonderful material.'¹

Historically, the relationship between glass and architecture is at its most sophisticated when transcending technical limitations, notably those imposed by load-bearing masonry construction which restricted the width of window openings. The first break with convention was the Gothic exoskeleton; the stone frames and flying buttresses of medieval cathedrals made possible unprecedentedly tall, arched windows composed of myriad fragments of jewel-like glass. Notions of illumination were spiritual as well as literal; the sumptuous, stained glass panels efficiently disseminated Biblical narratives to a largely illiterate populace. The architectural quest for transparency, weightlessness and luminosity began, in effect, with the radiant membranes of coloured light in cavernous Gothic cathedrals.

The next quantum leap occurred in the nineteenth century, with the introduction of the skeletal structural frame, initially fabricated from cast and wrought iron, and latterly steel and reinforced concrete. Such materials were the product of engineering and manufacturing invention associated with the burgeoning industrial revolution, invention that also found expression in the manufacture of glass. During the 1830s, an improved version of the traditional cylinder process² began to be used more widely, providing glass of uniform thickness in sizes up to 1m x 1.3m. Until then, manufacturing techniques restricted pane size, as manifest by the intricate divisions of mullions and transoms in windows of the eighteenth and early nineteenth centuries.

Victorian iron and glass technology generated a new architectural language and new typologies – conservatories, arcades, heroic glazed rail sheds and exhibition buildings, notably Paxton's seminal Crystal Palace of 1851 which used over 300,000 sheets of glass. As an iconic expression of materials and structure, its influence on contemporary architects is still evident. Von Gerkan and Marg's vast, barrel-vaulted Exhibition Hall in Leipzig, designed in collaboration with Ian Ritchie (AR March 1996), is clearly a late twentieth-century reinterpretation of the Crystal Palace, using contemporary structural and material technologies of trussed steel arches and silicone jointed glass sheets held in place by cast steel finger fixings.

This century, the notion of transparency has exerted a particularly seductive and tenacious hold on the architectural imagination. Corb's canonical description of architecture as 'the masterly, correct and magnificent play of masses brought together in light' affirmed a new set of values for modern buildings – transparency and dematerialization, achieved through material lightness and spatial interpenetration. The symbolism of glass and metal gradually found new expression in the form of a glass skin, as opposed to glazed openings in a skeletal structure. Gropius' Fagus Factory of 1911 was one of the first examples of a glass facade supported by a thin steel framework; Bruno Taut's polygonal Glashaus Pavilion for the 1914 Werkbund Exhibition in Cologne was made entirely from glass, celebrating its ephemeral, crystalline properties.

The increasing sophistication of glass and lightweight transparent plastics has presented architects with new and enriched possibilities. In the last twenty years, the art and science of transparency has been pushed to new boundaries, by architects eager to exploit new cladding materials and fixing technologies with the same pioneering zeal as their predecessors did in the 1920s and 30s. The seamless, reflecting skin of Norman Foster's iconic 1975 Willis Corroon building (formerly Willis, Faber & Dumas), for example, has a clear historical antecedent in Mies van der Rohe's project for a glass tower of 1922. Mies' monumental, meandering glass wall was intended to exploit the possibilities of inter-reflection and the changing angles of light; over half a century later, it became a reality. With its specially developed curtain walling system consisting of large glass panels hung from the top of the building and the entire assembly stiffened by glass fins, Willis Corroon marked a defining moment in the obsessive architectural pursuit of the uninterrupted, transparent surface.

Architects, engineers and manufacturers continue to evolve ever more minimal ways of configuring glass walls and roofs, notably hanging glazed panels from point fixings. The synergetic combination of a steel structure and the inherently tensile qualities of glass

GLASS EVOLUTION

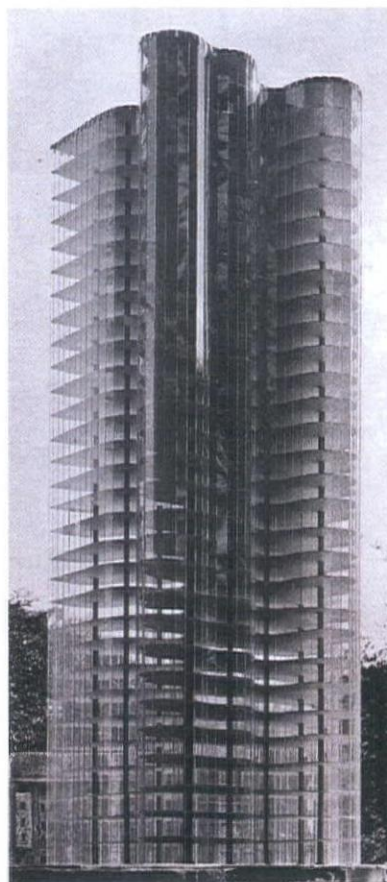
In architecture's historic quest for transparency, the relationship between glass and buildings has evolved through the conquest of technical limitations, presenting the current generation of architects with enriched formal and material possibilities.

has greatly advanced contemporary ideals of lightness and transparency. Another line of enquiry takes the notion of structural glass a stage further, by exploiting its properties in compression. The outcome is the development of the glass column and the glass beam, used in the all-glass pavilion at Broadfield House Glass Museum (AR August 1995), designed by Design Antenna and engineered by Dewhurst Macfarlane. Exuding a Miesian simplicity and an enviably seamless transparency, the glazed skin is supported by a triple-laminated glass structural frame. Such prototypical projects herald the tantalizing prospect of the ultimate, transparent enclosure.

One important consequence of the increased use of glass in buildings is a more changeable and capricious internal environment. In response to this, the window has evolved from a simple glazed aperture into an architectural skin capable of variable functions. With the advent and continuing refinement of low-emissivity coatings and variable transmission methods such as photochromics, electrochromics and thermochromics,³ the responsive, multi-layered skin has become a key element in environmental control. Yet the concept of an external skin with multiple environmental functions is not in itself new; Le Corbusier first attempted to devise a *mur neutralisant* in the early 1930s, for the Cité de la Refuge in Paris. Over sixty years later, Norman Foster designed a modern, high performance version of a *mur neutralisant* for his complex of buildings at the science and business park in Duisburg (AR February 1993). The seamless skin of the Business Promotion Centre, for example, is an environmentally engineered wall that regulates the transmission of light and heat, prevents the build up of condensation and provides an acoustic barrier.

It seems clear that glass and its attendant technologies will endeavour to evolve still further, enhancing the material's capabilities and intensifying its allure. Many of the buildings in this issue – for instance, Klaus Kada's concert hall in St Pölten, (p42) – represent the fulfilment of technical and aesthetic ambitions first postulated by the Modern Movement; yet as the century draws to a close, such ambitions continue to preoccupy architects and manufacturers. Writing in 1931, Gropius presciently observed: 'Glass is the purest form of building material made from earthly matter. It can mark the limits to spaces, it can protect us against the weather, but at the same time opens up spaces, it is light and incorporeal. Although glass as such has been known to us for many years, it is the technical age we now live in with all its modern manufacturing processes that has rendered this substance one of the most valuable materials of our day and of the future. Glass architecture, until recently deemed purely utopian, is now a reality.'⁴

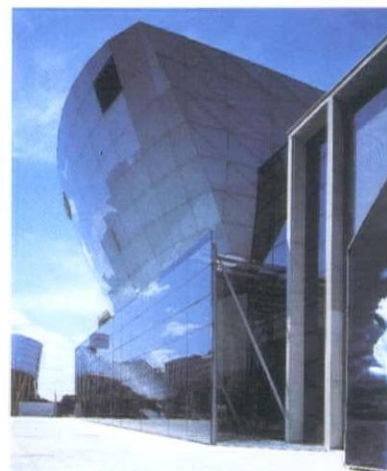
CATHERINE SLESSOR



Mies' prototypical glass tower of 1922



Foster's iconic Willis Corroon building



Kada's contemporary concert hall (p42)

1 *Glass in Architecture*, Michael Wigginton, London, 1996, Phaidon Press, p10.

2 Window glass production using blown cylinders originated in northern Europe around the eleventh century. The technique involved the blowing of a large cylinder, which was cut, opened out and flattened. See Wigginton, *ibid.* p271.

3 Low-emissivity coatings help to diffuse glare and heat build-up in multi-layered glass wall structures by means of thin chemical coatings; variable transmission involves altering the transmission rate of glass by different means, for example photochromics (glass darkens as a function of its chemical composition as opposed to a coating), thermochromics (temperature change induces chemical reactions in the glass) and electrochromics (glass undergoes a change in chemical structure caused by an electric current). For further discussion of these and other developments see Wigginton, *ibid.* pp247-264.

4 On the occasion of the 1931 German Building Exhibition in Berlin, Gropius wrote an article headed 'Glass as a Building Material' in *Korrespondenz der Deutschen Bauausstellung*, a newsletter accompanying the exhibition. Quoted in *Glasarchitektur 1996*, published by Pilkington Flachglas, p5.



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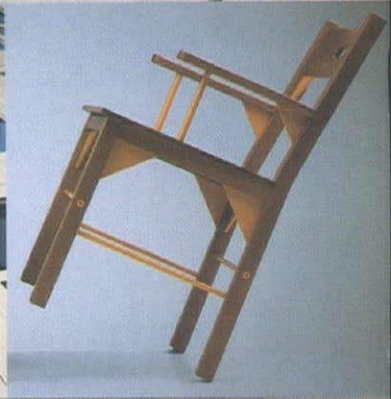
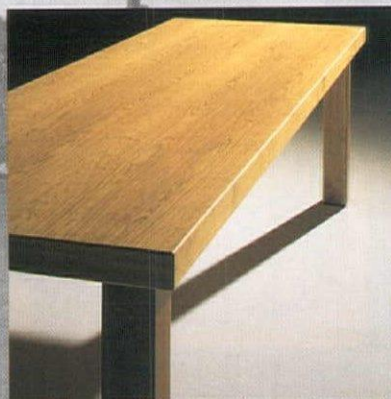
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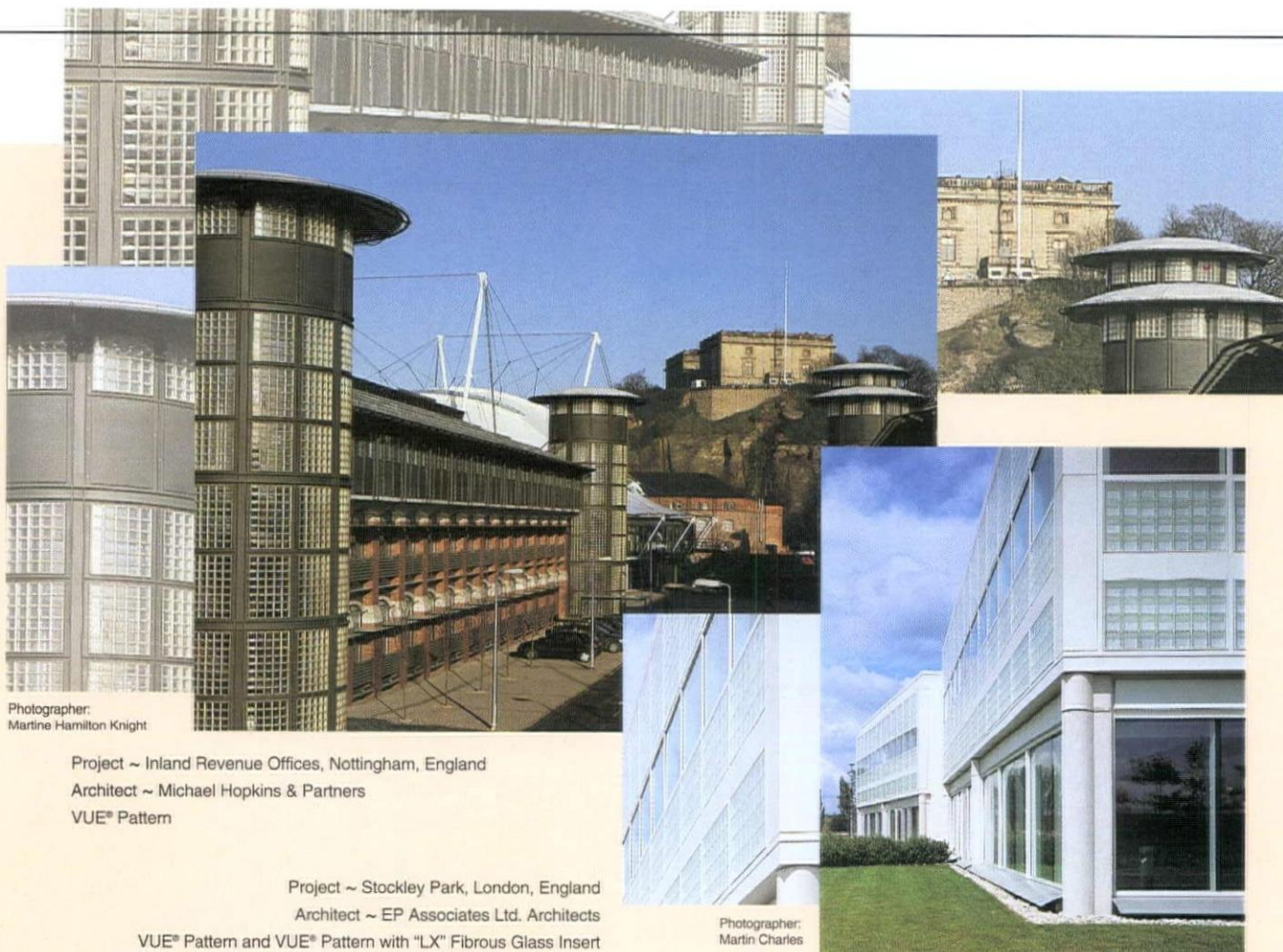


Maastricht Bonnefanten Museum

Aldo Rossi

Consiglio, Cartesio, Museo





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Architect ~ Michael Hopkins & Partners
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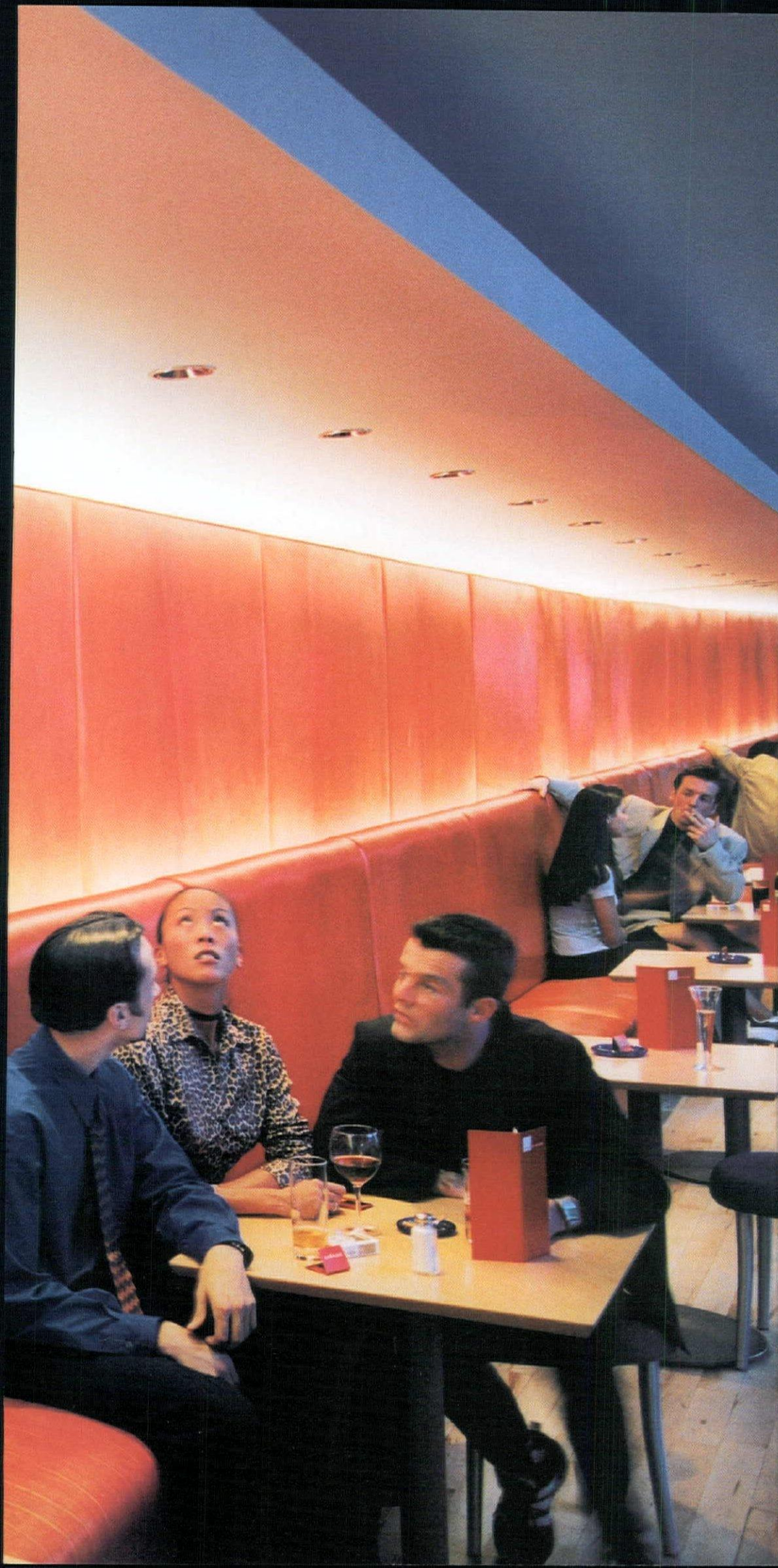
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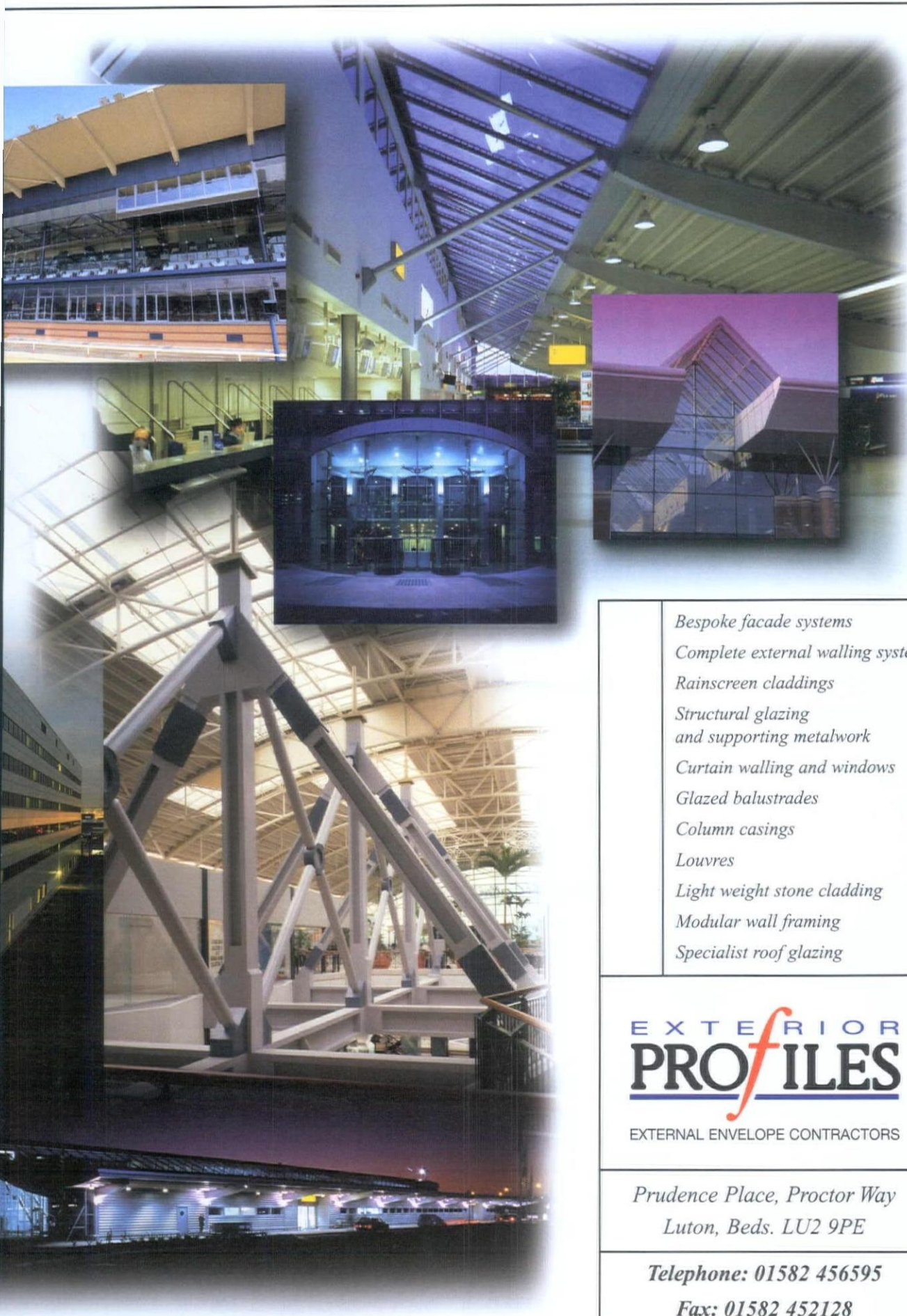
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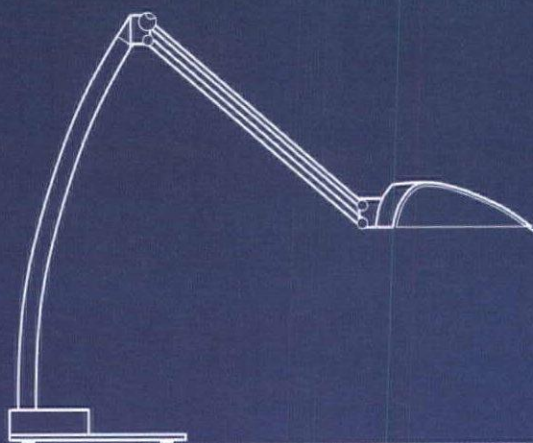
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The Architectural Review in the Gulf



Abu Dhabi, the artificial city with...



...no old buildings...

The Architectural Review staged a well attended conference on Sustainable Architecture and Construction in the Middle East at Abu Dhabi on 30 and 31 March. We asked some of the most eminent designers in the Middle East to analyse the area's problems and suggest remedies. Jim Antoniou reports.

Sustainable design, dealing with efficient use of energy, water treatment and waste management while utilising the latest smart construction techniques, is now an essential ingredient of any new development. Architecture and planning are crucial. Construction as a whole uses more of the world's energy and material resources than any other activity. Perhaps nowhere is sustainability more problematic than in the Middle East, where an abundance of wealth and energy, with few of the restraints found in other regions such as Europe, has resulted in an urban environment that relies almost entirely on artificial support, with little reference to past life-styles which were so well adapted to natural phenomena.

With this in mind, AR organized a conference on Sustainable Architecture and Construction for the Middle East at Abu Dhabi a month ago. Its purpose was to discuss kinds of architecture and building that are economically, culturally and climatically relevant to the region, and to explore appropriate models of development. The conference attracted award-winning architects, designers and technical experts from many parts of the world.

John Gummer, environmentalist and former British Secretary of State for the Envi-

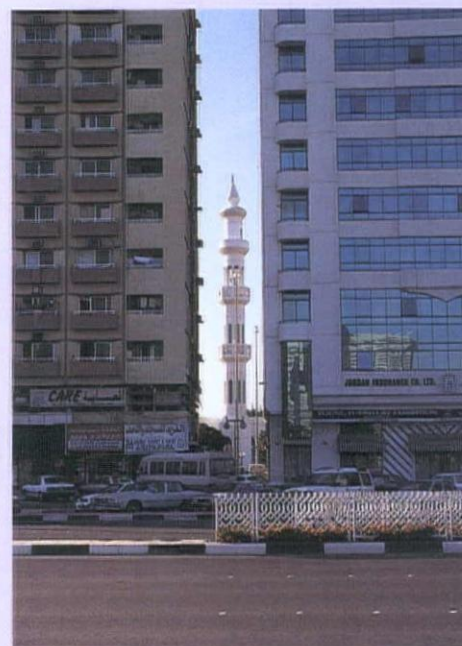
ronment emphasized that 'buildings of low quality cannot provide the ingredients of sustainability'. In addition to technology, other mechanisms need to be found to use energy efficiently. His view is that sustainability is not an extra cost but a way of improving opportunities.

Suha Özkan, Secretary General of the Aga Khan Award for Architecture, spoke eloquently on the region's cultural background and contemporary evolution. He concluded that there are examples of architecture conversant with the values of Islam, and that the region has been fertile ground for the development of some of the finest expressions of contemporary architecture.

Learning from the past

In the past the natural world was the guiding design principle in the Arabian Peninsula. Examples survive of comfortable living environments answering human, social, cultural and climatic needs. Decorative and design features were concerned with privacy, security and temperature control. Courtyards and colonnades were both important, the former providing shelter from sun and wind, the latter ventilation and indirect light to living areas; and both offering security and all-important privacy. Doors, columns, capitals, roof parapets, shutters, windows, screens and wind-towers became the motifs of regional architecture.

Vernacular building was based on a simple pattern of life which oil revenues and international trade have altered beyond recognition. In the transition 'from mud village to Manhattan', few traditional buildings have survived except those kept for



...and scarcely any good new ones.

their historical interest. The vast majority of buildings are around 30 years old.

Khaled Asfour gave the conference what he called 'the dark side of the equation'. He attacked the way in which 'cutting and pasting' has been used in the Arab world – imposing Western building types without considering their impact on the local culture and environment. He also believed that 'direct copying of the past is as absurd as copying from the West'. His message is that long-term education and research can assist architects to create an appropriate environment for the future (AR March 1998, p52).

The concept for planning Abu Dhabi, according to Abdel Rahan Makhoulf

(appointed director of town planning in the 1960s) was to create a modern city based on plans prepared by international consultants, to take on the role of capital of the United Arab Emirates. Today, however, some 95 per cent of plots in Abu Dhabi range between approximately 25m x 15m and 30m x 30m. For multi-storey buildings with an average height of 20 floors, such plots, according to Abdel Al-Radi, a practising architect and town planner in Abu Dhabi, leave very little room for architectural manoeuvre. The result is a stereotyped repetition of building after building with no sense of urbanism. In fact, there is no Islamic high-rise tradition (barring the unique Yemeni examples, which are up to 10 storeys high but not a concept directly applicable to modern high-rise buildings).

Essence of Islamic architecture

Demands for housing have resulted in rapidly built tower blocks, providing maximum profits per unit area for Abu Dhabi citizens (only they are permitted to own land in their Emirate). This has led to poor buildings with a high turnover of tenants, as there is little incentive to sell a house or apartment. In short, the architecture reflects the power of money in a period of frantic development. Under these conditions, consultants from outside the region are the rule,

rather than the exception, where 85 per cent of construction is awarded to foreign companies. Inevitably, there is a large number of tower blocks, superficially Islamicized by arches and exaggerated motifs.

Nevertheless, cities such as Abu Dhabi, Dubai, Riyadh, Jedda and Kuwait are the sites of some of the world's most flashy buildings, constructed by international architects – alas famous for their design ability rather than their understanding of Islamic culture.

On the other hand, more and more Arab architects are being recognized for their approach to design, producing buildings which combine an understanding of traditional architecture with a knowledge of modern technology.

Rasem Badran, who received international acclaim for the Qasr al Kokm Justice Palace and Mosque complex in Riyadh (AR November 1995) spoke on the Poetics of Place, using examples of his work. He has developed an innovative approach to evoke local culture, without slavishly copying past forms of regional styles. His work is based on contemporary design within a framework of precedents, but avoids making a personal imprint on a place or creating an individualistic style.

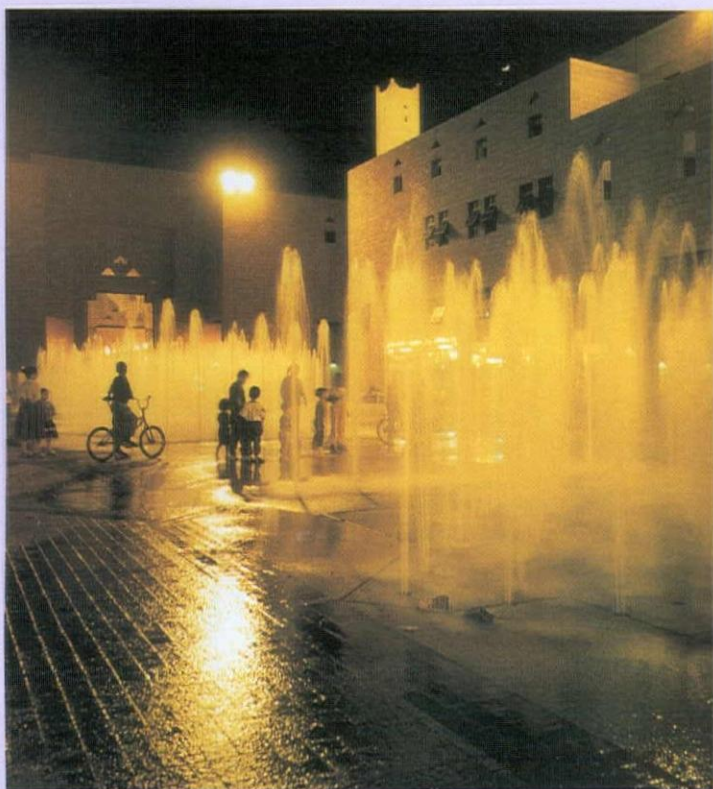
For Badran, architecture is concerned with culture, society and economics as well

as the surrounding environment. The interaction of all these aspects is vital in defining the characteristics of a place. The essence of Islamic architecture for Badran is that it is 'human', answering the needs of the community without neglecting the individual.

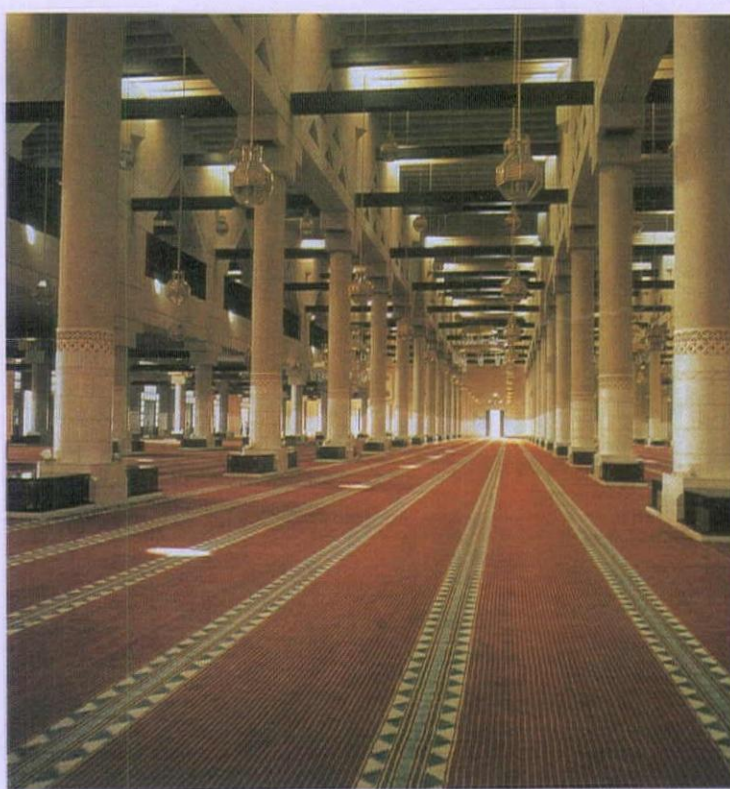
Greening the desert

Ali Shuaibi added his voice for a culturally sensitive architecture, showing Al-Kiudi Plaza in his native Riyadh, which expresses Najdi regional forms in contemporary materials. Similarly, the landscaping of the new diplomatic quarter in Riyadh by Richard Bodeker is a landmark in environmental planning (AR November 1989). He spoke enthusiastically of 'turning desert cities into green cities'. In Saudi Arabia, the water used by one person can be recycled to sustain six trees. He was able to reintroduce locally extinct plant species which had resisted dramatic changes and escaped camel overgrazing. This was achieved by sieving the desert sand and incubating the fine dust. Seeds and spores collected in this way from beyond the camel grazing areas were germinated, nurtured and planted in extensive areas of non-irrigated land. In this way radically new yet genuinely self-sustaining ecological systems were created.

Nadar Ardalan embraces the philosophy and mysticism of Sufi traditions and strives



Rasem Badran's Justice Palace and Mosque complex...



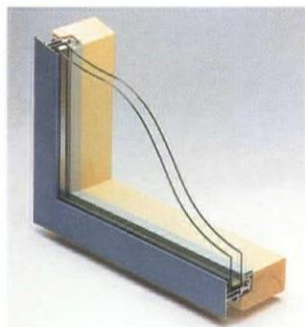
...a search for 'human' architecture.



Client: Glasgow Caledonian University

Architect: RMJM

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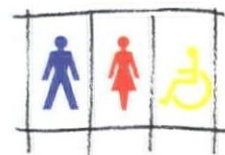
We've suspended it from the headrail to create what appears to be a floating cubicle. It's not only more attractive, it works more efficiently.

In every detail, Oasis' cat-walk looks are matched by a steely determination to withstand rough treatment and reduce maintenance.

Brackets, through fixings, door lock and adjustable feet are all made from stainless steel.

The system is already working beautifully in the new £42 million Bridgewater Hall in Manchester.

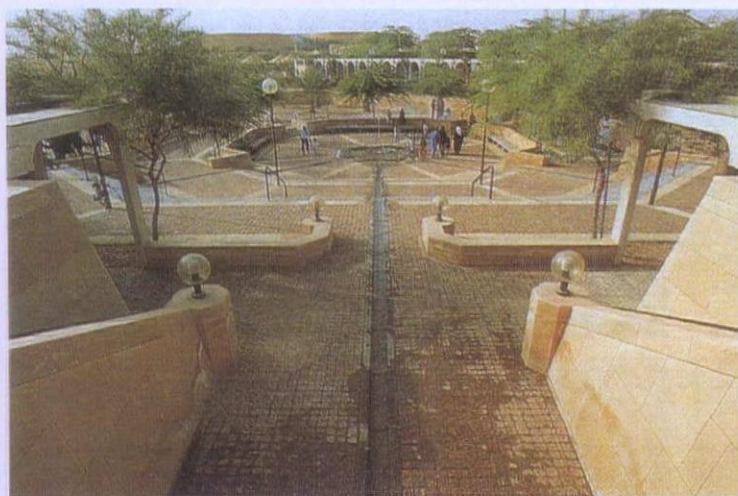
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Oasis by Thrislington Cubicles.

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Richard Bodeker's greening of Riyadh.



Abdelhalim's park in Cairo...

to convey a 'simultaneous perplexity', a hidden order by which Islamic architecture is determined. He spoke of the traditional Islamic world-view as 'a unified perception of existence, where there is no separation between the material and the spiritual'.

Abdelhalim Ibrahim Abdelhalim dealt with community architecture, linking the vibrant but poor community of Sayeda Zeinab in Cairo to a major landscape project (AR October 1992). The task was to engage the local community in the conception and regeneration of the environment. The design of the park took its inspiration from the geometry of the nearby Ibn Tulun mosque and its minaret. The plan works on two levels: the formal layout, based on the main axis of geometry; and the ceremonial process through the active participation of the community. The main issue for Abdelhalim became how to 'transform the community from passive observers to active participants in the design and construction of the park'. The park is an experiment in retaining the link between the conception and execution of the design to allow the community's identity to emerge. The ideas and images that resulted would not have emerged in the sterile environment of the architect's office.

The role of enlightened clients is equally significant. Patrons of architecture are now better informed of development requirements and show more interest in sustainability than speed of construction. They look for the best expertise in the world, and encourage freedom of innovation and expression.

In this respect, Ken Yeang, a world expert on energy-saving tall buildings, has undertaken many experiments with high-rise

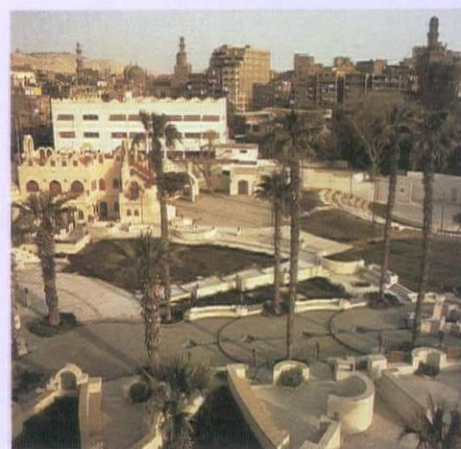
structures, using permeable skins that permit natural ventilation and passive cooling.

Tall buildings, by virtue of their size, consume large amounts of energy and materials. However, Yeang believes that a decentralized form of built environment requires even higher energy consumption. His studies show that the greater the intensity of urban population, the lower the energy consumption per capita. There is also a proportional reduction of energy consumption in other areas, notably transportation. Moreover, he pointed out that 'regardless of whether we are for or against the skyscraper, this is a building type that will not simply go away'.

Rethinking urban design

Frank Duffy, on the other hand, told the conference that conventional office organisations are rapidly changing, with consequences not only for the office layout at every scale, but also for the landscape of whole cities. He advocates rethinking the way offices work. He sees office buildings as bringing people together in new ways which he regards as 'street buildings' or 'office villages': the skyscraper city is virtually obsolete. The design devices that facilitate the way organisations work are clearly expressed in his headquarters of the Arab Petroleum Investments Corporation in Al Khobar, Saudi Arabia.

Obviously lacking in the Arabian Peninsula (and in other parts of the Middle East) is urban design on an extensive scale. In Abu Dhabi and Dubai, it is the norm to stand and look at one building complex, without being aware of any link with another. Urban design is tackled at the level of the individual



...changed a whole community. (Ibn Tulun in background.)

complex, but ill-considered on a city-wide scale. This message clearly emerged from the conference.

In tackling problems of environmental engineering in the region, Tony McLaughlin, partner in Buro Happold, wondered whether it was likely that any building with integrated renewable energy systems would ever see the light of day in the Middle East, because of the region's unique energy situation. 'It is up to us as architects and engineers,' he said, 'to keep putting the opportunities in front of our clients.'

People throughout the region have expressed a strong desire to break links with their impoverished past. They want new buildings designed to international standards, but in accordance with traditional Islamic values. This demand and the rapid pace of development are proving a tremendous challenge to clients and architects alike at the dawn of the twenty-first century.

JIM ANTONIOU



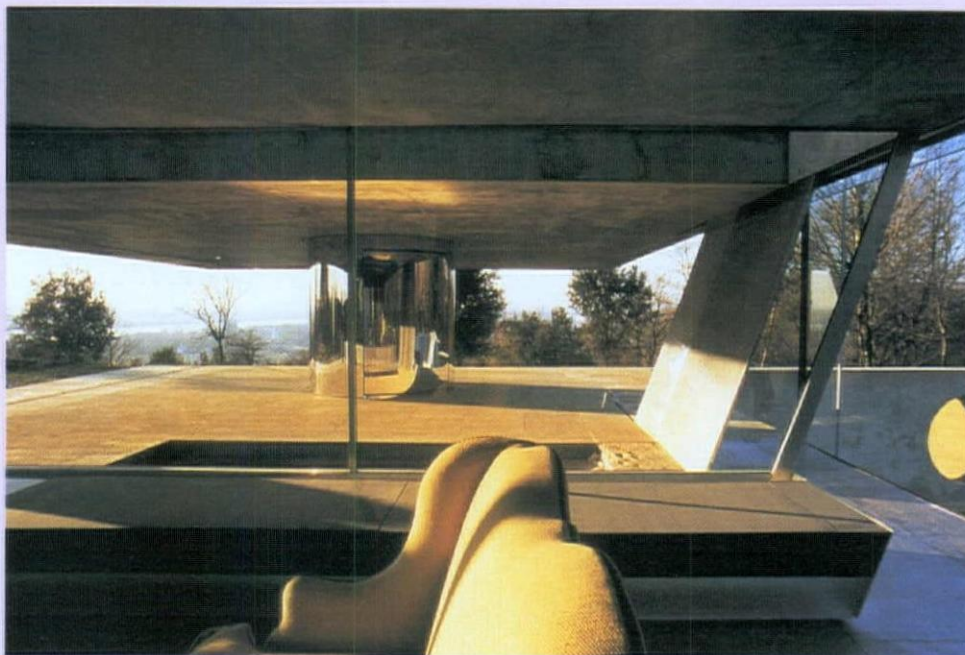
The looming opaque box of Koolhaas' Bordeaux house.

Koolhaas in Bordeaux

The exhibition *Living* explores the four private houses built in Europe over the past decade to designs by OMA-Rem Koolhaas, and their Nexus apartments of 1991 in Japan. It coincides with the launch of a new edition of Koolhaas's book *S,M,L,XL* and marks the completion of the fourth and most recent private house, 5km from the centre of Bordeaux.

The Maison à Bordeaux stands in rural surroundings on a hillside commanding views over the Garonne river to the city centre, and was designed for a couple with three young children. As the client had recently been confined to a wheelchair by a near-fatal car accident, he was keenly aware that his universe would be defined by the new house, and asked Koolhaas to make it complex, not simple.

In response to this request, Koolhaas has composed the house on three storeys of contrasting character. A brooding opaque box containing parents' and children's bedrooms looms above an almost completely transparent piano nobile with indoor/outdoor living spaces and panoramic views, while the lowest storey gives on to the main entrance forecourt on one side and burrows into the hillside on the other. Enclosed in a variety of volumes at this level



The luminous piano nobile.

are the kitchen, laundry and wine cellar, a media room, the main entrance and cloakroom, and the foot of three very different staircases: a cavernous one linking the main entrance to the main living space, the first of a series of straight flights serving all three levels at the parents' end of the house, and a spiral stair for the children.

A lift in the form of a 3m x 3.5m open platform provides the client with the means to move through the house vertically. This platform can serve as a work-station, it will ascend or descend at the touch of a button to reach the required shelf of an extensive bookcase-wall, or will slot into waiting voids on all three floor levels, to become an integral part of the kitchen, main living room or parents' bedroom. The question of whether – or how – retractable guard-rails might be provided, to prevent other

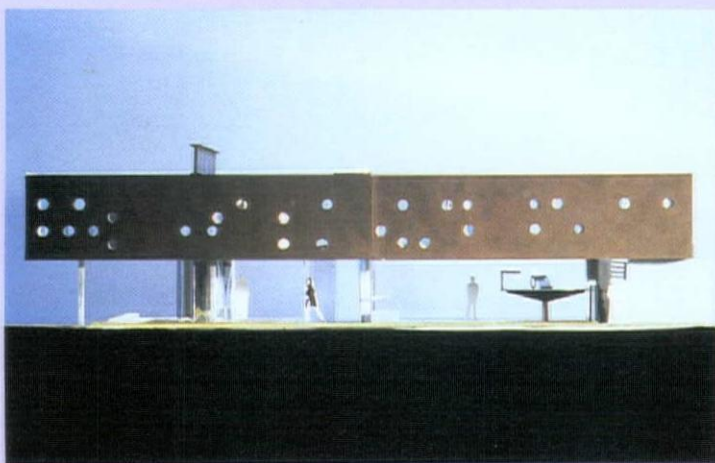
members of the family, staff or guests from tumbling into these voids remained unresolved at the time of writing.

A guest bedroom with small patio, and the caretaker's house, are aligned on the far side of a walled forecourt, which is entered through a kind of electronic portcullis from a long private drive. The house is not open to the public. However, a guided tour commented by Rem Koolhaas is available on video.

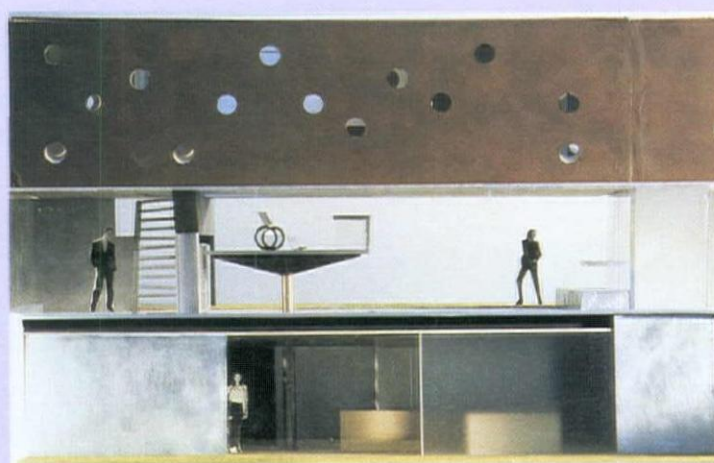
CHARLOTTE ELLIS

The exhibition is at Arc-en-rêve centre d'architecture, Bordeaux, until 17 May 1998 and will be shown afterwards at the Architektur Zentrum, Vienna, and the Nederlands Architectuur Instituut (NAI), Rotterdam.

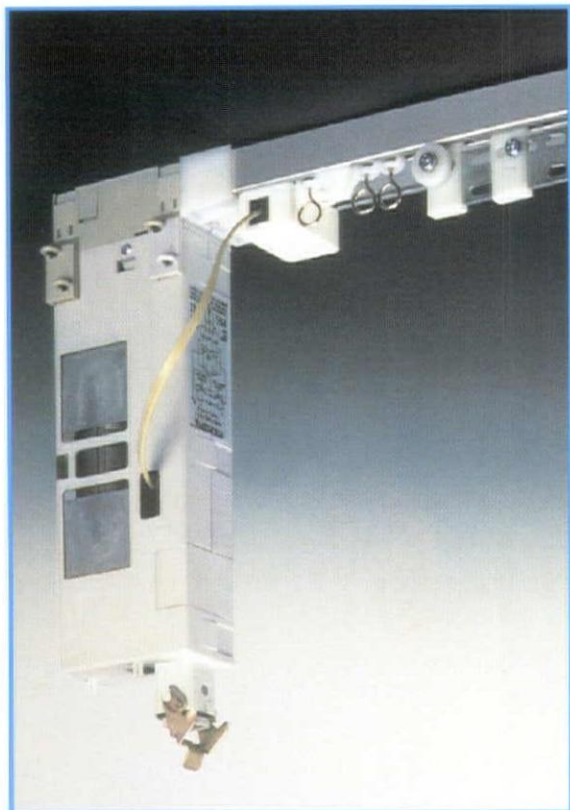
S,M,L,XL was first published 1995 (AR June 1996). The 1998 edition is published by Taschen in Cologne & the Monacelli Press in New York. The 18-minute video *Maison à Bordeaux* was directed by Richard Copans and co-produced by Les Films d'Ici and the Arc-en-rêve centre d'architecture, Bordeaux.



Model of the Bordeaux house.



Detail of model.



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Graphisoft Prize

Following the success of last year's competition, (AR October 1997) The *Architectural Review* is once again co-sponsoring the annual Graphisoft Prize for creative architectural interpretation using computer-aided design (CAD). The challenge is to use computer modelling techniques to interpret spaces and buildings in myths, legends, literary works and musical pieces that have never existed, or are long missing from the physical landscape – but are nevertheless alive in our present day culture. The list of works includes the Ballroom of the Devil in Bulgakov's novel *The Master and Margarita*; the Palace of Haroun al-Rachid from *Tales of 1001 Nights*; Faust's house and laboratory from Goethe's *Faust*; Rick's American Café from the film *Casablanca*, and Heartbreak Hotel from the song by Elvis Presley.

The competition is open to all. Separate awards categories will be established for students and design professionals. Students must be enrolled in a school of architecture, landscape architecture, urban planning or an allied discipline. Prizes will include cash, a top range Apple Macintosh (plus ARchiCAD software), and travelling fellowships.

Registration is now open, with final submissions due on 23 September. To register, send an email to gsprize@graphisoft.com. Competitors will be included on a mailing list, receiving updated information about the competition.

A CD-ROM of the 1997 Graphisoft Prize is available by contacting Graphisoft at the addresses below, or logging on to the Graphisoft web site at www.graphisoft.com

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letters

The emptiness of the pin-up

SIR: Congratulations on being a mag that is clearly engaging its readers, as evidenced by the lively correspondence on the issue of photography and people in buildings. When your sister rag the weekly *Architects' Journal* published 32 pages on this debate over two weeks (25 July & 1 August 1979) with a memorable essay by the RCA's Tom Picton and revealing interviews with photographers

(including Martin Charles) and those who commissioned them, not a peep was heard from the readers. Even more interestingly there was silence in the Art Editor's room and a noticeable sigh of relief when the magazine could return to business as usual in the ensuing weeks. Was this simply a sign of embarrassed guilt, of raw nerves having been touched among so many 'voyeurs of the abstracted vacuum'? For in this pin-up aesthetic of the architectural photography world, we are all as readers complicit in this elimination of inhabitation.

What maddens me even more than peopleless photographs are the ones with project team staff posed as if for a *Wallpaper* shoot but trying to convince us that this is real life. They insult us and their clients with such arrogance. The message after all is clear. Not only have we designed a place really for ourselves rather than the culture of the users who commissioned us, but we need to show you how you really ought to look and live in it. Q.E.D.

Like Martin Charles, I am aware of the technical and practical reasons why such events occur and it would consume too much of your valuable space to run through them. It all seems so innocent, but there is nothing like innocence for achieving surreptitious corruption.

Until we begin with a design process that observes, values and understands through dialogue the client's visual culture expressed in habits of inhabitation, and then seek out the client's aspirations for the future, and use that combination of past, present, and future as a foundation for designing an appropriate place, then we will continue to be dependent on the architectural photographer to paper over the all too visible cracks between day to day inhabitation and buildings as abstract paintings – a surrogate dream of our personal utopias.

Long may the debate go on in your letters pages, and let us hope Martin Charles' ripples (AR February 1998) might spill over into your building coverage pages too.

Charles suggests nobody could care less if old buildings are photographed without people. Could I suggest that while he may have a point about the 'contemporary' intruding unhelpfully on the 'eternal', his choice of Lincoln Cathedral as an example is not helpful.

First, nobody cares about uninhabited photographs of these older piles because we all know instinctively that the photograph is no longer part of a designer's PR mission. In most cases, as he points out, the photograph simply confirms what is already lodged in our collective visual memory.

Secondly, the Cathedral is at the very far extreme of an architectural spectrum which addresses the balancing act between signs of

contemporary inhabitation and an architecture that transcends any particular moment. In the Cathedral the day to day user has nothing to add; the individual is insignificant against the awesome presence of the Deity. However there is a whole raft of architectural settings (the majority in our modern world) where that comfortable and empathetic interaction between user and building is both vivid and vital to its success.

Thirdly, architectural photography's pre-socialist/modernist history was hugely influenced in the UK through the pages of *Country Life*, *Illustrated London News* and architectural history books. Here the cult of privacy was overlaid with the message that ownership/power equals displayed grandeur of space and artefacts, (tied once again to limitations of camera technology), and this conspired to encourage the unquestioning acceptance of these images devoid of humans. We simply expect those historic piles to be peopleless. They were all in the 'cathedral' mode. It is the same trick in those contemporary minimalist shops with seemingly no clothes and equally no purchasers, because the artefacts are simply too expensive to have the hoi polloi present.

If we are to understand this art of designing for habitation, and then comfortably photograph it, we would do well to read Alison and Peter Smithson's brilliant essays on the difference between Eames and Mies, in their sparkling small tome *Changing the Art of Inhabitation* (Artemis 1994). Ray and Charles knew all about real life in buildings.

Yours etc

PATRICK HANNAY

Touchstone – the magazine for Architecture in Wales
Cardiff, Wales

What, no outrages in Middle East?

SIR: Congratulations on the successful influence of the *Architectural Review* all over the world and vice versa. For instance, it seems from AR1213 that no Outrages can now be found in the Middle East. But then who knows, they might have been browned off if you had.

Yours etc

RINI NAAN

London N1

Phone home

SIR: I thought you might find the enclosed slides of interest. They are images of the phone boxes in front of Senate House in Malet Street, London (just behind the British Museum).

I took the first image in March 1997 while



Malet Street, London, in March 1997...



...and in December 1997.

walking back and forth between my home and the Architectural Association. I took the shot in anticipation of these glass phone boxes being hideously transformed into the red plastic-domed ones that started appearing elsewhere in London at that time.

I took the second image in December 1997. Imagine my surprise when I saw that the glass boxes were not replaced by red plastic-domed ones, but by 'real' ones, reproductions or originals of the Sir Gilbert Scott classic. Upon closer examination, I have noticed that all of the glass phone boxes in the vicinity of Russell Square have suffered the same fate.

What are we to think of this swap which has presumably been done by BT? Are we to praise it as a sign that BT has learned the error of its plastic-domed past? Or, are we to mourn the retrogressive step of replacing a contemporary glass and stainless steel phone box with a 1930s model?

After all, there are always many many tourists around Russell Square and what is London without its red phone boxes? And for

that matter, is London also doomed to always have bulbous black taxis and red double-decker buses, even if they are designed in 1998?

The question begs to be asked: is London allowed to move on or should it become frozen like a museum in some fairytale time?

Yours etc

CHRISTOPHER WILSON

London WC1

Black hole of Israel

SIR: I have just received your special issue on the Middle East and it appears that there is a black hole in its centre. Why is there no coverage of Israeli architecture, the country at the centre of the Middle East and with the most vibrant economy in the area? Israel is totally ignored in your issue. Is it politics, ignorance or racism which lies behind the omission of a major modern economy?

The problems affecting Israeli architecture are as great as any of those in Arab countries, more so in many cases because of the need to avoid conflict between so many religions and sects existing in a minute area of the world. There has been both beautiful and terrible building in Israel, in Jerusalem in particular. The capital growth of the economy allowed imaginative new architecture and an attempt to redress the urban legacy of the inter-war period.

Some explanation is needed, although I do not believe you will print my letter.

Yours etc

MARTIN TAYLOR

Dartford, Kent, UK

SIR: In your recent issue on the Middle East (AR March) two countries were conspicuous by their absence. In Iraq's case this is probably due to much of their architecture being blown up in the Gulf War, Israel's exclusion is more baffling.

Yours etc

JOEL COOPER

London N16

Errata

Joint architects for the City Hall, Amman, Jordan (AR February pp40,41) were Jafar Tukan & Partners and Shubeilat Badran Associates. The latter were wrongly credited as associate architect.

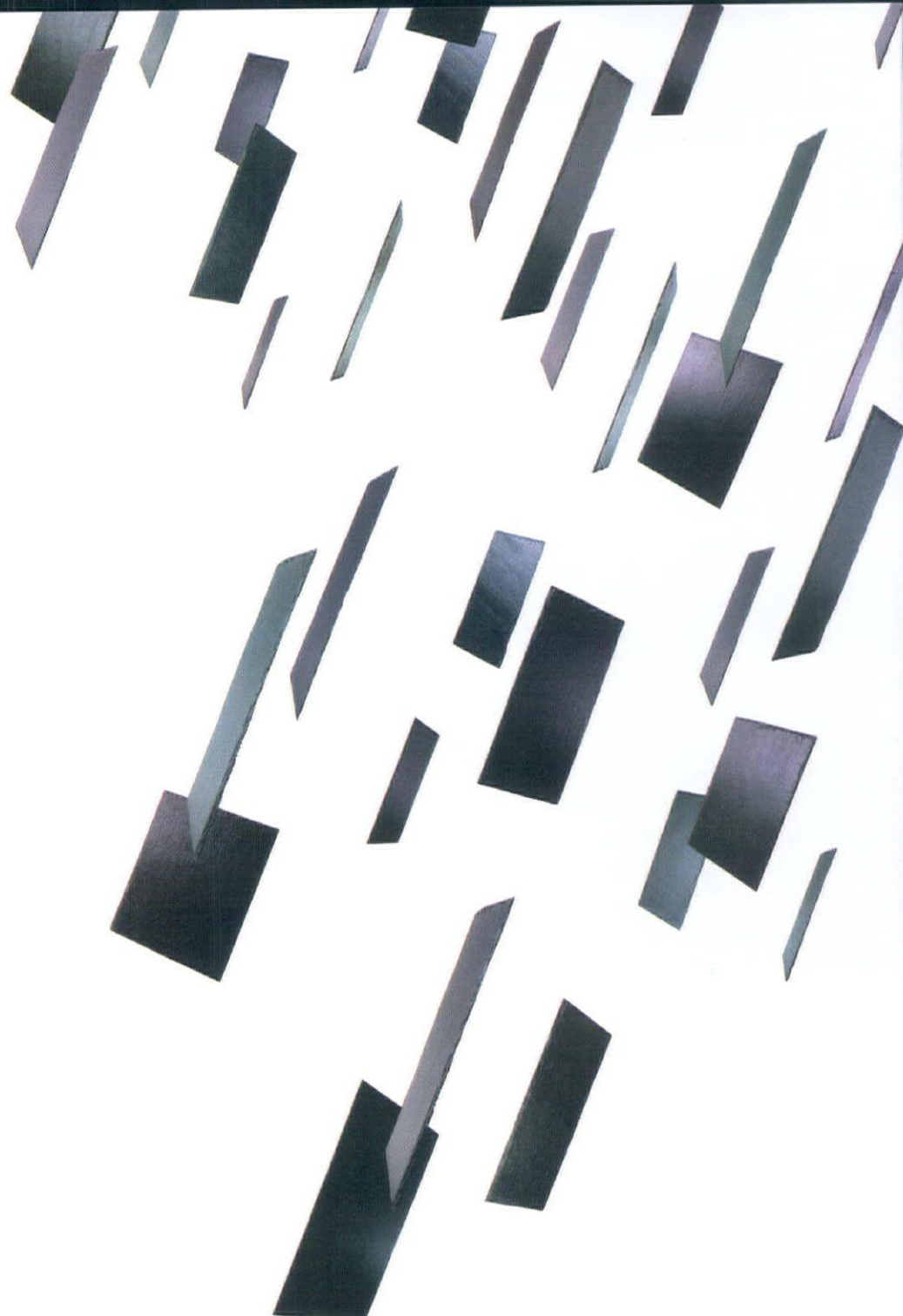
Photographs of the Nokia company headquarters (AR April p40) were taken by Jussi Tiainen, except for 1, 3, by Titta Lumio and 9 by Voitto Niemelä.



Next month's issue is devoted to the theme of libraries, historically essential institutions for the advancement of all civilized societies. But the library is changing. Those libraries being planned for the next century will be both repositories of knowledge and nurseries of research, and must respond to the growth of information in electronic form.

The focus of our coverage is the new British Library at St Pancras in London, by Colin St John Wilson, the largest public project undertaken in Britain this century and a building worthy of its phenomenal contents. We examine the evolution of this huge and complex project and evaluate how it has responded to an immensely challenging programme. On a much smaller scale, we also consider the Ruskin Library at the University of Lancaster, by MacCormac Jamieson Prichard, a modest memorial library dedicated to one of the great minds of the nineteenth century. These two British projects are joined by the best examples of new libraries from around the world, including a library for the University of Delft by Mecanoo, a provincial county library in Wyoming by Will Bruder and a new city library in Malmö, by Henning Larsen. Plus the usual stimulating mixture of interior design, delight and outrage.

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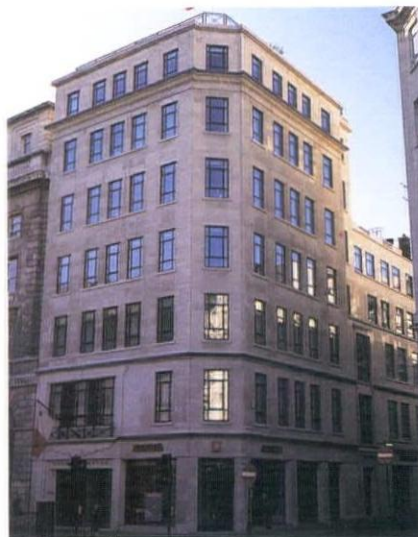
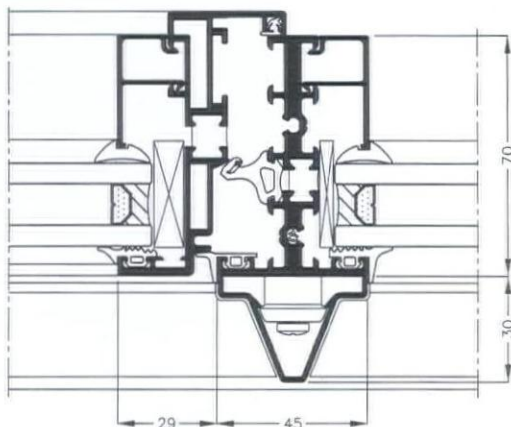
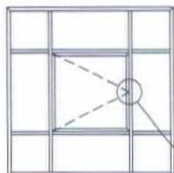
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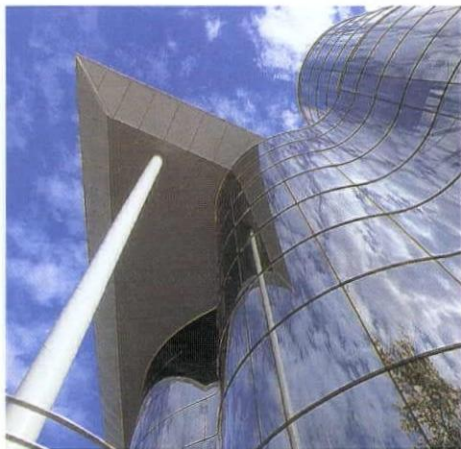
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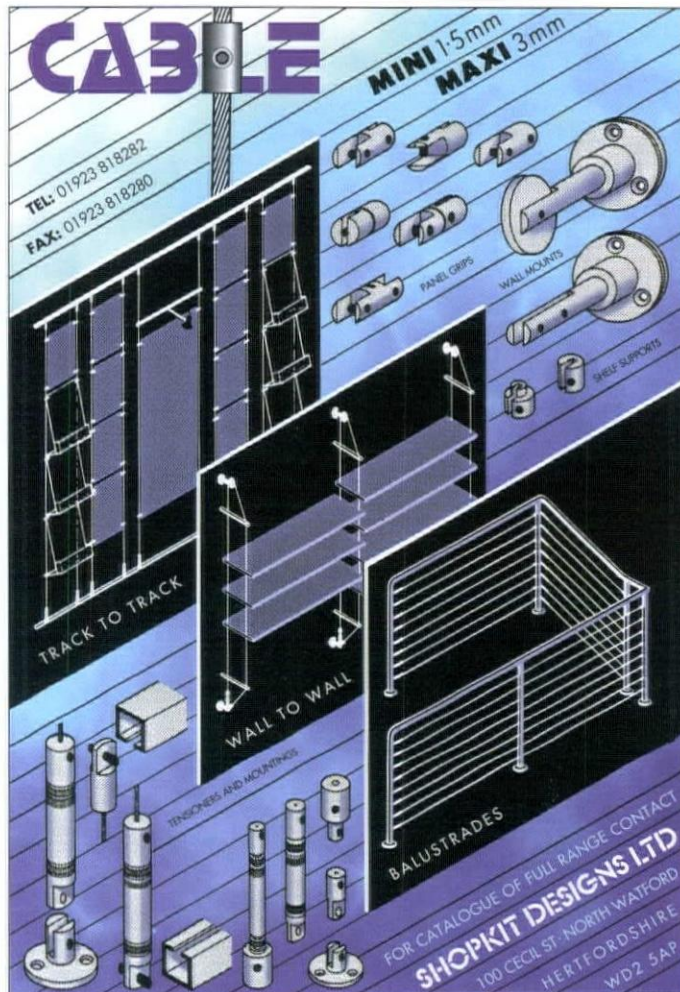
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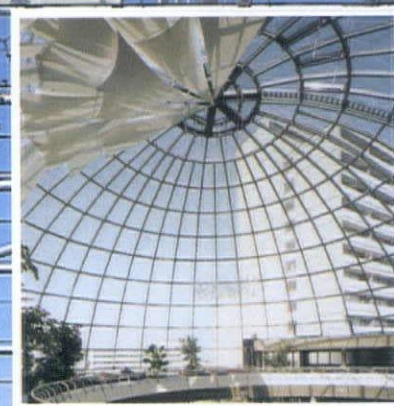
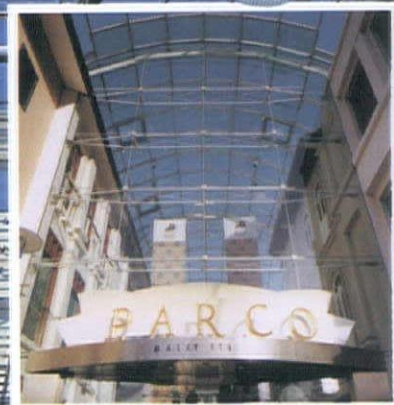
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The all-glass link in this house conversion is one of those rare occasions when a modest intervention completely transforms a building by opening up new views and connections. It also shows structural glass and sealant being used only a few hundred metres from the Cornish coast, in the face of Atlantic gales, on a listed building where metal-framed glazing was prohibited.

The zig-zag arrangement of buildings started with the cottage and the lower-lying barn set parallel to each other but slightly displaced. Later, the two were

linked by a short cross extension, its floor level halfway between them: three steps up, three steps down. When agriculture gave way to holidays, the barn was converted into a studio by adding a floor and making a large glazed opening in the gable end. This included a new entrance with a ramped approach. With only one narrow ground-floor doorway leading to the far corner of the kitchen, internal circulation was tortuous.

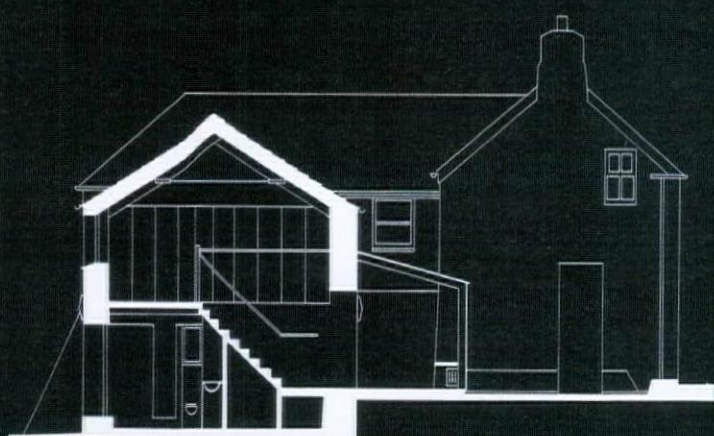
Then Evans Vettori's clients bought it. They had small children, and chose to develop the lower part of the barn as a

bed- and playroom. To improve connections with the rest of the house, the glazed link was added. Set in the south-west corner of the garden court, it provides an intermediate stage in the progression to the outside world. It also extends the axis of entry from the approach court towards the north-west. Combined with the circulation space across the end of the kitchen, the glazed link therefore makes a new communications axis at the heart of the house. With the folding doors open, it pours natural light into playroom and kitchen, and on to the

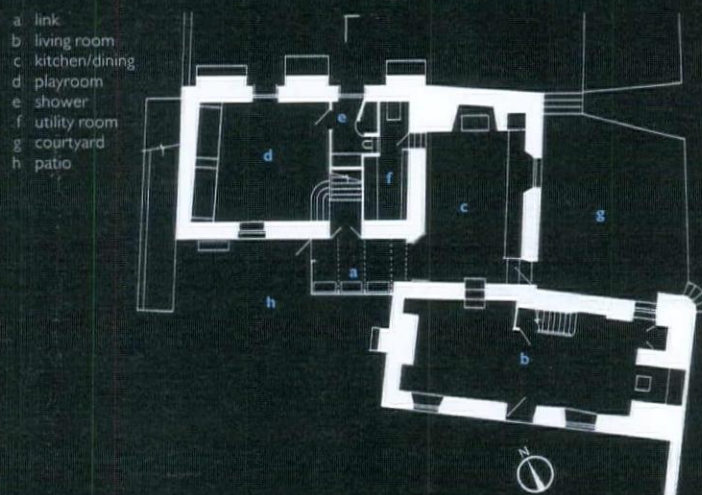
landing of the rebuilt studio stair. Within the link are built-in seats over radiators for winter use. The double-glass is insulating and specified to minimize solar gain. Its large sheets rest on a laminated glass structure glued at the corners, which is set in stainless steel shoes. Joints are filled with sealant. Deceptively simple, the link is only apparently straightforward.

PETER BLUNDELL JONES

Architect
Evans Vettori
Photographs
Bob Berry



cross section



ground floor plan (scale approx 1:375)

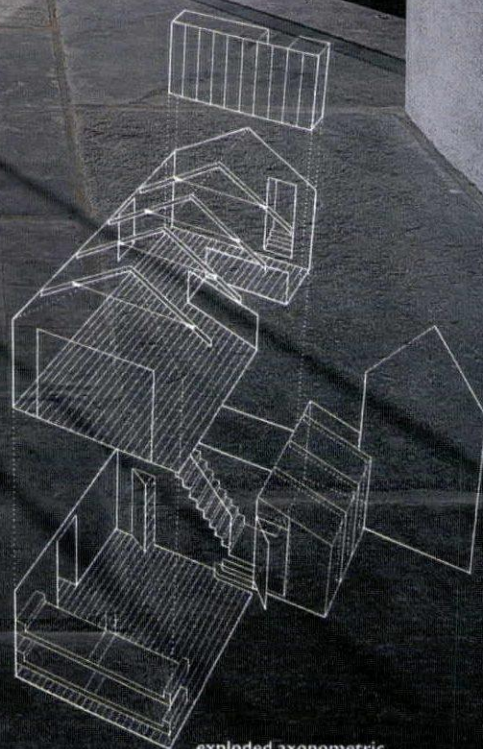


1 The glazed link transforms the renovated building, opening up views and connections.

2 The lightweight glass construction of the new link contrasts with the elemental solidity of the old farmhouse.

3 Detail of the laminated glass structure.

4 Poised on the south-west corner of the house, the link brings light flooding into the interior.

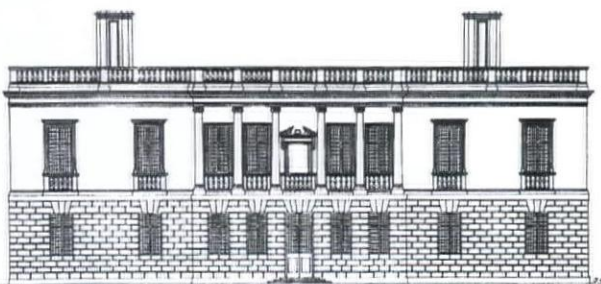


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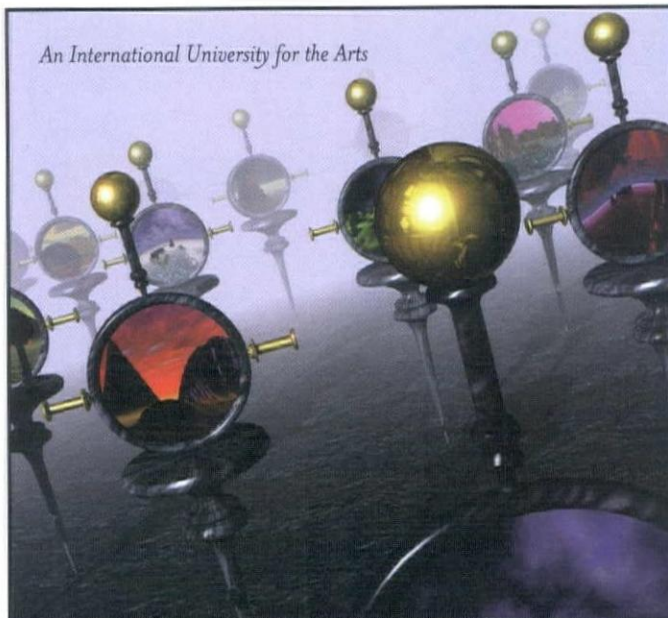
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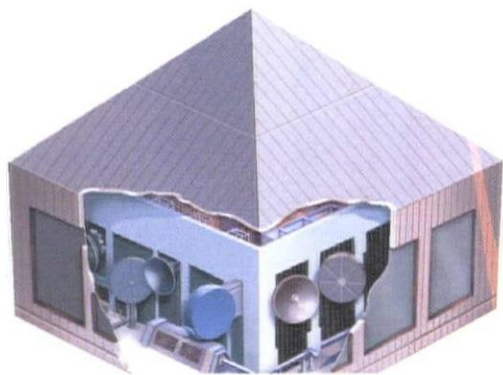
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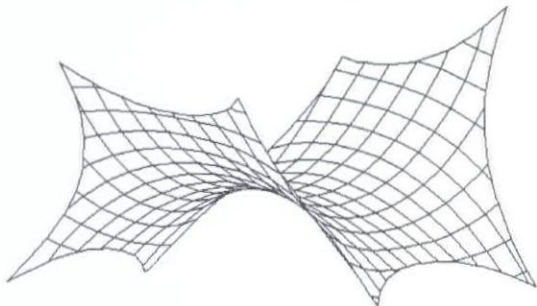
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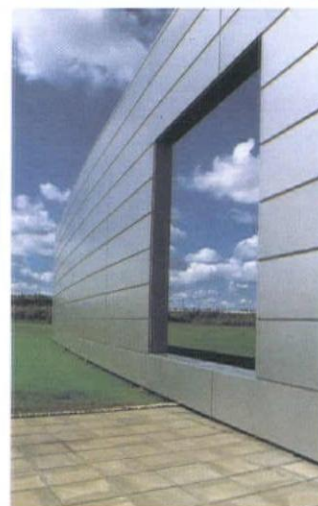
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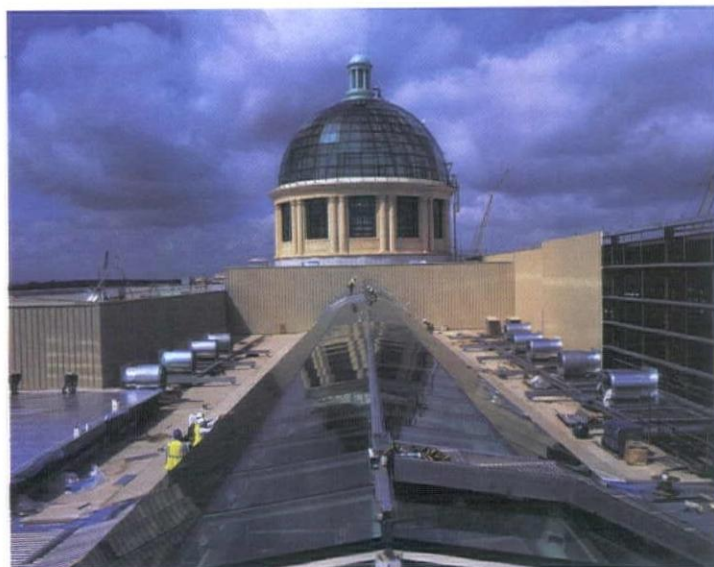
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outrage



POMO IS ALIVE AND WELL AND LIVING IN MANCHESTER, ONCE A PROUD CENTRE OF REGIONAL CULTURE, NOW A PROVINCIAL BACKWATER, DEPENDANT FOR INSPIRATION ON LONDON AND AMERICA.

Manchester is perhaps a metaphor for Britain. Once one of the greatest cities of the world, crucible of the Industrial Revolution, home of the nineteenth-century school of *laissez-faire* economists and of Friedrich Engels, still proud possessor of an orchestra and a few fine buildings (those not yet destroyed by planners and developers), Manchester's intense regional world has gradually slumped into provincialism. The crucial moment was perhaps when its great newspaper, *The Manchester Guardian*, moved to London in the 1960s, but the collapse of confidence began before that and continues to this day.

Mancunians may brag about the strength of their culture, but deep inside, they know that the rules of the game are being made in London. Similarly, the nation as a whole fusses about being Cool Britannia with a vacuum cleaner and a few inflatables on Horse Guards Parade, but most Brits (and particularly our present rulers) believe that America is the real source of tomorrow.

The combination of the atrophying of Mancunian self-confidence and the general British desire to be America's most faithful colony has

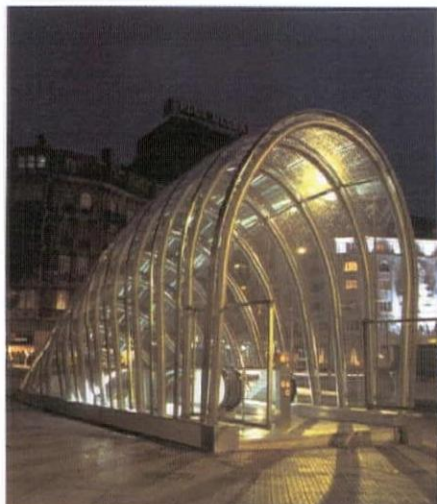
led to the fungoid growth of backwardly provincial and aggressively dull buildings put up to serve the city's prosperous suburbs. What might have seemed a bit daring in the US a couple of decades ago is now news in Manchester.

Here for instance is the Trafford Centre by Leach Rhodes Walker. The construction photographs (proudly taken by Trent Concrete) show cut-and-paste architecture at its most flimsy and facile. You start with the cornice and capitals, then work downwards. Large quantities of beautiful Bath stone have been crushed to make the pre-cast classical twiddles; prefabricated brick infill panels include good old Manchester Reds (to appeal to local sentiment), Baggeridge Blues, and Leyburn Buffs [sic].

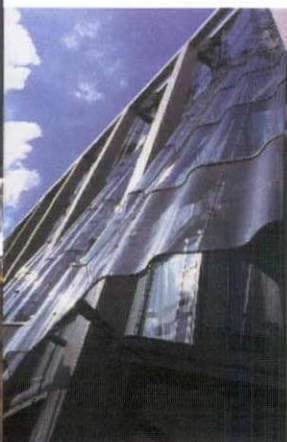
The centre will offer a million square feet of retail space and 10 000 car parking spaces. A truly American scale. We do not expect kindness either from Manchester or from the huge commercial programme. Yet where is there any notion of the nobility of the city, dignity or even somewhere to want to be in?

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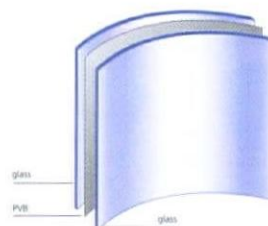
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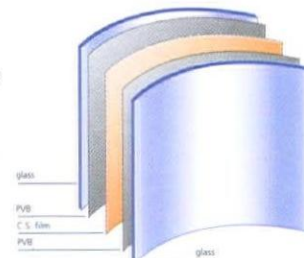
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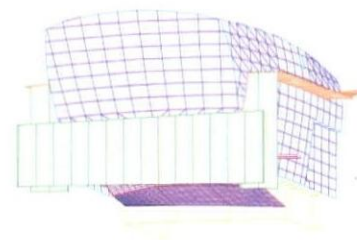
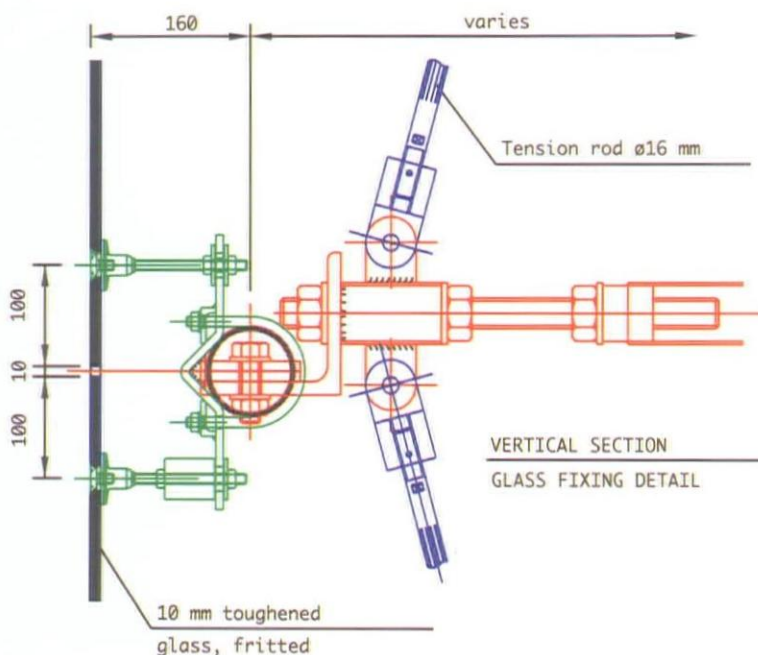
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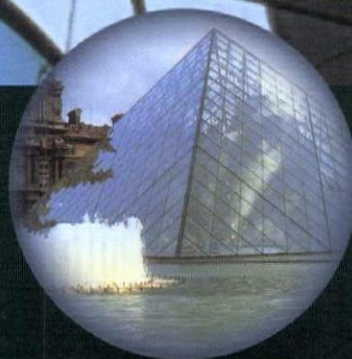
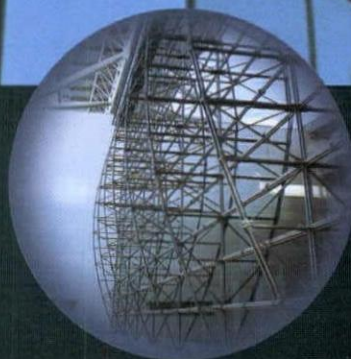
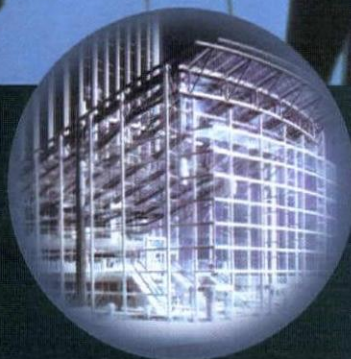
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GLASS AND TRANSPARENCY

This issue examines how Modernist ideals of transparency and translucence find varied expression in contemporary architecture. Klaus Kada's concert hall in St Pölten (here and on p42) stunningly elevates a modest, municipal theatre into a seductively luminous volume. Using glass panels to evoke a sense of the numinous, Francois de Menil's chapel provides a new resting place for Byzantine frescoes (p82) and in Rotterdam, Koen van Velsen's new cinema (p58) transforms an introverted building type into the glowing symbol of an imaginatively revitalized public square.



St Pölten is a small industrial town about 30 miles due west of Vienna. It lies on the river Traisen, a tributary of the Danube. Until quite recently, it had no great buildings and no special history, and was missing from the Michelin guide to Austria. But it happened to be sited right at the centre of the *Land* of Lower Austria and next to the busy conduit of the Vienna/Salzburg motorway. It was therefore chosen in the 1980s to become the new regional capital, the place where the *Landtag* (regional parliament) sits, and the site of a regional bureaucracy employing some 3000 functionaries. The new government quarter was located south-east of the town centre, next to the river. Beside the new parliament building and parallel with the river was placed a linear office development 650 metres long, then the decision was made to enliven the area with a cultural centre. A limited competition was held in 1992 for a group of buildings including museum, library, archive and concert hall. Hans Hollein won first prize and his plan was adopted, but many aspects of Kada's scheme were also admired, so while Hollein was given the museum, Kada was commissioned for the concert hall. The museum is yet to be built: Kada's hall opened at the beginning of this year.

This history is significant because Kada's design was initially conceived as part of his own masterplan and later adapted to fit Hollein's scheme. The main difference between the two is that while Hollein sought to focus the cultural development inwardly on a new pedestrian square (Schubert-Platz),

Kada intended instead to make the new cultural buildings a link between the government area and the old town centre. Hollein's introverted scheme would seem to be in danger of producing a political and cultural ghetto, but it will be hard to evaluate the success of the new square until all its buildings are complete.

Hollein put Schubert-Platz just where Kada had intended the concert hall to go. Kada had therefore to move his building westward, and to acknowledge the square he rotated it through 90 degrees. His main facade on the axis of the auditorium faces east and fronts the square, but the entrances do not open that way. With another open space to address to the north, Kada made a second front. He placed his main entrances by the north-east corner, still expecting many pedestrians to arrive from the town centre. He has coped rather well with the ambiguity of space and object induced by the Hollein plan, but in town-planning terms this only underlines the problem: the more the concert hall becomes an object in its own right, the less Schubert-Platz reads as an outdoor room. This story has to be told because the building's relationship with its setting is less than convincing, but it is not Kada's fault.

Taken within its own terms, the building is exciting and innovative. From the start, Kada seems to have been interested in the idea of a building-within-a-building (the egg-in-a-box like London's Royal Festival Hall), but with the major difference that a visible gap exists between the auditorium and the peripheral

GLASS CONCERTO



The possibilities evoked by the Modern Movement in the use of glass at the beginning of this century are now finally being realized in buildings such as Klaus Kada's stunning new concert hall in St Pölten.

CONCERT HALL, ST PÖLTEN, AUSTRIA

ARCHITECT

KLAUS KADA

1

Kada's glowing, curvaceous auditorium animates the entire building, in a spectacular transformation of a traditionally 'dead mass'.

2

The volume of the auditorium is clad in translucent, faceted greenish glass panels, heightening the building's civic prominence. The material betrays a certain fragility, and when illuminated, hints at the presence of mystery beyond.



CONCERT HALL, ST PÖLTEN, AUSTRIA

ARCHITECT

KLAUS KADA

3
North elevation, dominated by the cobalt blue volume of the small recital hall.

4
The bulging, convex auditorium is buttressed by a pair of glazed orthogonal volumes.

5
Part of the crisply detailed south elevation.

6
A belt of offices and dressing rooms wraps around the west elevation.

7, 8
Details of the junction between the auditorium and the orthogonal outer wings. The gap is occupied by the stairways and landings of the foyer.

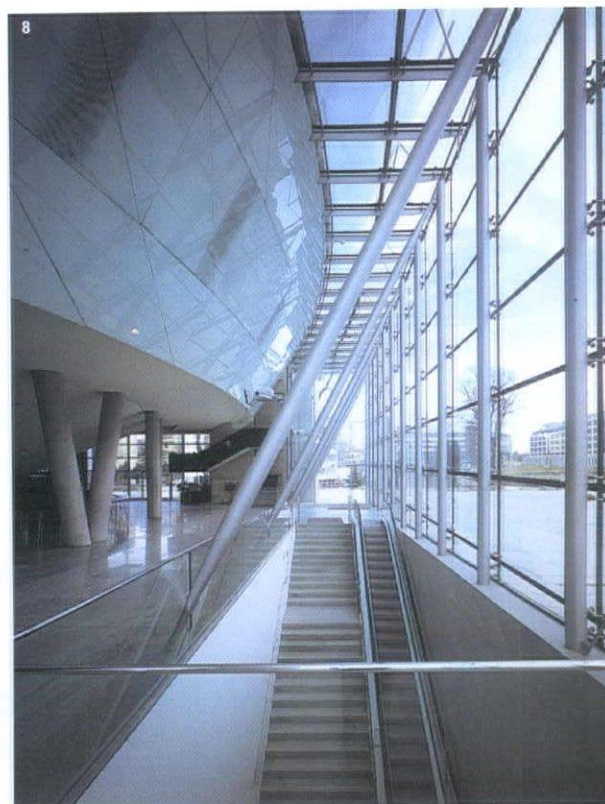
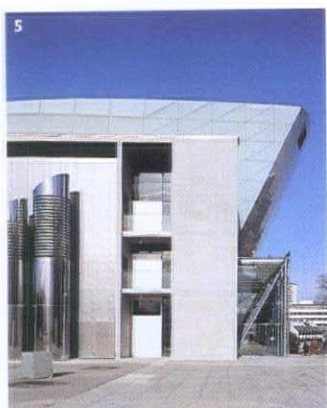
pavilions, the latter having their own rational structures and being capped by their own roofs. In his original masterplan, the concert hall tapered in plan towards the stage, while the outer box was asymmetrical, its acute angled-corner responding to site boundaries. The revised version, straitjacketed by Hollein's plan, has ended up orthogonal both inside and out, but Kada has found other ways to enliven it. The design for the 1200-seat concert hall was restricted too, for it needed to serve also for opera, ballet, and musicals, necessitating a conventional stage with proscenium, orchestra pit and full flying arrangements. So the relationship between 'producers' and 'consumers' had to be the conventional one: there was no question of a centralized arrangement like Scharoun and Wisniewski's Berlin Philharmonie's Chamber Hall which is of similar size (AR March 1988), or for experiments in novel staging or aperspective space. Also, the fashion in halls has seen a return to the linear shoe-box type, which is especially relevant around Vienna with its historically conservative musical tradition and famous *Musikverein*.

Kada chose not to fight these conditions, and accepted a conventionally symmetrical parallel sided layout. Instead, he harnessed his ingenuity as a designer to make the space as flexible as possible. The stage width can be varied and it can be thrust into the auditorium, the acoustics and lighting can be varied with movable panels. Even the apparent colour of the interior can be changed through lighting. It is a true chameleon of a space.¹

Kada was obliged to plan the surrounding building in an orderly and compact manner, the foyer being relatively narrow and restricted compared with larger rivals in other European cities. Nonetheless, a glance at the plans reveals what a complex cellular organism he eventually produced. The greater width of the north wing was prompted by the presence at the third level and towards the west end of a small, second 250-seat concert room. Articulated as a dark blue glass box in the north side, this too is a flexible space in terms of acoustics and lighting, serving for lectures and readings as well as chamber concerts. Symmetrically opposite it on the other side of the stage areas are two rehearsal rooms, placed one above the other. Not being public rooms, their presence is not signalled externally. Visually, they are absorbed into a belt of offices and dressing rooms on seven levels, which wraps around the west of the building and round its south-west corner. Being the back, this is treated in a rational and straightforward fashion with a regular glass curtain wall. Only the fly-tower looming above suggests that it is a theatre. There are many lifts and four sets of protected fire stairs. These complex demands might have pressed many architects into damaging compromise, but not Kada.

His greatest stroke of genius was in making so much of the glowing curvaceous mass of the hall. There is a tradition in modern architecture of the expressed auditorium as a curved, raked form, which dates back at least to Melnikov's Rusakov Factory Club in



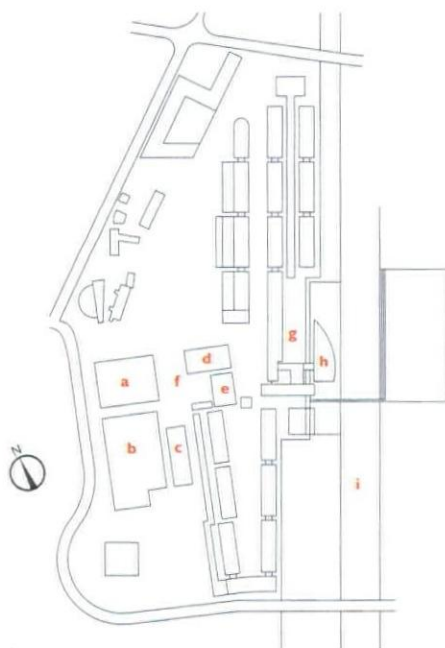


CONCERT HALL, ST PÖLTEN, AUSTRIA

ARCHITECT

KLAUS KADA

- a concert hall
- b Lower Austria state museum
- c hall
- d state library
- e state archive
- f Schubert-Platz
- g state parliament
- h Parliament Square
- i river Traisen



site plan

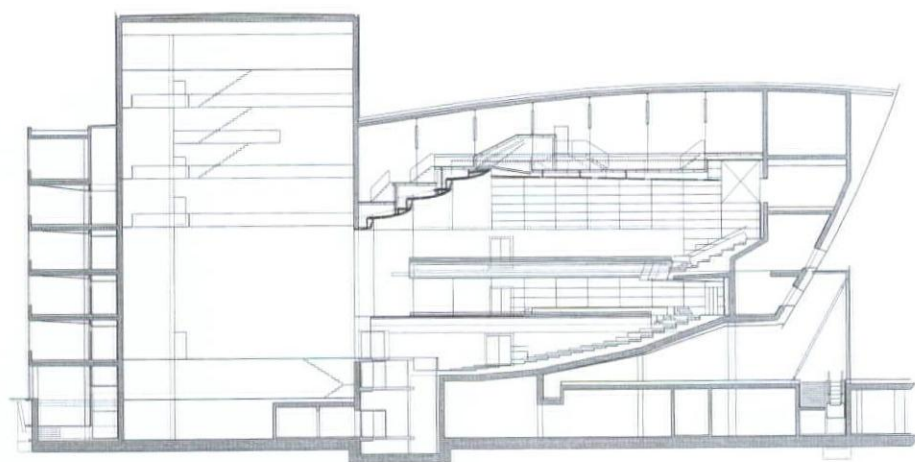
Moscow of 1927,² and which went through many variations with Aalto. The difficulty is that for good technical reasons such a hall usually has to be a dead mass without visual or aural connections to the outside world. When articulation of the exciting events within is precluded, what can the architect do to transmit some sense of them?

Kada creates a visual metaphor. He had only the dullest concrete box to start with, but has managed to give it an exciting curved shape just by adding faceted glass 'bodywork'.³ On the front behind and under the rake it follows approximately the section of the auditorium, but the curve on the sides is quite fictitious. The slight bulge exists entirely in the cladding, but it is enough to give the hall its convex surface – a double curvature. Importantly, the curved wall also contrasts with straight ones opposite. It makes the presence of the auditorium felt everywhere, even linking distant views across the town with close views as one enters. The greenish turquoise glass is a constant presence, sometimes reflective, sometimes glowing mysteriously from within. The material betrays a certain fragility, while the glow hints at the presence of a mystery beyond, and when nothing is happening the lights can be turned off.

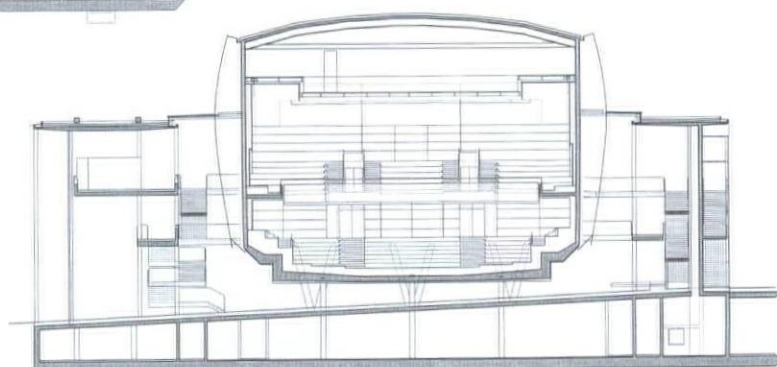
The glass cladding would not work nearly as well were it not separated from the solid roofs of the peripheral buildings by a continuous glazed rooflight; transparent glass spanning a void. This, more than anything else, produces the impression of a gap between the auditorium and the

rationally structured outer wings, a gap in which the stairs and landings of the foyer occur like so many secondarily added bridges and connections. The gap also stresses the continuity between the green glass cladding that is touched inside and that only seen outside. At night when the whole building is lit up, the space left around the auditorium seems to flow out into the square, leaving the body of the auditorium floating independent of the side pavilions.

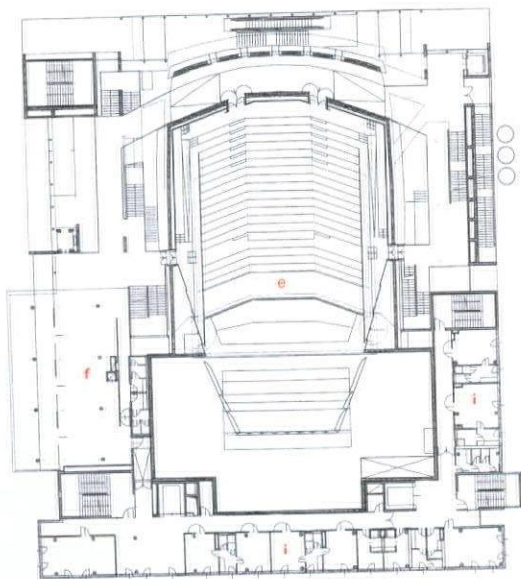
Just as the convexity of the hall plays against the orthogonal system dominating the building, so the sloping plane of the ground floor (which extends the sloping paving of Schubert-Platz), plays against the strong horizontals of the building's section. This important gesture helps relate the building to the site, but it also sets off a sequence of natural asymmetries which disengage the symmetrical body of the auditorium from its asymmetrical setting. The rising floor also cuts off the auditorium at an oblique angle in plan, contracting the space on the less important side. The auditorium underside descends almost to the floor, as in Rem Koolhaas's Netherlands Dance Theatre in the Hague (AR September 1988). This is a clever way of producing visual space where there is no headroom for occupation, and is dramatized with artificial light. Because of the asymmetry induced by the sloping floor, the ramps and staircases leading up to the landings and bridges above (and thence into the hall) have to set off in different ways, and have to be differently resolved. This is where Scharoun and Aalto



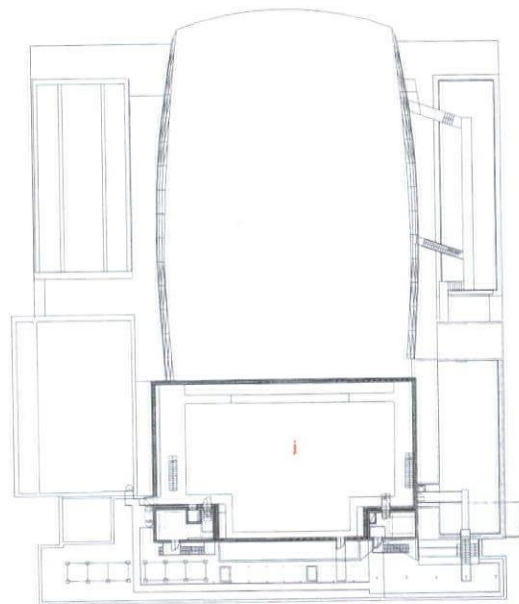
longitudinal section



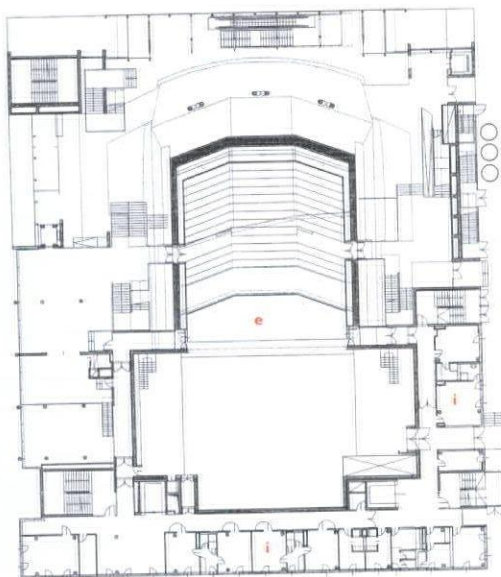
cross section



second floor plan

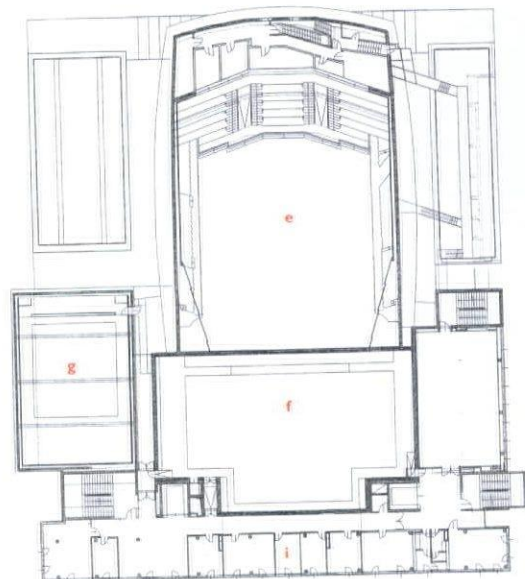


seventh floor plan

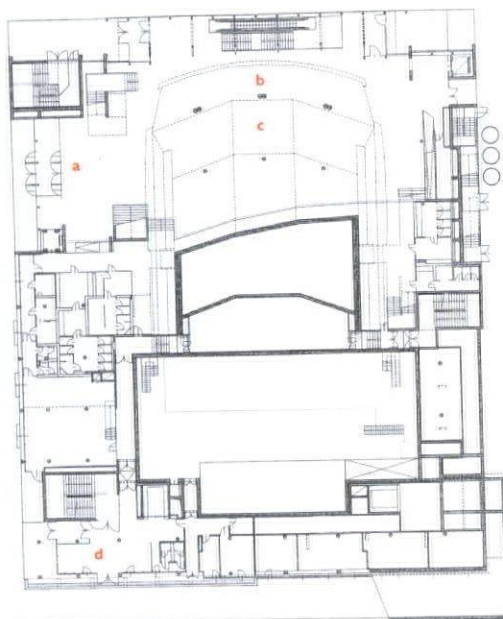


first floor plan

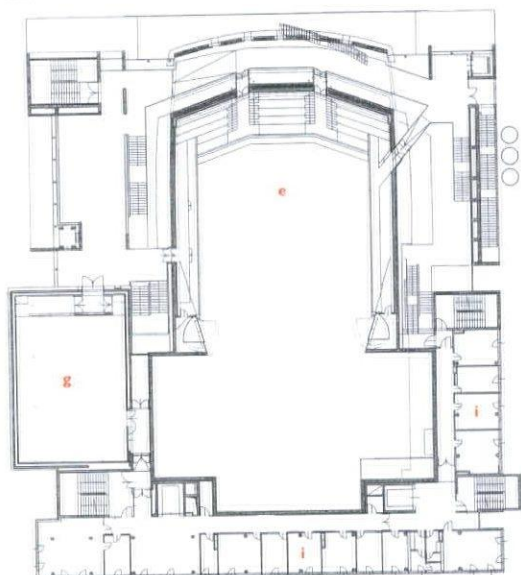
- a main entrance
- b main foyer
- c cloakroom
- d artists' entrance
- e main auditorium
- f northern foyer
- g Haydn theatre (small recital hall)
- h rehearsal stage
- i dressing rooms and offices
- j fly tower



fourth floor plan



ground floor plan (scale approx 1:2000)



third floor plan

CONCERT HALL, ST PÖLTEN, AUSTRIA

ARCHITECT

KLAUS KADA

9

Interior of the small recital hall.

10

The main auditorium is an elegantly linear shoebox (in the Viennese tradition of the *Musikverein*), capable of variable stage width, acoustics and lighting.

11

The translucent bulk of the auditorium dominates the foyer spaces. Glass panels are corner hung by a cable and strut system.

12

Part of the festive cascades of stairs and walkways in the foyer.

13

The glazed gap between peripheral volumes and the auditorium emphasizes the continuity of the delicate glass cladding.

14

The sloping underside of the auditorium almost descends to the floor; the undercroft is colonized as a cloakroom.



come to mind, for despite the orthogonal frame, Kada has managed to produce festive cascades of stairs and levels according to circulation sequence, as in the Philharmonie or the Essen Opera House (AR June 1989). The parade up and into the auditorium is an occasion to see and be seen, and visitors have ever-changing glimpses of one another across intersecting levels.

Kada's first major building and first appearance in the AR was the Glass Museum at Bärnbach near Graz (AR November 1989), which was notably appropriate to its purpose in two ways. First, it used glass not only for the usual windows, rooflights and general glazing, but also as relatively opaque cladding tiles, as a free-standing structural wall, and as floor. Second, it played particularly well on themes of relative enclosure, of interstitial spaces, of transparency and translucency, reflection and refraction. Ten years later, his new building seems to take all these themes further, stunning in its visual effect and in the awesome visual changes between day and night. As before, the hierarchy of structure is part of the story, with primary columns and slabs of concrete, secondary supports for the glazing in lightweight steel. The choice of glass types is also significant, particularly the innovative light green glass of the auditorium, applied in panels hung by the corners on a strut and cable system, every one a different size and shape calculated by a sophisticated computer programme. There are also many other types of glass: the lapped cobalt blue cladding of the small hall and the solar control glass of the foyer, for example, and the structural glass of the vertically cantilevered balustrades. The effect of these glasses is extended by other materials, including translucent plastic sheeting and expanded metal grilles. The combined

impression is a shimmering mirage which is surely only appropriate to the festive purpose of the hall. It also seems to echo the hymns to glass by Paul Scheerbart that inspired Bruno Taut's beautiful glass-pavilion of 1914, a first great attempt to exploit the wide possibilities of the material.¹ As with so much of our best *fin de siècle* architecture, possibilities opened up or only hinted at by the early Modern Movement at the beginning of this century are finally bearing fruit. PETER BLUNDELL JONES

¹ For these intentions see Kada's statement in the periodical *Glas Architektur und Technik* (Stuttgart) 5/97, pp26-32.

² See S. Frederick Starr, *Melnikov: Solo Architect in a Mass Society*, Princeton University Press 1978, pp134-139.

³ Kada uses the term *Karosserie*, which usually refers to the bodywork of a car.

⁴ 'Das bunte Glas zerstört den Hass' ('coloured glass destroys hatred') was the motto inscribed over the door of Taut's pavilion. Thanks to the detective work of scholars and an elaborate model built for an exhibition in Berlin, we can envisage the effect of the brilliant colours originally used in Taut's pavilion. Coloured photos are published in Manfred Speidel's *Bruno Taut: Natur und Fantasie 1880-1938*, Ernst und Sohn, 1995.

Architect

Klaus Kada, Graz

Project team

Klaus Kada, Ursula Märzendorfer, Erwin Matzer, Peter Rous, Willi Nakolnig, Heribert Altenbacher, Alexander Forsthofer, Wolfgang Wimmer, Frank Moritz, Robert Clerici, Ronald Schatz, Herbert Schwarzmann, Elisabeth Kopeinig, Claudia Schmidt, Michael Gattermeyer, Ellen Kianek, Roswitha Küng-Freiberger, Hubert Schuller

CAD

Peter Szammer

Project management

Nöplan

Glazing

Seele, Lorenzon

Bonded fixing system

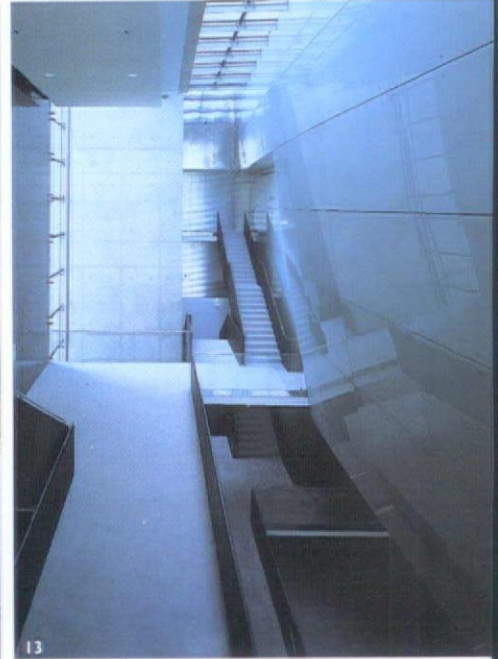
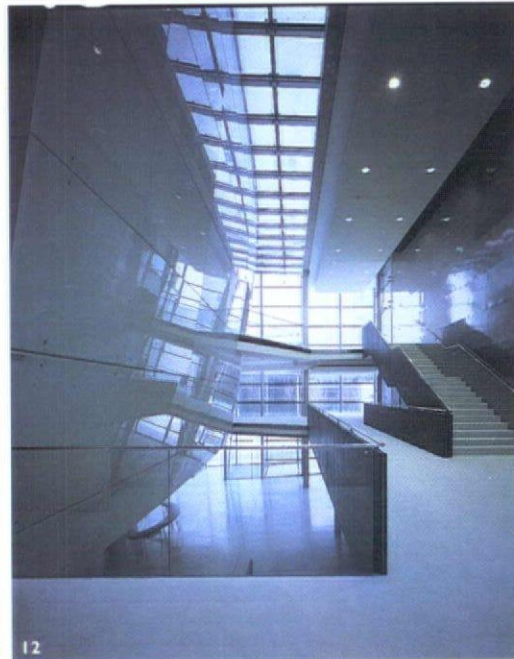
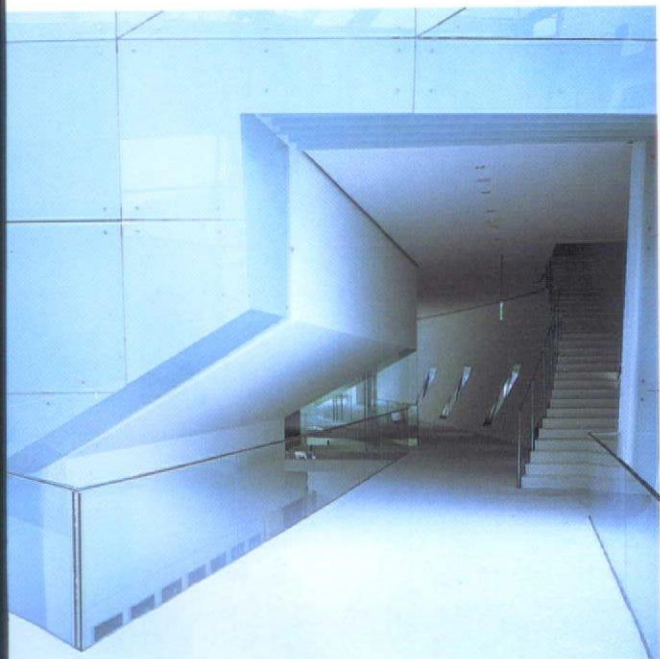
Dow Corning

Metalwork

Treiber

Photographs

All photographs by Angelo Kaunat except 4,5,9 and 10 which are by Gisela Erlacher and 3 by Rupert Steiner



CLEAR CUT

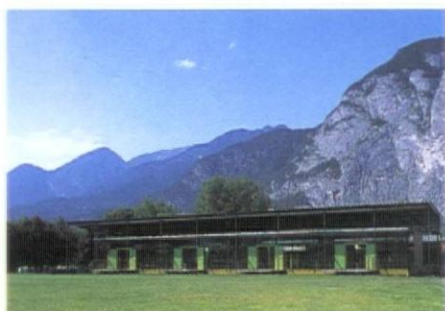
KINDERGARTEN, KEMATEN, AUSTRIA

ARCHITECT

ERICH GUTMORGETH

Framed by dramatic Tyrolean landscape, this little glass extension to a kindergarten embodies a finely honed material and tectonic refinement.

- 1 The little kindergarten appears as a horizontal sliver in the landscape.
- 2 North elevation overlooks a courtyard formed by the existing building.
- 3 A glazed link joins the existing building with the new part.
- 4 The ephemeral glass box is framed by the Stubai Alps.
- 5 Classrooms open out on to cantilevered timber decks.
- 6 Detail of external wall and plywood shelving.



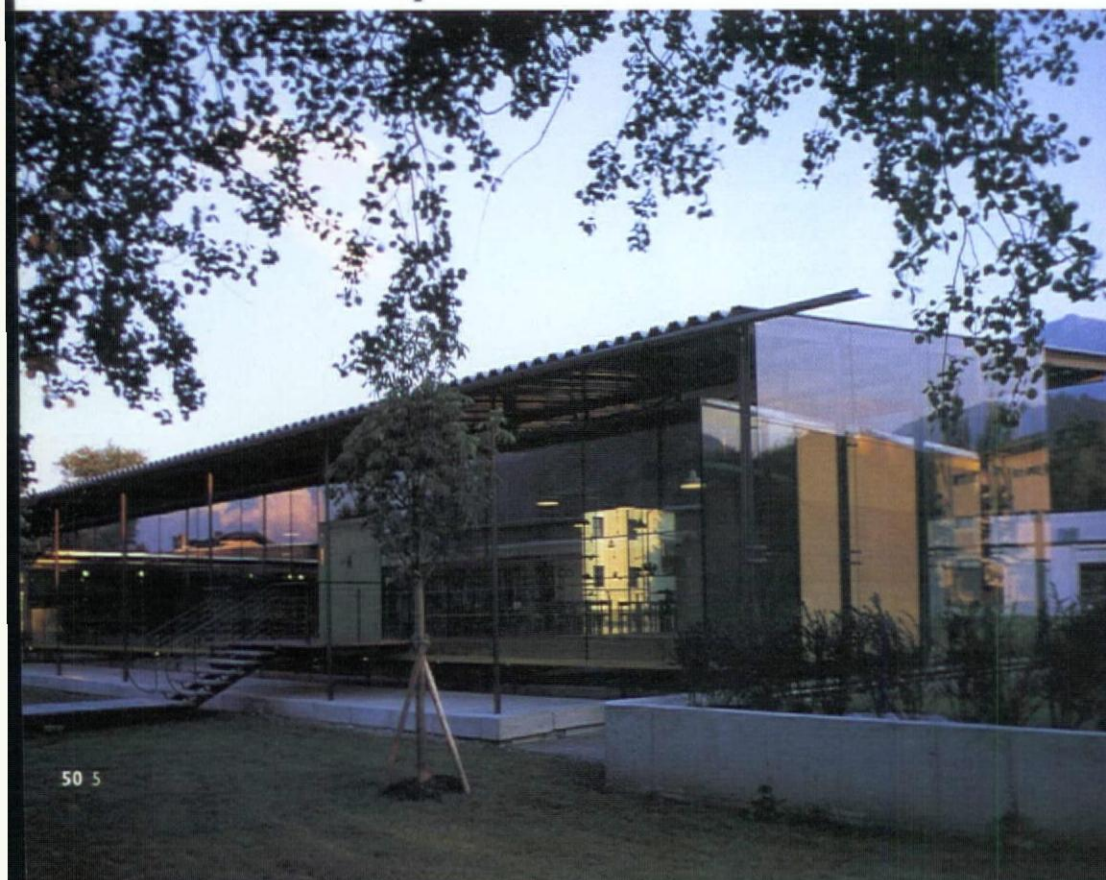
1

Kematen is a scattered settlement on the edge of Innsbruck, spread out on flat fields between the towering Stubai Alps and the Inn River. Originally built in the 1960s, the town's kindergarten needed renovating to provide more space for educational and social activities, and the young Innsbruck-based architect Erich Gutmorgeth was commissioned to design a new addition. Gutmorgeth elected to reclad the existing building with a skin of lapped timber planking and, to the south of the old kindergarten, he has placed a rectangular glass extension of surprising refinement and transparency. Enclosing the third side of an internal courtyard, the horizontal, jewel-like box sits lightly on the ground, its sheer glass walls filtering sunlight and views of the surrounding alpine landscape. The composition is unified by an oversailing roof of thin, corrugated metal.

The building consists of a slightly raised ground floor housing a quartet of classrooms (two group rooms and two playrooms) and a basement that provides space for evening social activities such as youth clubs, so connecting it with the town's larger communal life. Classrooms are linked by a circulation spine (containing cloakrooms and lavatories) and divided by sliding glass partition walls, enhancing the sense of transparency and spatial interpenetration. Each classroom opens out on to a timber deck, cantilevered out from the steel and concrete structure. Partially shaded by the oversailing roof, the decks act as informal, outdoor extensions to the classrooms.

Four sets of tall double doors painted a soft, grassy green punctuate the apparently weightless main south elevation. Clear glass panels are corner fixed to the slim steel structure

2



3





4



5



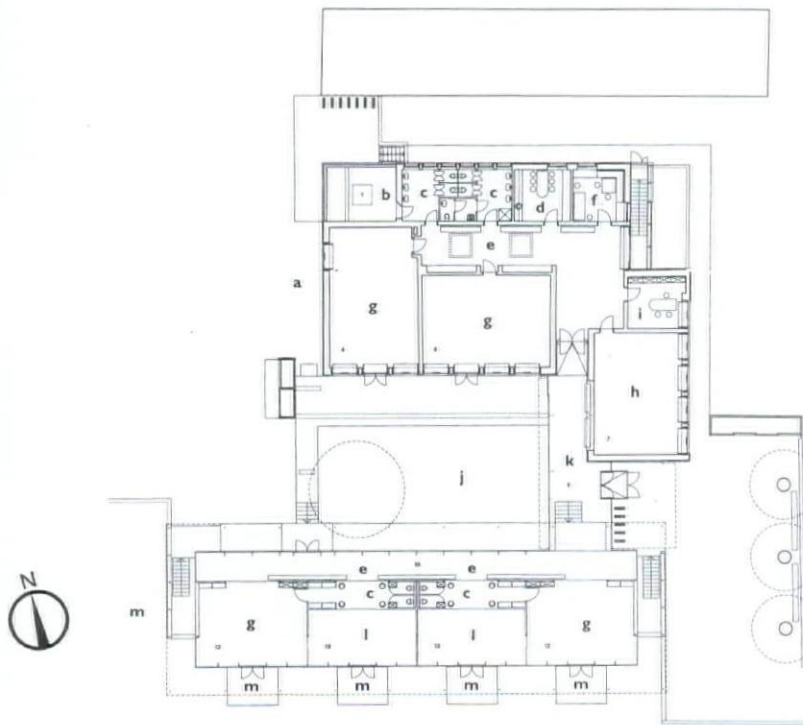
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KINDERGARTEN, KEMATEN, AUSTRIA

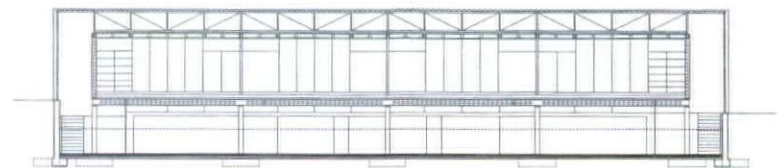
ARCHITECT

ERICH GUTMORGETH

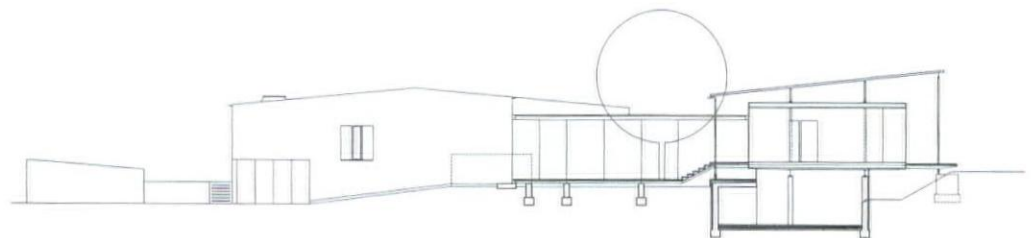
- a existing building
- b storeroom
- c wcs
- d kitchen
- e cloakroom
- f staff room
- g group room
- h activities room
- i office
- j courtyard
- k link
- l playrooms
- m external decks
- n new building



ground floor plan of new and existing buildings (scale approx 1:500)



longitudinal section



cross section

7
Part of the service core and circulation spine. Internal glass partition walls heighten the sense of transparency.



with the minimum of fuss; throughout the building, nuances of construction are crisply and lucidly expressed. Glare and heat gain are counteracted by blinds attached to the edge of the wide, overhanging roof. Serving both as a shelter and canopy, the almost imperceptibly sloping roof is supported on a series of slender steel columns.

The heightened transparency brings the children and their teachers closer to nature and the surrounding greenery. Seen from across the fields, the occupants are like colourful fishes moving around a glass bowl. Remarkably, the children manipulate the sliding glazed doors with practised ease and the transparent walls are transformed in a child's imagination into generous,

accommodating surfaces that can be decorated with finger paint. Simple sturdy furniture and plywood shelving add functional elegance, without overtones of designer fastidiousness. Finely made and informed by material and social concerns, this modest, modern kindergarten embodies a refreshing clarity of purpose in both conception and execution.

CLAUDIA KUGEL

Architect

Erich Gutmorgeth, Innsbruck

Project team

Erich Gutmorgeth, Helmut Seelos

Structural engineers

Christian Humer, Gottfried Brunner

Photographs

Craig Kuhner

FASHION SENSE

SCHOOL OF FASHION AND GRAPHIC DESIGN, UTRECHT,
THE NETHERLANDS
ARCHITECT
ERICK VAN EGERAAT

The delicate glass epidermis envelops the low slung form of the new college block. Van Egeraat's intervention at a relatively late stage in the project is given tangible expression.

Wrapped in a sheer glass screen, this new building for a technical college in Utrecht by Erick van Egeraat is the outcome of an unusual, yet ultimately fertile, gestation.

The School of Fashion and Graphic Design is the latest addition to Utrecht's technical college. On a sprawling, suburban campus the new building comprises three low-rise horizontal blocks cranked around a courtyard. The largest block contains cellular classrooms for fashion and graphic design, linked to an interstitial wing housing a canteen, auditorium and facilities for a Montessori School. A third, smaller part containing classrooms and a gymnasium meets the ancillary link at an obtuse angle. Spatial organization is apparently unremarkable, based on cellular rooms and wide central corridors which double as breakout and social areas. Yet the project had an unconventional gestation, owing to the Dutch practice of subjecting major new building proposals for independent scrutiny by panels of architects

and designers. Although the panels act in an advisory capacity, their recommendations are generally acted upon by local councils. In this case, the original proposals (by Utrecht's own building department) for the new School were rejected by the local review panel and the head of the building department called on Erick van Egeraat to devise a more acceptable architectural solution. However, work on the project was far advanced – the concrete foundations were already in place – so van Egeraat had to accept the constraints of the original three-storey building form. Despite this stricture, and a frugal budget, he has responded to the apparently unpromising programme with characteristic invention.

Van Egeraat's response was to build the school largely as initially proposed, and then sheath it in a delicately transparent external skin. This audacious yet economic gesture affirms the



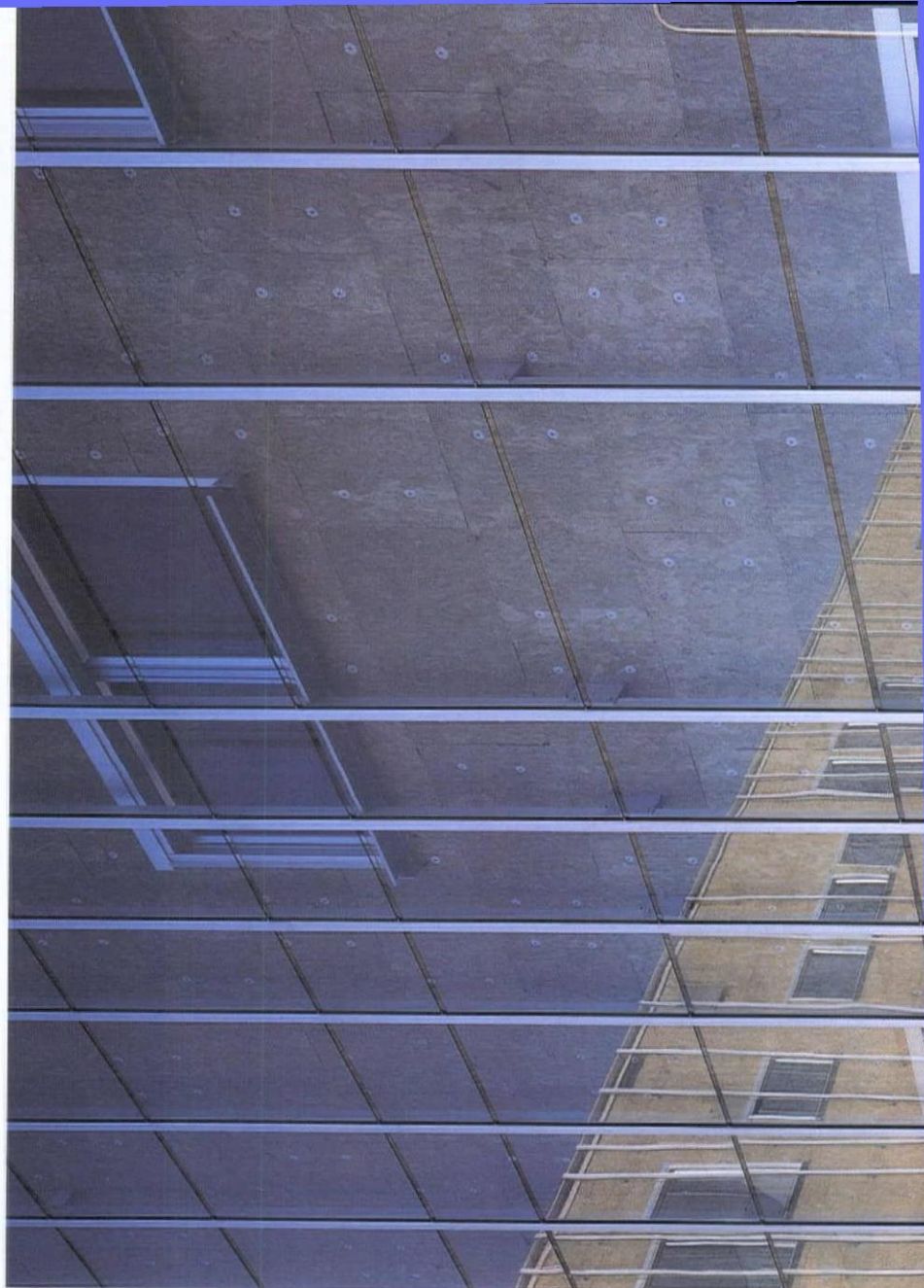
**SCHOOL OF FASHION AND GRAPHIC DESIGN, UTRECHT,
THE NETHERLANDS**
ARCHITECT
ERICK VAN EGERAAT

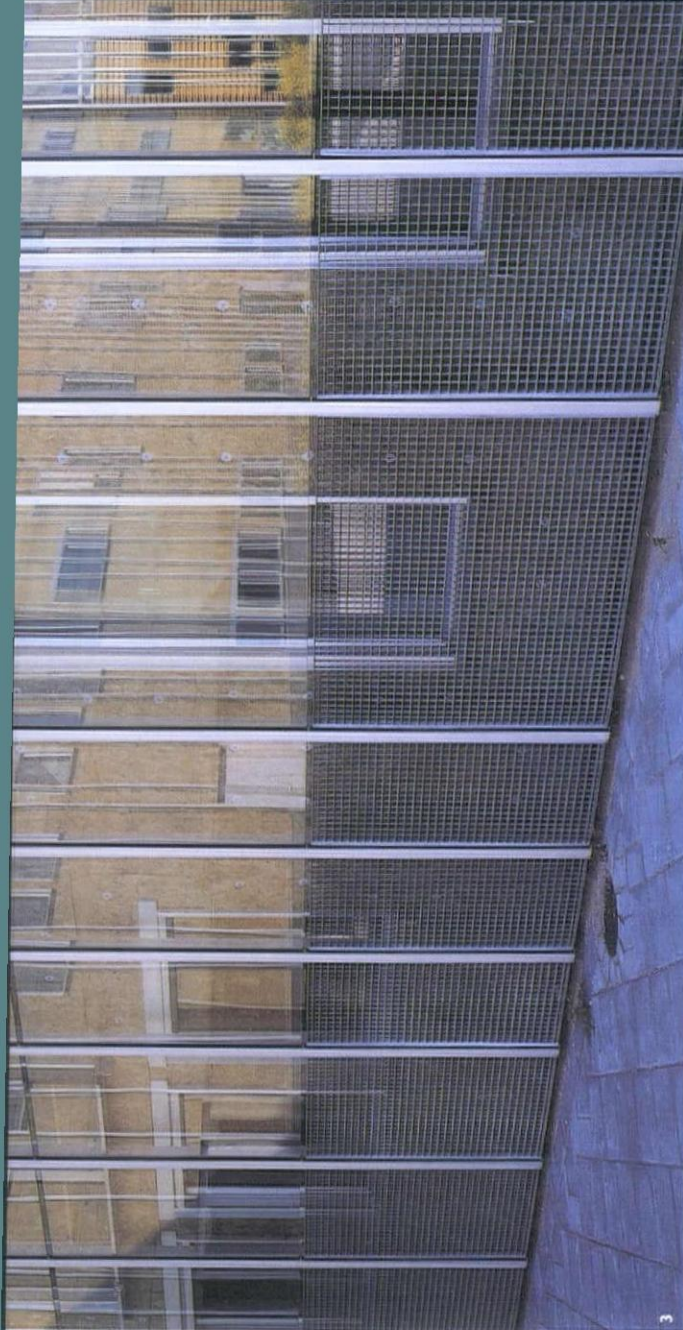
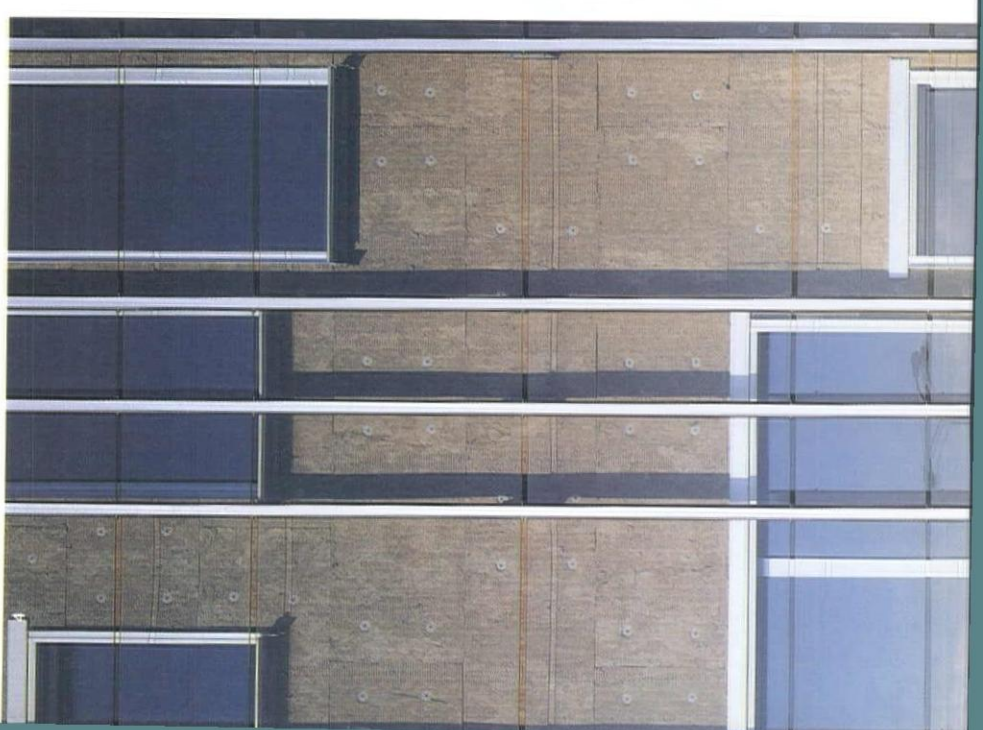
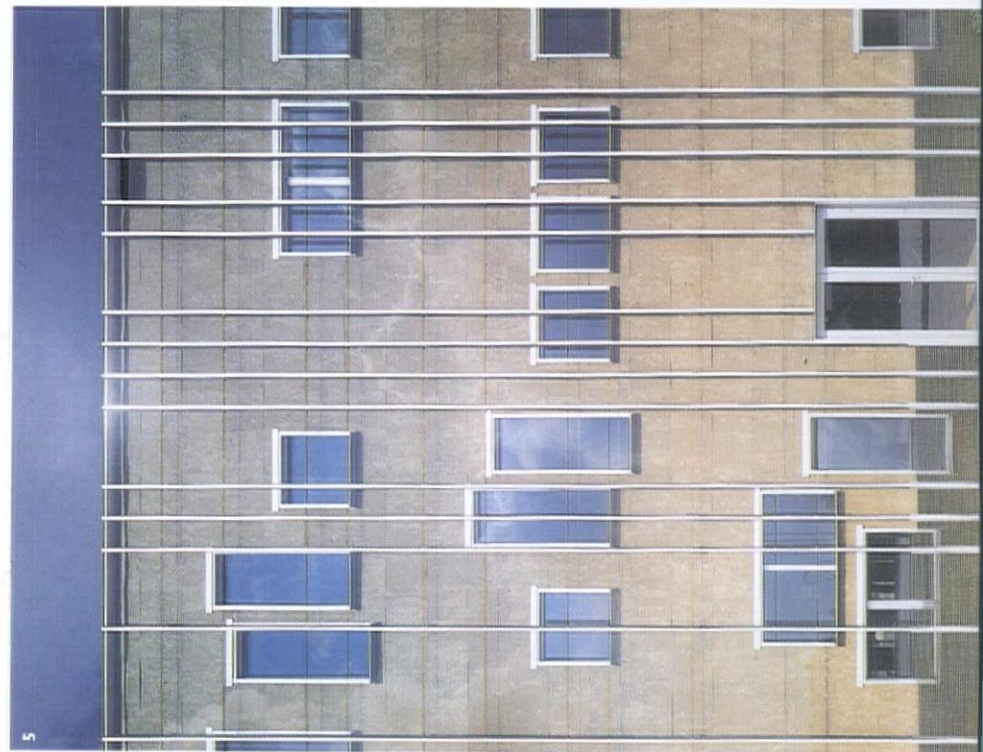
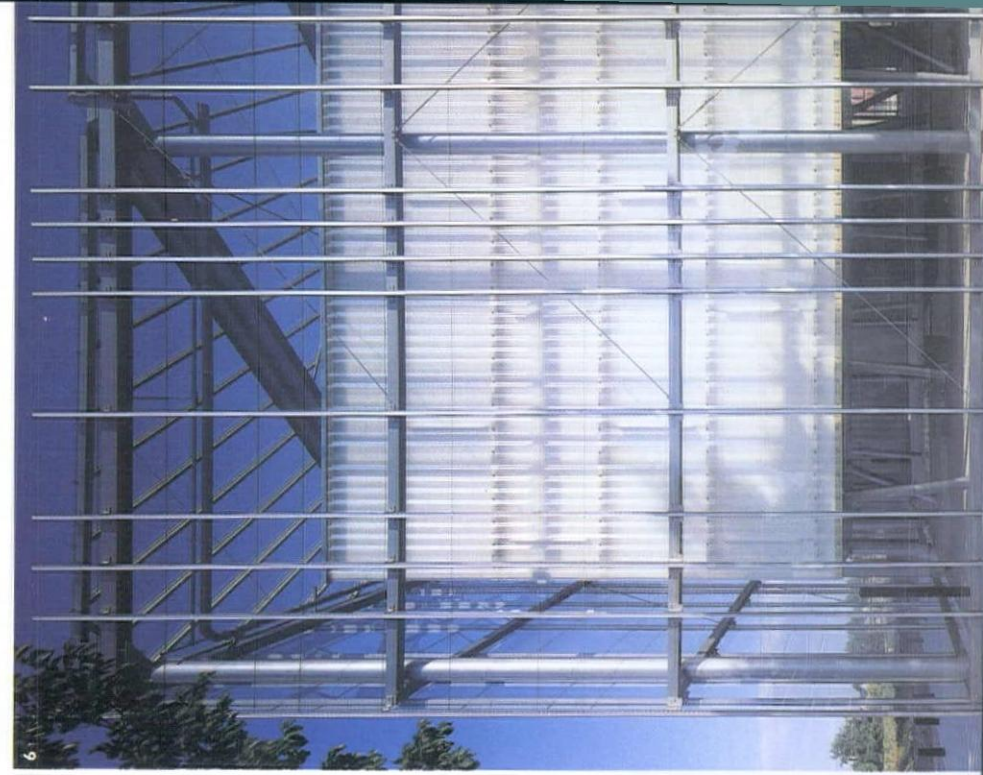
- 2 The transparent glass screen reveals the building's constructional innards.
- 3 The play of reflection adds to the surreal quality of the elevations.
- 4 Detail of the glass screen, held in place by aluminium mullions.
- 5 The staccato rhythm of windows articulates the facades.
- 6 At the north-east corner, the glass wall becomes a free-standing screen, wrapping round the translucent volume of the auditorium.

building's independence from the original design and transforms the dull college blocks into objects of fascination and intrigue. Van Egeraat compares the glass envelope to a gauze veil, simultaneously concealing and revealing; a metaphor for the tantalizing vicissitudes of fashion. Positioned 150mm from the face of the building, the aluminium-framed glass wall is a uniform 12m high. Comprising a single layer of 8mm thick clear glass, it deliberately overshoots the two-storey volume of the Montessori block, further distinguishing van Egeraat's intervention from the original design. Behind the transparent screen, the contrasting textures of the building's innards – concrete structure, plywood sheathing and mustard coloured insulation – are clearly visible. These secondary elevations are animated by the syncopated rhythm of random window

openings, perforating the doubly functional surfaces like a computerized punch card. At eaves level, the gap between the glazed epidermis and the inner skin is sealed by aluminium flashing; horizontal slits between the variably sized glass panels help to ventilate the cavity. Where the external wall meets the ground, glass gives way to protective, geometric steel grills.

Such a wilful exposé of the mundanities of construction is undoubtedly disarming, yet also strangely compelling; moreover it aptly evokes the evolution of the building. Van Egeraat's glass screen and playful elevational treatments act as a determinedly piquant foil to the essentially stodgy building form. The outcome is an invigorating tension, similar to the ING Bank in Budapest, where an organic addition extrudes seductively out of an Austro-Hungarian palazzo (AR July 1995).





site plan

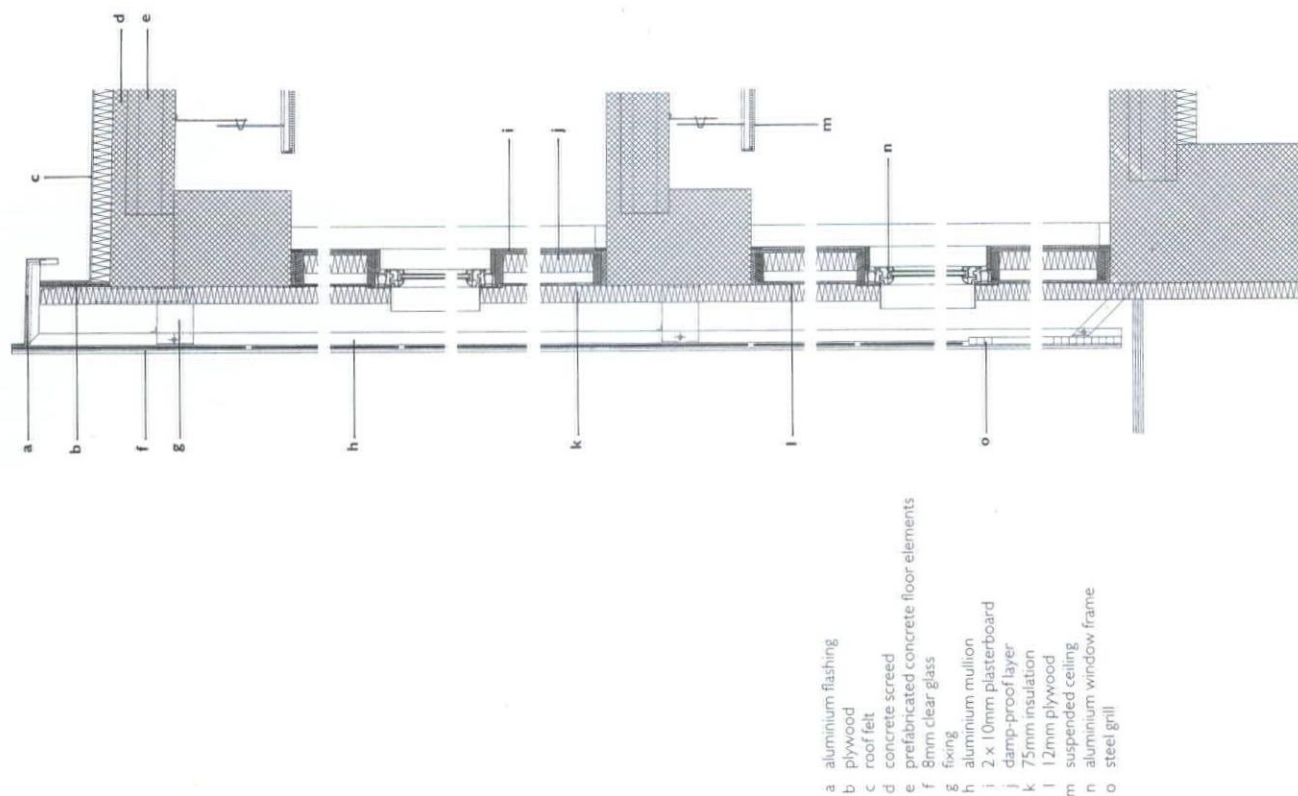
- a School of Fashion and Graphic Design
- b proposed college buildings
- c proposed housing
- d existing buildings

SCHOOL OF FASHION AND GRAPHIC DESIGN, UTRECHT,

THE NETHERLANDS

ARCHITECT

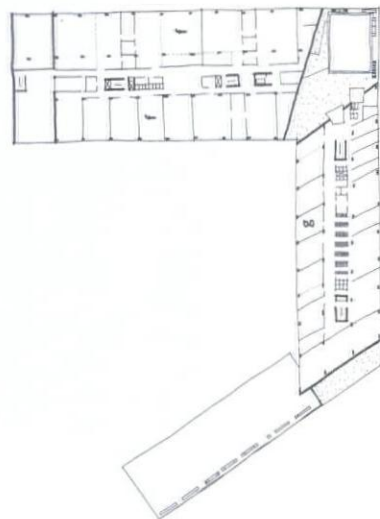
ERICK VAN EGERAAT



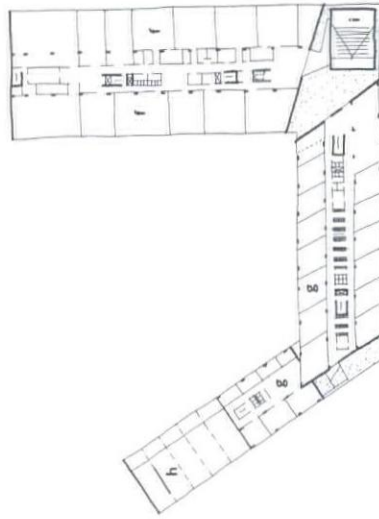
detailed section through external wall

- 7 The luminous entrance hall, dominated by the cuboid volume of the auditorium, hoisted aloft on spindly, angular pilotis.
- 8 Glazed bridges connect the theatre with the classrooms.
- 9 Inside the theatre.

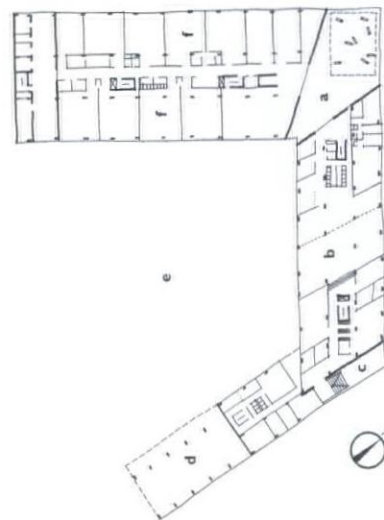
- a atrium
b canteen
c entrance to Montessori school
d bicycle shed
e courtyard
f classrooms (fashion and graphics)
g Montessori school
h gym
i auditorium



second floor plan



first floor plan



ground floor plan (scale approx 1:1250)

The only part of the complex where van Egeraat had a relatively free hand was at the north-east corner, where the orthogonal plan is fractured to create a luminous entrance atrium, which also functions as an exhibition space. The triple-height volume is enclosed by the glass screen wall and glazed roof. Within the atrium is a small auditorium, clad in translucent, ribbed fibreglass panels. Elevated on a random grid of spindly, angular pilotis, the cuboid volume of the auditorium is linked to classrooms and ancillary spaces by glazed bridges. Its gently angular underside is clad in smooth plywood sheets. The complex layering and fracturing of the semi-public atrium and theatre spaces contrasts with the orthogonal ranks of classrooms. Light diffuses through the theatre's translucent cladding,

infusing the surrounding atrium with a surreal, radioactive glow; a further variation on the continually surprising play of light and materials. The luminous cube is also an arresting, enticing presence in the featureless suburban landscape. Although fascinating to speculate what van Egeraat might have made of the commission had he been involved at the outset, his response to an apparently limited programme has proved just as enthralling.

CONNIE VAN CLEEF

Architect
Erick van Egeraat Associated Architects,
Rotterdam

Project team
Erick van Egeraat, Maartje Lammeren,
Ard Buijsen, Boris Zeisser

Structural engineer
Strukton Engineering

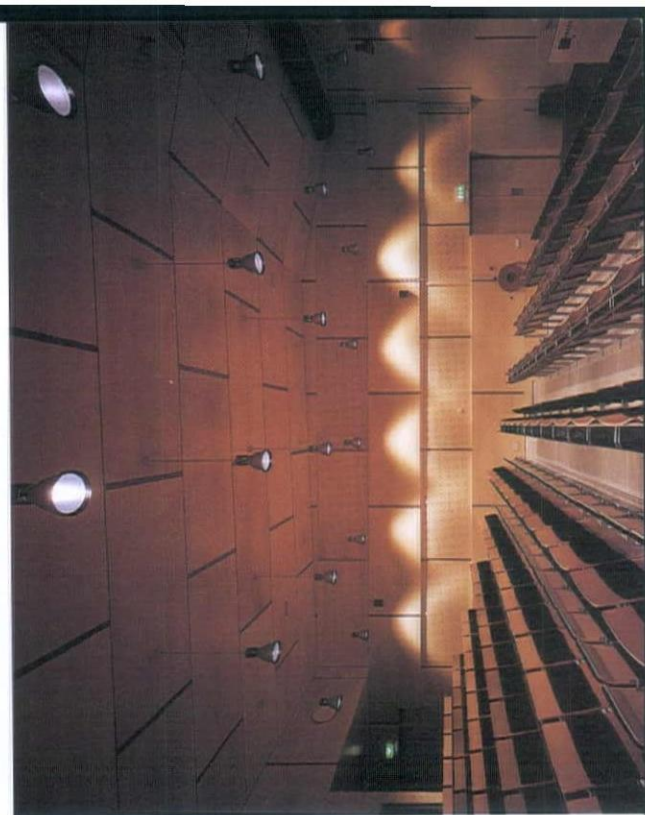
Mechanical and electrical engineer
Sweepers & de Bruijn

Acoustic consultants
Lichtveld Buis & Partners

Photographs
Christian Richters



8



9

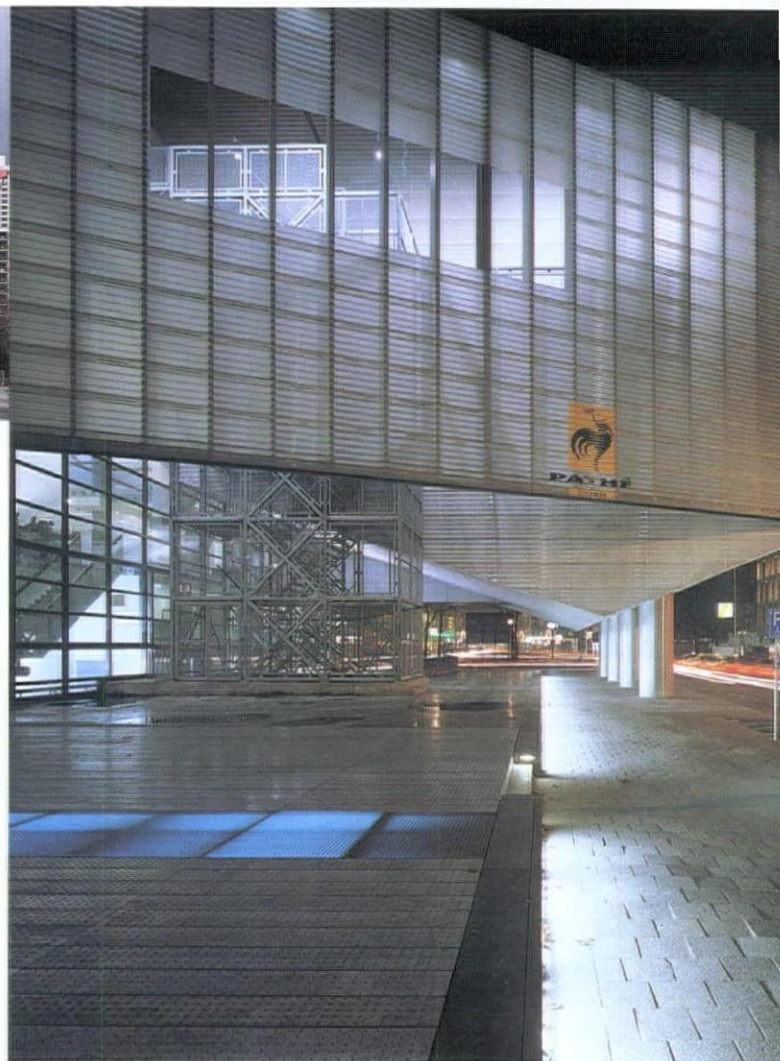


Conceived as part of a plan to reconfigure an existing square in Rotterdam, Koen van Velsen's new cinema reinterprets a traditional introverted typology as a dazzling celebration of material and visual lightness.

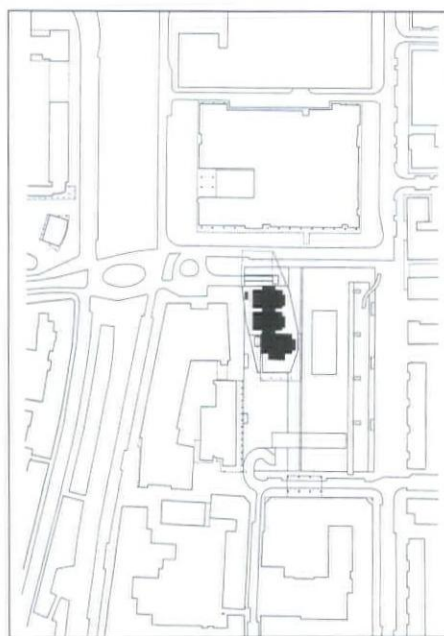
LIGHT BOX

Formerly a run-down and depressing tract of urban space in the heart of Rotterdam, the Schouwburgplein is now an imaginatively revitalized city square (AR January 1998). Masterplanned by landscape architects West 8, the redevelopment programme encompasses new street furniture, landscaping and light sculptures, together with a new multiscreen cinema designed by Koen van Velsen. On the west edge of the square, the new building manifests the resourceful spirit of the Schouwburgplein's reinvention. It also provides a new social and cultural focus for the area, which, historically, was the centre of Rotterdam's entertainment district.

The cinema is conceived as a free-standing box with the corners bevelled off, but its blind bulk has been transformed into an ethereal, translucent volume of great lightness and surprising delicacy by van Velsen's ingenious handling of the elevations. Wrapped around the great flanks of the exterior is a lightweight skin of corrugated opalescent polycarbonate sheets. At night, the entire building lights up like a huge, free-form Japanese paper lantern, glowing with a softly luminous intensity. Van Velsen's contemporary reinterpretation of a fundamentally introverted building type explores concepts of visual and material lightness, far removed from the historical notion of the cinema as a hulking, opaque bunker. Yet the unorthodox choice of

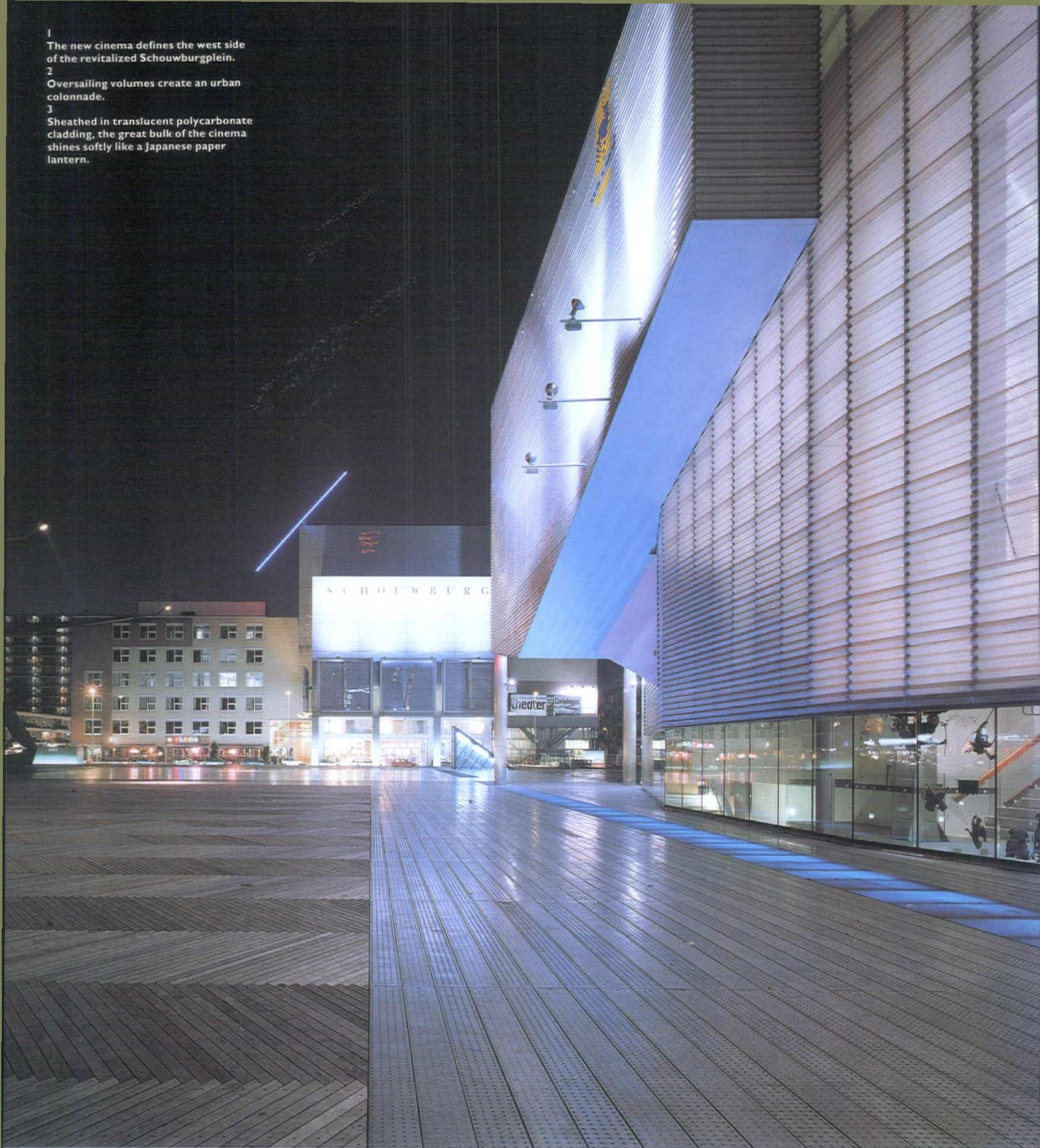


2



site plan

- 1 The new cinema defines the west side of the revitalized Schouwburgplein.
- 2 Oversailing volumes create an urban colonnade.
- 3 Sheathed in translucent polycarbonate cladding, the great bulk of the cinema shines softly like a Japanese paper lantern.





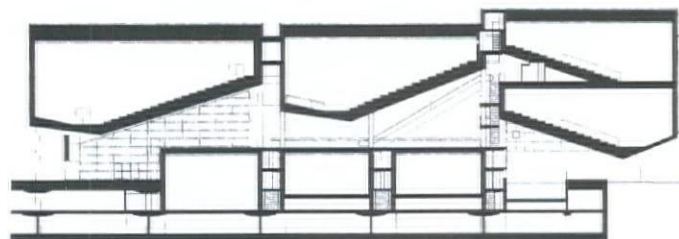
4



5

4, 5
The translucent cladding stops short of the ground, so the building appears to hover on the edge of the square.

6
The luminous volume of the foyer. White plastered walls and a polished metal floor heighten the sense of lightness.

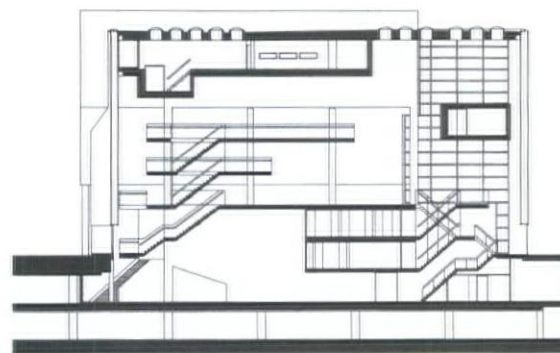


longitudinal section

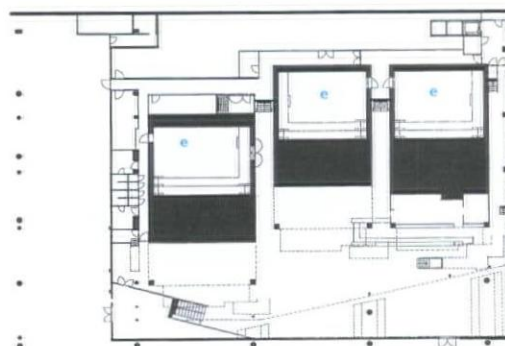
cladding was as much dictated by function as appearance; the cinema sits on top of an underground car park, so the intention was to minimize the imposed load of the new building. The milky-white cladding stops short of the ground, so that the cinema appears to hover lightly on the edge of the Schouwburgplein, fluidly connecting with the urban landscape and anchoring the composition of the square.

The new building houses seven cinemas of varying sizes. The largest seats 700 people and the smallest 200; overall capacity is 2700. Volumes are arranged around a pivotal promenading and foyer space that extends over several storeys. Visitors enter a busy entrance and box office hall at ground level, and then ascend a sweeping, red-carpeted staircase to the *piano nobile* foyer spaces. From here, individual cinemas are reached by a network of stairs, escalators and walkways that criss-cross the foyer. Bold contemporary graphics and signage identify each cinema entrance.

Van Velsen treats the orthogonal cinemas as a series of interlocking, sculptural blocks, exploiting the different-sized volumes to create a kind of architectural and spatial nougat. Three of the smaller cinemas are half-buried below ground (their roofs form the *piano nobile* floor of the foyer space), while the four larger ones are hoisted above the foyer, their sloping undersides creating a spectacular, undulating ceiling. A key technical requirement of the



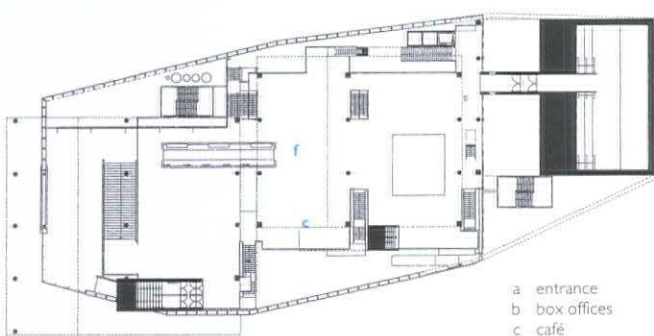
cross section



lower ground floor plan

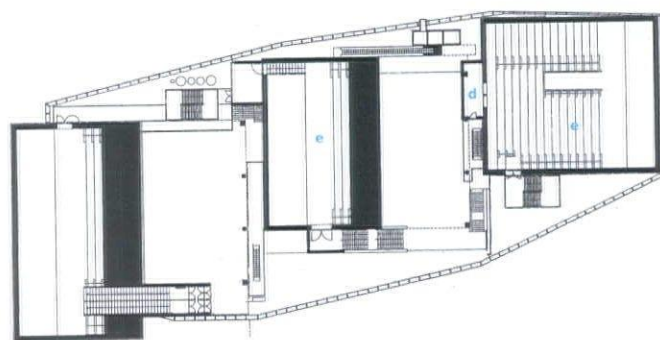


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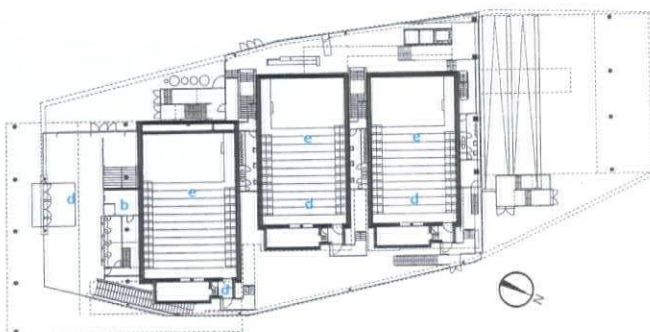


first floor plan

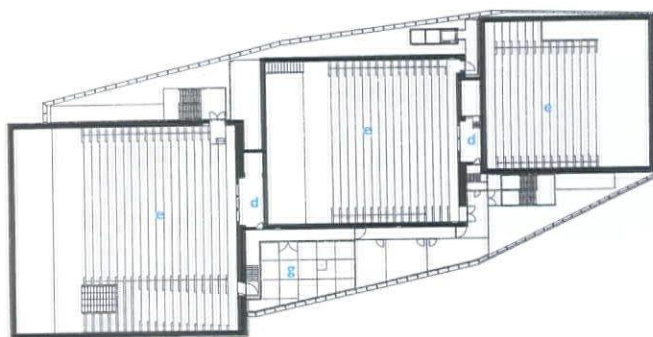
- a entrance
- b box offices
- c café
- d projection suites
- e cinemas
- f foyer
- g roof terrace



third floor plan



ground floor plan (scale approx 1:1000)



second floor plan

CINEMA, ROTTERDAM, THE NETHERLANDS

ARCHITECT

KOEN VAN VELSEN



7

programme was a high level of acoustic separation between the individual cinemas. This is achieved by means of wall cladding comprising several layers of plasterboard supported by a secondary steel structure. The secondary frame is connected to the main steel structure by means of rubber blocks to prevent acoustic leakage.

Equipped with seating and cafés, the elevated foyer spaces are open to the public at all times of day. Access is not conditional on buying a cinema ticket, so the foyers act as a convivial extension to the square, creating a framework for the unpredictable patterns and flows of urban life. White plaster walls, highly polished metal floors and fin-like glass balustrades, heighten the qualities of lightness and reflection induced by the translucent walls, through which also filter evanescent, enigmatic views of the city.

CATHERINE SLESSOR

7 With its cafés and seating, the foyer space is conceived as an extension of the square. Access does not depend on buying a cinema ticket.

8 The sloping underside of the cinema volumes creates a dramatic, undulating ceiling in the foyer space.

Architect

Koen van Velsen, Hilversum,
The Netherlands

Project team

Koen van Velsen, Lars Zwart, Gero Rutten,
Marcel Steeghs, Okko van der Kam

Structural engineer

D3BN

Mechanical engineer

Technical Management

Acoustic consultant

Van Dorsser

Photographs

Christian Richters



8

APARTMENT BLOCK, PARIS, FRANCE

ARCHITECT

FRANCIS SOLER

GRAPHIC DETAILS

A new housing block near the Bibliothèque Nationale in Paris plays a surreal variation on the theme of transparency through colourful applied imagery.

The housing block by Francis Soler flanking the Bibliothèque Nationale de France provides a colourful foil for the more muted play on transparency presented by the facades of Dominique Perrault's library towers (AR July 1995). Built as part of the new residential district now taking shape to a masterplan by Roland Schweitzer on former railway land to the east and west of the library, Soler's block contains subsidized rental housing for middle-income tenants in the form of 93 flats, over a crèche and underground car parking. It is immediately east of Perrault's podium, between a new access road (Rue Emile Durkheim) and a soon-to-be landscaped quadrangular neighbourhood garden (the future Jardin Georges Duhamel).¹

In response to the tripartite line-up of L-shaped blocks envisaged by the masterplan, Soler has devised a quirky double return flick at the north-east corner of a continuous linear structural carcass. The block's classic simplicity is designed to cut construction costs. Floor slabs, perimeter columns and central spine (where vertical service runs, common stairs and lifts are located) were cast in-situ; the resin-based floor sealant was laid, one storey at a time, before the erection of dry-mounted partitions and party walls. The volumetric separation sought by the masterplan is evoked by



¹ The elevations of the new housing block are adorned with figurative images abstracted from a Renaissance fresco at the Palazzo del Te.

deeply recessed loggias aligned on communal lobbies, where clear-glazed partitions are intended to give through views; though in practice, some of this transparency has been compromised by a motley crop of visual barriers improvised by tenants to screen off the loggias, which are let as private spaces.

Soler's long-standing personal preoccupation with the fully glazed facade² led him to design the fenestration of the flats in the form of a parallel layer of floor-to-ceiling sliding windows separated by a ventilated air gap. Equipped with retractable privacy screens in the air gap, manually operated external sun blinds and narrow projecting balconies (which provide access for window cleaning access and also double as *brises-soleil*), this device achieves the requisite level of thermal insulation for public housing as well as providing sound insulation.

To emphasize the dichotomy between transparency and visual privacy, Soler has elected to apply repetitive figurative images resembling outsize translucent colour transfers to the glass of the outer layer of sliding windows, forming a series of framed kinetic sequences. Each storey has its own paired set of motifs, based on selected details from Giulio Romano's *Feast of the Gods* fresco at the Palazzo del Te in Mantua, reassembled in the manner of Roman Cieslewicz – a dual provenance intended to signal a (fairly) modern reinterpretation of the past.

The wisdom of so adorning the glass of subsidized rental housing has been questioned, very rightly, for living at close quarters with such large omnipresent figurative images at every window. A recurring chunk of chubby cherub could prove slightly oppressive, even for the middle-income tenants

the flats are destined to house. But, as Soler maintains, his building is designed to allow for future conversion (to create larger flats or to provide up to 80m x 14m per storey for other purposes), so it would be reasonable to suppose the decorated glass might also be replaced – with clear, differently patterned, or opaque glass, perhaps even solid panels – to meet changing requirements.

Seen in the context of the redevelopment programme, Soler's block is refreshingly low-key. Eschewing the usual gamut of overstated formalist gesturing produced by the competition system, he has contrived to simplify the masterplan while also providing welcome relief from the bland monumentality of Perrault's Bibliothèque. More importantly, perhaps, he has shown that the ubiquitous plastic-framed window is not the only form of fenestration possible for public housing programmes in Paris.

CHARLOTTE ELLIS

1 Cf *Techniques et Architecture*, March 1994. Franck Hammoutène's winning scheme for the corresponding site on the west side of the library has not yet been built.

2 Soler's previous explorations of the fully-glazed facade include his winning scheme for the ill-fated Quai Branly international conference centre (AR June 1990) and his winning but unbuilt competition for private housing at the Parc de Passy 1988, with Bertrand Bonnier.

Architect

Francis Soler

Project team

Francis Soler, Jérôme Lauth, Vincent Jacob

Structural engineer

Khephren

Quantity surveyor

Hexages

Facade engineer

YRM

Facade graphics

Francis Soler, Olivier Fontvieille,

David Trottin

Interior design

Frédéric Druot

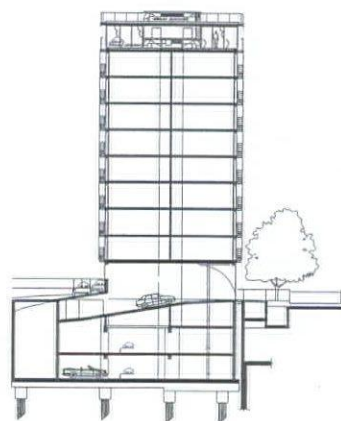
Photographs

Nicolas Borel

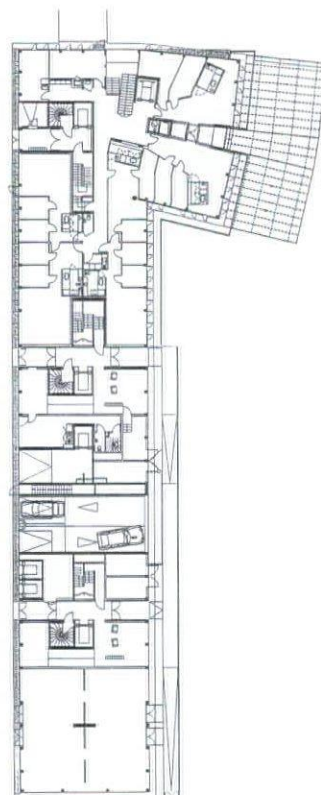
APARTMENT BLOCK, PARIS, FRANCE

ARCHITECT

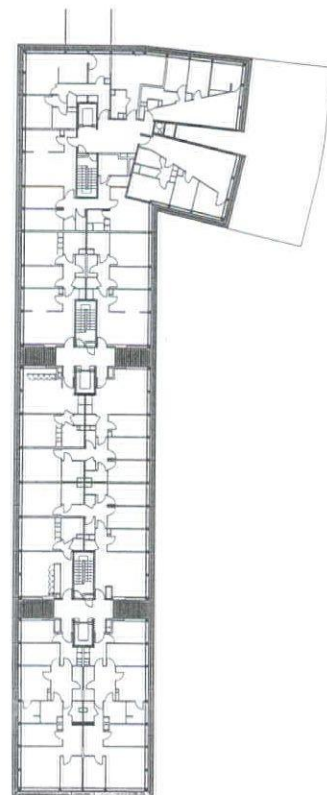
FRANCIS SOLER



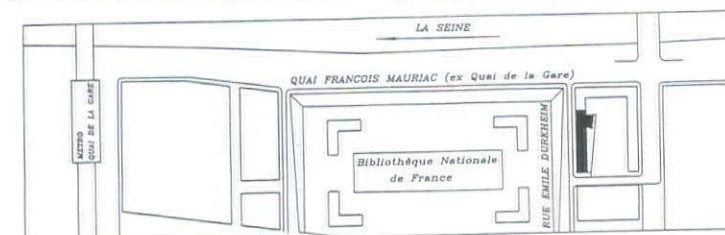
cross section



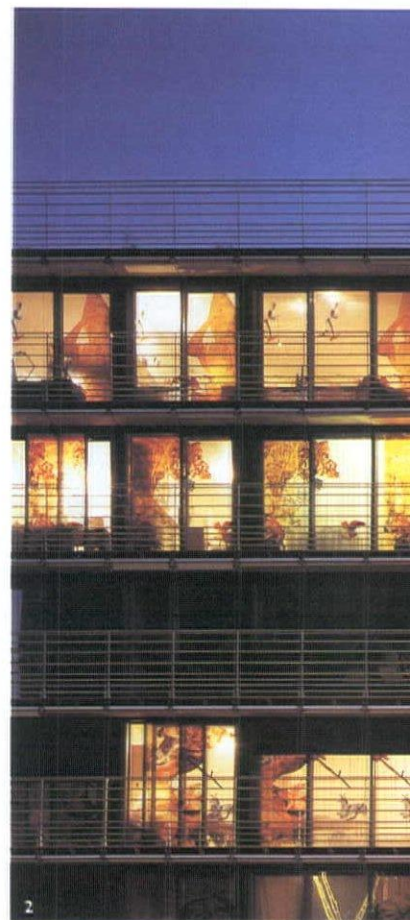
ground floor plan (scale approx 1:1000)



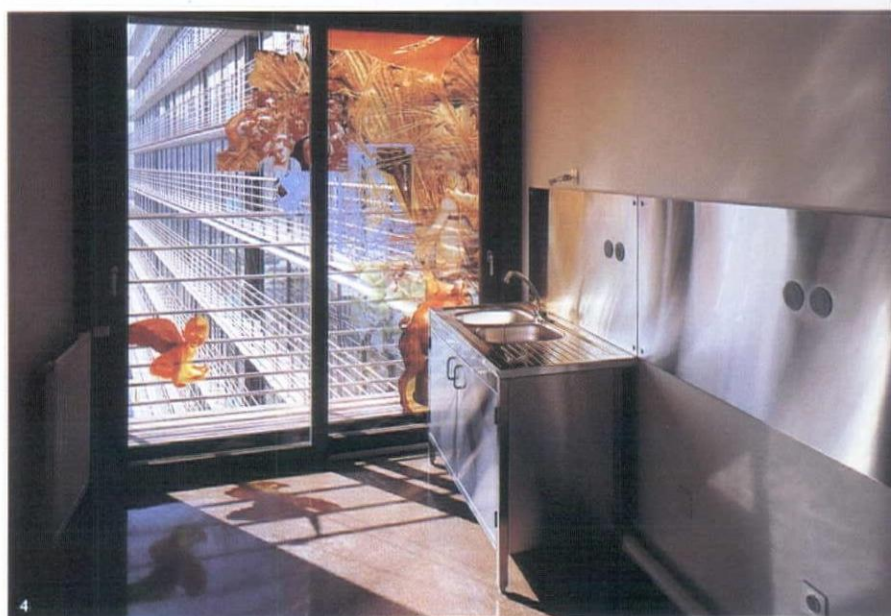
typical upper level plan



site plan



2



Typical interiors. Each storey has its own paired set of fantastic motifs, though living close to such dominant imagery might not appeal to everyone.

JAPANESE PRESENCE

CULTURAL CENTRE, PARIS, FRANCE

ARCHITECT

ARMSTRONG ASSOCIATES

Enclosed by a curved transparent screen wall, the Maison de la Culture du Japon in Paris is a civilized setting for performance, exhibitions and study.



site plan

Conceived as a symbol of Franco-Japanese co-operation and funded through the Japan Foundation, the Maison de la Culture du Japon seeks to help a European public acquire a deeper understanding of Japanese culture. A competition open to architects registered in France or Japan was held in 1989 for the design of the building, the French government provided the 1670sq m Quai Branly site, and the City of Paris highway authorities agreed to round off the road alignment along the site boundary, to give a continuously curving street frontage.

A screen-like curved facade was a notable feature of Armstrong Associates and Masayuki Yamanaka's* winning scheme. As built, this elevation is almost entirely glazed with greenish, semi-transparent glass said to resemble jade.

The competition scheme has been revised in many respects, the internal planning in particular. In all, the finished building has a net floor area of 7500sq m floor, arranged on 11 storeys, five of them below ground level (including an underground car park at level -5).

While tea ceremonies do take place from time to time in part of the 'belvedere' perched on the top of the building, the planned roof-top restaurant has not yet materialized and the large auditorium, around which the entrance level of the competition scheme revolved, has been relegated to the basement and is now wholly rectilinear. It has an audience capacity of up to 400 and is equipped with a computer-operated Spiralift system offering over 30 different performance and seating configurations with variable angles of rake. Along with access routes, fire escapes, control gear and other services, it occupies most of the volume below ground level.

A second rectilinear multi-purpose room, entered at ground floor level and occupying a double-storey height, has retractable raked seating to serve an audience of 150 (currently used for weekly film shows), and can be cleared to give 130sq m uninterrupted floor space (as for a recent staff party). Also designed for flexibility is the 500sq m exhibition area at second floor level, which can be



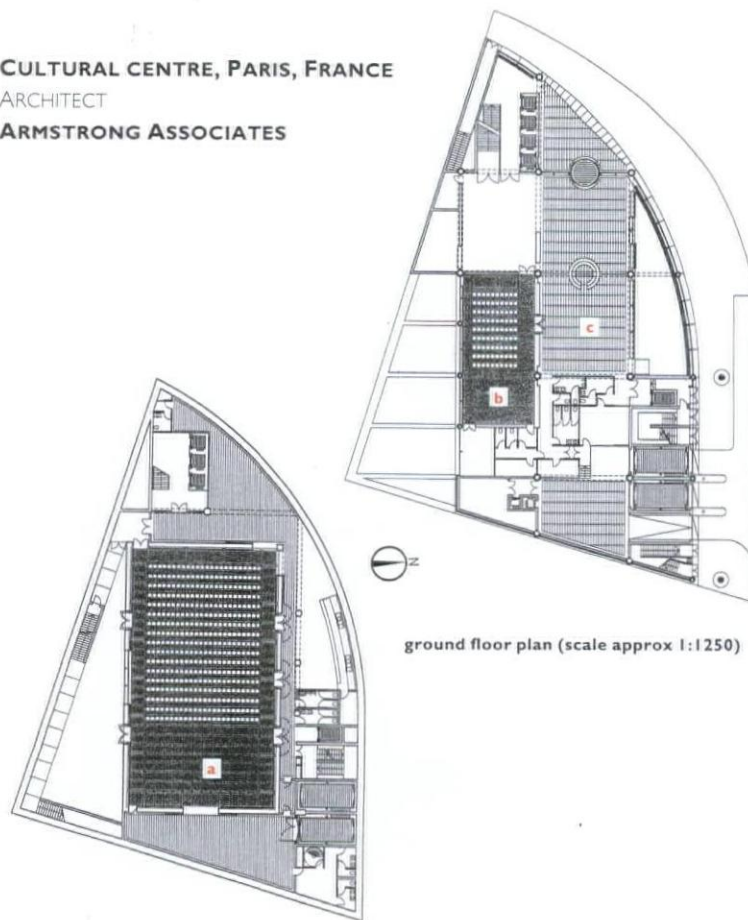
- 1 The new building in its edge of Seine setting on the Quai Branly. Harry Seidler's robust Australian Embassy is just visible, far left.
- 2 The screen wall curves around the corner site.
- 3 The curving, delicately transparent wall acts like a traditional Japanese shoji (rice paper) screen, filtering and diffusing light.
- 4 The rooftop belvedere.



CULTURAL CENTRE, PARIS, FRANCE

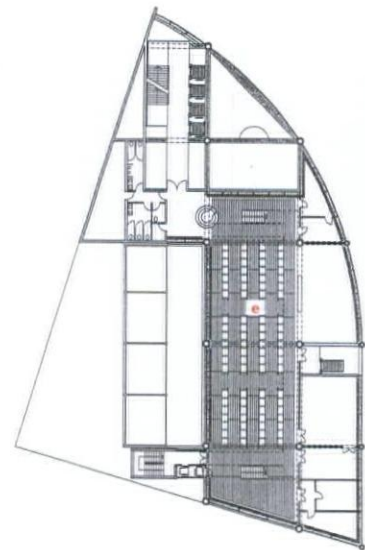
ARCHITECT

ARMSTRONG ASSOCIATES

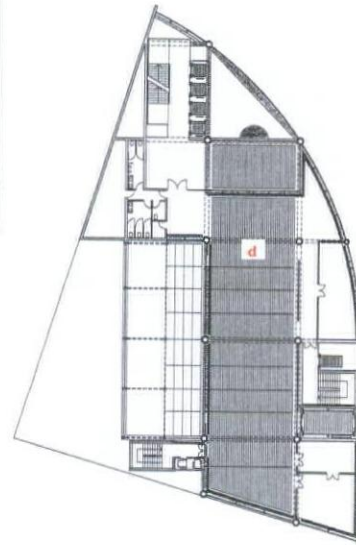


ground floor plan (scale approx 1:1250)

- a main auditorium
- b multi-purpose hall
- c entrance hall
- d exhibition space
- e library



third floor (library) level



second floor (exhibition) level

lower ground (auditorium) level

either used as a single space or subdivided with movable partitions.

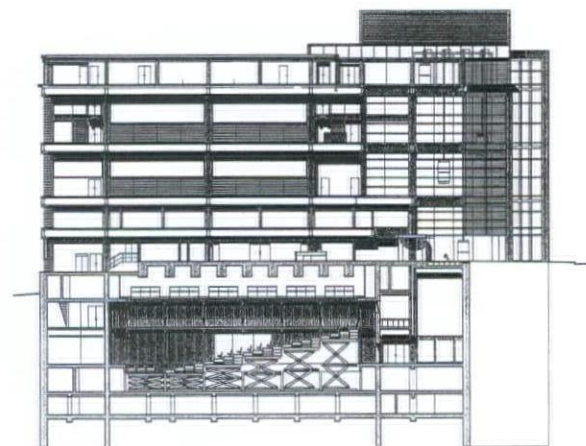
The interior design and quality of finish of these public spaces is reminiscent of work by the Foster office – an affiliation that is still more marked in the main library, where production models of Foster-designed furniture predominate: Tecno reading tables familiar from the Nîmes Médiathèque, and solid birch bookcases of the type designed for the Cambridge Law Faculty library. The latter were manufactured in Italy by Acerbis, with slight modifications – to create magazine racks, for example – at the request of Etsuko Morimura, the chief librarian, who selected all the library furniture except the reception desk and had several items purpose-made to her own specification.

Books and periodicals are on open access, audio-visual equipment is available in highly civilized surroundings and library users have the added benefit of magnificent views of the Seine, the Eiffel Tower and Harry Seidler's imposing Australian

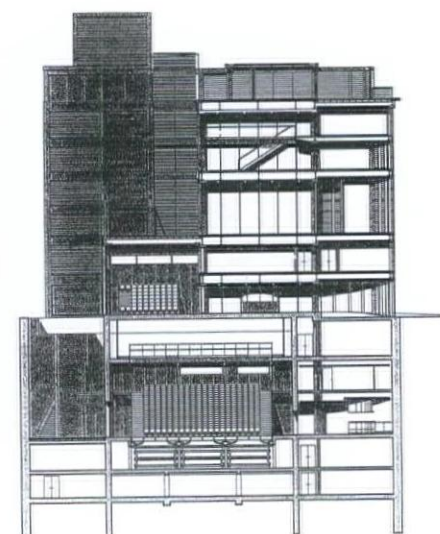
embassy building of 1978.

But, while Armstrong has made use of the views, he seems to have been less confident when it came to the articulation of the building as a whole. The accumulation of awkwardly shaped left-over spaces and residual volumes around the main entrance displays a distinct lack of tectonic resolution which culminates at the very threshold of the building, in a partially screened roofless void offering the prosaic spectacle of a ponderous structural frame. It could be said that despite the building's evident material refinement, such slightly fumbled opportunities do nothing to further the cause of international competitions. CHARLOTTE ELLIS

* Masayuki Yamanaka, a young Japanese architect-engineer then working in London for Ove Arup & Partners, withdrew from the project soon after the competition. For an account of the competition and illustrations of the 453 entries submitted, see *Concours pour la Maison de la Culture du Japon Paris*, published by the Pavillon de l'Arsenal/L'Architecture d'Aujourd'hui, Paris, 1990. Tadao Ando, Paul Andreu, Mario Botta, Fumihiko Maki, Roland Simounet and Alvaro Siza were the architect members of the 11-strong competition jury.



longitudinal section



cross section

Competition architects

Armstrong Associates and Masayuki Yamanaka

Project architect

Armstrong Associates

Project team

Ken Armstrong, Jenifer Armstrong, Russell Gilchrist, Christophe Egret, James McCosh

Bureau d'étude

Groupe Arcora

Quantity surveyor

Algoe

Mechanical and electrical engineer

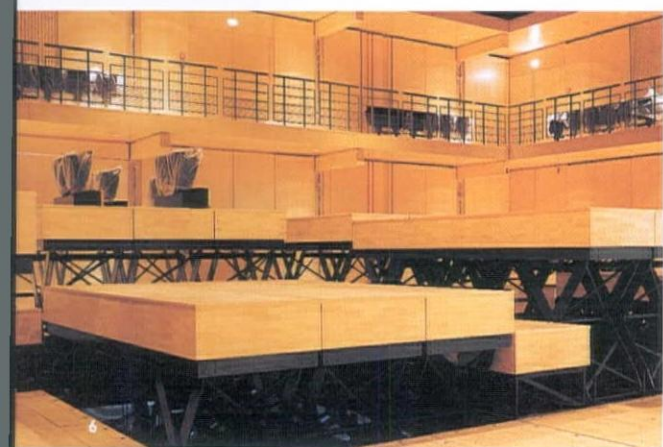
Trouvin Ingénierie

Theatre consultant

Scene

Photographs

Paul Raftery



5 The curved screen wraps around a void above the entrance courtyard.

6 Part of the large auditorium, capable of providing over 30 different seating and performance configurations.

7 The screen wall affords diffused views over Paris.

8 The void above the entrance courtyard.

9 Serene interplay of space and light in the Japanese tea house at rooftop level.



MOUNTAIN MINIMALISM

A new art museum and community building in south Japan responds to the beauty of the setting and needs of the local community while preserving an essential architectural autonomy.

ART MUSEUM, NAKAHECHI, JAPAN
 ARCHITECT
KAZUYO SEJIMA

Kumano Kodo Nakahechi Museum, dedicated to the works of two Japanese painters, is outside the town of Nakahechi, south of Osaka on Japan's main island. Though mountainous (and prone to earthquakes), the landscape has a gentle and wide-open aspect, receding by degrees into the sky.

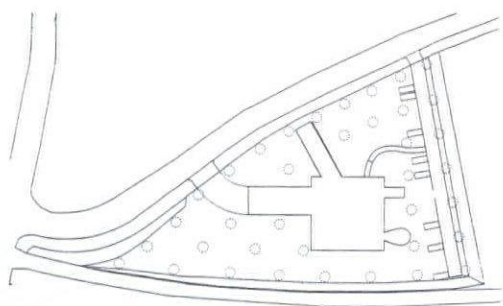
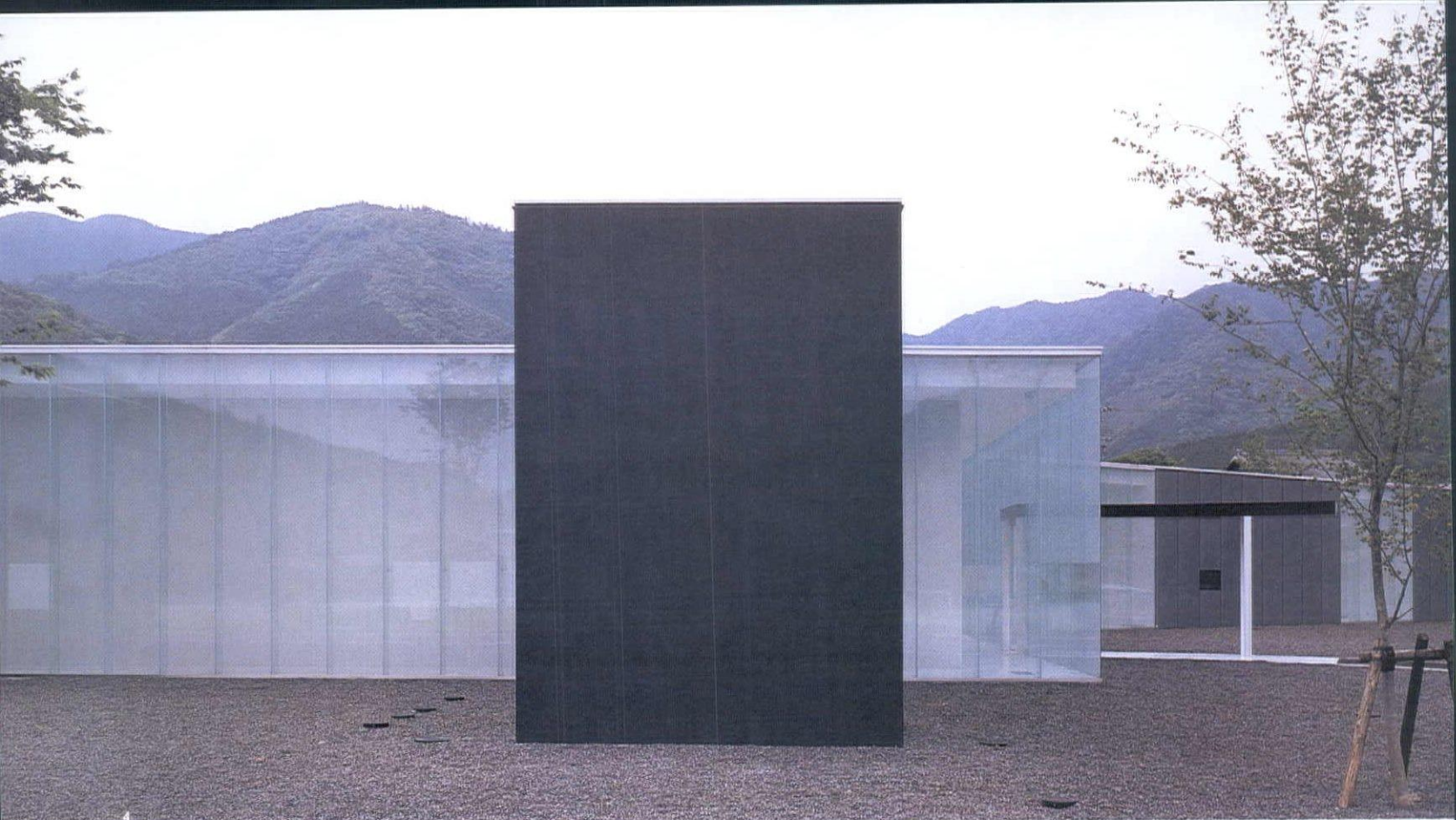
Spread out horizontally against low undulations of mountain ranges, Kazuyo Sejima's diaphanous glass-skinned building looks other-worldly, as if it had simply alighted there. The air of self-containment which derives from the abstract universal nature of Sejima's architecture is characteristic, though nuances of meaning are always present, making each of her buildings different one from another. As in her previous works* Sejima's delicately contrived minimalism drawing on Japanese tradition is infused with complex qualities

woven from her subtle appreciation of site and purpose. Abstractly expressed, they are perceived at a subliminal level.

In this case, it is not difficult to pick up the tension between the immanent logical calm of the architecture and the potential for unruliness always present in the surrounding landscape. Sejima invites you to make such connections. There is another level of significance, more inscrutable to the outsider's eye, which has to do with the place as a symbolic refuge from toil. The museum stands beside an ancient track worn by pilgrims on their way to the great shrine of Kumano, one of the oldest and most important shrines in Japan.

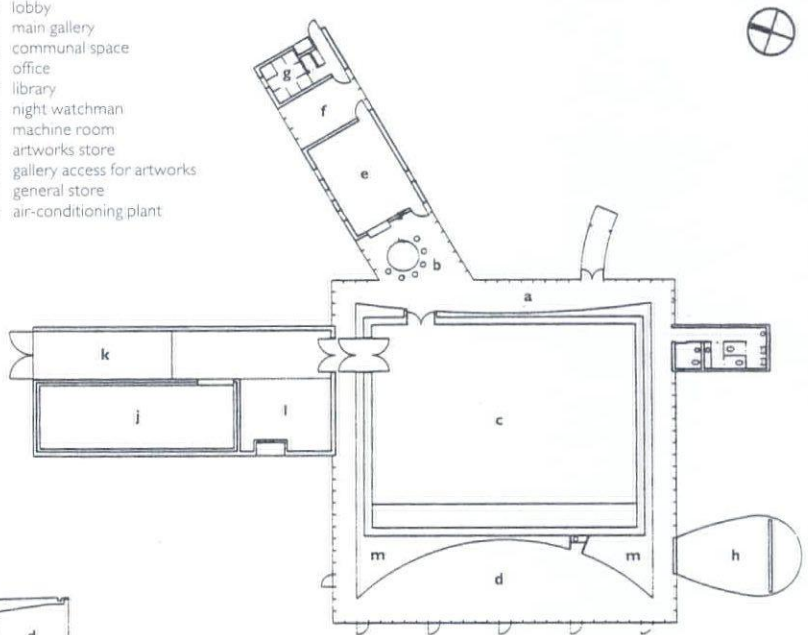
While principally an art museum, the building also serves as a community centre for the local town. In plan, the main body of the building is composed of a central, environmentally controlled gallery protected

- 1 Main public entrance and north wing with lobby, office and library
- 2 Detail of north-eastern wall and lobby
- 3 West and south-west walls of communal zone

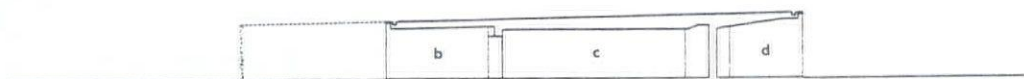


site plan

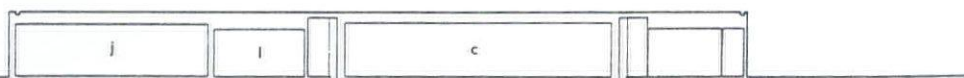
- a entrance
- b lobby
- c main gallery
- d communal space
- e office
- f library
- g night watchman
- h machine room
- j artworks store
- k gallery access for artworks
- l general store
- m air-conditioning plant



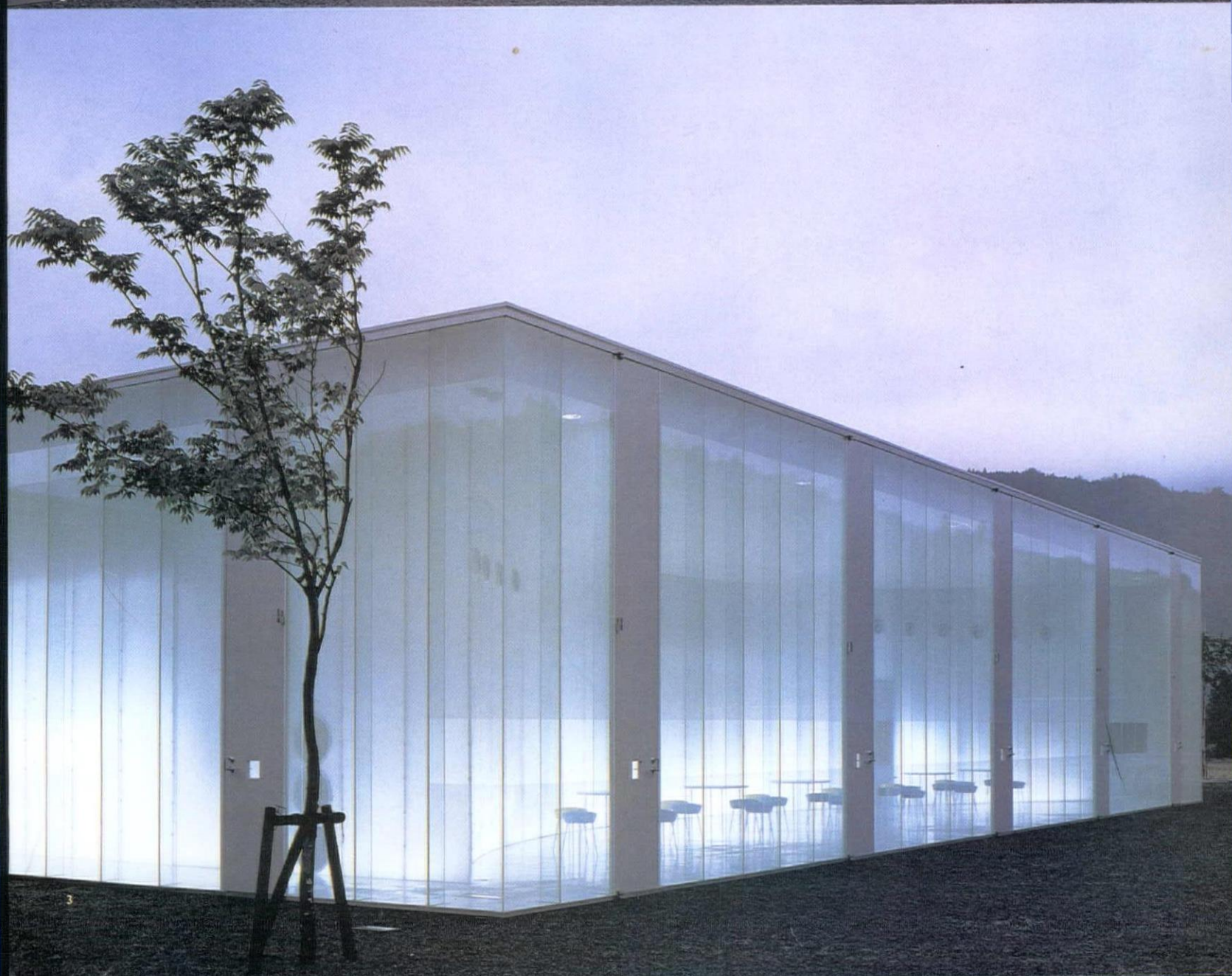
plan (scale approx 1:500)



section: north-east – south-west



section: north-west – south-east



by a buffer zone of public space. From this parent body, two main projections into the landscape, like the tails of a comet, contain ancillary spaces – in one, the lobby, office and library; in the other, gallery access and storage. On the opposite south-east side, two small extrusions provide lavatories and a machine room. The plan is reminiscent of Sejima's small artist's studio in Nagano. As in the earlier building, the perimeter corridor expands to become a larger space, although here, conforming to an overall plan that is square rather than circular, it does so in a different fashion.

Fluidity at Nakahechi is provided by a curving inner wall with interstices at either end, turned into rooms for air-conditioning plant. The space is communal, furnished with tables and brilliantly covered stools like abstract flowers in the gauzy interior, where you can sit and contemplate the view.

The delicate tensions present in this building are a constant source of delight. If the core is solidly framed, the skin of diaphanous glass and metal counterpoints substantial with insubstantial. Walking around the outside you experience a sequence of receding and advancing planes – a formalized representation of the surrounding landscape.

VIOLET GORE

* See in particular Platform houses, Katsuura (AR April 1990, pp61-65) and Artist's studio, Nagano (AR August 1994, pp72-73).

Architect
Kazuyo Sejima & Associates
Project team
Kazuyo Sejima, Ryue Nishisizawa
Structural engineer
O.R.S.
Photographs
Shinkenichiku-Sha

ART MUSEUM, NAKAHECHI, JAPAN

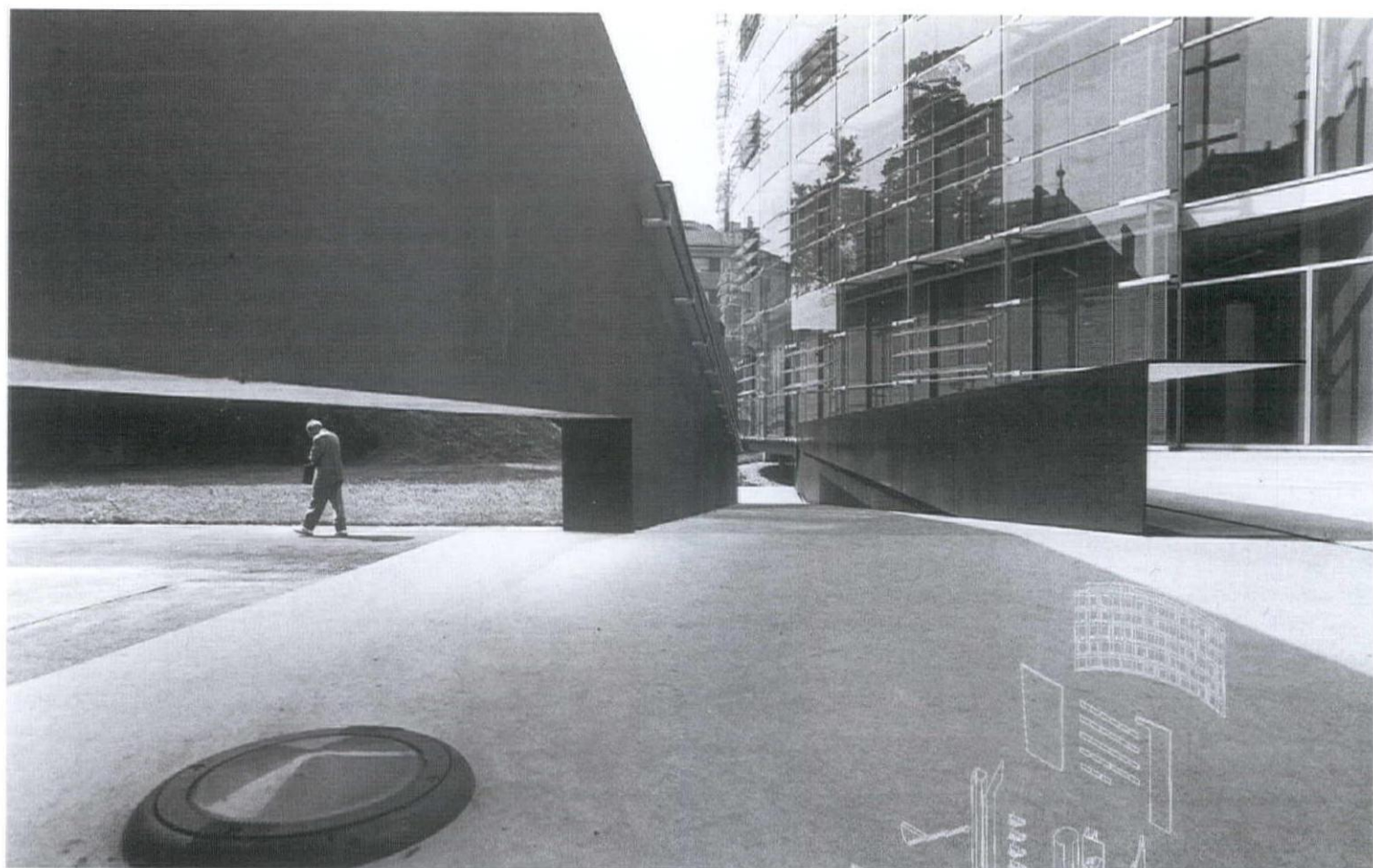
ARCHITECT

KAZUYO SEJIMA

4
Opaque flank of lavatory block, east corner
and entrance

5
Perimeter circulation space and lobby





SWISS EXEMPLAR

LOCAL GOVERNMENT OFFICES, MORGES,
SWITZERLAND
ARCHITECT
RODOLPHE LUSCHER

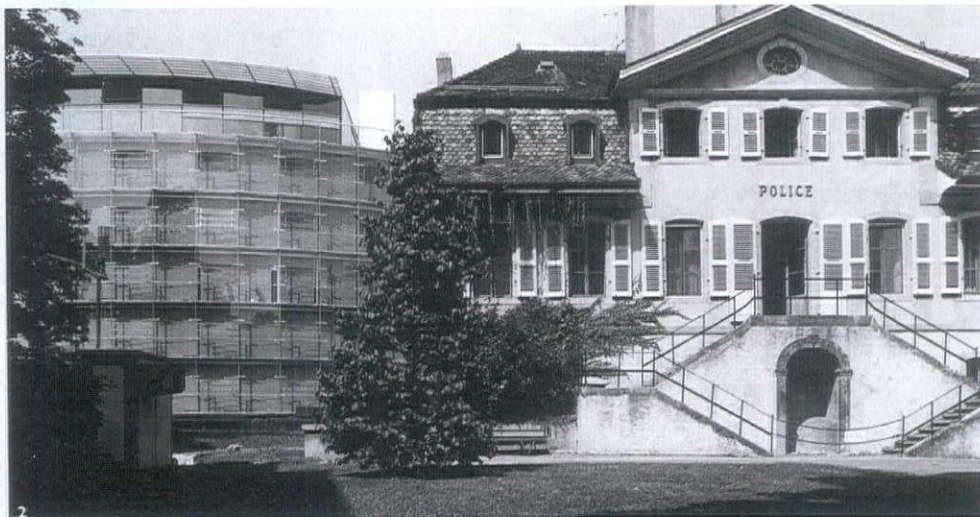
Enveloped by a dramatic, shimmering, curved glass wall, these new cantonal administration offices in the Swiss town of Morges sensitively address issues of energy use, transparency, daylight and identification with place.

Morges is a small town with a castle and a well-preserved medieval centre situated on the north shore of Lac Léman between Lausanne and Geneva. New offices were needed for the administration of the canton, and as they were to occupy a sensitive site close to the old centre an architectural competition was held in 1992. Rodolphe Luscher won the competition, his design being worked up in 1993 and '94 and constructed from the beginning of '95, culminating in an inauguration in September of last year.

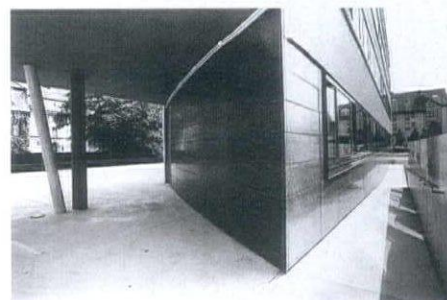
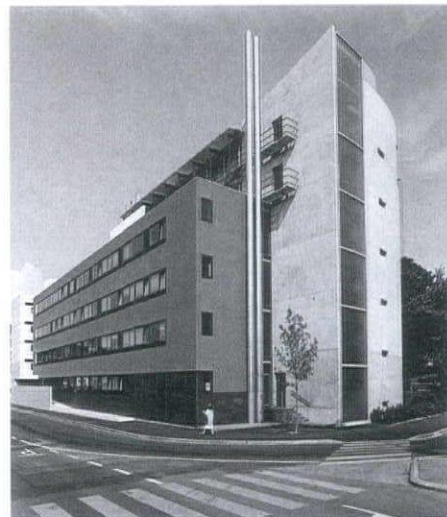
Lying just north-east of the old walled town, the site is one of those peripheral places where buildings are beginning to emerge as free-standing entities, but still exert a strong force on one another. Luscher's design was premiated above all for its urban strategy and clever juxtaposition of building parts, which relies on response to the edge conditions. Three blocks are asymmetrically arranged on a slightly raised podium. A linear four-storey block lines the street to the west; a short point block, also four storeys, turns the north-west corner; and the main curved six-storey block faces into the adjacent

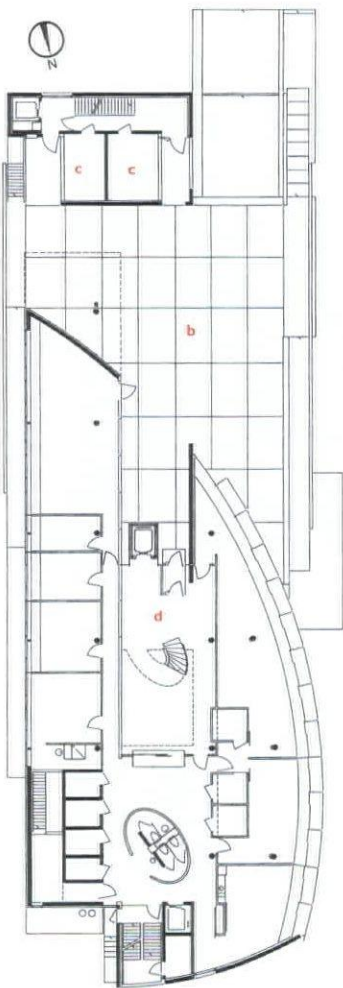
park. This curved block is the crucial gesture: its convexity is directional, suggesting expansion towards the park, and taking advantage both of local short views and longer ones of the lake from upper levels. Looking to the inside, the curve suggests containment and enclosure, focusing back on the vertical well which forms the building's communications heart.

Both the linear block on the street and the curved block contain the cantonal offices. The separate small corner tower is an adjunct to the neighbouring police station containing cells for prisoners, a part of the programme that was easily and conveniently separated off. The office wings meet around a central open well whose ends are terminated by two half-engaged oval forms: at the north end the open main staircase, at the south a stack of lavatories. The main entrance is via a ramp or staircase from the street, then across the podium and into an entrance placed in the gap between the two office wings, which leads directly through to the central lightwell. Where the straight wing continues in the outside world beyond the curved one,

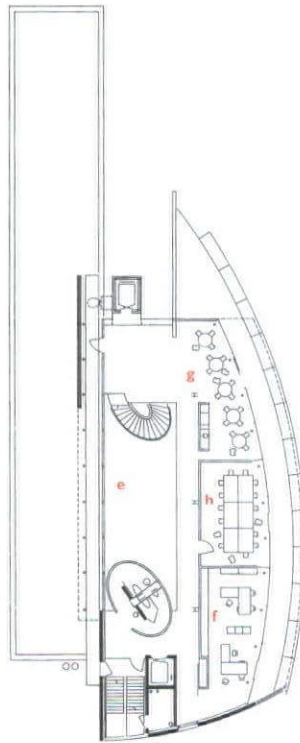
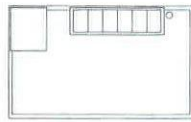


- 1
A ramp and staircase lead up to the entrance podium.
- 2
The curved glazed block has a vernacular police station for its neighbour.
- 3
The four-storey linear block to the west.
- 4
The prow-like corner of the curved block.
- 5
The double-skinned glazed block is a key part of the building's environmental control strategy.
- 6
The crisply articulated volumes form a striking composition.

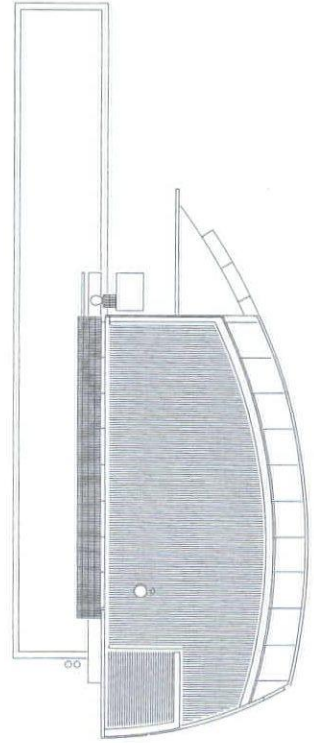
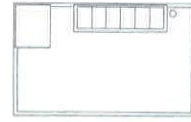




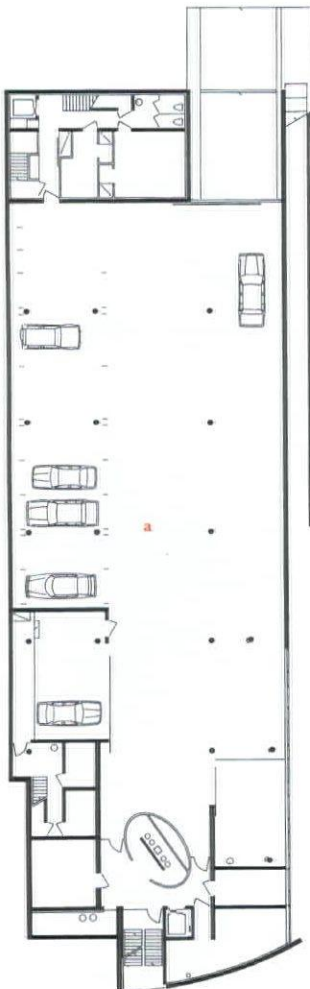
ground floor (podium) plan



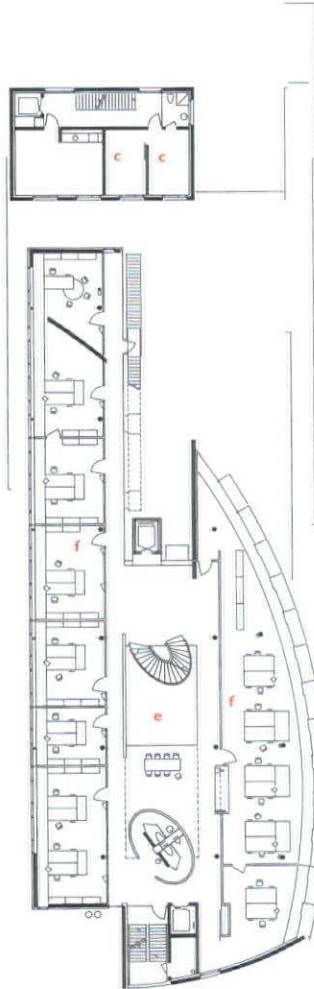
fifth floor plan



roof plan

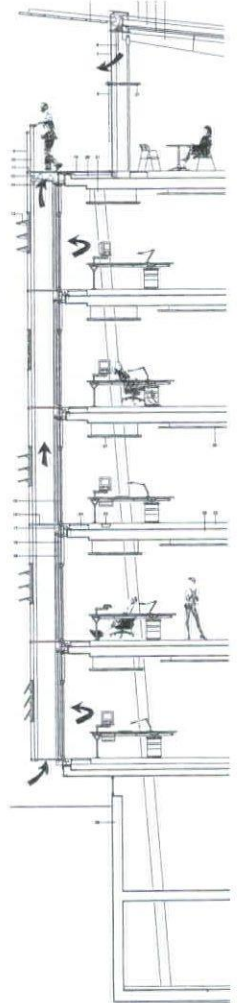


lower ground floor plan



first floor (typical office level) plan

- a car park
- b podium
- c police cells
- d entrance hall
- e lightwell
- f offices
- g restaurant
- h conference room



detailed section through glazed wall

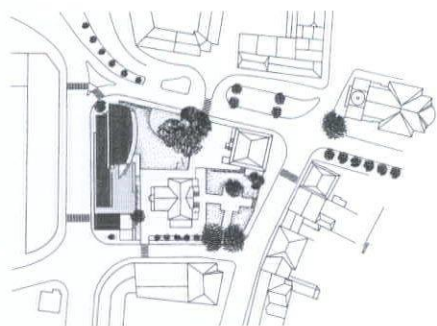
**LOCAL GOVERNMENT OFFICES, MORGES,
SWITZERLAND**

ARCHITECT

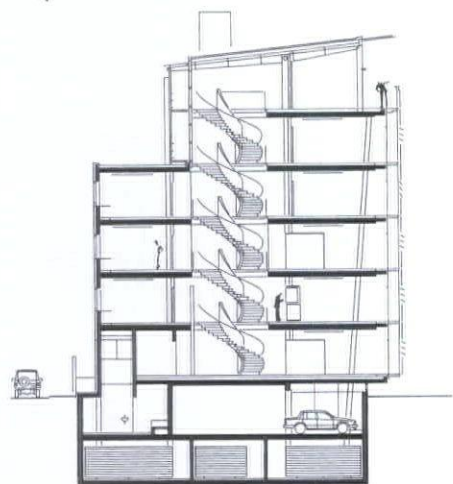
RODOLPHE LUSCHER

7

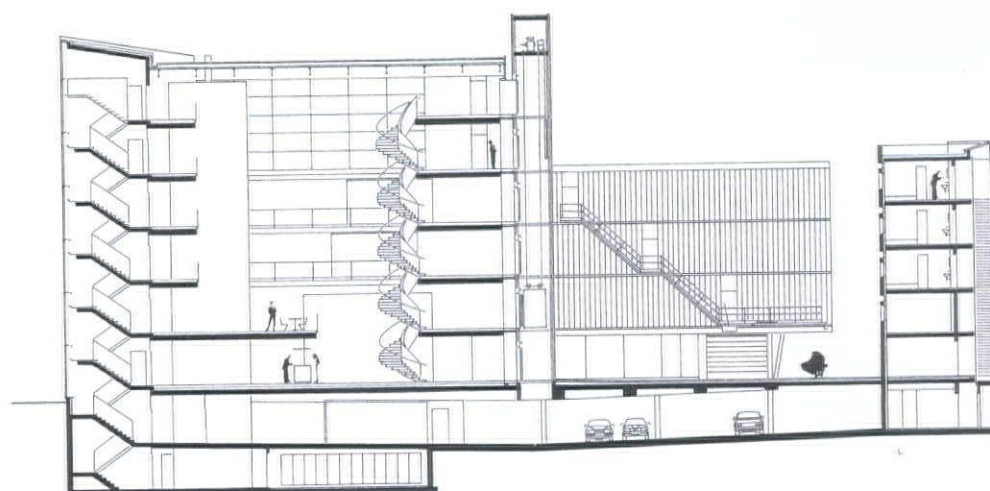
The central well, with offices arranged around its perimeter.



site plan



cross section



longitudinal section



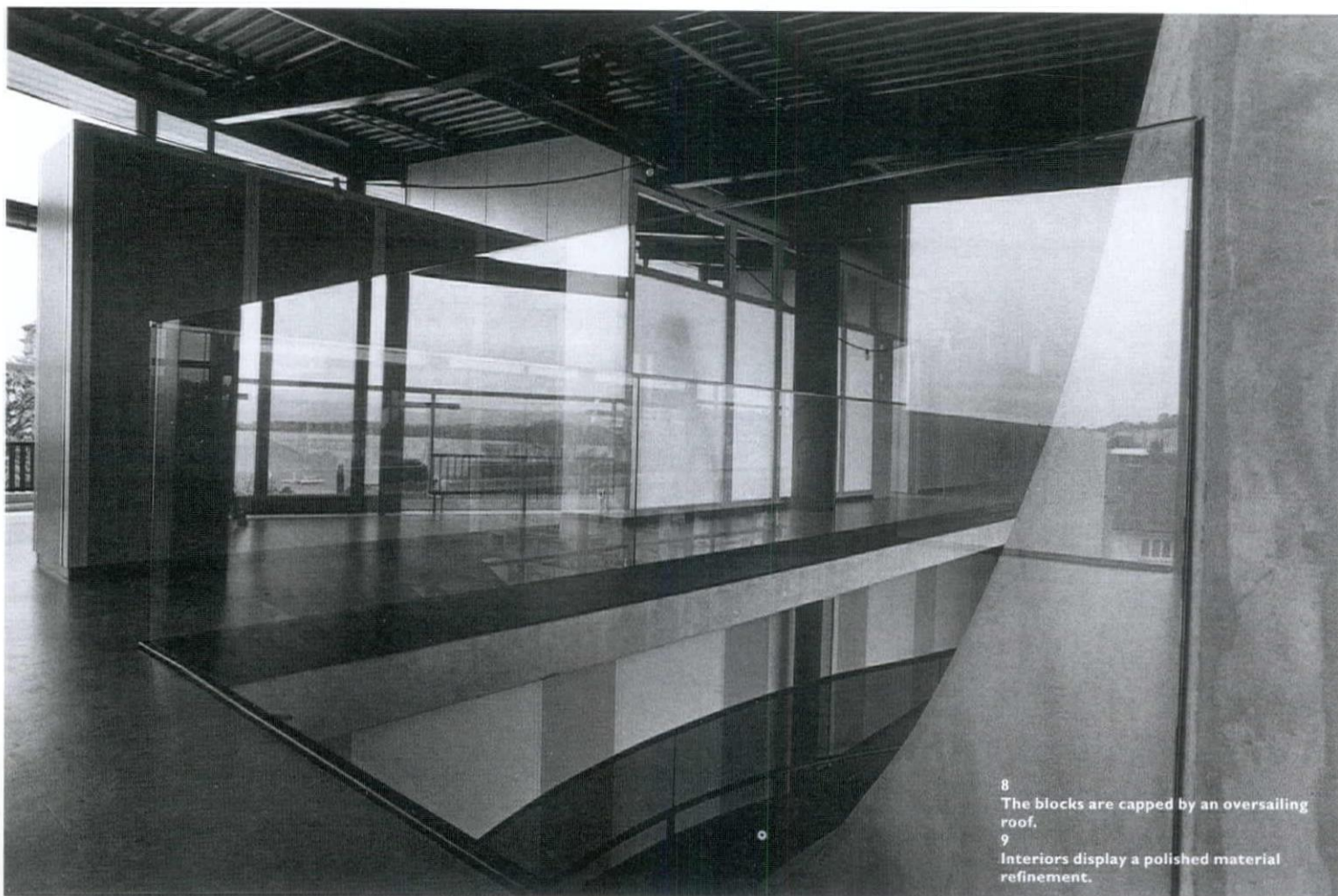
7

the corridor becomes single-loaded and is set behind a translucent wall of structural glass cladding, a contrasting reflective surface. The outboard metal fire-stair running diagonally up the side both advertises the emergency route to the occupants and enhances the compositional effect.

The most visually impressive part of the building is the double-skinned glass wall of the curved block, shimmering with reflections like the lake which it faces. This is also the key element of an energy-conscious environmental strategy. The offices are not air-conditioned, only heated, and the intention is that by manipulating vents and blinds the occupants can combat the surprisingly changeable Swiss weather to produce comfortable conditions. The double-skin glass wall faces south-east to collect the winter morning sun, whose heat is admitted into the offices by opening vents in the inner skin. Summer overheating is avoided by opening large vents at the bottom and top of the cavity, so turning it into a thermal chimney

which draws air through. Vents into the cavity from the offices can allow air to be drawn in and out, and during hot periods these can safely be left open for cooling during the night. Louvres in the glass outer skin can also be opened opposite vents in the inner one to allow lateral ventilation. Protection from solar radiation via both glass layers is achieved with louvred blinds on the outside face of the inner skin. A thermal chimney effect can also operate in the central well, which is equipped with adjustable vents top and bottom.

The north-west facing office wing is not susceptible to summer solar gain until the end of the day, and has conventional horizontal windows. Facing a busy road, its vents had to be acoustically baffled, and in hot periods cross-ventilation is achieved in combination with the central well. The rooftop restaurant has its projecting roof for shade and cross-ventilation for cooling. In his report of the environmental strategy, Luscher claims that the rapid changes in the Swiss climate need to be anticipated if the building is to be used to



8
The blocks are capped by an oversailing roof.
9
Interiors display a polished material refinement.

8

**LOCAL GOVERNMENT OFFICES, MORGES,
SWITZERLAND**

ARCHITECT

RODOLPHE LUSCHER

Architect

Rodolphe Luscher, Lausanne

Project team

Rodolphe Luscher, André Luscher,

Joëlle Schumann, Jürg Degen,

Sabine Arnaud, Joëlle Tharin

Structural engineer

Edmond Sumi

Electrical engineer

Electro-Etudes G+J

Mechanical engineers

Sorane, Weinmann-Energies

Photographs

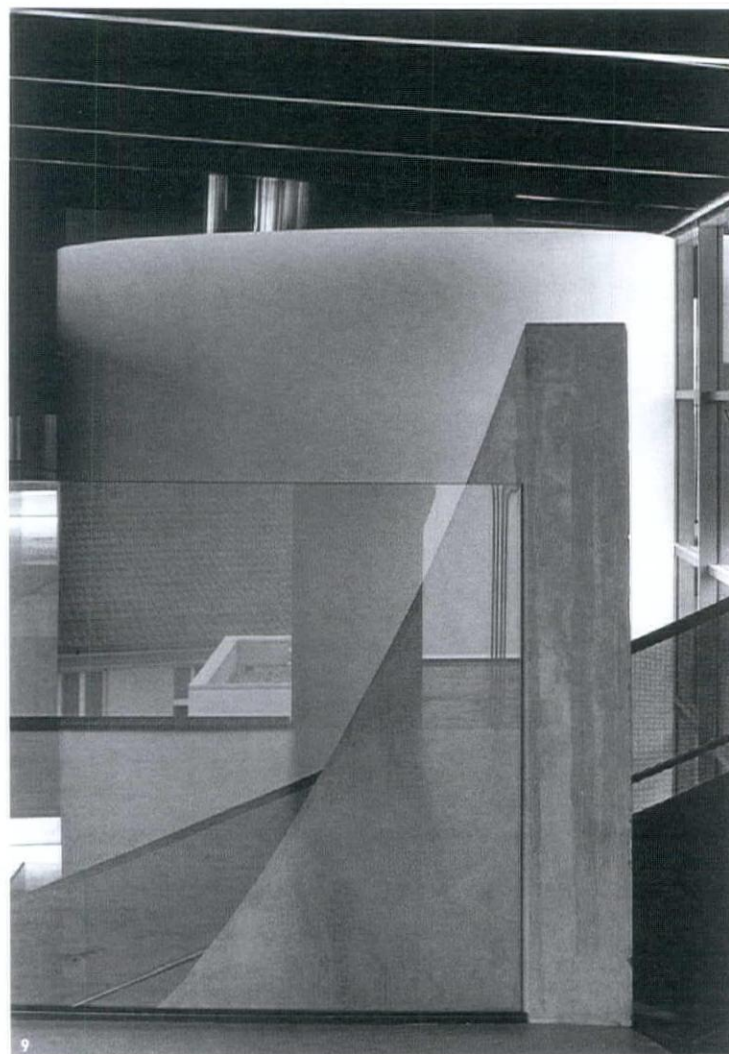
Pierre Boss

best advantage.* It will be interesting to see whether in daily use the office workers understand their responsibility and can manipulate the building's environment effectively.

The cantonal office building at Morges is no run-of-the-mill office: it is an important, even prestigious development. Though employing an uncompromisingly modern vocabulary involving clear forms, strong applied colours, and shimmering walls of glass, it fits appropriately into its historically sensitive site. If the environmental strategy works and conditions are as they should be, it will be cheap to run and an inspiring place to work. Most importantly, it addresses issues too long neglected in the design of most office buildings: daylight and view, orientation and identification with place, understanding one's location and how to get there. Such matters, ignored in favour of the anonymous deep plan, heavily serviced office, now seem to be re-emerging in the name of sustainability.

PETER BLUNDELL JONES

* Luscher reports that the Swiss climate can switch very quickly from hot to cold, and that the summers are extremely variable: 1994 saw a 12 week heatwave, the hottest for 240 years, 1995 only three weeks, but with the highest recorded temperature of the century. In 1996, there were only a handful of hot days at the beginning of June.



9

**GREENHOUSE AND PARK, TERRASSON LAVILLEDIEU,
DORDOGNE, FRANCE**

ARCHITECT

IAN RITCHIE ARCHITECTS

A pavilion in a park uses age-old masonry techniques and up-to-date glass technology, evoking myths of nature and history while providing sunny shelter.

GREENHOUSE EFFECT

The Dordogne is one of the most magical parts of France, still very rural and seemingly unspoiled, even if many of the old stone buildings are now country cottages for Dutch, English or German families. Despite the mechanization of agriculture, you can still find hosts of butterflies and orchids in the fields, and a profusion of ceps and truffles in the woods. A new five-hectare park at Terrasson Lavilledieu, designed by Kathryn Gustafson and Paysage-Land, has been set up to celebrate the qualities of the region's landscape and nature.

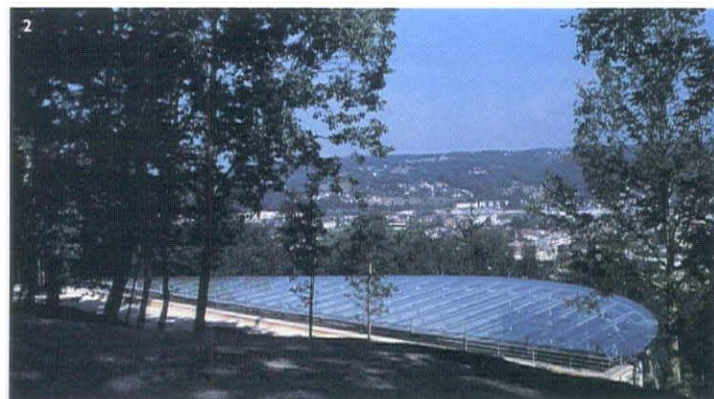
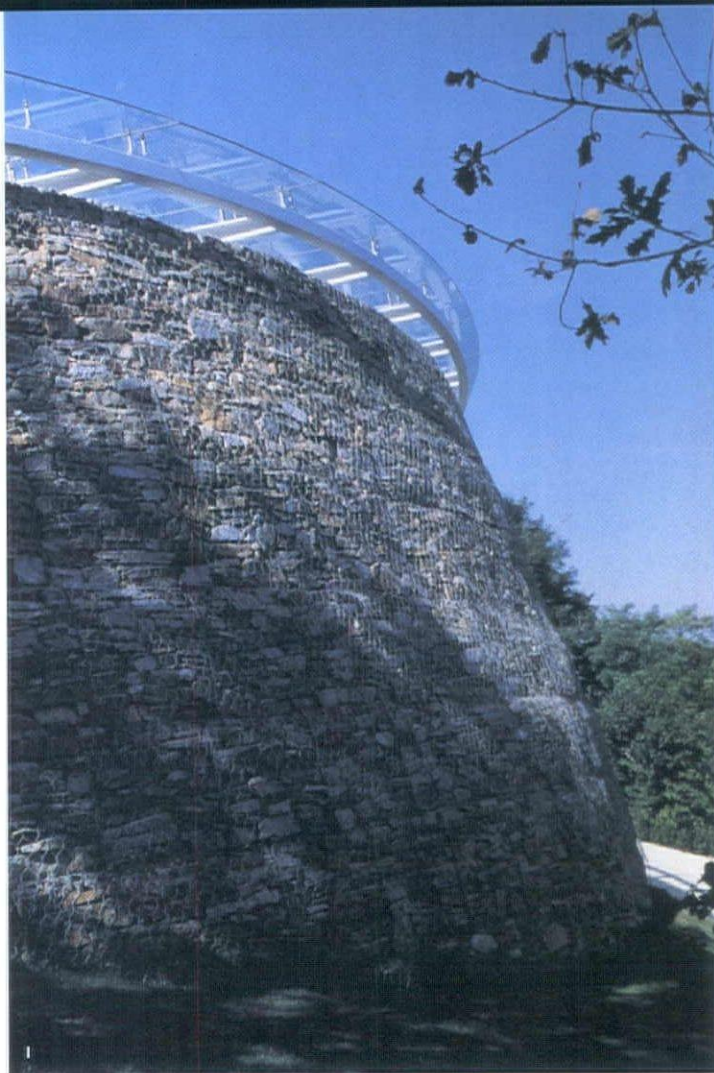
The principal building in the park is a greenhouse by Ian Ritchie Architects which grows out of the quite steep north-facing slope – literally so, for its battered curving north wall is made of local stone held in steel mesh cages (gabions), a form of construction used throughout the park by Gustafson and her colleagues to create retaining walls which define the terraces. The big wall bulges out of the hillside, seeming from a distance to be a ruined medieval bastion, but close up it is clearly of modern construction, with the random limy sandstone given a

grand order by the geometry of the cages. And, on top, there is a delicate precise rim of glass strangely hovering.

From the uphill side, the glass flows out towards the valley, seemingly flat (in fact a couple of degrees off horizontal). And from some angles, in certain lights (particularly when you first see it from a distance), it triumphantly fulfils the designers' intention of creating a 'virtual lake', related to pools elsewhere in the park, reflecting constant movements of clouds and trees. A real pool separates the glass surface from the path, and is

intended to act as a deterrent to the daring (it is to be hoped that it will work, for although the experience of walking on glass is pretty scary, it could become part of the acceptance rituals of local youth).

The glass is supported on a white steel structure which is entirely independent of the curved stone wall. The steel cantilevers from a concrete structure cut into the slope. T-section ribs taper towards the outer (northern) edge where they are propped by a continuous tubular edge beam supported on cylindrical

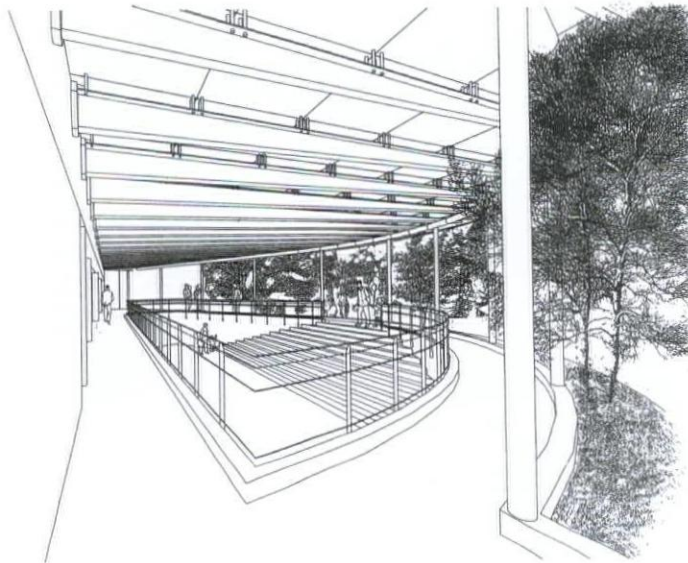


1,2 Bastion and pool. The super-smooth glass surface reflects trees and sky, like an abstracted version of the park's real ponds. The great battered rough wall of local freestone contained in metal mesh cages (gabions) is evocative of a forgotten medieval fortress.

**GREENHOUSE AND PARK, TERRASSON LAVILLEDIEU,
DORDOGNE, FRANCE**

ARCHITECT

IAN RITCHIE ARCHITECTS



architects' perspective showing how plants are expected to grow



steel-to-glass assembly

3

The wall is entirely self-supporting. The glass roof has its own steel structure cantilevered from the hillside and propped by round steel columns.

4, 5

The glass surface is imperforate to encourage pure reflections. Fixings are to inner pane of glass only, with spherical bearings on stub props bolted to tapering T-section ribs

6

Interior, with cylindrical columns setting up an artefactual order against what is expected to become a virtually continuous hedge of evergreen citrus.

Architect

Ian Ritchie Architects, London

Project team

Simon Conolly, Edmund Wan

Landscape architect

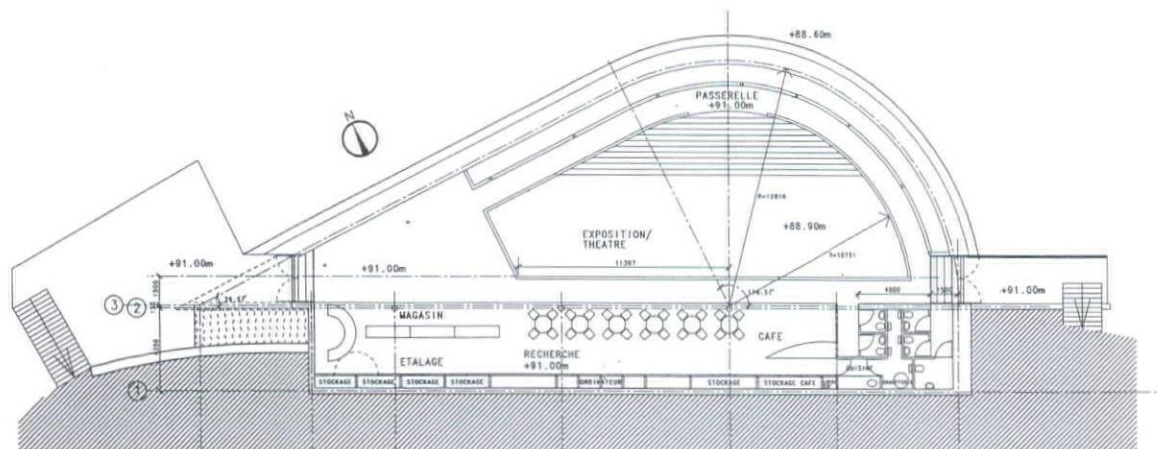
Paysage-Land/Kathryn Gustafson

Engineers

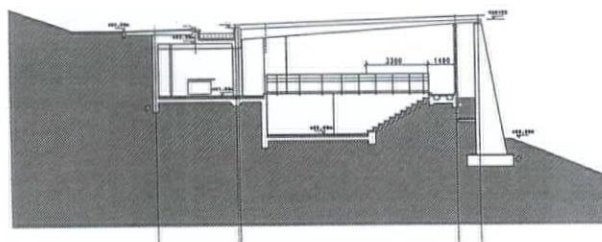
Ove Arup & Partners: John Thornton

Site engineer

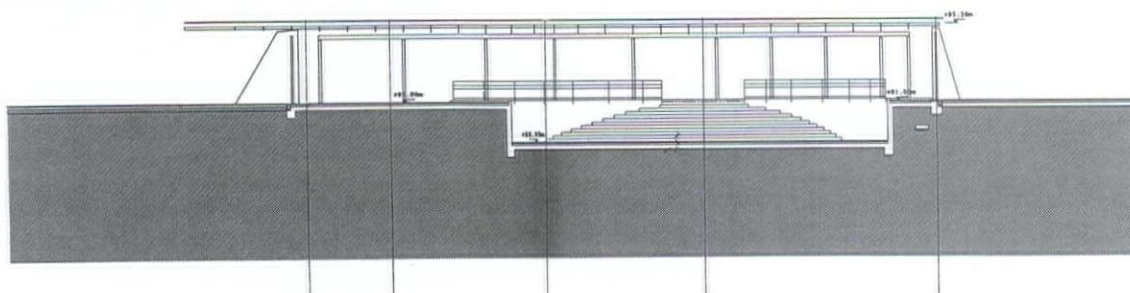
ARC Ingénierie, Brive



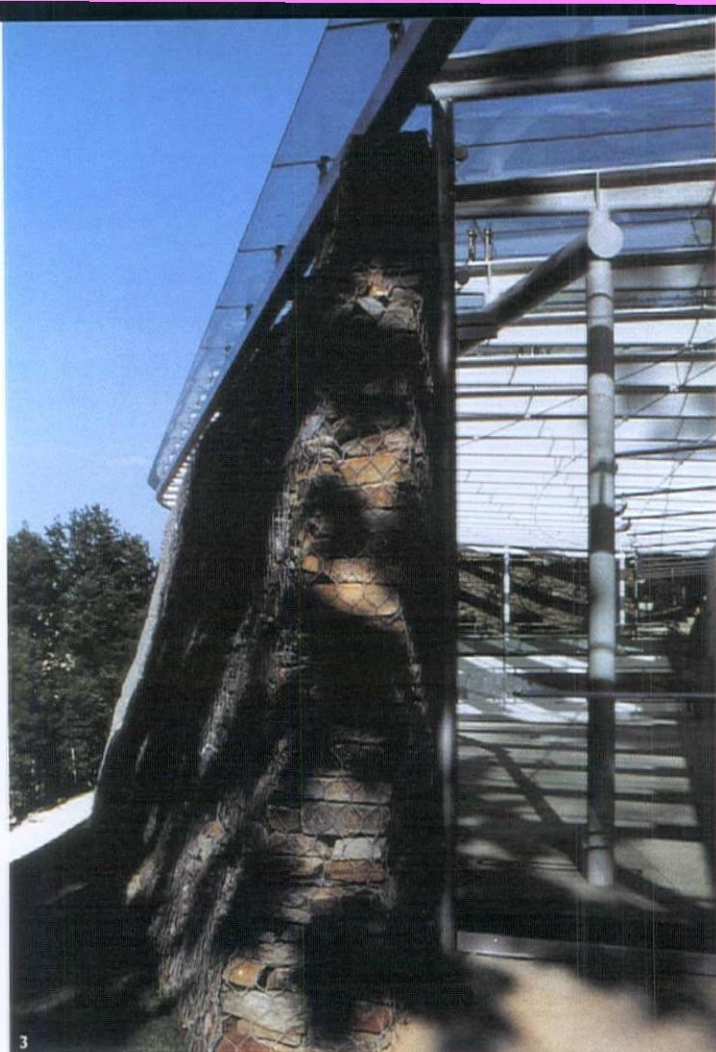
plan (scale approx 1:400)



cross section



long section



columns. Two layers of 8mm toughened glass separated by 3mm of polyvinyl butyral are supported from the ribs on stubby stainless-steel props, one in each corner of every sheet. These connect to the inner layer of glass only, leaving the outer one entirely plane and unsullied by obvious fixings, so permitting (from oblique angles) the virtual lake illusion. The fixing heads are mounted on spherical bearings, close to the glass, so minimizing local bending stresses in the glass caused by tolerance differences and differential expansion of glass and steel. The system is

somewhat similar to the one Ritchie used in the Leipzig exhibition hall (AR March 1996 p77), but there the spherical bearing (in effect a three-dimensional pin joint) is in the plane of the glass itself.

The super-sophisticated glass plane oversails the edge of the rough stone wall. There is no connection between them, for the internal climate is supposed to be a modified version of the external one, and air can of course filter through the gabions as well as the slot between glass and stone.

The greenhouse is intended to have a multitude of uses. Its

curve is caused by a little auditorium which can be used for theatre, conferences and exhibitions. This generous and cheerfully luminous volume is overlooked by a little café, a shop and a study area cut into the hill under the long pool which separates glass from path above. Citrus trees have been planted inside the curve of the stone wall. They are sprayed and watered in the summer, and the evaporation from them (and the rubble behind) is expected to temper the heat of the sun shining through the glass roof (provision has also been made for blinds between

the ribs to mitigate the effects of summer's hottest days).

The wall itself is of course a thermal flywheel, which is expected to be particularly effective in winter, when the greenhouse effect will enhance the sun's heat in the space and the wall will capture some of that heat, slowly emitting it when the air temperature falls.

Only experience will tell how the calm little place will work. But, as a building, it is already astonishing in its mixture of rough and smooth, ancient and modern archetypes, transparency, opacity and reflection.

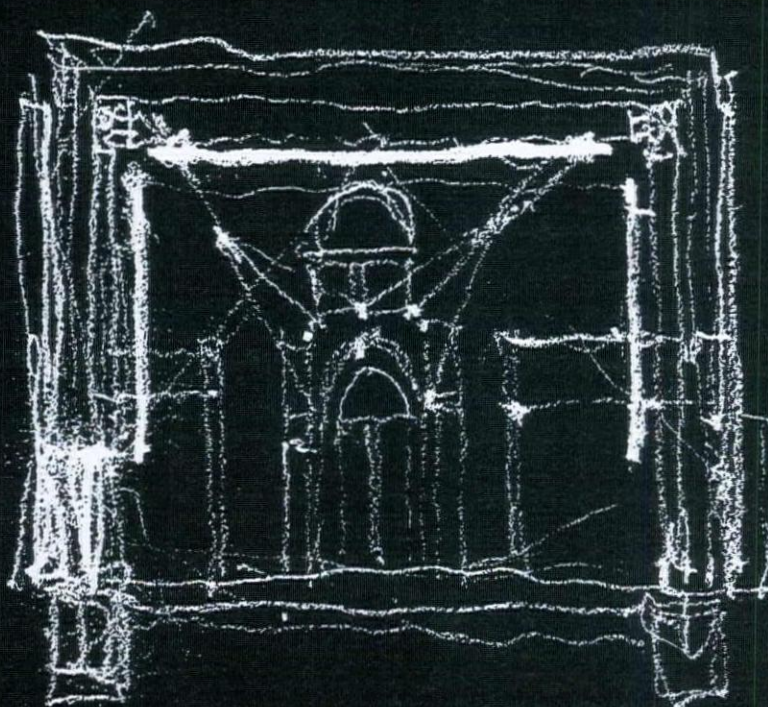
A. UIDE





OUT OF THIS WORLD

Byzantine frescoes pillaged from a church in Cyprus have found a glorious new resting place in a modern chapel that uses panels of translucent glass to evoke a thrilling sense of the numinous.



1 The blank, orthogonal volumes of the chapel give no clue as to the divine mysteries within.

2 Detail of the thirteenth-century dome fresco in its new setting.

3 The translucent glass 'chapel' appears weightless and luminous in the womb-like darkness of the interior.

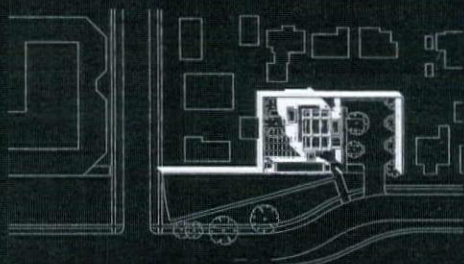
The Byzantine Fresco Chapel Museum in Houston, Texas, was built to display dome and apse fresco paintings originally housed in a small thirteenth-century votive chapel near the Cypriot town of Lysi. During the late 1970s, the frescoes – serene representations of Christ and the Virgin Mary – were stolen from the chapel, cut into 38 pieces and shipped to Germany. On the verge of being sold off piecemeal, the fragments were acquired by the Houston-based Menil Foundation and duly returned to the Church of Cyprus. The frescoes are now in the custody of the Foundation on extended loan.

Under the terms of the loan agreement, a consecrated chapel was built to house and display the restored masterpieces. The Menil Foundation selected a site in the leafy Melrose district of Houston, near the original Menil Collection museum (AR March 1987) and the more recent Cy Twombly Gallery (both by Renzo Piano). Francois de Menil, son of the distinguished arts patron Dominique de Menil, was commissioned to design the new chapel-cum-museum.

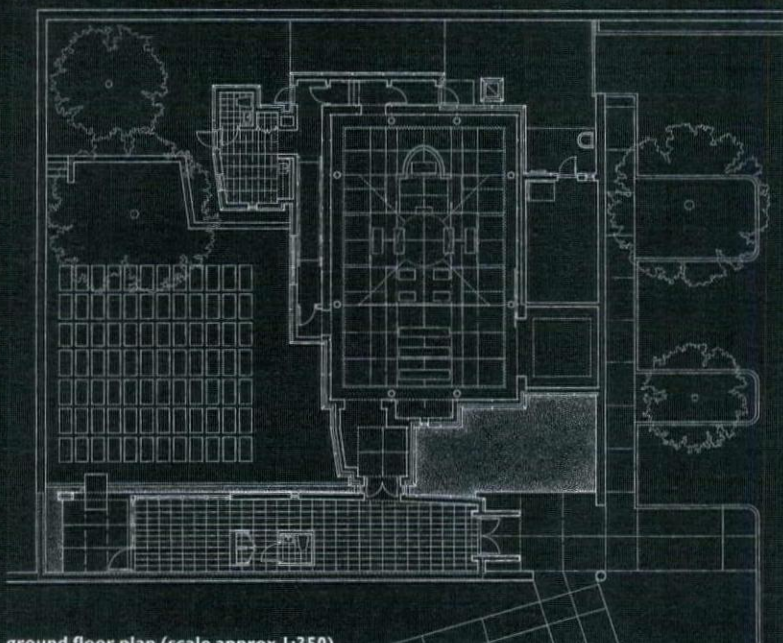
It was judged contextually inappropriate simply to replicate the chapel at Lysi in a modern American city, so de Menil has created a mediating external building with an embedded steel structure – a 'reliquary box' – which forms a neutral enclosure for a free-standing chapel constructed from thin translucent slabs of laminated glass. From the outside, however, there is little to suggest the spatial and spiritual drama within. Clad in finely jointed precast concrete panels, the modest, orthogonal structure has a clear

CHAPEL MUSEUM, HOUSTON, USA
ARCHITECT
FRANCOIS DE MENIL

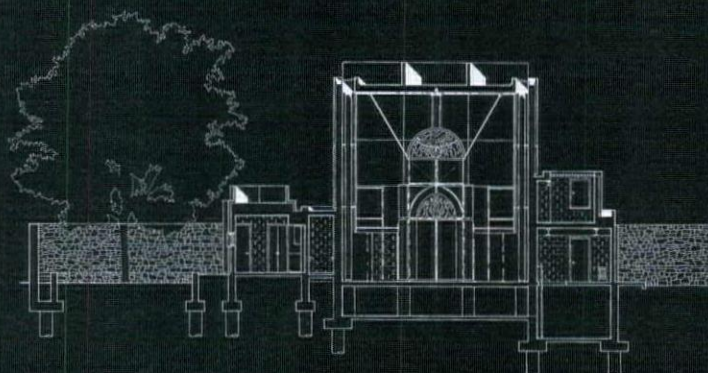




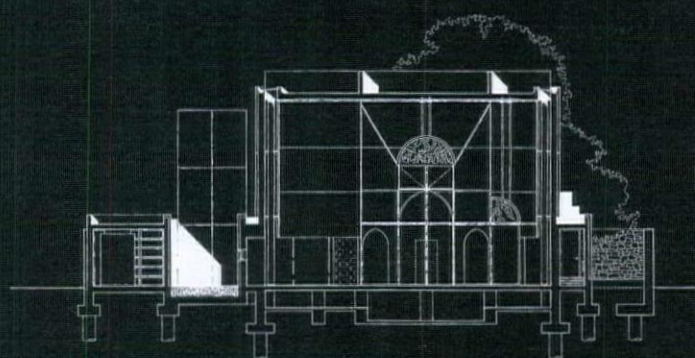
site plan



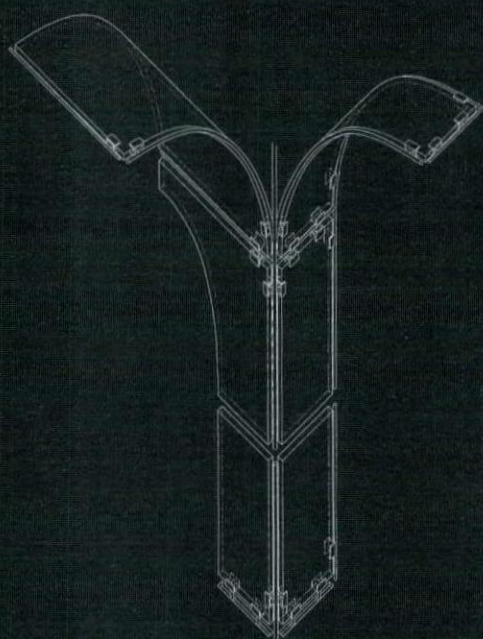
ground floor plan (scale approx 1:350)



cross section



longitudinal section



detail of glass panel junction

Architect

Francois de Menil, New York

Project team

Francois de Menil, Matthew Pickner,

John Blackmor, Jan Greben

Structural engineer

Ove Arup & Partners

Photographs

affinity with the inscrutable elementality of Piano's Cy Twombly Gallery. A limestone rubble wall wraps around the new building, evoking the rough-hewn construction of the original chapel in Cyprus. Entry is marked by a stark, lead-clad portico.

The building unfolds through a calm sequence of spaces, intended to prepare you for an encounter with the divine. Visitors enter a long lobby, glazed at the north-east end where it overlooks a tranquil garden enclosed by the limestone wall. Set at a right angle to the lobby is an antechamber, its bare concrete walls dimly illuminated by a clerestory. This tall, narrow space provides a moment of stillness and decompression before entering the chapel proper.

Inside the chapel, the sense of layering and dematerialization becomes more apparent. Set 600mm back from the external concrete walls is an inner, secondary envelope of black steel plates. The lowest quarter of the black wall is removed, allowing light to gently wash down the concrete and infuse the chapel with a subtle radiance. The charcoal-grey slate floor heightens the sense of depthlessness. Out of the womb-like darkness, the panels of jade green glass supporting the frescoes glow with a stunning intensity. Traditionally,

with murals, but here there is only a handful of images, rendered even more striking by their splendid isolation in de Menil's translucent glass chapel. The new interior even recreates the curvature of the original dome and apse settings.

The scale and geometry of the panels exceeded the fabrication limits of tempered glass, so 38mm thick laminated glass was used instead. Panels are supported by a free-standing structure constructed from tungsten-welded steel tubes of varying diameters. Engineered by Ove Arup & Partners, this structural trapeze disappears against the dark background, making the glass chapel appear mysteriously weightless and free-standing. In reality, the rigidity of the steel space-frame structure is increased by the laminated glass panels, which act as shear diaphragms to prevent the frame from racking and deforming. The resulting composite system of steel frame and glass panels is remarkably robust.

Constantly changing as visitors move through it, the translucent structure and its precious contents are transformed into an exquisitely ethereal apparition. As channels and instruments of light, the glass panels evoke the numinous, instilling the ancient frescoes with renewed spiritual significance

CHAPEL MUSEUM, HOUSTON, USA

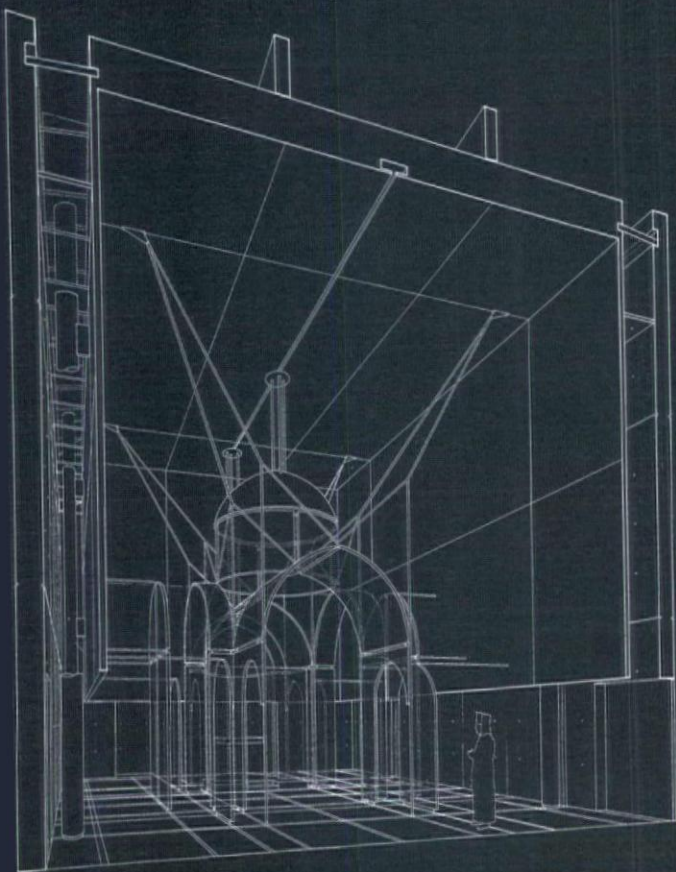
ARCHITECT

FRANCOIS DE MENIL

4, 5

The glowing panels of translucent glass are supported by a network of steel tubes. Light washes down the concrete walls, gently illuminating the space.

4



sectional perspective



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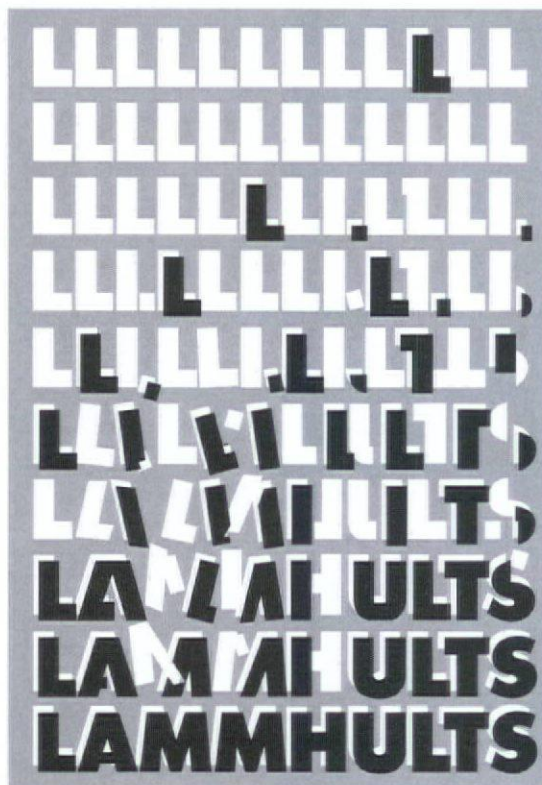
Table Cinema



Sofa Casino



Design Love Arbén



Felicia



Felix



Easy chair and foot stool

Design Gunilla Allard

Lammhults in Great Britain and Ireland

London
Coexistence
Phone 0171 354 8817
Fax 0171 354 9610

London
The Conran Shop Contracts
Phone 0171 589 7401
Fax 0171 823 7015

London
HOWE Projects
Phone 0181 673 2244
Fax 0181 675 9111

Manchester
Ralph Capper Interiors
Phone 0161 236 6929
Fax 0161 236 7208

Manchester
HOWE Sutton
Phone 01925 730 050
Fax 01925 730 052

Edinburgh
Tangram Contemporary Design Furnishers
Phone 0131 556 6551
Fax 0131 556 4290

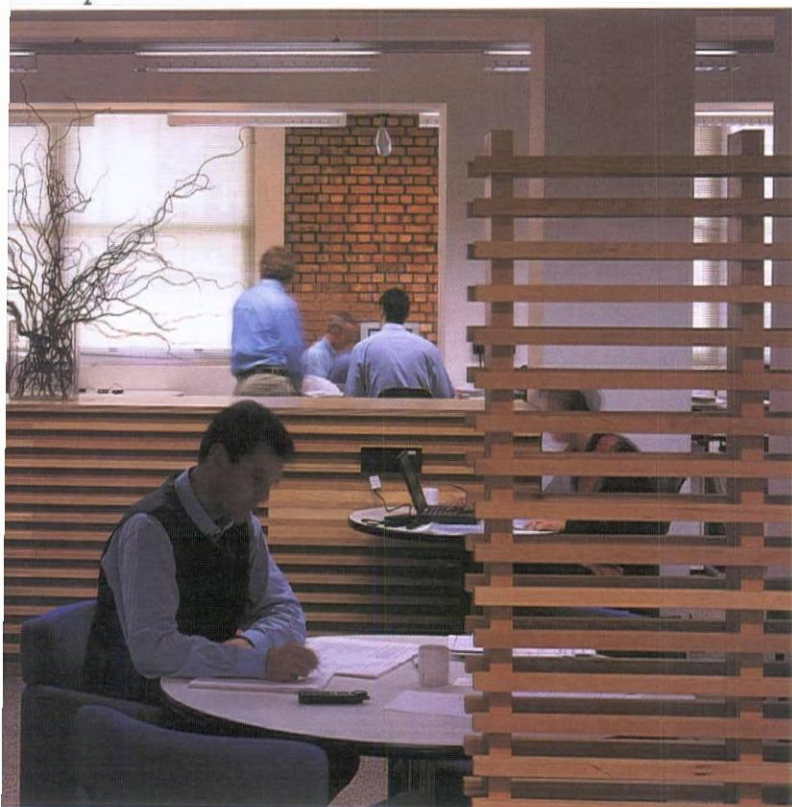
Dublin
O'Hagan Contract Interiors
Phone 01 872 2166
Fax 01 873 2388



Variety club

Investment in technology by DEGW shows how hot desking can make companies leaner and fitter.

2



DEGW's recasting of its King's Cross offices is intended as a living demonstration of how the workplace can be changed, made more lean and responsive to human and economic needs now and in the future. If DEGW is truly prophetic, the phallic office block as a monument to corporate hubris is destined to share the fate of the dinosaur; though looking round the world the indications are not universal.

Over a period of nearly 20 years, the practice which today has offices in Glasgow, Madrid, Milan, New York and Paris, has acquired a reputation for civilized office design. Its chairman, Frank Duffy, has long been concerned with analyzing office culture, change and the

working environment; and the latest results of his deliberations appear in a book published earlier this year and entitled *The New Office*.¹

Duffy advocates finding new ways of using what we already have and cutting down on space. His argument is forceful. Who indeed in the prevailing climate of social democracy feels the need to feed a monstrous directorial ego with an executive suite and vast acres of desk? What firm can afford half-used space when city rents and services are so expensive? Modern shareholders concerned about efficiency are entitled to ask such questions.

To make necessary changes in working practices, says Duffy, we need to adjust our perspective and look at how offices function and the nature of business. Communications today

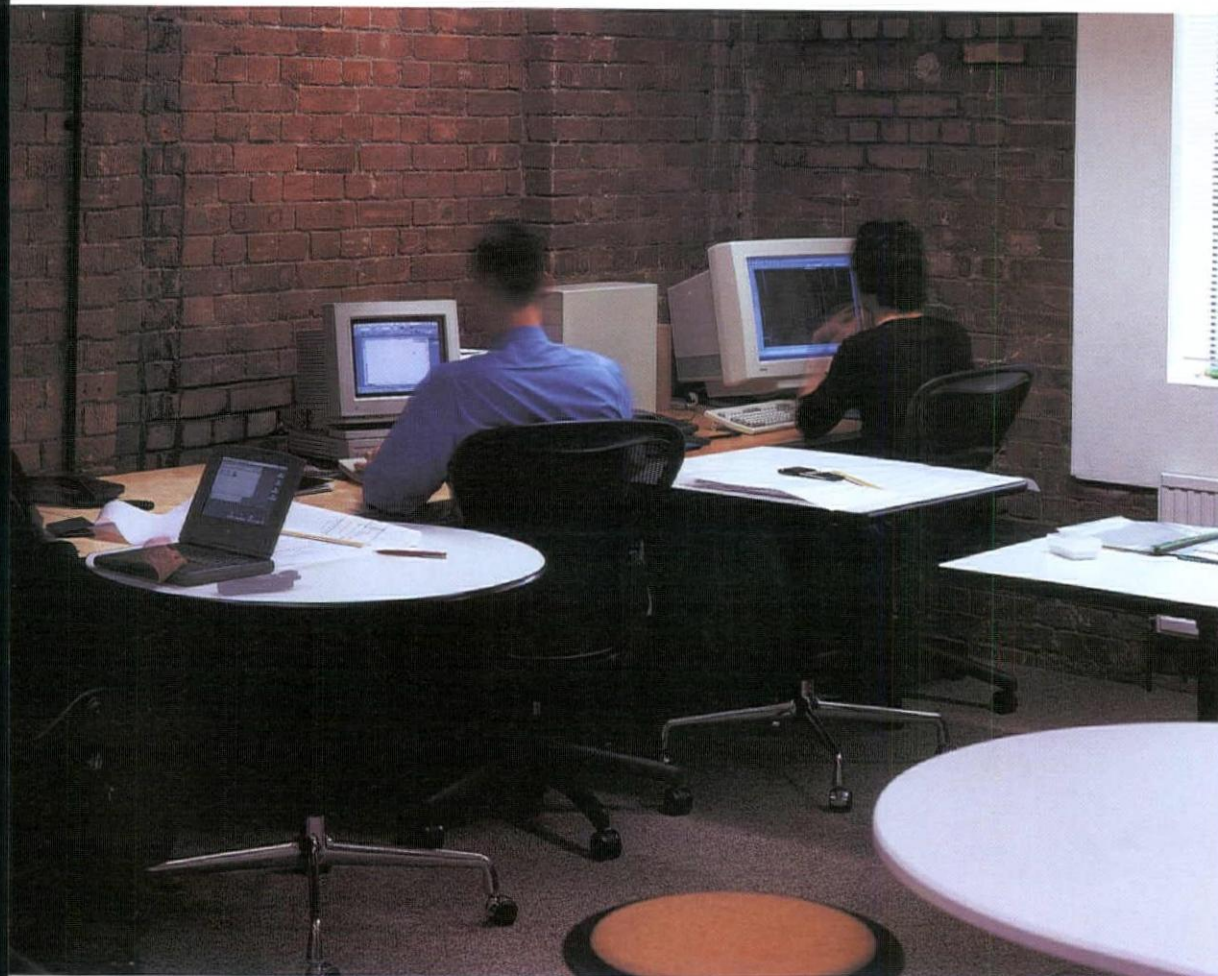
¹ Pick-up zone on right and club.

² Club in detail.

OFFICES, KING'S CROSS, LONDON
 ARCHITECT
DEGW

3
 Project team zone.
 4
 Enclosed Hives.

5
 Hub: touch-down zone.
 6
 Pick-up zone.



3



4

mean that part of the modern workforce *can* be more mobile and employees do not necessarily have to occupy the same space every day at the same time. Expensive, energy guzzling office space can therefore be shared and thereby reduced. Hot desking supplies the answer.

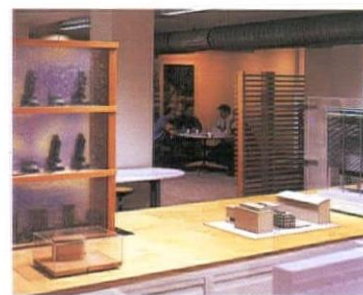
As a rough analytical tool Duffy has devised a series of descriptive categories including Hives, Cells, Dens, and Clubs, which are characterized by the degree of autonomy allowed the staff, the extent to which they communicate and share resources.

DEGW seems to fall into the Club class which is 'characterized by high levels of both concentrated and interactive work, high levels of autonomy and a great deal of shared support of different kinds'.

Their offices, in a handsome Edwardian warehouse overlooking the Crinan basin, look quite conventional. This is because the revolution is all but invisible. Part of it indeed is under the floor where the new high performance cabling is concealed, necessary to service sophisticated desk-top telecommunications and data networks. Detailed analysis of the working habits of staff revealed there were four main groups each of whom used the office in a different way. The groups ranged from the nomadic who were out of the office nearly half the time, among whom Duffy and his partner, John Worthington, were numbered, to resident support staff, such as secretaries and accountants, who were in the office but away from their desk about a third of the time.

Terrain has been rearranged accordingly into work settings designed to provide the right environment for the task. Some zones are for communal workstations, others provide enclosed cells for private study and meetings; administrative staff have permanent workstations while storage and research takes place in the document centre and library. There are also pick-up points for parcels, and mail/fax. Such arrangements require the help of technology and perambulating staff are issued with laptops, digital cordless handsets and personal voicemail systems.

Like Gehry's Chiat-Day in New York (AR January 1998), the DEGW designers and architects work without visible personal clutter or hierarchy – the chairman picks up a handset and plugs into an available



6

Architects
 DEGW
Flooring
 DLW (linoleum), Millikan (carpets)
Lighting
 Erco, Zumtobel
D-line ironmongery
 Allgood
Floorboxes
 Ackerman
Mobile tables, desking, screens, storage
 Bisley
Stools
 Wilkhahn
Seating
 Tecno (tub); Knoll (easy), Herman Miller (task), SCP (benches), Hille (high task)

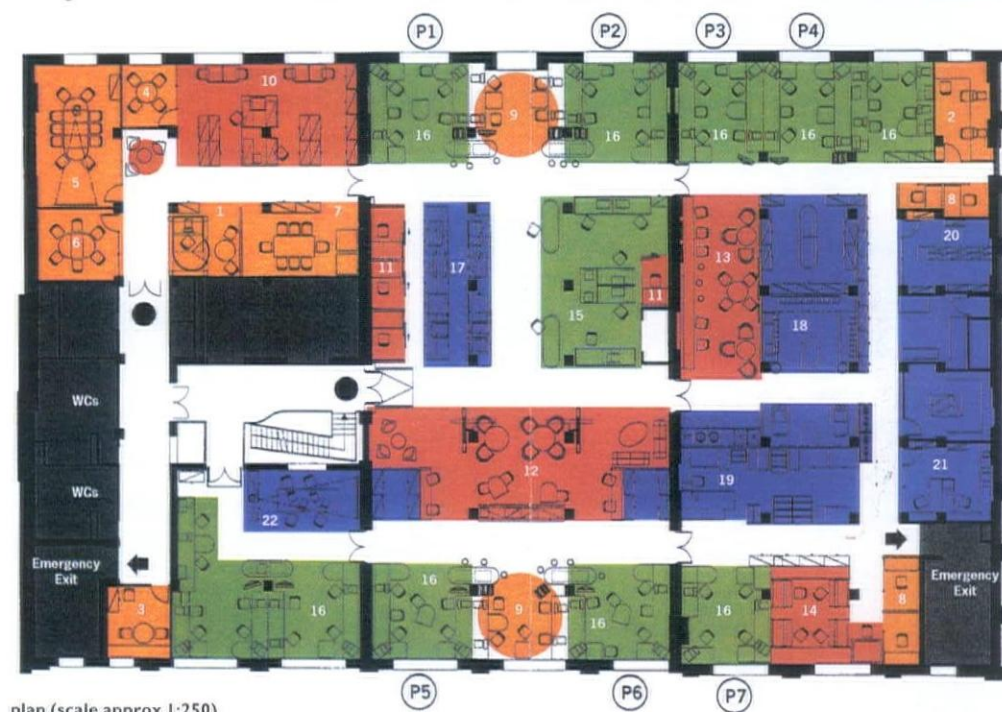


computer like anyone else.

The penalty of such a system may be a certain daunting impersonality, which may not matter to the staff (to a journalist pronouncements about a 'clear desk' policy are bound to be anathema). In New York Gaetano Pesce got over the problem of impersonality by creating a giant playpen for Chiat-Day personnel who, initially suspicious, said they loved its liveliness and informality. Here at DEGW the ambiance is sober, but the office feels civilized and spacious, and is elegantly furnished. The reality is that DEGW does make sense, and if prescient may spell a reduction in, if not the demise of, dumb office developments.

PENNY MCGUIRE

1 The New Office by Francis Duffy, published by Conran Octopus. Reviewed AR January 1998, p88.



plan (scale approx 1:250)

BOOKABLE

- 1 Study booth
- 2 Quiet room
- 3 Meeting room 3
- 4 Meeting room 4
- 5 Meeting room 5
- 6 Meeting room 6
- 7 Meeting room 7
- 8 Open study
- 9 'Independent' area

TOUCHDOWN

- 10 Knowledge Centre
- 11 Study booths
- 12 The Club
- 13 The Hub
- 14 The Heritage area

HOMEBASES

- 15 Administrative Support
- 16 Project teams

SUPPORT

- 17 The Pick-up zone
- 18 Fax/mail area
- 19 Document centre
- 20 Sample library
- 21 Prep/binding area
- 22 Training area

● ENTRANCE

➔ EXIT

○ P1 PROJECT TEAM AREA

Record levels

**OFFICES, TURNHAM GREEN,
LONDON**
ARCHITECT
JESTICO + WHILES

Considered against DEGW's offices (p87), Jestico + Whiles' headquarters in Chiswick for Independentie record company, provides a less impersonal alternative, according to the Duffy rating, somewhere between Den and Club. The immediate impression on entering the building is of an architecturally lively kindergarten. The brief asked for offices that would reflect the firm's youthful character ('grunge' was specified). Using

raw metal, low-cost industrial components and asymmetry, Jestico + Whiles have invested their scheme with invention and vigour – qualities needed for survival in a notoriously fierce industry.

Independentie has been inserted into a nineteenth-century drill hall on the south side of Turnham Green. The hall is pressed up against a towering brick warehouse which, built at the turn of the century, has been converted into flats. Its

proximity to the record company meant the latter's noisier activities had to be sound-proofed.

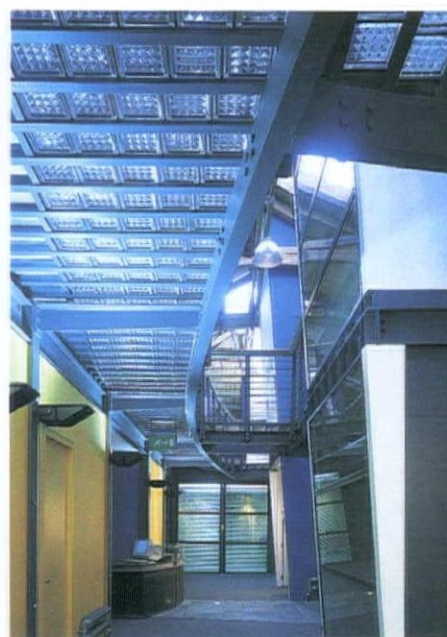
When acquired by the client, the empty and neglected hall was in danger of collapse. It was plainly worth saving, its main delight consisting in a remarkable interior volume and rugged structure. Seen from outside, its squat articulated shell of brick and terracotta belies the grander interior scale which is articulated by vaulting



1



2



3



4

1 New glazed entrance giving intimations of the interior.

2 Mezzanine walkway and reception desk, designed by the architects with rusted metal base and counter of crazed glass.

3 Canted walls and mezzanine walkway paved with glass blocks over ground floor corridor.

Offices for a small dynamic record company, inserted into a nineteenth-century drill hall in west London, have been made-to-measure and made to reflect the liveliness of the business.

arches of laminated wood, each muscled by bolted iron ties. More or less hemmed in on three sides, the building looks inwards with daylight penetrating a series of small windows in the main north face, and reconstructed lights let into the ridge of the roof.

At first glance, the single volume provided by the hall was at odds with the client's request for acoustically separated compartments for the different parts of the business – creative,

marketing, finance, legal, management and so on. But in this conversion, as in past schemes such as the one for the British Council in Madrid (AR February 1994), Jestico + Whiles' interventions have been imaginative and co-exist happily with the existing structure.

Having established a central well of clear space up to the roof, the main intervention was the construction of a new mezzanine around it. Offices on both floors are confined to the

perimeter so that the centre of the building becomes the public domain. At mezzanine level, a curving metallic walkway bridging the central well and only partly obscuring the central corridor beneath gives access to offices tucked under the eaves. Lined by open balustrading, the walkway is paved with an asymmetric pattern of prismatic glass blocks which on the underside form a ceiling of sprinkled light. Beneath, the corridor running on each side of

the reception and staircase breaks at either end into airy double-height spaces – one for waiting visitors, one for administrative staff – and a cluster of offices. The simple ordering allows you to appreciate the original volume, lets daylight into the ground floor, and establishes a division between public and private.

A single volume and rectangular plan could have meant regimentation; but the architects have made restrained



5

4 Stair tower at mezzanine level leans towards walkway and provides odd glimpses of the building through an irregular pattern of windows.

5 Open seating area for visitors on ground floor.

6 Mezzanine offices under eaves and laminated wooded roof trusses.



6

use of asymmetry to create an impression of liveliness and eccentricity. The plan is not quite regular and division of space around the perimeter yielded offices of different shapes and sizes. At the same time, another dimension of eccentricity is added by walls being canted very slightly into the public domain either side of the entrance and by the irregular pattern of slots cut into partitions that frame odd views.

Though largely glazed, the rooms seem intimate, like

private studies; they are individually furnished and cluttered with the collectable paraphernalia of the music industry. Their privacy is partly due to the notion of ownership but also to their necessarily good sound insulation. The floor and partitions of mezzanine offices where listening to music and experiments take place have been heavily insulated, as has the roof. Downstairs, only the purpose-made screens giving onto the corridor are composed of acoustic glass

sealed with neoprene strips.

Raw finishes, expressed fixings, and walls painted to form blocks of strong colour have been worked into a robust and agreeably untidy composition. The inhabitants like their offices and the place seems to work well. The building is heated and ventilated by a compact air-handling system; and a small heat exchanger ensures that energy consumption is kept to the minimum. Rooflights can be opened manually.

This is a modest scheme that

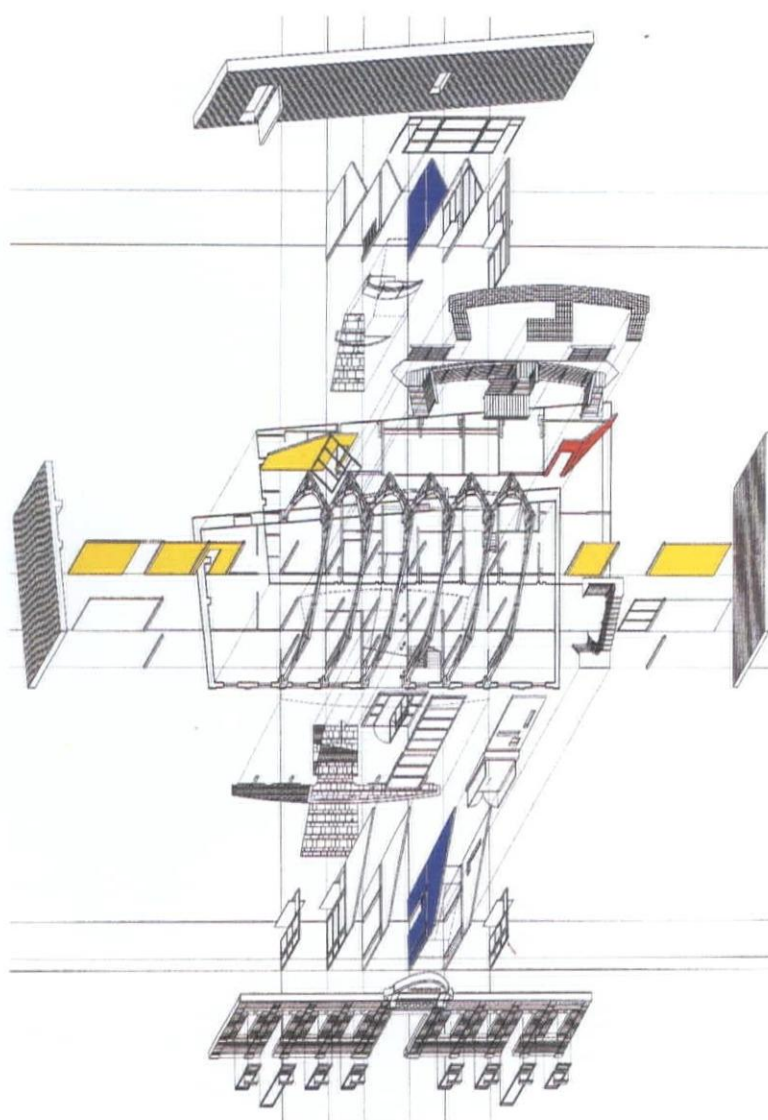
manages to do a number of things well; and considering the original purpose of the drill hall, the muscularity does seem appropriate. PENNY MCGUIRE

Architects
Jestico + Whiles
Photographs
Paul Ratigan
Carpets
Interface Flooring
Glass blocks
Nazeing Glass
Firescreens
Fenlock Hansen
Lighting
The Light Corporation

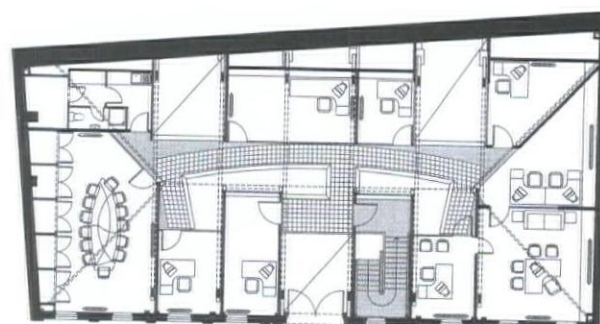
OFFICES, TURNHAM GREEN, LONDON

ARCHITECT

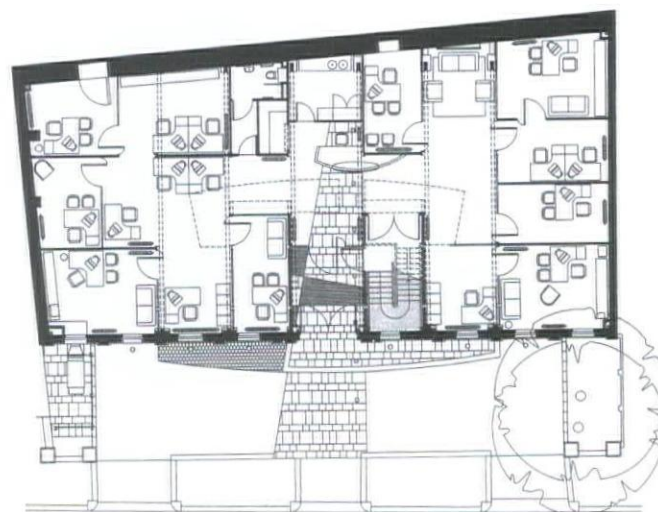
JESTICO + WHILES



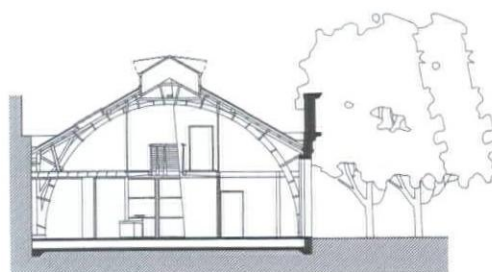
exploded projection



mezzanine plan



ground floor plan (scale approx 1:340)



south-north section



OFFICES, VIENNA, AUSTRIA

ARCHITECT

CLAESSON KOIVISTO RUNE

ARKITEKTKONTOR

I Service core interior is painted red, the apertures intense against the pure white walls and ceiling, and tinted white oak floor. Arne Jacobsen's Swan chair from Fritz Hansen.

Paper chase

Design of new penthouse offices in Vienna for a Swedish paper company plays on the origins and cultural context of the client, and provides staff with a three-dimensional work of contemporary art.

OFFICES, VIENNA, AUSTRIA

ARCHITECT

CLAESSON KOIVISTO RUNE ARKITEKTKONTOR

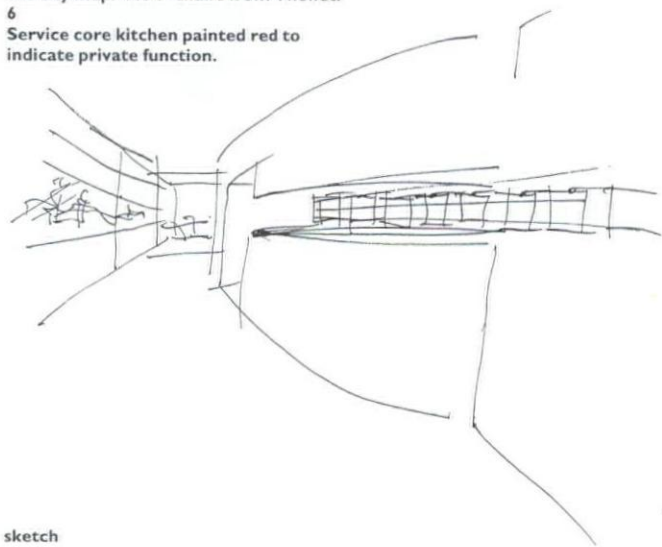
2
Offices give onto surrounding terrace.
'Minimal' tables and benches from Nola,
by Eero Koivisto and Ola Rune.

3
Slot lining corridor contains white
squares of the firm's different papers.

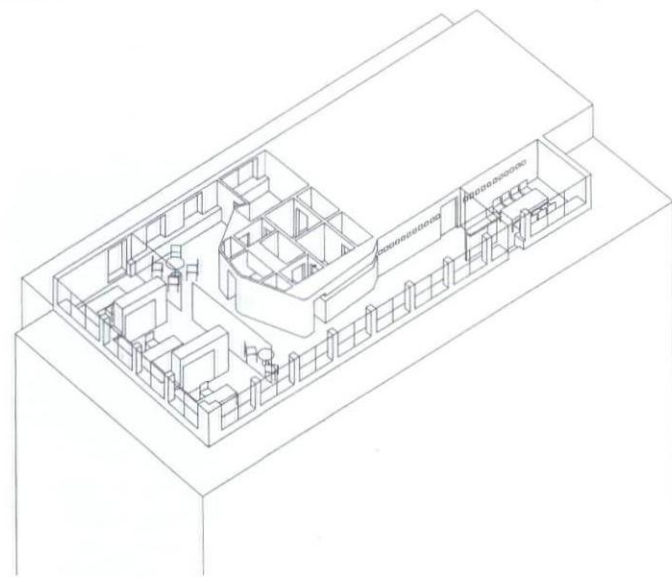
4
Service core enclosed by a mini
Ringstrasse wall.

5
Glass wall with sand-blasted pattern of
the city map. 'No 9' chairs from Thonet.

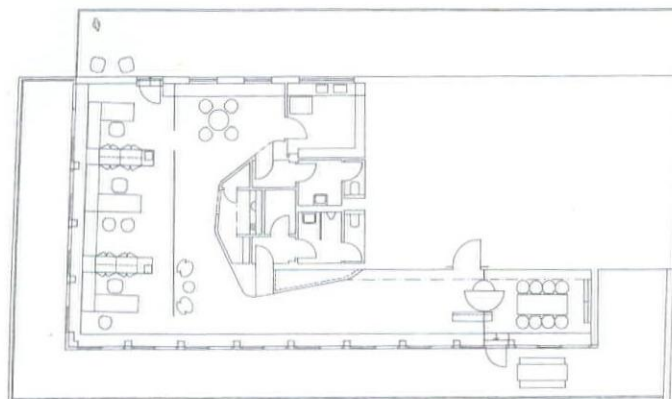
6
Service core kitchen painted red to
indicate private function.



sketch



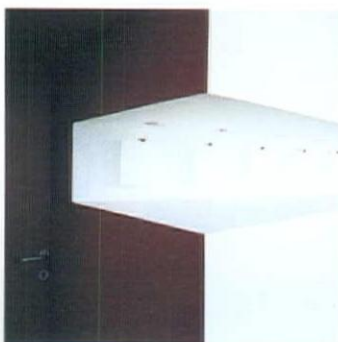
isometric



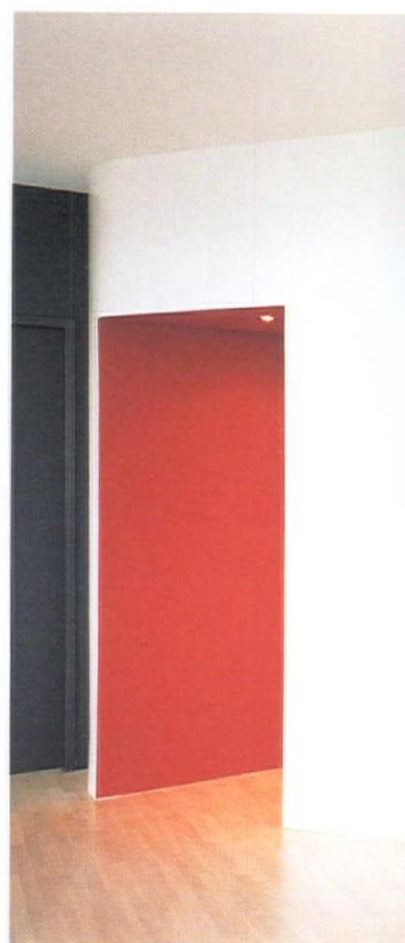
plan (scale approx 1:650)



2



3



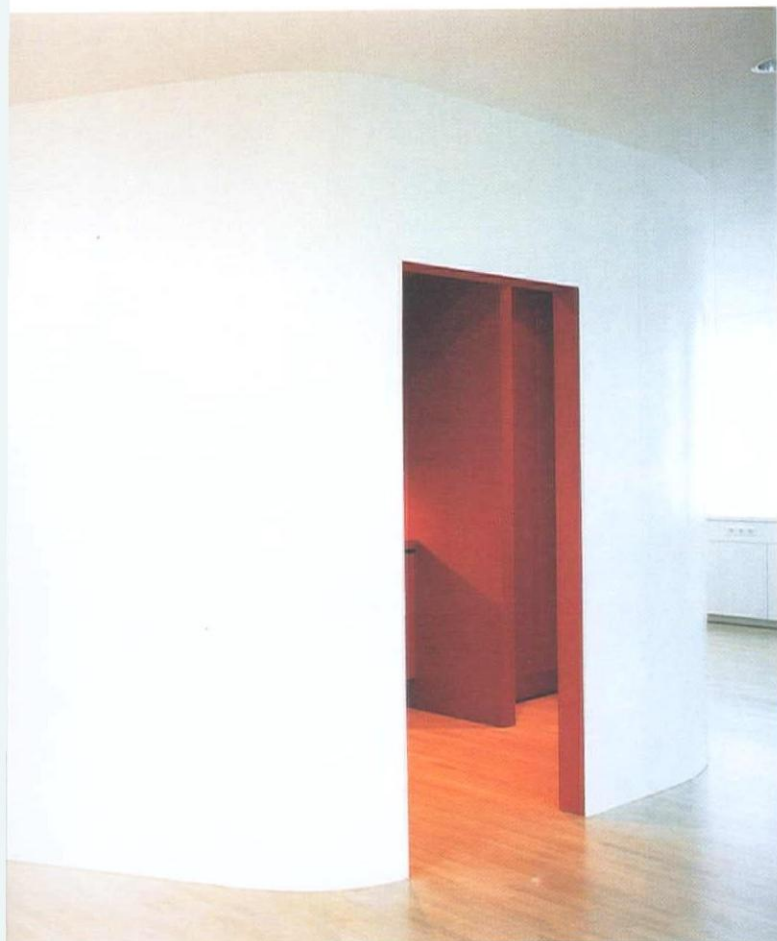
4

Claesson Koivisto Rune Arkitektkontor is a group of young Swedish architects with, among other things, a series of remarkable idiosyncratic interiors to their credit. The clarity of these schemes, the manipulation of pure white planes and austere use of a few materials plainly has Modernist origins, and the deployment of brilliant colour betrays a painterly sensibility. But the architects' approach to site and brief suggests more labyrinthine intellectual processes at work.

In designing new offices in Vienna for AssiDomän, a leading Swedish paper and cardboard manufacturer, the practice sought to inject some magic and counteract what was felt to be the industry's dull public image. These small offices are one of several projects in Europe

designed by the practice and though the language and materials used in each case are similar, the character of each reflects a different context.

There is no escaping the drama of the Viennese context. The offices have been installed in a penthouse on top of a high modern block. With windows on three sides, giving onto a surrounding terrace, there are splendid views over the city on all sides. Small metal signs beside the windows indicate important buildings and a set of coin-operated binoculars is ready for use. On entering from the main building, you pass into a long luminous corridor with the panorama on one side, and down the other side a slot in which is displayed white squares of the different papers produced by the firm, the effect being reminiscent



5

of the textural white exhibits of Piero Manzoni (the Italian avant-garde artist of the '50s and '60s).

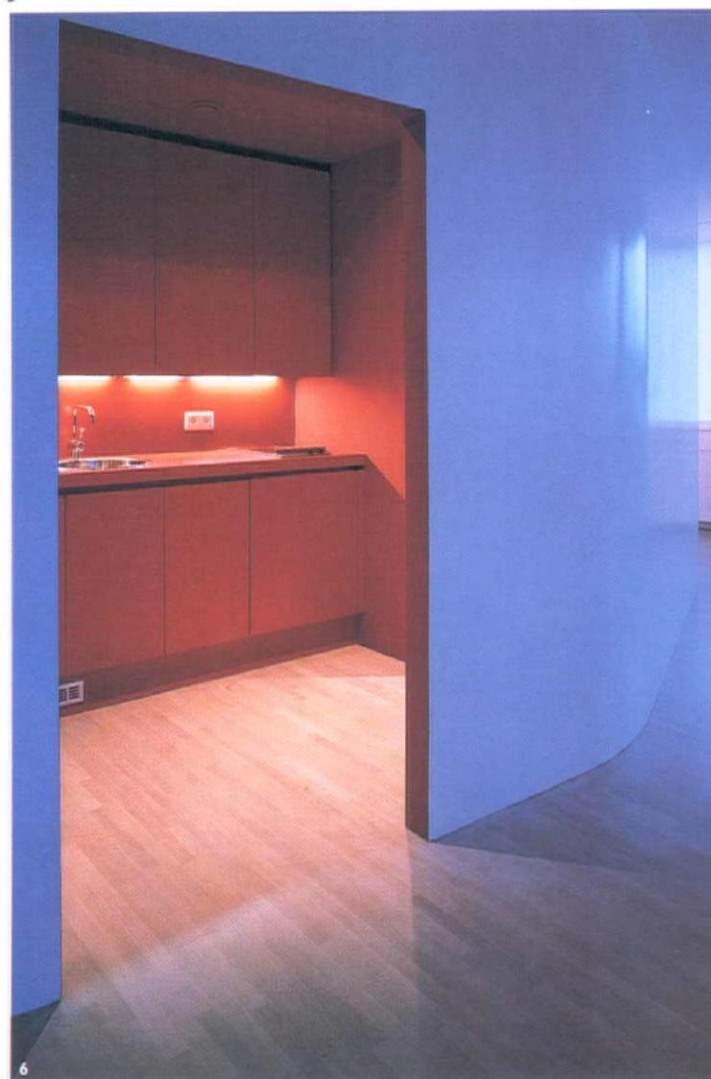
In the main airy space which is divided into private and communal areas, reflection of the context takes a literal turn. What flashes of colour there are in a predominantly white interior were suggested by the red elements of the Austrian flag – and say the architects, the green of Swedish forests. Workspaces at the far end, set against windows, are divided from communal areas by a glass wall patterned with a sand-blasted map of Vienna that provides a degree of privacy and diffuses pale green light. An inner service core containing a kitchen, lavatories and storage rooms, is enclosed by a wall tracing out the path of the city's Ringstrasse; this is not a simple

conceit. The odd shaped pod with off-set doors is an expressive note in an otherwise orthogonal space; the intense red interior of this body, which can be perceived as a play on private functions, is experienced as a series of glowing apertures so that the whole becomes a piece of abstract art.

Like Jestico & Whiles (p90) these architects have in their individual way used design to extrapolate on the idea of the office. In the process, this young Swedish group has produced spaces in which the demarcation between art and architecture is blurred.

PENNY MCGUIRE

Architect
Claesson Koivisto Rune Arkitektkontor
Photographs
Patrik Engquist



6



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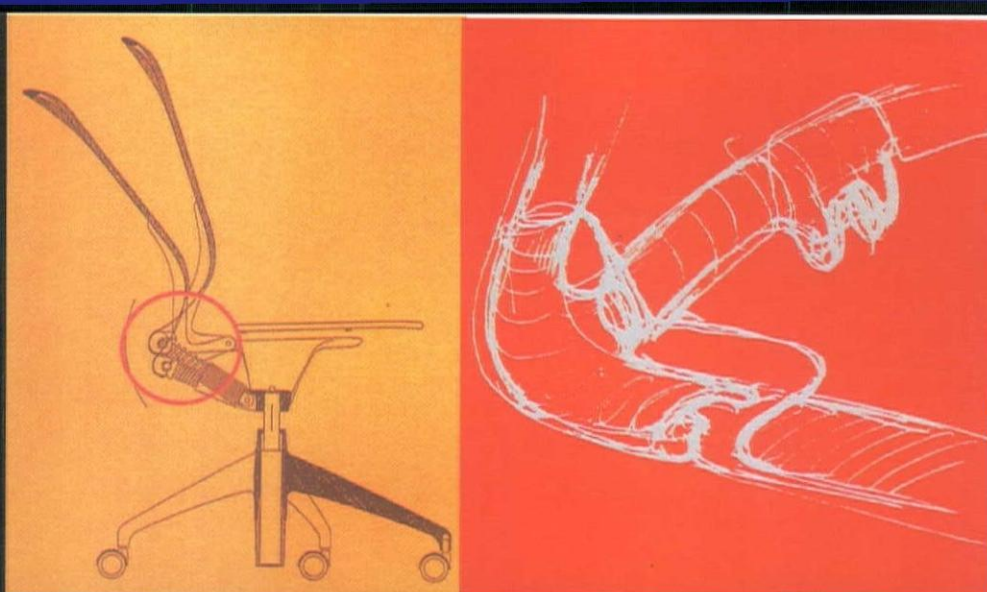
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products survey

PS



Alberto Meda is one of Italy's most interesting and refined designers. Having trained as a mechanical engineer he left the Politecnico of Milan in 1969 and went to work for some of the firms most instrumental in sustaining Italy's extraordinary talent for product design: Kartell, where he learned about plastics technology; then Gaggia, the coffee machine manufacturers; and Alfa Romeo. His success as a freelance designer began in 1984 with a lamp for Luceplan and he has since won the Compasso d'Oro twice as well as other important awards. His success is due as much to his engineering skills and predilection for graceful stripped down form, as to an abiding interest in using new materials and technology. As is often the case with the best designers, his approach to design is that of the traditional engineer/architect. Meda was responsible for the Light Light Chair, designed in 1987 for Alias, which is one of a handful of outstanding designs produced in the last dozen years. Among his other designs, the chair is part of the New York Museum of Modern Art's permanent collection; and Rolf Fehlbaum, Chief Executive of Vitra, made it one of the '100 Masterpieces'

exhibition at the Vitra Design Museum in Weil am Rhein.

'Anyone holding the chair in their hands is astonished by its lightness, and anyone sitting on it marvels at the sense of security on what is a slim and visually frail object', he observed.

In collaboration with Vitra, Meda has now designed a similarly essential conference and office chair. Aesthetically an object of harmony and balance, it has been specially detailed in every respect. Though it is equipped with the now customary synchronized mechanisms for individual adjustment to the occupant's body, it appears to have no mechanical parts at all. This is because the mechanism is an integral part of the structure.

The tree-braced seat and back can be upholstered in leather or fabric; and partly upholstered armrests can be slotted into the aluminium underframe. Like the classic Eames chair, which is its relation, the pared down structure of the more technologically sophisticated Meda chair is pleasing from any angle, with a grace that is characteristic of Meda's work.

Vitra

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The office



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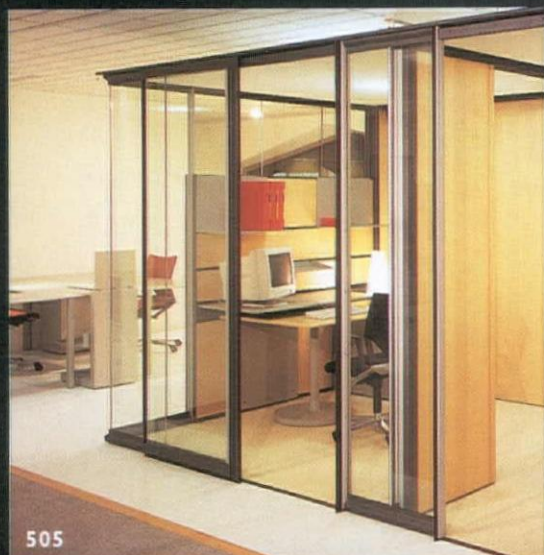


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505

Progetto 25 is an infinitely flexible and minimal system with which to divide up space or create your own private sound-insulated office. More architectural furniture than partitioning, it was designed 15 years ago by Luca Meda for Unifor, since which time the firm has continually refined and extended the system.

The system provides full-height free-standing walls of structural glass panels held together without mullions by silicone-free glass jointing. The glass is secured by a perimeter frame and sealed with closed cell neoprene foam. The system includes sliding glass and single-glazed pivoting doors.

The glass is secured by a perimeter frame and sealed with closed cell neoprene foam. The system includes sliding glass and single-glazed pivoting doors. Aluminium-framed service spines, finished in perforated metal, wood veneer, fabric or glazed panels, incorporate cable routing for power, data and telecoms with or without carrier baskets and outlet modules. They can be fitted with horizontal rails to support shelves, wall units and work surfaces.

Progetto 25 is free-standing, can be installed free of the ceiling and is largely assembled in the factory. The walls can easily be reconfigured – in the manner

of desking systems – using Allen bolt connectors. The system accepts the firm's Misura and Mood desking and tables which provide a variety of different work surfaces for VDU and other sophisticated equipment. Progetto 25 is available from Ergonom.

506

This supremely elegant wooden bookcase is part of a larger system of office furniture called Naòs, designed for Unifor by Pierluigi Cerri, and also available from Ergonom. The shelving is modular and consists of a wooden facing that can simply accommodate shelves and small cabinets with plate glass doors. In section, the shelves curve to a slender point so that seen head-on they appear horizontal slivers of wood of one thickness. The system also includes equally minimal mobile storage units and modular tables.

Ergonom

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Fax: +44 171 481 3368

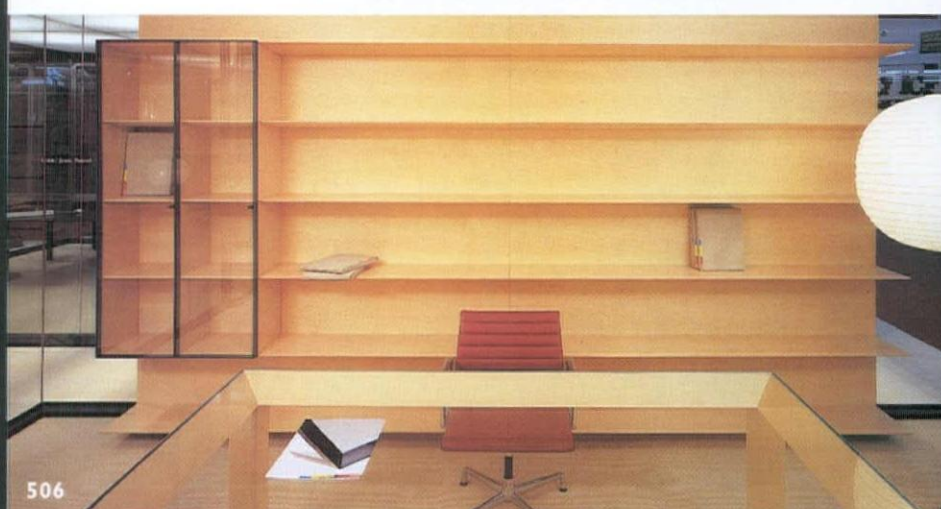
Unifor S.p.a.

Tel: +39 2 967 50223

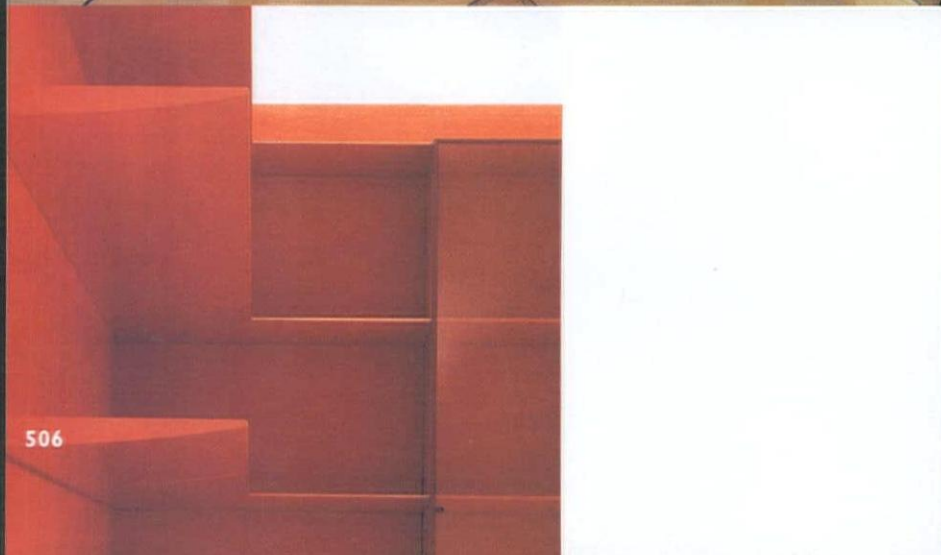
Fax: +39 2 967 50859



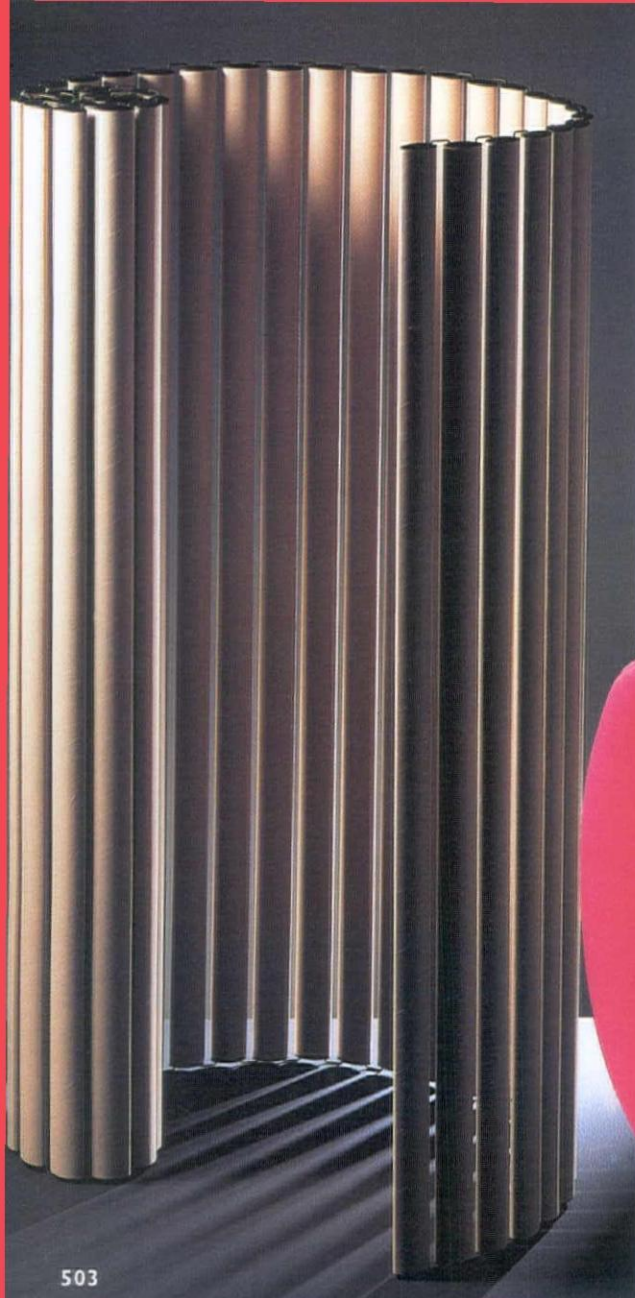
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506



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503

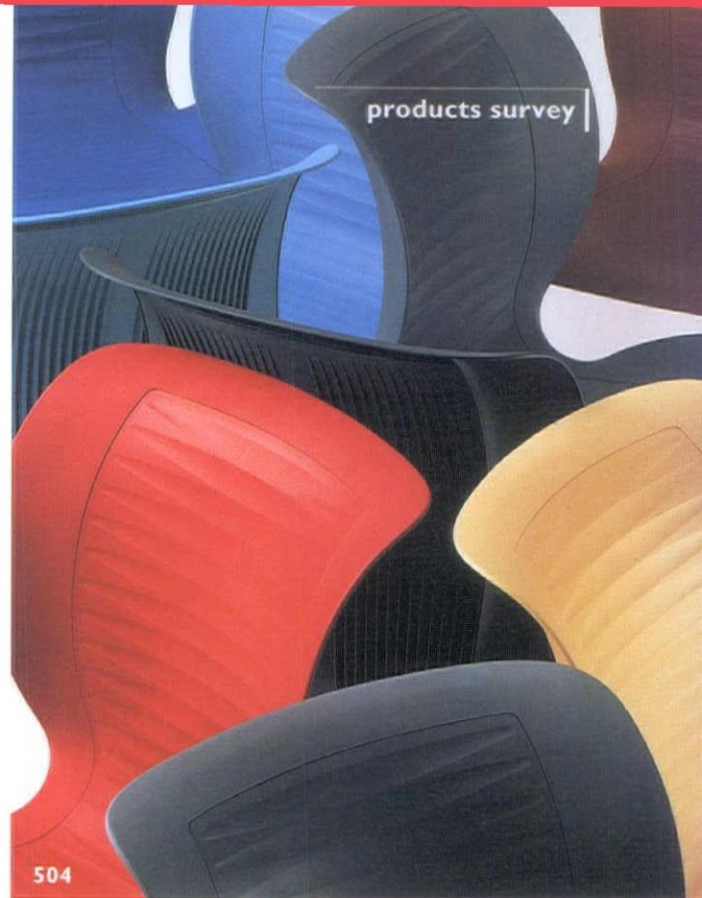
Fritz Hansen's early collaboration with Arne Jacobsen (AR December 1996, p81), which began in 1934, produced some of the finest pieces of modern furniture ever designed. They include the moulded plywood chairs of the early '50s – the Ant and the 3107 – the designs of which encapsulate the clear Modernist spirit informing that collaboration. These timeless pieces, seen today in buildings all over the world, were followed by other classics. The voluptuous Egg **502** and Swan chairs designed in 1958 for the Royal Hotel in Copenhagen are still in

production but are now covered in Kvadrat's vivid fabrics. Brilliant colour has the effect of emphasizing fluid form and making them seem jewel-like. That early collaboration was followed by other partnerships with a succession of eminent figures – among them, the architects Verner Panton, Vico Magistretti, and Jörgen Rasmussen, and the industrial designer Burkhard Vogtherr – while early masterpieces by Poul Kjaerholm and Kaare Klint form part of Fritz Hansen's collection. Though their works are idiosyncratic and immediately identifiable, these designers are unified

by a common adherence to Modernist principles. The same adherence is evident in Fritz Hansen's latest furniture on show in its new white London showroom in Clerkenwell.

503

Viper is a simple flexible screen, designed by a young Danish furniture designer called Hans Sandgren Jakobsen. The screen is made of long oval cardboard tubes linked by hinges which form leg ferrules and ensure the screen's stability. Assembled without tools it is simply clicked together. The screen is elegant, can be made to shape any enclosure you



504



502



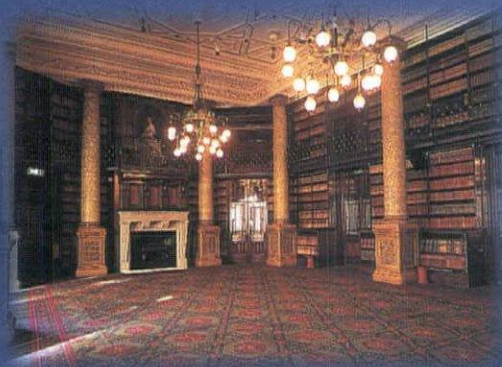
want and can be made more or less transparent; it can be easily rolled up, tucked under your arm and carried away. It is also easy to clean for the cardboard tubes have been treated with a moisture and dirt-resistant material.

504

The Ensemble chair, by the Danish architect, Alfred Homann, is available in new colours and with more accessories. The stackable chair, which won 'Design-Innovation', Germany's design prize, has an elegantly curved shell moulded from a specially developed and recyclable synthetic material which is threaded during

manufacture with air ducts. So the shell is immensely comfortable, and is light to carry. Muted new colours – corn, chestnut, poppy, sky blue, ocean blue and sea green – devised by Homann add an extra dimension. The metal frame which has ingenious rocking toes on ball bearings is now powder coated in black-grey or silver-grey. The firm has introduced arm- and writing tablets in two sizes which can be swung down out of the way, as well as an improved linking device and transport dolly.

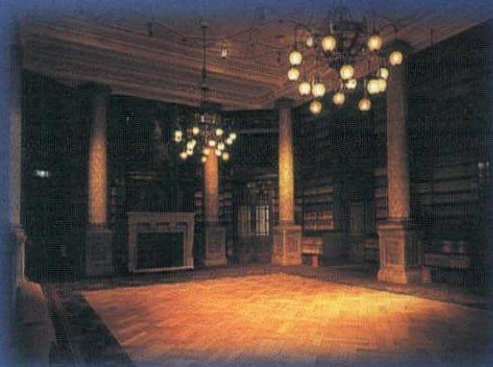
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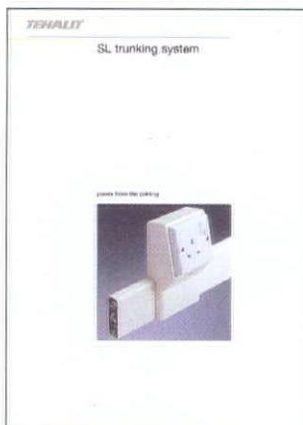
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Photo Location: One Whitehall Place, Conferencing Center, London
From top: Conference Setting, Ballroom Setting, Dining

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Specifier's information



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The trunking bases are designed to take low or extra low voltage cables, separated by two or three compartments. The range is available in a selection of five colours, with a comprehensive range of accessories. For further information tel: 01952 677899 fax: 01952 670271.



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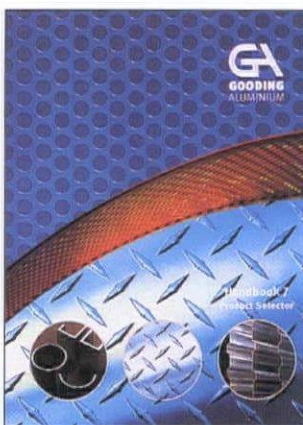
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Solaglas

The Glass Facts factfile is a comprehensive guide to the range of glasses available from Solaglas and Saint-Gobain. Produced in A5 format, it has been beautifully designed to make it easy to use and a pleasure to work with. Aimed at professionals, it contains a series of technical tutorials on glass and gives detailed product information complemented by photographic case studies.

For further information please use the enquiry number below, or visit our website: <http://www.glassfacts.co.uk>



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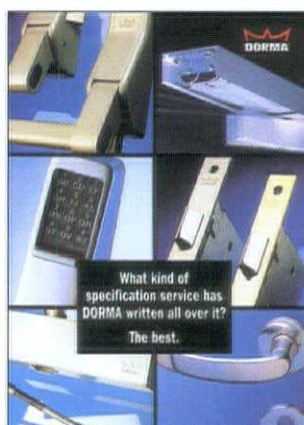
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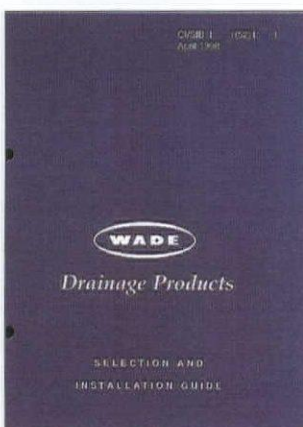
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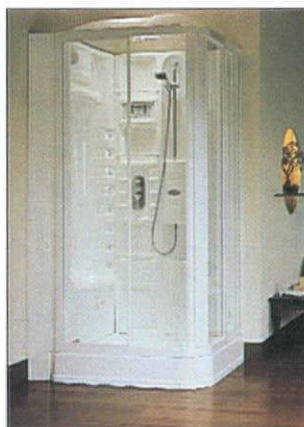


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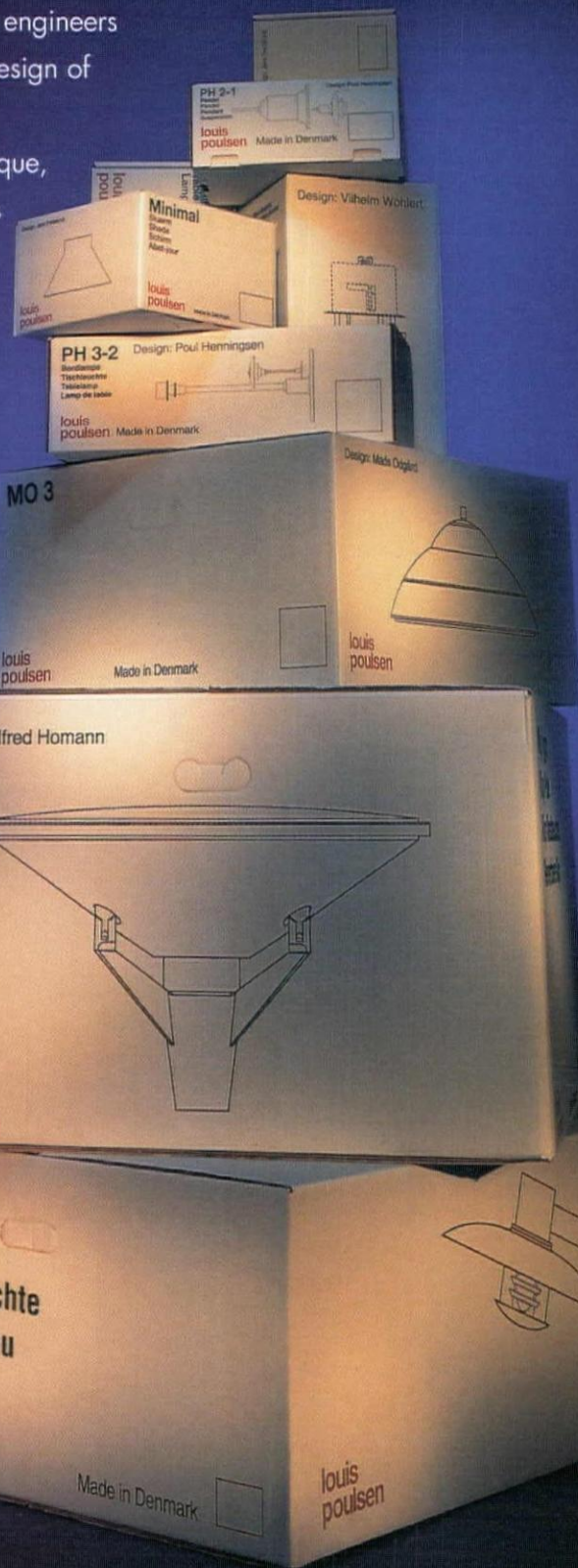
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The world in perspective

ARCHITECTURAL REPRESENTATION AND THE PERSPECTIVE HINGE

By Alberto Pérez-Gómez and Louise Pelletier.
The MIT Press. 1998. £34.95

This book covers an enormous subject area with considerable skill and erudition. Focusing on the Western tradition of art and architecture and how the visual world has been reconstructed by philosophers and artist-architects, it commences in antiquity with Euclid, Plato and Vitruvius, and concludes in the twentieth century with Merleau-Ponty, Heidegger and Le Corbusier. This is not however a straightforward survey of architectural representation. Indeed, the authors are critical of texts which describe perspective theories through a 'progressive' history of optics and painting. Instead, they set out to relate a complex genealogy in which perspective is described as a 'hinge' for architectural representation, one which connects profound notions about the making of images and of buildings.

While Vitruvius established the essential drawings required of a building, the authors argue that Alberti was the first to set out the fundamentals of the laws of perspective. These underwent several centuries of refinement – brought about by a clearer understanding of the physiology of the eye, and of light – until, that is, the realities of single-point perspective were undermined by astronomers and a changed philosophical viewpoint.

Enlightenment induced technology led to photography and its painterly antidote Cubism: Le Corbusier invented the *promenade architecturale*. Now there is computerized architecture in cyberspace, about which the authors are deeply sceptical. Nevertheless, time marches on, and the Internet will undoubtedly be used to discuss the many merits of this enthralling book. ROBERT TAVERNOR

Bognar regis**WORLD CITIES – TOKYO**

By Botond Bognar. London: Academy Editions. 1998. £75

Even as the ink was drying on its printed pages, events were conspiring to undermine one of the central propositions of this book: 'Just as Paris was the "capital of the nineteenth century" and New York the "New Babylon" of the twentieth century, Tokyo is destined to become the capital of the twenty-first century'. Recently, this has become no longer so certain. In 1997, the Japanese economy saw negative growth for the first time in 23 years. Land prices have fallen to

one quarter of 1990 peak levels. Companies are going bankrupt at record rates. Unemployment (virtually unknown before) rises. Increasing numbers of homeless live on the streets.

In other words, in many ways Tokyo is pretty much like many other major world-cities. If you prick it, does it not bleed? Too often, Western correspondents have reported the city in rather breathlessly over-awed prose, which sometimes appears to have been penned while jet-lagged after a brief visit. Compare it with *Blade Runner*. Out-of-this-world, etc, etc.

Botond Bognar, however, knows the city well, and portrays it well. Explaining that Tokyo invites description but defies analysis, he collages together a series of quotes, essays, facts, histories, statistics and photographs, which, by their contradictions and complexity, eloquently introduce the rich character of the city. He even dares to suggest, accurately but much against the received wisdom in the West, that Tokyo is, in fact, a comfortable and humane city in which to live.

Amusingly, Bognar's streetscape photographs are captioned with not only the year but also the month – necessary data in ever-changing Tokyo. And wisely, although – or perhaps because – his photographs are so excellent, Bognar has chosen to minimize their size, knowing that while the life of a city can never really be represented in a text, it is probably a better medium than film or photography, which inevitably allow the picturesque to overwhelm.

In the major part of the book, though, in which he describes Tokyo by comprehensively cataloguing its significant architecture, the photographs naturally prevail. Here, Bognar has played an even hand – regardless of quality the buildings each get almost the same number of pages and all are described with short, usually uncritical, comments implying that, like the city itself, the architecture invites description but defies analysis. Bognar's numerous previous writings, however, show him to be a knowledgeable and astute critic of Japanese architecture. Clearly, he has decided that, in this case, breadth can be as fluent as depth, and this may be correct, but for the vast majority of his potential readership, who have never been to Tokyo, and who will never stand in these buildings, extra explanation – textual, graphic and photographic – of several of these buildings, might help convey a clearer idea of the thinking that has guided and will guide, the architecture of this city.

One of the chief contributions of this book, however, is Bognar's proposition of a new way to understand the miscellany of Tokyo's architecture. Subdivided into themes 'Cities of Fiction and Illusion'; 'The City of Screens'; 'The City of Resistance', and so on, we discover an

intelligent and convincing way to 'read' these confusing forms.

This is, essentially, an extremely interesting and illuminating study, masquerading as a coffee-table book. Within its handsome covers and elegant pages it is uneven – some of the facts and quotes and buildings are dull, some fascinating; some of the invited essays are irritating, some, like that by Kazuo Shinohara, are brilliant. This unevenness seems to be intentional. It reflects the erratic character of the city in which, as Shinohara says here in his essay: 'To ensure its continued vitality, progressive anarchy must constantly alter (Tokyo's) structure. Vitality is in a sense synonymous with urban freedom. A city that is ceaselessly generating such vitality is mankind's greatest unintentionally created machine'. TOM HENEGHAN

On a sticky wicket for half a century**BEHNISCH AND PARTNERS: 50 YEARS OF ARCHITECTURE**

By Dominique Gauzin-Müller. London: Academy Editions. 1998. £45

This is a strange and disappointing book which suffers from a lack of any creative or imaginative overview, or indeed of any charm, and leaves the reader to do most of the hard work which proper architectural criticism requires. Inexplicably subtitled '50 Years of Architecture', it starts with a project scarcely 40 years old and blunders through the ensuing decades with a combination of bland descriptions of buildings that are 'interesting', 'inviting' or 'successful', of photographs that invariably fail to do justice to their subject, and of various repetitive quotations from the maestro which fail to throw any light on anything valuable. There is not enough on the magical lacy structure built for the Munich Olympics, only a passing reference there to the collaboration with Frei Otto (did he and Behnisch fall out?), and nothing at all on the ways of working with the environmental artists who have had such an impact on so many of Behnisch's buildings. There are not enough plans (the famous cascading staircase hall at the Catholic University of Eichstätt is incomprehensible in two-dimensional reproduction without one) and there is no attempt whatsoever at any theoretical analysis. As for Herr Behnisch himself, we hear early on that he 'only rarely does any designing himself'; indeed, he 'only uses a pencil in emergencies'. So what *does* he do?

The agitated stirrings of a nervous, even disruptive, architecture that came fluttering off the elevations of Eiermann's Neckermann works in the late '50s have now conquered the heart of the German establishment, as illustrated by Behnisch's new plenary chamber for

the Bundestag. However, even those who share the AR's enthusiasm for this low-church, high-minded, finely-detailed northern architecture will find no clues in this book as to what it means. Is the edgy unmonumentality of post-war German architecture reacting to the overblown classicism of the 1930s, or, in fact, to the dull, dusty, lumpy Germany of the early Federal Republic?

TIMOTHY BRITAIN-CATLIN

Mosque must

THE MOSQUE AND THE MODERN WORLD: ARCHITECTS, PATRONS AND DESIGNS SINCE THE 1950s

By Renata Holod and Hasan-Uddin Khan.
London: Thames and Hudson. 1997. £42

I admit that I came to this book with some apprehension as I thought, wrongly, that the material would be dry and tedious. As with an encyclopaedia, the book encourages you to jump from one entry to the next almost on a whim, which is a good way of getting to know the text. It is not a book to sit down with and read from cover to cover.

Both authors have had a long association with the administration of the Aga Khan Award for Architecture. They are extremely well travelled, and over the years have met architects and patrons in all fields of Islamic architecture, not only mosques. It is the breadth of their background knowledge through their numerous contacts which ensures the success of the book. They have also had access to the AKAA archives in Geneva, which house the hundreds of reports by technical reviewers and the thousands of reports nominating buildings serving Islamic communities around the globe. These archives chart architectural developments and fashions over the last four decades.

The mosques are split up into six groups, each with its own chapter, based on the type of patron: individuals; states; local government; public and commercial institutions; local communities and Islamic centres in the West. The diversity of the subject is evident: on one page there are the marvels of Louis Kahn's exposed concrete ceiling of the prayer hall of Shere-e-Bangla Nagar Capital Mosque in Dhaka (does it contain tiny decorative squares?) and on another we can contemplate the details contained in Rasem Badran's characteristic sketches of his State Mosque in Baghdad or his mosque in Riyadh. Likewise, we can contrast the fascinating mud brick and rendered Great Mosque in Mali with Kanwan Diba's exquisitely simple exposed concrete prayer space defined by two rotated squares.

ARCHIE WALLS



'Heaven and man are one' from *Feng Shui Design* by Sarah Rossbach and Master Li Yun (Sidgwick and Jackson, London, 1998, £20). You may not believe in Feng Shui, but even if you don't, you ought to know what it is about, if only to cope with clients who do. This is a well (if vulgarly) illustrated guide to the principles and practice of what often seems to be a codification of very practical design measures – though sometimes the rules really do seem extraordinarily odd.

Hidden agendas

MAKING THE INVISIBLE VISIBLE: A MULTICULTURAL PLANNING HISTORY

By Leonie Sandercock. Berkeley: University of California Press. 1998. £35 hb, £11.95 pb

The founding propagandists of the modern planning movement – people like Patrick Geddes or Ebenezer Howard – saw it as a popular crusade, not as a branch of government operated by its professional servants. Consequently it would be surprising if the allegedly value-free and scientific planning system had failed to reflect the assumptions of middle-aged, middle-class, white males.

This volume examines the 'class, race, gender, ethnic or ideological biases of ideas and practices inherent in the notion of planning as a Modernist social technology'. Quite a lot of the terminology is outside the day-to-day vocabulary of architects, though one chapter of great interest is a direct challenge to the assumptions of CIAM and the Modern Move-

ment. This is James Holston's examination of 'Spaces of Insurgent Citizenship' about the conflict between the official and unofficial cities of Brasilia, and of the same contrasts between rich and poor residential areas in São Paulo. Other chapters discuss the gulf between indigenous planning traditions in the Lower Mississippi Delta with its Blues tradition (not only as music but as popular culture and social explanation), the official planning ideology, as well as the similar gap between the indigenous social planning of the Pueblo Indians and policies of the Bureau of Indian Affairs. The relationship of planning with sexual and racial discrimination and with the social and physical structure of the apartheid regime in South Africa, as well as its impact, which we seldom consider, on the experiences of gays and lesbians are examined too.

COLIN WARD

The new cathedrals

STATION TO STATION

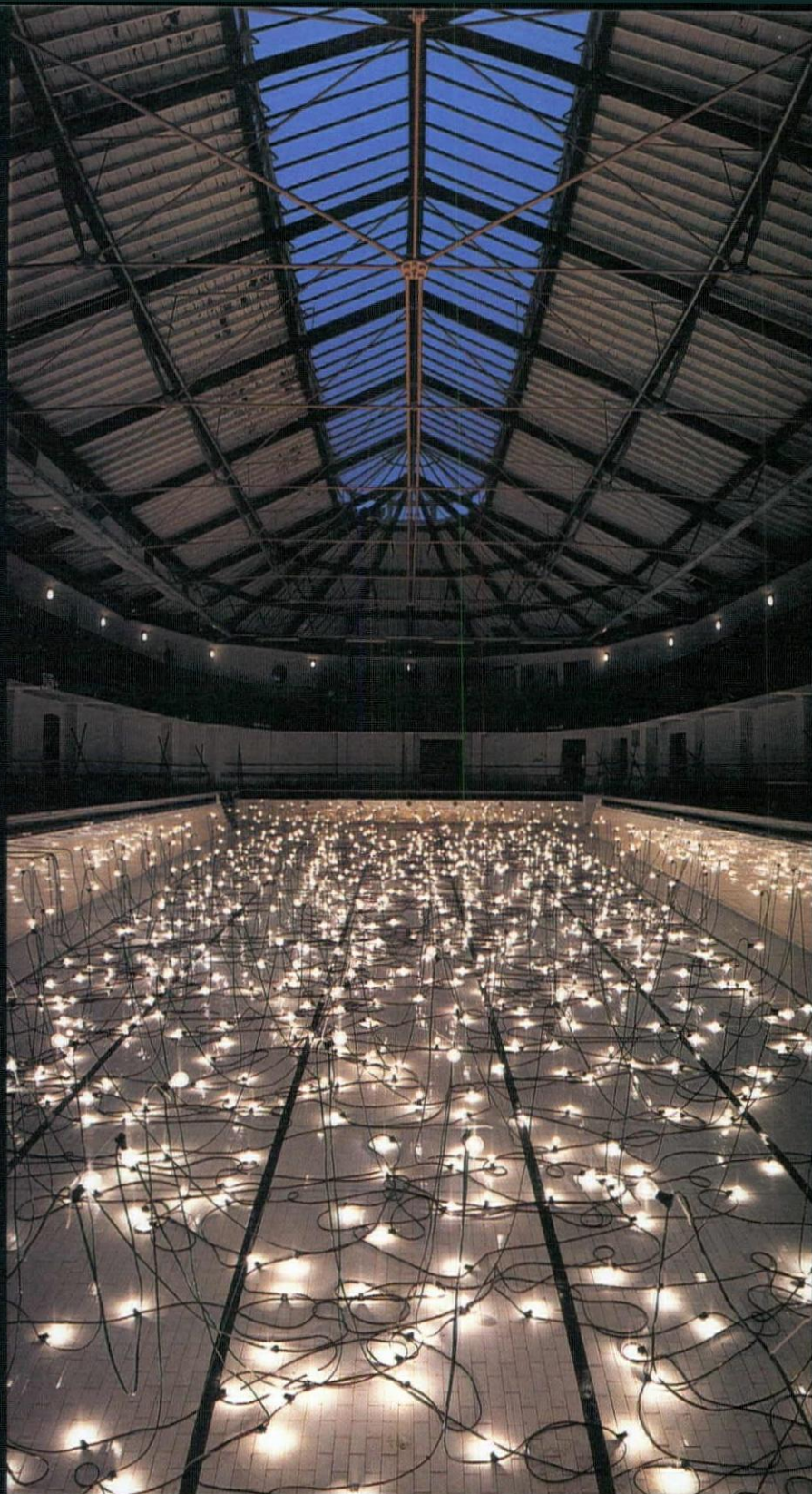
By Steven Parissien. London: Phaidon Press. 1997. £39.99

Since the railway renaissance started in the last 10 years, a book about stations is timely and this one could be a revelation to a generation living in the US, where 20 000 stations have been demolished, and where many have never been on a train.

This is a beautifully illustrated book, a celebration of the life and architecture of the railway station and an interesting read. But to learn more about how stations were planned and worked Carrol Meek's book *The Railroad Station*, frequently acknowledged by Parissien, has to be read in parallel. How else can those stations that he discusses at length like Cincinnati or New York's Grand Central be understood? When these stations were planned over the rail tracks, the section became the key to design, but there are only three in this book and no plans.

The last chapter on the 'Modern Movement' is rather a disappointment. We get a eulogy on France's TGV stations with five full pages of Calatrava's vast Lyons Satolas concourse with its two shops and one restaurant. Of Holden's fine underground station concourses in London or the Liverpool Street station reconstruction there is no mention, although Grimshaw's Waterloo is discussed. Stirling and Wilford's Abando station in Bilbao rates a tiny picture, but there is no mention of the interchange with a bus station below. Bilbao shows the way that stations are evolving, as efficient interchanges and (like airports) shopping centres as well. Will the end results necessarily be the 'soaring sheds' to which Parissien refers as the icons of the Railway Age?

BRIAN RICHARDS



Photograph: Rod Doring

THIS EXTRAORDINARY TEMPORARY INSTALLATION IN LEAMINGTON SPA'S ABANDONED VICTORIAN BATHS USES A THOUSAND LIGHTBULBS TO RECREATE THE SPARKLE OF WATER.

The Royal Pump Rooms and Baths at Leamington Spa are part of the town's rich legacy of Victorian buildings. Plans are under way to convert the Grade II-listed structures into an art gallery, local history museum and tourist centre. A public art project was conceived as a way of drawing attention to the change of use, and reinforcing Warwick Council's application for development funding. To this end, the Public Art Commissions Agency (PACA) proposed the creation of a temporary art installation which would respond to the character of the buildings. From its files of 1300 artists, the PACA invited London-based David Ward to create a temporary, site-inspired installation.

Ward was particularly drawn to the disused swimming pool, which had been abandoned and drained 10 years earlier. His powerfully dramatic installation substitutes light for water, recreating the

evanescent glitter of the old pool. One thousand electric light bulbs were painstakingly wired at and below the surface of the absent water. The effect of the different shimmering strata of bulbs strung across the 100ft pool is quite breathtaking, transforming the derelict space into a fantasia of sparkling points of light. Reflecting off the white tiles, the myriads of twinkling bulbs are like stars fallen to earth. Evoking associations with water, well-being, architecture and geology, Ward entitled his installation 'Well, One Thousand Lights'. Although only open to the public for two weekends last autumn, over 2000 people visited the Baths to experience this unique, ethereal interplay of light and space.

CATHERINE SLESSOR

More information on this and other public art projects can be found in *Public Art: Space* by John Gillet, recently published by Merrell Holberton to mark the PACA's 10th anniversary.