# WORLD ARCHITECTURE

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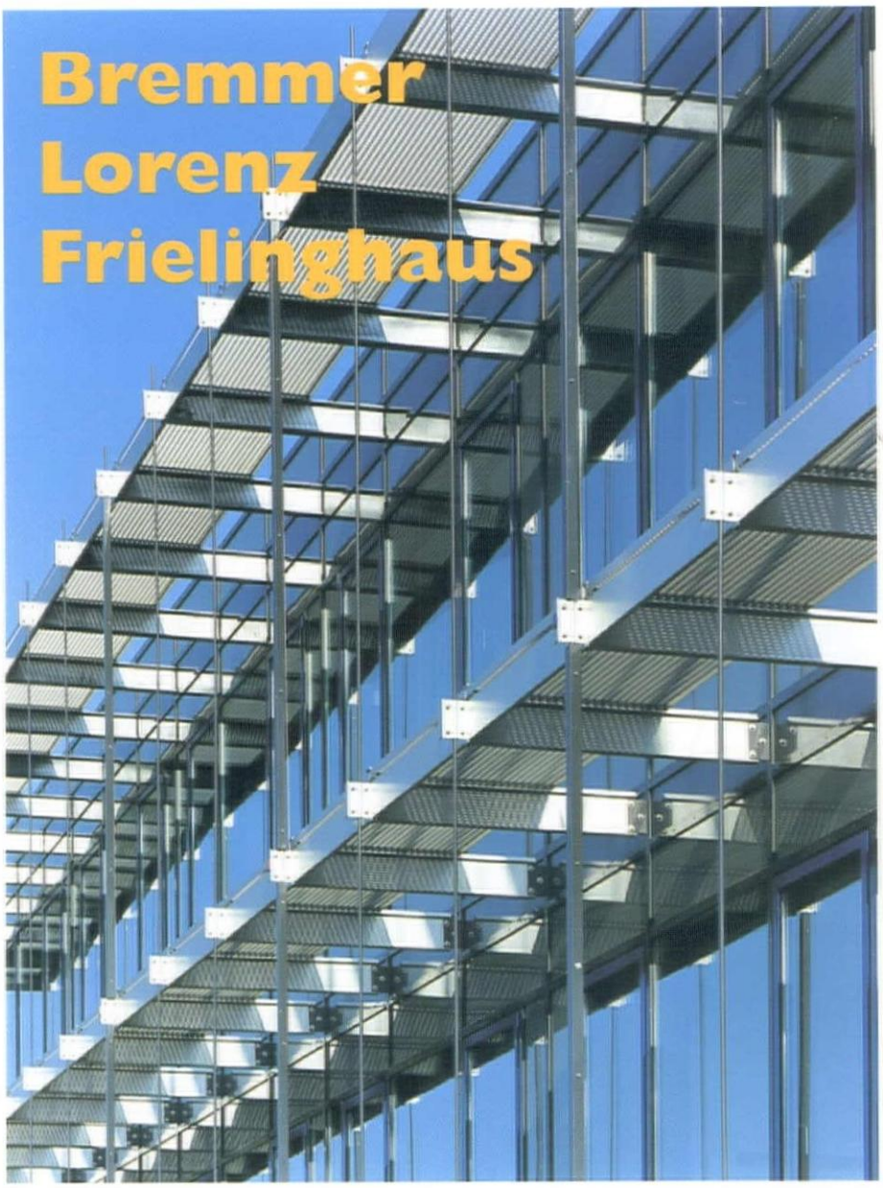


**Australia means business**

**Vintage stuff – distilling Mies**

**In search of nationhood**

**Ricciotti and Hecker at school**

**Vico Magistretti takes the chair**

THE BUSINESS MAGAZINE FOR THE GLOBAL ARCHITECT

Design: Claire Bataille & Paul ibens

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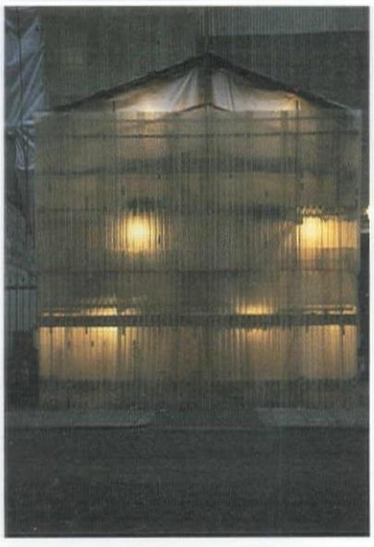

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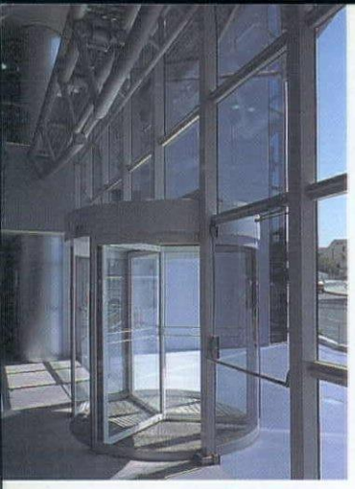

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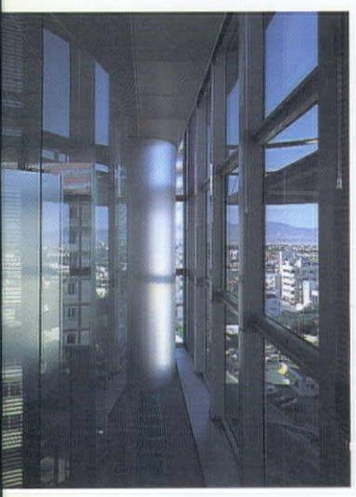

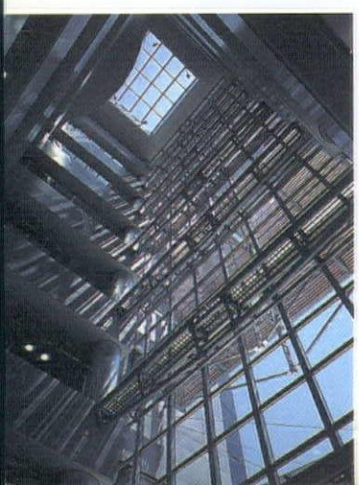

| | |
|---|---|
| *Project* | Cyprus Popular Bank - New Headquarter |
| *Location* | Nicosia, Cyprus |
| *Architects* | CMP Ltd. Nicosia<br>(Joseph Costantinides &<br>Nikos Michaelides Partners Ltd.)<br>George Machlouzarides - Nicosia |
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**Unusual Ideas Require Exceptional Solutions.**

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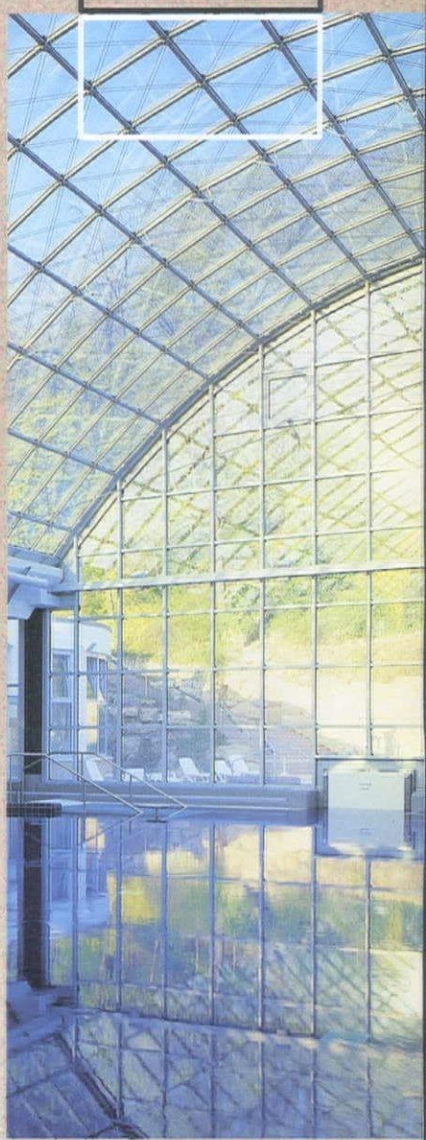
SOLUTIONS for constructive glass in building are best presented by the functional glazings of FLACHGLAS. The huge glass dome of the Mineral Bath at Cannstatt (Germany), for instance, invites the visitor with its playful visual dialogue between sunlight, shade and water. FLACHGLAS products are responsible for a comfortable climate all through the year, due to their low emissivity and solar control functions. Safety against breakage was included by adding laminated panes to the glass units and, according to the architect's choice, coloured surface coating was applied.

The result of this individual architectural concept: A fresh bathing experience in a bright mediterranean atmosphere.

**Talk with us about your unusual ideas – we will find exceptional solutions in glass.**



*Light and water effects of Mediterranean reminiscence: The silver-blue coloured solar control insulating glass INFRASTOP® and the filigreed dome construction "Liteshell" are in harmony with the interior design.*

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*Haydnstr. 19*
*45884 Gelsenkirchen*
*Germany*
*Tel.: 0209/168-0*
*Fax.: 0209/168-2053*

# Great Barrier Reef Aquarium in Cairns, Australia

## DAVID GILBERT, ARCHITECT ARAIA in association with Woodhead Firth Lee Architects

THE BACKGROUND

The proposal is for the development of an integrated Aquarium, Information Centre and Passenger Transit Terminal for Barrier Reef tourism to be built on the picturesque Trinity Inlet adjacent to the existing Cairns waterfront developments.

THE CONCEPT

The project focuses on the three main functions of the building:

The Aquarium with its Oceanarium, display spaces and curatorial facilities forms the bulk of the building.

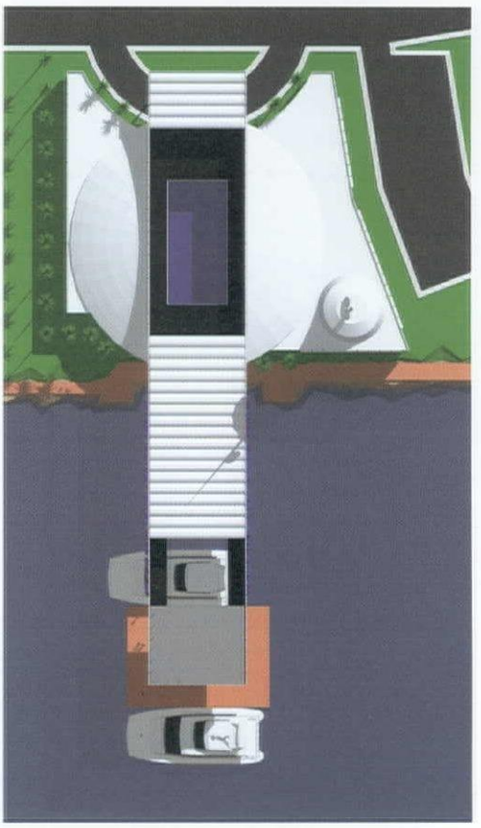
The Gantry/Wharf/Jetty wing provides docking facilities for both the Aquarium vessels as well as a fleet of ultra fast Reef Catamarans which operate continuous tourist shuttle services to the outer Reef.

The Observation Tower replaces a modest structure already located on the site which is used for monitoring harbour traffic. It also provides a tourist observation deck with panoramic vistas over the surrounding land and seascapes.

The area is one of the Southern Hemisphere's leading tourist destinations and is gateway to the Great Barrier Reef, one of the World's major natural wonders.

THE BUILDING

The complex housing approximately 14,000m2 of technical and public facilities is housed on five main levels including a basement level carpark.



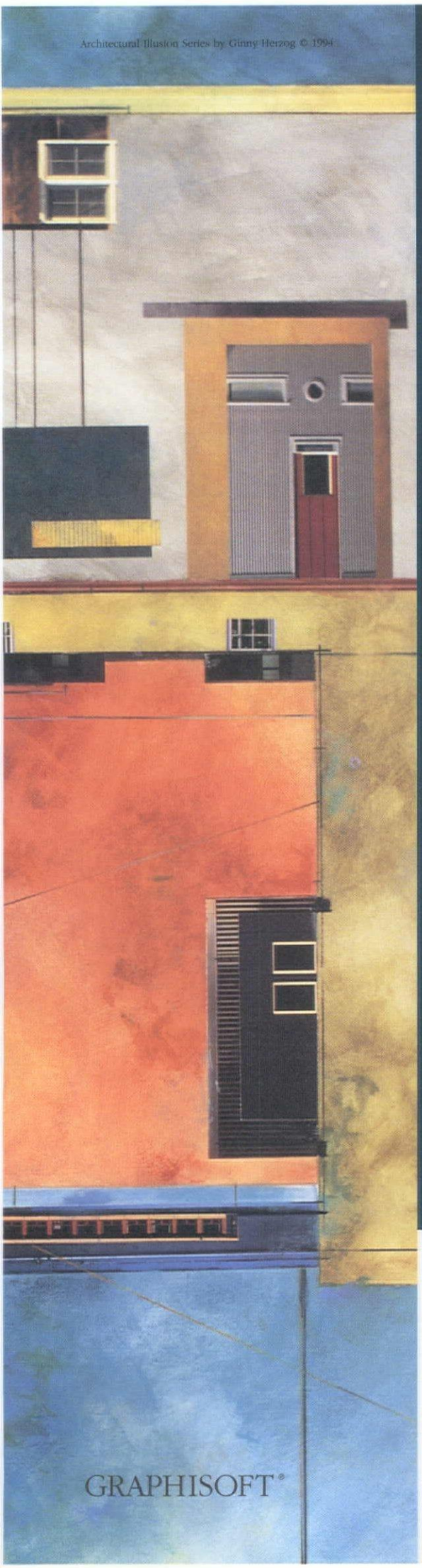
The Observation Tower and Boat Jetty is in addition to this.

THE DESIGN TOOL

Although initial concept sketches were produced, the final design proposal was developed using the ArchiCAD software. This allowed the design concept to be fine tuned and tested against a number of differing scenarios with speed and efficiency. The complex interrelationships of gantry roof which slides back to reveal the main aquarium tank could be tested and critical sun studies could be determined. Even the 3D models of the catamarans were produced in ArchiCAD.

ArchiCAD has again proved to be an exceptional tool throughout the design phase and not merely as an excellent documentation device. The drawings, images and animations were created using ArchiCAD, Artlantis Render and Electric Image. The use of ArchiCAD's virtual reality tool (QTVR) has allowed the building designers to walk through the complex at a very early design phase.

*Designed with ArchiCAD, rendered with Artlantis*

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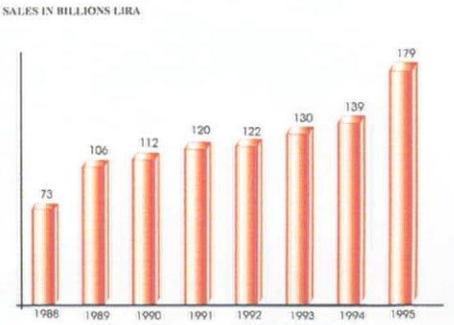
# GranitiFiandre in the heart of tile valley

**GranitiFiandre S.p.A the international leader in vitrified stoneware production, has its main offices in the foothills of the Appenines between Reggio Emilia and Modena, in the area which is by now commonly known the world over as "the ceramics zone".This company has tripled its sales in just a few years, producing and exporting to the four corners of the globe materials that are guaranteed up to a century with unique characteristics. We are going to talk to Graziano Verdi, General Managing Director of the company.**

**Mr Verdi, today GrantiFiandre is a company with an international reputation. How did it start, how did it develop and how did it get to occupy such a commanding role in its sector?**
GrantiFiandre was established in 1961 as Castellarano S.p.A and began producing vitrified stoneware in two tunnel kilns. Things really took off in the late eighties when, with a change of ownership and name to GrantiFiandre S.p.A., a new range of highly prestigious products was launched on to the market. These were "Pietre Preziose" and "GrantiReali", guaranteed for a century, that brought vitrified stoneware to the pinnacle of beauty as well as technical preformance that no other company had ever achieved before.
**In a moment when there is talk of a slow down at international level in the construction sector and consequently also in induced industries due to both the decrease in investments in general and investments in building in particular, how is GrantiFiandre responding?**
In contrast to the sector trend, GrantiFiandre is continuing to grow, and how! This tendency is illustrated by the analysis of a few very significant figures. From a total sales of 73 thousand million Lira in '88 we achieved 179 thousand million Lira in 1995 with a further growth of 4% in the first five months of this year. What is more, a significant segment of those sales, 70 per cent, is exported; I'm sure you'll agree that the figures speak for themselves. In 1995 GrantiFiandre exports demonstrated a remarkable presence on the major world markets with considerable increases of its share: +24 per cent in the USA and +32 per cent in France, +13 per cent in Germany, +52 per cent in Ireland, +11 per cent in the Netherlands, +37 per cent in Australia, +25 per cent in Saudi Arabia and an astounding +221 per cent in the Lebanon!
**What are the stong points of a company that, despite the market trend, manages to stay strong and expand the world over?**
Firstly I believe that the success enjoyed by GranitiFiandre is a reflection of the typology of its products, the fruit of continual research and exceptionally pure raw materials, produced employing state-of-the-art technologies. They are materials that guarantee both superlative aesthetics and technical characteristics that can only be called unique.

GranitiFiandre has achieved certification for its Quality System to UNI EN 29001/ISO 9001 standards for "the design, development, production, sales and client technical assistance of vitrified stoneware" which bears witness to the attention always paid by the company to the




materials, the production process and sales.

One strong point leading to success is certainly the human aspect. We have trained personnel working all over the world with enthusiasm and skills, enabling customers to get to know and appreciate our materials; this aim is being realised given that our collections can be admired in numerous highly prestigious architectural projects in Italy and abroad. I should like to add that GranitiFiandre, top company in its field, can also now supply "turn key" flooring; we are in a position to offer the final client the planning and design, metric calculi and cost estimates as well as tile layers who are highly specialized in laying vitrified stoneware.

**What are the new ideas for the next edition of Cersaie? What are the new sizes and collections?**

I'm afraid I can't reveal anything - we must keep the public holding its breath right up to the last minute. I can, though, mention the success enjoyed by the new materials launched this Spring. In the "Pietre Preziose" collection there is a brand new size, 40x60 cm in the new Parnon, Tropical, Mikonos and Finnka lines that we can say is going full swing if we look at the orders. The "GranitiReali" collection has been strengthened by the addition of Bengal Blue in 30x30 and the 45.7x45.7 (18 inches) size in both finishes, semi-matte and polished. Another total novelty from this Spring is the GranCorindo, a material in which we have managed to capture the interpretation of Venetian flooring and in which the veining, thicker than any other on the market, has even got veining within it creating an extraordinary colour effect.

**Thanks to this interview we have been introduced to a company that is modern and dynamic regarding both materials and management. Can you tell me what future plans are?**

To continue, as we have up to now, along the road of research and innovation and to devote substantial investment to these areas. At the same time our distribution strategy and final client assistance must be maintained and developed to reach every corner of the globe. The logical solution is to offer superior materials able to attract those who buy them not only for their intrinsic characteristics but also because they become a "must".

*Left: Graziano Verdi. Above: 'A worldwide leadership'. Opposite page: GranitiFiandre headquarters*

GRANITI FIANDRE

*GranitiFiandre SpA*
*Via Radici Nord, 112*
*42014 Castellarano*
*RE Italy*
*Tel: +39 (0) 536 819615*
*Fax: +39 (0) 536 858263*

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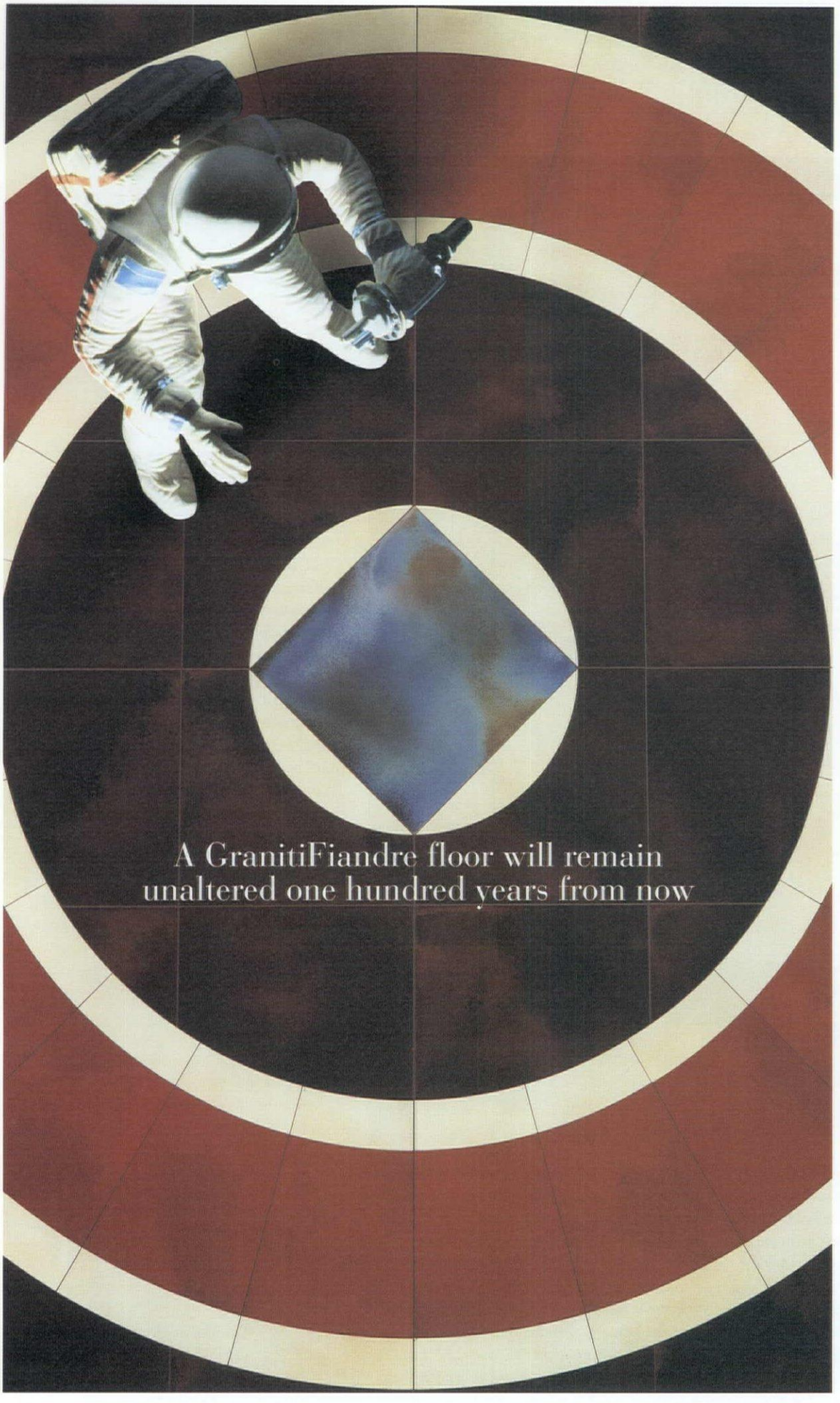


Unique in the world for their technical and aesthetic features, the "Pietre Preziose" and "GranitiReali" collections in GranitiFiandre porcelain stoneware are **guaranteed for a century. GranitiFiandre**, the leader company which holds the **UNI EN 29001/ISO 9001** Quality System certificate, thanks to its 1.140 items, in 8 sizes and special pieces, for 7 collections which can all be mixed and matched, is ideal for industrial environments and for high-traffic areas, interiors and exteriors, as well as exterior wall claddings.

GRANITI FIANDRE

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For further information, send this coupon to **GranitiFiandre, Marketing Dept. - Via Radici Nord, 112 - 42014 Castellarano (RE, Italy) Tel. 0536-819615 Fax 0536-858263.**

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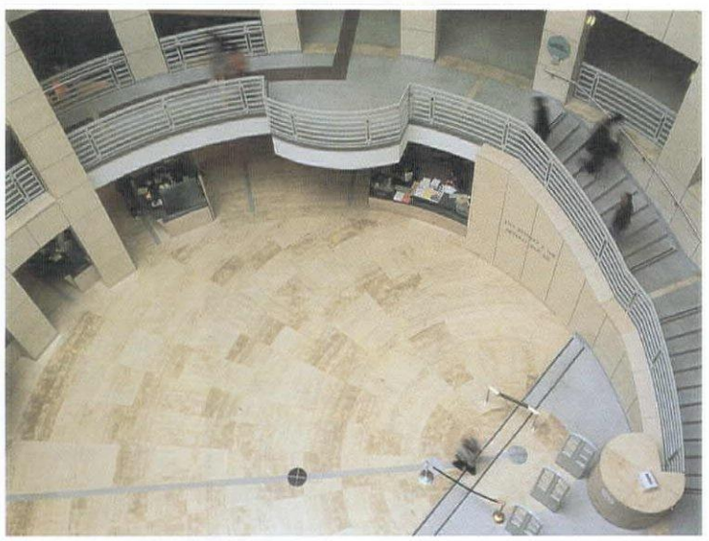
*Societe Generale Banking Corporation HQ, Paris. Beauharnais*

*Nasu Golf Club, Japan. St Marc*



*San Francisco Library, USA. St Marc*

# Marbres du Boulonnais

## HEAD OFFICE/CONTACT NUMBERS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France
Tel: +(33) 20 06 14 69
Fax: +(33) 20 06 14 85

Stone Selection, San Francisco, USA
Tel: (510) 782 3000
Fax: (510) 782 1383
e-mail: Stone selection@best.com


## COMPANY PROFILE

Established in 1917 and dedicated exclusively to the extraction, production and distribution of natural stone, Marbres du Boulonnais has, over the years, acquired an enviable reputation and the highest levels of technical skill. Still family owned after four generations, the company is managed by a dynamic young team whose objectives are quality and reliability.

The aim of the company is to satisfy the customers needs by supplying, within the particular context, the finest range of natural French stones.

## RECENT CLIENTS

**Miho Museum, Japan**
Saint Marc limestone; IM Pei Architects

**Cosmos Hotel, Moscow, Russia**
Lunel Marbles

**Hyatt Fisherman's Wharf, San Francisco, USA**
Beaumaniere limestone; Blair Splangler Inc. Architects

**Empire Tower Building, Jakarta, Indonesia**
Lanhelin granite; Architect Pacific

**Coins Department Store, Napoli, Italy**
Lunel dore limestone

**231-235 Gloucester Road Building, Hong Kong**
Chassagne limestone; P&T Architects

**Luton Airport, London, England**
Napoleon marble

**LBS Commefcial Building, Stuttgart, Germany**
Lanhelin granite

**Al Issa Private Residence, Saudi Arabia**
Chassagne limestone; Pierre Yves Rochon Architects

## PRODUCT RANGE

Our comprehensive range is principally composed of:

**Fashionable and attractive limestones:**
St. Marc, St Martin, St Albain, Comblanchien, Chassagne, Beaumaniere, Beauharnais, St. Veran, Poiseul, Corton, Ruoms, Beaulieu, Tournus, Lunel Dore, St. Pierre, Cabernet, Louvre, Amboise

**Highly coloured and prestigious marbles:**
Napoleon Grand Melange and Tigre, Notre Dame, Brun Fleuri, Lunel, Paloma, Henri 4, Breche Nouvelle, Saran Colin

**Unique, high quality granites:**
Lanhelin dark blue, Rose de la clarte, Silverstar

These products come from 20 different quarries and are processed in our eight factories to meet the highest standards of the building industry. We can supply anything from raw blocks to finished, cut-to-size panels for cladding or flooring, as well as 10 millimetre thick tiles, or solid works such as columns, fountains or monuments.

With a range of over 70 different stone types, we have the resources to meet most requirements and feel that we can provide the outstanding material to add unique value to your project.

## AREAS OF SPECIALISATION

Our natural stones can be found all over the world, from Japan to the USA, as well as in Europe, the Middle East, Africa and Australia. We have worked with famous architects on some of the most prestigious construction projects in the world: from museums, hotels churches and office buildings, to luxury residential compounds and private places.

Having been involved with the stone business for nearly a century, we would be proud to share our knowledge of stone and talk you through our wide range of materials, for any given project.

CERAMIC TILES FROM SPAIN

# CERAMIC TILES FROM SPAIN

## DECOCER S.A.

Spain:
Tel: +34 64 530033
Fax: +34 64 527093

UK:
Shaun R. Eagle
Tel: +44 1427 874242
Fax: +44 1427 874797

In the next addition of CERSAIE, Decocer will present an exclusive range of strips for floor tiles.

Decocer's strips are made to enhance the natural beauty of ceramic tiles. The wide range of products, the variety of colours, designs and sizes make them match with most existing decorative styles. At present, their products are being very well accepted in the British market.

Decocer's new plant has the highest technology to produce from single fired to four fire tiles all in white body. The sizes available are 2x20, 3x20, 5x20, 5x15, 6.4x20, 7x20, 8x25, 10x20, 10x27.5, 15x31.6 and 11x33.3cm.

## VENIS S.A.

Spain:
Tel: +34 64 525262
Fax: +34 64 530306

Constant research in the field of ceramic tiles has allowed Venis S.A. to develop numerous technological advances. One of them being the floor tile "Superdur" with an extreme resistance against wear. Several investigations on tiles used in high traffic areas, have allowed Venis S.A.. to develop a new type of glazed tile with extraordinary technical features, suitable for any kind of surface. The technical basis of Superdur is a surface hardness equal to 8 degrees on the Mohs scale, a non slipping coefficient 0.6-0.7, a humid abrasion according to PEI method which can be classified as PEI V (according to the ISO norm project) and a water absorption of 1.8 percent according to UNI En 99 standard.

The photo shows the Modul Min and the Andros series, both in 33.3x33.3, complemented by the Kalami strips and corner pieces.

## CERAMICAS MYR S.L.

Spain:
Tel: 34 64 360167
Fax: +34 64 361861

UK:
Mr Geoff Snape
Novaland Imports
Tel: +44 1922 723445
Fax: +44 1922 723446

Cerámicas Myr S.L. founded in 1961, have advanced steadily in the ceramics sector, manufacturing porous single-fired ceramic tiles. At present the range is made up of two basic formats in particular: 20x35cm and 25x40cm.

The company has recently launched a range of collections specifically designed for the British market, taking into account consumer preferences with regard to colours, shapes and sizes. These series are "MACAEL", "BREMEN", "PADUA" and "RIMINI", available in cream, peach and salmon. This series has been developed using the very latest dry glazing techniques combined with silk-screen printing.

## TOGAMA S.A.

Spain: Juan Peris
Tel: +34 64 282874
Fax: +34 64 284460

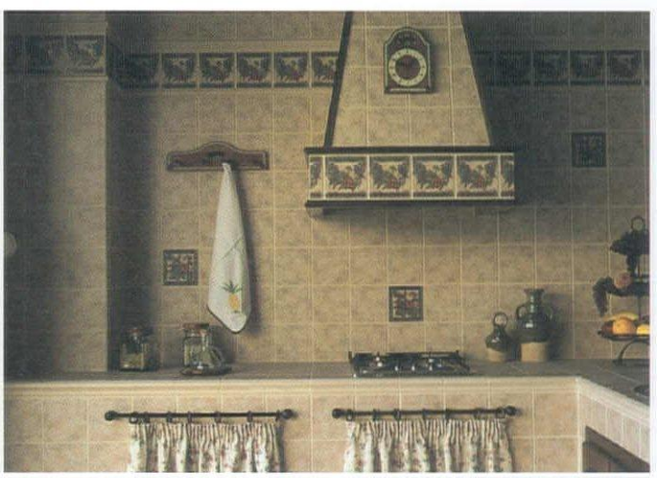
Togama specialises in the production of glass mosaic wall and floor tiles in a 5x5 and 2.5x2.5 cm format. These glass mosaic tiles are available in a wide variety of colours and are accompanied by matching strips and decorated pieces.

Due to its completely non-porous surface and 0% water absorption, Togama's glass mosaic is easy to clean and highly resistant to wear. Other technical characteristics include high frost resistance and resistance to chemical agents. These tiles are colour-fast and remain unchanged with the passage of time.

These glass mosaic tiles can be used in high traffic areas, leisure centres and also for external decoration such as façades and murals.

## HERMANOS NOMDEDEU S.A.

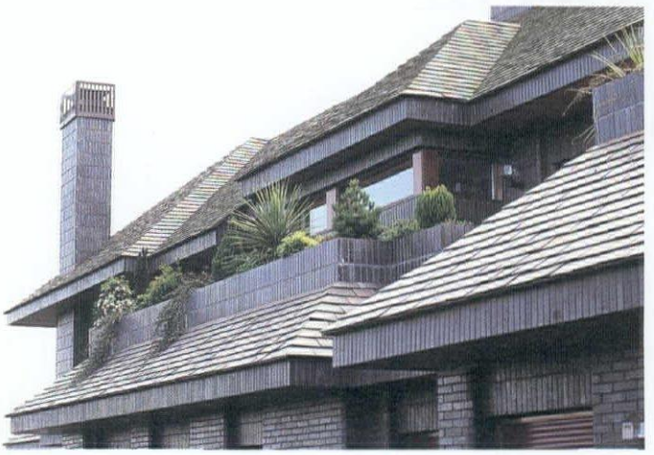
Spain:
Tel: +34 64 252250
Fax: +34 64 243256



Hermanos Nomdedeu S.A. presents its Florida series available in 15x15cm format in matt beige. With a water absorption of 13.2% and a resistance to flexion of 18N per square millimetre, all the technical characteristics of this series comply with the UNE Standards of Quality. This series is decorated with fruits which are hand painted onto the finished product (third fire). Complementary pieces are also available in the same base finish.

## GRES DE CASTILLA - S.A LA CERAMICA

Spain:
Mr rowan
Tel: +34 (1) 4091570
Fax: +34 (1) 4091701



Gres de Casatilla specialises in the manufacture of salt glazed floor tiles. These tiles are fired at temperatures of around 1350°c for periods of over 36 hours, a process in which the addition of salt creates a chemical reaction which provides them with a special aesthetic effect.

These floor tiles have a PEI III resistance to abrasion and a Mohs 6 scratch resistance, together with total frost and chemical resistance. These characteristics make them ideal for either internal or external use.

Gres de Castilla has just opened a new plant which will enable the company to increase the production of new formats and widen their range of special pieces and roof tiles.

## COLORKER S.A.

Spain:
Tel: +34 64 361616
Fax: +34 64 386432

UK:
Colorker UK Ltd
Tel: +44 181 5588399
Fax: +44 181 5588384

The Vulcano series of Colorker S.A. , shown in the picture, is especially suitable for high traffic areas and public spaces due to its technical characteristics such as abrasion resistance of PEI V, a scratch resistance of MOHS 9 and a resistance to flexion of 26N per square millimetre. These tiles are impervious to substances that could stain or damage them and their physical-chemical characteristics are all in accordance with EN (UNE).

This series is available in 41x41 cm and is presented in grey, dark grey, white, beige and green. This series is accompanied by a range of corresponding trims and geometric-shaped pieces.

## ROCERSA

Spain:
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The technical features of Rocersa's Traffic series makes them especially suitable for use in all residential and commercial high traffic areas such as airports, hotels, hospitals, schools etc. These floor tiles are designed to withstand the hardest wear imaginable, with an abrasion resistance of PEI V and scratch resistance of MOHS 9. The Traffic series is available in white, grey, salmon pink, beige and black and in the 30x30cm format.

The picture shows the Traffic grey series accompanied by the Megara decor and matching strips and corner pieces.

## TAULELL S.A.

Spain:
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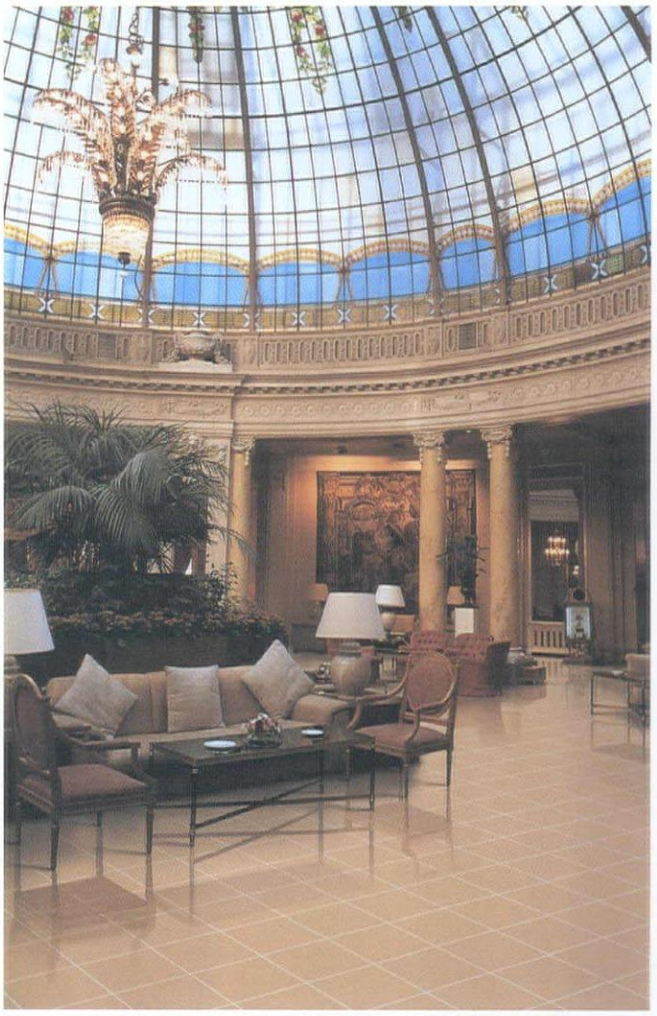
This company specialises in the production of Gres Porcelain under the brand name Tau Porcelánico. Their characteristics for water-absorption, crazing, frost resistance and resistance to chemical agents are superior to those demanded by the European and American standards. The versatility of Gres Porcelain is due to the great variety of finishes and textures available. Taulell's porcelain tiles can be combined with either ceramic or natural stone tiles, allowing the creation of many different ambiances.

Tau Porcelánico presents four collections: Tau Tec, specially designed for high traffic areas, Tau Natura, with a classical marble effect. Tau Ecología, with a rustic effect, and Tau Crom, a solid coloured tile designed for monochromatic surroundings.



## AZULEJOS SANCHIS S.L.

Spain:
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Azulejos Sanchis S.L. has recently opened a new plant for the production of floor tiles, utilising the very latest technology and enabling the company to increase their production capacity significantly.

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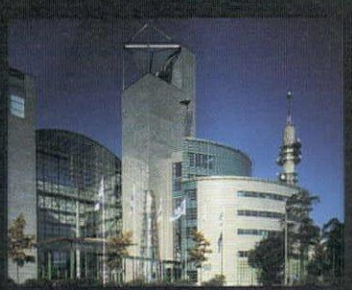
Azulejos Sanchis S.L. will be presenting these new formats at CERSAIE '96, together with new products with marble, wooden and rustic effects.

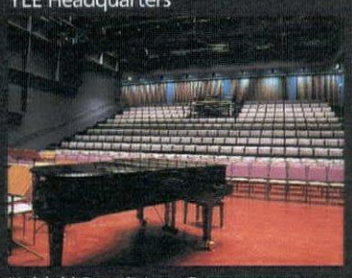
The picture shows the Oregon series in a 15x45cm format.

# Material with the potential to reflect strong identity

The main building of the University of Tampere was designed to communicate the value structures of the academic world with a combination of both classical and innovative architecture. The structural material chosen for the purpose was steel, since steel has the potential to reflect the identity of the users of the building.



The Finnish Broadcasting Company
YLE Headquarters



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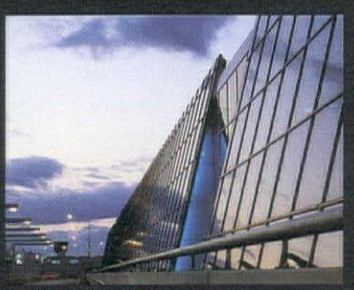
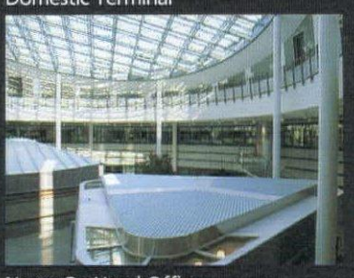


Helsinki-Vantaa Airport
Domestic Terminal



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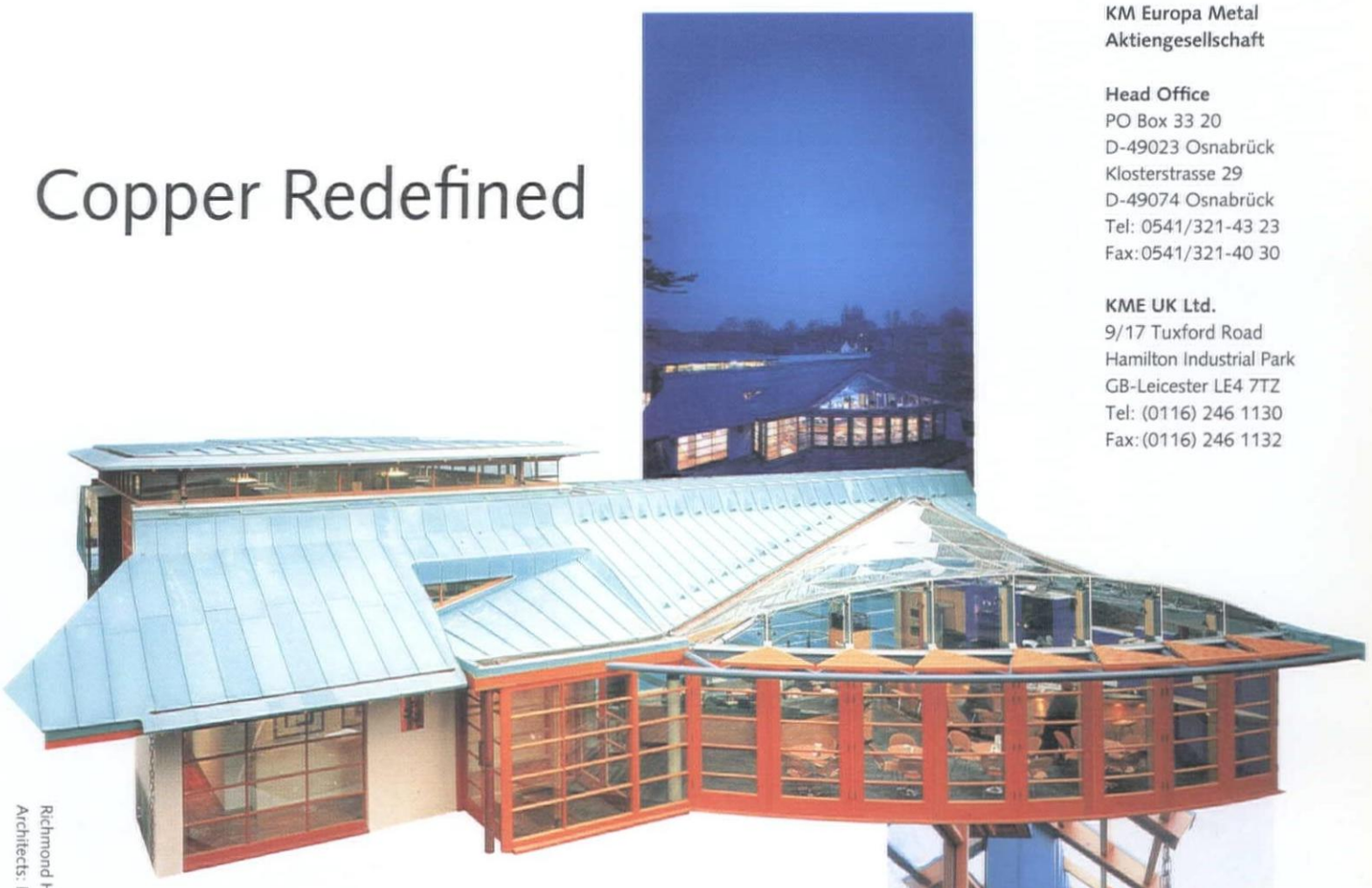
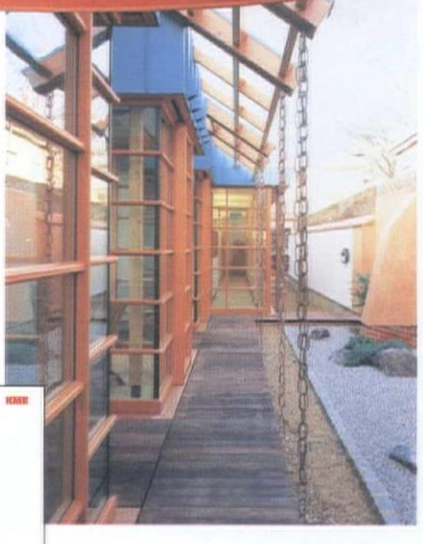


Richmond Hill Leisure Centre, London, UK.
Architects: Daryl Jackson International Ltd.



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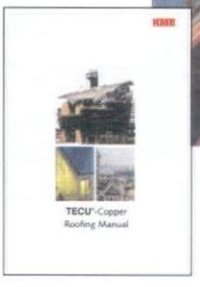


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*Right The office at home also requires perfect functionality and efficient organisation.* ***Below right*** *Modular furniture systems allow individually tailored work spaces.* ***Below left*** *Single modules which allow openess and transparency.* ***Bottom*** *Rounded reception counter helps to make a visitor feel at ease*

# USM

**USM Haller**

For over quarter of a century USM Haller Furniture Systems have been setting standards in the field of office furnishing, and as classics in this area, the products are also finding favour in the private sphere. But why introduce a new product range now, just as the market seems suited to the consistent construction, functionalism and timeless elegance that typify the work of USM Haller Furniture System? Can it really be that USM are joining the ranks of fashion oriented suppliers, constantly producing new and short-lived variants on established themes?

USM's latest product is the Modular Table System (Kitos). The principle attributes of Kitos lie in their clear, elegant simplicity giving expression to a high degree of stability and wide ranging potential for employment, as well as layout variants. Of course all these strong points would be worthless if the product did not meet the requirements of the modern hi-tech workplace. USM Kitos also has the versatility to allow for swivel areas, special cabling, VDU/CAD areas and individual ergonomy.

USM Kitos is designed as a modular construction system. Using the basic elements, columns, traverses and upright tubes, and depending on the table top form required, the appropriate frames are assembled. Over a hundred different table versions can be constructed from these basic elements - without even taking into account extension stages on three levels, alternative base positions, electrification modules and table combinations.

The side dimensions of the table-top forms are compatible with all USM Haller furniture, offering the potential for compact linkings, thereby saving valuable office space. The hexagonal form of the table-tops allow for extra flexibility in the construction of workstations, conference layout or team workplace. USM Haller furniture is also available in rectangular, square and circular forms, thus opening up innumerable possibilities of combination and the possibility of making use of even the most awkward ground plan situations.

In terms of external appearance, the USM Haller philosophy - based on the Bauhaus tradition - is, "Form follows function". The dimensions of the individual elements are reduced to a necessary minimum. The mirror finish chrome plated surfaces reduce the optical volume of the structural elements even further. Added to this, the chamfered edges of the tabletops creates the impression of a delicate instrument rather than a conventional desk.

With its virtues of transparency, honesty and visionary technology USM Kitos can be seen as the workplace of the future, both visually and functionally. USM U Schärer Söhne AG, of Münsingen near Berne, Switzerland have created all the prerequisites for an innovative, long-term product. USM Kitos sits proudly next to the previous works of USM Haller Furniture System.

*For further information contact:*
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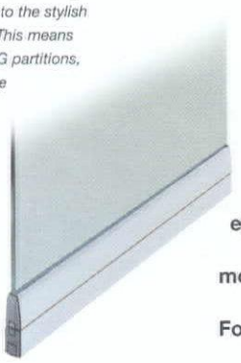

**Whether in the Louvre, a cafe in New York, a bank in Singapore, the Ljubljana Airport, or the Gothenburg Central Station – Hawa's all-glass sliding wall system creates a sensation wherever it shows up. It is becoming ever more popular amongst renowned architects throughout the world thanks to its timeless elegance, durability and the versatility of its modular track system.**

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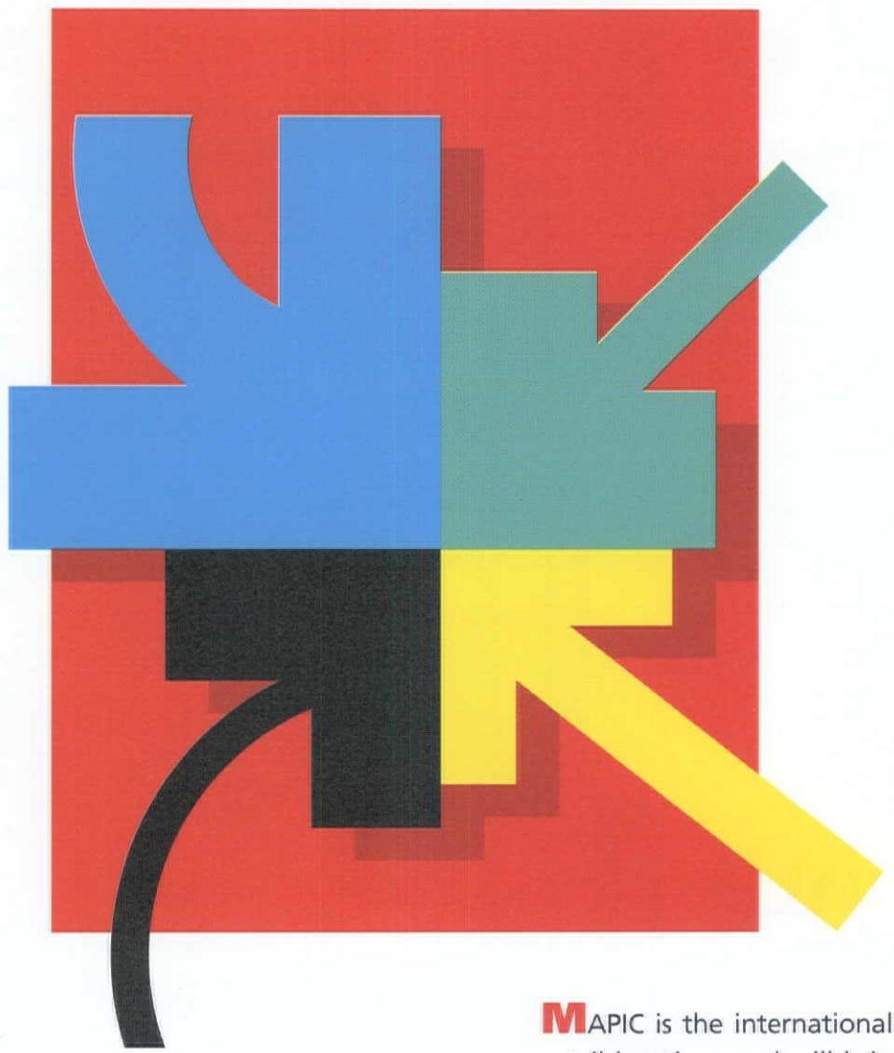
"It always does seem to me that I am doing more work than I should do.
It is not that I object to the work, mind you; I like work; it fascinates me.
I can sit and look at it for hours. I love to keep it by me;
the idea of getting rid of it nearly breaks my heart".

*Jerome K. Jerome*

# NEW RETAIL LOCATIONS WILL BE ON DISPLAY FOR THE RETAIL SECTOR AT MAPIC BETWEEN 15 AND 17 NOVEMBER 1996



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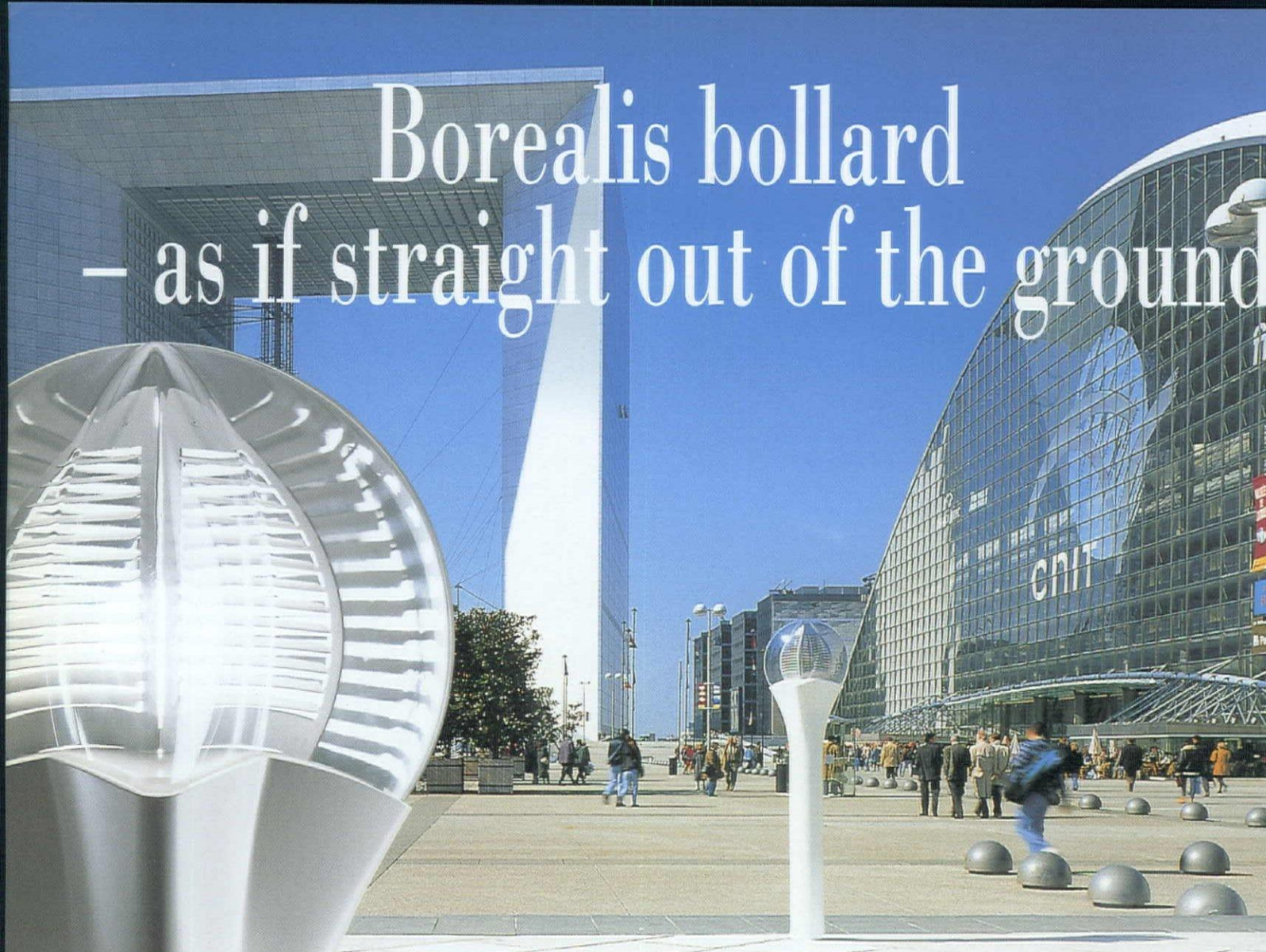
Making light work

# Borealis bollard – as if straight out of the ground




Borealis was developed in cooperation with the internationally acclaimed designers, King & Miranda, who drew their inspiration from the Nordic countryside – Borealis is Latin for northern – when they created the new bollard.

In its geometry, Borealis is simple and organic. The luminaire head is a reminiscent of a seed-pod ready to burst – not with seeds, but with light. In the immediate vicinity of buildings and squares, Borealis imparts softness and life to its surroundings. In parks, gardens and grounds, the botanical appearance of the bollard will interact with the natural scenery.

The luminaire head is made with either an opal or a clear injection-moulded polycarbonate shade. In the opal version the radiation of the light is soft and diffuse. In the clear version the bollard is fitted with an interior pyramid-shaped reflector, the slats of which leave a shadow pattern on the clear shade while directing the light diagonally downwards.

louis poulsen

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# UIA: "Incompentencia absoluta!"

So wrote Spain's national newspaper *El Pais*. For a congress whose themes were flows, habitations, containers, mutations and "terrain vague", it was with some amusement, and not a little annoyance, that those of us at this year's UIA Congress in Barcelona in July were met with utter disorganisation from a city that brought us the admirably engineered Olympic Games in 1992. The "flows", or infrastructure, around the city were remarkable when compared to many other international metro and bus systems, but the on-ground control of the masses by the UIA organisers was seriously lacking. As a result, the 10,000 or so delegates (at least 4,000 more than were initially catered for) queued in vain to gain admittance to the many "containers" scattered across the city – many of which could hold no more than 500 people, and of which a large proportion were reserved for VIPs. Which brings me to the next point: who, I wonder, could these VIPs possibly have been? The star struck wonder surrounding the congress had elevated all the participating architects to deity, or at least to the level of movie star or pop idol, and these stars were all performing in other venues throughout the city. Barcelona found itself in the unenviable position of demonstrating exactly why so much international and local attention needs to be lavished on the themes of the congress.

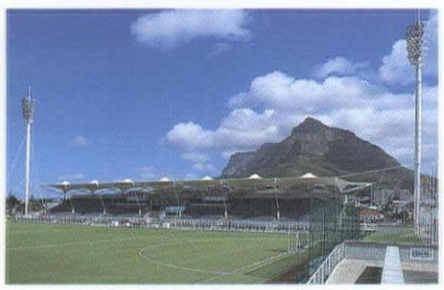
As a result of the lack of foresight, or perhaps just an underestimation of the cult status of these heroes, the main "debates" were moved to Arata Isozaki's 15,000 seater Olympic arena. This satisfied the desires of some of the less critical delegates who appeared to be carrying with them a check list of "seen" and "not seen", rushing to the podium to top up their autograph books at the end of each session. For those who had eagerly anticipated unlikely head to head confrontations such as Norman Foster and Peter Eisenmann, Richard Rogers and Jean Nouvel, there was more disappointment. In this Olympic venue there was as little chance of the speakers debating with each other, as there was of fielding questions from the floor.

But there was something sensational about hearing Zaha Hadid describe her "invisible" career, and Eric Owen Moss declare architecture as "the work of a mad man". Charles Correa spoke elegantly on the subject of housing and Richard Rogers brought the house down with his campaigning plea for "creative thinking reflected in creative spaces", a more even distribution of wealth and an awareness of environmentally friendly design. Those of us from the UK and Europe had heard this manifesto on many occassions, but it brought a raucous cheer from many of the audience – some reputed 30 percent of whom hailed from Latin America. Despite the inevitable whinging and justified complaints levelled at the UIA, they have however provided a unique forum for an unprecedented number of architectural professionals and students. Such is the human condition, that the disorganisation of the event fuelled a comeradery and empathy that generated many hours of fruitful discussion within the seminar rooms and around the bars and squares of Barcelona.

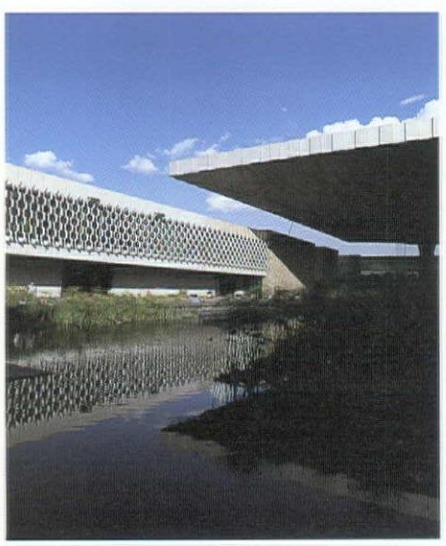
This level of discourse is what the Commonwealth Association of Architects promises to deliver in September1997 in Goa, India. The CAA president, Rusi Khambatta, has promised a more organised and relaxed event, encouraging visitors with the prospect of the beach if all else fails. Before that, Venice is hosting its second Biennale this month. At the time of writing rumours of overcrowded hotels and restaurants are already being spread due to the untimely clash with the Venice Film Festival. Let's hope they have taken action to learn from Barcelona's practical shortcomings, but a sneak preview at the architects and projects to be displayed indicates that in terms of content some countries may still be one step behind the curators of the UIA. Risks must be taken with lesser known architects and unrealised projects if we are to generate anything other than self congratulation and adulation from these architectural circuses.

*Nicola Turner*

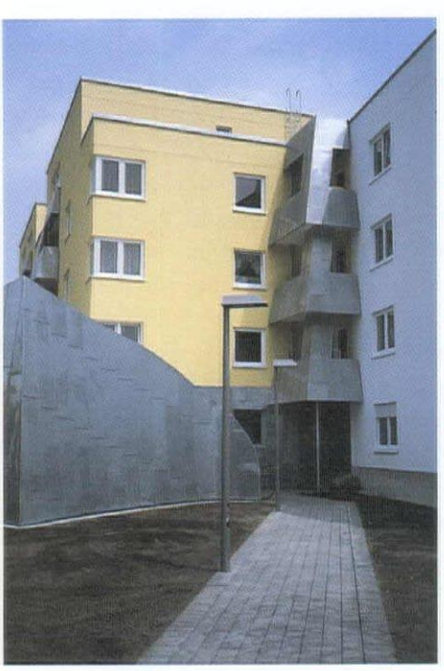
# In next month's World Architecture



GAPP Architects' Hartleyvale Hockey Stadium in Cape Town, South Africa



National Museum of Anthropology, Mexico by Ramirez Vasquez



Frank Gehry's "Goldstein-Sud" housing project in Frankfurt, Germany

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**COUNTRY REPORT - South Africa**

An in-depth business analysis of the architectural profession in the light of the new South Africa's Reconstruction and Development Plan – including an interview with the major architectural and political figure, Revel Fox. Project coverage includes the Kwazulu Natal Society of Arts Gallery in Durban, by Cindy Walters and Michelle Cohen; Meyer Pienaar's South Africa Reserve Bank, New Johannesburg Branch and the Hartleyvale Hockey Stadium in Cape Town, by GAPP Architects, which would form part of the new facilities for the 2004 Olympics, should Cape Town get the Games.

*Future Country Reports will feature Malaysia in November; The World Survey of the Top 250 Architects in December/January*

**PROFILE - Ramirez Vazquez**

*World Architecture* profiles the work of the Mexican architect Ramirez Vasquez which includes Mexico's Houses of Parliament; the National Anthropological Museum; the Azteca Stadium; 35, 000 rural schools in Latin America and one of the holiest shrines in the western hemisphere. Vasquez's most important contribution to Mexican architecture has been to assert the authenticity of its indigenous tradition, identifying its essential characteristics and reinterpreting them for a humanistic culture in the late twentieth century.

*Future Profile reports will include a look at Architekturburo WGK in December/January*

**SPECIAL REPORT - Residential**

*World Architecture* focuses on an international range of housing projects which demonstrate a range of answers to community architecture. *WA's* Germany correspondent, Layla Dawson allows readers a sneek preview of Frank Gehry's first housing project, "Goldstein-Sud" in Frankfurt, Germany; Manuel de las Casas' high-profile Alcobendas project in Madrid is covered by *WA*'s Spain correspondant, David Cohn; a British architect based in Holland, reveals the secret to Dutch "speed building" techniques which allow developers to produce 90 000 new homes a year; Carlos Morales discusses the Chilean architect Fernando Castillo's award winning housing scheme in Santiago, Chile and finally, the Canadians explain why 11 of the 23 homes they designed in Hamamatsu, Japan sold within three hours of opening.

*Further Special Reports will cover hotels in November; office design in December/January*

**PRODUCTS - Computers/CAD**

*World Architecture* argues the case for computer aided design, outlines the premier CAD programs and takes a look at developments on the horizon. Plus a focus on the Spanish architect/designer Vicente Guallart's innovative new CD ROMs for architects, recently released onto the market. All this, plus eight pages of projects employing specialist computer design.

*In subsequent issues, Products will focus on bathrooms and sanitary fittings in November and the office environment in December/January*

# News Review

## WA's News and Business round-up

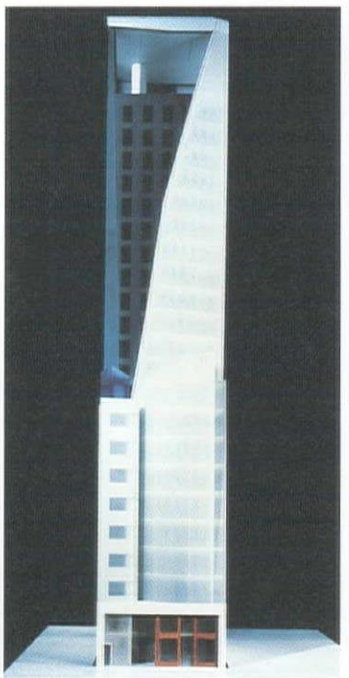
## Signature designers cash in with top retailer

Louis Vuitton has recently commissioned a Parisian architect to design the New York office and a British couturier/hotelier to design a store in Paris. With an annual turnover of FF6.4 billion and 80 outlets in 25 countries, Louis Vuitton's luxury goods constitute a truly international retail enterprise.

In New York Christian de Portzamparc, the Parisian Pritzker Prize winning architect, is working with the Manhattan architecture firm Hillier/Eggers on the 23-storey Louis Vuitton flagship store and offices.

The building is designed as a slim vertical structure of opalescent and transparent glass to allow maximum daylight. Among several "smart" design elements is the 300 foot light "trough" which will enable the building to change its appearance through colour variation.

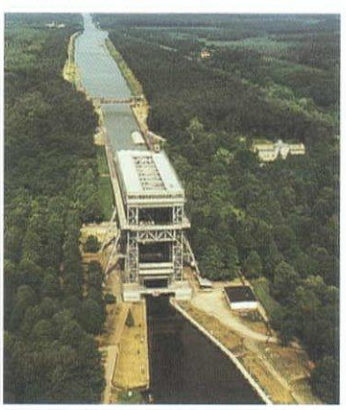
Meanwhile, after an enjoyable stay at London hotel designer Anouska Hempel's Blakes, Louis Vuitton commissioned Anouska Hempel Design to redesign the 350 square metre 1960s shop in Saint-Germain-des-Prés, Paris. AHD achieved a dynamic contrast of the elegance and luxury associated with the Louis Vuitton name with rigorous modern detailing in steel and glass.



## German engineering wonder to be replicated

Between 1925 and 1934 a consortium of 20 partners including the founders of Krupp brainstormed a solution to the problematic height difference of 36 metres between the Oder river and the Oder-Havel Canal. The resulting ship lifting station in Niederfinow in eastern Germany, is still considered to be one of the most extraordinary enginnering feats in Europe.

Sixty years later, Krupp, who provided the famously maintenance-free steel roofing for the Chrysler building in New York, became reaquainted with the station when they were commissioned to provide a roof (roll seam welded steel NIROSTA). When Krupp invited a team of engineers, architects



and journalists to Niederfinow to announce that a new station will be built to accomodate the increased volume and size of water traffic, they challenged their guests to suggest improvements upon the 1930s design.

The lift is particularly efficient because it only uses the equivalent of four car engines to lift the 4300 tonne weight of the water-filled trough. These engines overcome the initial interia after which momentum, created by the counterbalance weight and lead chain, takes over.

The weight of the trough is constant because the ships displace their mass in water. The system can be operated by two people and shifts approximately 11.5 million reference tonnes per annum. Due to its extraordinary efficiency, half a century later, the new ship hoist will be built along the same principles as the original except for an increase in scale.

## Moneo wins LA cathedral commission

*by David Cohn, Spain correspondent*

The archdiocese of Los Angeles has selected Spanish architect Rafael Moneo, 59, to design a new cathedral for the city, replacing a structure damaged by several earthquakes and undersized for the city's growing Catholic population, now the largest in the United States. The announcement was made by Cardinal Roger Mahoney in mid-June, the day before Moneo received the 1996 Pritzker Prize in a ceremony at Los Angeles' Getty Centre.

Fifty architects from around the world participated in the selection process, which included a sketch-problem competition related to the building's programme. Moneo was chosen over two other finalists, Thom Mayne and Frank Gehry, both local architects. One of the factors cited in the decision was the desire that this "Cathedral for the Third Millennium of Christianity" reflect the cultural origins of the predominantly Hispanic congregation.

The fate of the existing cathedral, built in the 1870s, is currently a lively subject of debate, with local conservationists campaigning for its preservation. Rafael Moneo and the archdiocese hope to incorporate elements of the existing structure within the new design, although the available options are still under study. The estimated budget for the building is US$45m.

### News Analysis

- People of London question the role of developers.
- France prepares to host the 1998 Football World Cup, and London's Wembley stadium checks in for a facelift with Foster, after "Euro '96".
- Upside of the UIA in Barcelona. Details of the award winners.
- Update on the pace of construction in Berlin.

### OnScreen

- Graphisoft's virtual prizewinners.
- DVISE, Division's premier VR authoring tool.
- Fractal Design acquire Ray Dream Corporation.

### Polemic

Martin Pawley notes that the absence of architectural monuments at either end of the Channel Tunnel is being reflected in similar land-link projects across the world.

# Anyone for Tennis

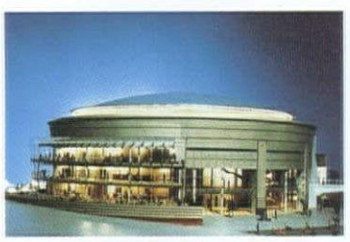
David Barbour

Visitors to the Wimbledon Lawn Tennis Championship in July would have witnessed the progress of Building Design Partnership's new No 1 Court. Site work began after the 1994 Championships and will finish in time for the 1997 season.

The new stadium is countersunk into the hillside; it is surrounded by terraces of hospitality, restaurants, retail and service spaces. Circular in plan, the new design is an updating of the proven success of light and acoustics on the existing Centre Court. BDP seeks to combine this with openness and informality incorporating improved sightlines, seat comfort and ventilation for spectators.

Together with the court building, the BDP masterplan includes an underground Broadcast Centre, a road tunnel linking Somerset Road and Church Road plus two new outer courts. Monk Dunstone Associates is construction cost consultant and the main contractor is Try Construction Ltd.

# Cheaper air in Belfast



Annual energy bills for the 2, 335 seat Belfast Waterfront Conference and Concert Centre in Northern Ireland will be cut by around £30,000, thanks to an innovative design solution by Consulting Engineers Mott MacDonald, which has been partly funded by the Energy Design Advice Scheme (EDAS). Mott MacDonald, the building services and energy consultant decided on displacement ventilation – where the supply of conditioned air is brought in at a lower level, with hot stale air being extracted at a higher level.

# In Brief

**THE CZECH REPUBLIC**

**Bovis benefits from Prague boom**

Demand for offices in Prague is expected to remain buoyant for the rest of this year and into 1997 according to agent DTZ. Bovis, the UK construction company, is continuing to expand its Czech order book with the award of three more contracts worth more than £20m (US$30m). It has won 16 contracts worth US$90m since it opened its offices in Prague in 1991, the latest orders include technical consultancy services for the US$19.5m Parukarka development to the east of Prague for the real estate division of IPB Real, a Czech bank. and US$7.5m refurbishment contract to a spa and sanatorium at Luhacovice and a US$4.5m airbag plant for Automotive Safety Components International at Jeviko both in Moravia.

**CHINA**

**Commercial slump**

A commercial property slump means that companies are investing more in public housing. Mr Sam Crispin of the Shanghai branch of Brooke Hillier Parker said that "two years ago construction sites in Shanghai were working 24 hours a day. Nowadays they are mostly quiet, even in the day time."

**FRANCE**

**Taking flight**

The French government have chosen a site near Chartres, 80 kilometres south-west of Paris for possible construction of the capital's third international airport to relieve congestion at Orly, 10 kilometres south of Paris and Roissy-Charles de Gaulle, north of the capital. Ms Anne-Marie Idrac, the transport minister, is negotiating land purchase in the chosen location of Beauvilliers.

**GERMANY**

**Wayss & Freytag**

Wayss & Freytag, the German building and construction group, had a net profit of DM24.6m in 1995. Their recent report shows that output in the first five months of 1996 was down by three percent. New orders in the period climbed 7 percent to DM1.16bn, with domestic orders up 8 percent at DM1.05bn.

**Berlin boom begins – German captial relocation spurs jobs**

The US$400m reconstruction of Berlin's parliament building, the Reichstag is now beginning in anticipation of the government's relocation from Bonn to Berlin in 2000. The government's move is helping to generate a construction bonanza, with work in the city worth US$18bn last year, according to Hanscomb GmbH Berlin. Hanscomb forecasts a 50 percent increase in office space to 20 million square foot by the end of the decade.

**JAPAN**

**USA build cinemas in Japan**

MCA Inc is to built a US$1.5bn theme park in Osaka, Japan. Universal Studios Japan will be linked by high-speed water taxi to the Kansai International Airport. The corporation have previously commissioned Rem Koolhaas to design a master plan for its Universal City complex in Los Angeles but they have not named the architect for this, their first venture outside the US.

**SAUDI ARABIA**

**Wise after the event**

Investigations are underway to determine whether additional security measures are necessary to avoid tragedies like that at Khobar Towers, a US military housing complex in Dhahran where, on 25 June this year, an explosion ripped the facade from an eight storey, T shaped building that consists of precast concrete panels. The guarded perimeter fence should have been further away and the outer areas of the complex, which should have been for such non essential uses as storage, were accommodation blocks for camp personnel. No one anticipated an explosion of that magnitude, but Tod Ritten house, principal of Weidlinger Associates, New York City, claimed that the building performed well given the strength of the bomb. The initial repair contract worth US$1.28m has been given to a local contracter.

**SINGAPORE**

**All eyes on the housing market**

In the first three months of 1996, Singapore's residential property market reached fever pitch, however UK property consultant Jones Lang Wotton said that "the private housing market, which had threatened to boil over in the early part of this year has simmered down". Reasons for the decline were not given in the Jones Lang Wotton report but it is thought that suprise government measures introduced in May seem to have been aimed at cooling property speculation and damping prices.

**SOUTH KOREA**

**Seoul investment**

The South Korean government have sanctioned the financing of five giant infrastructure projects in the capital, to the tune of US$16bn by 2001. The aim is to turn South Korea into a tranport centre for north-east Asia, and the scheme includes an international airport, high-speed rail system and three container ports. The money will be raised from the central government, public corporations (via overseas borrowing), and private contractors.

**UK**

**Bridging the Thames**

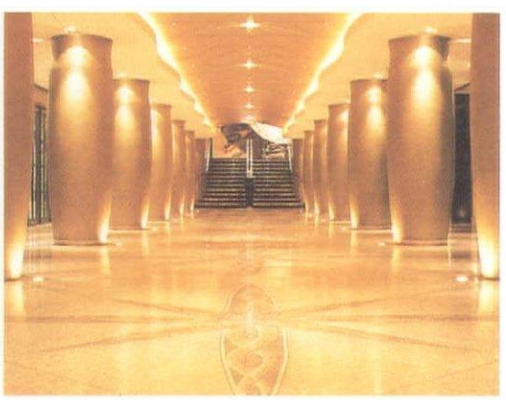
A competition has been announced for the design of a new pedestrian bridge to link St Paul's cathedral with the new Herzog & de Meuron Tate Gallery of Modern Art at Bankside (not yet built). The competition is open to international architects, engineers and artists, and will be staged in two phases. The deadline for entires is 25 September 1996, and a shortlist of up to five entrants will be announced next month (October). The winner will be announced in December 1996 in time for construction to be completed by the Millennium.

**USA**

**Ballinger win Philadelphia contract**

The Philadephia based architecture firm, Ballinger, has won a contract to design a new training centre for the Allied Signal's, the engineeing manufacture company headquarters there. The project consists of a complete renovation of an existing, 60,000 square foot facility, formerly used for research and an 8,000 square foot addition to the same building.

# Design Effectiveness Awards



***Above*** *Oleson Worland Architect's Yorkville Park Project in Toronto and* ***right*** *Yabu Pushelberg's Princess of Wales Theatre*

Two winners of the 1996 Apple Canada sponsored Design Effectiveness Awards stand out particularly: Oleson Worland Architect's Yorkville Park Project and Yabu Pushelberg's Princess of Wales Theatre.

The Village of Yorkville Park is the result of an international design competition sponsored by the City of Toronto in 1991. On a one acre site over a subway station, the new park satisfies the competition brief by creating an oasis and establishing a unique foothold for nature in the city. Oleson Worland Architects designed the winning plan. The creation of the park is the story of people working together – City Councillors, City staff, design professionals and most importantly local residents, business groups and the local BIA, to strengthen a community. Once an unremarkable suburban location, the park has increased the value of surrounding properties and encouraged better quality retail and other businesses to move into the area.

In the Princess of Wales theatre project, Yabu Pushelberg incorporated a number of custom designed details commissioned from local artists and craftseople. He tested his ideas and costing as the project progressed to keep to a tight budget and introduced enterprising. The evolving design has increased the theatre's turnover considerably.

# Broadway Malyan Africa unveil plans for Kimberley's "Big Hole"

The Big Hole is one of the largest man made holes in the world, measuring 1,640 feet across with a depth of 1,3000 feet, it will be the focal point of a US$75m development by AMTRAD, the property development arm of the Anglo American Group of chartered architects, Broadway Malyan.

BM's 28 hectare scheme comprises a 140,000 square foot retail centre of 50 units, a 10 building, 100,000 square foot office park and a three star 120 room hotel. Additionally, a number of historic buildings on the site will be developed into 16 luxury suites and a conference and exhibition centre. Architecturally, the style will reflect Kimberley at the turn of the century. This will be mirrored in the selection of landscape features such as bandstands and gazebos. Work is expected to begin in early 1997.

## WZMH's work in the United Arab Emirate

Construction has begun on three new towers for Etisalat the Emirates Telecommunications Corporation. The buildings were the winners of an international design competition. The designs, by WZMH (The Webb Serafa Menkès Housden Partnership) of Toronto and Cansult of Abu Dhabi, were all designed differently but all incorporate the trademark Ray-Dome. The buildings, for Fujairah, Ras Al Khaimah and Sharjah are designed as landmarks of their respective cities.

The firm are also starting work on the "Sails" luxury residential building on the gulf in Abu Dhabi. The building is inspired by the majestic sailing "Dhows" of the region.

# RTKL – the waterboys

RTKL has completed business district masterplans for two communities in the Philippines including Lucena, the provincial capital of Quezon, and Legazpi, the provincial captial of Albay. In order to develop a distinct identity for each of these provincial seaside towns, RTKL created a plan for Lucena that takes advantage of the river and provides a waterfront central focus for the district. The old Legazpi central business district's Spanish influenced architecture is the basis for RTKL's development of a modern business park. The plan includes intimate urban parks and squares, covered arcades and landmark buildings that are designed in a contemporary Spanish style.

# SPD Party new headquarters in Kreuzberg, Berlin

*by Layla Dawson, Germany correspondent*

The German Social Democratic Party, SPD, is the first political party to move its headquarters to Berlin, the new capital. Until 1933, when the SPD was outlawed by the Nazis, they had premises on Lindenstrasse. Their new building, also in Kreuzberg, nicknamed "Kaese-Eck" (cheese triangle) but officially called "Willy Brandt Haus", lies between Stresemannstrasse, which runs from Potsdamer Platz past the Martin Groupius exhibition building and Anhalter station, and Wilhelmstrasse, where the gestapo prison cells have been preserved as a memorial. Architect Professor Hege Bofinger, designer of the Film Museum in Frankfurt am Main, and whose plan for Kreuzberg won first prize in the IBA was chosen by the SPD to realise his ideas on one of the key sites in his schem. For DM90m he has produced 24,000 square metres of space on seven levels, including shops and a restaurant, seven storeys of party administration, a top lit triangular atrium, a 474 square metre assembly hall, and two basements for 102 cars and 219 bicycles.

The atrium is a public exhibition space, accessible from both streets through shopping arcades. The staircase rises from a speaker's podium for political addresses. The restaurant roof terrace faces the Kreuzberg constituency. Culture, shopping and eating, will bind the people in their political goal. The acute curved glass corner of the building, described as the "point de vue" by the architect, faces one of the Spree's many canals in which the radical socialist Rosa Luxemburg was found murdered, in 1919. Bofinger's architectural gesture embracing the city, is not without political risk. At the May opening, security was called on to guard the "open house" from an announced demonstration.

Alex Kroke

## People and Practice

**Inventor of the Portakabin retires**

Donald Shepherd, inventor of the Portakabin has retired, aged 77. He introduced the self-contained portable accommodation unit as a single model in 1961 inspired by his on-site experience. Although the Portakabin is his best-known innovation, he also played a major role in developing bulk cement handling, design and build and module-based building systems.

### Obituaries

**Alejandro de la Sota**

Modernist architect Alejandro de la Sota, an influencial 'Minimal rationalist' in Post-War Spain has died at the age of 82. His best-known works are the Maravillas Gymnasium in Madrid (1961) and the Civil Government Building in Tarragona (1957).

**Esther Kahn**

Esther Kahn, widow of the architect Louis Kahn has died aged 90. Esther is credited with galvanizing the group of architects and historians who helped to place her husband's archives at the University of Pennsylvania.

**Jean Victor Gimpel**

Jean Gimpel, historian of technology has died. Author of the controversial "Cathedral Builders" (which sold more than 100,000 copies in France alone) led to his diatribe against art called "The Cult of Art". Compared with the nameless craftsmen and unsung engineers and architects of the Middle Ages, artists of the Renaissence were, he argued, egotistic and self-indulgent if not actually fraudulent: Gimpel proved, for example, that Leonardo da Vinci's "inventions" were mostly borrowed from treatises by earlier engineers. Gimpel was a man of action as well as words and, dismayed at the pre-mediaeval level of technology in the rural areas of many Third World countries, he sought to introduce inventions such as the Archimedean screw for lifting water from one level to another. In his obituary in the UK newspaper *The Independent*, Roger Berthold concluded that: "Few people can have more effectively or agreeably bridged the gap between CP Snow's 'two cultures'of science and the humanities."

### Company news

**MALAYSIA**

**Buro Happold**

The International consulting engineers, Buro Happold Malaysia Sdn Bhd, opened a branch office in Kuala Lumpur, Malaysia, in July under the directorship of Dominic Lidell. Padraic Kelly, Buro Happold Partner said that "Kuala Lumpur is an exciting, fast growing city. International companies and developers have significant com mercial activites and investments planned for the whole region".

**SOUTH AFRICA**

**Broadway Malyan Strengthen South African Operation**

Broadway Malyan Africa (BMA), based in Johannesburg, have formed a strategic alliance with Linda Mvusi BSc Design (Hons) Ghana, B Arch (UK), MIA (SA) following two years of informal collaboration. Linda Mvusi is a qualified architect and urban designer and her wide ranging expertise in housing, education and public sector design complements the retail and commercial skills of Broadway Malyan Africa. The alliance is effective immediately.

**UK**

Richard Windmill, who has significant experience of building engineering works in the City and West End, has joined Oscar Faber as a director in its London office. Thomas Sit has been promoted to managing director, Oscar Faber Asia, responsible for operations in Singapore, Thailand and Malaysia.

Ken Patton has been made an associate of Alan J Smith Partnership. He joined the Alan J Smith partnership to coordinate the construction aspects of the 250 unit roll-out for British Gas Retail's Energy Centres. He has 25 years of construction experience including the role of Project Director for six years at the Metrocentre.

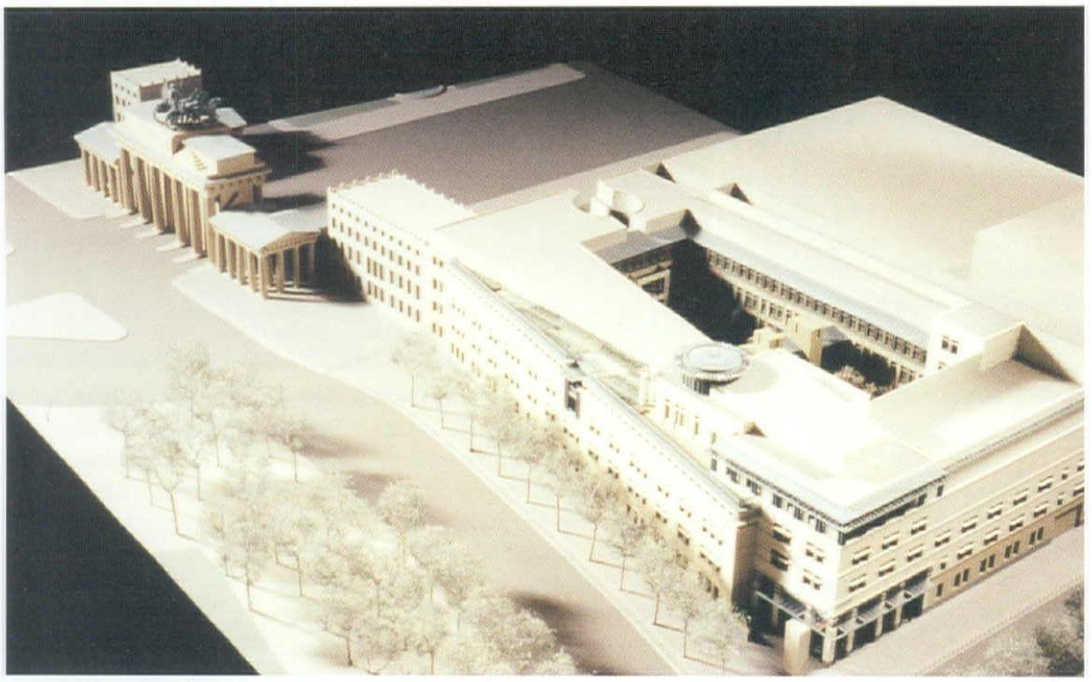
Richard Adams, Simon Cove, Andrew Fox and Julian Morris have been appointed as associates to ACP (Architects Co-Partnership). These four have been appointed as the third generation of directors.

Derek Lovejoy Partnership, one of Europe's leading Landscape Planning and Urban Design practices, announced its incorporation on 1 July 1996. The Partnership was established in 1960 and has since won more than 80 design awards with a strong international portfolio including projects such as Disneyland, Paris, the Apicorp building in Saudi Arabia and several projects in Europe and Japan.

**US**

Craig Purcell, AIA had joined the Cincinnati office of FRCH (Fitzgerald Roche Cicio and Hambrecht) Design Worldwide as a Design Principal in the firm's architecture and environmental graphics studio. Craig Purcell was previously design architect with Development Design Group (DDG) in Balimore and for nine years he headed his own firm.

# American embassy in Berlin



*by Layla Dawson, Germany correspondent*

The American embassy is to be built anew on its pre-war site in the heart of Berlin. Ambassador Charles Redman declared Moore Ruble Yudell Architects & Planners in association with Gruen Associates unanimous winners of the US Embassy competition at a ceremony on 5 June in Berlin's Amerika Haus. The architect's Santa Monica office was one of thirty original entrants from which six were invited to progress to a second design stage. The site on Pariser Platz lies on what used to be the East Berlin side of the Brandenburg Gate and will have as neighbour Günther Behnisch's design for the Berlin Academy of Arts. However, in contrast to Behnisch's people friendly glass facade and public foyer entrance, the US embassy, of necessity, will have a more daunting and solid perimeter. The architects speak of a "respectful and spiritual dialogue" with the Brandenburg Gate by the use of complimentary proportions, details and materials. The facade on Pariser Platz presents a high stone wall broken in the middle with a view beyond into an inner garden courtyard where a glass and copper dome tops an entrance rotunda. Light, as a symbol for democracy, will enter the compound through this south facing facade slit. Limestone facing on the more formal Pariser Platz will give way to arcades, pergolas and fencing details on the Ebert Strasse side in an attempt to relax the heavy impression of such a large city block. Apart from the landscaped inner garden and plant covered walls the roof will also be designed as an external reception space with garden overlooking the quadriga of the Brandenburg Gate. The architects took their inspiration from the form of country houses and America's National Parks. Internally energy saving and integrated building services will provide a modern and flexible working environment for the business of representing America in the heart of Europe. The project will be financed from the sale of other American held properties in Germany and embassy staff will move into the building in 1999.

# Demon developers in London

The last in the series of "London in the 21st Century" debates centred on "Housing" but it was focused by George Monbiot (the academic/activist behind "The Land is Ours") on the role of the developer. With the developer, Stuart Lipton, another panel member sitting just behind him, Monbiot argued that the whole planning process is geared towards developers: "if a planning application is rejected the developers have a right of appeal, but if it is accepted, there is no such right for objectors." He explained that "most local authorities cannot afford to fight an appeal because it takes an awful lot of money to hire a QC." Monbiot called for an end to repetitive developer appeals in an effort to grind local authorities down and, even more controversially "an end to legalised bribery 'You don't like my proposal for a supermarket? Here is £1m, what do you think of it now?'."

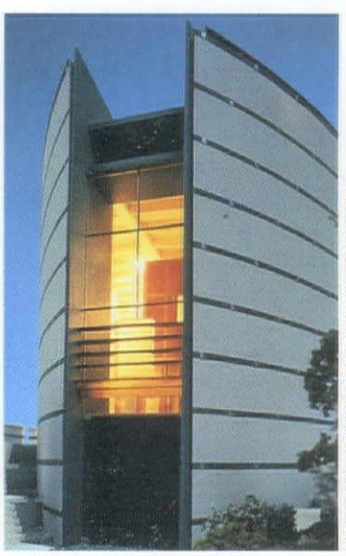
However, despite enthusiastic support from the majority of the audience, Margaret Mervis, Wandsworth Council's housing chairperson, took the floor to challenge Monbiot saying that the nine-acre Guinness site in Wandsworth that "The Land is Ours" group were occupying was, infact, not abandoned, but was going through the very planning process that he had outlined. "Wandsworth Council is waiting for the results of a public inquiry into an application to use the site as a superstore". Unfortunately, time was running out and the debate's moderator, Paul Finch, editor of *Architects' Journal*, was not able to give Monbiot time to respond.

## Dishing up more of the same

Putting the practical issues associated with any architectural exhibition aside, some would argue that the buildings chosen by the UK team to exhibit on the theme of "information" at this year's Venice Biennale pose a more immediate problem. A section of Colin St. John Wilson & Partners' British Library will be redesigned on site. Given the notoriously scandalous history of this multi-million pound government project it seems an odd flagbearer for the UK's construction industry, albeit appropriate for the theme of "information". Perhaps the government, which provides a significant percentage of the funding for the show, is hoping that some measure of success can still be milked from this project at the eleventh hour?

Nicholas Grimshaw's Eden Project for a "living museum" in the Cornwall countryside, despite demonstrating innovatory ecological advances, closely resembles the Eurostar train station at Waterloo, London – a project with which most observers of the UK architectural scene are already overly familiar.

Britain is not alone in choosing the safe option, other countries have gone for known names: Oscar Niemayer representing Brazil; Switzerland Luigi Snozzi etc. Artistic risk has to be balanced against funding but even so will the huge potential of the Biennale as an architectural forum be realised?



McCormac Jamieson Prichard's Ruskin Library, Lancaster University, UK

# French football fever

*by Michael Rowe, France correspondent*

"I hear a huge clamour rising from the stadium." According to the French Organising Committee of the 1998 Football World Cup, this line from Seneca (*Letter to Lucilius*) inspired the logo for the vast new arena being built at Saint-Denis immediately to the north of Paris to welcome the final of this most intensely media-conscious event.

The decision to stage the next World Cup in France has triggered a frenzy of stadium building and redesigning plus related infrastructure works across the country. Nine French cities in addition to Saint-Denis are hosting different rounds of the Cup, and in all of these architects and construction firms are being called on to adapt local stadiums to the organiser's rigorous criteria and to ensure adequate access and security.

For example architects Jean-Pierre Buffi and Pierre Averous have devised a plan which will transform 80 percent of the famous Vélodrome stadium in the ancient Mediterranean city port of Marseille. Elliptical in form, and encompassed by outward sloping wings which will open the arena to the southern French skies, the design adeptly reconciles lightness of touch with the need to restrain expenditure within a budgetary corset of some FF230m or so.

The Gerland stadium in Lyon, which can accommodate 44,000 spectators, was designed by the architect Tony Garnier, and nowadays it is listed as an historic monument. Plans for conversion works to cover the northern corner and to provide seated places for all spectators have been devised so as to preserve the essential character of the original design.

Adaptations to improve seating capacity are also planned for the stadiums in Bordeaux, Lens, Montpellier, Nantes, Saint-Etienne and Toulouse. Minor modifications are being carried out in the Parc des Princes stadium which offers capacity seating of more than 48,000 next to the city ring road on the western side of Paris.

The centre piece of all this activity is the new 80,000 capacity stadium "Le Stade de France", now under construction at Saint-Denis. Designed by the architects Michel Regembal, Michel Macary, Aymeric Zublena and Claude Constanti, the stadium will cost something over FF2.6bn to build. More than half of this is being provided by the private sector through a concession arrangement under which the consortium carrying out the building works will also operate the completed project.

A major related objective is to bring fresh life and jobs to this traditionally working-class industrial suburb of Paris. To this end additional works include the building of new roads and railway stations together with the upgrading of other public infrastructures. The stadium itself has been designed to offer maximum flexibility for a wide range of uses. Symbolically, its disk-shaped roof will float on masts above the surrounding townscape, and its design will open the building to the city outside.

# UIA...on a more positive note

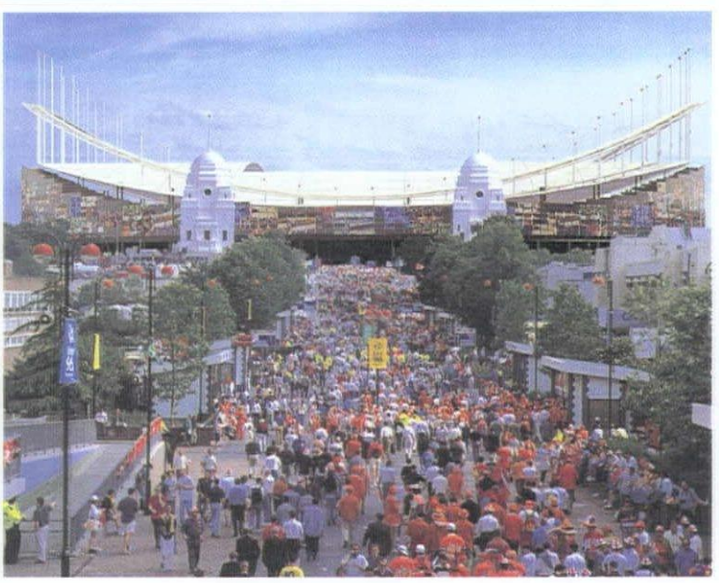
Despite the wide publicity centred on the disorganisation and rioting at this year's UIA conference in Barcelona (*see this month's Foreword*) there was much to write home about of a positive nature. The Spaniards certainly know how to throw a fiesta and the opening party in the Gaudi-designed Parc Guëll, and the closing party on the beach were enough to make anyone forget the tension of the interim days. These two events were complemented by some excellent exhibitions running alongside the conference, most notably the New York MOMA exhibition "Light Construction" at Richard Meier's new Museum of Contemporary Art. Whatever you may say about this imposing white giant standing alone amongst the integrated stone and brick of Barcelona, the galleries work successfully – and despite having to wear sunglasses inside, it is a joy to walk around.

The exhibition at the heart of the conference was called, simply, "Present and Futures". The projects chosen to illustrate the themes of the conference were wide ranging, although some were already well known, dating back to the early 1990s. The major downside was the languages chosen to accompany the photographs and models – Catalan and Spanish!

For some the highlight of the week was the awards ceremony, where compatriot Rafael Moneo received the highest honour, the Gold Medal, from the UIA president, Jaume Duró. The Sir Patrick Abercrombie Award went to the Mexican architect, Juan Gil Elizondo for his work in the Programme of Ecological Rescue of Xochimilso. The August Perret prize for technology applied to architecture was awarded to Thomas Herzog, from Germany, and the Jean Tschumi Award for architectural criticism and teaching was shared between the UK's Peter Cook and Liang-yong Wu, from China. Finally, the Robert Matthew Prize for 1996 was given to Italian, Professor Giancarlo de Carlo.

# New century, new Wembley

One of the highlights of the European summer was surely the sight of Wembley stadium in London as "Euro 96" reached fever pitch: a full house, well behaved spectators in good voice, defeat for the host nation in the semi-finals... However, the championships may well prove to be the swansong for Wembley as we know it. Built in the 1920s, Wembley must undergo a radical redesign if it is to keep pace with current stadium design trends. Foster and Partners Architects have proposed a scheme – yet to be approved but with the full backing of the English National Stadium Trust – which will involve repositioning the famous twin towers in order to allow the stadium to be spun round 90 degrees. This will improve spectator circulation and access around the building, and reduce the sun's glare onto the pitch. The proposal also includes an immense lazer projection screen on the eastern and western sides of the new stadiums external skin for the benefit of spectators viewing from the new square outside, as well as the seemingly obligatory retractable roof. The message seems to be that, despite the success of "Euro 96", every twenty-first century city has to have a twenty-first century stadium.



## The new Severn Crossing coincides with Cardiff bay building boom

The timing of the opening of the second Severn Crossing comes at a good time for developers at Cardiff Docks because it coincides with the completion of the final stretches of highway joining Cardiff Bay with the M4 London-South Wales motorway. Buildings at the Docks include the "brave new" offices such as the Dutch insurance company NCM's prow-shaped headquarters building, the Ocean Technical Glass, German-Japanese company's joint venture offices and the new Techniquest hands-on science discovery centre. Sensitive restorations of a former bonded warehouse, an old HM customs office and a former Norwegian seamen's church are underway and Victorian edifices waiting refurbishment; housing and hotels next to the docks and a large acreage of land still awaiting new users.

Building has been delayed by a government requirement that the proposed scheme be put out for consideration under the private finance initiative. A number of consortiums bringing together building and transport groups have now put in bids which are being evaluated and it is still intended that the scheme be in operation by 1999. For the private sector the incentive will be the opportunity to develop land on either side of the road which will run in a 90 metre corridor down to the middle of the waterfront.

## Canada capitalises on US posturing on Cuba

Eleven tourist hotels will be built in a joint venture project between a Canadian entrepreneur and Cuba's state hotel corporation Gran Caribe. The deal worth US$400m is the biggest foreign investment deal in Cuba due to President Clinton's anti-Cuba legislation.One Canadian investor based in Vancover is also interested in two advanced gold projects in Cuba and has invested in a Cuban-canadian biotechniology joint-venture. But while the Canadians are captialising on Cuba, their American neighbours' hands are tied, since the US introduced the notorious Helms-Burton bill in March to discourage foreign business there.

At the beginning of July, a cross section of the business community petitioned Clinton for a six month suspension of a specific provision of the bill which would allow US citizens and corporations to sue foreign companies which trade or invest in property in Cuba expropriated from US nationals. The business community warn of "enormous friction" and of "our closest allies and important trading partners...contemplating legislating counter measures and the US firms will bear the brunt of these."

# Timber makes a comeback

*by Layla Dawson, Germany correspondent*

The Berlin ideological debate stone versus glass, power and tradition, or transparency as a reflection of democracy, has been hotly discussed throughout Germany for the last three years. However, a building material which has an older claim on German history is timber. An Aachen conference examined the revival of this environmentally appropriate material. In a time of recession, public sector cutbacks and rising land prices which now account for 50 percent of housing costs, government, architects and contractors are interested in any cheaper methods of construction, especially for social housing where profit margins have become break even or minus calculations. Nordrheim Westphalen's building minister Michael Vesper is expressly encouraging timber because it uses less energy during production, is renewable, flexible and has structural and insulating properties. It is also a material which lies at the heart of German folklore. Despite acid rain damage, a direct result of their industry, prosperity and equal love of the car, forests are regarded as a national heritage. Wandering though the woods is an obligatory Sunday pastime. While prefabricated concrete slabs have fallen into political disrepute by association with socialism factory prepared timber panels are seen as ecologically correct and welcomed as economical.

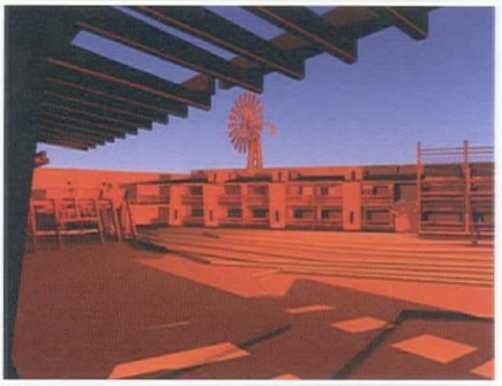
Apart from the Aachen conference there have been a growing number of events sponsored by the German timber industry, and Scandinavian architects have been increasingly promoting their extensive experience of timber construction in Germany in the last year. Housing by the Swiss architects Herzog & de Meuron, and projects in Nürnberg-Langwasser and Ingolstadt, show that timber does not have to mean kitsch. Munich architect Thomas Herzog has even designed a multi-storey all timber hospital in Switzerland.

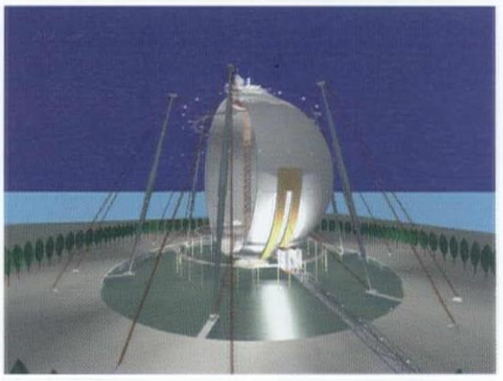
## *WA* visits Berlin to witness the extraordinary pace of building

There are some question marks over the frantic pace of building in the German captial but with the move of the government from Bonn to Berlin, oversupply is not expected to be a problem. Potsdammer Platz is still a desert populated by dinosaur-like cranes but in Schneider+Schumacher's red "Info Box", an impressive interactive display gives a comprehensive guide of building in this richly symbolic city centre.

Outside Potzdammer Platz, the British architect, Nicholas Grimshaw's Stock Exchange and Communication Centre building is underway. The above image shows the building's steel arcs which are now being clad in Krupp's new "sharkskin" matt steel. Daniel Libeskind's Jewish School is already attracting an audience, although builders complain there are no horizontal surfaces on which to balance a cup of tea, and Berliners are waiting with baited breath for Sir Norman Foster's transformation of the Reichstag. **WA**

# OnScreen





***Right from the top*** *Graphisoft's virtual architecture competition winner Paul Bo Peng's Hotel California; equal second, a rendering of Boulée's Tomb of Newton and the Library from* The Name of the Rose

## REAL PRIZES FOR VIRTUAL WORK

Creating a virtual 3-D image of a non-existent building – such as the pleasure dome at Xanadu (Coleridge's version, not Orson Welles') or the Pharos at Alexandria, was the challenge set to students worldwide by Graphisoft. Prizes worth over US$50,000 dollars were available, and over 80 entries were received. The winner was Paul Bo Peng and team, from Austria, for a view of Hotel California, from the song by the Eagles. A team from former Yugoslavia won second prize (for an imaginative re-rendering of Boulée's Tomb for Newton) jointly with a Polish team, who recreated the library in *The Name of the Rose.*

Inviting students to create designs for buildings that are, by definition, unreal, might seem to some to endorse the "blue sky" view of student work rather too much, but the quality of the finalists' work suggests that the different entrants took the project seriously. The entries had to be designed using Graphisoft's ArchiCAD as a design tool and visualised using Apple's QuickTime VR. The competition (punningly entitled VR Une Architecture) was co-sponsored by the American Institute of Architectural Students, Apple Computers, *Progressive Architecture* and the *Architectural Review.* The first two prizes included not only hardware and software but also travelling scholarships.

The co-sponsorship by Graphisoft and Apple is a symbol of their continuing cooperation in other fields. Though available on other platforms, ArchiCAD was originally designed for use on Apple Macintosh, and the two companies operate a joint marketing strategy throughout Europe. Further proof of the link was the recent demonstration of a beta version of ArchiCAD designed to run on Apple's forthcoming Mac OS 8 operating system. Graphisoft's expansion from its original European base continues with the recent opening of offices in China, to complement the marketing office which opened in Japan a year ago.

*For more information and to order the CD-Rom of the VR competition, contact Graphisoft at http://www.graphisoft.hu*

## DIVIDING WINDOWS

Competition to provide virtual reality to the presentation market, including architecture, has just got keener with the release of dVISE for Windows NT, from Division. DVISE is Division's premier VR authoring tool, and to date has only been available for the Unix platform. Demand from customers to have a program that could work on the main program used in offices, led to a five-year development program to port the program to the new operating system. This is a complete port of the program, not a stripped-down or limited version. It will run on a Pentium PC with 32 MB of RAM (similar to the configuration required for AutoCAD's 3D Studio, for example) though a graphics accelerator card is recommended to take advantage of the full facilites of the program.

This move by Division, whose clients for interior planning include companies such as Sainsbury's in the UK, Steelcase in Europe and Matsushita in Japan, highlights the role VR is likely to play in the future for architects with major corporate clients with intranets. Intranets are networks using Internet software to post and transfer information as text, graphic, sound and movie files but with closed access to company employees only. They are increasingly used for internal corporate communications, and so corporations are in turn asking their consultants to produce material in electronic form to be handled on the intranet. Architects are going to be drawn into this process, and are going to need to have available programs that can be handled on intranets. Division's software can convert data from most standard CAD formats, and so offers a new tool to architects for around US$3,000.

*For more information see Division's web site: http://www.division.co.uk*

## SPREADING THE LIGHT

Want a lamp with angel's goose feather wings? Need a dedicated lighting design for a major project such as the Tel Aviv Opera House? After a chandelier of broken crockery? Ingo Maurer and his team in Munich have been designing lamps, light fittings and lighting schemes for the last 30 years. Now they have issued a CD-Rom showing both installations and designs. It is a flowing sequence of images, inviting intuitive investigation rather than ordered progress.

The quality of Maurer's design lies both in its technical mastery and in its eloquent yet spare form. His Watch Tronic system is an integrated device for calculating and sharing power loads across transformers in a low voltage system, which has enabled him to create some of the most complex low voltage wire systems to date. Individual lamps show wit and minimalist skill: One for the Recession (1995) is a folded red steel heart fitted with spikes. Los Minimalos is a single 50 watt halogen lamp in a casing wrapped in a mesh envelope. Maurer describes himself as someone "religious without a religion. I like to work in different ways. Sometimes it's more the emotional expression, and other time the pure, the reduced and technical expression I look for". The CD-Rom conveys brilliantly the complex and direct world of light by Maurer.

*Contact Ingo Maurer GmBH on tel +49 89 381 6060, fax +49 89 391 606 20*

## FRACTURAL SYNERGY

"Fractal Design of Aptos, California, recently announced they had completed the acquisition of Ray Dream Corporation." For the conclusion of a long courtship, this is a distinctly bald wedding speech. Fractal Design's Painter program has in the five years since its launch achieved an enviable position in the 2D graphics market, while Ray Dream Studio has a considerable following among 3D designers, including a number of architects who use it for visualisations and rendering. Discussions between the two companies, both of whom were successful but needed more critical mass, had been going on for some time. According to Eric Hautemont, now president of Fractal Design, a key realisation in the process was the fact that their market overlap with competing programs such as Quark Express and Photoshop was in balance in both cases: about 20 percent of Fractal's clients used Ray Dream, and vice versa, while about 60 percent of both also used Quark or Photoshop. More importantly, the two companies shared a common approach to designing software, and a common goal of serving the needs of creative graphics professionals. Several new programs, both for 2D and 3D imagery, are promised in the latter part of this year.

*For more information see http://www.fractal.com* **WA**

# No nationalism: no architecture

Back in the 1980s, when the precise form of the long awaited fixed link between England and France was still under discussion, every form of engineering structure including bridges, combined tunnels and bridges, even artificial islands was still in the frame. Inspired by this variety, English and French architects began to get excited about the possibilities for great national portals. There should be, they argued, an architectural portal marking the entry into mainland Europe at one end of the Channel link, and a similarly grand portal marking the entry into Great Britain at the other. Several speculative designs for these portals were made. They ranged from great halls sunk into deep underground bunkers to mighty hi-tech towers soaring 300 metres into the air, so that they would be visible from one side of the Channel to the other. At the time several of these projects were published in magazines, and all of them were vigorously put about in the hope that the engineering and construction dominated consortiums preparing themselves for the selection process would sign up the lucky firm of architects as members of the team. At that time, it is true to say, although few architects were signed up for such a purpose, the idea of two great portals marking the journey from one country to the other was popular. It seemed only right that, with the historic natural barrier between the two countries finally overcome, something ought to symbolise the fact that they were still two separate countries after all – or were they?

**"...very few commentators thought that the removal of natural barriers between countries might also remove the demand for nationalistic architectural symbols."**

In those days, before the Maastricht Treaty, the ill-fated European Monetary System and the prospect of a single European currency, very few commentators thought that the removal of natural barriers between countries might also remove the demand for nationalistic architectural symbols to mark where they began and ended, but there was. Back in the 1980s only one Channel fixed link team was utterly opposed to the idea of architectural portals and that was a group working on the design of a 38 kilometre Channel road bridge. Their view was uncompromising. Questioned about opportunities for architects at each end of the road bridge, the engineer in charge waxed indignant. "There is no need to spend money on anything like that," he said. "All we need is an exit from the M20 signposted 'France'. When it's finished the bridge will just be another link in the European motorway network."

In a way he was right, for that is precisely what the Channel Tunnel has turned out to be. Even though the road versus rail battle of the 1980s ended up with a victory for rail, the most successful part of the service is rapidly becoming the rail car ferry – and still not an architectural portal in sight.

Today, in other parts of Europe and the rest of the world, the question posed by the lack of Channel Tunnel portals is being asked again. In south east Asia there is the "land bridge" project linking Thailand and Malaysia that promises to create an economic zone shared by both countries but belonging to neither. Despite the massive high-rise projects nearing completion in the capitals of both these countries there are no nationalistic architectural projects for the land bridge. There is indeed no nationalistic potential in these economic zones at all, as the Chinese understood years ago when they created the new economic region close to the border with Hong Kong. By and large the architecture of all new economic regions is speculative and undistinguished, even Spartan. From the moment of its creation it is hostage to continued growth and inward investment, and any display of nationalistic fervour discourages both.

Nowhere in the Old World is this process clearer than in Poland, a country whose frontier was moved hundreds of kilometres west by the Soviet Union in 1945, deep into what was once Germany. Fifty years later the reopening of severed transport links across the border at the end of the Cold War has led to the European Community-funded creation of yet another new economic district, "New Pomerania", a region that is neither Polish nor German, but both. The Poles are not disposed to commemorate the creation of "New Pomerania" because they see it as an example of resurgent German hegemony in eastern Europe. Nor will the Germans commemorate it because they do not wish to draw attention to its being seen in that way either. As a result "New Pomerania" lacks all architectural identity. It may indeed, in the prophetic words of the Channel Tunnel engineer, end up as an exit from a north German autobahn marked "Poland".

But the biggest of all European question marks about the future role of architecture as a symbol of nationhood must surely be asked by the massive civil engineering project that is in the process of linking Denmark and Sweden across the 16 kilometre sound separating Copenhagen and Malmo, and the 18 kilometre fixed link between the two halves of Denmark which will in turn feed the existing fixed link with the German/Danish peninsula.

A rail service across these two combined road/rail, bridge/tunnel links is expected to be operation next year and the motorway connection too will be working by the year 2000. By then not only will Copenhagen be more convenient for shopping and flying than Stockholm for most of Southern Sweden, but Germans will be able to drive north to the Arctic Circle, and Swedes south to the Mediterranean, without using a single ferry or making a tiresome detour to the east. In effect another new economic zone will have been created that will be neither Germany, Denmark nor Sweden, but all of them. Once again there will be no architectural commemoration of the transition from state to state. If the removal of historic national boundaries really does mean the removal of the need for grand architecture, this might be a trend worth watching.

*Martin Pawley*

# Events

## LECTURES, CONGRESSES AND CONFERENCES

CHINA
**8th International Federation of Landscape Architects Eastern Regional Conference** 11-14 December 1996. Hong Kong Convention and Exhibition Centre. Tel: +852 2528 6136. Fax: +852 2865 1528

ITALY
**Paradise on earth, the gardens of the XXI century** 33rd International Federation of Landscape Architects congress (IFLA). 12-15 October 1996. Enic Go Round, via Faentina 40/r, I-50133 Florence, Italy. Fax: +39 55 583300

RUSSIA
**The Fourth Russian Festival** "Architecture 96" 22-27 September 1996. The purpose of the Festival is to demonstrate the potential for architecture and construction within "New Russia" in terms of market economics. Union of Architects of Russia. 103001 Moscow K-1, Granatni per, 22, Russia. Tel: +95 291 55 78 (President of the Union of Architects);+95 203 6911 (Foreign Relations Department). Fax: +95 202 81 01

SLOVAKIA
**Universality and Heterogeneity. The Modern Movement and its regional reflections** 4th International DoCo, MoMo conference. 18-20 September 1996. Contact: Segreteria c/o, Eindhoven University of Technology, PO Box 513, NL-5600 MB Eindhoven. Fax: +31 40 2459741

SWEDEN
**Form Follows Anything** 3-6 October 1996. An interdisciplinary project comprising an international symposium, seminars and exhibitions, set up to examine how the media, technology, economics and politics influence architecture as the century draws to a close. Fargfabriken, Lovholmsbrinken 1, S-117 43 Stockholm. Tel: +46 8 645 0707. Fax: +46 8 645 5030. e-mail: fargfab@algonet.se.

USA
**IDSA 1996** international conference – Worldesign 96: "Alternative Realities: 7 continents, 6 billion people, 4 oceans, 1 Worldesign". 18-21 September 1996. IDSA 1142 Walker Rd, Great Falls, VA 22066 USA. Fax: +703 7597679

YUGOSLAVIA
**Architecture and Urbanism at the turn of the III millennium** 13-15 November 1996. The conference will focus on the issues affecting the architectural profession at the end of the millennium; including socio-political upheavals and new technologies. Sava centar, Milentija Popovica 9, Belgrade, Yugoslavia. Contact: Ms Natalija Jurosevic. Tel: +381 11 3225254. Fax: +381 11 135919

## ARCHITECTURE AND DESIGN COMPETITIONS

BELGIUM
**Interieur 96 "Design for Europe"** International competition, open to all designers, groups of designers, students and educational institutions, calling for projects which constitute a creative contribution to interior design (private and public). Reception of prototypes 9-14 September 1996. Interieur 96, Groeningestraat 37, B-Kortrijk, Belgium. Fax: +32 56 216077

GERMANY
**Solar Build – European students' competition.**
Design of "solar buildings". Competition open to students enrolled at schools of architecture in: Austria, Belgium, Denmark, Germany, Finland, France, Greece, Great Britain, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden. Deadline 30 September 1996. Universität Stuttgart, Lehrstuhl 2 für Baukonstruktion und Entwerfen, Keplerstrasse 11, D-70174 Stuttgard, Germany. Fax: +711 1213252

**International Audi Design Award** A competition open to designers under 35, on the theme of "Life in Motion". Jury: D Rams, G Aulenti, Kenji Ekuan, R Lovegrove, P Schreyer. Total prize money US$150,000. Deadline 15 September 1996. Contact Audi AG, Audi Design Preis, D-85045 Ingolstadt. Fax: +49 841 896195

JAPAN
**8th International Design Competition** YUU in the quest of spiritual comfort and the relaxation of the mind. Total prize money US$71,000. Deadline 2 December 1996. Contact: Mr Hada, PR Department, Japan Design Foundation, 3-1-800 Umeda 1-chome, Kitaku, Osaka 530, Japan

ITALY
**International Design Competition** calling for original designs of objects used for play. Open to designers born or working in eastern and central Europe. Registration 10 September 1996. Deadline 30 September 1996. Contact Trieste Contemoranea, via del Monte 2/1, I-34121, Italy. Fax: +39 40 367601

POLAND
**"Szczecin 96", 6th International Plein Air Competition** International competition organised by the Polish Architects Group (SARP)open to European architects. Plans are invited for the spatial and architectural development of the area next to the planned city-airport of Szczecin-Dabie. Competing teams of architects will commence by presenting general proposals. 5-14 October 1996. Contact Ewa Nosek at SARP: Plac Zolnierza Polskiego 2, 70-551 Szczecin, Poland. Tel/Fax: +48 91 339181

USA
**Greenport Waterfront Park** Open to architects, planners, landscape architects, engineers, student-faculty teams and students. Multi-disciplinary teams encouraged. Innovative design ideas for a four-acre park and harbourwalk. The landscape will incorporate various architectural pavilions, a carousel, community facilities and dock master's offices.
Registration by 19 October 1996. Submissions by 15 November 1996. Professional advisor: Wendy Evans Joseph AIA. Tel: +516 477 3000. Fax: +516 477 2488

## EXHIBITIONS

AUSTRIA
**Ingenious failure** Unrealised architectural projects in Austria 1699-1920. 13 October 1996. Austrian Musuem of Applied Arts (MAK) Stubenring 5, A-1010 Vienna. Tel: +43 (1) 711 36/0. Fax: +43 (1) 713 10 26

CANADA
**Frank Lloyd Wright:** Designs for an American Landscape, 1922-1932. Until 22 November 1996. Contact CCA 1920 rue Baile, Montreal, Canada. Tel: +(1) 514 9397000

CHINA
**China Construct 96** 9th international building materials and construction machinery exhibition. This year to be held in Shanghai. 11-14 September 1996. Contact: Oriental-Western Promotions Ltd, 6/F China Harbour Building, 370 King's Road, Hong Kong. Tel: +852 2807 7633

FINLAND
**Finnish Wood: From Raw Material to Final Product** Until 29 September 1996. Design Forum, Fabianikatu 10, Helsinki, Finland. Contact: Ms L Dynkknen. Tel: +358 0 629 290

**Timber Construction in Finland** An exhibition combining historical trends and current developments within the field. Until 13 October 1996. Contact: Ms Hannele Jröndlud. Rakennustaiteen Museo, Kasarmikatu 24, Helsinki, Finland.
Tel: +358 0 661918

FRANCE
**New Architecture in Flanders.** Until 24 November 1996. Arc en reve, centre d' architecture, entrepot, 7 rue Ferrere, Bordeaux, France. Tel: +33 1 42 76 33 97

GERMANY
**Design of the 50s, 60s, 70s and 80s.** A retrospective look at design over the last four decades, covered in four separate installations in four separate rooms. Until December 31 1996. Contact Ms K Takvorian. Vitra Design Museum, Charles-Eames-Strasse 1, Weil am Rhein, Germany.
Tel: +49 7621 702200

JAPAN
**Shiro Kuramata 1934-1991** A retrospective of the work of the Japanese architect. Until 23 September 1996. Hara Museum, 4-7-25 Kitashinagawa, Shinagawa-ku, Tokyo, Japan. Tel: +81 3 3445 0651

THE NETHERLANDS
**The Netherlands Goes to School** Two centuries of school construction. 7 December 1996 - February 1997. Netherlands Architecture Institute (NAI), Museumpark 25, 3015 CB Rotterdam, The Netherlands. Tel: +31 10 440 12 00. Fax: +31 10 436 69 75

**The Future of the Past** Restoration 96. 10-12 October 1996. Contact: Wenda Buining, RAI, Europaplain, NL-1070 MS Amsterdam. Fax: +31 20 6464469

UK
**Bridging the City**
29 September-8 December 1996. Photographs, models and drawings will complement a spectacular "river of time" documenting the development of the Thames. Royal Academy of Arts, Piccadilly, London W1V ODS, UK. Tel: +44 171 494 5615. Fax: +44 171 439 4998

**Christopher Nicholson.** The first retrospective of work by the influential modernist designer. 12 September - 26 October 1996. The RIBA Heinz Gallery, 21 Portman Square, London, W1. Tel: +44 171 307 3632

**100 Masterpieces – Furntiture that made the twentieth century** Until 6 October. Design Museum, London SE1, England.
Tel: +44 171 403 6933

USA
**Building for Air Travel: Architecture and Design for Commercial Aviation** 19 October-7 January 1997. The Art Institute of Chicago, 111 South Michigan Avenue, Chicago, Illinois 60603-6110, USA. Tel: +312 443 3600. Fax: +312 443 0849

**Between Fences** An exhibition examining the role of fences in defining the American landscape and culture. Until 5 January 1996. Contact: Public Affairs, National Building Museum, 401 F Street NW, Wahington D.C. Tel: +202 272 3606. Fax: +202 272 2448

**Humane Technology: The Eames Studio and Beyond** Until January 1997. Museum of Modern Art 151 Third Street. Tel: + 415 357 4000

**Three Buildings by Frank Lloyd-Wright** American spirit alive in Japan. Until 19 January 1997. National Building Museum 401 F Street NW, Washington DC, USA. Tel: +202 272 2448

## TRADE SHOWS

CANADA
**IIDEX '96 International Interior Design Exposition** 14-16 November. 13th annual exposition. The Metro Toronto Convention Centre, 255 Front Street West, Totnto, Ontario, Canada. Contact: Johanna Hoffmann or Mary Hermant. Tel: +416 923 9335. Fax: +416 923 8162

GERMANY
**CONSTRUCTEC '96**
7 November 1996. Leading international construction market show will include a special "Europe Symposium". Hannover Fairs Information Centre, 25 Hurst Way, South Croydon. CR2 7AP, UK.Tel: +44 181 688 9541. Fax: +44 181 681 0069

INDONESIA
**INDOBEX** 25-28 September, 1996. International Building and Construction Expo. Jakarta Convention Centre, Jakarta, Indonesia. Contact: David Aitken. Reed Exhibitions, Oriel House, 26 The Quadrant, Richmond, Surrey, TW9 IDL, UK. Tel: +44 181 910 7744. Fax: +44 181 910 7749

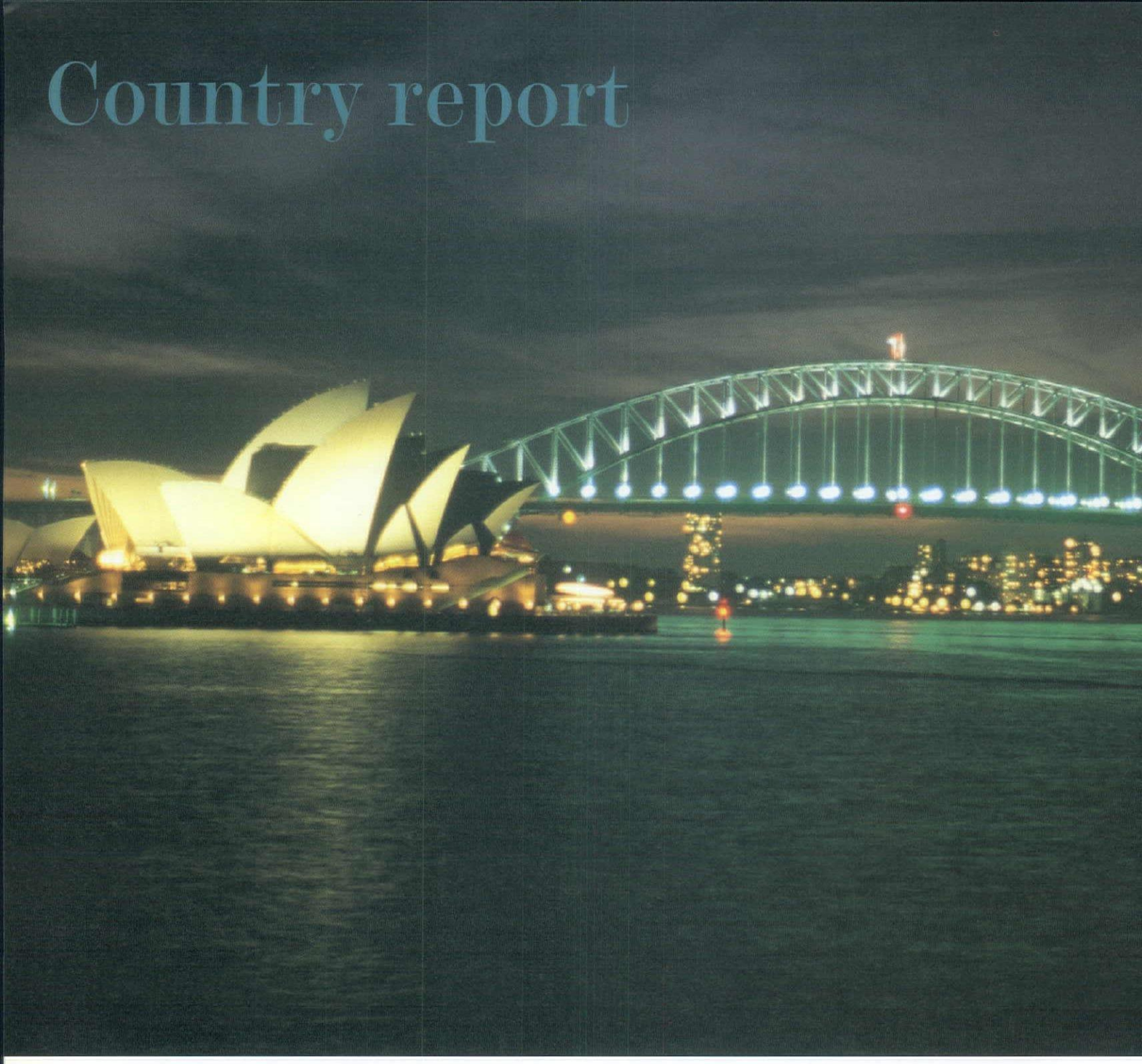
KAZAKHSTAN
**KAZBUILD '96** – 3rd Building and Construction Exhibition 18-21 October 1996. Atakent International Exhibition Centre, Almaty. Contact: Rebekah Alvord, International Trade and Exhibitions, J/V Ltd, 112a Shirland Road, London, W9 2EQ, UK. Tel: +44 171 286 9720.
Fax: +44 171 286 0177

SOUTH KOREA
**Design Engineering Expo** 1-4 November 1996. Contact, Kyungyon Exhibition corp, 17-1 Yoido-Dong, Yongdeungpo Ku, Seoul, Korea. Tel: +82 2 7854771. Fax: +82 2 7856118

USA
**AISI Steel Home Seminars.** Chicago (September 16-20); Atlanta (October 21-25) and Houston (November 18-22). The American Iron and Steel Institute is conducting a series of hands-on training seminars on the use of light-guage steel in home construction across the country. Tel +212 705 7658

**METALCON International '96.** 1-3 October 1996. The Metal Construction Association all-industry trade show. Rosemont Convention Centre, Illinois, USA. Tel: +617 965 0055

VIETNAM
**VIETBEX International Building Expo** October 30 - November 2 1996. International Exhibition and Convention Centre, Ho Chi Minh City, Vietnam. Contact David Aitken. Tel: +44 181 910 7744

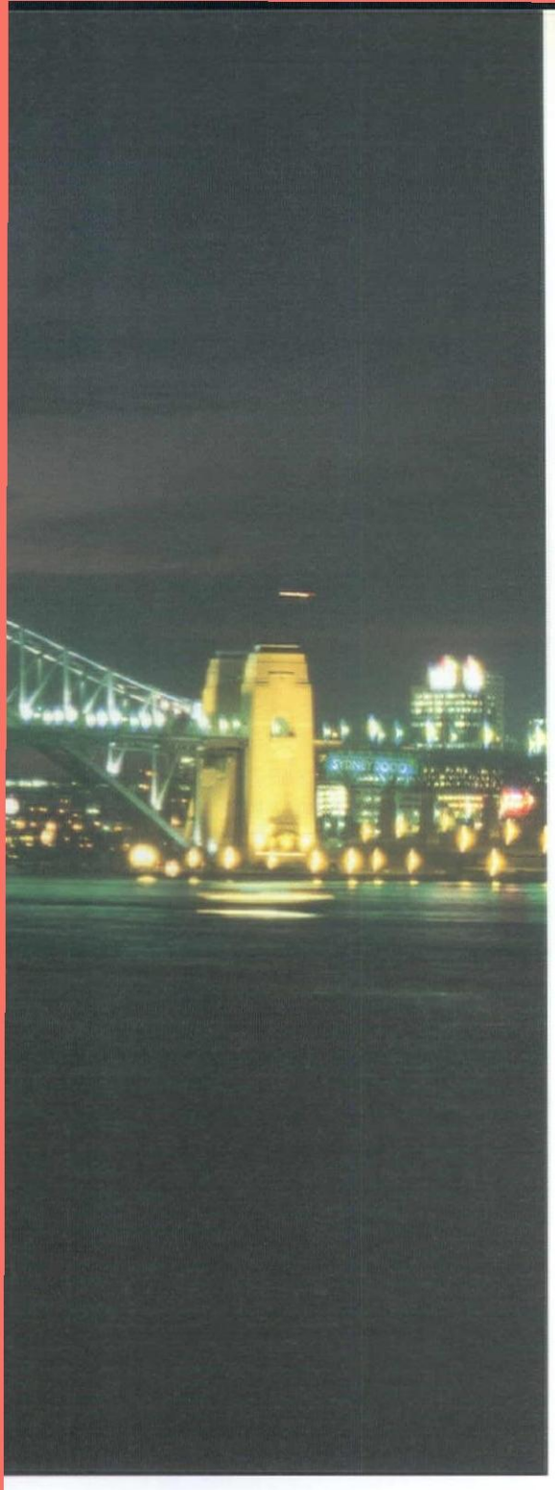


# Australia

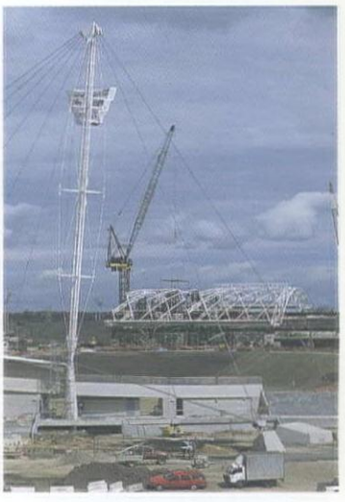
**"Thank you Sydney" was the campaign slogan used by the Olympic bid committee in 1993. For a while after the harbour city's success was announced, the same slogan might have been adopted by the Australian construction industry. The international recession of the early 1990s has not spared Australia's economy; yet this single event engendered a spirit of optimism and enterprise. New tourism facilities and the inevitable upgrading of infrastructure has provided the country's architects with a much needed diversion. "Thank you Sydney" – but for too little, and possibly too late. Peter Wislocki reports.**

The benefits of Sydney 2000 remain potent. Tourism accounts for over five percent of Australia's GDP, and, particularly when other industries faltered, has grown in relative economic importance. Recent history shows that major events, including Brisbane Expo '88 and the national bicentennial celebrations, have boosted visitor numbers – and hence revenues for tourist-related industries – with spinoffs for other sectors. A handful of very visible Olympic-related projects have stimulated interest in Australian architecture, and boosted the morale of Sydneysiders.

But all is not rosy. Whilst Paul Keating's government insisted at the end of 1995 that Australia was "emerging strongly from recession", a subsequent forecast by construction industry analysts BIS Shrapnel suggested a further two years of decline, followed by a strong revival



***Left*** *The famous view of Sydney Harbour taking in the Utzon/Ove Arup Opera House, and Sydney Harbour bridge.* ***Above*** *Aerial shot of Olympic masterplan and site, taken by Lawrence Nield and Partners.* ***Right*** *Homebush Bay Olympic facilities under construction*



early in the next millennium. Keating's successors in government are keen to tackle Australia's public spending and foreign debt. There is oversupply in almost all sectors of property – particularly residential developments, which have been affected by high interest rates and demographic changes. Even in Sydney, progress with the implementation of designs for Homebush Bay (the main Olympic venue) is proceeding only after delays and disagreements.

**Keating leaves business confidence high**

Seen from overseas, Australia continues to offer long term prospects of economic growth, associated with a complete reversal of former protectionist policies, and the gradual deregulation and internationalisation of most business activities over the last decade. The country's population has more than doubled since 1947, and currently enjoys a standard of living rated by the UK's *Economist* magazine as the seventh highest in the world. This owes as much to the high quality of the natural environment around Australia's cities, the relative freedom from crime, and the low cost of living (which seems even lower to foreigners, benefiting from the relative weakness of the Australian dollar). Federal and state governments are vigorously promoting their territories as ideal refuges for those firms and individuals joining the pre-1997 exodus from Hong Kong, and others moving into Asia-Pacific markets, seeking a politically stable and culturally compatible base. Low inflation and steady overall economic growth, a highly educated workforce, and the lack of militancy on the part of Australia's trade unions are further attractions. Indeed, the steady success of the Labour Party's policies – in terms of repeated electoral success, as much as financial results – had become the envy of socialist politicians around the world.

The secret, commentators generally agree, related to a policy of unspectacular, highly focused investment in a mixed economy, balancing increasingly free trade and tax-cutting incentives with simultaneous improvements in the social wage, jobs programmes, family assistance, and medical and education services. With Paul Keating's demise, the Liberal's agenda of expenditure reductions – totaling A$8 billion in the next budgetary year – is hitting some sectors hard. For example, education capital projects are being severely cut. The arts have also been targeted, with inevitable consequences for both building projects and the wider culture of architecture, as Australia's withdrawal from this year's Venice Biennale testifies. But, amongst the larger Australian professional practices at least, business

***Below left*** *The garish colour and form of the Royal Melbourne Institute of Technology, by Edmond and Corrigan architects, in association with Domain Partnership.* ***Below right*** *Award winning CRA Advanced Technical Development Centre in Victoria designed by Forbes and Fitzhardinge of Perth.* ***Opposite page*** *Harry Seidler's 120-storey, 500-metre Grollo Tower, designed for an as yet unidentified site in Melbourne*

confidence remains high, the Liberal's conservatism being seen as an appropriate basis for sustainable long-term growth. It is equally true that with all states, excluding New South Wales, under the Liberals' control, a unity of purpose between the two major tiers of government has emerged, which many believe should streamline policy implementation and effective national administration.

In terms of property and construction, inward investment is officially welcomed, but regulated, and is also subject to more subtle entry barriers. In 1992-93, 48 percent of all inward investment was in the property and finance sectors – the latter classed alongside utilities as a vital part of Australia's infrastructure in need of revitalisation and improved efficiency. The Foreign Investment Review Board (FIRB) offers advice to all would-be investors.

In the professions, entry barriers are less explicit but possibly more impenetrable. Requirements for registration of building designers vary from state to state, but generally speaking, whilst the title of "architect" is legally protected, any person of whatever nationality could, in theory, offer a design service. However, very few overseas architects and engineers have completed projects in Australia, due to extensive networking. Whilst Utzon and engineers Ove Arup won the Sydney Opera House commission in open competition, the perceived mismanagement of the project has discredited the competition system in Australia. Ove Arup have maintained a presence, working with leading Australian architects on the most structurally ambitious buildings, suggesting that unique competence is still a passport to international acceptance. But few architects could claim similar advantages over indigenous counterparts.

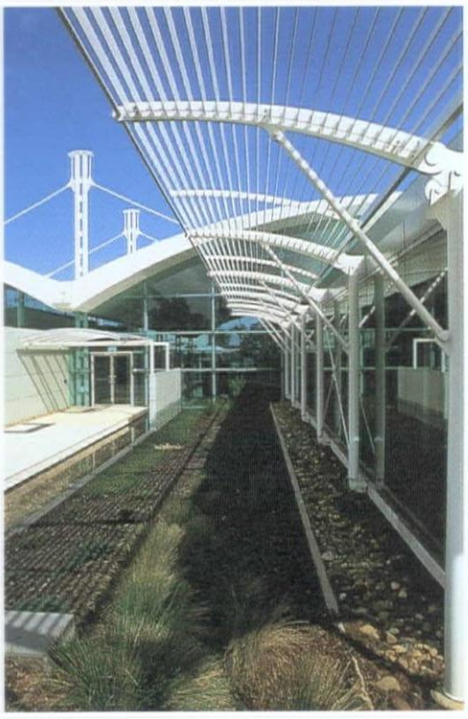
The relative autonomy of each state within the federal constitution results in a fairly complex web of planning and building control regulations. There are, generally speaking, three tiers of planning controls, with varying degrees of local specificity and legal status – but even this varies from state to state. As in other countries, leading designers have prospered by finding innovative ways of circumventing apparently inflexible legislation – a feat requiring excellent local awareness and established working relationships with officials. It is hardly surprising, therefore, that the few foreign architects who have penetrated the Australian market have done so collaboratively with local partners.

### Presenting to the world

Sydney's claim to the lion's share of international visitors (and migrants) is constantly being challenged. Australia's biggest and wealthiest cities are racing to improve facilities for conferences and exhibitions, after the Olympics, the biggest crowd-pulling and revenue-generating events. The country's leading architects are on hand: Philip Cox, applying the experience of projects in Sydney's Darling Harbour, has completed Brisbane's congress centre; whilst Denton Corker Marshall are nearing completion of Melbourne's rival facility.

Cox, with Lawrence Nield, is responsible for much of Sydney Olympic infrastructure - but, against earlier predictions, Cox's expectation of winning the biggest prize of all, the main athletics stadium, has been confounded, the project having become the subject of a competitive selection procedure. Several other firms – including smaller and less internationally renowned practices – are working on Olympic projects; and even those Sydney-based architects and engineers with no direct involvement acknowledge the benefits the Olympics are bringing to their professions. Three teams submitted tenders for the Olympic village: but despite the participation of such respected designers as Peddle Thorp, Philip Cox, Hassal Architects, Lawrence Nield, Alex Popov, Graham Jahn, Lindsey Clare and Bligh Voller, it seems that cost – or rather the absence of any cost to the government – will finally determine the contest.

Trevor Mein/Arcaid



***Right*** *The main building and clinical science building at the New Children's Hospital , Westmead, near Sydney, by health specialists Lawrence Nield and Partners.* ***Far right*** *Ken Woolley's Children's Medical Research Institute at Westmead.* ***Below*** *Philip Island House, Victoria, by Peter Madison*

John Collings

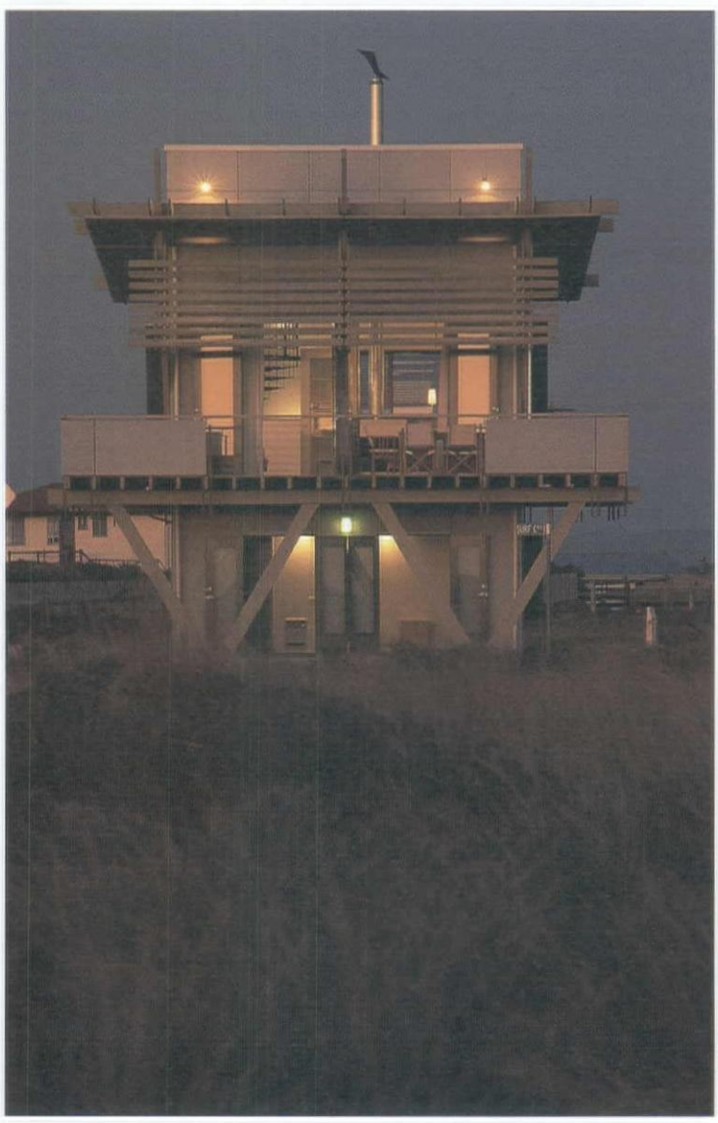
### Tourism

Whilst Expos and sporting events generate shortlived peaks of economic activity, the Australian government has made the expansion of tourist facilities a priority. This is most evident on the north Queensland coast, the most popular destination for sun-drenched beaches, surfing and diving. The federal government has been spending A$42 million over two years to prime tourist developments with explicit ecological agendas, sustainability having become a leading political issue throughout the Asia Pacific region. Australia's eight percent world share of long haul tourism is expected to rise – bringing consumer spending without the social costs of a higher permanent population – but tourism must be accommodated without long term environmental damage.

### Infrastructure

Australia's low overall population density, and the concentration of urban centres along the coasts, separated by thousands of miles of desert, poses obvious logistical problems. Tourists and business travellers alike are being provided with an improved transport infrastructure. Under a programme supported by the federal government, every major city is improving its airport. Since the deregulation of air travel in the 1980s, regional routes have multiplied, traffic increasing with falling fares. The infrastructure on the ground is steadily catching up, although problems persist, particularly at Sydney where the runway capacity has become the limiting factor to further growth. Local architects have studied recent international paradigms – Brisbane's international terminal (*see feature in WA 48*) displaying an obvious fusion of Norman Foster's Stansted and Renzo Piano's Kansai designs – but no international practices have been commissioned on such projects.

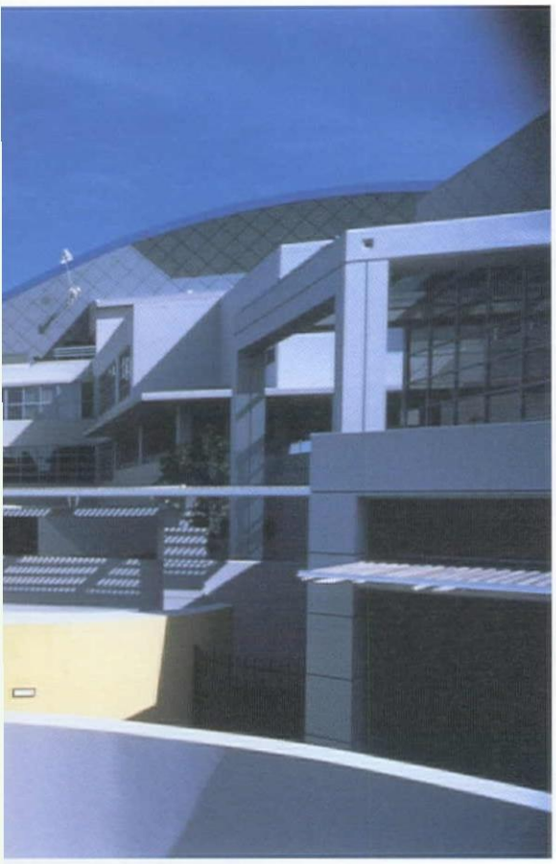
Inter-city rail travel has never been popular in this vast country, but steady improvements have been made, culminating with the completion of a continuous line linking Perth with the major cities of the east coast.



Trevor Mein/Arcaid

### Building for wealth

The traditional reliance on the primary industries of agriculture and mining is diminishing, Australia being keen to establish itself as a producer of high value-added, sophisticated manufactured goods. As in all developed countries, the services sector's signifi-



Ken Woolley

cance within the national economy is great, and increasing. Paul Keating's government specifically promoted inward investment in Australia's financial services sector, in the belief that a deregulated and internationally networked banking system, something Australia is only now in the process of acquiring, is a prerequisite for continued prosperity. Fierce competition from the deregulated mortgage lenders has hit the profits of established banks, but benefits consumers in the short term.

The ascent of the financial services industry is matched by rising land values and ever greater building heights in the centres of larger cities. Harry Seidler and Denton Corker Marshall are the country's leading designers of these buildings, whose monumentality is coming to assert Australia's challenge to Hong Kong, Singapore and Tokyo. Seidler's proposals for the world's tallest building, a crystalline, photo-voltaic-clad tower destined for an as yet undetermined site on Melbourne's tracts of railway sidings, stands in stark contrast to the majority of urban architecture, which generally attempts to be contextually sensitive, if only in the rather superficial manner of American post-modern classical skyscrapers of the preceding decade. Whilst less commercially-minded Australian architects complain of the Americanisation of their city centres they have mostly their compatriots to blame. Even in the quite rare cases where US consultants have been involved, designs have always been executed with Australian collaborators, working in local offices.

**Health and social services**

Queensland's recently elected government has embarked on a programme of massive investments in its health and social services, including the rapid replacement of nearly all of the state's hospitals. Other states are also improving such facilities, albeit at a more modest rate. Once again, Australia's leading larger practices, particularly Lawrence Nield, the most design-orientated hospital specialist, have benefited. Most projects are the subject of limited competitions; but, as in all other sectors, openings for overseas practices are seldom evident. Health facilities – along with all other public buildings – are now commonly financed from private sources, using a variety of concession contract systems. This has proved most problematic in the case of libraries and other services which are provided free to the public, and whose use is not even readily measurable.

**Residential**

Australia's attractive lifestyle – as portrayed in internationally distributed soap operas – is rooted in the plush suburbs of detached houses, separated by thriving subtropical greenery. Of course the reality differs from the myth – a substantial proportion of the urban population live in apartment buildings, including public sector housing of higher quality than is generally to be found in Europe. Yet Australian architects' collective international reputation cannot be divorced from the image of the highly individual dwellings produced by Glen Murcutt, Corrigan and Harry Seidler, as well as younger architects such as Alec Tzannes and Alex Popov. The volume of such commissions, as well as those for larger housing projects, has been high over the last couple of years; but BIS Shrapnel's firm prediction is that the bubble is on the point of bursting.

**Looking up "down under"?**

Two years of gloom; and definitely no friendly welcome for outsiders. Australian architects are breaking into foreign markets (40 percent of Philip Cox's work is in South East Asia), and dismiss any suggestion that their almost total stranglehold on their domestic market could seriously be challenged. The country's recent worthy internationalism aside, covert protectionism reigns high in Australian architecture, engineering and construction.

But things must improve. If BIS Shrapnel's prediction of a sustained construction boom in the first decade of the next century is fulfilled, and the Liberals continue their predecessors' policies of deregulation and international free trade, the present cultural and legislative barriers must be lifted. As the economy revives, albeit at a more moderate though sustainable rate than might have been the case under Labour, incentives will arise for European, American and Asian firms – particularly those with distinctive competences not readily found in Australia – to explore the opaque and tangled webs of the country's planning laws and inter-professional networks. Sydney's 2000 Olympics should not be seen as the start of a race to gain footholds on Australian soil. The serious competitors will be preparing long before the Games. **WA**

Interview

# Interesting idea, isn't it?

**In an economic region dedicated to the tallest, the biggest and the fastest, Glenn Murcutt is an anomaly. He is an architect of private houses on the Pacific Rim. A man with an enviable practice in the style of Bruce Goff, or even the young Frank Lloyd Wright, but Murcutt is not just a clever designer with a bee in his bonnet about natural ventilation. He is a global urban thinker with a line in the urban "apocalypse now" that chills the blood, as Martin Pawley found out. Photograph by Chris Floyd.**

**Martin Pawley: Nowadays the Pacific Rim is a big economic area dominated by Asian countries. As an Australian, do you see yourself continuing to practice in a local way amid this growing global phenomenon, or are the Asian Tigers going to put you out of a job?**
Glen Murcutt: The first thing you must realise is that the Pacific region is vast and, whilst our economy is more and more directed towards Asia, the thing Asian people want when they come to Australia, and I have several Asian clients, is the idea of living in a house that I have designed. Now whether my future lies five years ahead in this field, or fifty years, or two hundred years, I don't know, and frankly I don't care. I'm interested in prospect. I'm interested in refuge. I'm interested in arrival. I'm interested in where the wind blows. I'm interested in where the sun rises, where it sets, what time of the year it's doing this, what is the rainfall. I'm interested in...
**That sounds a bit close-focus. Can we put your work into a larger context? For instance one could say that you design middle class single family dwellings, often second homes, in virtually unpopulated areas. I suppose in Australia that's an inexhaustible resource?**
There's no such thing as an inexhaustible resource, anywhere in the world, let alone Australia. You may not know it, but I have done a lot of urban building, and suburban building too. For some reason the journalists don't write about that part of my work, they prefer to photograph the houses in the outback. I was told in 1969, when I set up in practice on my own, that with the direction I was going in I

# "The major, tall office building today is as irrelevant a building, except as a symbol, as anything we have had in the twentieth century."

would be out of business within five years. Ha! It's 1996 now and I've got more work than you can possibly poke a stick at: I've got a three year waiting list of clients. My practice is based on my knowledge of Australia, and my knowledge of Australians, who happen to be Aboriginal Australians, American Australians, European Australians, Japanese Australians. The kind of inquiries I get, inviting me to do work in America, to do work in Finland and to do work in Australia, would lead me to think that I might have more than a couple of years left.

As for building in the desert. Of course you can build in the desert but if you put a building there you've got to have something to support it. You've got to have work. Satellites and computers won't provide that, not at this stage of their development. Fundamentally, you've got to have water. If you haven't got water, you've got troubles. If you've only got artesian water, you're in troubles. What do you do for a waste system? What do you do for a cooling system? Where does the energy come from? It's no good saying solar energy because solar energy costs a lot of money. Not operating cost but first cost, true cost. It's very hard. There's no way of making water. No economic way. Not when you've got millions of suburban pieces of land where there is water and infrastructure already there. That's why ninety percent of Australians live in cities and only ten percent of Australians live outside cities, in rural areas.

**Are you an urban person? Do you lead an urban life?**

Reasonably. I live within five kilometres of a city centre, but I am not sure there is urban life in Australia.

**Is there urban life anywhere?**

There's urban life in Paris.

**There's a kind of media life that has replaced urban content.**

Sure, urban life has become lost. In a sense it's a historical phenomenon already.

**Do you like urban life?**

Do you like chocolate?

**Sometimes.**

That's the issue. Yes, I love urban life. Yes, I love rural life. Yes, I love aboriginal life. Rural life I cannot do without, but I can't live in the rural life for all time. I love density of people. I like seeing buses go past. Of course I like it. If I didn't, I'd go and live in the country.

**But development in the other Pacific countries is very determinedly urban. There is no rural option. That's the shape of the future.**

That's not the shape of the future, I think that's the past. What they are all doing in those cities is the past. The energy produced by the fuel that got the aeroplane off the ground that brought me here is enough to supply the energy needs of a population of 10,000 for a week. For instance a lot of our cities, all of them except Canberra in fact, started out as ports, so they concentrated their infrastructure near the water and then expanded outwards away from it over a maximum of 180 degrees. The other 180 degrees wasn't available. This is very uneconomic. We've developed in semicircles, in Melbourne, Sydney, Adelaide, Perth, Brisbane, Darwin... None of them has any orbital infrastructure so the very people who live farthest out are the people who need two cars and cause so much pollution when they drive one, one and half hours to the water's edge.

**Can you see a connection between this sort of urban failure and the lost cities of the past? Can you see the steps that lead to it?**

The steps are finally economic. What happens is that the people on the perimeter will never be able to afford to live within reach of the old central services. The rich, who can, will get richer and less numerous and the poor will be more numerous and get poorer. Thus the rich enclaves will start to be threatened with violence, robberies and anarchy. That will make the rich areas uninhabitable. There is a scenario. There is a scenario. Twenty, forty fifty years... It's heading for implosion. The major, tall office building today is as irrelevant a building, except as a symbol, as anything we have had in the twentieth century. It's completely out of date and its only still being built today because it's been built in the past. And it is happening in China as well, because it has been done. That's all.

The fact that the computer is letting us link up with all over the world from a room in our house is going to make an immense difference to the way we operate in cities. It's going to break down urbanism as we've always understood it. It's going to reinforce suburbia and make the rural population able to survive much better than they ever survived before. They are the people who are going to be able to grow their own food, milk their own cows... They've got all the food. Their biggest problem is the cost of transport to the cities. They could cut us off entirely and we would all starve. They would all survive. They would all survive. But the real problem is that the city people will come out from the cities to steal the food. They are going to occupy your land. Interesting idea, isn't it?

**Yes it is. Do you think it applies to the rapidly urbanising Asian countries too?**

I've never been to Asia. Only once to Hong Kong. But if you want a scenario for that, chances are Asia is where Britain was at the beginning of the industrial revolution and expansion. Britain went to explore and conquer. Chances are that Asia is doing the same thing. Not in the same way, but they are conquering economically. Australia is very influenced now by the Asian countries because of the big money that is coming in from Asia, and the purchasing and buying of Australian cities by Asians. It is a new form of colonialism heading our way, an economic one.

**But do the Asian countries not have a formula for high density urbanism that saves them from the pattern of decline you described in Australia?**

Technically, theoretically, there should be a solution to the Asian city states like Hong Kong and Singapore because it is so concentrated. There should be a kind of efficiency but so far it always seems to remain theoretical. The intensity of waste production and disposal of those cities takes oceans and hemispheres to dispose of. What they do have is a tight family unit that makes dense urban conditions bearable. That is something we have completely lost. Perhaps that is their formula. **WA**

# Building in Australia

## GENERAL INFORMATION

Australia consists of two land masses, mainland Australia and Tasmania. It lies on, and extends south of, the Tropic of Capricorn, and is located in the southern hemisphere between the Indian Ocean and the South Pacific. It is the smallest continent with an area of 7,682,300 square kilometres. Australia's neighbours are Papau New Guinea and Indonesia to the north, the Pacific Islands of the Polynesians and Melanesians to the east, and New Zealand to the south-east.

**Climate:** Being in the southern hemisphere, Australia's summers are from December to February. Summers are generally hot, particularly in the interior, west and south arid or semi-arid regions. Northern Australia is hot all year long and has a summer monsoon season. Rainfall varies greatly within the continent.

| | Average Temperature Max/Min (C) | | Annual Rainfall (in mm) |
|---|---|---|---|
| | January | July | |
| Canberra | 27.7/12.9 | 11.1/-0.2 | 633 |
| Sydney | 25.8/18.5 | 16.1/8.0 | 1,224 |
| Darwin | 31.8/24.8 | 30.4/19.3 | 1,651 |
| Perth | 29.7/17.9 | 17.4/9.0 | 868 |
| Hobart | 21.5/11.7 | 11.5/4.5 | 627 |

**Population:** 16.2 million, 88% urban (mainly on the east coast), 12% rural with an average of 2 persons per square kilometre.

**Language:** English

**Ethnic composition:** European (95%), Asian (4%), Aboriginal and other (1%)

**Capital:** Canberra

## TRAVEL & BUSINESS INFORMATION

**Time differences:** There are three time zones on the Australian continent.

| | |
|---|---|
| The Eastern States | 10 hours ahead of GMT |
| South Australia and Northern Territory | 9.5 hours ahead of GMT |
| Western Australia | 8 hours ahead of GMT |

Queensland and Western Australia are the only time zones that remain on standard time throughout the year. The remaining territories add one hour for Australian summer time.

**Currency:** Australian Dollar (A$), divided into 100 cents.

**Business hours:**

| | |
|---|---|
| Government: | 8.30-4.30, Monday-Friday |
| Office: | 8.30-5.00, Monday-Friday |
| Banks: | 10.00-4.00, Monday-Thursday |
| | 10.00-5.00, Friday |

**National holidays:**

| | |
|---|---|
| New Year's Day | January 1 |
| Australia Day | January 28 |
| ANZAC Day | April 26 |
| Queen's Birthday | June 10 |
| Christmas Day | December 25 |
| Boxing Day | December 26 |

Good Friday and Easter Monday (March or April) are observed on different dates each year.

**Airport information:** Australia has international facilities at Adelaide, Brisbane, Cairns, Darwin, Melbourne, Perth and Sydney. Kingsford Smith Airport is 11 kilometres from Sydney and Tullamarine Airport is 26 kilometres from Melbourne. Local air service is excellent.

**Dialling code:** Australia's country code is 61. The international dialling-out code from Australia is 0011.

## GENERAL CONSTRUCTION INFORMATION

**Construction outlook:** The worst of the recession for the construction industry is over. The housing boom, brought about by low mortgage interest rates, provided some relief to the recession. Housing starts began slowing in 1994 and declined in 1995 with the onset of higher interest rates. During 1994, non-residential construction began its recovery. Slow steady growth is expected over the next few years, led by government-financed infrastructure projects. Prospects for the industrial, tourist and retail construction sectors are promising. However, office construction will remain weak.

Tendering is still competitive since the number of new projects remains low and the industry workload below capacity. Currently the main areas of activity are Darwin and Hobart. However, there should be a considerable amount of work in the Sydney area before the end of the decade. Over US$1.4 billion of building activity is projected for the Sydney 2000 Olympics.

**Rates of inflation:** The 1996 rate of inflation for the building industry is estimated at 6 to 7% per annum.

**Forms of contract:** There are several contractual forms available. Variations and combinations of these may be found, but these are the basic forms:

- Traditional Tender
- Competitive Negotiation
- Cost Plus
- Design and Construction
- Construction Management

*Traditional Tender* – Tender may be constructed for construction on a "selected" or "open" basis. In a selected basis tender the tenderers are selected by qualifications and experience in the type of project. In an open basis tender there are no restrictions placed on tenderers.

A project design team is selected by the owner which prepares complete design documentation. Tenders are called based upon the completed documentation and are usually lump sum. The successful tenderer is awarded the building contract which is administered by the architect.

*Competitive Negotiation* – Building plans are prepared from the schematic stage to the preliminary working drawings stage by the design team. Tenders are called from a select list of contractors for the following elements:

- Preliminaries
- Percentage for margins
- Percentage for off-site overheads
- Percentage for attendance on sub-trades
- Statement of time to complete with schedule

A tenderer is selected and joins the design team. The builder prices each trade package as it is completed, usually by obtaining three competitive bids for each trade package.

### Economic information

**Consumer price index:** 1990=100

| 1991 | 1992 | 1993 | 1994 | 1995 |
|---|---|---|---|---|
| 103.2 | 104.3 | 106.1 | 108.1 | 112.0 |

**Exchange rates:** A $ per US$

| 1991 | 1992 | 1993 | 1994 | 1995 | 1996 (June) |
|---|---|---|---|---|---|
| 1.32 | 1.45 | 1.48 | 1.29 | 1.34 | 1.27 |

*Cost Plus Contract* – The building contractor contracts with the owner to complete the building in accordance with the contract documents at a cost plus a percentage of the cost. The form of building contract can be used with any of the contract forms. It is extremely important to define cost in this contract form. The "cost" usually includes all on-site activities while the "plus" portion covers head office overheads and profit. The plus portion of the contract may be a fixed fee.

*Design and Construct Contract* – The owner requests a preliminary proposal from an organisation, usually known as a "package dealer", for design and construction based on the project brief.

If the preliminary proposal is accepted by the owner, the "package dealer" prepares and submits the final development proposal, which in most instances includes a guaranteed maximum price for the project. The final development proposal would include schematic drawings and an outline specification.

*Construction Management Contract* – In this form of contract the building owner usually selects the construction manager as an additional member of the design team after completion of the schematic design. The construction manager brings practical building experience to the design team. The construction activities are subcontracted for the various trades required. These contractors are selected on a competitive basis and enter into direct contract with the building owner.

**Design professions:** The following consultants are normally used on major projects in Australia: Architects, Engineers (Structural, Civil, Mechanical and Electrical Services), Project Managers, Quantity Surveyors, Cost Consultants.

**Contractors:** The major national contractors are:
- Baulderstone Homibrook
- Civil and Civic
- Concrete Constructions
- Fletcher Constructions
- Grocon
- John Holland Constructions
- Leighton Contractors
- Multiplex

Barclay Mowlem, F A Pidgeon and Walpac are very large contractors in the considerable Queensland market.

**Governing codes and standards:** There is one common code for the principal requirements for construction in Australia: "The Building Code of Australia".

## CONSTRUCTION MATERIALS AND METHODS

**Material availability:** Generally materials are readily available throughout Australia, with most materials made in the country. Imported materials may necessitate consideration of lead times when planning projects.

**Labour availability:** Generally labour has been readily available in the past except in times of a construction boom. There is currently some concern that certain parts of the country may see some shortages as the industry accelerates owing to the number of operatives who have left the industry through the recession.

**Equipment availability:** Major construction equipment can be hired from plant hire organisations and is readily available.

## CONSTRUCTION COST GUIDES

**Pricing manuals:** Two pricing manuals are published in Australia:
- "Rawlinsons Australian Construction Handbook"
(published by a subsidiary of a national quantity surveying practice, "Rawlinsons")
- "Cordells Construction Price Book"

The following data is provided by Rawlinsons.

## USEFUL ADDRESSES

Master Builder's Federation of Australia
Construction House,
217 Northbourne Ave, Turner
Canberra, ACT 2601
Tel: (61) 06-249-1433
Fax: (61) 06-249-1373

Royal Australian Institute of Architects
2A Mugga Way, Red Hill
Canberra, ACT 2603
Tel: (61) 06-273-1548
Fax: (61) 06-273-1953

Australian Institute of Quantity Surveyors in Sydney
27-29 Napier Close, Deakin
Canberra, ACT 2600
Tel: (61) 06-282-2222
Fax: (61) 06-285-2427

Standards Association of Australia
1 The Crescent
Homebush, NSW 2140
Tel: (61) 02-746-4700
Fax: (61) 02-746-4785

Association of Professional Engineers, Scientists & Managers, Australia
163 Eastern Road
South Melbourne, Victoria 3205
Tel: (61) 03-695-8800
Fax: (61) 03-695-9312

World Architecture *and* Hanscomb *wish to thank the Rawlinsons Group, Australia for assisting in the presentation of the information contained in this Country Report.*

**Approximate construction costs:** The following square metre unit rates are provided for rough comparison purposes. The prices provided are for the Sydney area.

| | A$/square metre |
|---|---|
| Warehouse - high bay | 400 - 480 |
| Office building, 4-7 stories, shell & core | 1,050 - 1,200 |
| Office building, 7-20 stories, shell & core | 1,400 - 1,550 |
| High rise hotel, five star (excluding fit out) | 2,200 - 2,400 |
| Parking structure - 2-3 levels | 250 - 300 |
| Low rise (1-3 stories) apartment | 850 - 1,000 |
| Factory, large span, owner occupied | 450 - 550 |
| associated offices, showrooms | 850 - 950 |

## Australia – Major architectural practices/design firms

*This table was compiled with information supplied by the practices listed.*

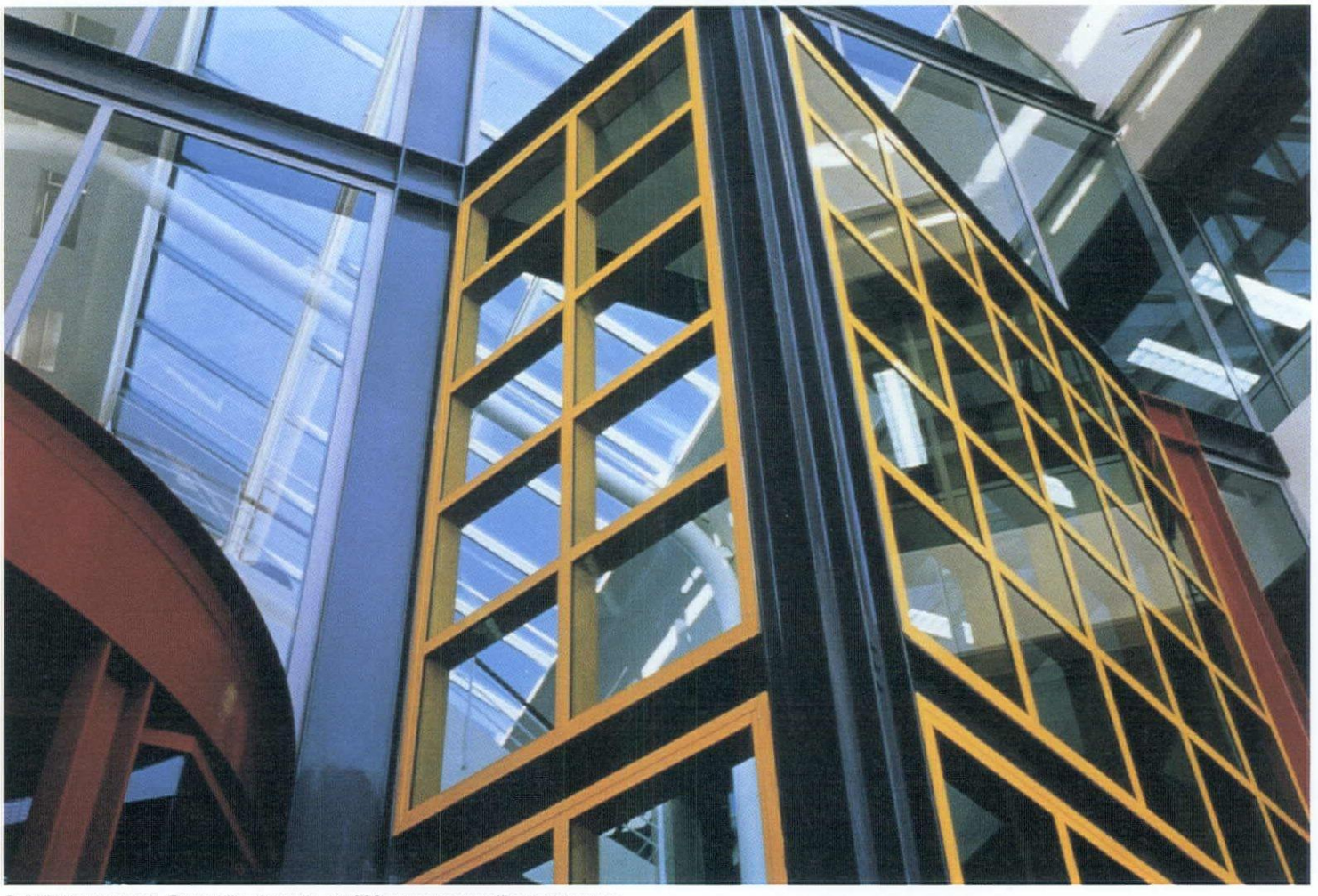
| Architectural practice / design firm | Total architects | Total staff | Total offices | Area of Specialisation: Health care | Industrial | Commercial | Office buildings | Housing / Residential | Religious / Cultural | Planning | Interiors | Sport / Leisure / Recreation | Hotel / Restaurant | Education | Laboratories / Research | Transport | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| The Buchan Group | 267 | 302 | 11 | • | | • | • | • | • | • | • | • | • | • | | | |
| Woods Bagot Pty Ltd | 175 | 335 | 9 | • | • | • | • | • | | | • | | • | • | • | • | |
| The Cox Group Pty Ltd. | 168 | 215 | 7 | • | | • | • | • | • | • | • | • | • | • | | | |
| | | | | | | | | | | | | | | | | | |
| Wood Head Firth Lee | 150 | 250 | 11 | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| Spowers Architects | 150 | | 5 | • | • | • | • | | • | • | • | • | • | • | • | | |
| The Rice Daubney Group | 91 | 180 | 3 | • | | • | • | | | • | | • | | | | • | |
| Hassell Pty Ltd | 85 | 300 | 6 | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| HBO + EMTB | 85 | 145 | 5 | • | • | • | • | • | | • | • | • | • | • | • | • | |
| Thomsen Adsett Archtiects | 61 | 130 | 9 | • | | • | • | • | | | • | • | • | | | | |
| Bates Smart | 55 | 118 | 2 | • | | | • | • | | • | | • | • | • | | • | |
| McKekkell Lynch | 48 | 103 | 5 | • | • | • | • | • | • | • | | • | | | | | |
| Lend Lease Design Group Ltd | 43 | 97 | 2 | | • | • | • | | | | | • | | | | | |
| D.B.I. Design Corporation Pty Ltd | 41 | 70 | 2 | | | • | • | • | | • | • | • | | | | | |
| Robert Peck von Hartel Trethowan | 37 | 55 | 4 | • | | • | • | • | • | • | | • | | | | | |
| Synman Justin Bialek Architects | 32 | 55 | 1 | | | | • | • | • | • | • | • | • | • | | | |
| Travis McEwen Group Pty Ltd | 32 | 56 | 7 | • | • | • | • | • | • | • | • | • | • | | • | • | |
| Mitchell/Giurgola & Thorp Architects | 30 | 51 | 1 | | | | • | • | • | • | • | • | • | • | | | |
| The E.G.O. Group Pty Ltd | 28 | 41 | 3 | | • | • | • | • | • | • | • | • | | | | | • |
| Pacific Design Group (NSW) Pty Ltd | 25 | 40 | 5 | | | | | | • | | • | | | | | | |
| B+N Retail Group Architects & Designers | 25 | 60 | 4 | | | | • | • | | • | • | | • | | | | |
| Noel Robinson Architects | 20 | 25 | 2 | | • | • | • | • | • | • | • | • | • | • | • | • | |
| Jackson Teece Ohesterman Willis Consultants P/L | 20 | 35 | 1 | • | • | | • | • | • | • | • | • | • | • | • | • | |
| Oldham Boas Ednie-Brown | 20 | 65 | 2 | • | • | • | • | • | • | • | • | • | • | | | | |
| Roger J. Thrum & Associates Pty Ltd Architects | 20 | 32 | 1 | | | • | • | | | | | | | | | | |
| Dennis Fabian Belman Hacknee Architects | 18 | 28 | 1 | | • | • | • | • | | | | • | • | | | | |
| Forbes & Fitzhardinge Woodland | 16 | 26 | 1 | | • | | • | • | • | • | | • | • | • | • | • | |
| Hobbs Winning Australia | 16 | 40 | 3 | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| Conra & Gargett Pty Ltd. | 16 | 33 | 2 | • | • | • | • | | • | • | | • | • | • | | | |
| Oldfield Knott Architects Pty Ltd. | 16 | 35 | 1 | • | | • | | • | | • | | • | • | | | • | |
| Devine Erby Mazun (Qld) Pty Ltd | 15 | 24 | 6 | | | | • | • | • | • | | • | • | | • | • | |
| Bruce Henderson Architects | 15 | 44 | 1 | • | | • | • | | • | • | • | • | | | | • | |
| Ashton Raggatt McDougall Pty Ltd | 15 | 20 | 1 | | | | • | | | • | | • | • | | | • | |
| JBR Architects | 12 | 16 | 1 | | | | • | | | • | • | | • | • | | | |
| Stephenson & Turner International P/L | 12 | 14 | 5 | • | | • | | • | | • | | • | • | | | • | |
| Grounds Kent Architects | 12 | 24 | 2 | | | | | • | | | | • | | | | | |
| Gazzard Sheldon Architects | 12 | 35 | 1 | | | | | • | | • | • | | • | | | • | |
| Cameron Chisholm & Nicol (Gold Coast) Pty Ltd | 11 | 25 | 5 | • | | • | • | | | | • | | | | | | |
| Blomqvist + Wark | 10 | 12 | 1 | • | • | | • | | • | • | | | • | • | • | • | |
| Roberts Weaver | 10 | 20 | 1 | | | • | • | • | | • | | • | | | | • | |
| Allom Lovell & Associates Pty Ltd | 10 | 15 | 3 | | | | | • | • | • | | | • | | | • | |
| Forward Vine Woollan | 10 | 14 | 2 | | | • | | • | | • | | | • | • | | | |
| Jackson Lane Pty Ltd | 10 | 13 | 3 | | • | | | | | | | | | | | • | |
| Tonkin Zulaikha Architects | 10 | 14 | 1 | | | • | | • | | | • | • | • | | | • | |
| McGauran Soon Pty Ltd | 10 | 16 | 1 | | | • | • | • | | • | | • | | | | • | |
| Tompkins, Shaw & Evans Pty. Ltd. | 10 | 20 | 1 | | • | • | • | | | | • | | | | | | |
| Archi-media (Vic) Pty. Ltd. | 10 | 15 | 1 | • | • | | | • | | | | • | • | | | • | |
| Humphrey & Edwards Pty Ltd | 10 | 15 | 3 | | • | • | • | • | • | • | | • | • | | • | • | |

## Australia – Major architectural practices/design firms

*This table was compiled with information supplied by the practices listed.*

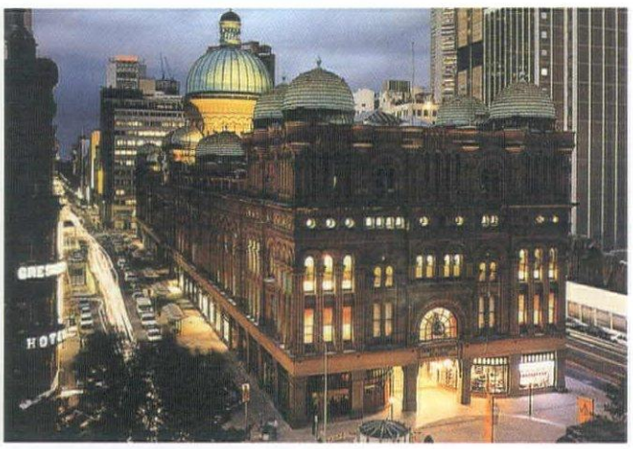
| Architectural practice / design firm | Total architects | Total staff | Total offices | Area of Specialisation: Health care | Industrial | Commercial | Office buildings | Housing / Residential | Religious / Cultural | Planning | Interiors | Sport / Leisure / Recreation | Hotel / Restaurant | Education | Laboratories / Research | Transport | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alexander Tzannes Associates Pty Ltd | 10 | 12 | 1 | | | | | • | | | | • | | | | • | |
| G A Hobbs + Associates | 10 | 15 | 3 | | | | • | | | | | | • | | | | |
| Merrin and Cranston Architects | 9 | 20 | 3 | • | | | | • | | | • | | | | | | • |
| MPS Architects | 9 | 15 | 1 | | | | | • | | • | | | • | | | | |
| Philp Lighton Architects Pty Ltd | 9 | 22 | 3 | • | | • | • | • | | | | • | • | | | | |
| WHP Architects | 9 | 12 | 2 | | | | | | | | | | | • | • | | • |
| Glenn Smith Associates | 9 | 20 | 3 | • | | • | • | • | | • | • | • | | • | | | |
| R.J. Ferguson & Associates Pty Ltd | 8 | 10 | 1 | | | | | | | • | | | | • | • | | |
| Prior and Cheney P/L | 8 | 10 | 2 | • | | | | | | | | • | | • | | | |
| Carner Davis Architects Australia Pty Ltd | 8 | 10 | 2 | • | • | • | • | • | | • | • | • | • | • | | | |
| Flower & Samios | 8 | 17 | 1 | • | | | | • | | • | | | | | | | |
| LFA (Aust.) Pty Ltd | 8 | 24 | 2 | • | • | • | • | • | | • | • | • | • | • | • | • | • |
| Bishop + Hitchcock Architects | 8 | 12 | 4 | • | • | • | • | • | | • | • | • | • | • | | | • |
| Colin Prince & Associates Pty Ltd | 8 | 10 | 1 | | • | • | • | • | | • | • | | • | | | | |
| Guymer Bailey Architects Pty Ltd | 8 | 20 | 2 | | • | • | | • | | • | • | • | • | | | | • |
| Wolff Architecture Pty Ltd | 8 | 9 | 2 | • | • | • | • | • | | | • | | • | • | • | | |
| Oaten Stanistreet Pty Ltd | 8 | 11 | 1 | • | | • | • | • | | | | • | • | • | • | | • |
| Conrad Theodore Partnership Pty Ltd | 8 | 18 | 1 | • | • | | • | • | | • | • | • | • | • | • | • | |
| Heathwood Cardillo Wilson Pty Ltd | 7 | 9 | 1 | • | • | | | | | • | • | | | • | • | • | • |
| May Flannery Architects | 7 | 9 | 1 | • | | | | • | | • | • | • | | • | • | | • |
| Barrack Douglas & Company | 7 | 8 | 1 | • | | | • | | | • | • | | • | • | | | • |
| Brand Deykin & Hay Architects | 7 | 18 | 7 | • | • | • | • | • | | • | | | | • | | • | |
| Parish O'Neill Architects | 7 | 11 | 1 | • | | | | • | | | | | | | | | |
| Holgar & Holgar (H. & H.) | 7 | 15 | 3 | • | • | • | | • | | • | • | • | • | • | | | • |
| May Flannery Architects | 7 | 9 | 1 | • | | | | • | | • | • | • | | • | • | | • |
| Matthews Kapetas Ehrlich Architects Pty Ltd | 7 | 13 | 3 | • | | • | • | • | | | • | • | • | • | • | | |
| Demaine Partnership Pty Ltd | 7 | 14 | 1 | • | • | | • | • | | | • | • | | • | • | | |
| Considine & Griffiths Archtiects P/L | 7 | 9 | 1 | • | | | | • | | • | • | • | • | | | | |
| Henderson & Lodge Pty Ltd | 7 | 14 | 1 | • | • | • | • | | | | • | • | | • | • | | |
| Down & Neylan Pty Ltd | 7 | 24 | 2 | | | • | | • | | • | • | • | • | • | | | |
| Bush Parkes Savgg & Moon | 7 | 19 | 3 | • | • | • | • | | | | | | | • | | | |
| Sarvos Yanchenko Collaborative P/L | 6 | 9 | 3 | • | • | • | • | • | | • | • | • | • | • | • | • | • |
| Insite Architecture & Design Pty. Ltd. | 6 | 9 | 1 | | • | • | | • | | | • | • | • | | | | |
| Inter Pacific Consultants | 6 | 14 | 4 | • | • | • | • | • | | • | • | • | • | • | • | • | • |
| Richard Huxley & Associates Pty Ltd | 6 | 12 | 1 | | • | | | • | | | | | | • | | | |
| Down & Neylan Pty Ltd | 6 | 24 | 2 | | | • | • | • | | • | • | • | | • | | | |
| Cocks Carmichael Whitford Pty Ltd | 6 | 10 | 1 | • | | | | • | | • | | | • | | | | • |
| Alexander & Lloyd Australia Pty Ltd | 6 | 10 | 1 | • | | | | • | | • | • | • | • | • | • | • | • |
| Arcadia Built Environment Design | 6 | 8 | 3 | | | • | • | • | | • | • | | • | | | | |
| NKM Architects / Nankivell Kelly Missingham P/L | 6 | 8 | 1 | • | | • | • | • | | • | • | • | • | • | • | | |
| Allom Lovell Marquis - Kyle | 6 | 8 | 2 | | | | | • | | • | • | | • | | | | • |
| Gregory Brugess P/L Architects | 6 | 10 | 1 | • | | | | • | | | | • | | • | | | • |
| Drogemuller Pudney & Drew Pty Ltd | 6 | 9 | 1 | • | • | | | • | | | | | | • | | | |
| Project Tournism International | 6 | 9 | 1 | | | | | • | | | • | • | • | | | | |
| Banham & Associates Architects | 6 | 10 | 1 | | | • | • | • | | | • | | • | | | | |
| Gibbon Hamor & Associates | 6 | 11 | 2 | | • | | • | | | • | • | • | | • | • | • | |
| Mohyla Architects & Interior Designers | 6 | 12 | 4 | • | • | • | • | • | | | • | • | • | • | • | | |

*Zenith Centre, Chatswood, Australia. Two 24-storey office towers*

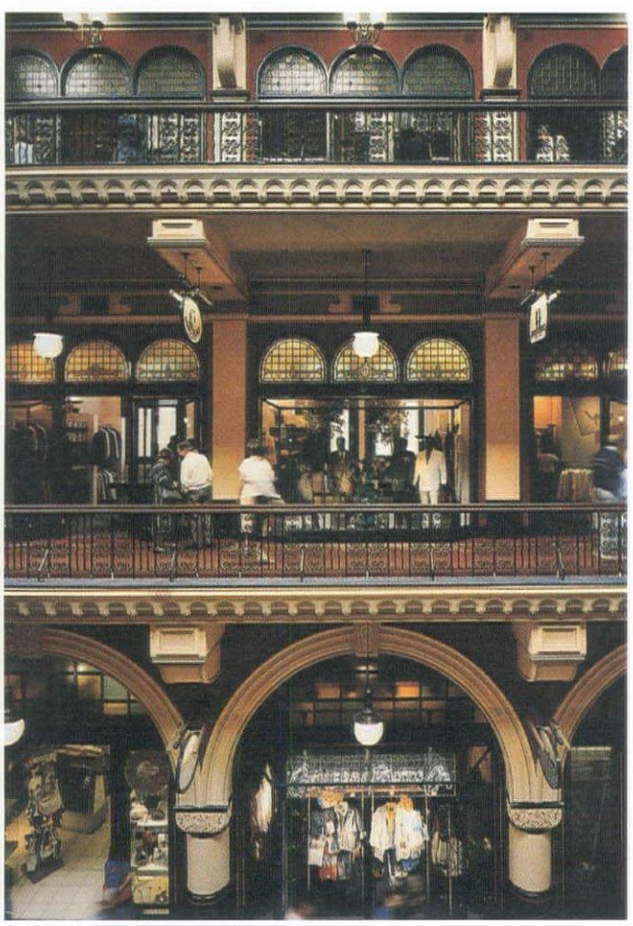


*Bull HN Headquarters, Terrey Hills, Australia. 11.000 square metre office headquarters*

*Airport Sheraton Hotel, Mascot, Australia. Four star, 314 rooms with commercial tower*



*Sydney's prestigious Queen Victoria Building, Australia. Revitalisation of historic building into a leading city retail precinct. Winner of numerous awards including the Sir John Sulman Award for Outstanding Architecture*



*Interior of Sydney's Queen Victoria Building*

# The Rice Daubney Group

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**Size of Practice:** 180 employees

**Key Personnel/Contacts**
**Principals:**
John Daubney -
*Business Development Manager*
Ross Gardner -
*Manager, Commercial Sector*
Graeme Smith - *Projects Manager*

**Senior Management Team:**
Frances Frazer - *Marketing Manager*
Jill Morrison -
*Manager, Hospitality Sector*
John Guscic -
*General Manager, Business*
Mike Rollings -
*General Manager, Operations*
Lynden Kidner -
*Manager, Interiors Sector*
Wal Mursa -
*Manager, Building Technology Sector*

**Recent Client/Projects**
- AMP
- CRI Limited
- Schroders
- Lend Lease
- Brambles
- NSW Government
- Commonwealth Department of Defence

**Current large scale projects in Australia and Asia include:**
- A$330 million design of a new, 30 floor office tower in Sydney's CBD for CRI Limited
- A$60 million refurbishment of "Amex Tower" in Sydney's CBD for AMP
- The single largest health commission in Australia – the A$196 million re-development of Liverpool Hospital
- New A$90 million 18 storey hotel and retail development in Jakarta, Indonesia
- Repositioning, revitalisation and expansion of Sydney's most unique retail and tourist precinct Harbourside, Darling Harbour

**Practice profile and specialisation**
The Rice Daubney Group is one of Australasia's leading architectural firms.

Established in 1976 the Group has developed a reputation for clever, commercial, design which is illustrated by the quality diversity of work over the past 20 years, ranging in scope from the restoration of Sydney's prestigious Queen Victoria Building to the design of the Australian head offices for some of the world's top companies including Arthur Andersen, Microsoft, Panasonic and Bull HN.

The Group has a proven track record in a wide range of project types for both government and private enterprise clients.

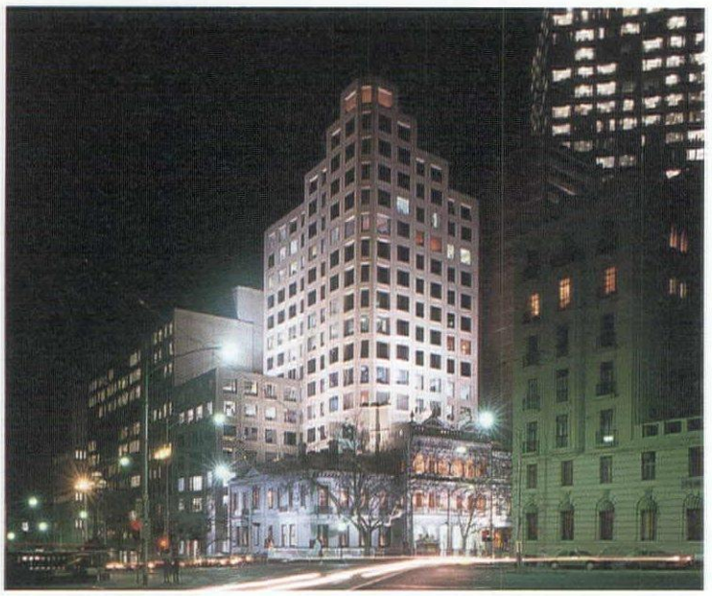
Specialist sectors include:
- Commercial Architecture
- Interior Architecture
- Retail Planning & Design
- Hotel Planning & Design
- Health Planning & Design
- Building Technology

**Additional information**
The Rice Daubney Group has a highly commercial approach to design, working with clients to minimise their risk and maximise the project's value.

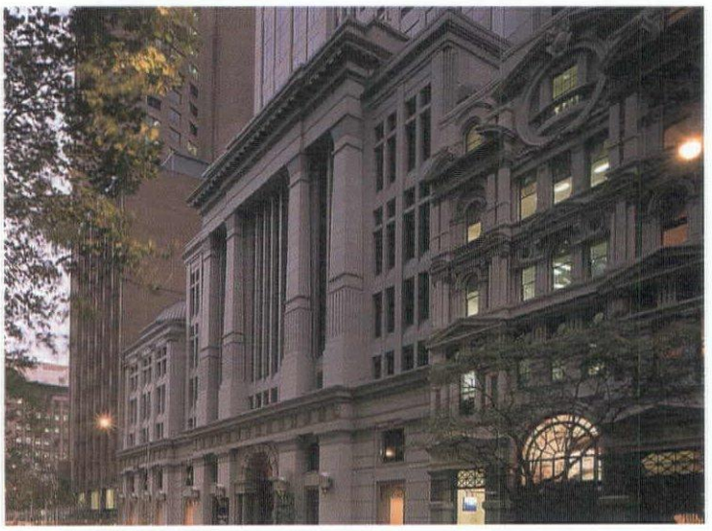
This commercial approach and the firm's diverse skill base ensures the effective integration of visual, financial, marketing and technical issues to deliver the optimum, most cost effective design solution.

The Rice Daubney Group's senior management team comprises a number of non-architects who specialise in managing large complex projects to ensure a professional, on time and on budget delivery.

The Group's international partners include a partnership in Austraia and South East Asia with US retail specialists, Callison Architecture, Inc.



*No 1 Collins Street, Melbourne*



*333 Collins Street Melbourne*

*333 Collins Street, Detail of Foyer*

# Robert Peck von Hartel Trethowan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Fax: 06 247 4210


**Key Personnel**

Robert Peck
Yvonne von Hartel
Bruce Trethowan
Paulette Trifiletti
David Waldren
Kelly Malapanis

**Size of firm:** 55

**Practice Profile**

Since its foundation in 1980, Robert Peck von Hartel Trethowan has become a leading Australian firm of architects, interior designers and planners. The firm's underlying objective is to produce the best solutions to meet its client's needs whilst recognising that good design has a permanent and enduring quality.

Serving a broad range of clients in both the private and public sectors, the firm provides comprehensive professional consulting and design services. It has an established reputation for initiating major projects and facilitating their implementation through complicated planning, construction and financial processes.

The firm is familiar with working with large and complex organisations and has worked successfully alongside organisations where client representatives are an integral part of the design team, and where sensitive and appropriate consultation has enhanced user satisfaction and ownership.

**Innovation**

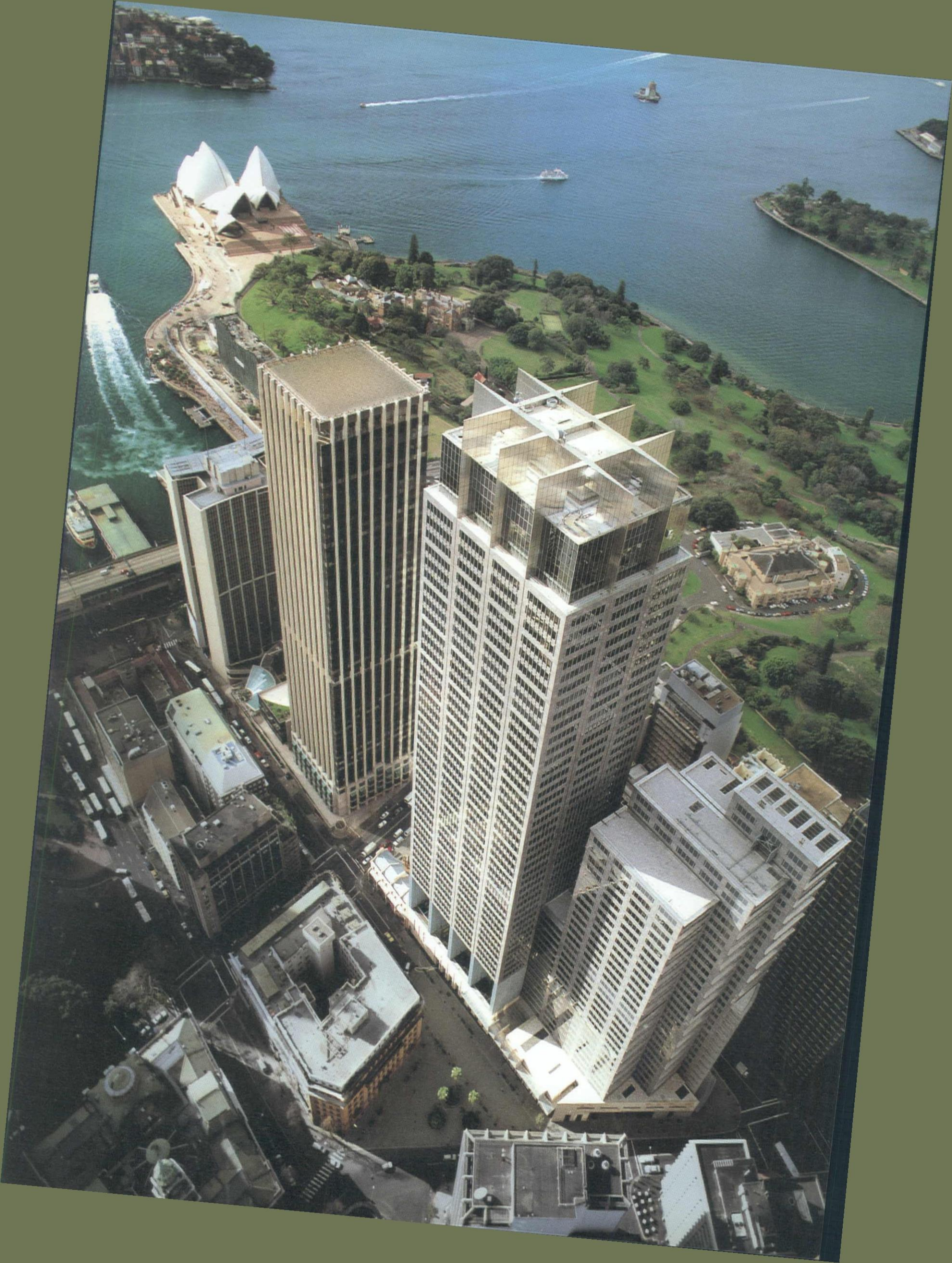
Good architecture has a timeless quality, but new technologies, changing community attitudes and a restructuring of the property development and construction industries have all combined to offer to potential clients new and innovative ways of meeting their building needs.

Robert Peck von Hartel Trethowan is focused on the opportunities presented by these changes for the benefit of its clients.

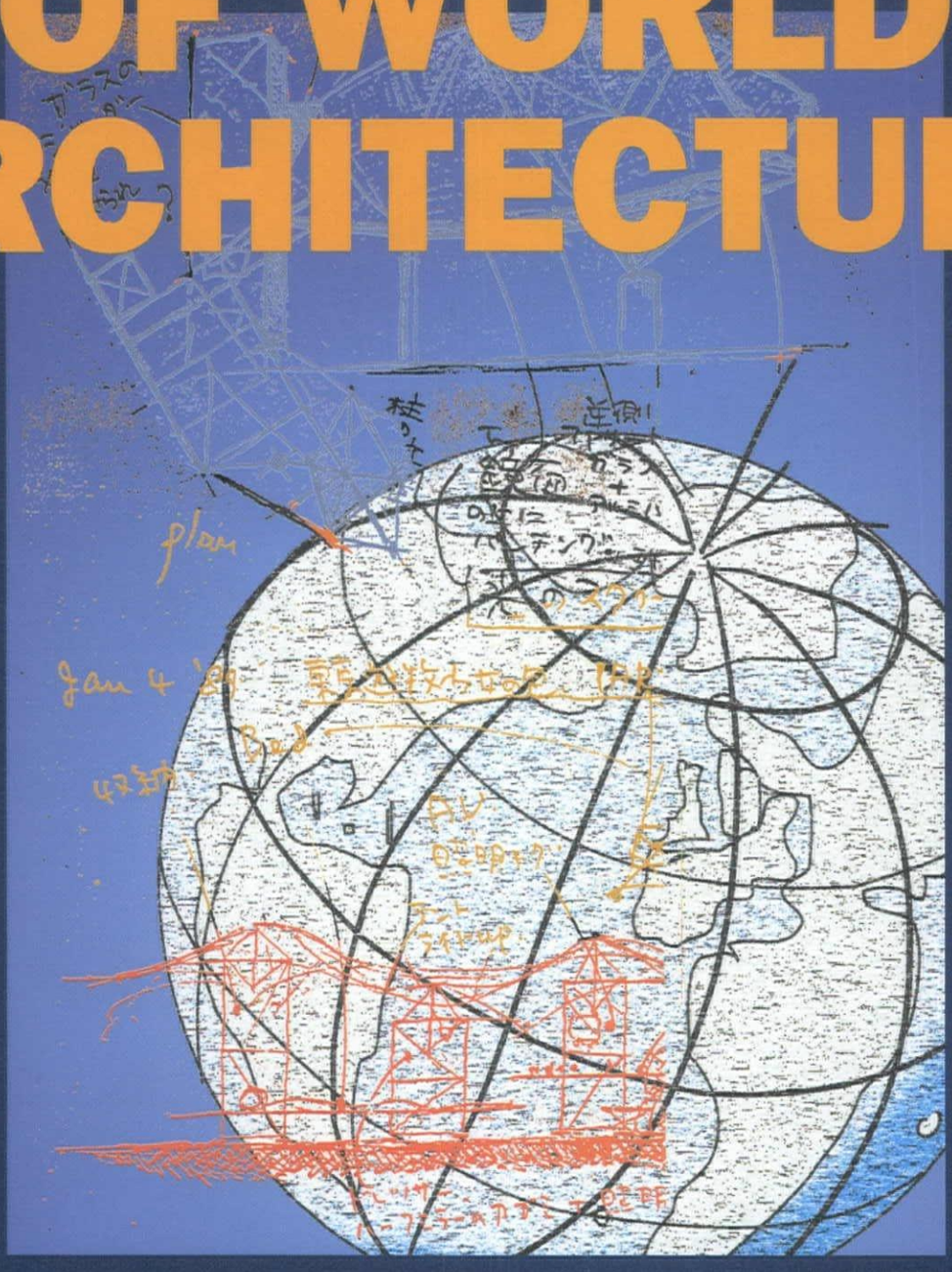
To provide the strongest possible technical project support, the firm is committed to the latest technology, including a integrated Computer Aided Design (CAD) network, with 3D modelling and ISDN links to all its offices.

**Areas of Specialisation**

- Major Developments
- Commercial Buildings
- Hospitality and Tourism Developments
- Interior Design
- Mixed Use Developments
- Building Refurbishment
- Retail Developments and Speciality Shops
- Restoration and Conservation
- Health Care
- Design for Government Instrumentalities
- Residential Developements



# THE GIANTS OF WORLD ARCHITECTURE



## THE ANNUAL SURVEY OF THE WORLD'S TOP 250 ARCHITECTURAL FIRMS

*World Architecture's* 1997 World Survey of the top 250 architectural firms is based on the largest set of data ever produced.

A unique and authoritative survey, it charts a continuing surge in the construction market with some cases of spectacular recovery, and looks at the biggest, best and fastest growing firms around the globe.

Within the detailed data, the survey shows that average fees have increased most significantly in the USA, Denmark and the UK, and that the world's fastest growing practice is based in Malaysia.

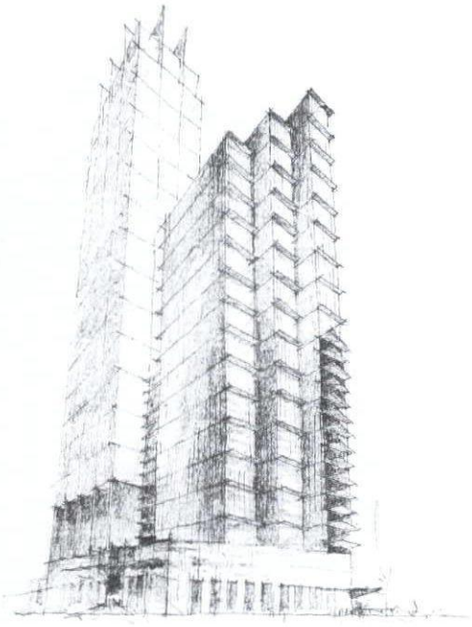
The most favoured consultants are listed and trends throughout the construction industry in general as well as within specialist frims are analysed.

The World Architecture 1997 World Survey of the top 250 architectural firms will feature comprehensive details of the largest, most successful and most sought-after architects and engineers in the world.

The World Survey will be included in the December/January issue of *World Architecture*. Don't miss out. Subscribe to *World Architecture* today.

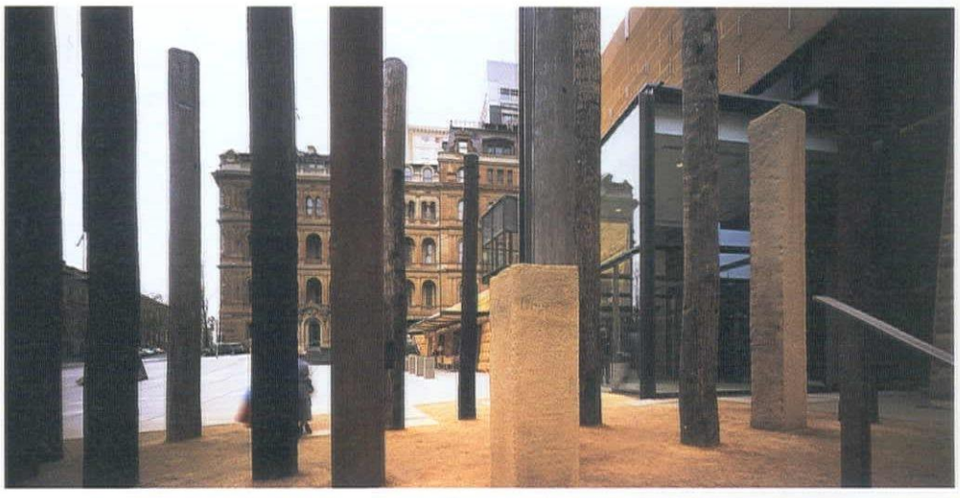
# Sydney's latest statement

**In a city which boasts two of the world's most celebrated modern landmarks, Denton Corker Marshall have created another. But whereas the opera house and the harbour bridge are sculptural objects, pulled away from Sydney's urban fabric, the redevelopment of a city block on the site of the first colonial Governor's House for the Museum of Sydney and the Governor Phillip and Governor Macquarie towers, was an altogether more complex and contextual exercise. Text: Peter Wislocki**

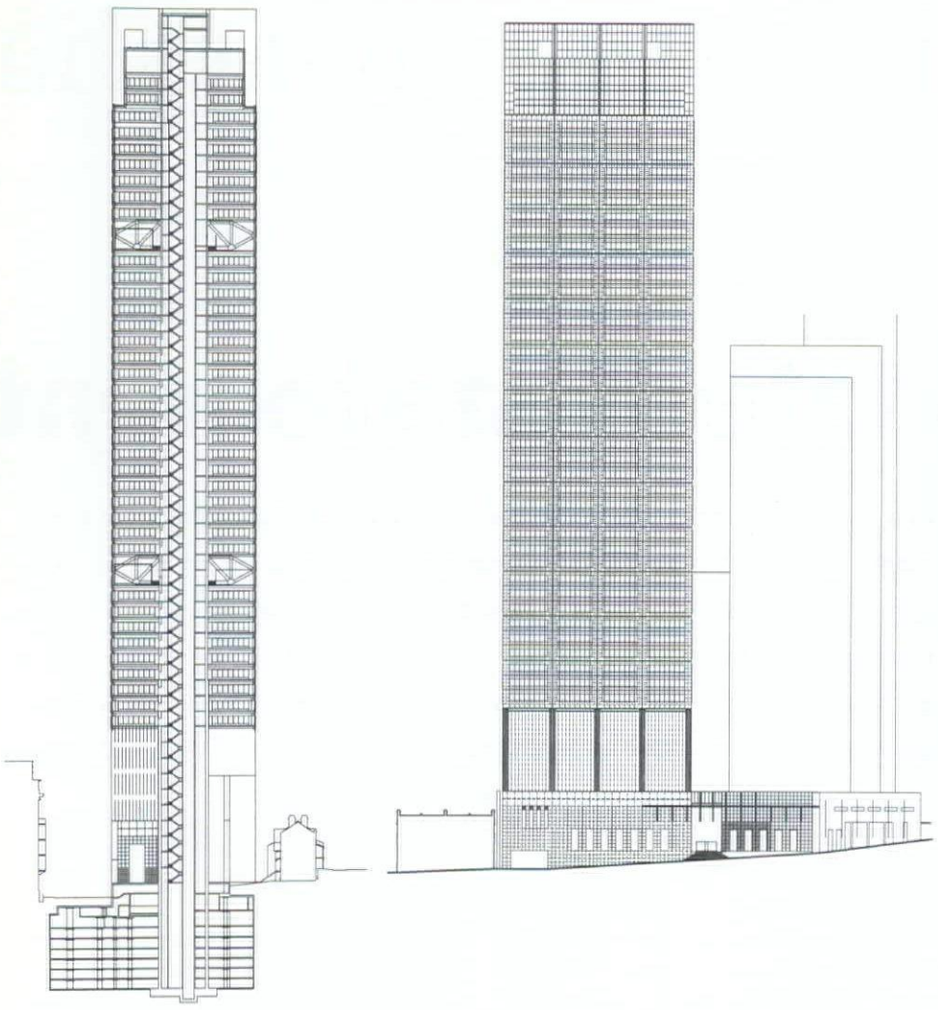


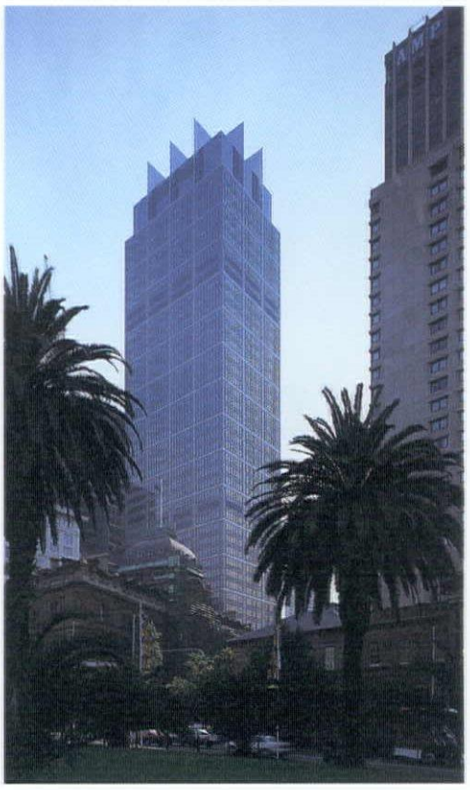
DCM's design for the Museum of Sydney and adjoining office towers is certainly no compromise: putting 63 floors of prime commercial office space right next to – in fact, virtually on top of – two historic, three-storey terraces of houses and the archaeological remains of the city's first seat of government, was not a task for the faint hearted. State Super's development doesn't hide behind neo-vernacular facades, and is unashamed of its height and mass. The third tallest building in Australia was intended to be a true landmark, dedicated to the city's prosperity. The project's contribution to Sydney's central business district nonetheless transcends commerce and its conspicuous representation. DCM's scheme accommodates the Museum of Sydney, set back from a new urban square. More generally, as fellow Australian designers and critics tend to agree, the architectural quality of DCM's enormous project transcends its size, confirming the international standing of this Australian practice.

DCM were appointed some time after an inconclusive open competition, on the basis of a strategy which included two office towers, the 63-level Governor Phillip (let to a number of blue chip companies) and the 40-level Governor Macquarie (pre-let to the State Government). The lowest edge of the block, bounded by Bridge Street, was known to be the site of the first Governor's House, built in 1788 and demolished in 1845, and therefore most appropriate as the location of the proposed museum. DCM's design is remarkable for the way in which these diverse functions are integrated. The contrast in scale between the commercial and cultural elements is immense – as is the difference between the A$460 million spent on the towers, next to the A$13 million devoted to the museum. Yet the latter part of the ensemble has a presence far exceeding its moderate size and budget.

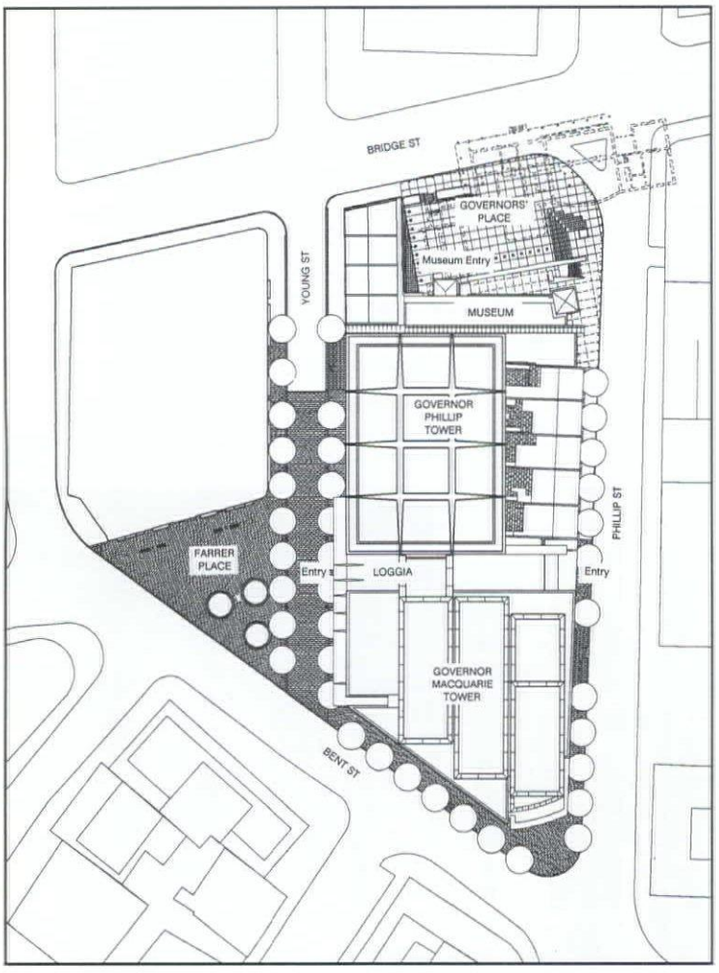


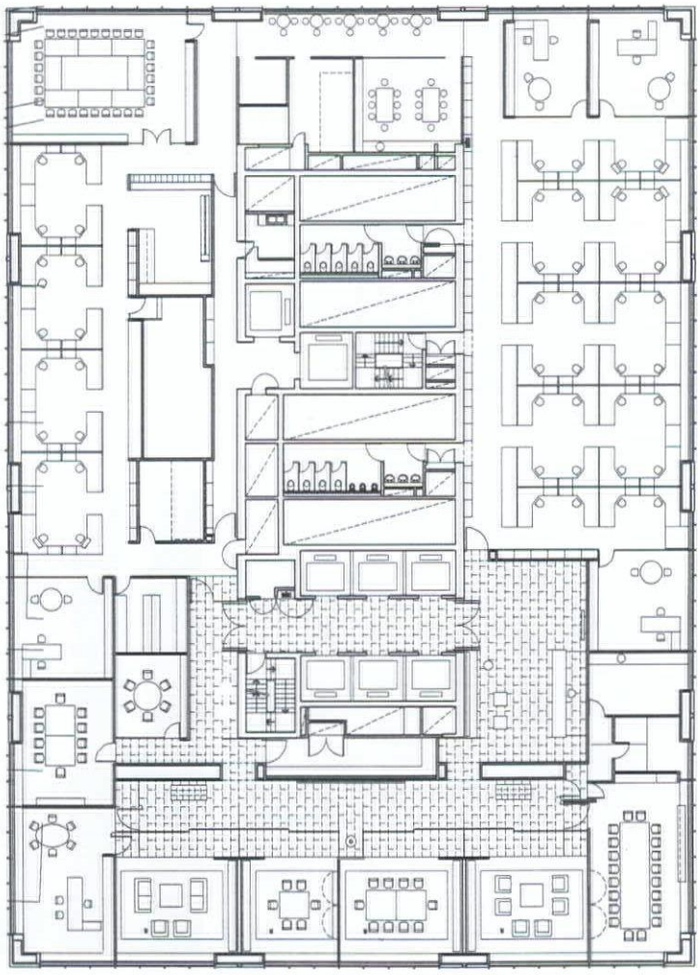
***Opposite*** *Ariel shot of the DCM project – Museum of Sydney and adjoining office towers (Governor Macquarie to the left, and Governor Phillip to the right, of the image) – at 63 floors the Governor Phillip tower is the third tallest building in Australia.* ***Above*** *Drawing of the project from street level.* ***Right*** *New urban square reaffirming DCM's intention to transcend commerce and its conspicuous representation and produce a true city landmark*



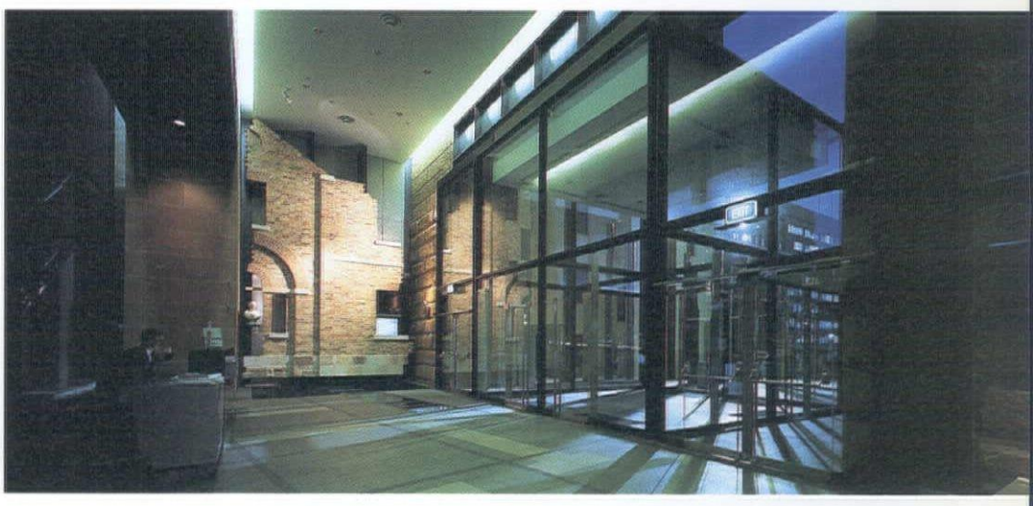


***Clockwise from top left*** *Section through Governor Phillip tower; Young Street elevation of the tower; the tower seen from the park that extends along the peninsula on which the Sydney Opera House is located; typical floor plan; site plan*



***Above*** *Urban square outside the Governor Phillip Tower.*
***Right*** *The entrance porch is a Miesian glass box. The porch is intermediate in scale between the MOS facade as a whole, and the almost domestic world at its foot*



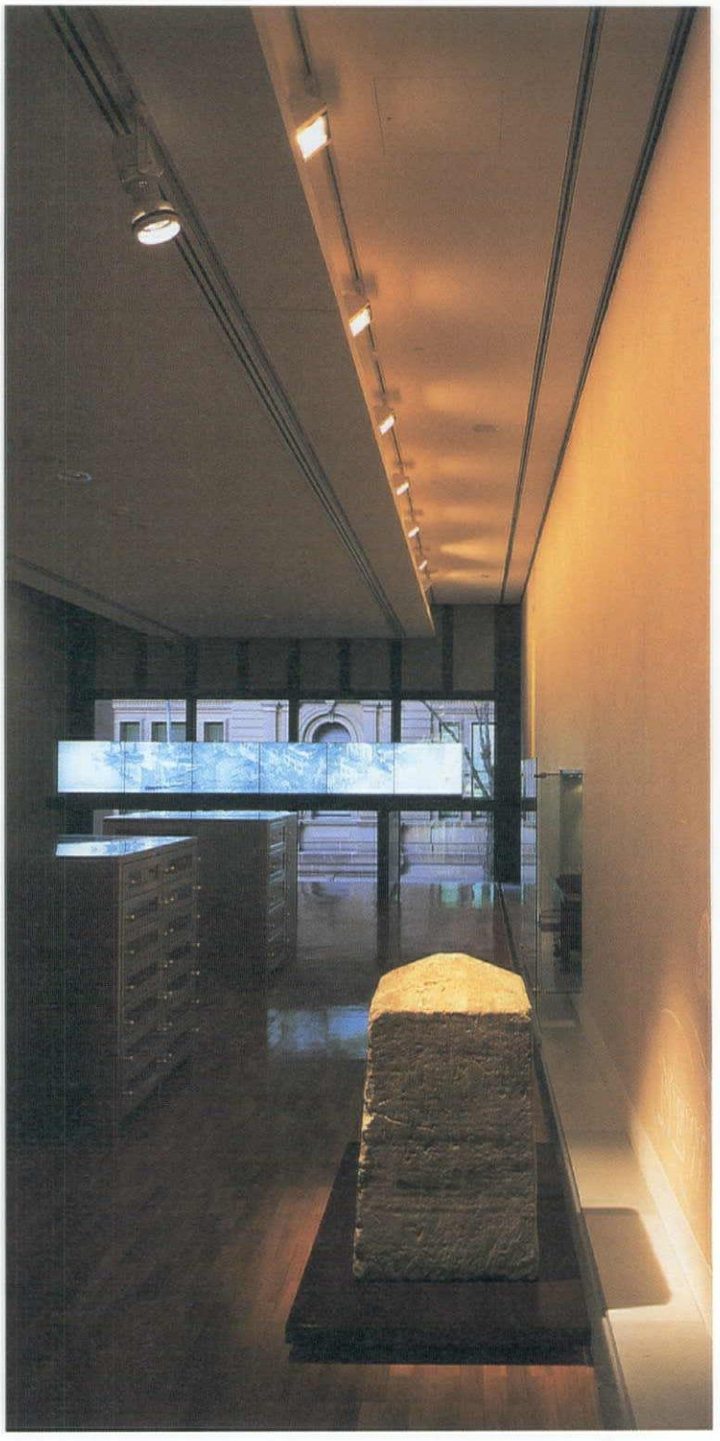
Sydney's skyline – opera house and harbour bridge excepted – is much like that of any other world city, with dozens of high rise office towers crowded into its central business district. But whereas Australia has succeeded in establishing a unique contemporary architectural tradition – growing from the suburban and rural landscapes, and most famously represented by Glen Murcutt – the high rise has, until now, been mostly an imported product. Only Harry Seidler has built a number of tall buildings to rival, and generally surpass, the qualities of towers by the likes of Skidmore Owings and Merril, IM Pei, Kohn Pedersen Fox and Kisho Kurokawa. In this Sydney development, Denton Corker Marshall have set a new benchmark for urban Australian high rise architecture, in the process consolidating their international status.

The Governor Phillip Tower is an impressive building for a number of reasons. It is self assured, yet comfortable in its context. It is commercial, yet civic. It exhibits structural sophistication and inventiveness without losing its sense of urban decorum. Its facades follow well established compositional principles – a tripartite articulation of the base, shaft and top – with a good eye for proportion. Above all, whilst the rented office floors are predictably unremarkable, and are in any case inaccessible to the general public, the entrance foyers are amongst the most memorable interiors in the city, modern and unfussy, combining an epic scale with well measured daylighting and opulent materials.

Planning regulations required that the historic terraces along the Phillip Street frontage of the site were to be preserved, with a substantial clearance between their rooftops and any new construction. Ove Arup Partnership's Sydney office engineered a structure of five transfer trusses, allowing the office tower to cantilever from its twenty-first level by some 8 metres. The trusses are over-clad in zinc, echoing the roofs of old Sydney, and are expressed as massive vertical fins on the Phillip Street elevation. The fin motif recurs at a variety of scales, and executed in various metals, in Denton Corker Marshall's design: in the distinctive rooftop, to the canopies over the entrance from Young Street.

**Australian Archaeology**

The Museum of Sydney (MOS) could easily have become the insignificant product of a "percentage for art" mentality. Yet, whilst its dimensions are dwarfed by those of the office tower it abuts, it is a building with great presence in its urban setting. Rejecting the city's planning guidelines, which favoured construction along the site's perimeter, Denton Corker Marshall set the sandstone facade of their building well back from Bridge Street, giving Sydney a new square on whose paving traces of the first Government House are recorded. This is not an exercise in desicated archaeology, however, but a pleasant urban space with a much used pavement cafe. The Edge of Trees, a sculpture of spinifex resin, wood, coreten steel, sandstone, feathers, shells, seeds and fibres, created by Fiona Foley and Janet



***Above left*** *Entrance into the museum. The sandstone plane of the exterior is echoed by another within the building, breached by a large opening opposite the public entrance.* ***Above right*** *Museum interior. The detailing of the ground floor of the museum, incorporating traces of the first Governor's House, continues the themes of the square outside, with a partial reconstruction of the historic monument rising from authentic archaeological remains*

Laurence, flanks the MOS's public entrance.

The museum's architectural success derives from its hierarchical manipulation of scales. Using an entirely modern vocabulary, DCM have applied compositional principles intrinsic to the styles of the past, but often neglected in contemporary architecture. The scale of the abstract sandstone plane which constitutes the building's principal facade element mediates between that of the gigantic Governor Phillip Tower and the Miesian glass box entrance porch. The porch, in turn, is intermediate in scale between the MOS facade as a whole, and the almost domestic world at its foot. Retaining their compositional integrity, each element is articulated with further layers of detail, giving the building sustained interest. The detailing of the sandstone, for instance, becomes progressively more planar as it rises above its rusticated base. The skewed bay window (aligned with the remains of the Governor's House) affords museum visitors a view towards Circular Quay, and gives compositional emphasis to the building's most visible corner.

The restraint of DCM's facade is matched by the building's interior. The sandstone plane of the exterior is echoed by another within the building, breached by a large opening opposite the public entrance. The detailing of the ground floor of the museum, incorporating traces of the first Governor's House, continues the themes of the square outside, with a partial reconstruction of the historic monument rising from authentic archaeological remains. As with the facades, the design of the interior is characterised by hierarchically ordered elements of

vastly varying scales, within a composition consisting of a multitude of layers which are readily perceived from the entrance foyer. A simple, yet refined steel stairway establishes the longitudinal orientation within the elongated plan, leading visitors to a second floor gallery, giving access to a number of simple, orthogonal spaces running the full length of the building.

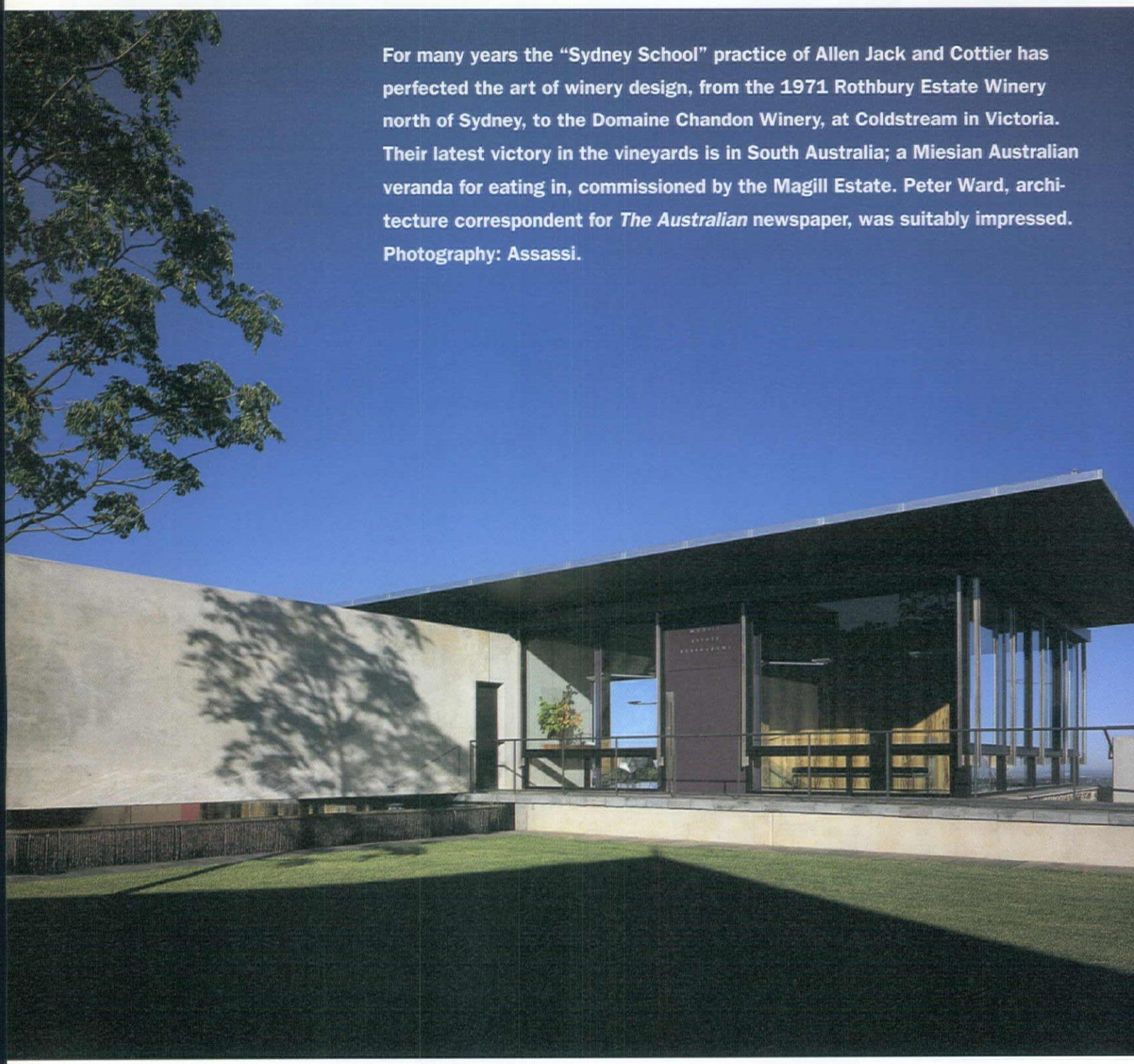
In this significant addition to Sydney's city centre, Denton Corker Marshall have been inventive in their approach to two very different building types, proving that it is not necessary to specialise in architectural practice in order to produce work of excellence. They have also shown that buildings of potentially incongruous sizes and functions can readily coexist, adding to the mature complexity of Australia's most vibrant city. **WA**

| | |
|---|---|
| **Project** | Governor Phillip and Governor Macquarie Towers |
| **Clients** | State Authorities superannuation Board |
| **Project** | Museum of Sydney |
| **Client** | NSW Public Works Department |
| **Architects** | Denton Corker Marshall Pty Ltd |
| **Engineers** | Ove Arup & Partners |
| **Surveyors** | WT Partnership |
| **Mechanical/ Fire Consultants** | TWA Consultants |
| **Systems** | Norman Disney Young |
| **Acoustics** | Robert Fitzell Acoustics |

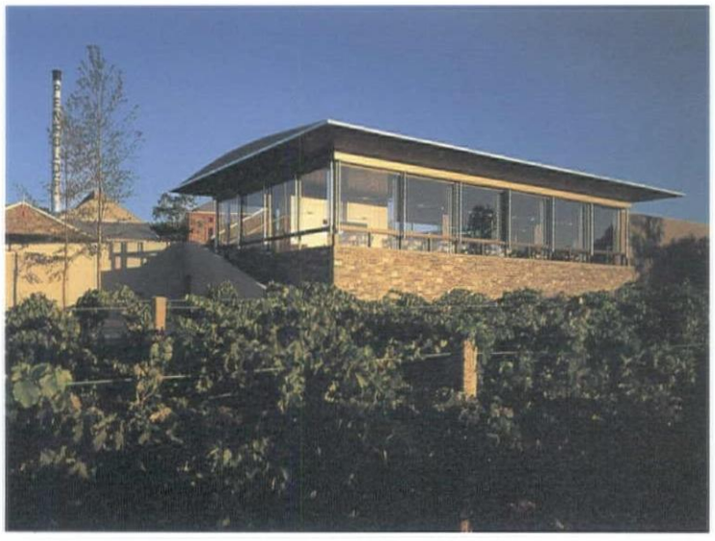
***Above left*** *A refined steel stairway establishes the longitudinal orientation within the elongated plan.* ***Above right*** *Second floor gallery gives access to a number of simple, orthogonal spaces running the full length of the building*

# Vintage stuff

**For many years the "Sydney School" practice of Allen Jack and Cottier has perfected the art of winery design, from the 1971 Rothbury Estate Winery north of Sydney, to the Domaine Chandon Winery, at Coldstream in Victoria. Their latest victory in the vineyards is in South Australia; a Miesian Australian veranda for eating in, commissioned by the Magill Estate. Peter Ward, architecture correspondent for *The Australian* newspaper, was suitably impressed. Photography: Assassi.**



***Opposite page*** *The Magill Estate restaurant is a robust interpretation of the Mies van der Rohe 1929 Barcelona Pavilion.* ***Below*** *View of the restaurant.* ***Right and below right*** *The restaurant in context with the some of the other estate buildings, which reflect the changing technologies of more than 150 years of wine making and construction. Materials range from locally quarried "bluestone" traditionally set in flushed blue-black mortar, through to brickwork, concrete and corrugated iron*



In the central state of South Australia the foothills of the Mount Lofty Ranges form the eastern boundary of its capital, Adelaide, with a population of 1.1 million. South Australia is the largest wine producing and exporting state and many top wineries are located within 50 kilometres of the city, with the most famous, Magill Estates, 7 kilometres from the centre. Now surrounded by suburban villas, the Magill Estate is probably Australia's most important wine heritage site and once boasted more than 100 hectares of vineyard. Dr Christopher Rawson Penfold settled there in 1844, building the Grange Cottage. In the 1950s Max Schubert made the first of the internationally celebrated Penfolds Grange Hermitage vintages at Magill.

Various ownerships over the past 25 years have seen the vineyard reduced to five hectares. It now forms a gently sloping, seasonally green, yellow or brown apron to a group of historically significant buildings dating from the 1840s to 1910s. It was in a dilapidated condition when Penfolds was purchased by Southcorp in 1990, which set about making the estate a corporate "home" for the brand-name.

Sydney architects Allen Jack and Cottier is a so-called "Sydney School" practice which designed the notable Rothbury Estate Winery at Pokolbin, in the Hunter Valley north of Sydney, in 1971. In 1987-90, having long graduated from the school, they designed another highly praised winery, the Domaine Chandon Winery, at Coldstream in Victoria. The Rothbury winery is a strongly modelled Sydney School essay in brick, angled tiled roofs and timber beams and details. The Domaine Chandon winery projects a sophisticated, lineal, rural shed imagery, giving the Moet *methode champenoise* an Australian accent, but neither broad nor kitsch. And now at the Magill Estate has come something completely different: an exceptionally elegant demonstration of high-style modernism, a Miesian Australian veranda for eating in, the Magill Estate Restaurant.

The restaurant is the architectural climax of a A$6 million programme of redevelopment, restoration, conservation, construction and landscaping at the estate, whose buildings have a clustered village character. The underground cellar complex, pot stills, bond stores, boiler rooms, other storage and wine-tasting areas, and the Grange Cottage, have been extensively restored. A new roadway allows only minimum penetration of vehicles into the main historic area, which is predominantly pedestrian. New office areas have been inserted into the 1910 buildings and a new warehouse has been positioned behind, while replanting of vines has extended the vineyard up to the edge of the whole complex. Together the estate's building stock reflects the changing technologies of more than 150 years of wine making and construction. Materials range from locally quarried "bluestone" (actually a bluish-brown blocky slate) traditionally set in flushed blue-black mortar through to brickwork, concrete and corrugated iron.

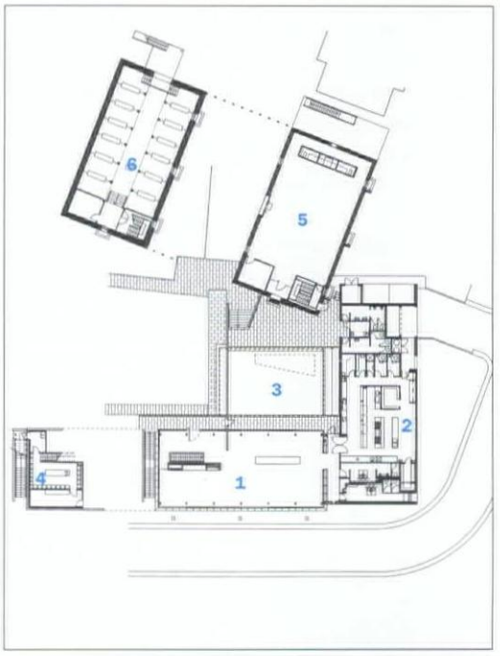
Southcorp was anxious also that overseas visitors to the Penfold corporate home should be able to receive what project architect Keith Cottier calls a "distilled Australian experience", an urban one instead of the commonplace rural excursions to wineries north in the Barossa Valley or in the southern Vales. Adelaide's climate is temperate, analogous to that of southern Europe or southern California, with relatively mild winters, warm summers and throughout many clear, sunlit days allowing open air eating. The views from the estate are notable too, by day taking in the central metropolitan area to St Vincent Gulf 16 kilometres west, with long casts of afternoon sun, while by night the city is revealed as a wide plain of networked light. The aspect is not

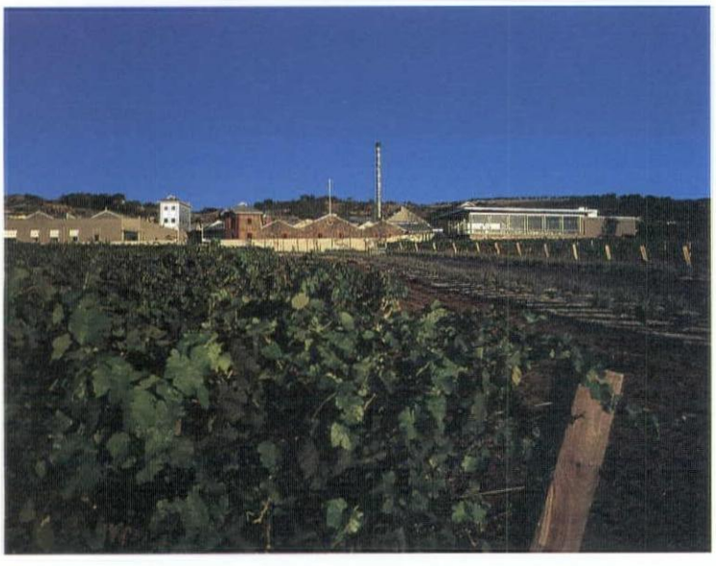
**Site plan – Key**

1 Grange Cottage
2 Restaurant
3 Service wing
4 Spirit bond
5 Vintage cellar
6 Terrace
7 Reception
8 Offices
9 Cellars
10 Warehouse
11 Workshop
12 Caretaker cottage
13 Coopers building
14 Boiler room
15 Still house
16 Car parking

**Building plan – Key**

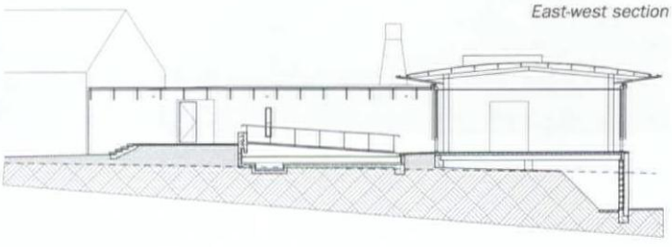
1 Restaurant
2 Kitchen
3 Pool
4 Cellar
5 Spirit bond upper
6 Spirit bond lower





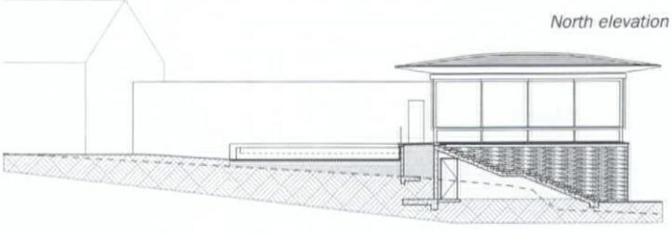
***Above left*** *Site plan of the Magill Estate.* ***Above*** *Building plan.* ***Below left*** *View of the estate from the vineyards, with the restaurant on the right*

*East-west section*



Spirit bond building Kitchen Pool Restaurant

*North elevation*

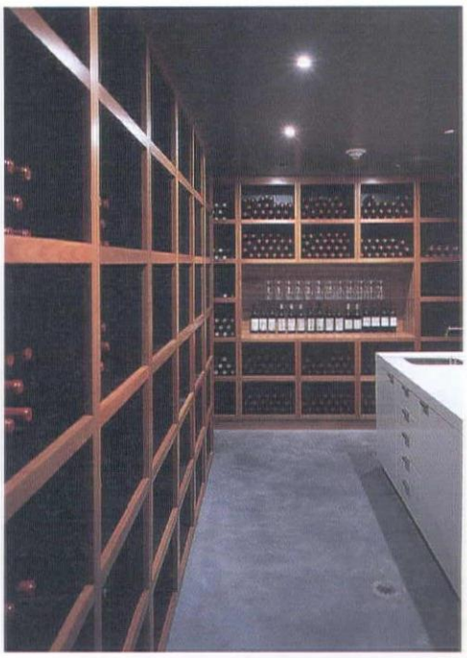


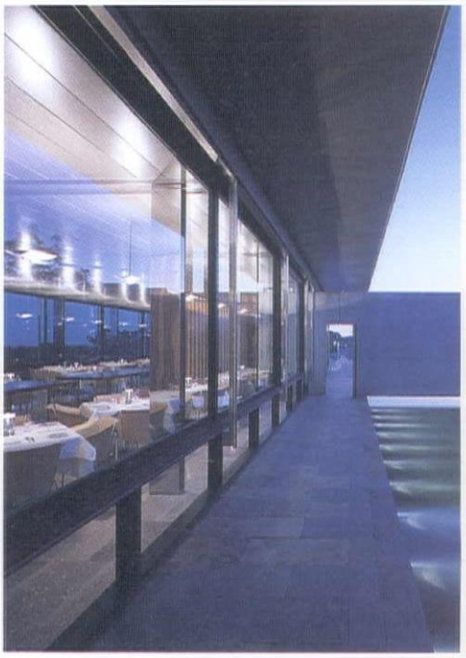
unlike that above the Los Angeles basin.

Keith Cottier convinced his client that any temptation to a "themed" restaurant should be steadfastly resisted. Instead the "distilled" experience should be of climate, outlook and urbanity, expressed by fine wines, fine food and fine design. Cottier and design architect Peter Monckton's solution is a spare glass-clad pavilion running north-south, connecting an unadorned rendered blockwork wing of washrooms, stores and kitchens running east-west. To the east the pavilion overlooks a large rectangular lily pond and the old spirit bond. A high thin pre-cast concrete dividing wall runs across the pool's northern end, creating an inner enclosure, and penetrates the pavilion, defining part of its entrance and waiting area. The pool runs under the wall and flows over a crisp metal edge into a thin longitudinal well. To the west is the sloping vineyard and the city.

During clement weather, two thirds of the eastern and western glass walls slide back, converting the eating experience from inside to out. Large overhanging eaves assist in sun control together with a neat array of mechanised aluminium louvres of the western side and northern end which descend and are progressively adjusted during the afternoon and evening according to the season and the sun's angle.

It is all done with a crisp minimalist aesthetic. On one level the pavilion's rectangular, pared-back functionalism, with its wide eaves, window and louvre system recalls, in amenity and response to climate, the "sleepouts" and verandas which were a common external feature in Australian housing before the 1939-45 war. However, this was not a conscious programme. The new buildings "are confidently modern and true to their time, but carefully positioned so as not to dominate the historic core," Keith Cottier says. "The restaurant has a transparent, "negative" character and is seen as





| | |
|---|---|
| **Project** | Magill Estate Winery Restaurant |
| **Client** | Magill Estate |
| **Architect** | Allen Jack & Cottier |
| **Structural and civil consultant** | Connell Wagner |
| **Electrical and mechanical consultant** | Bestec |
| **Hydraulic consultant** | Ashley Hallandel + Associates |
| **Landscape architect** | Terragram |
| **Quantity surveyor** | Rider Hunt |
| **Restaurant consultant** | Anders Ousback |

an external room beneath the hovering roof."

Importantly, he acknowledges its debt to Mies van der Rohe's Barcelona Pavilion of 1929, though it is more robust in some of its parts. The Barcelona Pavilion's thin-edges roof slab was notionally supported on eight thin polished steel cruciform columns. At Magill 12 relatively sturdy internal columns support the slightly curved thin-edged sheet steel roof. They have highly polished stainless steel sides to reflect light and activity. At Barcelona surfaces and divisions were clad in rich marbles, onyx or coloured glass. At Magill the richest finish is to the floor, which is creamy travertine. The main room divider and dining room southern end is clad in a smoothly finished, boldly patterned wood veneer of Black Heart Sassafras from Tasmania. Transoms and mullions are relatively robust, too, in response to the site's occasional high wind loads. But although the Miesian minimalism is thus a trifle thickened, the DeStijl geometrics remain patent.

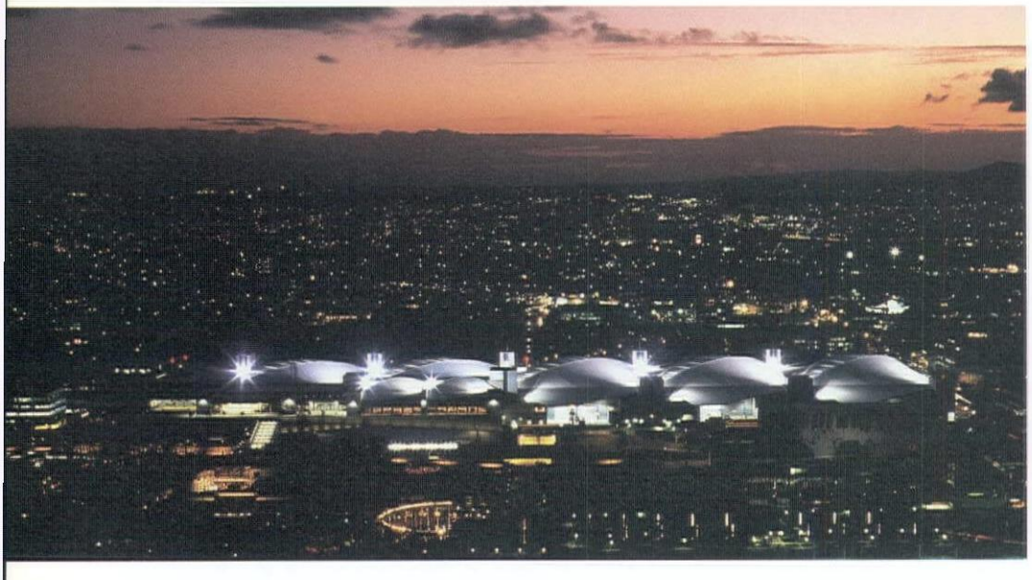
Other materials and fittings proclaim close attention to high quality detailing despite a tight budget. Russet New South Wales Turpentine is used in the carefully crafted shelves and cupboards in the corridor/servery and the wine cellar, while Queensland walnut and a floor of marble mosaic is used in the washrooms. Furniture and equipment includes design classics, such as chairs by Vico Magistretti/Fritz Hansen and cutlery by Stelton. The uplights in the dining room are the joint work of the practice and the notable Sydney-based lighting designers, Neoz. Externally, "bluestone" is used in large areas of dry-set paving and in the podium wall where it is thinly layered and the mortar is off-white and deeply inset, strategies which deliberately differentiate the wall from the traditional stonework and finishes in the buildings nearby.

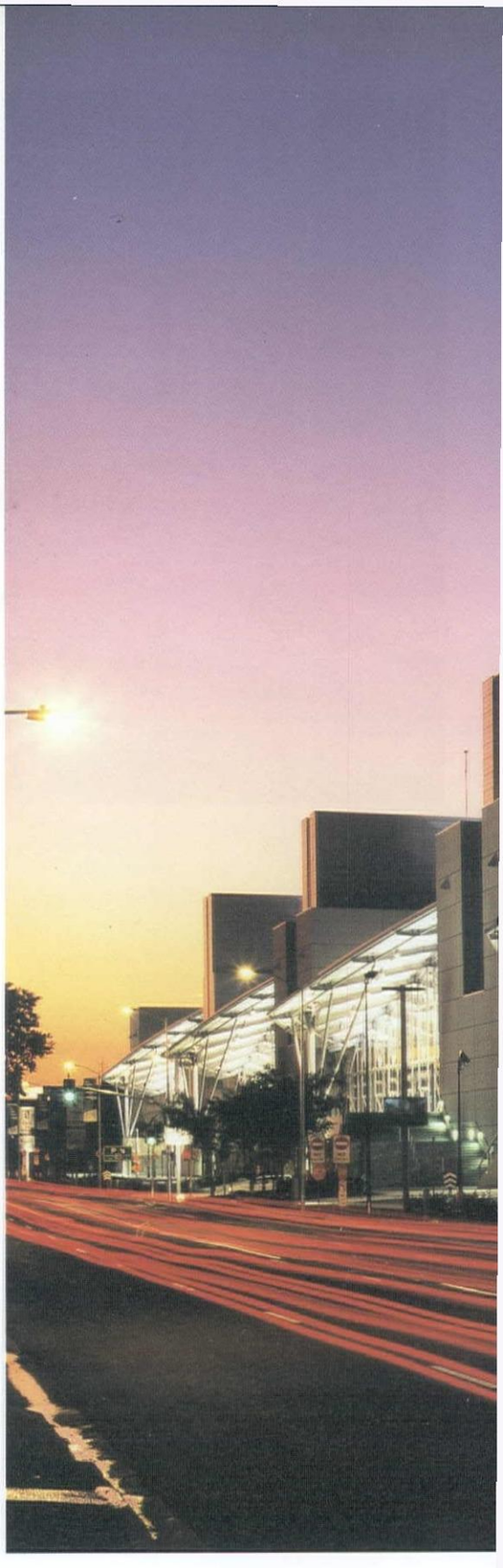
The Magill Estate redevelopment has made Australia's most famous winery both a showcase of Australian winery architecture and an efficient modern working winery and corporate headquarters. The restaurant sits like a smooth, precisely cut jewel in its crown. There is nothing like it in Australian restaurant architecture and it would be rare in the world. In it Alan Jack and Cottier have demonstrated consummate architectural skill and poise, and have made a triumphant gesture affirming the continuing vitality of main-stream modernism. **WA**

***Above*** *12 relatively sturdy internal columns support the slightly curved thin-edged sheet steel roof. They have highly polished stainless steel sides to reflect light and activity.* ***Above right*** *Attention to detail and quality of materials is reflected in the Russet New South Wales Turpentine used in the shelves and cupboards of the corridor/servery and wine cellar.* ***Right*** *"Bluestone" is used for the external dry-set paving, and in the podium wall, where it is thinly layered*

# Meeting machine

**Cox Rayner Architects are well known for their expertise in convention and exhibition centre architecture. They were the designers of Sydney's landmark convention centre at Darling Harbour, and their latest project in Cairns is now well advanced on site. *World Architecture* assesses their most recently completed, and largest, convention and exhibition centre in Brisbane, which looks set to put the city on the intercontinental map. It's distinctive and extravagant appearance belies its design and build construction. Text: Peter Wislocki. Photographs: Patrick Bingham-Hall.**





In a city lacking the vibrancy of Sydney, or the charm of Melbourne, Brisbane's new convention and exhibition centre has been built with the explicit intention of putting the Queensland capital on the intercontinental map. When it comes to such facilities, size and flexibility are paramount. The number of visitors not only determines the project's commercial viability but has a major impact on the city's economy. The greater the range of functions accommodated, the better the chance of continual use. The priority given to trade fairs and specialist conferences is understandable, given the greater propensity to spend of expense account bearing professional delegates. But the private leisure market is also lucrative. Having designed Sydney's landmark convention centre at Darling Harbour – one of the projects which turned the Australian bicentennial into an event of architectural significance – Cox Rayner Architects have gone on to evolve this building type, the Brisbane project being the largest to date.

The strategy for the project is based upon maximum flexibility, avoiding some of the missed opportunities of the earlier Sydney design. A row of five square halls, each measuring 70 x 70 metres, is sandwiched between a railway station on one side, and a grand, linear concourse on the other. Four of these halls have minimal equipment and fittings, providing a neutral volume for exhibitors. The fifth, known as the Great Hall, and located nearest the principal foyer at the south eastern end of the building, is provided with up to 4,000 seats, in a flexible arrangement suited equally to indoor sports, performing arts, business gatherings and banquets. Sliding partitions, manufactured in the United States, separate all five halls, allowing the entire floor area of

almost 25,000 square metres to be used as one, uninterrupted volume. Double partitions between the Great Hall and the neighbouring exhibition space ensure acoustic separation - when the spaces are used independently.

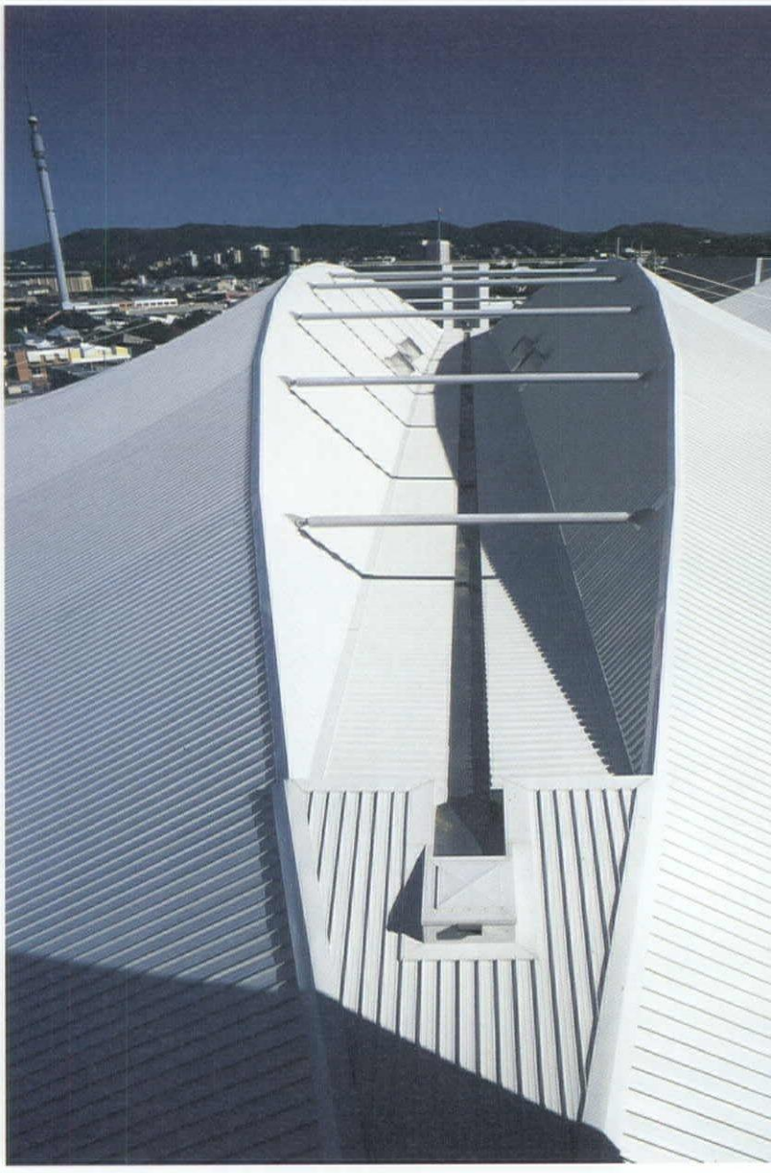
The circulation system allows the building to function in a variety of modes. When all or most of the centre is used for a single event, the monumental entrance from the corners of Glenelg Street and Merivale Street leads visitors to the major foyer, giving direct access to centralised ticketing, cloakrooms, restaurants, function rooms, smaller meeting rooms and other ancillary facilities. The concourse on the building's south western flank serves to distribute the public along the building's 350-metre length. Alternatively, when a number of independent users share the building, each of the halls can be accessed from the entrance to the adjoining section of the concourse, up external stairs or lifts directly from Merivale Street and the car park beneath the building.

### Trade-mark trusses

Like art galleries, convention and exhibition centres are not meant to distract from the

***Opposite page*** *Triangulated bow-sting trusses span diagonally across each of the five square 70 x 70 metre halls.* ***Above*** *View of the exterior down the linear concourse running parallel to the building. The Grand Hall, to the right of the image, is at the south-eastern end of the building*

***Below*** *View of the dramatic yet efficient and cost-effective trusses. The horizontally banded walls of the main entrance foyer indicate its continuity with the rest of the building.* ***Bottom*** *The aesthetic neutrality of the building dictates that its appearance will not detract from the events it accommodates.* ***Below right*** *One of the hyperbolic paraboloids that make up the building's extraordinary profile*



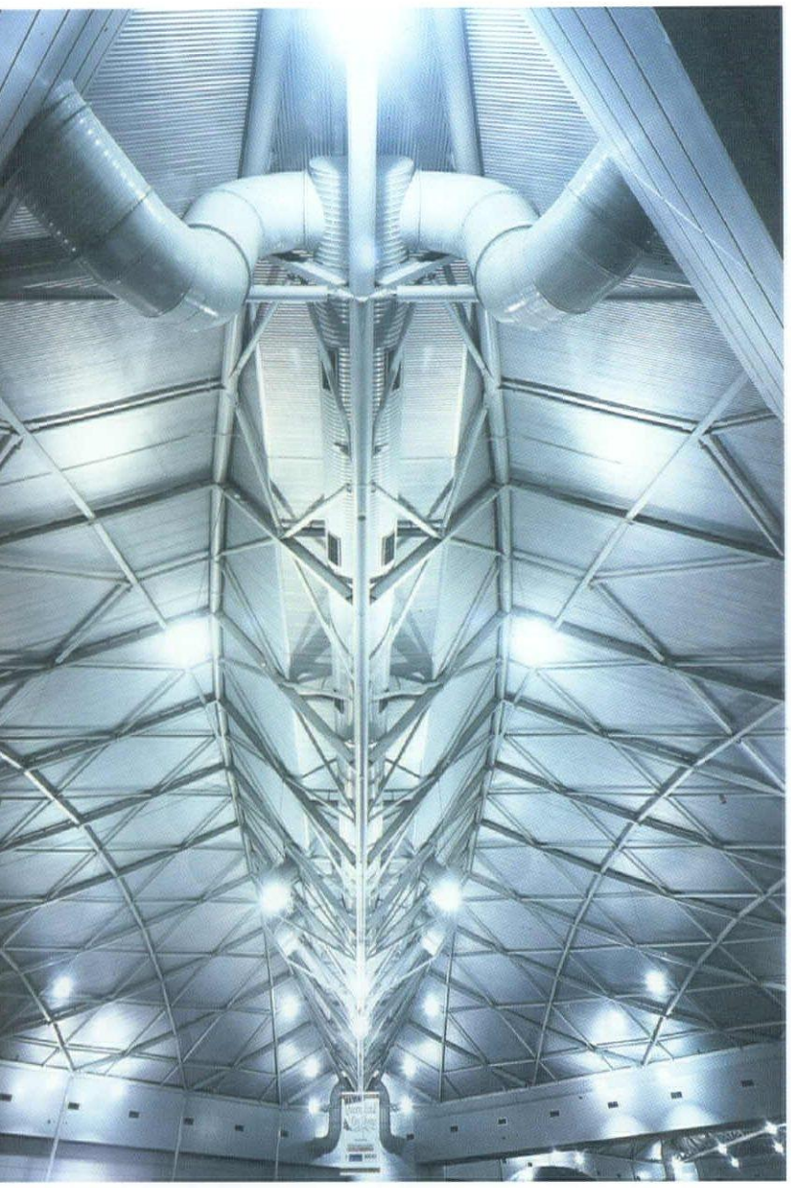
exhibits and events they accommodate. For this reason, much of the building's interior is aesthetically neutral; walls and ceilings are painted a uniform light grey. However, as one might expect of a Cox design, the roof structure over the exhibition halls is inventive and expressive, and provides a point of departure for some of the building's most distinctive architectural motifs.

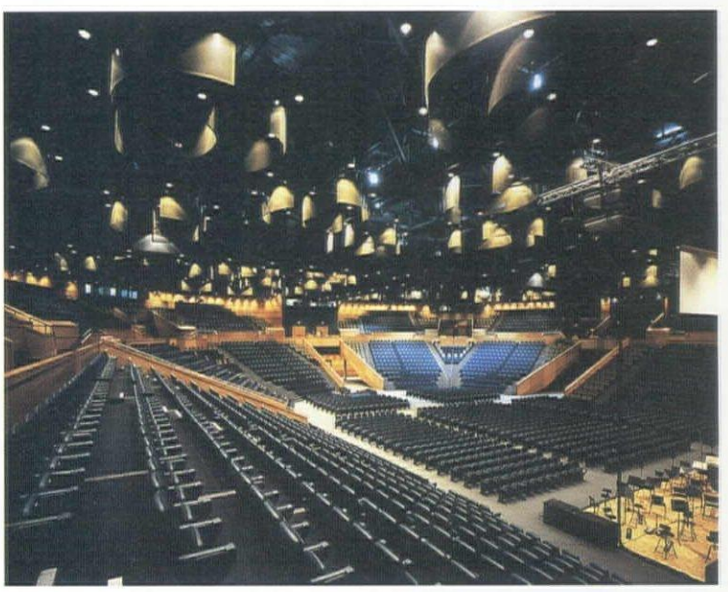
The square plan presents an engineering challenge. Steel frames are most efficient in their use of the material when members are hierarchically ordered, each joist or beam bearing on one of larger size, spanning a greater distance. Thus, given a rectangular plan, the primary beams span the shorter dimension, supporting secondary members oriented parallel to the longitudinal axis. With a square plan, unless a pyramidal or domed form is adopted, the choice of orientation for the primary structure becomes arbitrary. Cox Rayner's solution to this engineering riddle is unorthodox, yet elegant. Triangulated bowstring trusses span diagonally across each bay, in an apparently extravagant gesture. Yet the structural system is rational and efficient. Excluding the primary trusses, all other members are suspended, in tension, minimising their size and weight. Calculations reveal that this design used almost precisely the same mass of steel as the most economical alternative, but with far more architectural impact.

The hyperbolic paraboloid roofs provide the enormous building with a striking profile, and are extended across the concourse, dropping towards Merivale Street to articulate a series of canopied entrances, each propped from a single encased steel column. A taller variant of the same column design indicates the location of the building's major entrance.

Sadly, the opportunity to integrate a skylight into the triangular cross section of the roof trusses was rejected, largely due to the client's desire for a totally controlled, artificial internal environment. Close inspection of the exposed steel structure also reveals some details which the architects describe as "honest", if not necessarily elegant. Cox Rayner's design was realised on a design and build basis, distancing the architect from operations on site and final judgments on small, but sometimes all-too-visible components and junctions. The architects emphasise that the use of standard components was a design intention, not a compromise necessitated by the chosen procurement route. In this respect, the project moves away from the tendency to refine structural systems and

***Below left*** *Interior view of the innovative roof structure. The architects rejected the use of skylights in preference to the idea of a totally controlled internal environment.* ***Below*** *The main foyer, a meeting place with Aboriginal-inspired mosaic floor.* ***Bottom*** *Flexibility is the principle attribute of the Great Hall. It can be divided into halves or quarters, is acoutically viable and can be used as a venue for televised performances*





components in the sometimes mannered approach associated with the UK hi-tech architects Richard Rogers and Nicholas Grimshaw, which some of Cox Architects' earlier work also exhibits.

Notwithstanding these frustrations, several of the building's interiors do have considerable presence. The entrance foyer is conceived as an inside-outside space, its horizontally banded walls emphasising its continuity with the building's exterior. Designed as a gathering place for thousands of people, the foyer reveals its mosaic floor, inspired by Aboriginal artists, only when not fully occupied. Taking the escalators to the upper foyer levels, visitors reach a terrace, looking back over the riverside developments and city skyline beyond.

Technically, the Great Hall is a fine example of flexibility, being divisible into halves or quarters, with a great range of possible seating configurations. The lower tiers of seating can all be lifted towards the ceiling, creating a banquet or expanded exhibition space. By opening the partition to the adjoining exhibition hall, the 4000-seat capacity can be doubled for exceptional events. A lighting grid extends over the entire space, catering for the needs of live and televised performances. Acoustically, the fixed seating is highly sound absorbent, moderating the intrinsically reverberant volume.

Cox Rayner's next convention and exhibition centre, further up the coast at Cairns, is well advanced on site. The leading Australian architects of these immense meeting machines must now be looking towards their Asian neighbours as potential clients, to continue the evolution of their analytical but expressive design approach. **WA**

| | |
|---|---|
| **Project** | Brisbane Convention and Exhibition Centre |
| **Client** | Leighton Construction |
| **Architect** | Cox Rayner Architects |
| **Civil Engineer** | Ove Arup |
| **Structural Engineer** | Ove Arup |
| **Mechanical** | Norman Disney & Young |
| **Electrical** | Norman Disney & Young |
| **Communications** | Norman Disney & Young |
| **Hydraulic** | Norman Disney & Young |
| **Quantity Surveyor** | Rider Hunt |
| **Landscape** | Tract Constructions |
| **Acoustic** | Ron Rumble |
| **Traffic** | Ove Arup |
| **Interiors** | Cox Interiors |

# Profile

# Learning from experience

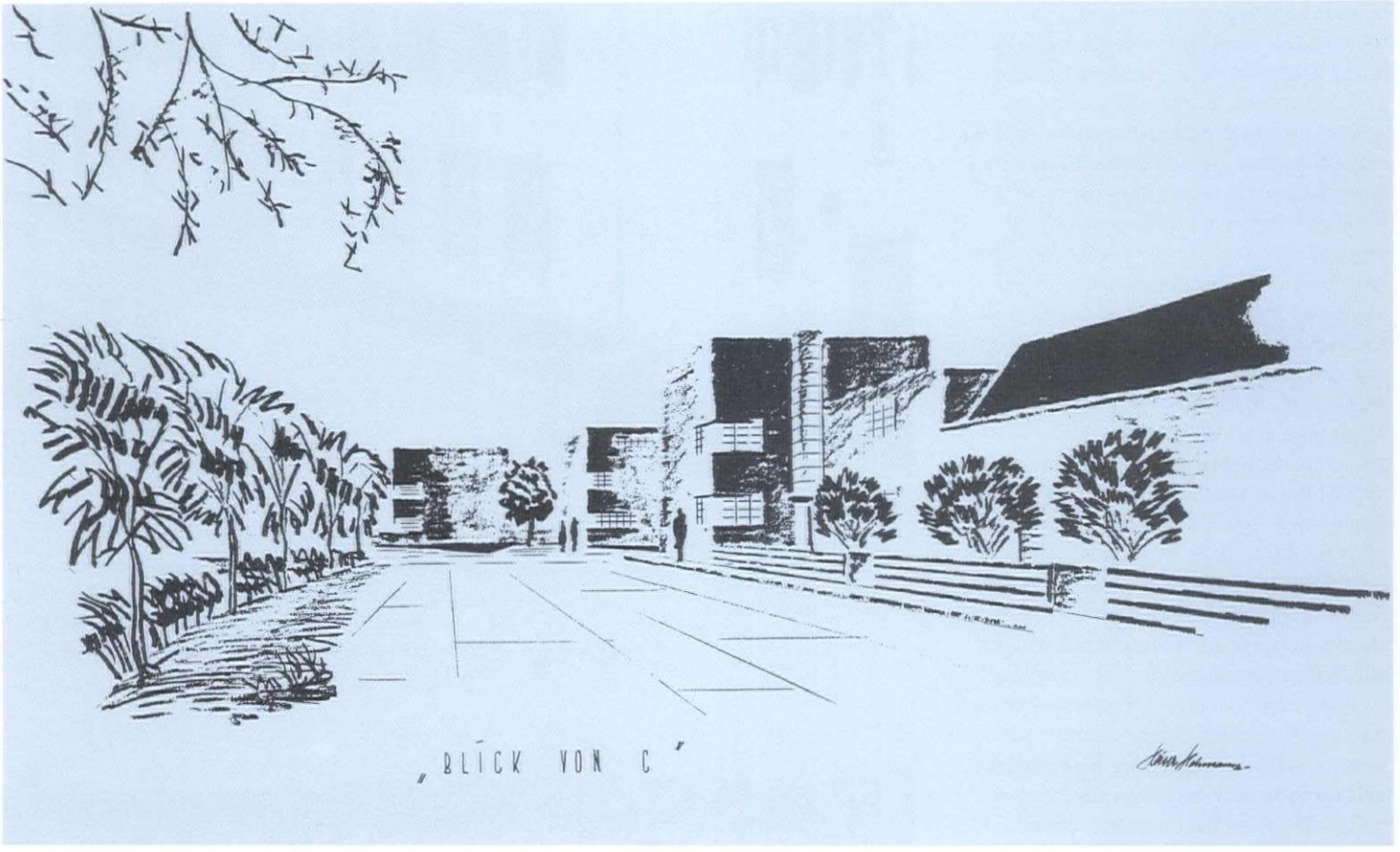
## Bremmer Lorenz Frielinghaus Partnership

**On the banks of the Rhine at Eltville, not far from the city of Frankfurt, is the new management training centre of the Federal Bank of Germany, an organisation of great importance, not only for Germany but for the whole European Union. Michael Frielinghaus, the architect of the training centre, calls it, "A large building that seems small", and although this is a modest description, his words convey an idea of the unique range of skills that have been brought to bear on many projects by the Friedberg firm of Bremmer Lorenz Frielinghaus Partnership since its foundation more than 60 years ago.**

Bremmer Lorenz Frielinghaus Partnership is a Frankfurt firm of architects, but its offices are not in Frankfurt. Instead a quick 20 kilometre drive north up the autobahn from Germany's financial centre will bring a visitor to an off-ramp signposted "Friedberg". A few minutes on a straight country road and you reach the modest-sized but strategically placed town of this name that has benefited for years from its proximity to the great banking centre and transport hub of the Frankfurt/Wiesbaden/Mainz triangle. More recently Friedberg has benefited too from German reunification, for it is close enough to the main cities of the old German Democratic Republic for a driver to reach them and return in a single day. It is factors like these that influence the partners at Bremmer Lorenz Frielinghaus whenever they think of relocating into Frankfurt itself. For the last 60 years it has been their choice to remain a small town firm, even though the practice is now one of the largest in the state of Hessen, with work all over Germany. So far, despite having a combined staff of over 100, and branch offices in Berlin, Weimar and Leipzig too, the firm is loyal to Friedberg, the birthplace of its founder and now the site of its

***Above right*** *BLFP's leading partnership today (left to right) Michael Frielinghaus, Professor Gerhard Bremmer and Bernhard Lorenz.* ***Right*** *Heinrich Hohmann (1908-1993) the founder of the firm.* ***Far right*** *BLFP's Friedberg staff in front of their new head office building in 1995*

***Right*** *Heinrich Hohmann's combined house and offices in Friedberg, designed in 1934 and occupied by his firm for 60 years.* ***Below*** *A competition housing project in the Weimar modern style drawn by Heinrich Hohmann in 1927*




new made-to-measure offices at number 7 Strassheimer Strasse, the first building in Friedberg.

The new Bremmer Lorenz Frielinghaus offices, designed in 1992 and occupied two years later, are more conspicuous than their predecessors, but they are no longer in the town centre. Instead the firm has moved to the very edge of the town and built what they hope will always be the first building in Friedberg approaching from the Frankfurt autobahn. The building they have put up is at present isolated on a site meant for more buildings. It is a right-angled structure, sited and fitted out for work efficiency as well as energy efficiency, with its doorless office spaces, fixed galvanised metal sunshades and the dashing section of inclined and curved glass cladding that covers the external junction of the two office arms. Together with an almost equally lonely bank building that is still under construction, the offices of Bremmer Lorenz Frielinghaus keep watch over what will one day be a thriving business park.

"We chose the site for our new offices and the way we designed our new building for many reasons," observes Professor Gerhard Bremmer, the most senior partner in the firm and president of the Hessen Chamber of Architects since 1984. "To be able to say we are the first building in Friedberg makes us easy to find, and it is also easier to get onto the autobahn system and to the airport from here than it would be from the town centre. As for the design, it not only expresses our architectural philosophy, it actually enables all of us to work together under one roof for the first time. Only three years ago we were still working out of four separate buildings in the centre of Freidberg."

Every German firm of architects in practice today that was in practice before World War Two must have an interesting history, and Bremmer Lorenz Frielinghaus is no exception. The founder of the firm was a man named Heinrich Hohmann, who was born in Friedberg in 1908, the son of a saddler and upholsterer. Deciding to become an architect, he began by apprenticing himself to a stone mason and then enrolled as a student at what was then the Polytechnic of Friedberg. One of his teachers there was a leading German church architect of the time named Rudolf Schwartz, who later on was to influence Gottfried Boehm. Another conservative figure who influenced the young Hohmann was the neo-classicist Paul Schmitthenner. But Germany in the 1920s was a hotbed of political and creative radicalism and Hohmann was drawn to the ideas of Bauhaus modernism as well. In the fullness of time this conflict was to resolve itself into an enviable ability to design in the preferred style of any era but, in the late 1920s there was little choice. Modernism was still in the ascendant and, when he left college to work for a firm of architects in Frankfurt, Hohmann worked on a competition scheme for a modern extension to the Reichstag. He also drew typical Weimar modern housing for another competition scheme, a housing development on the banks of the Rhine at Mainz, a

neat ink rendering of which still survives.

As the 1920s gave place to the 1930s it became clear that there would be no easy access to architectural practice in Germany. The country was in a state of political and economic chaos with pitched battles between the various factions in architecture and the whole construction industry in deep recession. Following a number of his disenchanted colleagues, Hohmann left the country. When he returned to Friedberg the situation in Germany had changed. In 1934, at the age of 26, he entered a local competition for the design of a new headquarters for the Friedberg District Savings Bank and won. The commission for this building, which still stands today under the name Mathildenstift, enabled him to set up his own practice. To do this he designed a combined house and office for himself at Mainzer-Tor-Anlage 29, a residential address near the centre of Friedberg that was not only destined to be the headquarters of his firm for the rest of Hohmann's professional life, but is still in the ownership of the Bremmer family.

Following his success with the Savings Bank building, Hohmann obtained further commissions in the Friedberg region. He designed a villa for the motor manufacturer Georg von Opel – whose car factories were located in nearby Ruesselsheim – and he designed new Opel offices in the city of Frankfurt. But his prosperity was not to last. With the coming of World War Two his practice ground to halt. In 1941 he closed it down when he was drafted into the Wehrmacht to serve as a driver on the Eastern front. Escaping capture in the German defeat of 1945 he returned to Friedberg and resumed practice in the following year.

Throughout the period of postwar reconstruction in Germany, Hohmann enjoyed success in competitions. With his uncanny ability to produce designs that were completely appropriate to their period, he adapted to the measured austerity required by the public sector clients of the reconstruction with the same skill as he had adapted to the style of Weimar, the Voelkisch preferences of the National Socialist period, and the mainstream modernism of the 1960s that was still to come. Within five years of his return to architecture Hohmann was being entrusted with the design of the first postwar rural community centres and schools in Hessen, and later with the first banks, administrative and industrial buildings.

***Above*** *The Mathildenstift Savings Bank in Friedberg, designed by Heinrich Hohmann in the Voelkisch style and completed in 1938. This building stands directly opposite Hohmann's later Friedberg District Council Offices dating from the 1950s,* ***below*** *(later addition to right), and at right angles to the District Savings Bank* ***opposite page*** *he designed in the modern style in 1962*

In 1954 he was commissioned to design new Friedberg District Council offices on a site opposite his prewar Mathildenstift Savings Bank and, in 1962, he completed the ensemble by designing a modern bank building too. Nearly a quarter of a century later, after Heinrich Hohmann's retirement, a soon-to-be partner in the firm, Michael Frielinghaus, designed an extension to Hohmann's District Council Offices which closed an intersecting street and created a small public square, called the Europa Platz. To this day it is bounded on three sides by Heinrich Hohmann buildings, and on all four by the work of Hohmann's office.

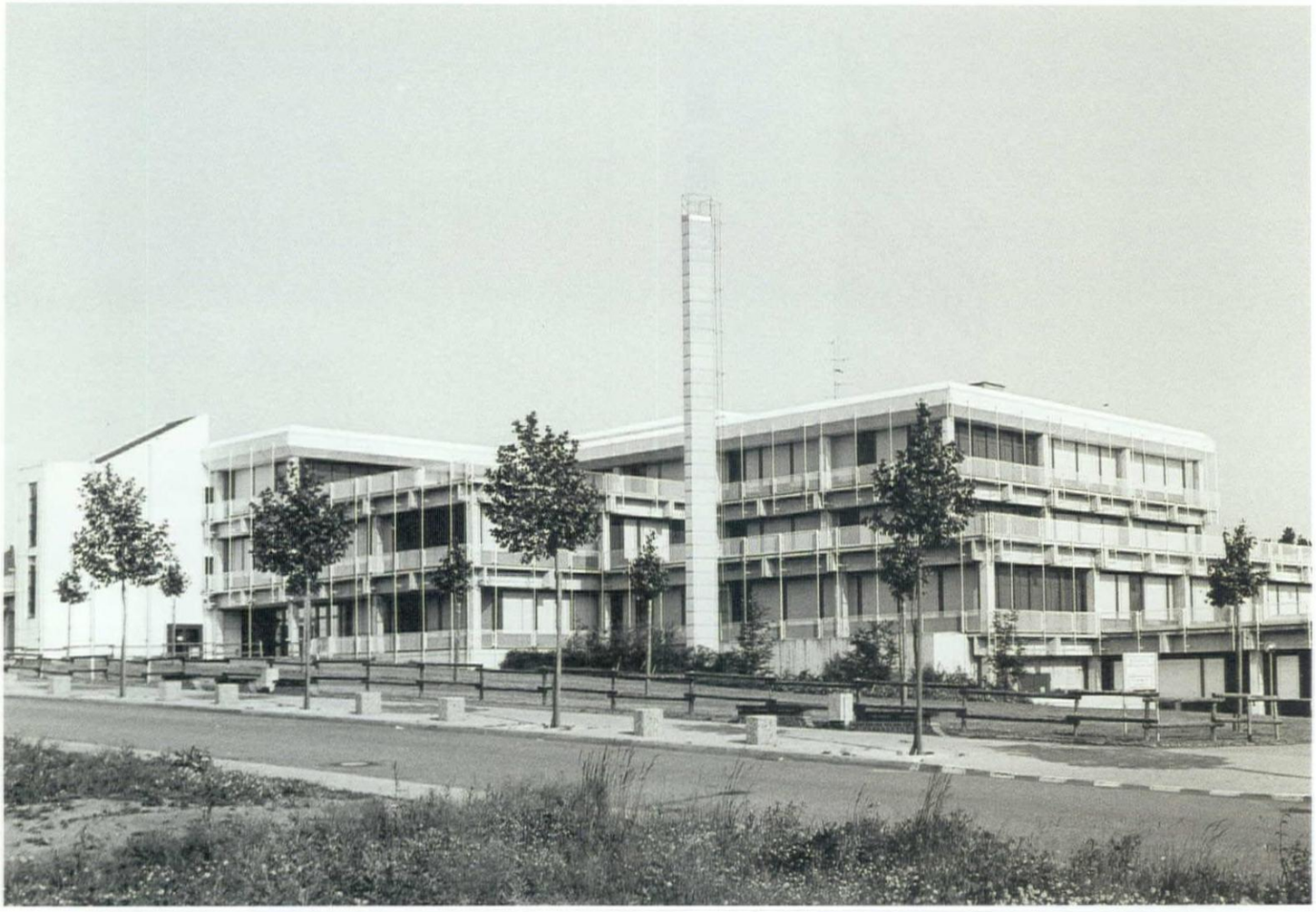
The first major change in Heinrich Hohmann's postwar practice took place in 1960 when his daughter Helga entered the office as a partner. Helga Hohmann had begun training as an architect but had later turned to interior design, working chiefly in Berlin. While her father had become a prosperous provincial architect – nicknamed by his staff "Sir Henry" because of his pronounced enthusiasm for English clothes – she had been living and working in Berlin, where she had met and married Gerhard Bremmer. Born in 1936 in a town near Friedberg called Bad Schwalbach, Bremmer had travelled widely and studied in Wien and West Berlin before taking a part time teaching post at the Technical University in the former German capital. Then, with the declining international situation and the construction of the Berlin wall in 1961, work prospects in the city dwindled and Bremmer too came to Friedberg, to work part time in Hohmann's office. At first he divided his time between West Berlin and Friedberg but this arrangement proved unsatisfactory and in 1963 it was agreed that he would join the firm full time. At first Bremmer found it hard to satisfy the demanding standards imposed by Hohmann, who had been running his own practice for nearly 30 years and was now his father-in-law as well as his employer. Although Bremmer was made a partner in the firm after only two years, his apprenticeship was not easy. Hohmann insisted that to be an architect required, not only the ability to plan and design, but to be able to win competitions, to understand construction, to be diplomatic, to manage staff, know how to deal with the building and planning bureaucracy and, most important of all, to be able to deal with money.

"It was a hard school," reflects Professor Bremmer today. "I learned from his experience, and he profited from my ideas."

Within a year of Bremmer's arrival, another architect, Bernhard Lorenz, joined the firm. A year younger than Bremmer, Lorenz was an artist and designer from Silesia. From the outset he displayed a Hohmann-like ability to win competitions, particularly in the education sector, which he was to make his speciality over the years.

During the 1960s a large scale comprehensive school building programme began in Germany and Hohmann's office – now restyled "BDA H. Hohmann, G. Bremmer and H. Bremmer" – designed a number of single-storey, deep plan, concrete system-built schools in the Frankfurt region. As in other countries, difficulties soon developed with these deep plan schools and their inflexibility became intolerable when teaching methods changed. In the early 1980s Lorenz, who had been made a partner in 1975, began designing a different type of school as a replacement. Clad in brick and glass and with a free-forming plan it hugs the contours of its site, boasted extensive daylighting and natural ventilation, and was planned for maximum flexibility around a large central meeting space.

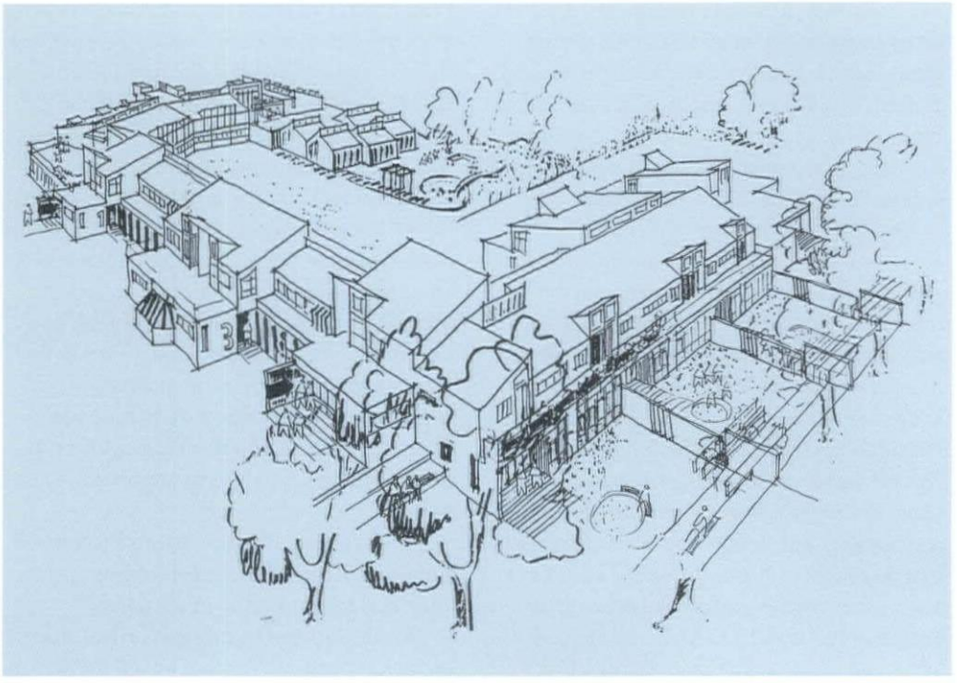
"With the 1960s and 1970s system-built schools, cost was the only factor," Lorenz recalls today. "But by the 1980s no one could stand the thought of any more concrete. The answer was simple: the state authorities spent a



lot more money and in return they got a lot more architecture."

Another participant in the 1980s public sector boom – which rapidly expanded to include community centres, swimming pools and sports hall buildings – was the youngest of the Bremmer Lorenz partners, Michael Frielinghaus, who joined the firm in 1977, by which time it was called "BDA H. Hohmann, G. Bremmer, H. Bremmer, B. Lorenz". Born in 1951 in Darmstadt, where he went to school and also studied architecture, Michael Frielinghaus worked for architects in Switzerland and had taken part in archaeological expeditions in Italy and Greece before he successfully applied for a post at the Friedberg office. Once installed in Hohmann's office/house he too was quick to demonstrate his abilities as a designer, winning an open competition for the design of an extension to the town hall at Lich in 1979 which later received awards. Like Lorenz, whose abstract paintings decorate the walls of the practice's new building today, and who has always concentrated on developing a sense of place and a continuity between building and landscape in his designs, Frielinghaus is driven by many concerns. He too senses place and landscape, but he also has a feeling for dramatic structure. A long standing admirer of the English hi-tech architects Norman Foster and Richard Rogers, Frielinghaus once made a special trip to South Wales to see Richard Rogers' celebrated INMOS Micropro-

***Below** Sketch by Bernhard Lorenz of his competition-winning design for a school for deaf children 1975, and **above** the 1977 competition-winning Friedrich Ebert Vocational Training School, Wiesbaden, by the same architect*



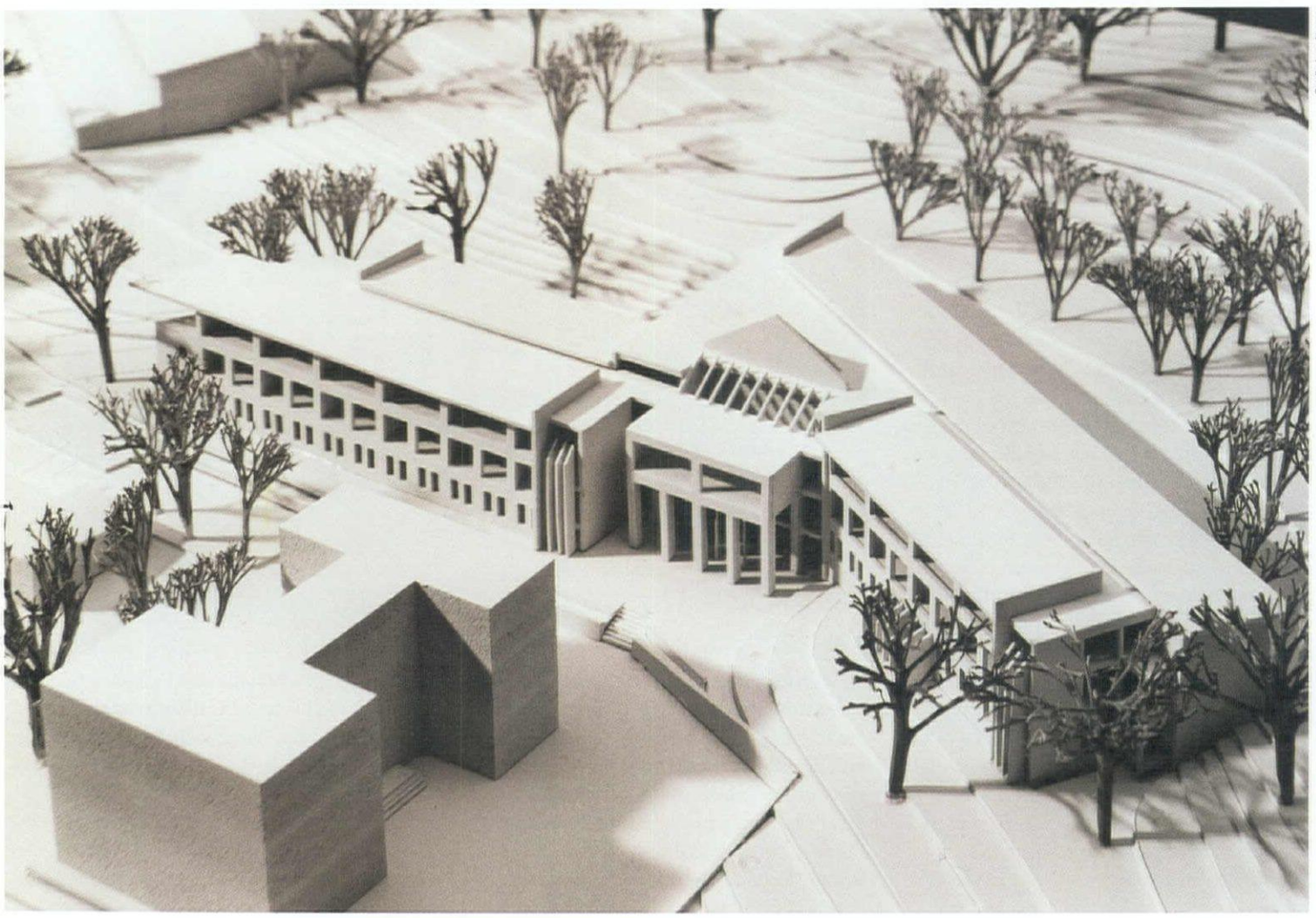
***Above*** *Contextual work by BLFP. A competition-winning extension to the town hall at Lich 1984.* ***Right*** *Competition-winning design for a spa and health centre at Bad Teinach 1985. Only the buildings on the right are new*

cessor factory, with its outrigged structure and chequerboard cladding panels, because he proposed doing something similar in a sports and leisure complex he was designing.

Frielinghaus's involvement with sports hall buildings started with a series of international competitions. The first was the 1981 invited contest for a new Leichtathletikhalle to be added to the existing sports buildings at the Frankfurt Waldstadion. In this competition his entry was unplaced and the winner was Norman Foster, but the project did not proceed. The second international contest was the 1984 competition for the Frankfurt-Hoechst Sports Centre, in which Frielinghaus's design for Bremmer Lorenz won third prize. Then came the 1987 competition to design a pioneering sports centre in downtown Frankfurt itself, on a site adjoining the southern railway station. This time Frielinghaus came third again.

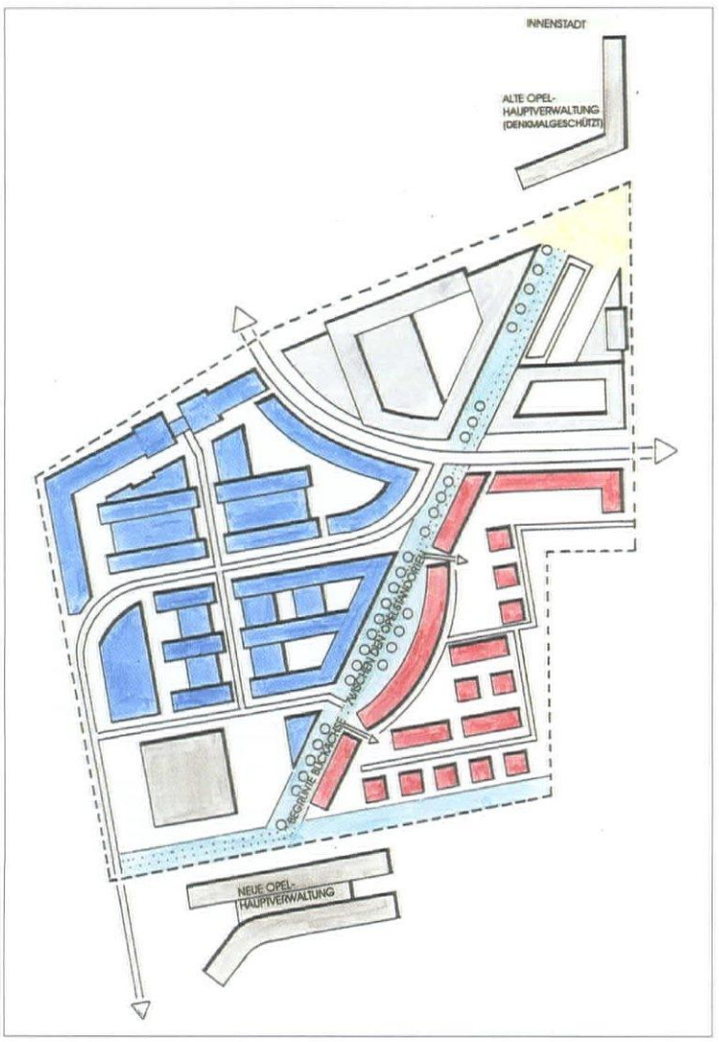
While he had failed to win any of these major competitions, Frielinghaus had nonetheless enjoyed other sports hall design opportunities in the 3,000 to 5,000 square metre range which he had exploited to the full, breaking new ground with long-span steel, or combined timber, steel and tension cable roof structures. These buildings include the all-steel Konrad Adenauer Sports Hall in Wiesbaden, and the August-Schaerttner Sports Hall in Hanau, both of which were completed in 1989; the Am Eichwald Gymnasium in Sulzbach and the Vocational School Sports Centre at Wiesbaden, both completed in 1993, and the gymnasium at Gruenberg, completed in 1994.

Apart from these smaller structures, Frielinghaus's most important commissions to date have been the prestigious management training centre of the Deutsche Bundesbank and



Studio Ivan Nemec

***Opposite page top*** *A competition-winning vocational school at Kriftel, 1986, designed by Bernhard Lorenz, and another* ***opposite bottom*** *for a secondary school at Koenigsee in Thuringen in the former DDR. This project shows the contrast in school design during the division of Germany. Note the brutal DDR school block in the foreground*




***Left*** *Current BLFP master-planning for the centre of Ruesselsheim involves the redevelopment of over 100 hectares of former Opel car production plant and offices in the city. At present the former Opel site consists mainly of large-scale factory sheds but there are also listed office buildings which contribute to the unique character of the city. There will be new housing and a substantial reorganisation of the road network and a new bus station*

the sports and recreation complex at Frankfurt-Kalbach.

Although restrained in its structural system and overall appearance, the 10,000 square metre, four-storey Bundesbank building, which was completed in 1995, represented an unique site opportunity as well as a healthy Dm60 million (US$38 million) budget, and a very prestigious client. The building terminates a line of expensive villas on the steeply sloping banks of the Rhine at Eltville, providing its staff and management trainees with a panoramic view of the river and beyond to the Rheingau hills. Half hotel and half university, the training centre is a complex and expensively finished building that steps down from a north-facing three-storey entrance elevation to a heavily glazed five-storey elevation that faces south towards the river. The building thus has two completely different scales north and south. The impressive riverside elevation is flanked by two wings that reflect the architecture of the nearby villas, while the centre section features a drum-shaped projecting terrace with a large circular conference room beneath it. A reinforced concrete frame structure up to its roof, the upper attic floor of the building, is clad in metal. The two side wings are rendered and the central glazed area on the river elevation is equipped with power operated sun blinds between stainless steel mullions that are capable of radically transforming its appearance.

The sport and recreation centre at Frankfurt-Kalbach, which was completed three years earlier in 1992 is a very different complex of buildings. A successor to the abandoned Foster Leichtathletikhalle, this group was originally intended to serve as the German National Team field and track training school for the Olympic Games. With 12,600 square metres of enclosed floorspace and a budget of Dm70 million (US$44 million) this complex of three sports halls is more than twice as large and much more expensively equipped than any of Frielinghaus's other sports buildings. Its structural system too, a series of double cantilever steel lattice trusses spanning a maximum of 58 metres and restrained by steel tension cables, is the most adventurous he has designed so far.

By the time Michael Frielinghaus was made a partner in 1990, the structure of the firm had already begun to change radically. Most, but not all of these changes were triggered by continued growth and expansion, but there were dramatic events as well. In the years before 1960, when Helga Hohmann-Bremmer had joined her father in his practice, the founder's home/office had been limited to six assistants or less. By 1977, when Frielinghaus arrived, the number had crept up to 18. By 1980 – the year Heinrich Hohmann retired from the firm – this figure had nearly doubled to 30. By the mid-1980s, when the schools programme was still in full swing and the leisure and sports hall programme was beginning to take off, the firm topped 50 staff for the first time. By 1990 even this record had been eclipsed with more than 70 staff working in Heinrich Hohmann's old office/house or one or other of three more houses leased by the firm in a desperate effort to keep pace with the ever increasing demand for space. Then in 1991 came the first of a series of major shocks. Helga Hohmann-Bremmer died suddenly, leaving Gerhard Bremmer, Bernhard Lorenz and Michael Frielinghaus in control of the firm. Two years later Heinrich Hohmann himself died at the age of 85. After a period of grieving the surviving partners embarked on a root and branch modernisation programme. The business park site on the outskirts of Friedberg was purchased. The overcrowded office/houses were disposed of, and the firm's new office building was designed and built. The result of this massive reorganisation is the firm of Bremmer Lorenz Frielinghaus Partnership that exists today, a large firm that from the inside, still retains many of the best qualities that its founder started out with more than 60 years ago. **WA**

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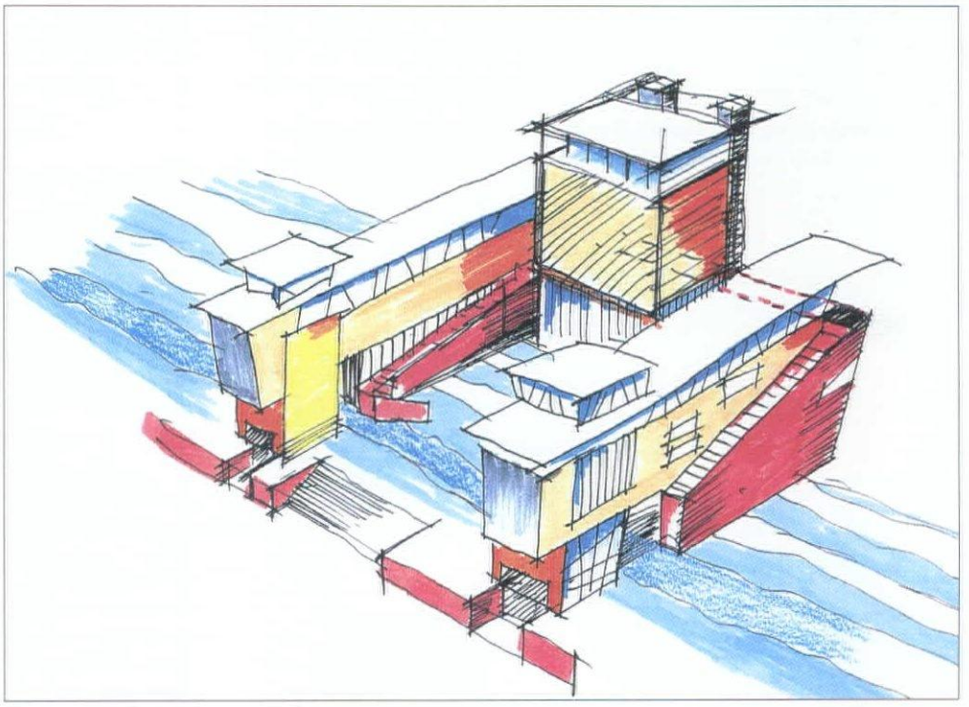
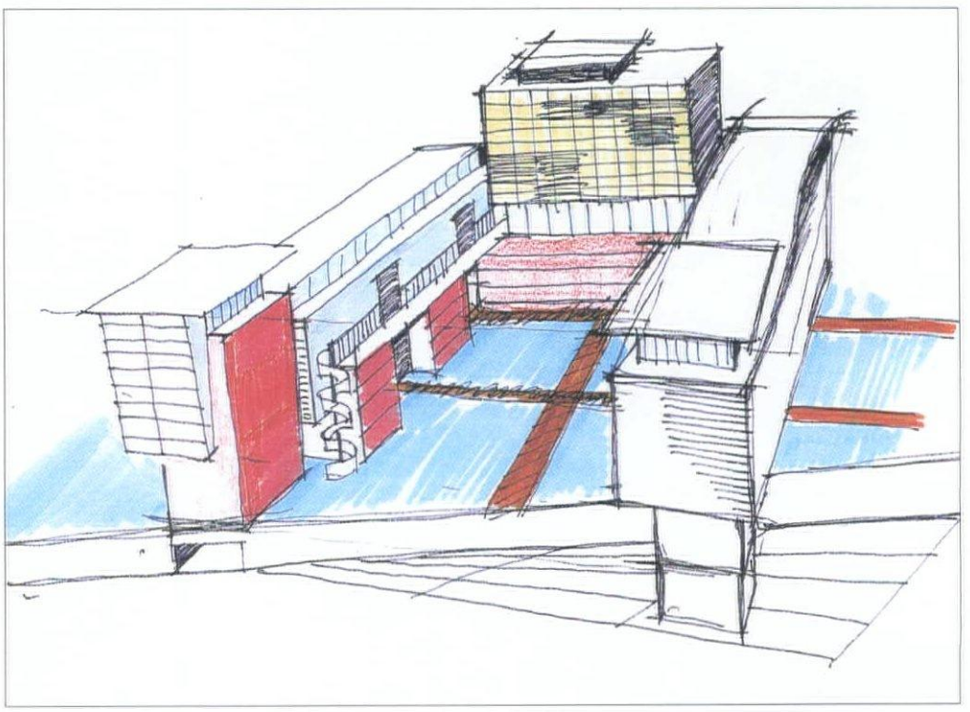
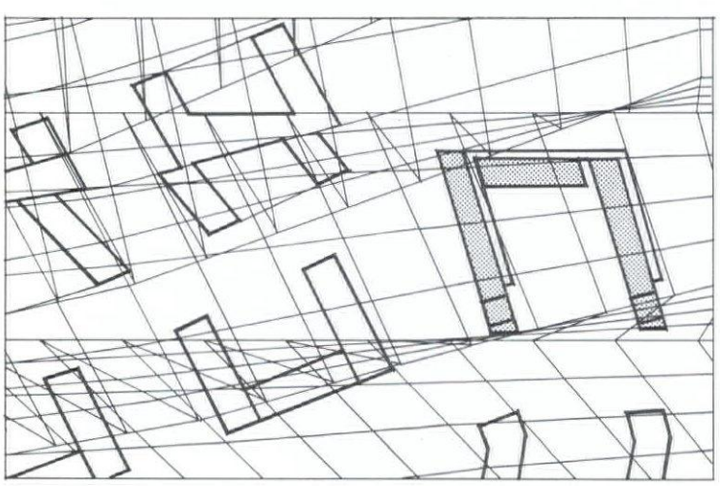
***Right and middle right*** *Two alternative apartment block schemes respond to the distortions of Peter Eisenman's sheared and twisted planning grid.* ***Bottom left*** *Site plan shows grid.* ***Bottom right*** *Floor plan/isometric of second alternative (shown directly above it)*

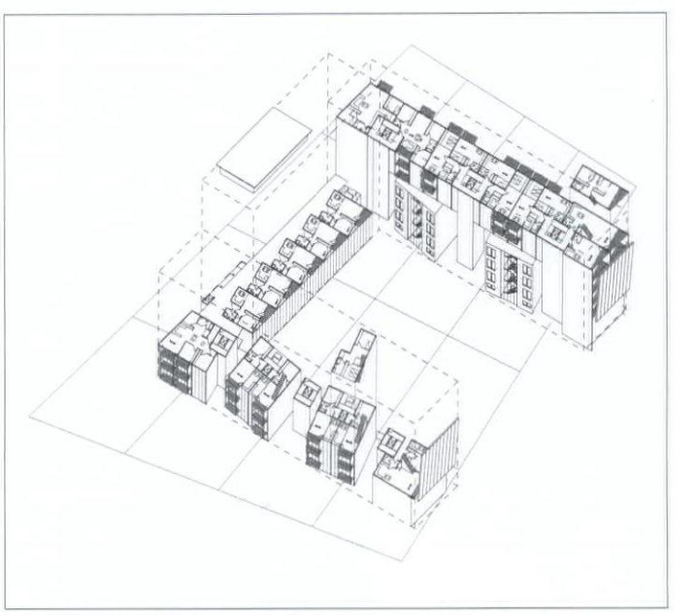




## Apartment housing at Rebstock Park, Frankfurt 1999

Using the matrix of Peter Eisenman's competition-winning masterplan for the environs of the city's first airport, and later world famous exhibition area, Frankfurt is beginning the development of an inner city residential and mixed use area under the programme title "Living and Working in the Exhibition Zone". Although work has only just commenced on the design of the living areas designated under this scheme, which will include sheltered housing, the radical nature of the design code is already evident. Eisenman's sheared and twisted planning grid has generated apartment block forms that will reflect these distortions in three dimensions. In the same way the slipped intersections of grid and building line have been used to define the lines of perimeter passages for access and communications between courtyard blocks. From this complex of ground level access routes an ascending path leads around and into each apartment building. The base of the buildings will thus be characterised by blank walls while the upper levels will enjoy a more freely perforated filigree pattern of external envelope.

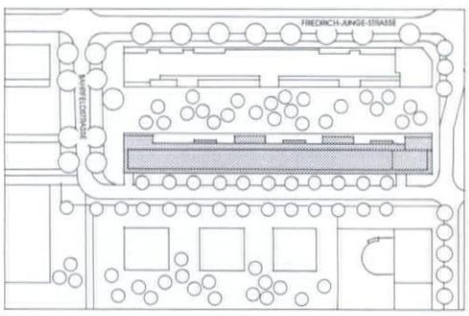




East elevation

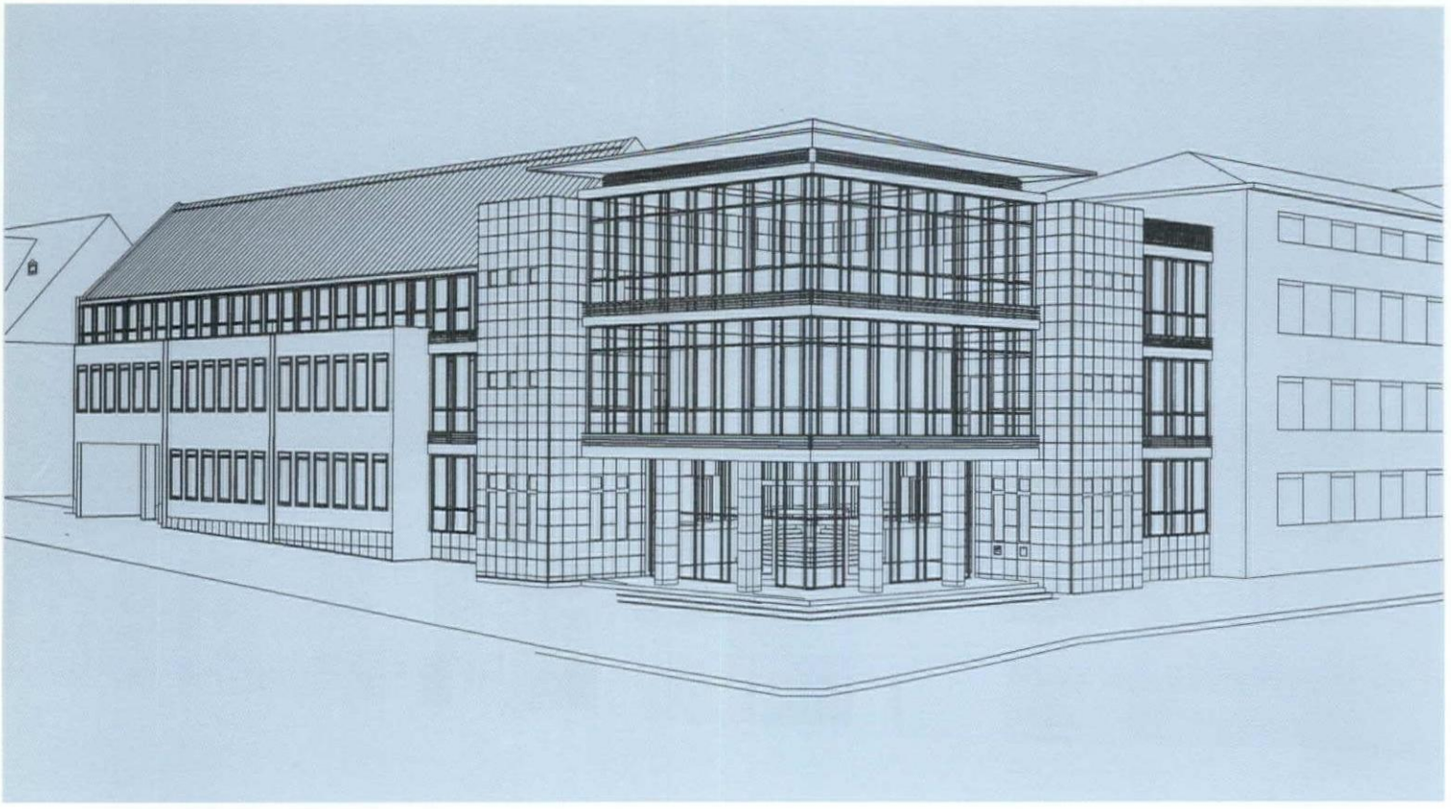
West elevation

***Top*** *Model view of the west elevation showing brick faced projecting elements.* ***Above*** *Elevations.* ***Below*** *Site plan*

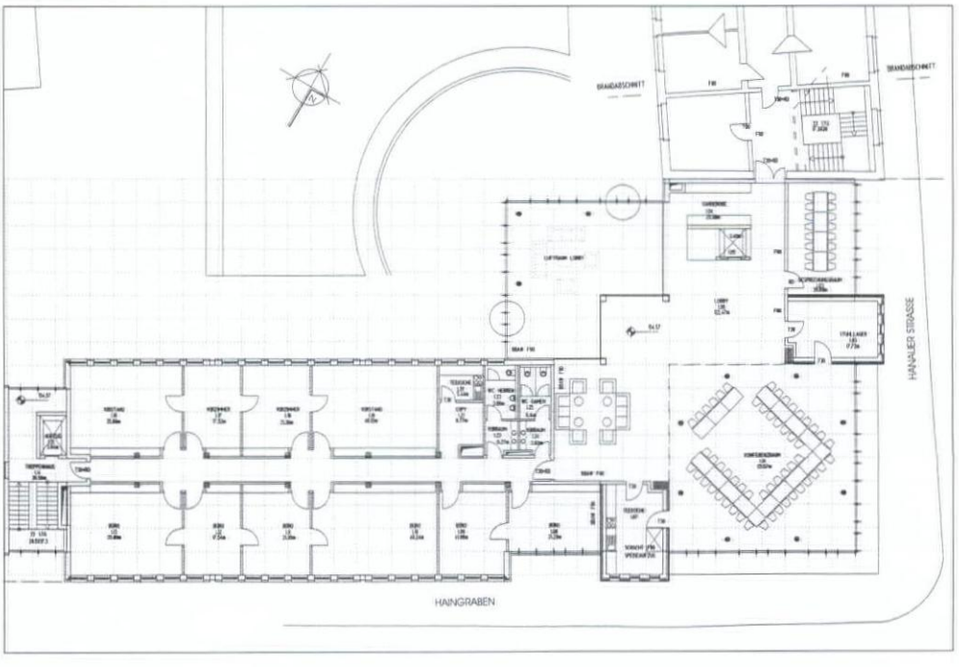



## Apartment housing at Berlin-Stralau 1998

This terrace of apartment dwellings is one of a number situated close to the city centre on the banks of the river Spree. It is a ribbon development which consists of seven reinforced concrete buildings faced in brick and linked by six staircases and a continuous service basement containing the underground car parking provision, all servicing equipment and storage space for each dwelling. Above this basement level are the seven three- and four-storey apartment buildings with either two or three apartments per floor, depending on the size of the apartment. Each of these buildings has its own ground floor terrace with direct access to the communal gardens, while the flat roofs of each block are connected and planted out as gardens beneath a continuous steel shading canopy. The projecting and receding facade elements that identify the separate apartment blocks also articulate the street and garden elevations. Construction is scheduled for completion in 1998.

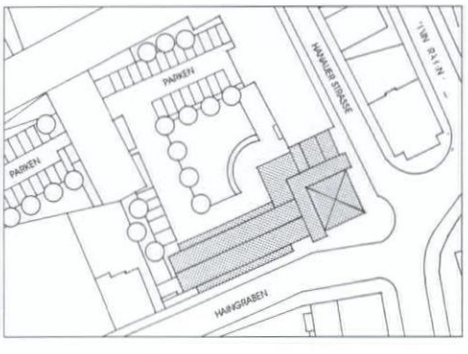


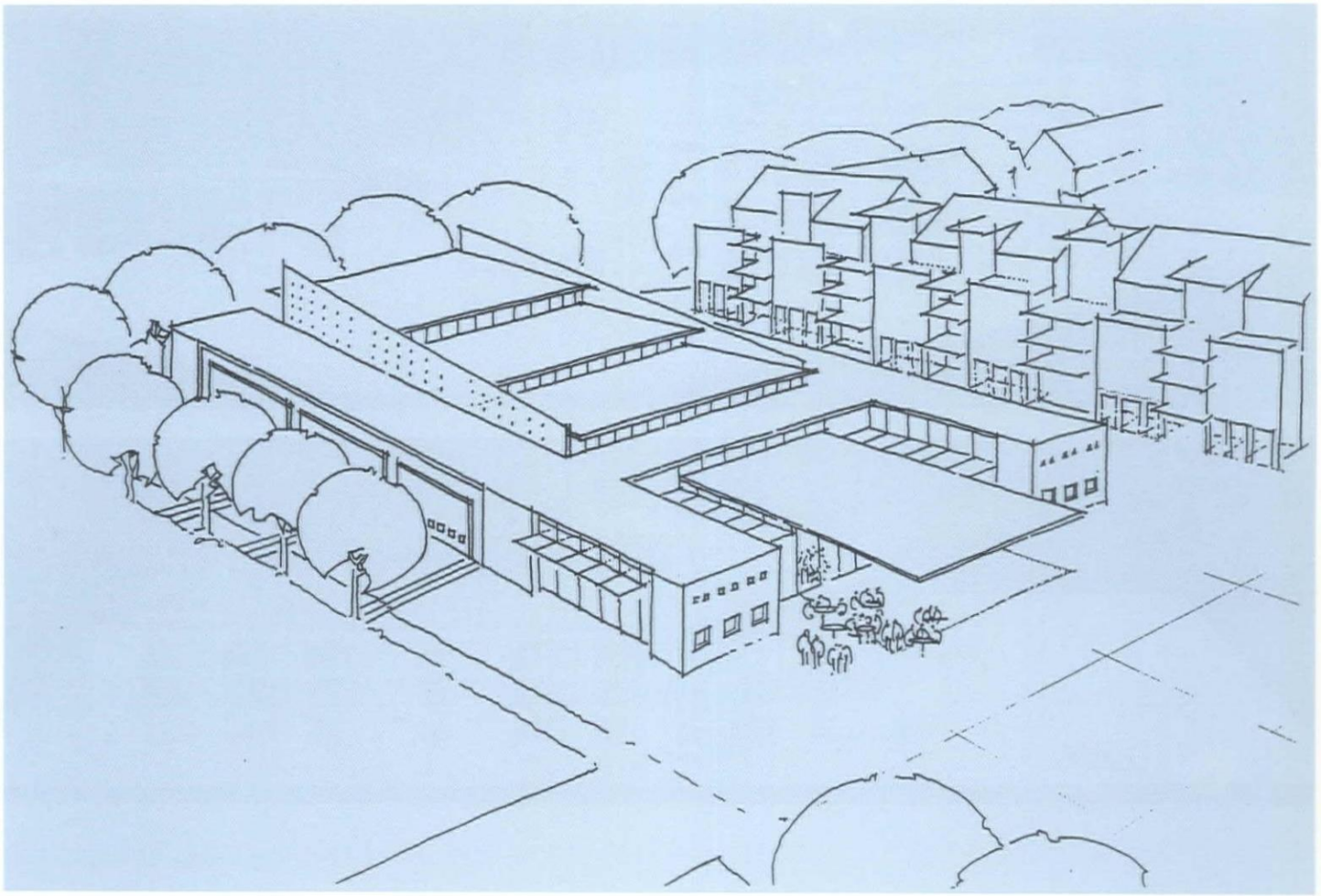
***Top*** *Facades relate to the existing street elevations with the corner structure, which contains a conference room, supplying stylistic contrast.* ***Right*** *First floor plan.* ***Below right*** *Site plan*

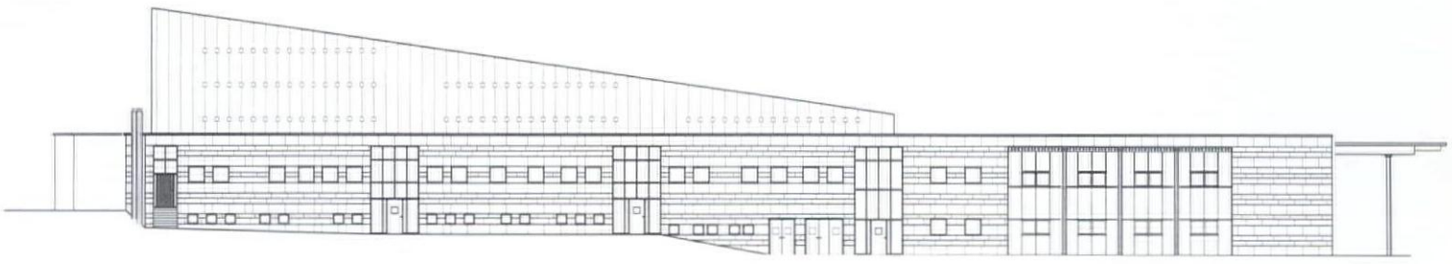



## New Administrative Building (OVAG), Friedberg 1997

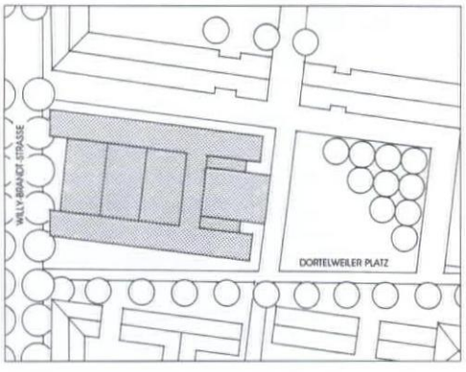
Standing on the corner of the Haingraben and Hanauer Strasse in Friedberg, this new administrative building will complete the enclosure of a garden and parking square to which it will provide pedestrian access through its main ground floor entrance. On either side of this entrance two street facades – one short, one long – have been designed to relate to the scale, roofscape and fenestration of buildings adjoining the development. The prominent corner structure itself is raised up on columns and heavily glazed thus providing a welcome contrasting element. Internally the building is planned so as to provide new office accommodation along the Haingraben, while the corner structure contains an impressive first floor conference room that can be extended along the short Hanauer Strasse elevation by incorporating the adjoining gallery space next to the boardroom. On the top floor of the Haingraben wing there are to be staff kitchens, a cafeteria, social rooms and all the necessary service installations.





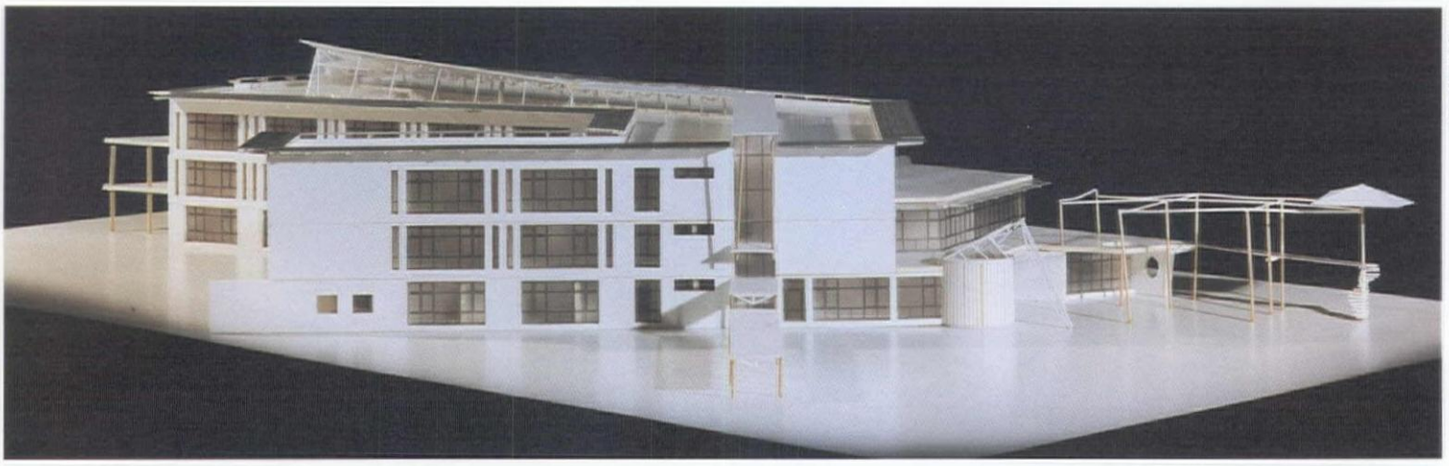


***Above*** *The sports centre is designed to step up from a single-storey entrance level through an assembly hall to a three-field sports hall.* ***Below*** *Side elevations will be clad in natural stone.* ***Bottom left*** *Site plan*




## Community centre and sports hall, Dortelweil 1997

This new 5,000 square metre community centre will be situated at the heart of the new district of Dortelweil-West between the old Federal road and the main street facing onto the Dortelweiler Platz. The centre itself is designed to step up from a single-storey entrance level through an assembly hall to a three-field sports hall, with a removable performance stage in between. On either side there are to be side wings accommodating a restaurant, a bowling lane, a youth club, a fitness centre, changing rooms, servicing equipment and storage space. The rising sides of the stepped flat roof of the central structure will be clad in powder coated aluminium. The lower lateral facades will be shaded by trees and animated by recessed modelling in natural stone. Completion will be in early 1997.



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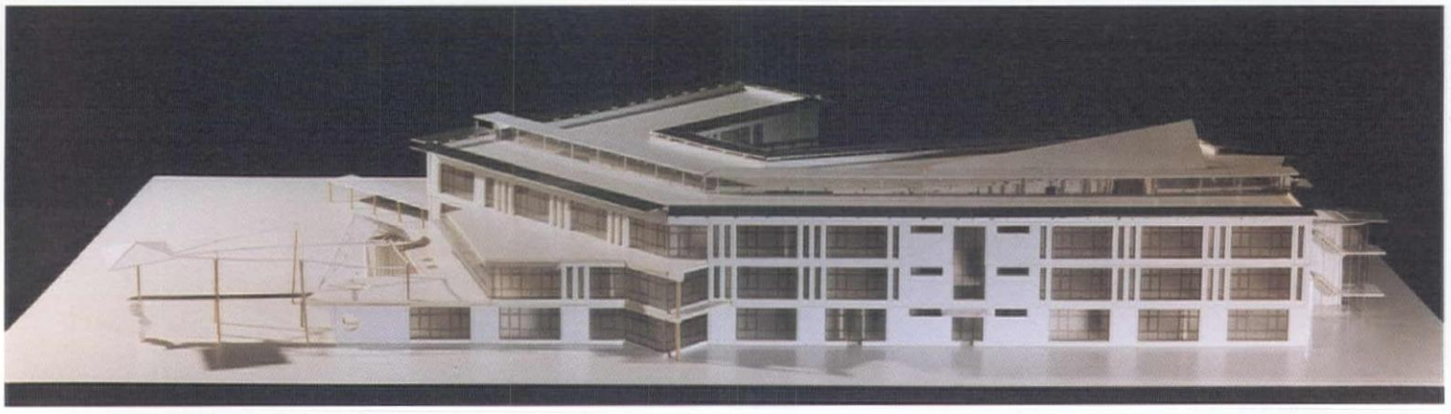

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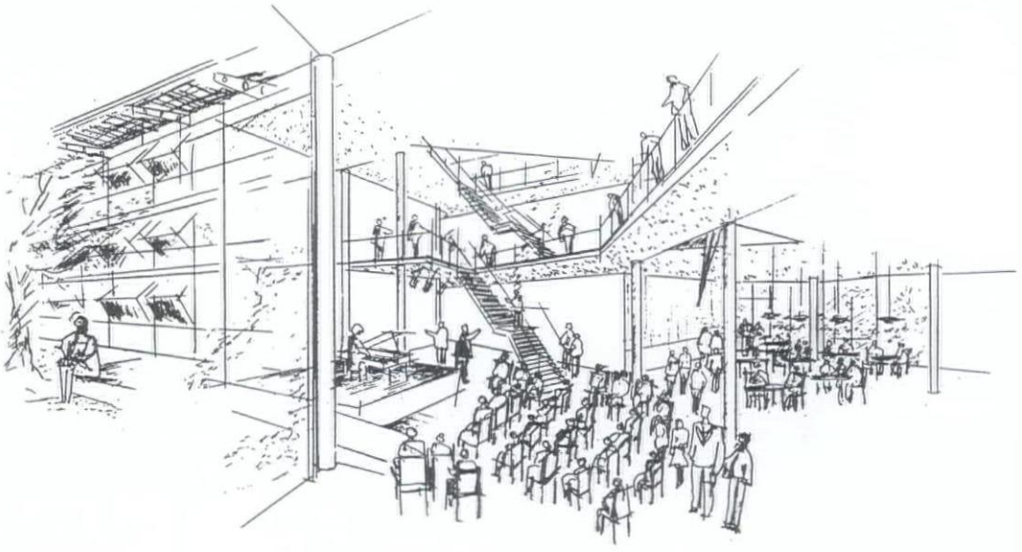
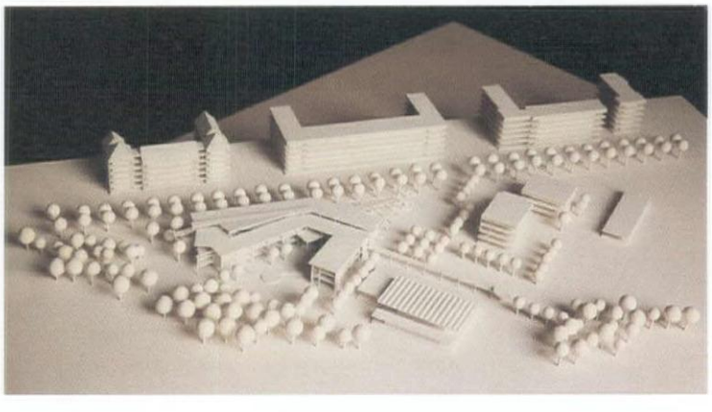
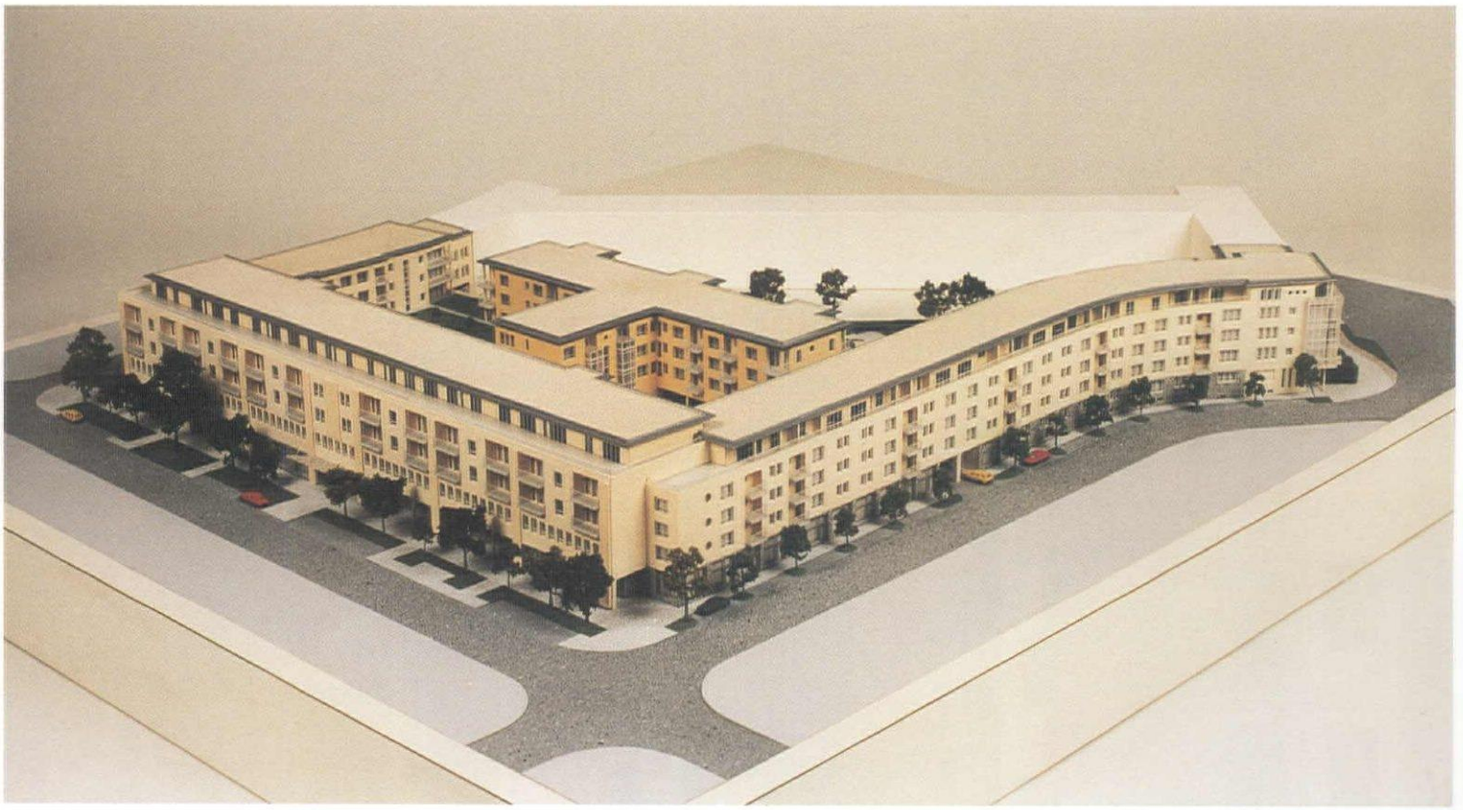


## Secondary school at Leipzig-Paunsdorf 1996

The design of this competition-winning 4,300 square metre, three-storey school building is characterised by the ingenuity with which it reconciles its straight northern facade onto the Dachstrasse with its more broken and freeforming elevation to the small Paunsdorfer Waeldchen wooded sector to the south. From the outset this school was planned so that the meeting and communal areas on the ground floor were combined into a single large, multi-purpose area which includes a central auditorium, a dining room and cafeteria, and a music room. The general administrative offices and the arts and crafts rooms are also connected to this central space. In order to achieve privacy the teachers' rooms, the library and reading terrace, and the computer and media science rooms are separately located on the first floor, but also in a central position and with physics laboratories and general classrooms in adjacent areas. The second floor contains the chemistry and biology laboratories as well as other general classrooms. The animated southern facade, together with clearly defined operational areas, good orientation and clerestory lighting, and a determined use of colour combine to provide an excellent learning environment. Completion will be at the end of 1996.



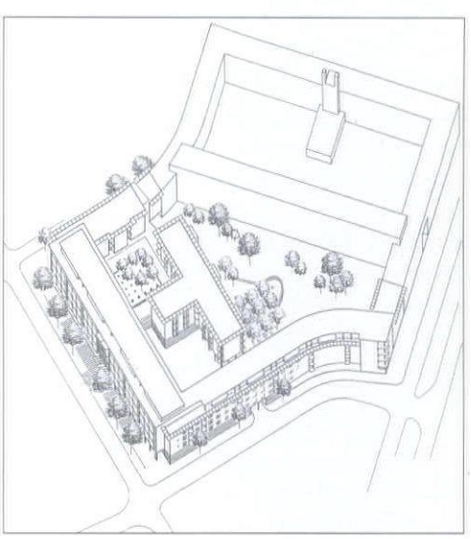
***Top*** *The "animated" south elevation which looks out onto a wooded area and* ***above middle*** *the straight north elevation facing existing buildings.* ***Above*** *Interior sketch.* ***Left*** *Site model*



***Above*** *Model view. Styling reflects the early modern style of the 1920s with ordered fenestration, rendered finishes and continuous roof terraces.* ***Left*** *Drawn detail of the residential units.* ***Below*** *Isometric*

## Steinplatz housing development, Erfurt 1996

The planning objective here was to insert a new 26,000 square metre urban building complex comprising 150 housing units, offices and retail shops, into the Johannis quarter of the city of Erfurt whose character is formed by flat-roofed terraced housing dating from the 1920s. This objective is being achieved by joining sympathetically designed new building structures to the existing terraced housing whilst observing the existing road pattern. The commercial elements are confined to the broader Friedrich-Engels-Strasse with the remainder of the development split between a backlands site giving onto a wooded garden, and two new wings of housing linking up with the existing housing on the Bebelstrasse and the Fritz-Buechner-Strasse. The facades of the new four-storey housing terraces reflect the early modern style of the 1920s with their ordered fenestration, rendered finishes and continuous roof terraces. The commercial offices and shops have lighter, fully-glazed facades. The required 310 parking places are provided in continuous basements and on the surface in one of the courtyards behind the commercial block. Construction will be completed at the end of 1996.



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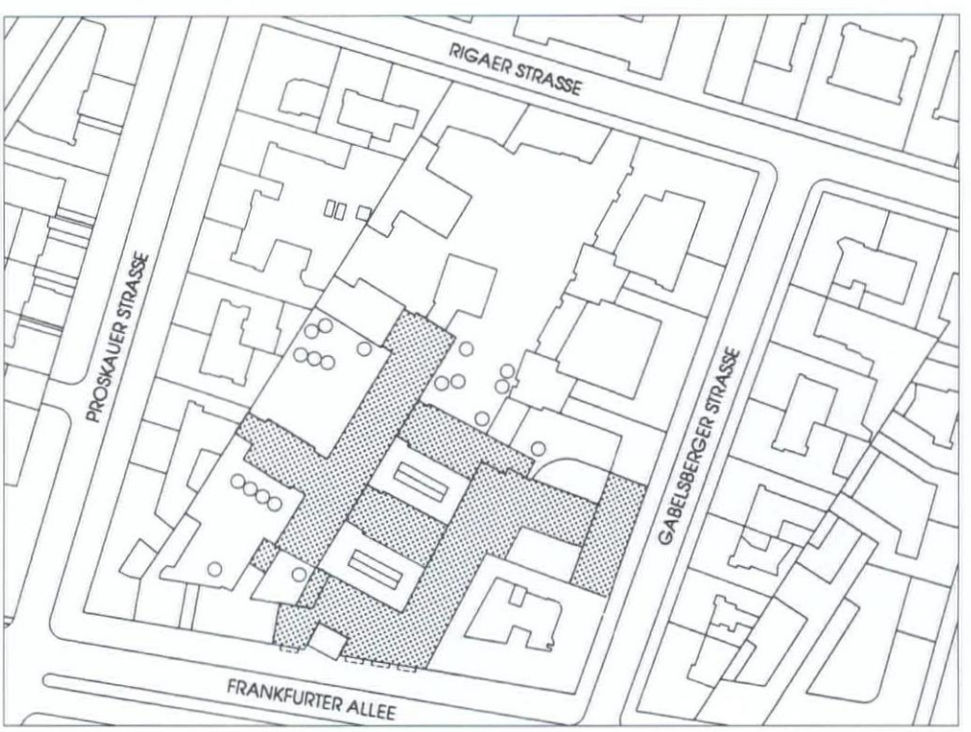
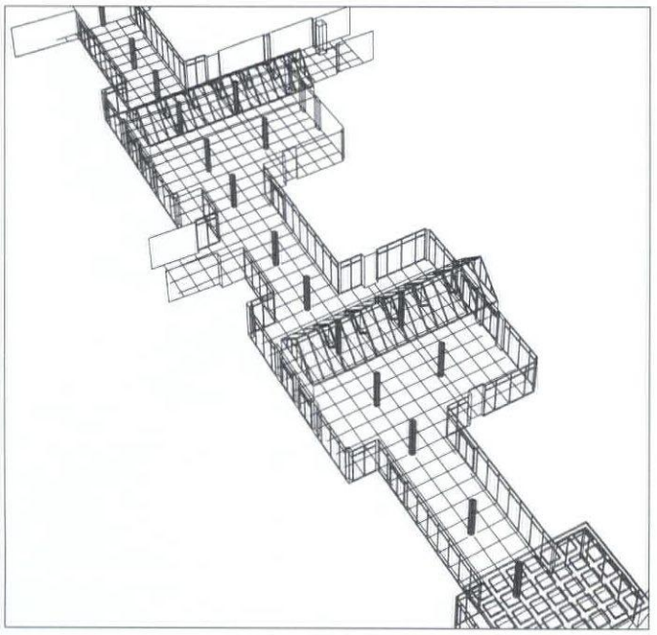
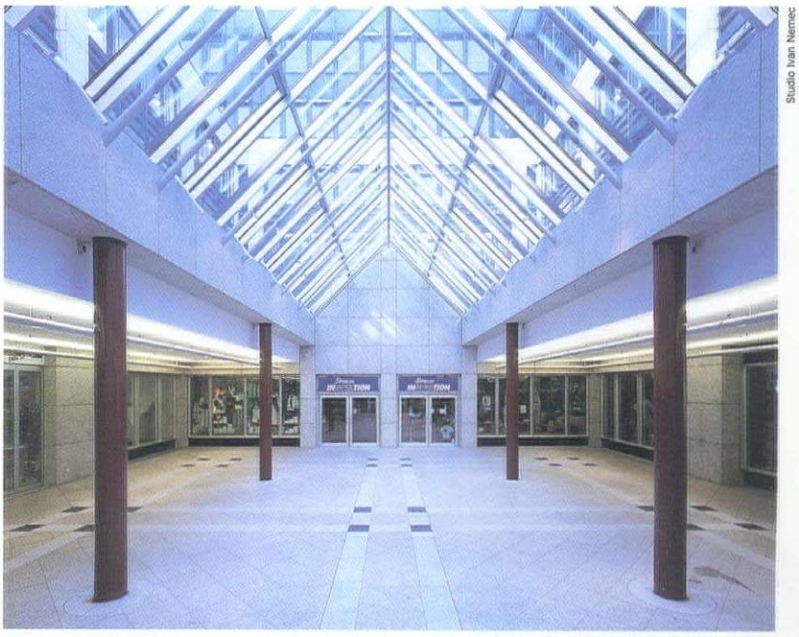
***Above*** *The Frankfurter Allee facade echoes elements of the neighbouring buildings to integrate into the existing street elevation.* ***Below*** *Site plan*

## Frankfurter Allee Shopping Centre, Berlin 1996

The commission to design this mixed use housing and retail complex off the Frankfurter Allee in Berlin was won in an invited competition held in 1992. The scheme takes up typical elements of the urban pattern of Berlin by unobtrusively integrating itself into the existing street elevations whilst more extensively developing the inner courts behind. In this way, despite its limited access to only two of the four streets defining the city block, it adds no less than 23,000 square metres of serviced floor space to that which already exists. Furthermore, a convenient system of pedestrian arcades now links the Frankfurter Allee and the Rigaer Strasse with the main entrance flanked by a series of shops and the arcades themselves daylit through two glassed-in courtyards. In addition to smaller retail units facing the arcade there is also a department store and a restaurant. Above the retail level there are four floors of offices. The equivalent levels on the Gabelsberger Strasse elevation are occupied by 33 new apartments. Approximately 300 parking spaces are incorporated into linked basement offices beneath the buildings.







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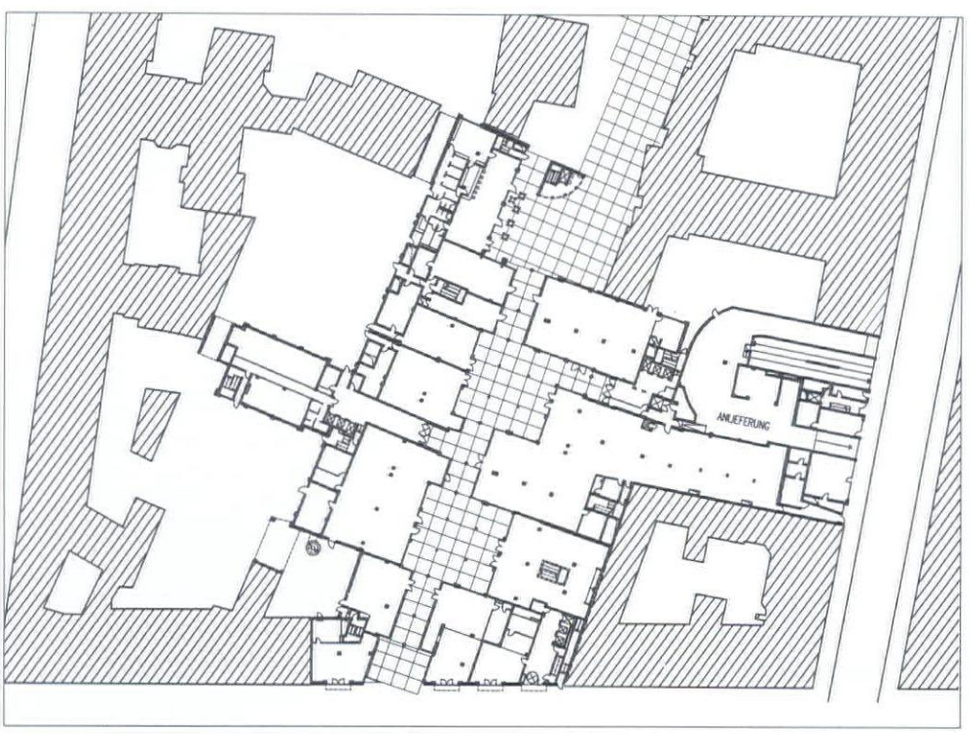
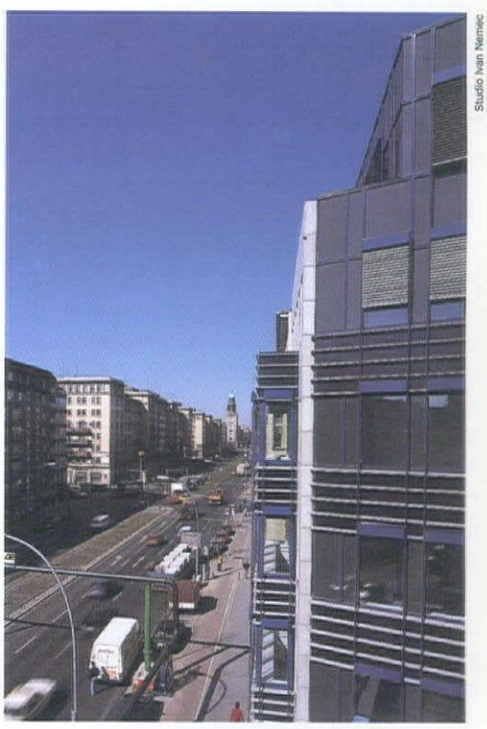
***Above left*** *Computer drawing of ground floor shopping arcade.* ***Above*** *One of the daylit courts in the arcade.* ***Left*** *Rendering of the Gabelsberger Strasse elevation consisting of 33 apartments.* ***Below left*** *Ground floor plan.* ***Below*** *View from the third floor looking along Frankfurter Allee*



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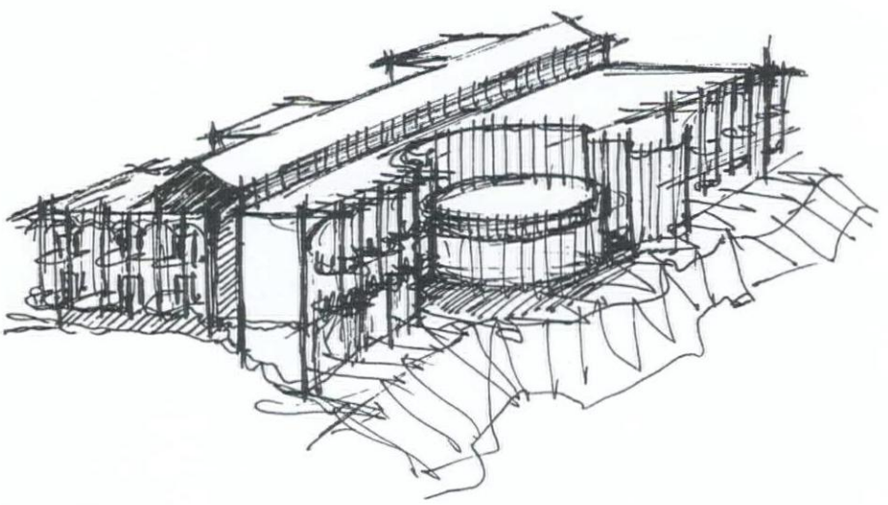
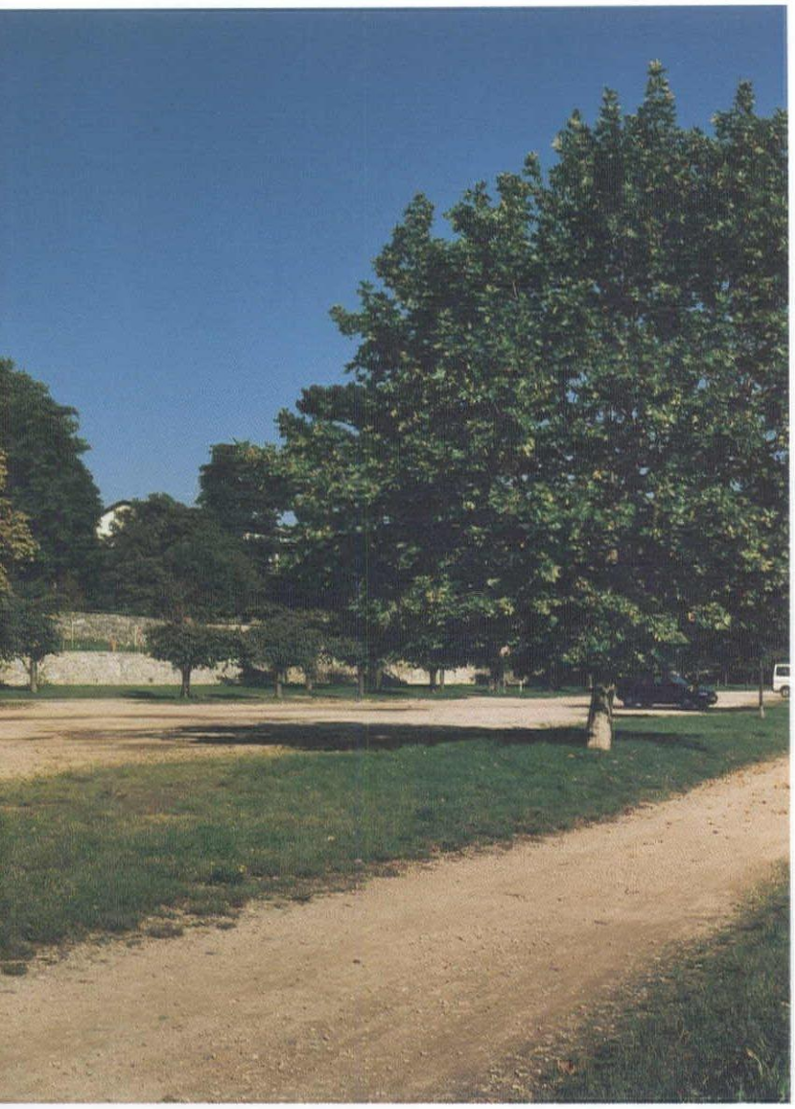


## Deutsche Bundesbank Management Training Centre, Eltville 1995

The site for this unique 10,000 square metre building is spectacular. It terminates a line of expensive villas on the steeply sloping banks of the Rhine at Eltville, providing its staff and management trainees with a panoramic view of the river and beyond to the Rheingau hills. The Training Centre itself is a complex and expensively finished building, half hotel, half university, that cost Dm60 million to construct. It steps down in section from a north-facing three-storey entrance elevation which is itself set back from the tree-lined Erbacher Strasse. Behind this is a heavily glazed five-storey elevation, one attic floor and four storeys that face directly south towards the river. Of these four south-facing floors, the lower two return as sub-basements for car parking, running beneath the entrance block and out beyond it to the street. The building thus has two completely different scales north and south. It also has a dual identity along its east-west axis. The riverside elevation features two rectangular side wings with narrow perforated fenestration reflecting the design of the neighbouring turn- of-the-century villas, while the wide central section is curved in plan and almost completely glazed, with a central drum projecting out to provide a large viewing terrace which can be reached directly from the main entrance hall. Beneath the terrace is a large circular conference room, and beneath that a restaurant with doors opening onto the lawns that sweep down to the riverside boundary wall.

The Eltville building meets the training requirements of the Bundesbank by providing 120 single rooms for trainees and seven separate classrooms of different sizes. In addition it provides a full range of leisure facilities as well as a superbly equipped restaurant kitchen. A reinforced concrete frame structure up to its roof, the upper attic floor of the building, is clad in metal. The two side wings are rendered and the central glazed area on the river elevation is equipped with power operated sun blinds between stainless steel mullions that are capable of radically transforming its appearance.



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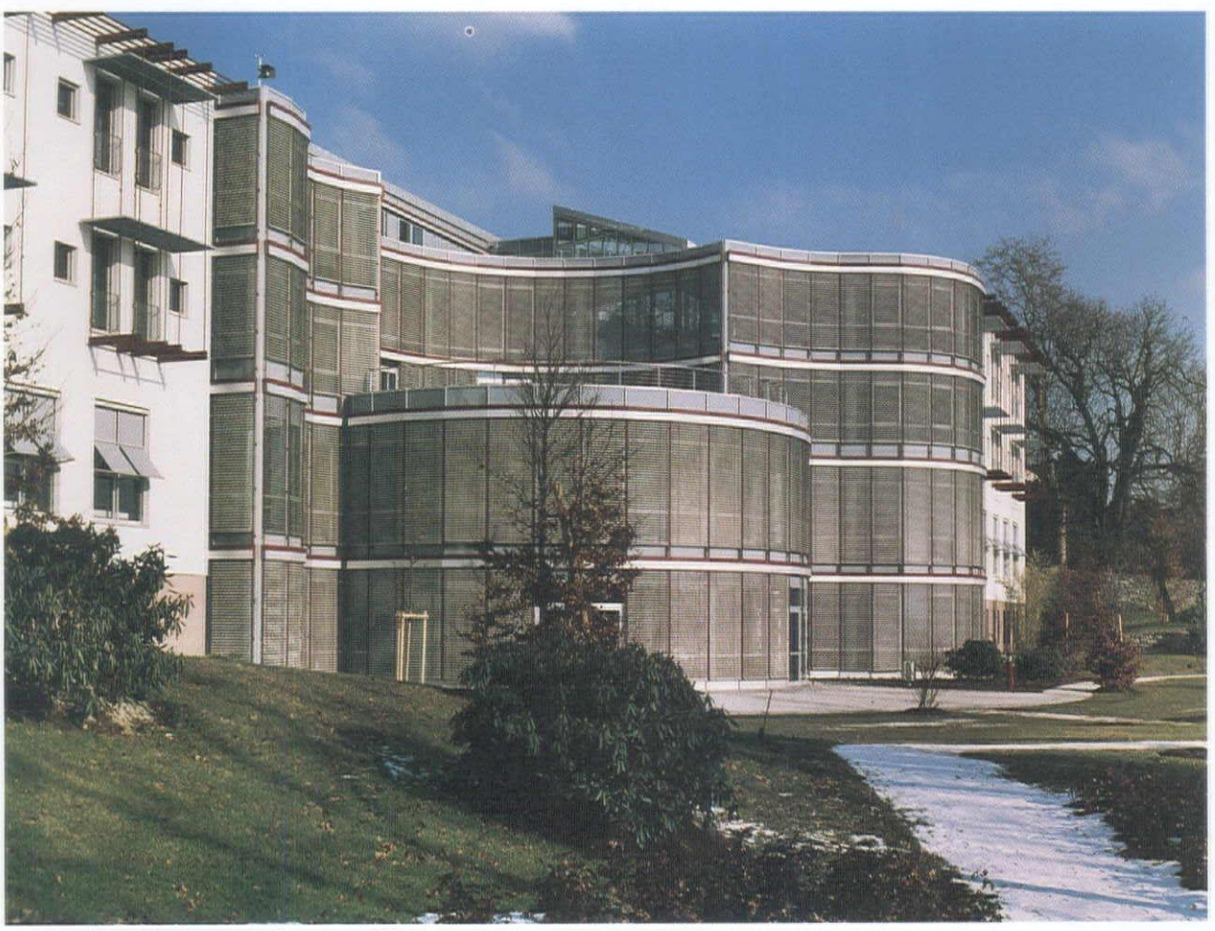


***Above left*** *View of the south, riverfront, elevation from the bank of the Rhine.* ***Top*** *Main entrance on the north side of the building.* ***Middle*** *Communal lounge on the upper floor with views of the river and hills beyond.* ***Above*** *Dining area.* ***Left*** *Curved central section of the south facade with projecting "drum" housing the conference room and restaurant*

*Deutsche Bundesbank Management Training Centre – the dramatic central staircase linking all parts of the building*

Studio Ivan Nemec

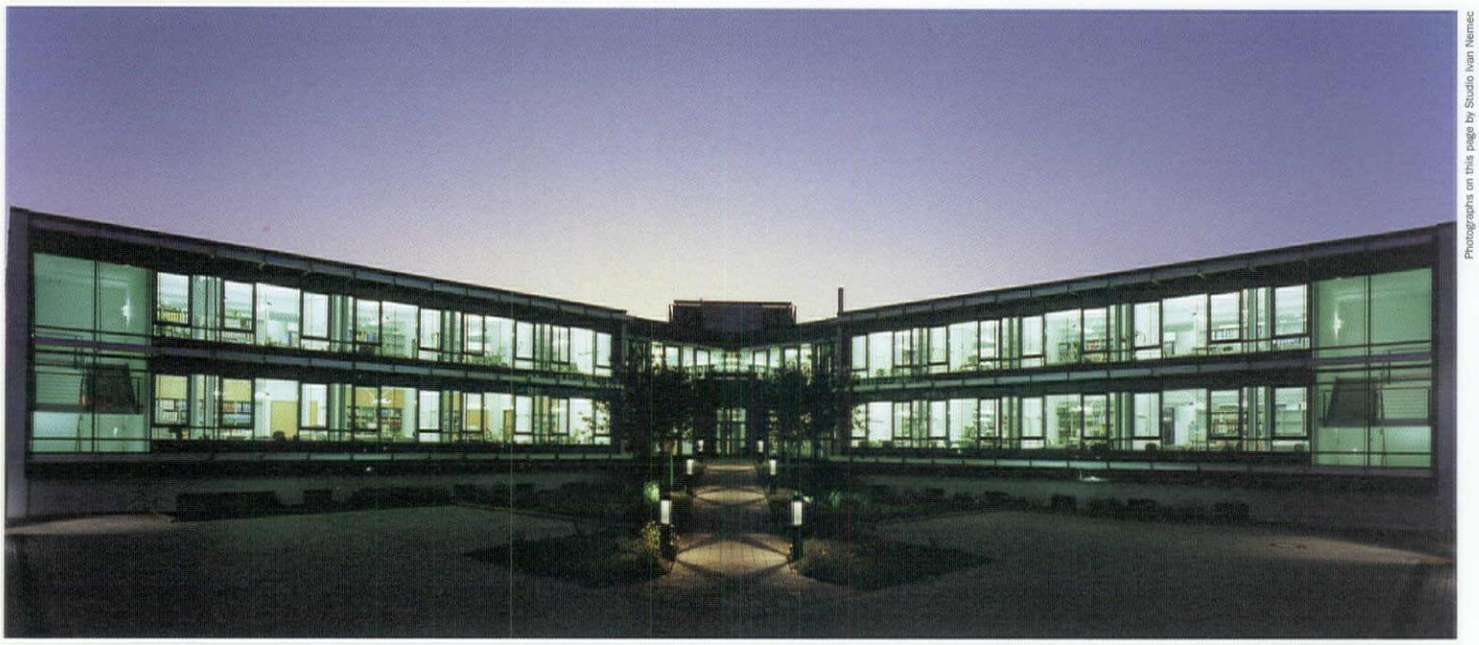
***Above*** *The inclined glass cylinder at the intersection of the two wings houses staff canteen, meeting rooms and a large conference room.* ***Right*** *The interior of the conference room demonstrates the high quality finishes used throughout the building*

Studio Ivan Nemec

## Architects' own offices, Friedberg 1994

Sixty years after the foundation of the firm in Heinrich Hohmann's own house, Bremmer Lorenz Frielinghaus took the dramatic step of abandoning their various downtown rented properties and designing their own architects' office capable of accommodating a staff of up to 100 and providing extensive car parking. The site chosen was a newly designated business park on the outskirts of Friedberg and the firm chose to place its building at the far end of the park, as close as possible to Friedberg city limits. BLFP's 2,000 square metre building takes the form of two right-angled three-storey wings entered at their intersection on the side where the enclosed angle is formed. The design concept for the concrete framed structure is transparency, with the two top floors clad in glass, with light transmission and heat gain controlled external sunshades and motorised sun blinds. In contrast the basement floor has solid external walls with perforated windows. It contains the office library, a sample room, model shop, archive storage and the project management department. The architects' workstations and doorless offices are located above, on the ground and first floors.

The dominant architectural feature of the building is a prominent inclined and truncated glass cylinder that masks the the external angle formed by the meeting of the two equal-sized wings in the central stair and lift well. This cylindrical glass element encloses a projecting staff canteen, meeting rooms and a large conference room on three floors. Beyond it is a terrace and a circular reflecting pool. An important consideration in the design of the building was the use of advanced materials, high quality finishes and precision detailing so as to set a standard for later business park arrivals.



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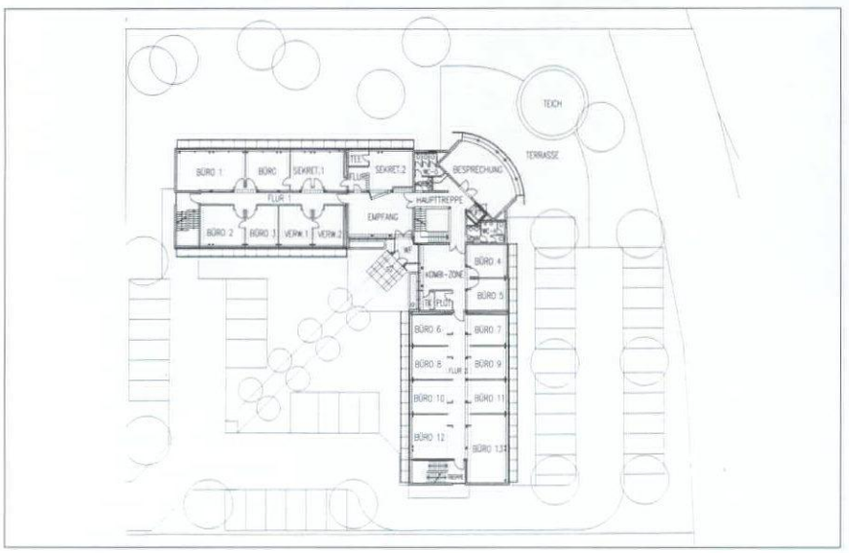


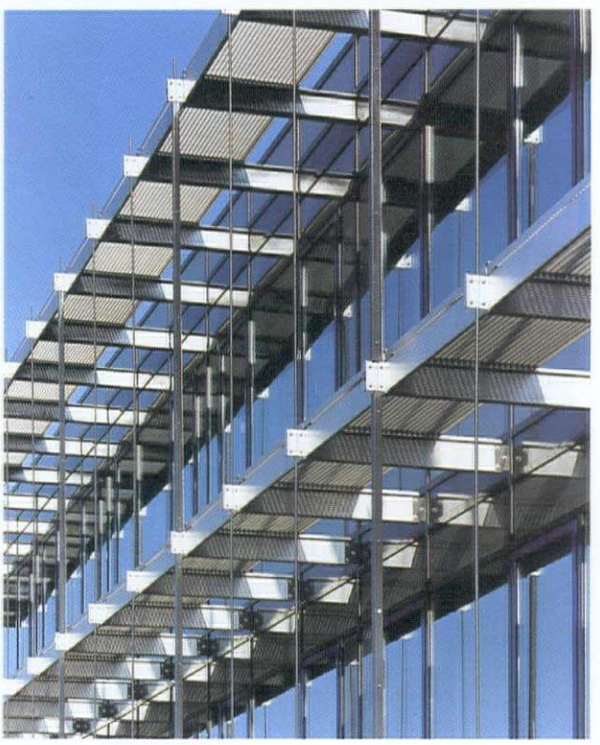

***Top*** *The entrance to BLFP's new offices in the angle between the two wings.* ***Middle*** *Side elevation showing the inclined glass wall at outside angle of the two wings and the motorised sun blinds.* ***Above*** *Ground floor plan.* ***Right*** *External sun shades help control light transmission and heat gain*

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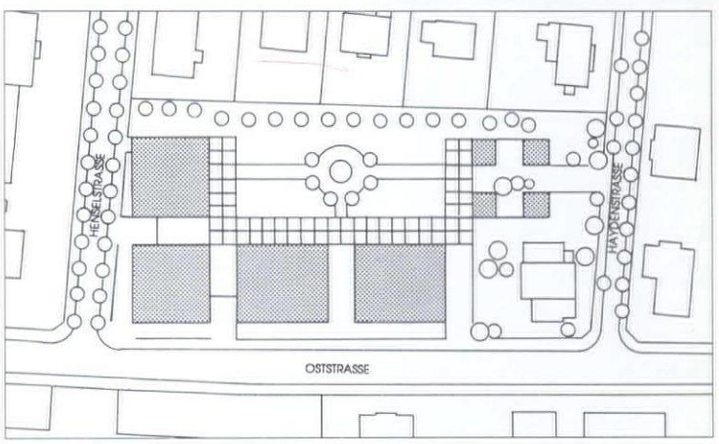
## District Savings Bank, Kamenz 1994

With a gross volume of 36,000 cubic metres, the District Savings Bank headquarters at Kamenz represents an ingenious combination of new and existing buildings through sensitive and inconspicuous urban design. The architects were required to fit 10,000 square metres of serviced office floorspace into a suburban block whose character was formed by surrounding villas at an extremely low density. One half of the city block contained only five villas while the bank site was already required to incorporate one. The solution was to devolve the bank's accommodation requirements into four stand-alone facilities linked by a U-shaped covered walkway which follows the perimeter of a tree-lined formal garden. Of these four main buildings, one rises to four-storeys and the others to three. All have shallow metal-clad pitched roofs, rendered facings, recessed windows and either freestanding granite colonnades or granite plinths at ground level that reflect and continue the character of the one villa remaining on the site. On the eastern side of the site, four smaller matching pavilions reached by the covered walkway mark the entrance to the underground car parking facility from Haydenstrasse. Extra tree planting formed an important part of the urban design. The project was completed at the end of 1994.




***Top*** *The landscaped garden and covered walkway that links the individual buildings which each house separate functions.*
***Above*** *The Oststrasse elevation. Wall finishes and the granite colonnade reflect the character of the surrounding villas.*
***Right*** *Site plan.*

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*Oststrasse elevation*

*Henselstrasse elevation*

***Above and below left*** *The new buildings share a common style – shallow metal-clad pitched roofs, rendered facings, recessed windows and granite plinths or colonnades.*
***Below*** *The use of granite continues through the interiors*

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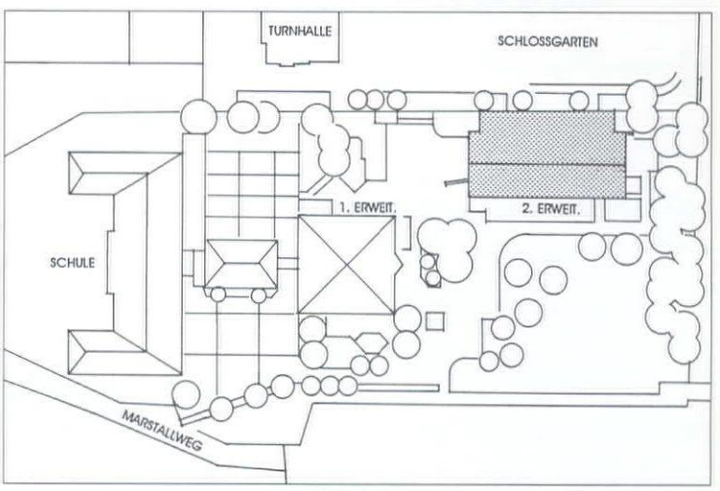


***Top*** *Full-height glazing to the north elevation and full width windows to the south elevation* ***above*** *make the building virtually transparent.* ***Above right*** *site plan.* ***Right*** *Interior staircase behind full height glazing*

### Christian Wirth High School, Usingen 1994

Standing in the grounds of the castle of Usingen, this is the second addition to the Christian Wirth High School carried out by the architects. The new building is sited behind the original school buildings over a change in level marked by a stone retaining wall, part of which has been restored to define the western entrance. To retain visibility of this relic the building has been made virtually transparent, its steel and concrete frame enclosed by ground to roof glass cladding on the northern side, and by full-width sun shaded windows above corrugated aluminium spandrel panels on the south side. Because of this transparency the change in site level can be clearly seen, access to the first floor being gained by a short flight of steps from the garden and internal stairs rising from the lower ground floor. Accommodation includes classrooms, workshops and special function rooms including an apartment for a janitor. On the ground floor a full-height movable partition makes it possible to combine two classrooms into an assembly hall.

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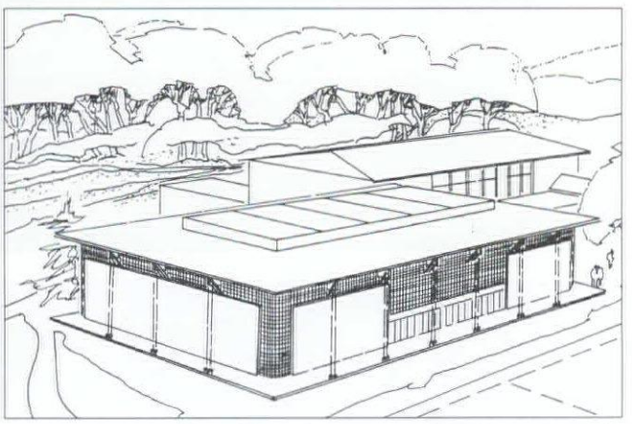


***Top and below*** *Maximum daylighting is ensured through the use of glass bricks which also provide dramatic night time effects.* ***Above left*** *The clear span roof consists of cantilever timber elements, gridded steel sections and tension cables with a large central skylight.* ***Above*** *Perspective sketch*

## Sports training school, Gruenberg 1994

Built between a smaller 1950s sports training hall and a full-size soccer pitch, this new 3,000 square metre facility for the Soccer Association of the state of Hessen marks a stage in the evolution of sports hall buildings and the development of lightweight steel and timber framing combined with maximum daylighting through the use of glass. The building takes the form of a 60 x 36 metre rectangle with rounded corners, a wide braced eaves overhang, and a main entrance with administrative offices projecting out from the short elevation to the east. To the north, with direct access to the sports hall, are the changing rooms and accommodation for servicing equipment. The clear spanning interior space is roofed in by means of a system of trusses employing cantilever timber elements, gridded steel sections and tension cables that produces a very low density of structural members. The roof decking above this supporting structure is punctured by a large skylight panel in the centre that provides daylight. In the same way the wall cladding above the continuous intermediate beam at doorhead height is transparent glass brick, wrapping round the corners of the building in a wide curve. The building was completed in June 1994.

Studio Ivan Nemec

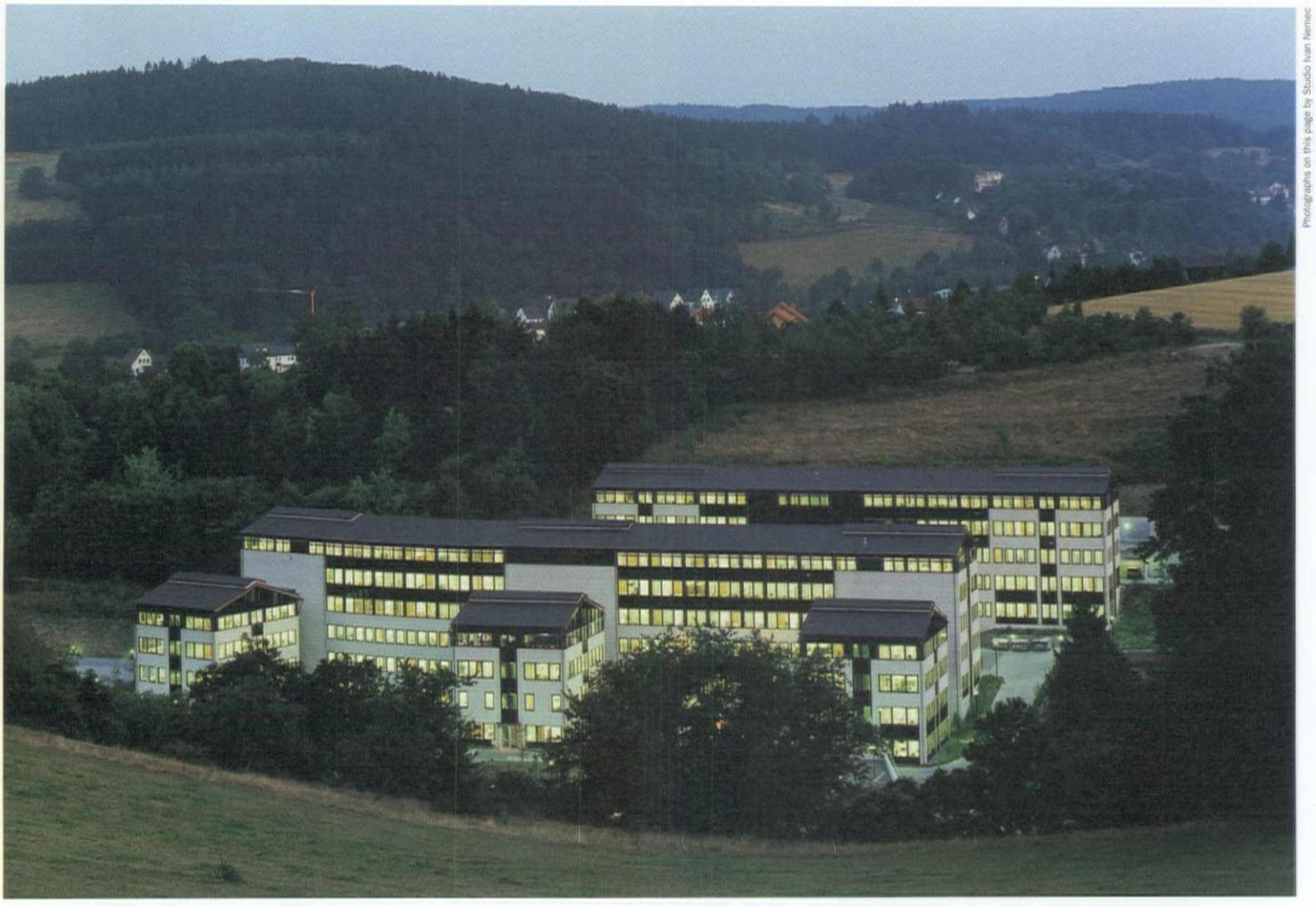
Foto-Bechtel GMBH

***Top and above*** *The style for the redevelopment of the airport maintenance and repair zone was inspired by early modern industrial buildings.* ***Below left*** *Cladding is of glazed ceramic tiles*

## Airport buildings, Frankfurt am Main 1993

Foto-Bechtel GMBH

The architects were commissioned in 1988 to re-plan the maintenance and repair zone on the eastern side of Frankfurt airport, and then to develop a consistent style for future services buildings that would be quite distinct from the style adopted for the new Terminal Two building and other passenger facilities. Design inspiration for the architectural task of bringing the needs of over 60 airport storage and maintenance users into a coherent visual style was sought in the design of industrial buildings dating from the early modern period. The image finally chosen was exemplified by a large brick-clad, steel-framed industrial complex built for the Siemens corporation in Berlin in 1929 by the architect Hans Hertlein. However, during the design phase it emerged that brick cladding could not be used because it was an excessively reflective material from the standpoint of airport radar. Instead a switch was made to a specially glazed ceramic tile with a finish closely resembling a local red sandstone. The resultant 63,000 square metre complex of workshop, fuel company and storage buildings planned on a 24 x 24 metre grid presents a powerful and disciplined impression today, roofing over the unavoidable disorder of airport vehicles and equipment, and dominating the entire Eastern maintenance zone with its vast but simple walls of red ceramic tile, matching false and real windows, glass brick stair and lift towers, and painted steel canopies over the loading docks. A welcome inspiration is the tree planting programme that accompanied the work.



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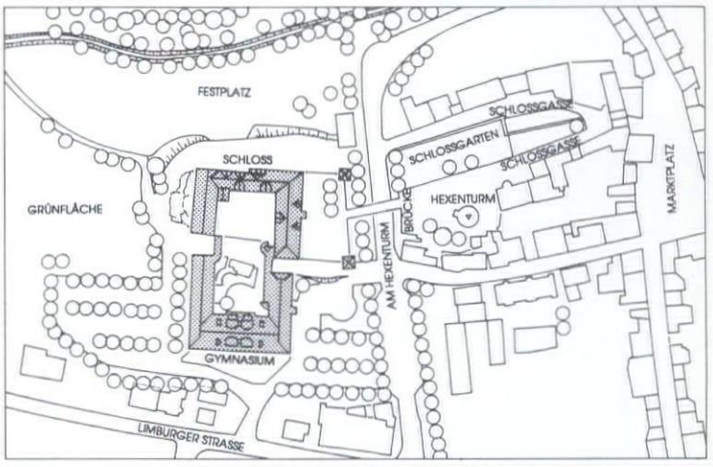
**Community centre, Bad Schwalbach 1993**

The general arrangement of this 9,000 square metre district administration office complex was dictated by the topography of its site, which is in a winding valley with steep sides not far from the town of Bad Schwalbach. The plan of the group was generated by the siting of the two main linear buildings, which follow constant height contours on the north slope of the valley, the longer of the two curving as it does so. Projecting to the south from this longer wing are three smaller buildings linked at two levels by glazed passages. Between the two wings themselves is another link building, this time fan-shaped, glazed to three levels on the western side, and containing conference rooms and a cafeteria. All buildings are clad in profiled aluminium and glass with metal covered pitched roofs. Surface car parking shielded by trees is provided around the outside of the buildings. Energy questions played a large part in the design of this scheme. The buildings are equipped with solar collectors to boost hot water supplies and a 100 cubic metre rainwater recovery cistern is installed.

***Top and above*** *The arrangement of the buildings is dictated by the topography of the site. Cladding is aluminium and glass with metal roofs.* ***Left*** *Entrance lobby with stained glass ceiling panel by Marion Hempel*

Photographs on this page by Goebel Photo & Design

***Top*** *Restored castle with the new annexe lower down the slope on the left of the photograph.* ***Above*** *The annexe is sensitive to the site without resorting to historical pastiche.*
***Right*** *Site plan*

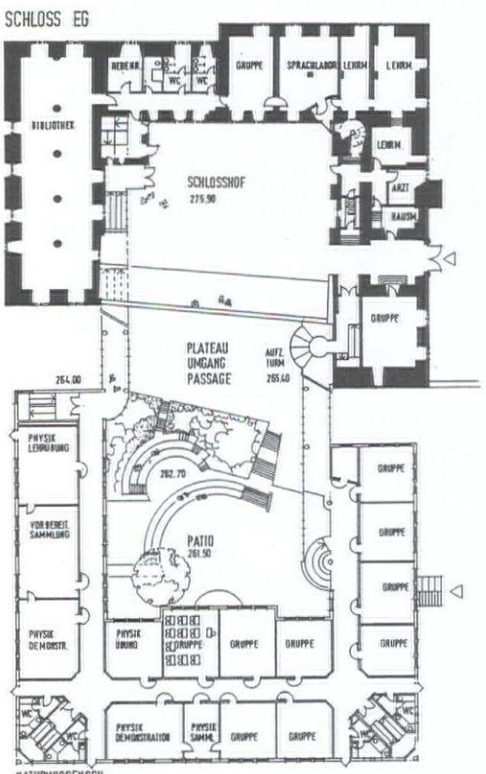



## Pestalozzi Secondary School, Idstein 1992

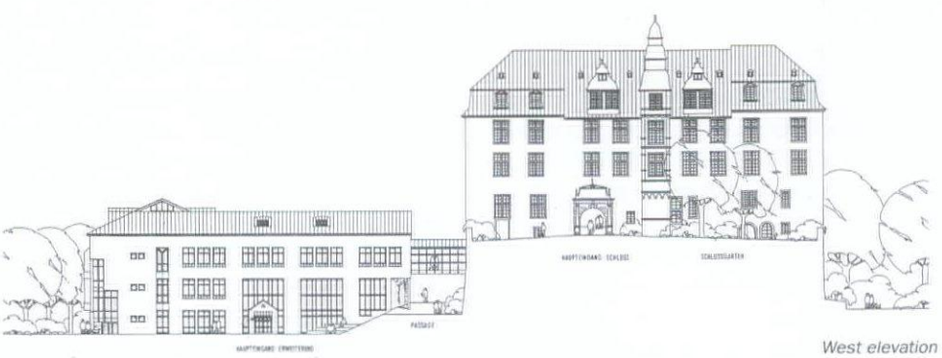
Used as a school for many years, Idstein Castle stands on a small rocky promontory overlooking the town of Idstein. By the early 1980s it was clear that extensive renovations and much new building would have to take place if the site was to continue to operate as a school against a background of rising environmental standards in German education. Invited to compete with other firms in a closed ideas competition, BLFP won the commission to update the school and prepared a scheme for the restoration of the castle buildings and the construction of new classrooms. The resultant renovations of the castle vaults and grand chambers were much admired for their sensitivity and authenticity. The connection between the castle and the new building complex is fully glazed and effects a neat combination and separation that preserves the unique identity of each. In plan dimensions, the new three-storey, U-shaped, 8,000 square metre classroom building is almost as large as the castle itself but, being very much lower and situated further down the slope towards the town, it is surprisingly inconspicuous. Largely because of the elaborate conservation work involved the project took six years to carry out, starting in 1986 and reaching completion in 1992.

Photographs on this page by Goebel Photo & Design

***Top*** *The library on the north side of the renovated castle.* ***Above*** *Entrance on the south side of the annexe.* ***Above right*** *Restored painting and plasterwork of a ceiling in one of the castle classrooms.* ***Below*** *Plan shows new annexe has similar "footprint" to that of the castle*



*South elevation*



*West elevation*

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***Above*** *The use of double cranked, guyed and outrigged lattice roof beams provides clear spans of up to 58 metres.* ***Right*** *The outrigged beams and glass clad walls provide night time drama*

## Sports and recreation centre, Frankfurt-Kalbach 1992

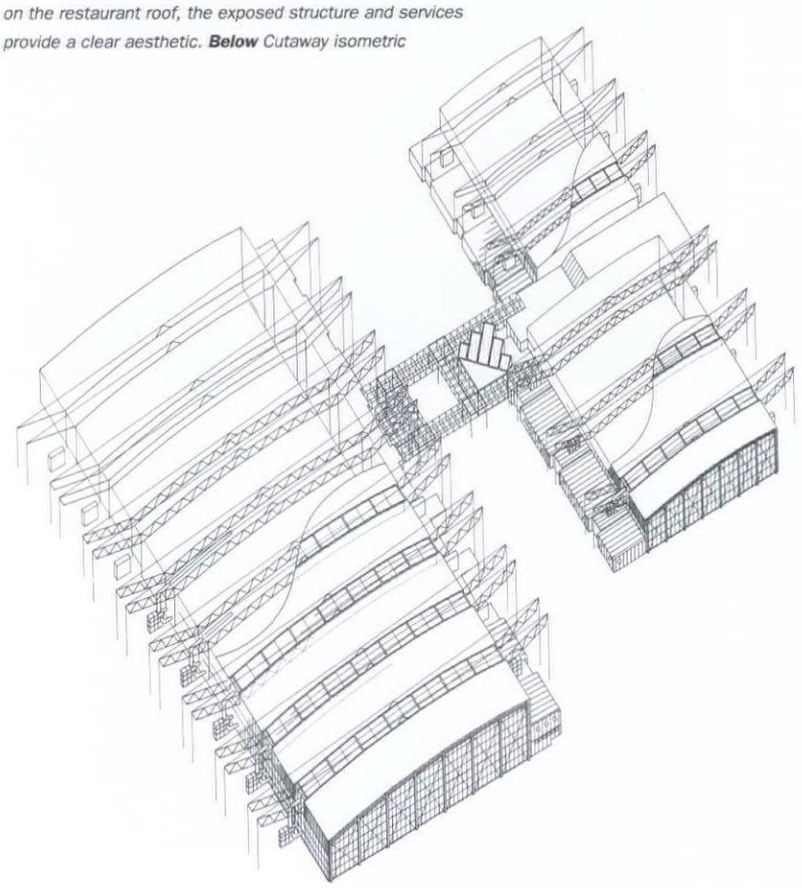
The design work of BLFP partner Michael Frielinghaus, the Frankfurt Sports and Recreation Centre at Kalbach was originally conceived as the German field and track team training centre for the 2004 Olympic Games. For this reason it was built on a lavish scale with 12,600 square metres of enclosed sports floor space and much bio-mechanical sports equipment. The largest of the three sports hall buildings encloses an Olympic running track and a straight line 110 metre hurdle track alongside one another. The basis of the design lies in the structural system which is dominated by an unique double cranked, guyed and outrigged lattice roof beam that, in different sizes, provides the roof structure for all three sports halls, spanning 58 metres clear in the largest hall, 36 metres in the tennis hall and 27 metres in the smallest multipurpose hall. Frielinghaus, an enthusiast for high-tech design, paid a special visit to Richard Rogers' INMOS building in South Wales before designing the Kalbach buildings and was inspired by the English architect's use of outrigged structure and bold glass and metal panel cladding. Frielinghaus's own beam system is more elaborate than Rogers', being at once cantilevered, cable-stayed and also asymmetrical, since the buildings are on a sloping site and gradually step down from the smallest to the largest hall.

While all the halls are clear rectangles in plan with glass-clad walls, their servicing systems and ancillary accommodation are located outside in opaque metal-clad boxes reminiscent of the toilet pods in the Lloyd's building. They too facilitate modification or repair without interfering with important activities inside.

The pedestrian walkways between the sports hall at Kalbach are covered with space frame canopies and the restaurant building, in the centre of the complex, is clad in photo-voltaic cells to supply back-up electricity. Begun in 1988 the complex was completed in 1992 and is a now a popular attraction with the public.

Hans Georg Göllner

***Above*** *The largest of the three sports halls houses an Olympic running track and a straight line 110 metre hurdle track alongside one another.* ***Right*** *The photovoltaic cells on the restaurant roof, the exposed structure and services provide a clear aesthetic.* ***Below*** *Cutaway isometric*



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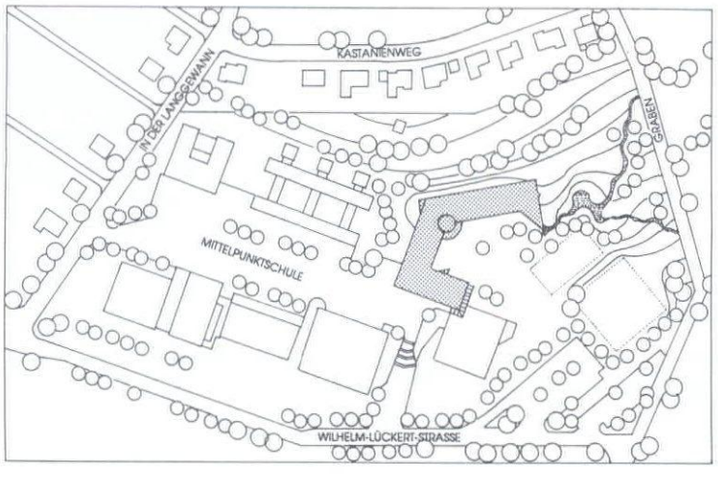

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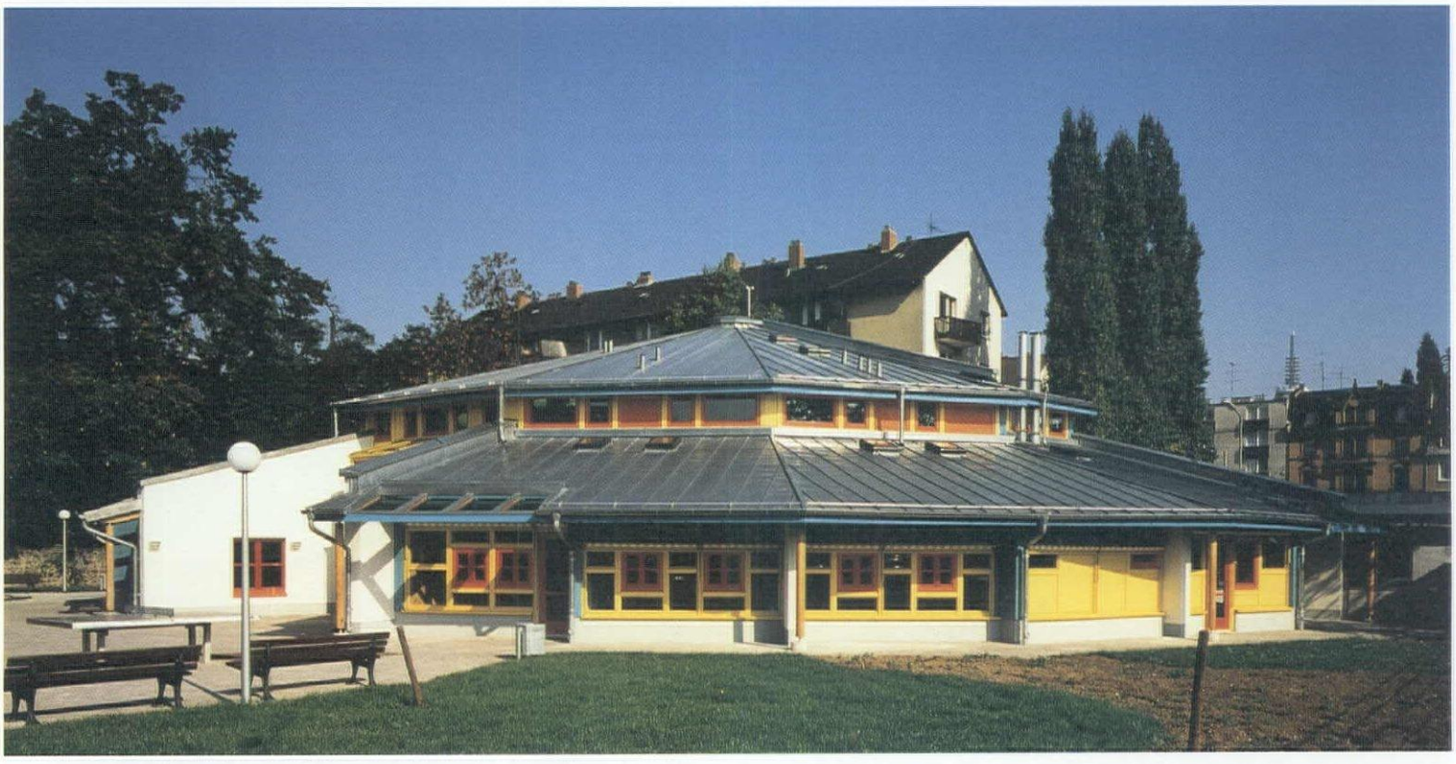
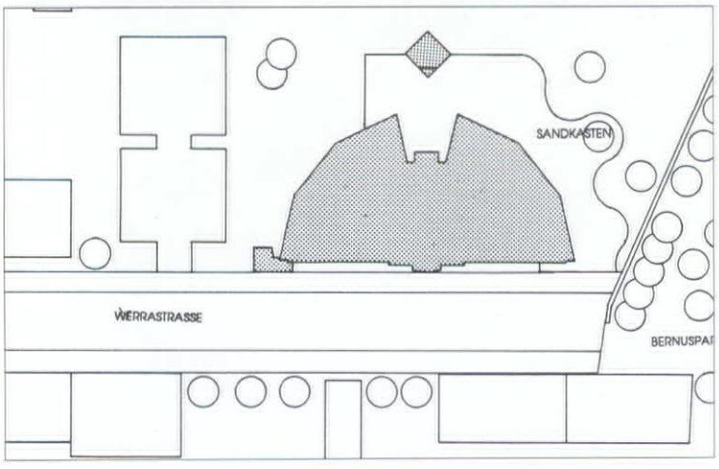
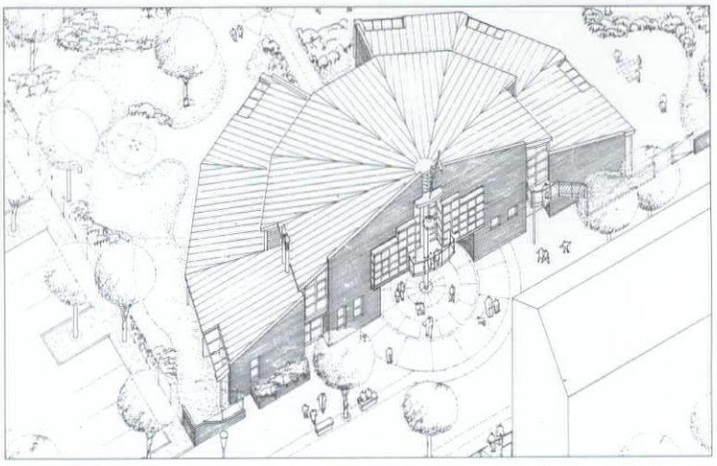
***Top*** *The deceptively simple brick-clad exterior. Rooms near the entrance open to both the street and school grounds.* ***Above left*** *Site plan.* ***Above*** *The glazed cylinder overlooking the square contains library, observatory and drawing studios surrounded by a winter garden*

**Wolfgang Ernst School, Buedingen**
**1990**

One of a number of highly intricate school designs by Bernhard Lorenz, the Wolfgang Ernst School is deceptively simple in appearance when seen from its brick-clad exterior. Viewed in plan, however, the 4,100 square metre, four-storey complex reveals an unexpected elaboration based upon the deployment of accommodation within its U-shaped perimeter. The U-shaped plan responds ingeniously, not only to the building line of a number of existing school buildings, but also to the contours of a shallow wooded valley with a stream that constitutes the most impressive aspect of the site topography and offers the possibility of an opening into the landscape. The building itself is planned with a number of multi-purpose rooms grouped around the central entrance hall, which can be reached from the street as well as school grounds. These multi-purpose rooms are connected so that they can be used in series or parallel for important school events. The special aspect of this part of the school is carried vertically through its structure by means of a glass cylinder culminating in a library tower, an observatory and galleried draughting rooms with the character of design studios. The project was won in competition in 1985 and executed between 1986 and 1990.



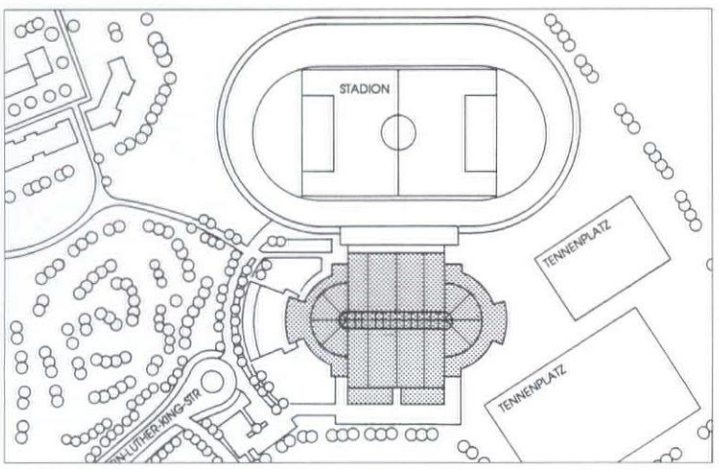


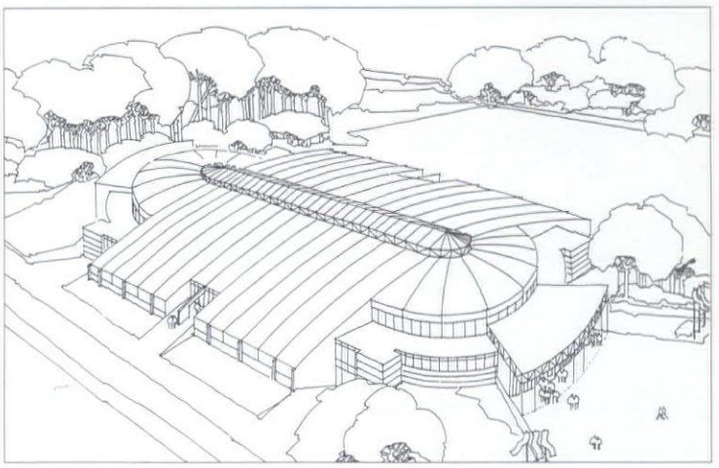



***Top*** *View from the landscaped playground.* ***Above left*** *Site plan.* ***Above*** *Isometric.* ***Below*** *Entrance lobby*

## Children's day nursery, Frankfurt-Bockenheim 1989

This child care centre in Frankfurt was built following a 1986 competition calling for a fresh architectural approach and the extensive use of colour. The shape of the building was derived originally from the shape of a circus tent cut vertically in half (to provide a street elevation), and its plan was based on providing immediate radial access from the ground floor nursery areas to the landscaped playground behind. On the smaller diameter first floor a second environment was created, suitable for children of nursery school age and equipped with reading galleries. Although the street facade is rendered, timber construction is responsible for much of the character of the building. There are parquet floors, plywood walls and ceilings and other exposed structural features. The bright colours create a distinctive and uplifting impression. The project was completed in 1989.



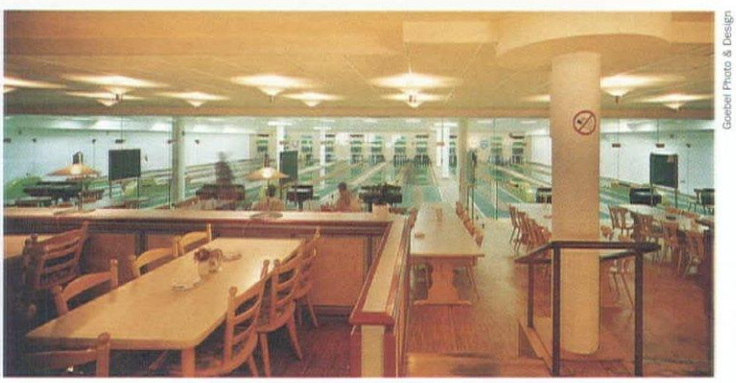



***Top*** *Exterior of the metal-clad sports hall showing the central spine rooflight.* ***Above*** *Site plan.* ***Above right*** *Sketch.* ***Below*** *Massive laminated roof timbers give a clear span of 72 metres*

## Auguste-Schaertner Sports Hall, Hanau 1989

The immediate predecessor to the much more elaborate sports complex at Kalbach, was the 5,100 square metre school sports building at Hanau designed by Michael Frielinghaus in 1986. This structure with its enormous laminated timber beams making up three-pinned trusses stayed with steel cables, boasts a clear span of 72 metres and an indoor seating capacity of approximately 2,000. Designed originally as a school gymnasium it now also acts as venue for field and track events, ball games and gymnastics. It is also used for music concerts and other cultural events. Compared to the later Kalbach buildings, the metal-clad Hanau arena makes relatively little use of daylight, with only a central spine rooflight and glazing at each end. All ancillary accommodation and service installations are arranged along the sides of the arena accessible from outside. Construction was begun in 1987 and completed in November 1989.

Goebel Photo & Design



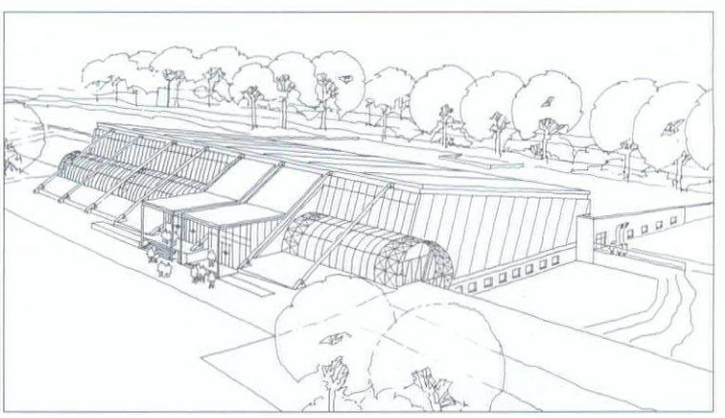
Goebel Photo & Design

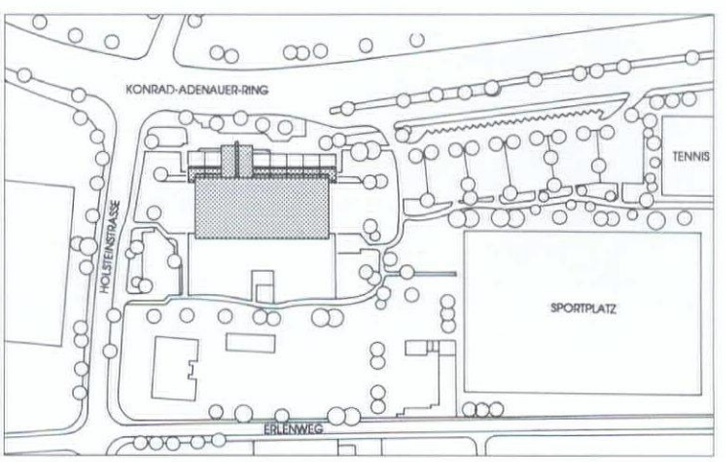
## Sports hall, Wiesbaden 1989

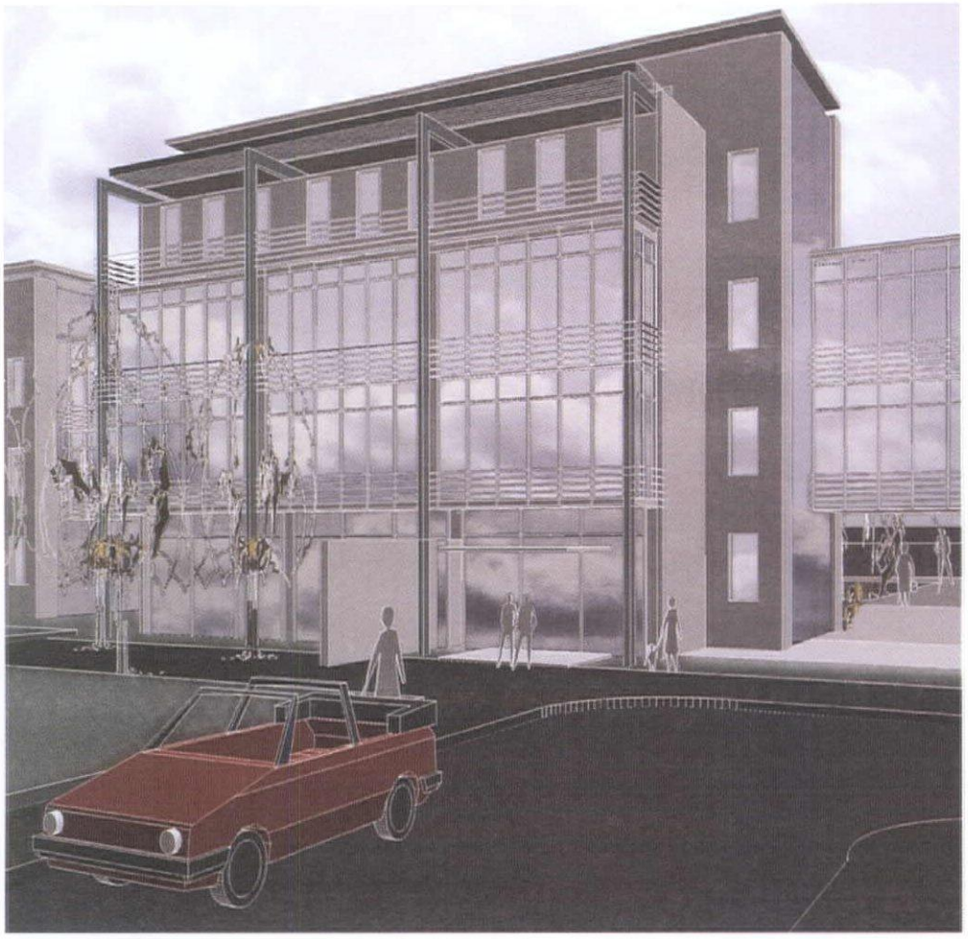
This 4,000 square metre Wiesbaden sports hall was built at virtually the same time as the sports hall at Hanau but, despite the similar colour of its cladding, it is a far more eccentric design. There is no BLFP precedent for its inclined glass-clad walls, large diameter polycarbonate-glazed "viewing tube", inverted, cable-stayed and inclined roof trusses, and underground bowling alley and auxiliary accommodation. Part of this fund of innovation stems from the need to fit a large number of sporting facilities into a very small site. The original brief called for a four-field gymnasium, 12 bowling lanes, fitness and power training rooms, a restaurant and bar and seating for 500 spectators.

The main elements of the design grew out of the structural demands made by these requirements, which created a very densely-packed two-storey steel frame structure with a 27 metre clear-spanning roof over the sports hall itself, and ancillary accommodation underground in a grassed-over section behind. On completion in July 1989 this sports hall was the first all-steel building Bremmer Lorenz Frielinghaus had ever built.

***Top*** *The Konrad-Adenauer-Ring elevation with inclined glass wall and polycarbonate-glazed viewing tube.* ***Above*** *The main sports hall with 27 metre clear span roof.* ***Above right*** *The underground 12-lane bowling alley.* ***Right*** *Sketch.* ***Below right*** *Site plan*

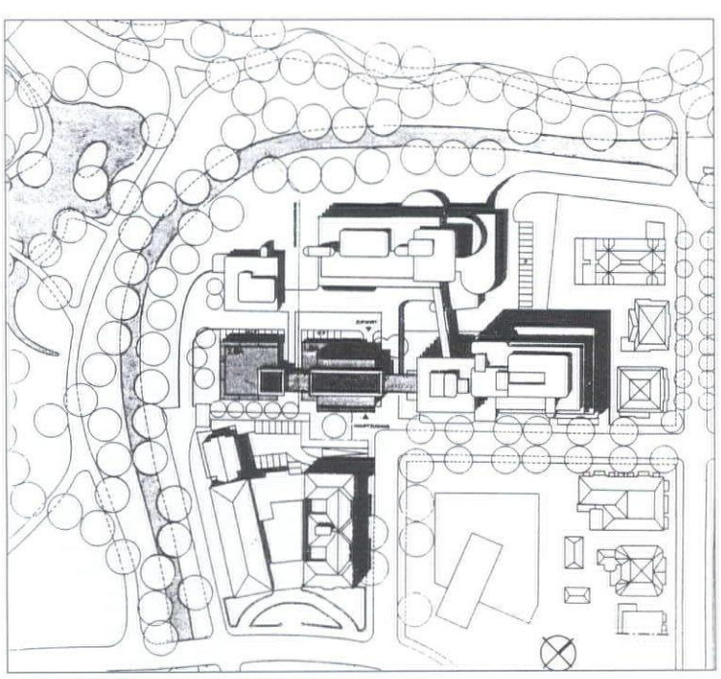


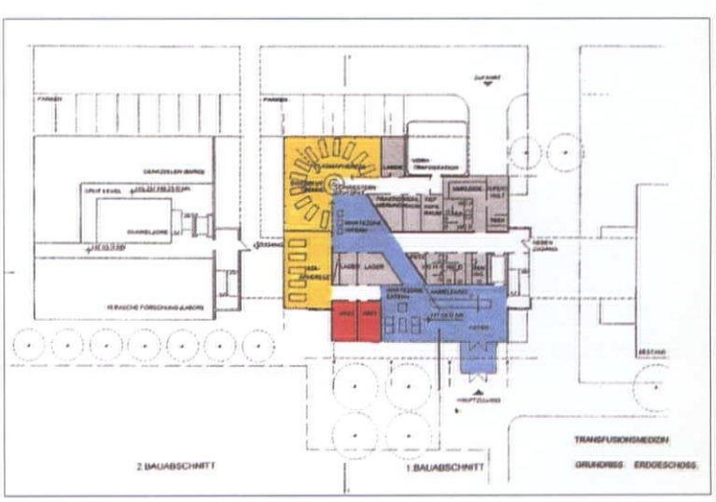




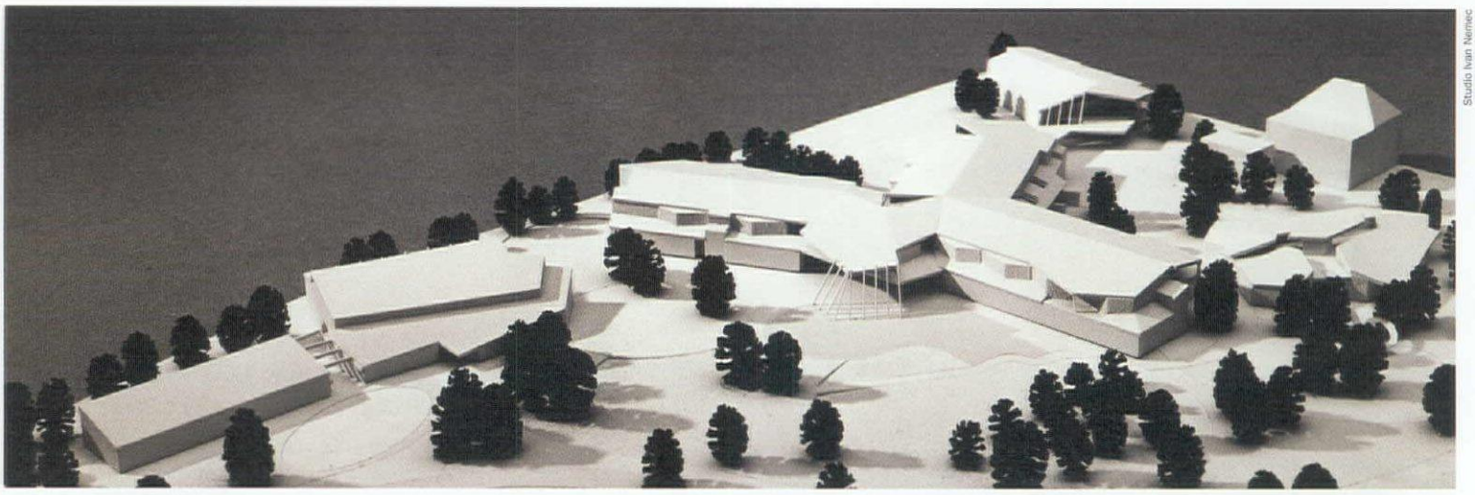
## Kerckhoff Clinic, Max Planck Institute, Bad Nauheim 1996

This project was won in competition in March 1996 and is expected to be completed within three years. The new clinic will be located in the spa town of Bad Nauheim and will be part of the new research and medical centre being set up by the Max Planck Institute. Its site will be surrounded by existing gardens and the ensemble of hospital buildings belonging to the Kerckhoff-Klinik-Society, a subsidiary of the Institute. The new four-storey building will have basement parking for 60 cars. Its superstructure will enclose a net floor area of some 5,000 square metres arranged between a central core and a perimeter structural system. The whole building, taking its place along the existing street building line, will be linked to nearby buildings by connecting bridges. At present the client's brief calls for laboratory, measurement technology and study rooms as well as a 600 square metre blood transfusion facility. The inner supporting core of the concrete framed building will contain the X-ray darkrooms. The outer skin of the building is intended to be load bearing also, so that all intermediate spaces can be modified to suit changing requirements in the future.

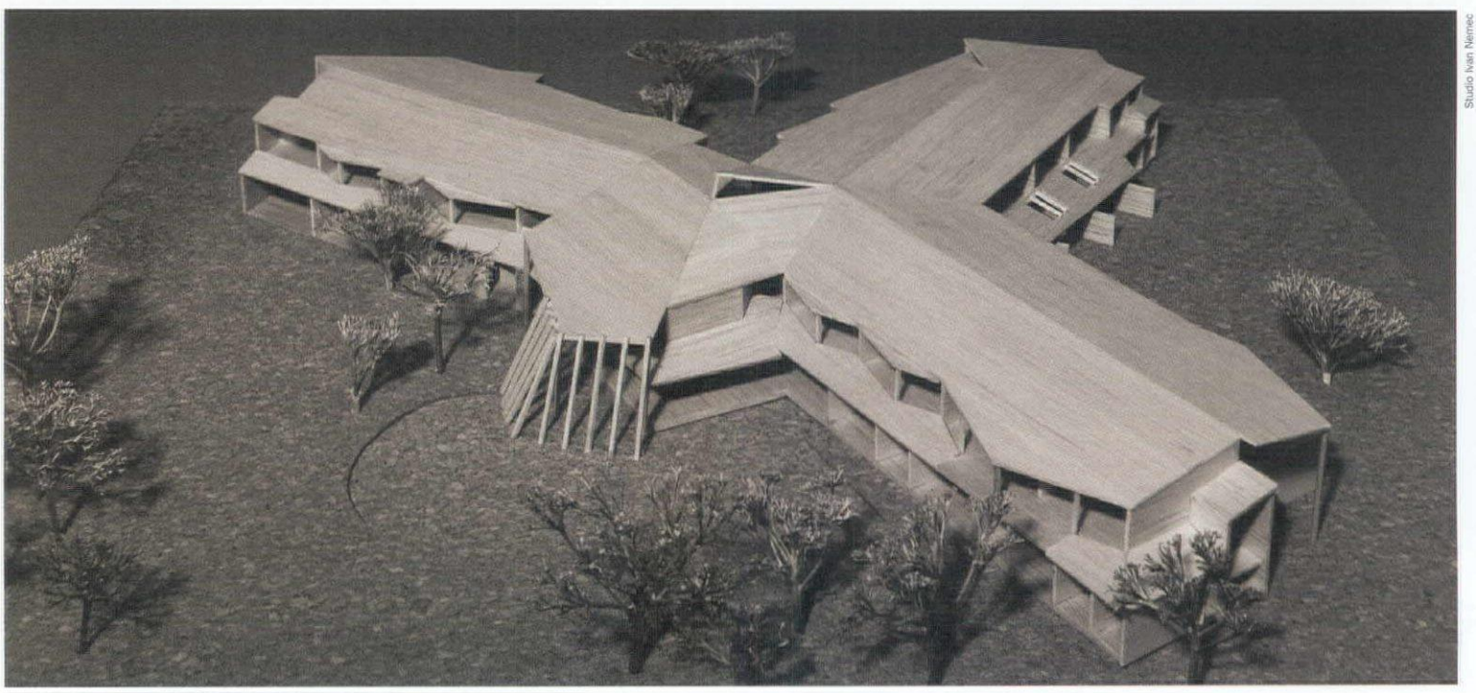





***Top left*** *Rendering of the south-east entrance elevation of the larger of the two blocks.* ***Middle left*** *South-east elevation of both blocks.* ***Left*** *Site plan.* ***Above*** *Ground floor plan*



Studio Ivan Nemec



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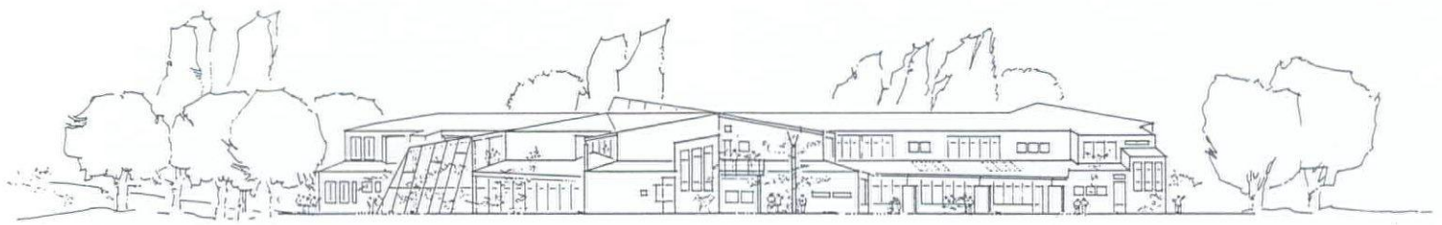
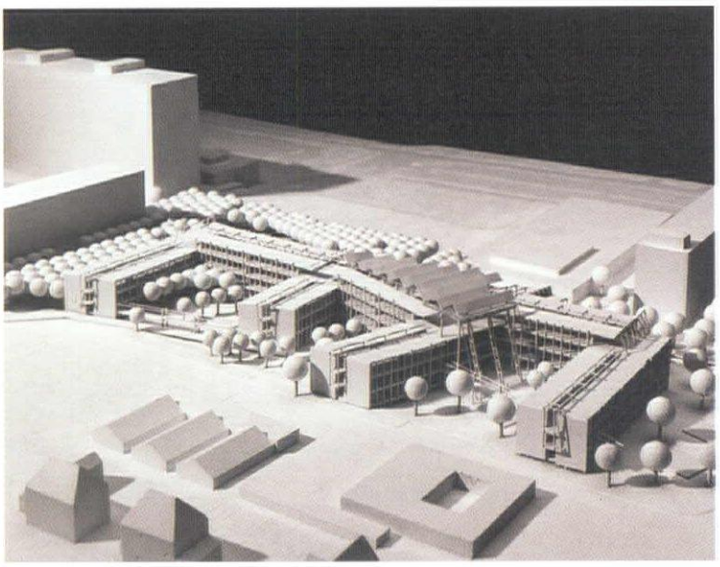
***Top*** *Model view of the whole complex including main school building, kindergarten and various sports facilities.* ***Above*** *The two-storey school building, all the elements of which are drawn together under one immense sheltering roof.* ***Below*** *Sketch of south elevation*

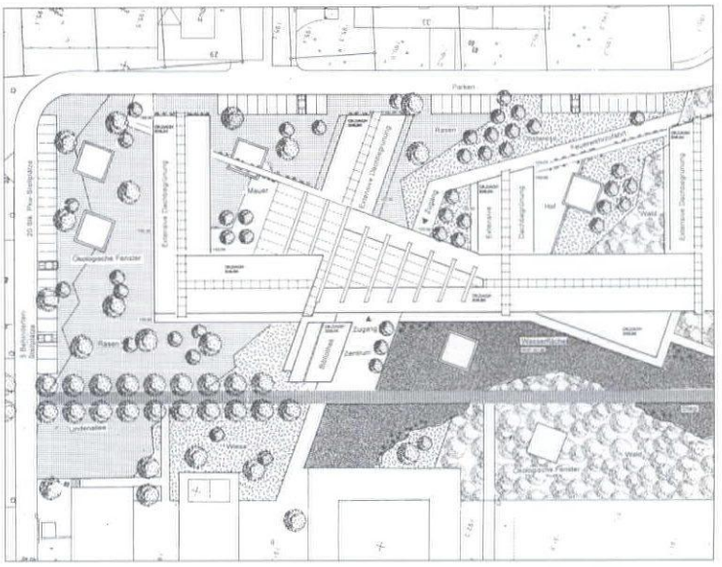


## Waldorf Free School, Leipzig 1995

The subject of a 1995 competition, the proposed Waldorf Free School will be located on the outskirts of the city of Leipzig at the transition between the countryside and the beginning of urban development. As a whole the school complex will comprise an assembly hall, a kindergarten, a sports hall and other publicly available sports facilities as well as classrooms. The two-storey building is of irregular shape, drawn together only by its immense sheltering pitched roof which will serve to integrate it with the surrounding hilly landscape. As in previous schools designed by Bernhard Lorenz, the entrance hall will lead directly into a central encounter space with access to a multi-purpose hall, a winter garden and music rooms. All the rooms opening onto this space will be able to be incorporated into it so as to enlarge it for major functions, or reduce it to permit smaller events to take place in private. From the entrance hall at ground level there will be direct access to the school administrative offices and to special classrooms which will open directly onto the school gardens. The rest of the school buildings are built in the same style and are characterised by an emphasis on light, shade, natural materials and easy access to outdoor areas.

Studio Ivan Nemec

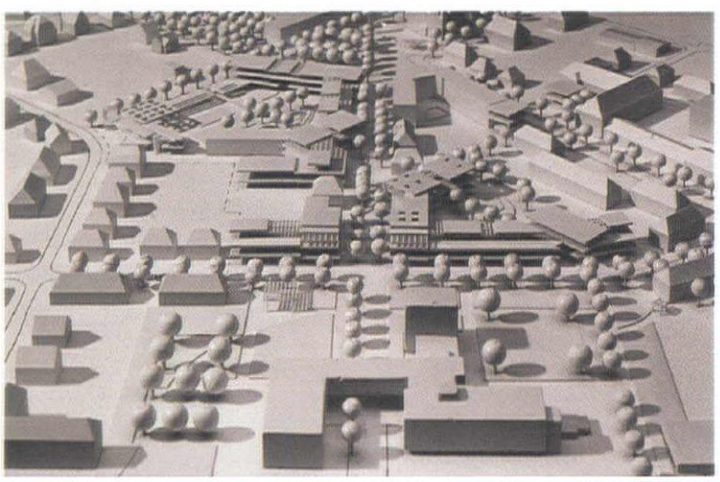


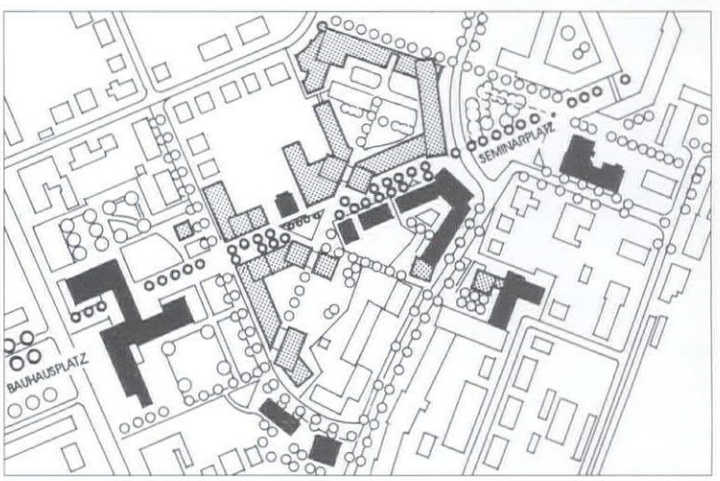


***Above left*** *The "arms" of the west side of the building allow the research centre to achieve a measured transition to the neighbouring housing area.* ***Above*** *Ground floor plan*

## Interdisciplinary research centre, University of Giessen 1995

This large structure, with a gross floor area of 21,500 square metres was designed to a complex brief which required it to fit into an ensemble of existing university buildings as well as satisfy the needs of four different client committees. The resultant design succeeds in completing a link between the existing university buildings north and south of the site. Also, by fragmenting into several arms on its west side, the research centre achieves a measured transition to the neighbouring housing area, creating a number of courts and green spaces of different aspect and size. The two-storey main entrance to the research centre has a fully glazed facade to enable its transparency to provide visual links with the east-west campus axis and the existing road system. Directly off the entrance lobby are meeting rooms, the general administration area, and a library, all having access to the three-storey glass-roofed atrium with its winter garden.

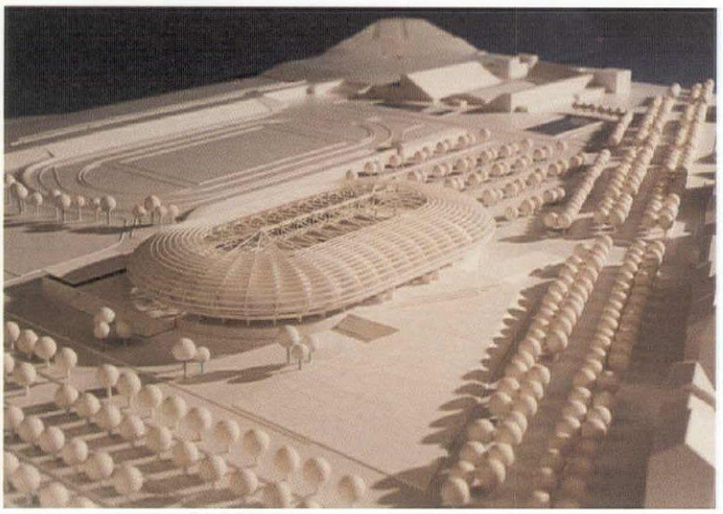


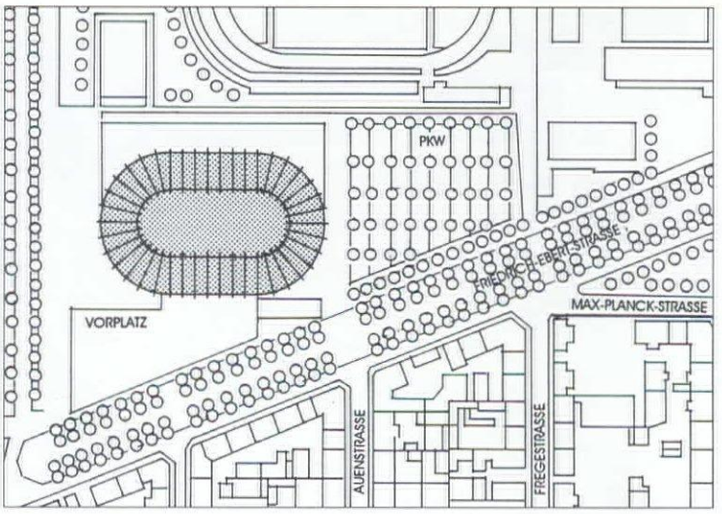



***Above left*** *This competition plan was designed to create physical and visual links between existing Bauhaus buildings and to enliven a rather elementary campus plan.* ***Above*** *Site plan*

## Campus masterplan for the University of Applied Science, Dessau (formerly known as Bauhaus) 1995

The new University of Applied Science in Dessau is conceptually dominated by the surviving main Bauhaus building designed by Walter Gropius in the 1920s. Using the orientation of this building, subsequent planners have created an axis along which a number of new academic buildings have now been assembled and a tree-lined boulevard is being constructed between Bauhaus Square and Seminar Square. BLFP's competition plan sought to intensify and redirect the development of this rather elementary campus plan by constructing an intersecting axis running between two Bauhaus dwellings, one south-east of the original Gropius main building, and the other north-east. One further axis, at 90 degrees to this one was also proposed to lead off to the east, along a line intersecting with the surviving student club and Mensa building. The competition proposal was unsuccessful.



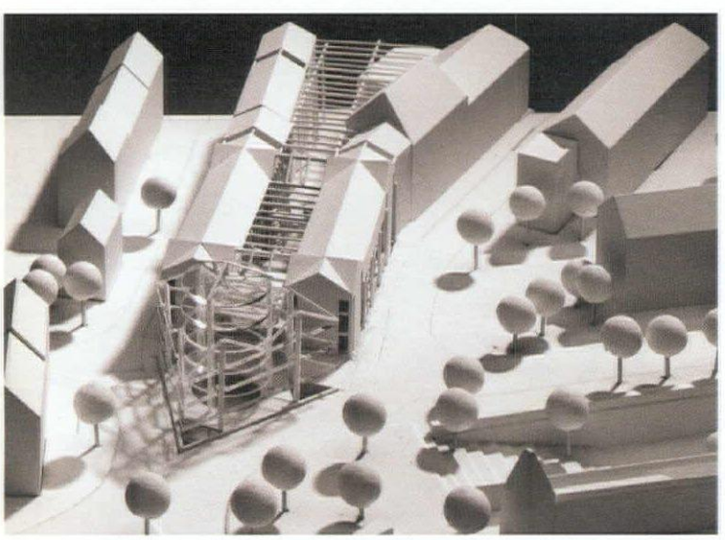



***Above left*** *The oval shape of the stadium expresses the traditional shape of the sports field. Servicing elements are integrated into the roof structure.* ***Above*** *Site plan*

## Sports centre, Leipzig 1995

The architects' task was to design a sports centre capable of hosting national international events as well as providing a 10,000 spectator capacity venue for music concerts. The site formed part of the great international sports complex developed in Leipzig by the German Democratic Republic prior to reunification in 1990. The basic design idea of the scheme was to create a separate stand-alone facility that would at once be part of the older complex but, at the same time, emphasise its new, forward-looking character. The oval shape of the enclosure results logically from the shape of the sports field and its surrounding seating. All the servicing elements of the arena are integrated into the curved beam roof structure and concealed with laminated panels. Ancillary accommodation is all located below ground level so that the shape and structure of the main envelope is clearly readable and possesses an unique form.

Studio Ivan Nemec

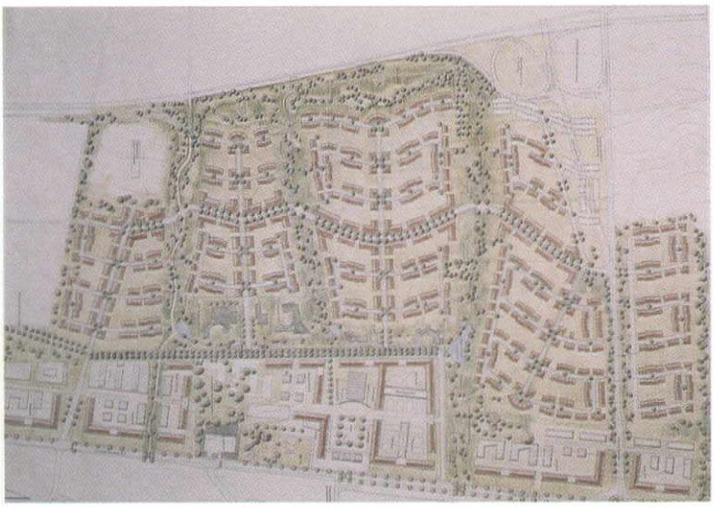


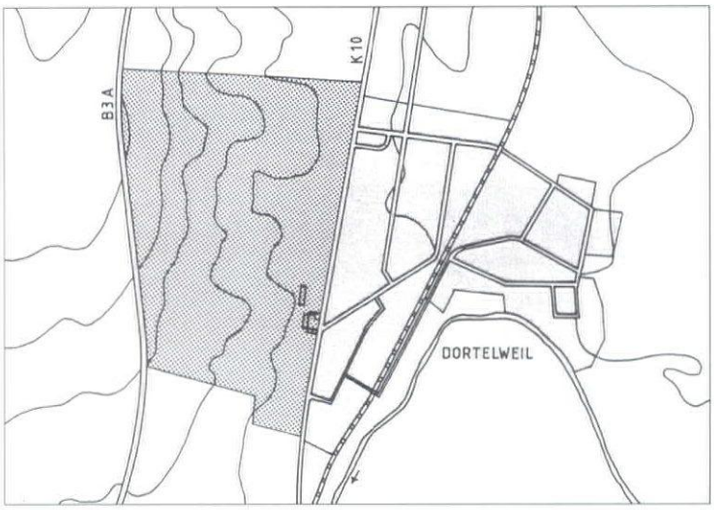
***Above left*** *Space between existing buildings will be converted into an atrium and winter garden by means of a continuously glazed roof. The triangular entrance building will be clad with acoustically treated laminated glass and fitted with a heat recovery system.* ***Above*** *Site plan*

## Maxtorhof, Nuernberg 1994

The commission to design this 10,000 square metre mixed use commercial complex on a hill (the Maxtor) on the outskirts of Nuernberg, was won in competition in 1994 and construction is scheduled to start in early 1997. When completed, the project will comprise a complete perimeter development together with the inner court converted into an atrium and winter garden by means of a continuous glazed roof. Bridging links will connect the two sides of the perimeter beneath smaller pitched glass roofs. The buildings will rise to five storeys with offices on the first three floors. The upper floor of the triangular entrance building will contain a large glazed assembly room with an observation deck offering spectacular views of Nuernberg castle and the old city. This building will be glazed with acoustically treated laminated glass and fitted with a heat recovery system and rooftop photovoltaic cells. Despite their steeply pitched roofs and traditional shape all the Maxtorhof buildings will offer a high degree of flexibility by means of shell and core construction and modular floor plans.

Atelier Rau

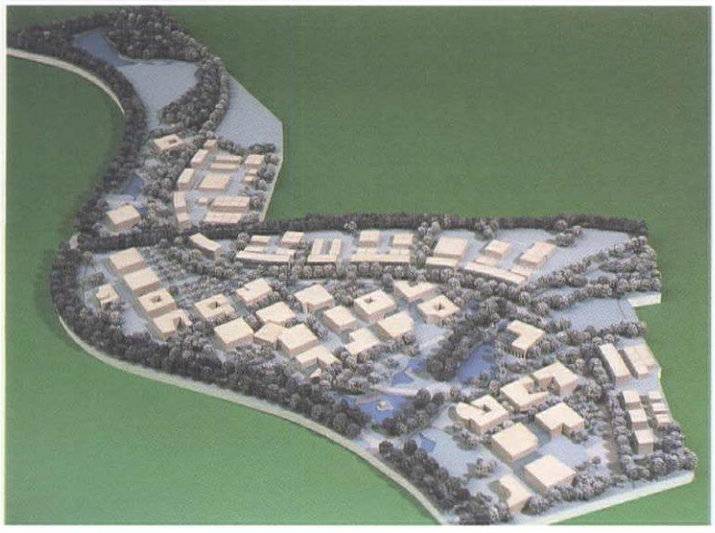


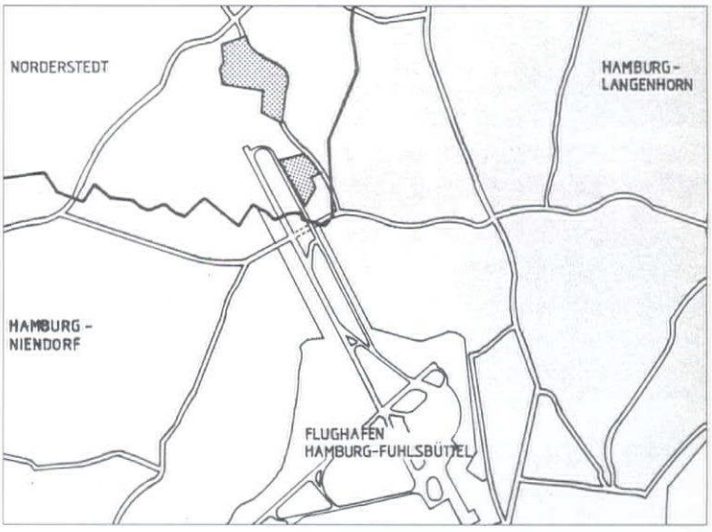



***Above left*** *"Fingers" of the surrounding countryside will reach through the site which will eventually provide 2,000 new homes and 1,500 new jobs.* ***Above*** *Site plan*

## Masterplan for Dortelweil-West district, Bad Vilbel 1995-2005

The proposed development of the 67.7 hectare Dortelweil-West area of the town of Bad Vilbel for industrial and residential uses involved BLFP in a planning exercise that lasted for two years. The period of execution will however last for 20 years, being programmed to end in the year 2005, by which time some 2,000 new housing and apartment units should have been built and 1,500 new jobs created in connection with the development of a new local commercial and retail centre. Because of the necessity for high density housing as well as the maintenance of a rural character, a key part of the BLFP plan calls for "green fingers" that will reach through the new housing developments as far as the industrial and commercial fringe along the southern boundary of the planning zone.






***Above left*** *This 22 hectare development next to Hamburg-Fuhlsbuettel Airport will provide a mix of offices, service industries and distribution centres.* ***Above*** *Site plan*

## Masterplan for Norderstedt Industrial Park, Hamburg 1994

The Norderstedt Industrial Park project covers an area of 22 hectares adjoining the north-eastern perimeter of Hamburg-Fuhlsbuettel Airport. BLFP's masterplan calls for a mix of offices, service industries and distribution centres. The corporate identity of the park is to be maintained by means of twin grids: an organic spine sweeping along north of the the east-west road pattern, and a reticulated grid to the south of the road. The transition to open landscape at the west end of the site will allow a variety of construction types to find their place within the urban design system.

# Face to face

## "I am lucky enough to have electric light to explore the whole world of Baroque illusionism where Bernini left off."

**Peter Greenaway is a film director not an architect. So why has he been asked to lecture on architecture in Vienna, Budapest and Helsinki, to judge a design for a post office in Estonia and to teach architecture in Chicago? Five thousand people turned up to his last presentation at the College of Architecture in Zurich, Switzerland and his talk had to be relayed on loud-speakers to the crowd outside. Amidst a prolifery of international lectures and events on the connection between "Architecture and Film", Katherine MacInnes went to meet the man who famously encapsulates both media and to test the strength of his architectural metaphor. Photograph by Ralf Emmerich.**

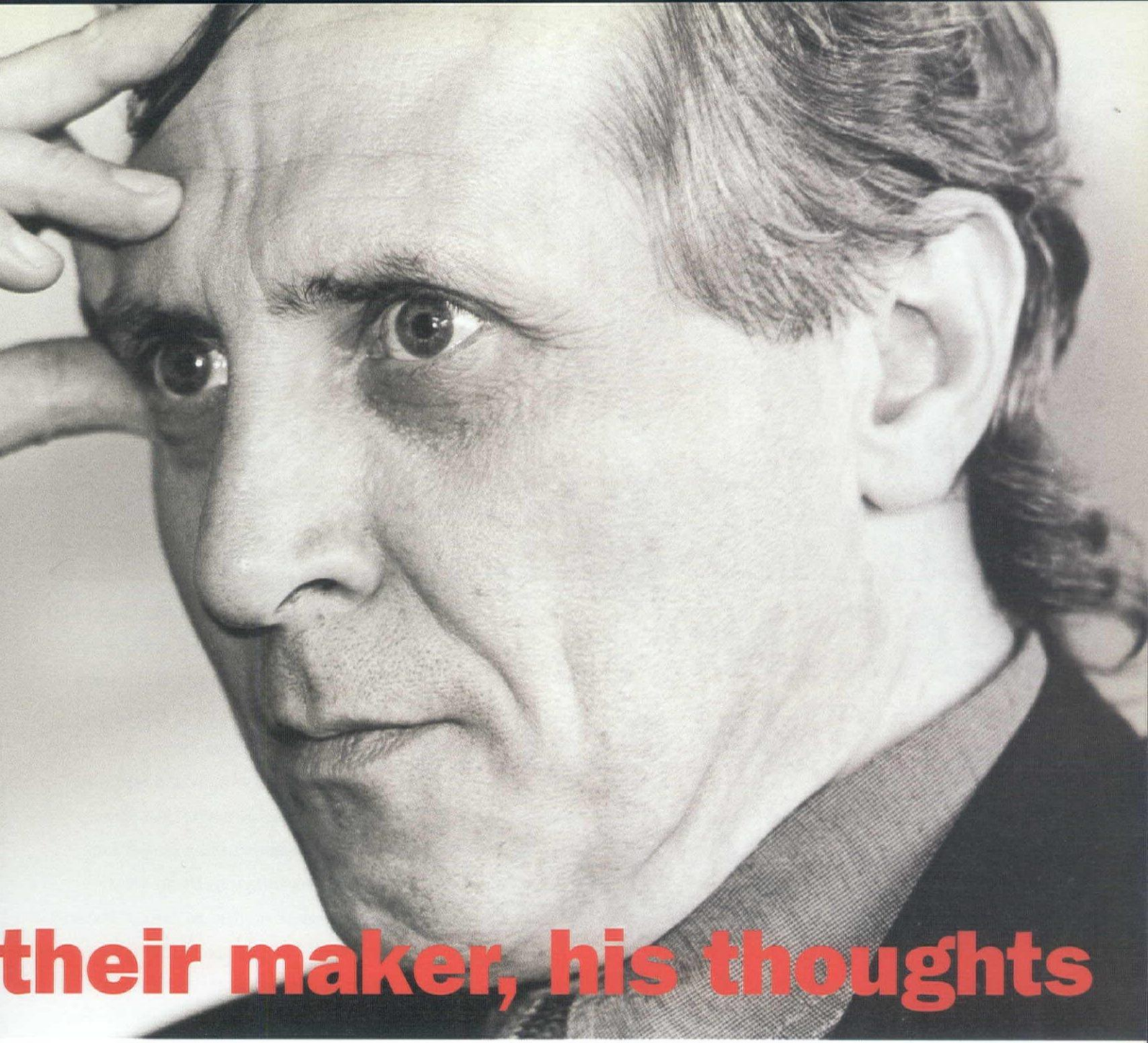
# Architecture, some films

"It is pathetic" Peter Greenaway told me on his return to England from Austria, "how you can't get an audience for interesting things". So does he think architecture is boring? "Oh no, architecture is the mother of the arts – in my next life I would be an architect, although I realise that it is a mistake to make an obsession a salaried career." But why did he choose film making as his career? "Well, I thought that cinema was the ultimate, Wagnerian grand house of all the Arts. But the more I practice it, the less I believe it to be the case. It has potential but it is young and just look how long it has taken for the aesthetics of architecture and painting to organise itself. In fact, I don't think we have seen any cinema yet. We have had one hundred years of prologue."

So what exactly is the connection between the "aesthetics of architecture" and the not-yet-realised cinema that Greenaway has been lecturing on? "Literally or metaphorically?" Literally. "Well, literally there is a way in which cinema is predicated on a piece of architecture called a cinema. OK you can hold up a sheet in an African desert and project an image onto it but it is never the same thing. So in a peculiar way, yet again, like all the other art forms, cinema is architectonically organised and concerned and focused by architecture." And metaphorically? "Like cinema, architecture involves space and movement and time and a 360-degree world and certainly all five senses. I have felt a strong tendency to regard each film as being in some way self-consciously, architecturally constructed."

But cinemas and metaphors aside, how much contact has Greenaway had with the actual practice of architecture? "Nigel Coates was supposed to do the drawings of the house for 'The Draughtsman's Contract' but they were too airy fairy and distant. The whole point of the film was to be as accurate as you possibly could about what is seen. I sacked him and did them myself." Greenaway is an excellent draughtsman and after his fine art degree at the Royal College of Art in London he retrained as a film director, but, by way of explanation, he took me outside his glass greenhouse editing room in west London and showed me his "dictum", a photocopied quote sellotaped to the wall: "'Draw what you know and not what you see.' – Picasso. See that? Well I was trying to achieve the opposite."

How ever suspicious we might be of his "architectural" labelling, Greenaway's films demonstrate his artistic preoccupation for the laying-out of plans and charts and developing three dimensional structures: "The Draughtsman's Contract" is an architecturally constructed film around one existing building in



# their maker, his thoughts

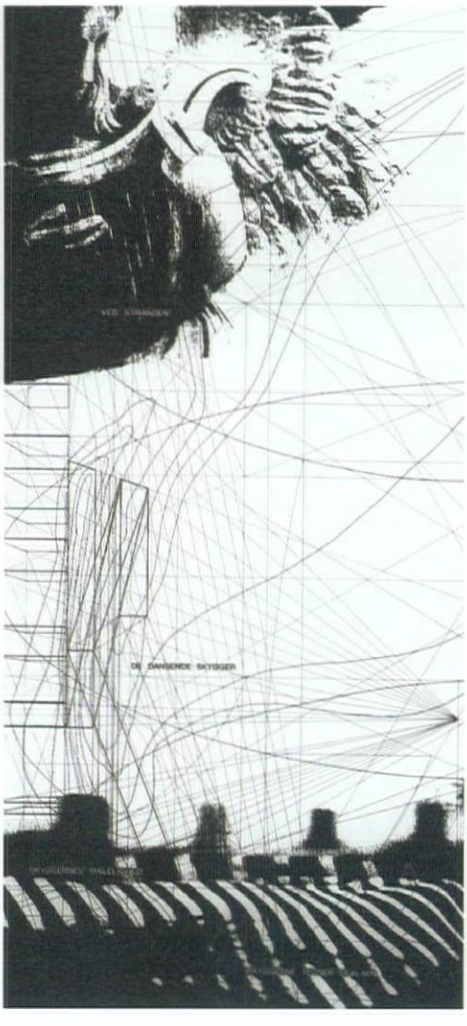
Groombridge near Tunbridge Wells; "A Zed and Two Noughts" uses a group of buildings; "The Belly of an Architect" examines the French "urbaniste" Etienne Louis Boullée's plans for designing an entire city; "Drowning by Numbers" films the relationship between buildings in a rural space and, last but not least, "The Cook, the Thief, the Wife and her Lover", "Prospero's Books" and "The Baby of Maçon" are all shot in continous interiors and seem to use the architectural context to link a series of unconnected situations.

Conversely, Greenaway's films have directly influenced architecture. "We were asked for permission to reproduce the beach house we built for the set of 'Drowning by Numbers'. Because of various hold ups, that was filmed on the beaches of East Anglia in late autumn and everybody froze. I hope they build it somewhere warmer!" Stylistically, Greenaway relates to postmodernism "the attempt to bring back symbolism and metaphor into architecture". But Bernini is the architect he most admires – "I am lucky enough to have electric light to explore the whole world of Baroque illusionism where Bernini left off. My God, the Roman Catholics had it licked in terms of architectural ambience and the ability to bring everything together to create a spiritual experience." Apart from staging dramatic *son et lumières* in cathedrals all over the world, Greenaway's lighting collaborator, Reinier van Brummelen's lighting of the Acropolis in "The Belly of an Architect" was so admired that plans are afoot to light it permanently.

So what, in fact, are the essential differences between architecture and film? "There is a great comforting sense of permanence about architecture which you don't get from all the reels of film surrounding us in this room. In films everything is transferable because of the digital revolution. That is something that can never happen to architecture. St Paul's cathedral is St Paul's where as you could easily turn the 'Draughtsman's Contract' into something else." Strange to hear the *enfant térrible* of film using the word "comfort" in any context, but he soon snaps out of this nostalgic reverie: "Architecture brings out the worst in people. Don't you think? There is a desperate conservatism, real lack of ideas in the way that people shock and horror at something new. What is so pathetic is that within ten years, everyone loves what they originally hated. It happened in Bath with Nash's jerry-built Georgian terrace houses which are now a *pièce de résistence* and it will happen with Libeskind's deconstructivist-style proposal for an extension to the Victoria and Albert Museum in London. I mean how fickle. How fickle we all are!" **WA**

# READING COPENHAGEN

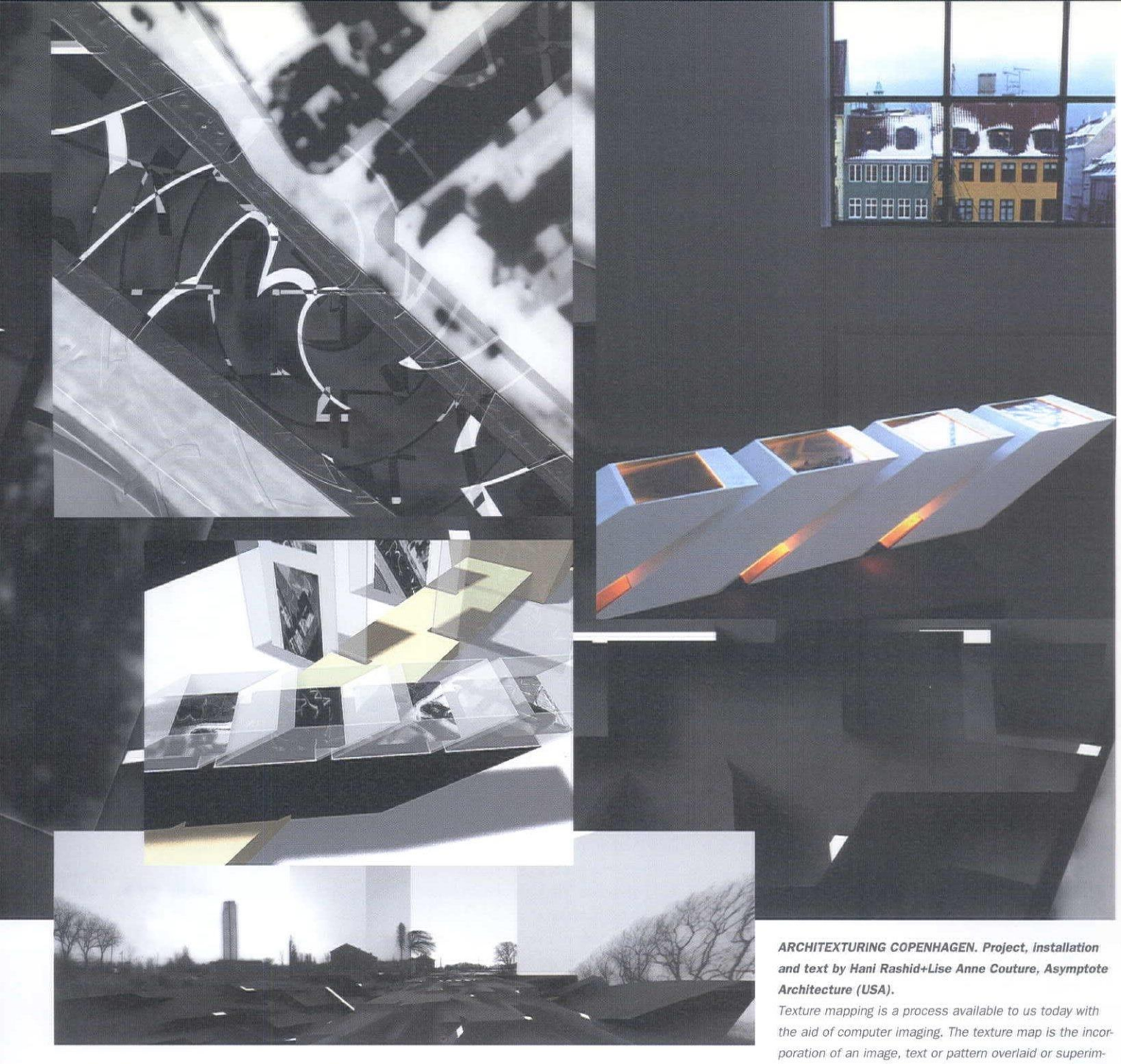
**Copenhagen – the Cultural Capital of Europe for 1996, came under architectural scrutiny at the conceptual exhibition "Overlooking the City: Copenhagen as it is Perceived". Several architects, including Enric Miralles, Hani Rashid+Lise Anne Couture, Wim van den Bergh and Cort Ross Dinesen/Birgit Ostergaard, were invited to create visionary projects to explore the correlation between the city's physical reality and its cultural, intellectual and sensual appearance. Helle Juul and Flemming Frost – initiators of the exhibition told Georgi Stanishev about the goals of their project.**



***ZIGGURATEN/Ved Stranden. Project, installation and text by Cort Ross Dinesen/Birgit Skovfoged Ostergaard with Charlotte Szots, Carsten Holgaard, Torsen Vestergaard.*** *The shadow draws the scale. The drop is formed by the light. The darkness stands out in the matter. The fortification of space. The outpointing body. The impression of the construction.* ***Top*** *Pictures from the film for the exhibition by Lars Johansson*

Architecture is in many ways a collective matter. Historically, it is the public space in between the city's buildings that has formed the framework for the life of the community. Within a democracy, the decisions regarding this "urban space", its appearance and organisation, are subjects of general interest and debate.

This public awareness of the impact of architecture on our way of life is reflected in the growing demand for insight into the aesthetic, cultural and social aspects of architecture. To encourage participation a conceptual exhibition held at the Charlottenborg Exhibition Hall: "The Cultural Capital of Europe", with the conceptual exhibition "Overlooking



***ARCHITEXTURING COPENHAGEN. Project, installation and text by Hani Rashid+Lise Anne Couture, Asymptote Architecture (USA).***

*Texture mapping is a process available to us today with the aid of computer imaging. The texture map is the incorporation of an image, text or pattern overlaid or superimposed onto or within any other computer generated surface, construct or image and is entirely different to the traditions of collage or montage. It integrates by means of dispersion and difference as opposed to the collagist's methodology of combination by similitude and the erasure of the seam. Procedures:*

***1*** *Subject the city plan of Copenhagen to an external and impartial device thereby isolating various unexpected "overlooked" territories, containing latent programmes and architectures brought to the front by means of a series of chance texture mapping operations.*

***2*** *Texture maps are formulated according to certain "field operations" retrieved from combining maze and labyrinth mathematical strategies.*

***3*** *These combined images reveal potential strategies for architectural interventions within the residual territories made apparent through aerial surveillance.*

***4*** *Programmes are integrated through another set of operations assuming that tourists will, despite themselves, always discover the overlooked sites, although they may not necessarily acknowledge their presence. These sites therefore contain an imminent architecture and may become actual sites of spectacle and revelatory sites of appreciation*

the City: Copenhagen as it is Perceived", aims to explore urban space as both a concept and as a perceived reality.

The exhibition consists of two parts. The first is built up like a street cutting diagonally through the exhibition space and tracing the evolution of different ways of seeing and perceiving the urban texture through historical examples. The second part entitled "The Cartography of the Pause", places emphasis on meaning of the notion *overlooking*, which deals with the obscure transitions and pauses in between places in the city – culturally and socially saturated with meaning.

The "Cartography of the Pause" is theoretically based on the correlation between two geometrical systems of identification:

The first is the "Roder Plan" of 1649, a cartographic analysis extended in 1989 by the architect Nis Nissen. This analysis was proven to be congruent with the organisation of significant sites such as observation posts and monuments.

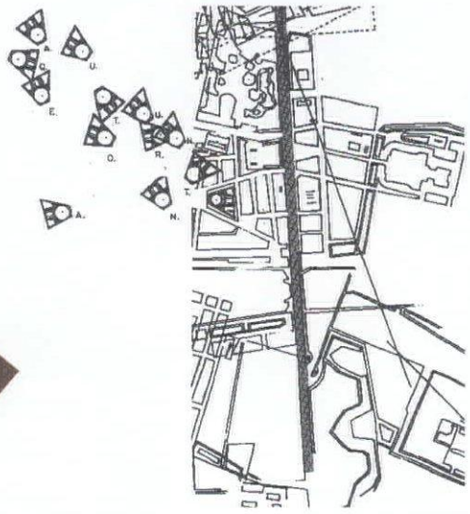
The second system of identification was the "Universal Transverse Mercator Grid" (UTM), a global identification system, which, unlike the "Roder Plan", is a projection achieved with an abstract, modern, technical and global cartographical tool. Where the "Roder Plan" fixes places of meaning the UTM net locates arbitrary places in the city-context. Thus the correlation of both systems creates an alternative way of reading Copenhagen's architectural memory and establishes new fields and places of meaning.

Helle Juul and Flemming Frost have chosen to let the UTM grid point out 16 locations in Copenhagen, corresponding to the area covered by the Roder Plan. A new reading of Copenhagen evolves through contributions from invited international architects asked to create their visionary projects and installations related to one or more of these 16 chosen locations.

**Georgi Stanishev: Your exhibition was conceived to be an exploration instrument**

***OVERLOOKING THE CITY. Project by Enric Miralles (Spain).*** *Construction always starts through destruction. It is this that allows new relationships to be built.*

*The material produced is formed by a series of objects derived from thoughts difficult to explain with any clarity. We have been using some definitions from Debord's texts in a direct operative way. In the Situationist's ideas we developed the concept of freedom of movement which Copenhagen has never allowed itself to have. Through Debord's texts we accepted the idea that the city could move, like the reflected image of a Parisian avenue. This mirage is guided by a positive desire to open the city up to more generous dimensions. Each one of the horizontal levels in the model represents one of the moments in this change of images. The city has turned it into a real "plaque tournant" – a point of detour of pre-existing elements, the integration of artistic production into a superior construction of an environment*



**intended to correlate the physical existence of the city with its mental, cultural and visionary maps. How does it work?**

Helle Juul & Flemming Frost: The "Cartography of the Pause" deals with the question of meaning and understanding. We focus on obscure transitions and pauses in the city, which are only seemingly empty. If one focuses on them, they reveal unexpected secrets and thus provide a completely different way of interpreting the concepts of site and space. The instrument, as it might be called, unveils the possibilities for reinterpreting the in-between as the kit that glues the understanding of the city together. In the classical sense the systems of urban meanings were represented through the position of monuments. Today we believe these fixed systems are substituted by the displacement of meanings towards non-predictable processes that contain both the permanent and the changeable – like in the myth of Hermes and Hestia.

**What were the basic goals and functions of both sections of the show?**

The two sides of the show complemented each other. The sequence of historical paradigmatic sights presented at the first section works as a background for the "Cartography of the Pause" project. The classical cartography leaves out what you focus on in the "Pause", where the "left over" turns out to be in focus. So there is a constant dialogue between the different parts of the show – from being the one that overlooks to being the one surveyed, for example.

**Where did the notion of the "Pause" come from?**

Regardless of whether the urban space has been the original aim or a succeeding order, it represents an attempt at focusing, at securing a locality in a glance, in aggregating a number of dimensions into one single apprehension. This volition to focus will always evoke the unseen and the overseen. The places that are brought about as physical realities are in between the incidents of understanding. You might call these places the pauses of the understanding. A position of waiting and procrastination, so characteristic of situations about which we have yet to shape our own conceptions. Such pauses are found everywhere in every city. Nobody has conceived them or willed them into being. They have turned up by themselves through collisions, like holes or sites of oblivion. They are always found at the boundaries of thinking.

**How did you get the idea of overlapping the UTM grid with the natural grids of the city texture, so that randomly pointed and un-recognisable locations became "heroes" of the show?**

The idea of looking at the Copenhagen network in this way stems from our basic conceptual attitude towards urban design achieved through our masterplan projects in Berlin, Paris and Copenhagen. Our intention was to create an urban tool through which we would be able to position – to anchor – the unpredictable urban planning process. We don't believe we, or anyone else, can claim to be in a position to predict the evolutionary mechanisms of the city. Our intention is to explore the rules for possible urban development through focusing on the overseen pauses – the places with no intentional traditional meaning. Thus the concept of the "Pause" maintains the role of the underlying hidden, anonymous network, that ties the city together.

**Were you satisfied by the resultant projects of the invited architects?**

The invited architects answered the challenge of the programme in different but spectacular ways, experimenting on various methods of working with the city. Our impression was that the architects have been extremely fascinated and positive about the process. Of course, you must have in mind that we invited conceptually oriented architects who previously had been involved in these kinds of problems, so there was a long preliminary theoretical correspondence. But our expectations primarily were to use these contributions to affect people's minds and imaginations regarding the possibility of architects being artistic in the method of working with the city. Thus the general result of our project was in the development of awareness and increased consciousness of urban phenomena. It means a mental change that, hopefully, in the future will have an impact on urban planning and design.

**What will be the future development of your exhibition in 1996?**

The project started as a Copenhagen Cultural Capital '96 exhibition and will now be shown all over Europe. The next step will be a "Summer Academy of Architecture – Studies in Large Scale Architecture", this September. And as the final architecture exhibition of the cultural year we are organising Dokumenta of Architecture, which will take place between 30 November - 16 December 1996 in Den Frie exhibition hall in Copenhagen. For this show five international schools of architecture – Barcelona, Helsinki, Lund, Bartlett, and the Berlage – are contributing. The Dokumenta of Architecture will also embrace contributions from architects, artists, photographers, filmmakers, visual artists, etc, from East-European countries. We see the final exhibition of this cultural capital year as a statement where architecture is the host of a future gesamtkunstwerk. A work of art that deals not with the creation of a total understanding but with variation of meaning. **WA**

***CON-TEMPLATION FOR COPENHAGEN***

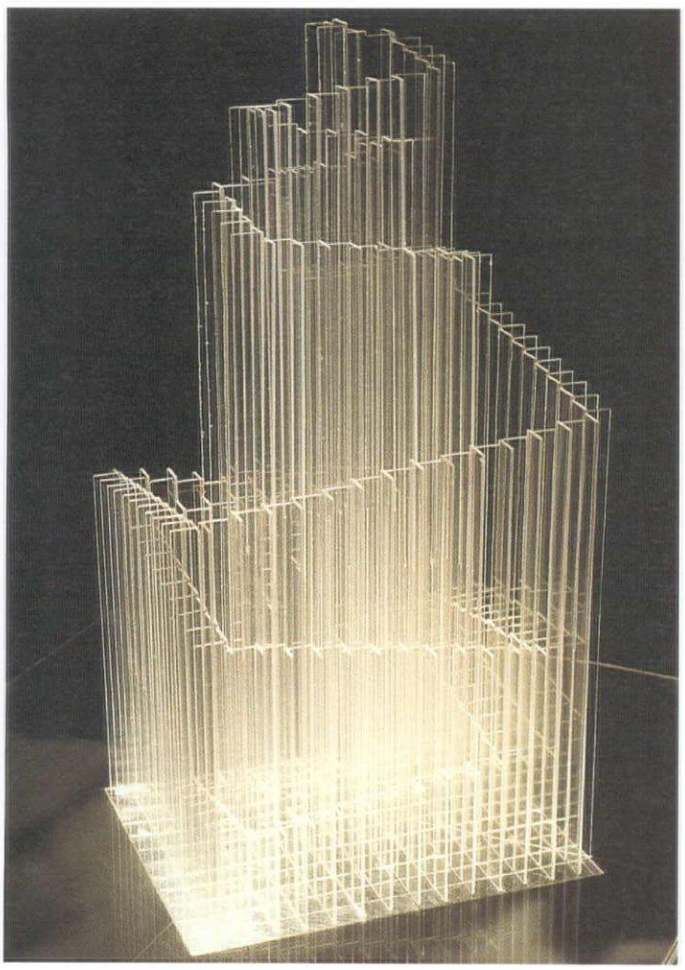
***Project by Wim van den Bergh (Holland)***

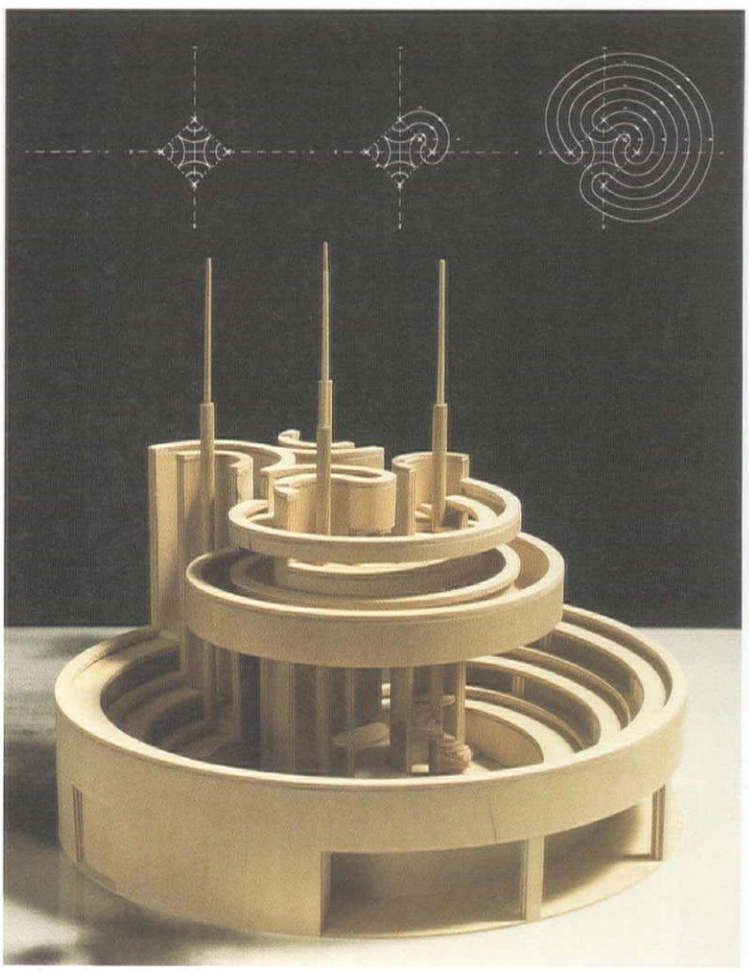
*When perceived as artefacts developed over time, cities often appear to us as accumulations of effects, the causes of which are mostly imperceivable, unknown or lost. Streets have directions but what caused their direction? Urban blocks have a shape but what caused their shape? There are colours, materials and textures but what caused their selection? The appearance of a city in relation to its perception and apprehension develops the other way around, by means of a sort of reversed causality. A reversed causality in which, from an individual's point of view, the existing and perceived effects are read and become the cause for imagination of the new effects, a new appearance like in Calvino's "Invisible Cities". Thus the existing effects are first read and then, in reverse, overlaid with the unifying concept of a plausible cause, which then becomes the cause for the new effect, a concept for the city's future appearance.*

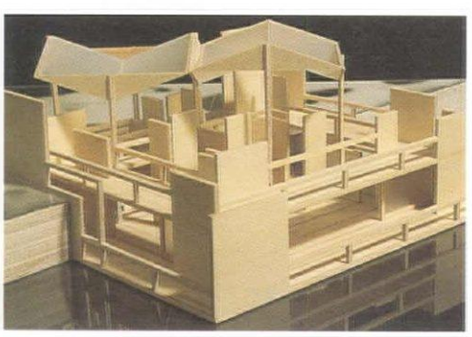
*Hence what was asked from the participating architects was actually to act as the Augurs – the readers and interpreters of the signs that appear within the templum of each of the locations – and to inaugurate the sixteen sites they were given. In ancient times an inauguratio lay at the basis of every organisation of space. The transformation of non-locations into specific and universal locations, like the founding of a new city, happened by means of a complex rite called Contemplation.*

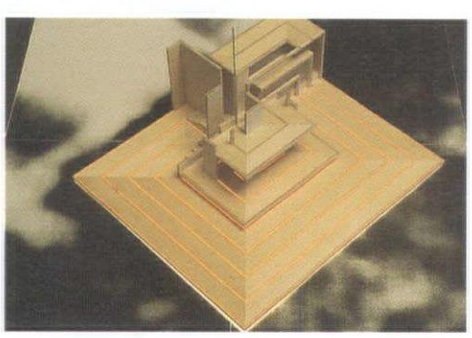
*My contribution for the exhibition "Overlooking the City: Copenhagen as it is perceived", consists of a number of so-called Con-Templations, which following a series of procedures, results in three-dimensional designs for each specific location: Museum of Unlimited Extension, Theatre of Representations,Observation Tower, Pavilion of Presentations, Box of Miracles, Wind Rose Tower.*

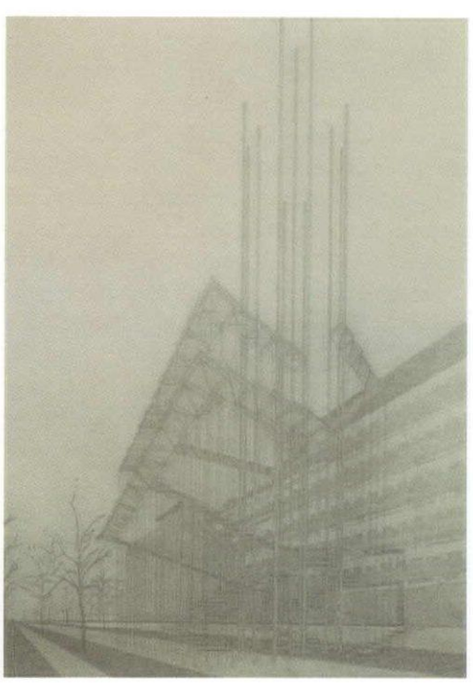
*This project was supported by the Stichting Fonds voor de Beeldende Kunsten, Vormgeving en Bouwkunst*

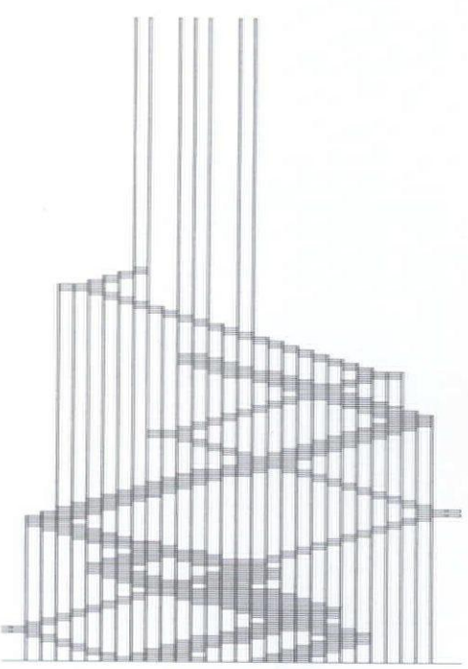




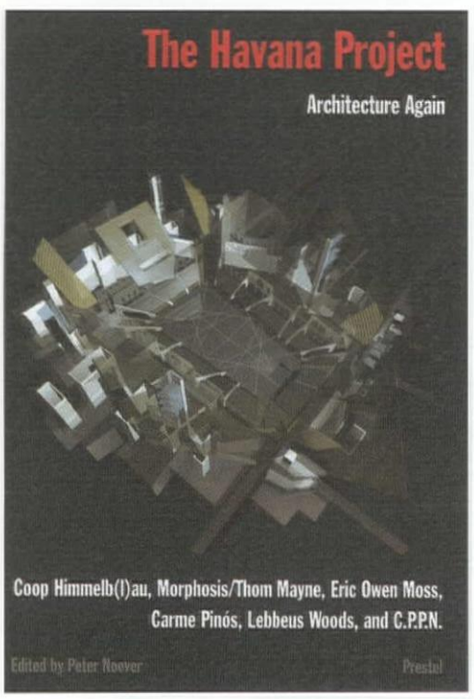








# Books




## THE CUBAN QUESTION

**The Havana Project: Architecture Again.** *Edited by Peter Noever, with Coop Himmelb(l)au / Wolf Prix,, Morphosis / Thom Mayne, Eric Owen Moss, Carme Pinós, Lebbeus Woods, C.P.P.N., Munich & New York: Prestel, 1996, 184pp, b/w and colour illustrations. £15.95/ US$23.92*

*Reviewed by Jean Stubbs*

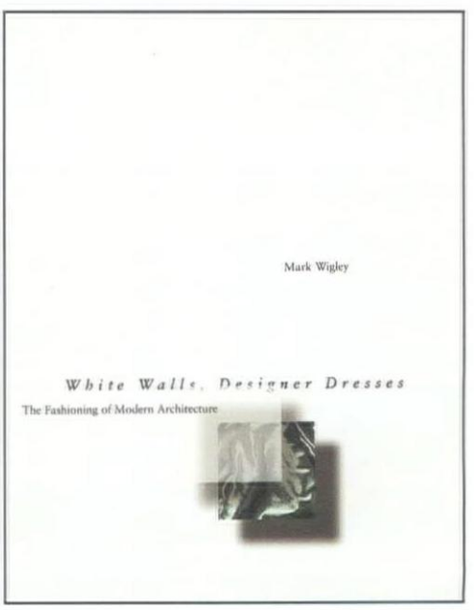
In December 1994, a small group of internationally renowned, radical and innovative architects from Europe and the United States travelled to Havana. The first part of the book records their incredibly mixed impressions which mirror my own vivid memories of when in 1968 I first wandered that city, so desolate yet alive, an architectural ruin yet of incredible beauty. Ironically, with Cuba still cut-off from the United States through a 35-year, US-driven embargo, the situation they encountered is oddly parallel to that of 26 years ago.

Havana is often depicted as a city caught in a time warp, romantically celebrated for its Spanish colonial buildings and squares, its Americana art deco and vintage cars. Yet, like many sprawling modern cities, it is the urban planners' nightmare. This, the architects recognise full well. They see the paradox of a physically ruined but socially alive city, a city whose splendours were built for people and purposes gone, haphazardly adapted by its present inhabitants. They muse on their own limitations and possibilities in developing new dimensions within the dichotomy of historical tradition and present, when they are foreigners and not starting out with a specific commission. They astutely recognise two fundamental points: first, Havana's architecture no longer represents its society and second, Havana itself doesn't know what it wants.

Mission impossible, the visitors declare; no common ground. Architects are for the large scale; the small scale is for the people. Architects can perform surgery on the body, not bring spirit to the city. The six projects comprising the second part of the book reflect this duality. Vienna-based Coop Himmelb(l)au and Wolf Prix sketch models for a planning strategy whereby the city builds itself; while C.P.P.N. Carl Pruscha and Peter Noever juxtapose a modern port entrance to the old city. California-based Eric Owen Moss proposes a futuristic redesign transforming the old market square into a forum-theatre-stadium. New York's Lebbeus Woods designs a seafront terrace with protective swivel seawall along with a modernistic city wall following the ruins of the old. Barcelona's Carme Pinós takes the city to the sea, protecting it by offshore breakwaters, working "with the senses and the sound of water, with interwoven movements and countervailing forces".

The book ends with a short interview with the editor Peter Noever in Havana in January 1995. He concludes: "The world has more architectural historians, or architects concerned with architectural history, than real architects. I am sure that historians, wherever they may be, will all be shocked by the proposals made by this group for Cuba. The shock is not the condition of Havana. It has nothing to do with so-called remoteness. The world is overflowing with ready-made recipes. Critical power is very low everywhere, and most of the things that are happening are, if not conventional, then convenient."

As an historian, though not an art or architectural historian, I inevitably see the past as integral to how we shape the present for a better future. I also recognise the pitfalls of re-inventing historical tradition for heritage purposes. My shock, if it can be called that, is nonetheless of a different kind: that such an exciting and innovative group of architects, when faced with the urgent challenge that is Old Havana today, seek refuge in projects which, while of architectural interest, tend to be piecemeal, if not oddly inappropriate, on almost predictable sites. I found the most practicable those related to the sea, which has recently occasioned serious flooding, and the seafront, long in need of regeneration. It is perhaps a historical irony that Old Havana, so twinned with Barcelona in its nineteenth-century architecture, might follow Barcelona's lead in this last respect. More of a paradox, the new world order market forces the US espouses, might already have irretrievably predisposed Havana in altogether different directions. Tourist and dollar economy enclaves already sit as architectural oases amidst want and delapidation. Would any one of these projects be significantly different?




## MODEST MODERNISTS

**White Walls, Designer Dresses.** *Mark Wigley. MIT Press. 452pp. 115 b/w illustrations. £29.95/US$40*

*Reviewed by Alan Powers*

On the final page of this medium-length book the author describes it as "an extended essay" which "has but lightly scratched" the surface of its subject. This shows a commendable modesty, and an awareness of limitations which will certainly be shared by readers.

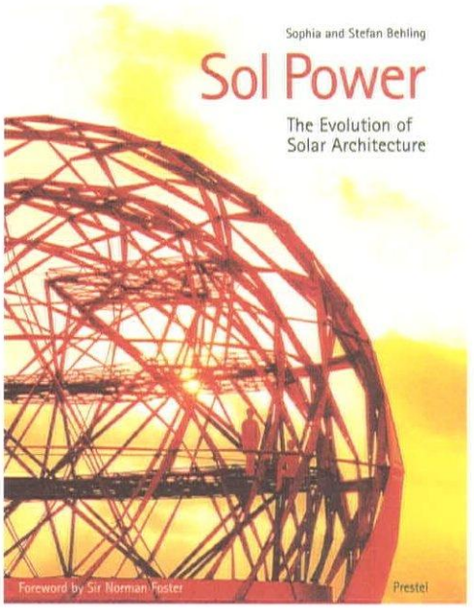
The book, organised in a series of ten "takes" rather than chapters, is concerned with the relationship between architecture and fashion in the early modern movement. The thesis, broadly, is that the ideology demanded white buildings

(even if, as he points out later, they were not in reality completely white) in order to establish its unchanging Platonic claims against the shifting alternative of fashion. What makes this over-familiar argument more interesting is Wigley's discovery of a body of writings by leading modern architects about the issue of dress and fashion from which they were apparently in full flight. The discourse which is most familiar from the writings of Adolf Loos has a pre-history and a sequel, but it becomes all too clear that architects entering the discussion had a very narrow understanding of dress and social anthropology when they automatically condemned fashion. They also assumed *a priori* that fashion was bad, and deduced that women must be responsible because men's clothes appeared to be outside the domain of fashion.

Wigley's book sticks to a very limited range of discussion. Feminism is nowhere introduced as a corrective to the misogyny of so much of the material. None of the more sophisticated readings of fashion now available are placed in comparison with the naive polemics of Loos, Le Corbusier and others. What we have is a discussion about texts rather than about things and people, and by this token although the book cannot fail to be suggestive for current discussion, it remains isolated in a reconstruction of a small part of a long-lost mentality.

The job was done just as well as in Wigley's shorter essay in the Princeton symposium Architecture in Fashion (1994). One just longs for Vivienne Westwood to sweep onto this rather dusty stage of 1920s modernism and demonstrate by word and deed that fashion is superior to architecture in its understanding of man's (and woman's) place in the world and its ability to make life tolerable and exciting.

Of the condemned aspects of fashion that are capable of reintegration with architecture, Wigley's focus is on colour, to which he devotes one of his "takes". He rightly calls for a more advanced understanding of the subject, but sets out no general principles, weaving his source texts (mostly Le Corbusian) without making a pattern. Colour is only one aspect of textiles, which, rather than fashion as such, might have been a comparison between architecture and its other. There is an interesting comment from Le Corbusier in 1960 that the tapestry was suited to the transitoriness of modern life as the "murainomad". This appears to be a throwback to Gottfried Semper's theoretical grounding of architecture in textile structures, an argument that became distinctive of modernism only in terms that excluded fashion from the discussion. More reference to social anthropology might have enabled a different path to be outlined, a path seemingly more suitable to our present condition in an age where architecture's need to incorporate change is at odds with the fixed forms of modernism. Textiles are a medium for the transmission of all kinds of information as well as being increasingly sophisticated as building materials. Architecture could learn much from their study.




## SOLAR CHALLENGE

**Sol Power: the evolution of solar architecture.** *By S & S Behling. Prestel, New York, 240pp, b/w and colour illustrations. £42.50/US$63.75*

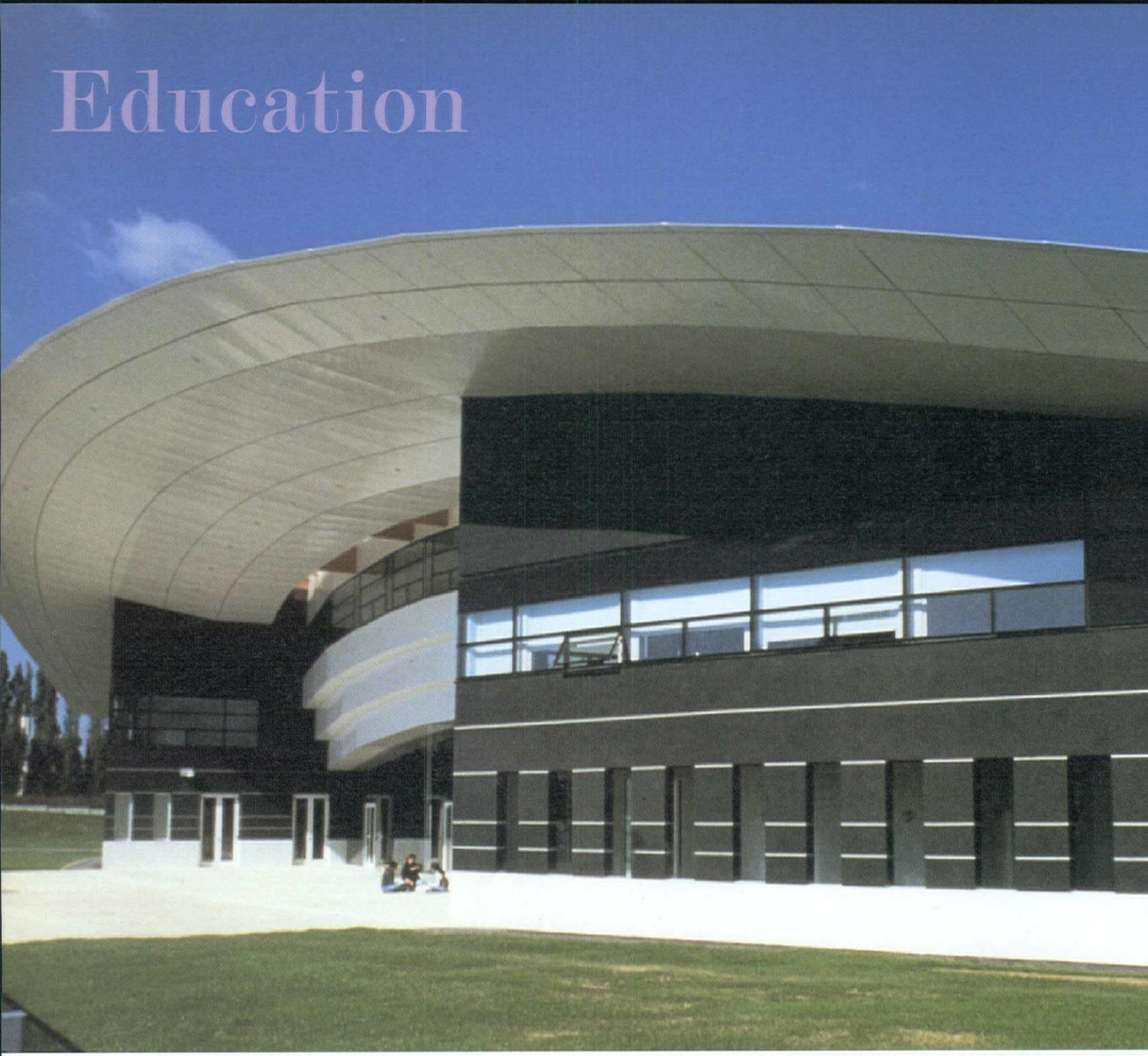
*Reviewed by Martin Pawley*

Perhaps it was the recent news that the world's insurance companies have awoken to the possibility of a global financial crisis that would ruin them and the banks as well unless swift action is taken to avert the kind of claims that could arise as a result of global warming, perhaps it was the culmination of a series of generous EC energy grants. What ever it was, the current view in the West is that environmental issues are intensifying their remorseless march from the distant horizon to centre stage. In the process they are turning their attention to one industry after another – transport, manufacturing, power generation and now construction. The last is an attractive target. In the developed world between 40 and 60 percent of greenhouse gases emerge from buildings. For this reason alone, in the next 30 years the focus of attention upon building emissions cannot fail to be increasingly intense and restrictive.

Enter the architectural profession, still adrift 20 years after the collapse of the modern movement, having lost an empire and – as far the Dr Kildare-style cruciality enjoyed by the great modernists is concerned – not yet found a role. But this time the profession scents victory. Whatever else they might be for, buildings are first and foremost about climate control, and climate control in today's buildings is the number one source of thermal pollution. If architects could keep buildings warm or cool without the aid of some gas-guzzling kit that has to be bought from a heating and ventilating manufacturer, cruciality would again be in their grasp.

Step forward Sophia and Stefan Behling, their mentors Sir Norman Foster and Bruno Schindler, and their book "Sol Power". As its name quaintly implies, this volume is about solar architecture, but that much said, nothing quite prepares a reader for the spectacularly bone-crushing thoroughness of its superb colour photography, or the pleasing tone of innocent simplicity and directness with which it explains the whole subject – from the solar system to photosynthesis, and from Mogul architecture to the evolution of industrial technology over 2,000 years, the wonder of the geodesic dome and the achievement of man-powered flight. There have been books on solar architecture before, hundreds of them, but none that I have seen so expansive, so enlightening and so guilelessly convincing as this one. So complete is this survey of the sun's impact on the earth, so enthusiastic its illustration of architecture driven by solar power, and so enthralling any length of time spent leafing through it, that criticism seems superfluous. If there does appear to have been distressingly little proof-reading or spell-checking done, and if there is not much by way of a conclusion except an EC resolution or two and a strong hint that the answer lies in the light technology of hang gliders, sail boards and photo-voltaics, no matter. Later editions can sort this out. Meanwhile, anyone who wants a grounding in solar technology and a massive encouragement to "go solar" in his or her architecture to save the planet should buy it. This book is worth every penny. **WA**

# Education

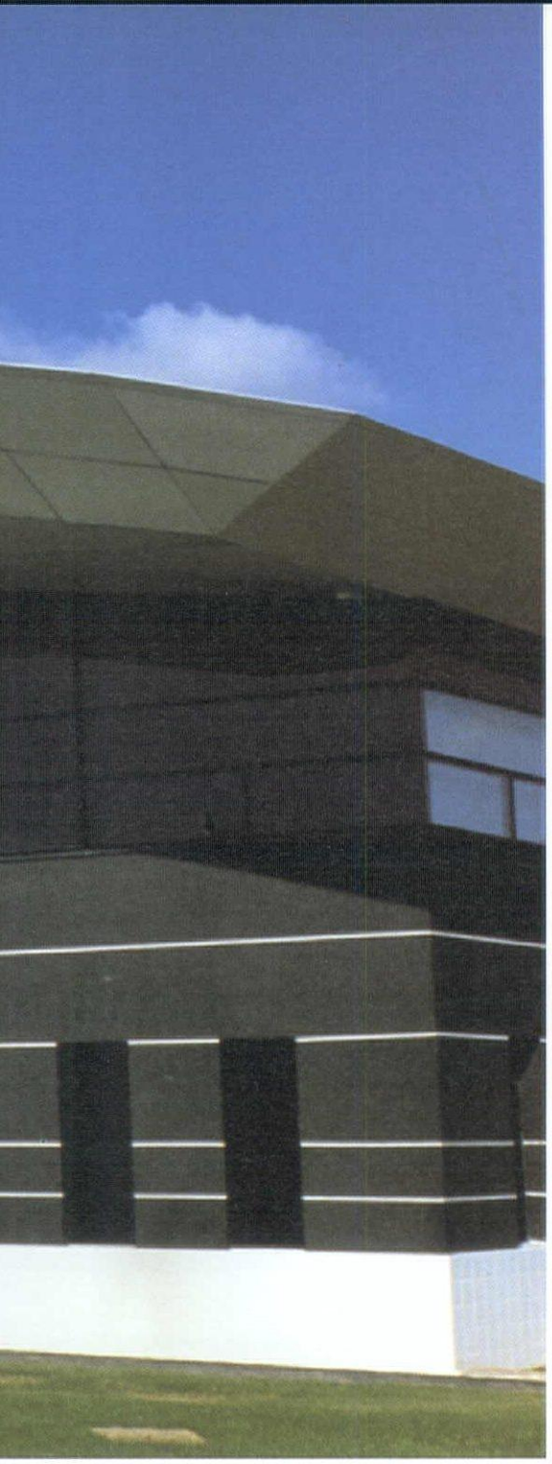


# Schools of thought

**Across the globe educational facilities are reflecting the health of regional construction industries with high profile projects from architects – including Stirling and Wilford's giant Temasek Polytechnic in Singapore, Itsuko Hasegawa's Busshoji Elementary School in Japan, and Miralles and Pinos' Morellas boarding school in Spain – as well as more humble additions and adaptations to existing schools and university campuses. David Cohn in Madrid, Peter Wislocki in London, Joshua Levine in Kuala Lumpur and Michael Crosbie in Connecticut, provide an overview of the political and economic policies that drive education projects across the world.**

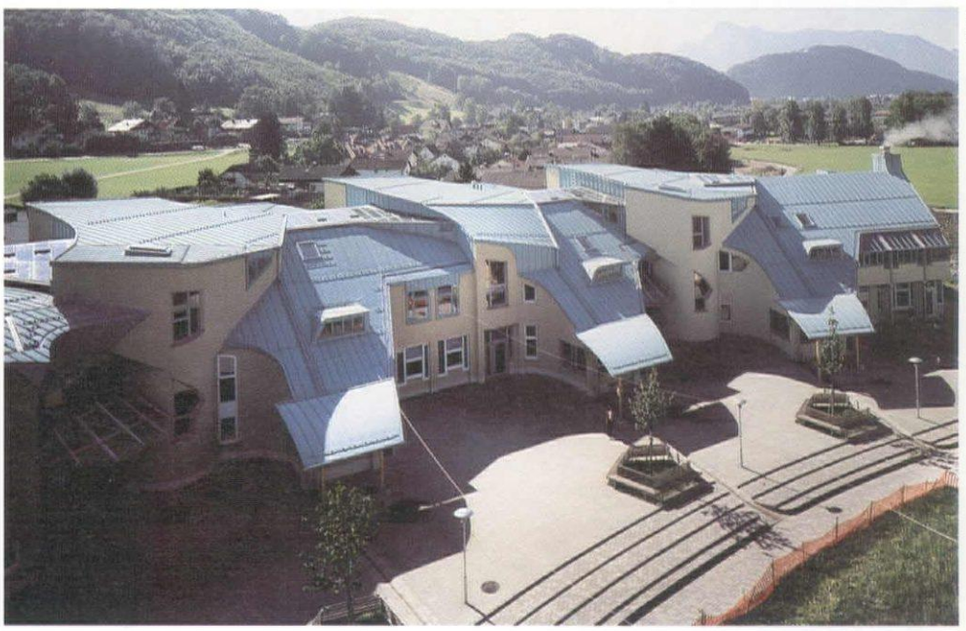
## CONTINENTAL EUROPE

Educational facilities have been an active area of construction in continental Europe over the past five years, although a downturn is now evident due to Maastricht's stringent public deficit criteria. Spending tends to follow global strategies for economic development, ranging from basic facilities in less-developed areas to the technological research centres that lead growth in advanced economies. In rural Spain we therefore find Enric Miralles' and Carme Pinos' Morellas School, a public facility with boarding accommodation for children too remotely located to be bussed daily; while the 1994 research centre of the University of Ulm West in southern Germany by Otto Steidle + Partner presents with its mock-rural timber framing, a curious contrast to the sophisticated topographic forms of Morellas.



Deidi von Schaewen

Heinrich Helfenstein



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***Left** Lycée Polyvalent of Limours in France by Alain Sarfati. **Top** Hans Kolhoff and Olga Timmermann's crèche in Frankfurt, Germany. **Above** Rudolf-Steiner school in Salzburg, Austria by Billing Peters Ruff + Partner*

**Effects of administrational decentralisation**

Between these extremes, the bulk of growth has come from the impact of administrative decentralisation and related provincial development, as seen in a host of new university campuses: the suburban campus of the University of Vigo, Spain or the University of Toledo, installed in under used convents in the old city; the University of Aveiro, Portugal, with buildings by Alvaro Siza, Eduardo Souto de Moura and Alcino Soutinho; the Karl-Franzen University in Graz, Austria; or the recent consolidation of Turin's University Institute of Technology by architect Roberto Gabetti, to cite a few.

In Germany, development in the former East Berlin has included massive school building, cut short this year by budget cuts, while the continuing incorporation of women in the workplace has led to pre-schools such as Hans Kolhoff's and Olga Timmermann's in Frankfurt.

**France – a cut above the rest**

But France stands out amongst these initiatives for its "Université 2000" of 1991, a 32 billion franc, five year national plan involving over 60 campuses and 1.5 square metres of space, mainly concentrated in existing urban centres of the 1950s and 60s. Planners such as Herzog and de Meuron at the University of Bourgogne in Dijon reject the typical isolation of the post-war campus, seeking to integrate facilities in the urban fabric as a vital element of local livelihood and growth. Governmental decentralisation in 1986 has also lead to investments in primary schools, conceived as multi-use civic centres for residential areas (as in, for example, the Lycée Polyvalent of Limours by Alain Sarfati).

Beyond the trend towards scientific research parks, France has also pioneered in new institutional concepts for the arts and humanities to meet changes in communications technologies, from the médiathèques replacing conventional libraries such as Norman Foster's Carré d'Art in Nîmes, to new creative-training centres such as Christian de Portzamparc's Cité de la Musique in Paris and Bernard Tschumi's upcoming National Studio of the Contemporary Arts in Fresnoy.

## UK

**Competing for distinction**

The late 1980s and early 1990s were a period of unprecedented growth in UK higher education. Britain appeared to have lagged behind its major economic rivals in training and research, so government policies crudely encouraged institutions to recruit more students. Colleges of higher and further education became polytechnics and, in 1992, the polytechnics became universities. As distinctions between the academic elite and more vocationally oriented courses

Reinhard Görner

***Above*** *The University of Ulm West in southern Germany, by Otto Steidle + Partner, with its mock-rural timber framing*

were officially abolished, competition between the new and older universities became more intense. This situation was sustainable in a growing market, but by the mid 1990s government policies had dramatically reversed, capping student numbers and financial revenues. Worse still, the last budget of November 1995 marked the complete withdrawal of central government funding for education capital projects.

Primary and secondary education now operate in a more competitive environment, increasingly reliant on private finance and income generated from activities other than the core teaching of schoolchildren. Across all sectors, governing bodies have been given more freedom to operate entrepreneurally – an increasing commercial imperative.

**Taking advantage of changing policy**

The impact on buildings for education has been surprisingly positive. Five architects emerged to take advantage of this unsettled situation: Richard McCormac, Edward Cullinan, RMJM, John Miller and Rick Mather, and their projects demonstrate a lively interest in original solutions for the nineties. Flexibility and quality are the key issues. Facilities must accommodate internal and external (income generating) uses. Dedicated teaching spaces are rare, as schools and colleges have introduced centralised time tabling systems, in which activities are distributed amongst generic classrooms, lecture theatres and seminar spaces. Networking for telecommunications and IT is increasingly required throughout educational buildings. Only workshops and laboratories remain specialised in form and equipment.

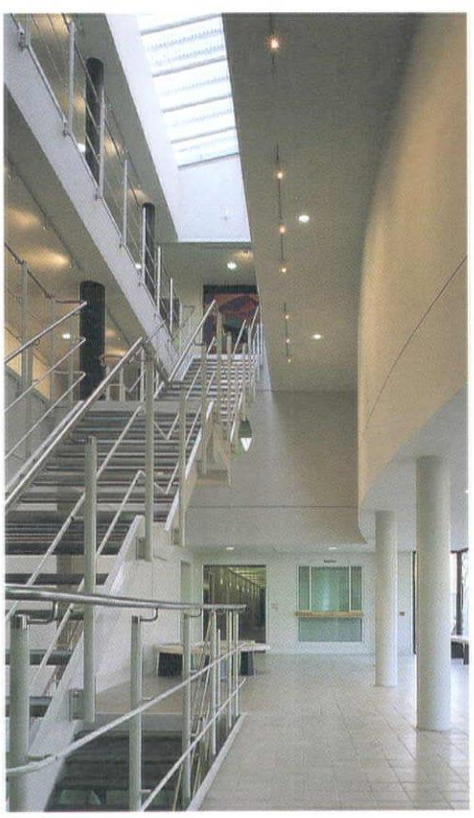
As schools and universities are becoming more skilled in marketing themselves to potential students as well as commercial users of the facilities, new buildings are coming to the fore as one of the most tangible assets on offer. The Queen's Building at Emmanuelle College, Cambridge built by Michael & Patti Hopkins in 1995 is an example of a tangible marketing asset which has generated considerable revenue for the university. The utilitarian architecture of publicly-funded education of previous decades fails to match the imagery and specifications demanded today – although, despite more generous equipment finishes, and striking aesthetics, today's buildings lack some of the underlying social idealism of the welfare state of the late 1950s and early 1960s. The "Meisian" Hunstanton Secondary School (in Norfolk built by the Brutalist architects Peter and Alison Smithson in the 1960s) expresses a social ideal where as the gothic style Engineering building at De Montfort Universtiy Leicester by Short and Ford was recently erected with the idea of creating an image.

**Adapting to attract lottery funding**

The incorporation of explicitly "public" or "community" functions – such as art galleries or visitors' centres – raises the architectural ambition of projects and crucially places them within the criteria for funding from the proceeds of the National Lottery. Distinctive buildings, or even highly articulated parts of buildings, are also more attractive to prospective private sponsors and benefactors. Thus schools and universities have come to resemble business parks and, in certain aspects, conference centres, museums and art galleries. Corpus Cristi College in Cambridge wanted a library, and, although such projects are not normally eligible for Lottery money, they offered partial

***Above*** *Central School of Speech and Drama, Design Studio Terrace, London, by Hugh Cullum and Richard Nightingale.* ***Below*** *Interior and exterior of the Elizabeth Fry Building for the University of East Anglia, UK, by John Miller + Partners*

opening to the public and have therefore secured public funds.



## ASIA PACIFIC

### Malaysia: 2020 and beyond

Until the last ten years, the majority of educational development in Malaysia was at the primary and secondary levels. School design and curriculum were standardised by the Ministry of Education and construction funded by the national development agency, JKR. As Malaysia puts into action its 30 year development plan, Wawasan 2020, there is currently a political re-evaluation of the educational process. While a great deal of the JKR-funded projects are still implemented by larger development firms like Kinta Kellas, who recently built a school for the partially-sighted in Penang, the number of private and specialised institutions has increased. The first evidence of the emergence of new clients and school programmes can be seen in the building boom for university campuses and professional training centres. Firms like Group Design Partnership (GDP) Veritas and TR Hamzah and Yeang have recently completed, or are designing, educational facilities.

***Above*** *Kajima Design's Tokio Marine, Oyama Traning Centre in Kawachi-Gun, Tochigi Prefecture.* ***Opposite page top left*** *Simon Kwan and Associates Hong Kong Science and Technology University.* ***Top right*** *Marist Student Center in Poughkeepsie, New York, by Einhorn Yaffee Prescott.* ***Bottom*** *New Library at Rowan College, Glassboro, New Jersey, by Perry Dean Rogers + Partners*

**Hong Kong/China: Politics and convergence**

One of the topical issues is how the return of Hong Kong to China will effect project fundings and overall business practices. It is expected that the publicly funded educational projects initially will be less vigorous, but that private sector will continue to develop institutions at the current rate. Traditionally development and design of schools in China was done by governmental in-house design institutions. Recently, as the political situation has allowed more free-market practices, these design institutions are now privatised and in competition with each other. This should put the more experienced Hong Kong practices in a good position. Two firms who are known in Hong Kong for their school projects are Simon Kwan Associates and P&T Architects. The Hong Kong Science and Technology University and the Academy of Performing Arts, designed by Simon Kwan Associates and funded by the Royal Hong Kong Jockey Club, are two notable projects.

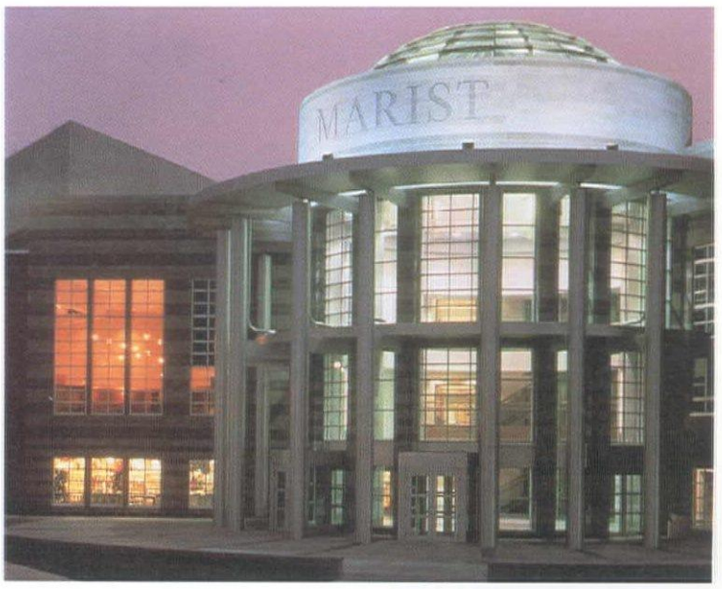
**Japan**

The recent reports that the Japanese economy is back to its previous form is good news for the students of Japan. In the early nineties, before the burst of the "bubble" economy, the national government was returning considerable amounts of tax money to the prefectures and the local municipalities. This money often went into the development of local institutional projects. Simultaneously, as Japan assumes its role as one of the leaders in the post-industrial age, there has been an on-going discussion as to the future direction of the school curriculum and new forms of planning. These two factors, money and experimentation, have contributed to the design of some of the most interesting non-institutional-looking projects in recent years. Most of the internationally known architects like Isozaki, Maki, Hasegawa and Kurokawa have designed schools and universities. Two notable examples are the Busshoji elementary school by Itsuko Hasegawa and the Keio University with projects by Fumhiko Maki and Yoshio Taniguchi.

**US**

**Trend setting**

The trends in the American market for education buildings indicate more emphasis on additions and modernisations for elementary, middle and high schools, while colleges and universities continue a building boom to attract students with new and refurbished facilities. For architects, this means more work in the realm of renovation – a market that has been growing in the US – for buildings of all types. Architects are finding new challenges in



Matt Wargo

the design of education buildings that respond to changing trends in education.

### All in the budget

According to a report by *American School and University*, construction of new school buildings dropped dramatically in the previous year by 20 percent, to US$3.76 billion. Total expenditures on school construction, however, were US$10.7 billion, indicating a surge in spending for retrofit, additions, and modernisations. Spending on college buildings saw a rise of US$300 million, to US$6.7 billion, with the biggest jump in spending for two-year colleges, whose construction budgets swelled by 24 percent. Budgets for four-year colleges, remain stable.

### Community design

In school design, architects have placed more emphasis on buildings that serve the community around the clock, throughout the year. To make bond issues for public school construction more popular with voters, designs that serve the community at large are prevalent, with sports facilities, meeting spaces, and auditoria for use after class hours. Adult education is also a need for new schools to address.

Carol Ross Barney, an architect in Chicago, has seen an increase in retrofit and modernisation of urban centre schools, and new buildings on tight urban infill sites. Barney also sees a trend away from "media" and "computer" labs, and the need to wire new schools for computers and media equipment in every classroom.

Elementary, middle and high schools also need to be flexible with spaces that can accommodate larger groups beyond the 25 to 30 student classroom. Boston architect Andrea Leers sees more emphasis placed on spaces for enrichment programmes such as art, music, science, athletics, and recreation. Physical education facilities for women in particular have seen a boom, observes Leers.

### Student demands

Colleges and universities now compete for students more and more on the basis of the quality of their facilities. Most popular in the education market today are student unions that offer a range of entertainment and social spaces, with shopping to compete with malls; dining facilities that are less like cafeteria and more like fast-food eateries; and residence halls (no one dares call them "dorms" any longer) in the form of smaller buildings with private suites and bathrooms. The residence halls at Boston College by Perry Dean Rogers & Partners, and their student union at Hamilton College are good indicators of the best in contemporary college facilities. **WA**

# A place to learn

## Hanscomb Associates

**Technological advances directly affect architectural intentions and nowhere is this more evident than in educational buildings. Being in the same place as the teacher and the information is no longer necessary. Hanscomb Associates analyse the potential impact of the computer age on the shape and form of educational institutions.**

Universities were the original forum for scholars to come together, to share ideas and resources. Printed materials were rare but became increasingly accessible to these scholars. Where scholars gathered they needed a place for interaction, for their books and for private study. Today, universities have many building types; classrooms, libraries, dormitories, student centres, athletic centres and theatres. However, the classroom remains the focus of teaching.

### University classroom buildings

A primary influence on university classroom building design is the institutions' and the departments' philosophies. The issue of whether a classroom building is for the exclusive use of one department or shared by other departments, clearly impacts its design. There are some clear design trends emerging. Notable amongst these is that classrooms are becoming more upscale. The institutional appearance of block walls and vinyl/plastic floors is yielding to a more "executive" environment.

This change may be less the result of a conscious decision to improve the quality of classroom space by university administrators (although this is a factor) than requirements forced by technology. With increasing use of video technology and computers for instruction, tiered classroom seating, common in most new classrooms, provides better sight lines for students, as does greater lighting control. With more students bringing computers to class, the provision of data jacks and power at student seating becomes important. Many new classroom buildings have this capability or at least provide for it be added easily.

Another technological trend is the increasing use of fibre optic cables. Campus infrastructures are being upgraded from wire to fibre optics, which is quickly becoming a standard, particularly at engineering universities.

There is a large stock of existing classroom space that must be renovated to meet these newer, more sophisticated requirements. Some of this space, particularly in smaller classroom buildings, cannot be easily renovated to accommodate the new standards.

The mix of room types in a classroom building will vary – lecture halls, classrooms, seminar/conference rooms – impacting the costs. Classroom buildings are more than just classrooms; they usually provide a gathering space for students to interact. In addition, they have faculty offices, which are increasing in size because of the need to accommodate personnel, computers and printers.

### Secondary schools

Over the years methods and philosophies of education change and these usually result in modifications to educational space requirements. Wherever change is an acknowledged factor in buildings, the issue of flexibility becomes important. Flexibility that anticipates future unknowns, usually costs additional money. Where local taxes are a predominant source of funds, the costs of schools can become a political issue. The dilemma is often between providing low cost facilities to meet existing needs and investing for flexibility.

Bill Brubaker, FAIA, of Perkins and Wills remarks that there are two things that powerfully direct the design of schools:

- the unique nature of the education programme
- the unique state of the site

These factors dictate that schools should be "one-offs", prototype schools usually do not make sense. School sites often pose difficult design problems. Costs for prime land is often prohibitive. Where available land site is restricted. Innovative solutions such as playgrounds and parking on the roof must be considered.

The school district enjoys long term cost benefits from this option. One option is lower operating costs from reduced staffing requirements and less built area. Further, by serving a larger area, the school is less likely to be affected by fluctuations in the student population from the neighbourhood maturation process.

Larger schools can provide increased opportunity for students. Greater curriculum diversity is one benefit. There is also the opportunity to introduce specialised facilities that a smaller student population might not justify.

In school districts with smaller student populations, larger secondary schools are not as feasible. To achieve similar cost savings, campus planning with primary, middle and secondary schools all sharing common facilities may occur. However, this can create territorial problems concerning the shared facilities.

While larger schools have benefits, they require special design considerations, such as accommodating the desire of the educators to build a sense of community within the student population. Administrators feel out of touch with the larger student populations. The concept of designing "schools-within-a-school" is a response to this problem. By designing small schools side-by-side the institutions take advantage of the benefits of small and large.

# "We might be seeing the beginning of more significant changes in school design with greater use of distance learning capabilities."

**Table 1a: Public Educational Facility Cost Ranges**

| Secondary Schools | Cost/square metre (in US$) |
|---|---|
| Japan | over 1,750 |
| Germany, Switzerland | 1,500-1,250 |
| France, Italy | 1,250-1,000 |
| Belgium, Denmark, Great Britain, Ireland, South Korea, Sweden, USA | 1,000-750 |
| Australia, Canada, Hong Kong, Netherlands, New Zealand, Spain | 750-500 |

**Table 1b: Public Educational Facility Cost Ranges**

| University Classroom Buildings | Cost/square metre (US$) |
|---|---|
| Japan | over 1,750 |
| Germany | 1,750-1,500 |
| Switzerland | 1,500-1,250 |
| France, Great Britain, Ireland, Italy, Netherlands, Sweden, USA | 1,250-1,000 |
| Australia, Belgium, Canada, Denmark, Hong Kong,New Zealand, South Korea | 1,000-750 |
| Portugal, Spain | 750-500 |

Infrastructure requirements for school classrooms are changing due to technology as they are in universities. The electronic age has invaded the classroom with video media and computers, which offer teachers additional resources for instruction. From a beginning relegated to specialised video and computing labs, schoolwide systems are increasing. Video networks are common. There is a push to wire schools so that every classroom will have Local Area Network (LAN) capability and Wide Area Network (WAN) capability within local school districts. All these changes may not be widespread, but they seem inevitable. Still, retrofitting the large stock of existing classrooms will take time.

We might be seeing the beginning of more significant changes in school design with greater use of distance learning capabilities. They offer the possibility of greater curriculum diversity. The goal is to develop a video studio to provide district-wide instruction from a central location for many speciality courses. Electronic/video learning may reshape our definition of the classroom.

### Cost concerns

Varying school requirements have a major impact on the cost of school buildings. Location causes variations that impact costs, and how the costs are allocated by building element.

- Typically urban schools are compact, multi-storey buildings, while suburban schools will likely be spread over a larger site.
- Schools in warm climates may provide more circulation as covered exterior walkways, while schools in cold climates will enclose most of the circulation area.

With higher land costs in Europe and Japan, multi-storey solutions are more common, even in rural areas. Tables 1a and 1b categorise educational buildings for several countries within unit cost ranges. Table 2 shows percentage elemental breakdown costs for typical US educational buildings.

The cost risk areas for educational building costs are not so vastly different from most buildings. When the requirements for the individual spaces are well known, the cost risks are less in the internal areas of the building than in unseen elements, particularly substructure and structure. Earthwork costs are another highly variable cost. The percentages in Table 2 exclude site work and assume normal foundation conditions.

With many years of experience providing cost advice on educational facilities, Hanscomb observes that in real cost terms educational facilities are becoming more expensive to build. Many educational planners are seeking creative ways to mitigate this, such as the move to larger schools. Tom Wiggins of Hanscomb Atlanta explains some of the reasons:

- Greater use of computers and videos increases heat loads in the classrooms, leading to higher HVAC costs.
- Electrical costs are increasing as data and video capabilities are added. At the university level, classrooms may have power and data available at each seat.
- In the US, a greater awareness of security issues is influencing the way we design our secondary schools.
- Costs for equipment are increasing.

**Table 2: Elemental Cost Percentage (US)**

| | Secondary Schools | University classrooms |
|---|---|---|
| Substructure | 4-6 | 4-6 |
| Superstructure | 17-22 | 13-17 |
| External enclosure | 9-12 | 7-10 |
| Roofing/skylights | 2-4 | 2-4 |
| Interior construction | 19-24 | 19-24 |
| Conveying systems | 0-1 | 1-2 |
| Mechanical | 20-30 | 27-32 |
| Electrical | 14-17 | 15-18 |
| Equipment | 2-6 | 2-6 |

### The challenge

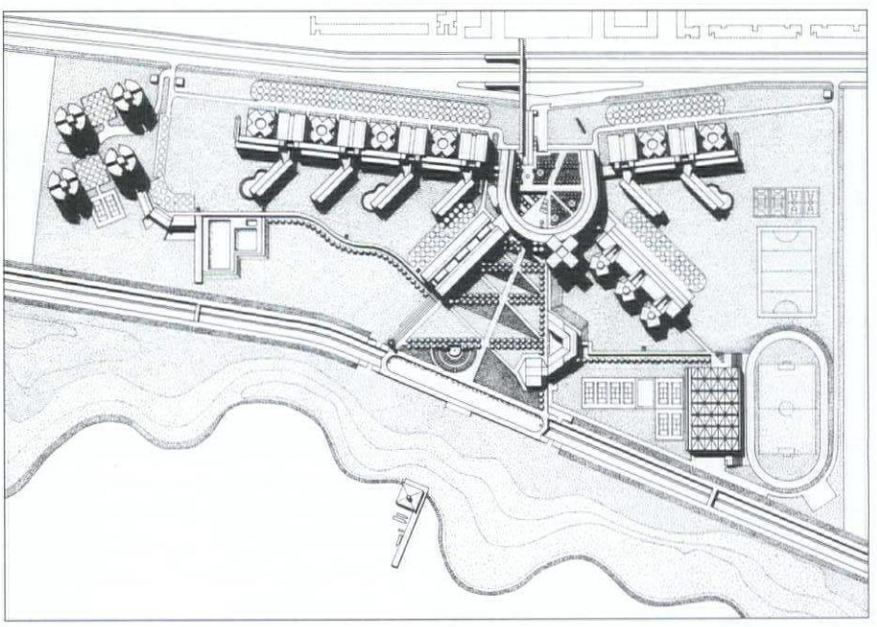
Central to any discussion of trends in education is the knowledge that compared with existing space, the amount of new classrooms built each year is minimal. Schools are facilities with especially long lives. Renovation and remodelling are favoured over new construction. However it will be a great opportunity and a huge challenge to change existing schools into learning environments for the information age.

While there is growing use of computers and distance learning, exactly how this new technology will finally be used in schools is uncertain. These tools will support an ongoing change in teaching style from group lectures to more independent and small exploratory group study, which further challenges the concept of the classroom as a rigid box. We are perhaps in the beginning of a paradigm shift in education. Being in the same place with a teacher and information is no longer required. WA

***Below*** *View from lake showing the library tower flanked by the double-banked Design School (left) and the Applied Science School (right ).* ***Bottom left*** *View into the horseshoe-shaped building which accommodates administration and the library.* ***Bottom right*** *Three dimensional site plan showing the four wings of accommodation, each corresponding to a set of academic disciplines, projecting from an integrating horseshoe.* ***Opposite*** *View through window in horseshoe which opens site affording garden views*

# Temasek Polytechnic
## Singapore

**Architects** James Stirling, Michael Wilford and Associates
**Text** Peter Wislocki
**Photography** Richard Bryant/Arcaid



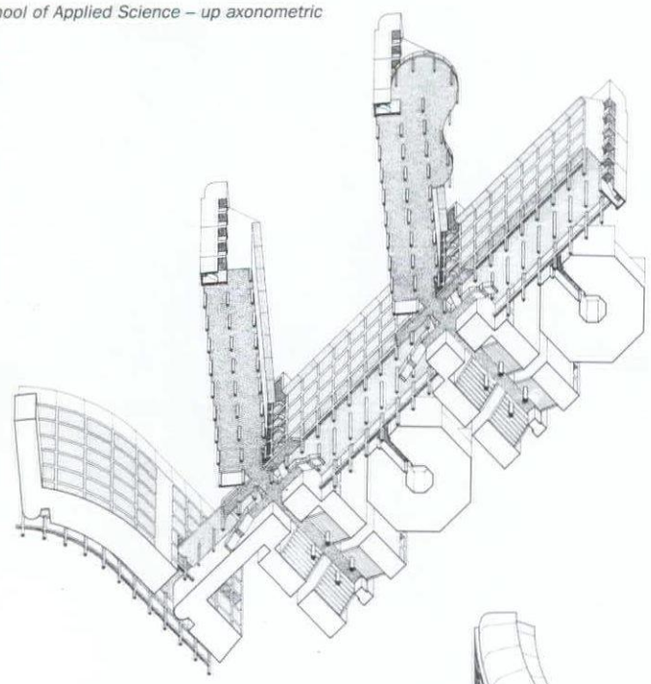
Temasek Polytechnic, home to 11,500 students and 1,500 staff, is receiving much international attention, not least because it is the last significant project to have been designed by the late James Stirling. Notable for its sensitivity to the equatorial climate, its clear organisation and formal discipline, its rapid design and development process and its sheer size, Temasek also raises important questions concerning the organisational culture of higher education.

"Big Jim's" biggest education project, marking an end to a career that took off with university commissions at Leicester, Cambridge, Oxford and St Andrews, has given critics an opportunity to reappraise the maverick architect's compositional skills, confirming his place within a continuing modern tradition. In its articulation of a complex programme, Temasek is exemplary. Four wings of accommodation, each corresponding to a set of academic disciplines, project from an integrating horseshoe, making the complex comprehensible to people on the ground, and aesthetically striking as an abstract plan. Stirling's axonometrics, and particularly his plans, can give hours of pleasure (and inspiration to architectural students, such as myself a few years ago). Just as La Tourette has been described as Le Corbusier's masterpiece, built shortly before the architect's death, so Temasek could be said to bring together a lifetime's development of concepts in a work of symphonic scale and complexity.

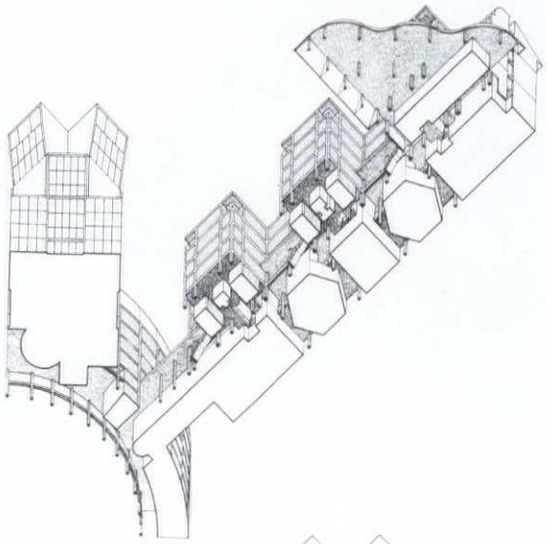
A better comparison might be made between Temasek and Le Corbusier's prototypical megastructure, the Unité d'Habitation. Unlike the Unité, Stirling's composition is additive and therefore highly articulated, with residential accommodation and the student union entirely separated from the continuum of built fabric. Yet, conceptually, these are both exercises in the total design of a very large community, in a building complex emphasising unity in equal, if not greater, measure than diversity.

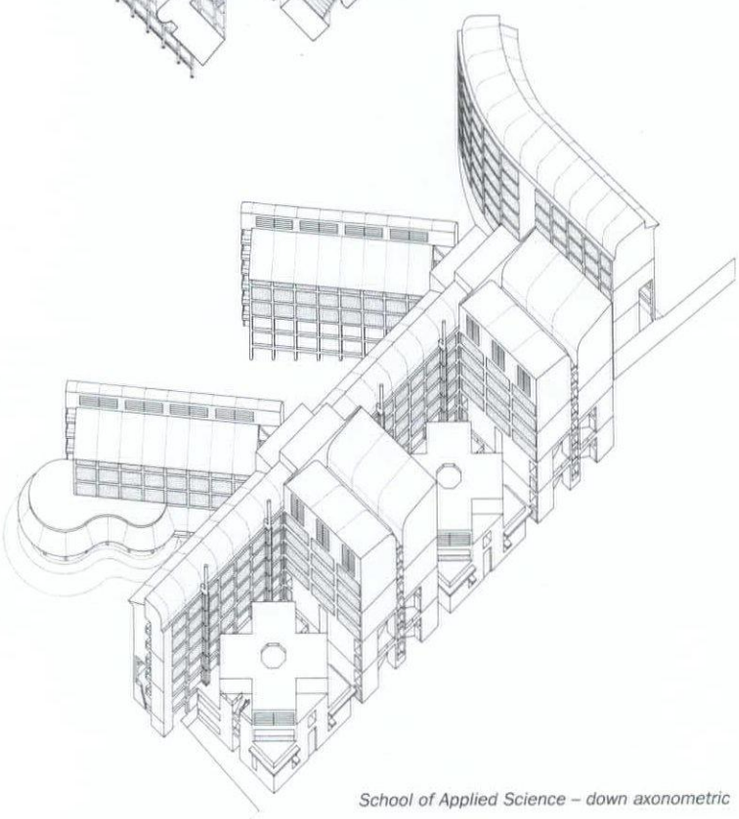
Some of this unity is programmatically derived: a covered circulation system was required to provide shelter from tropical storms, necessitating the physical continuity of the teaching accommodation. The visual impact of the complex is moderated by the luxuriant landscaping. At closer quarters, vibrant colours identify individual teaching faculties and magically enliven the rhythmic megastructure. In any case, one should expect

School of Applied Science – up axonometric

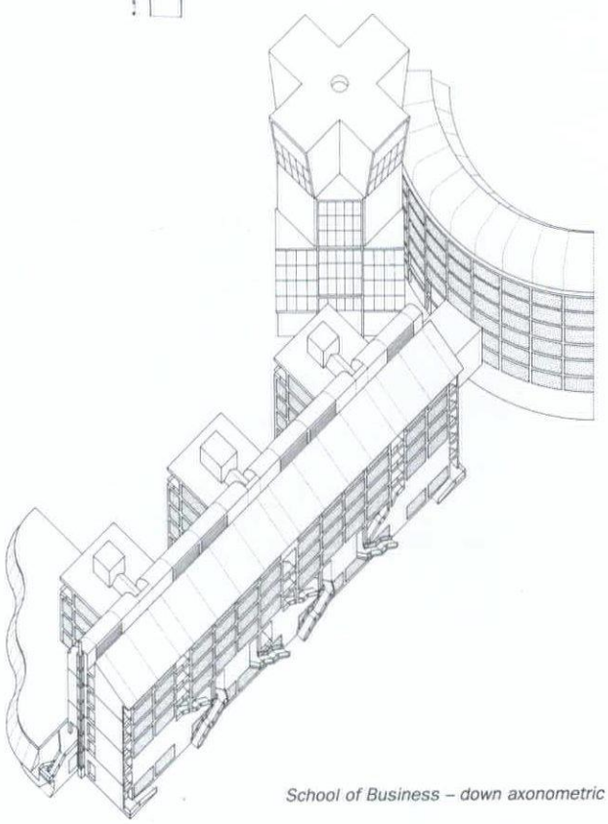


School of Business – up axonometric

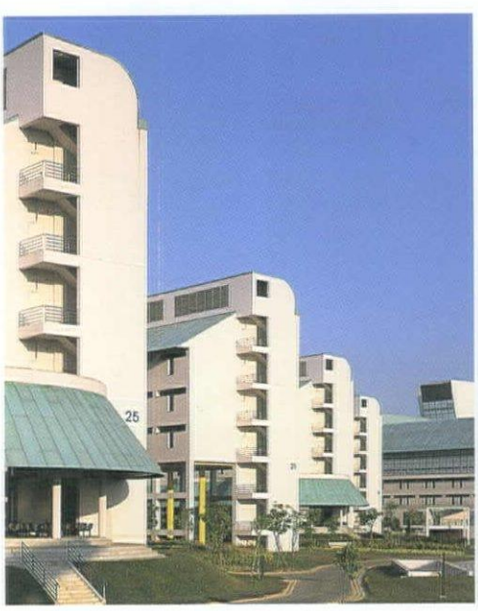


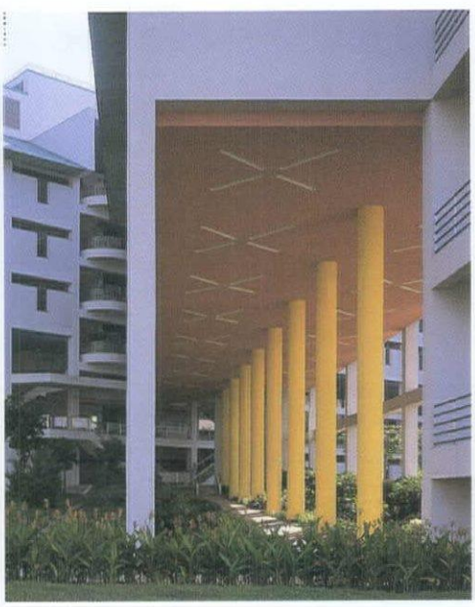


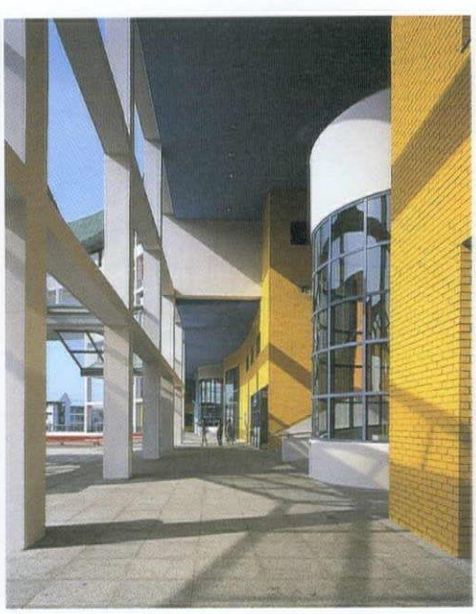
School of Applied Science – down axonometric



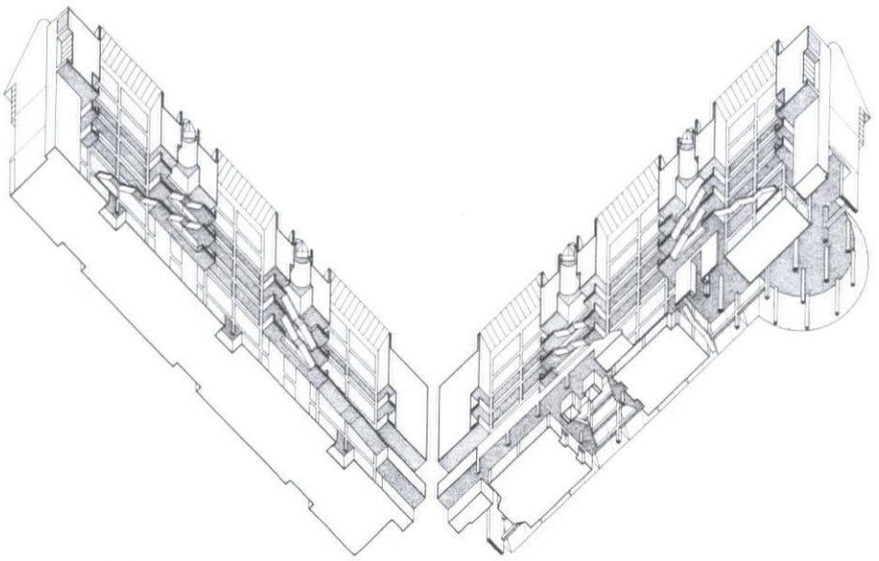
School of Business – down axonometric

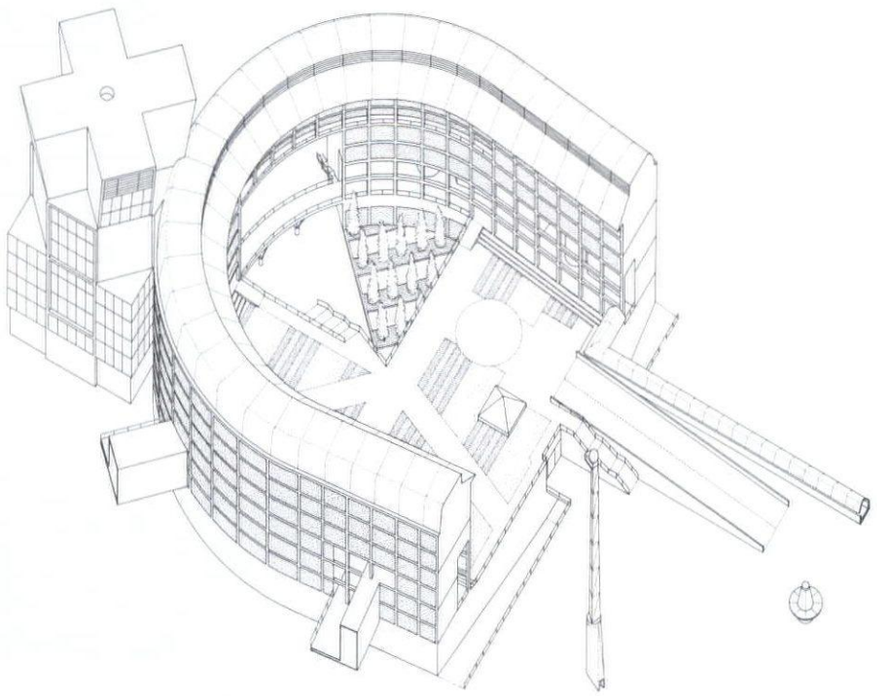






School of Design – split up axonometric



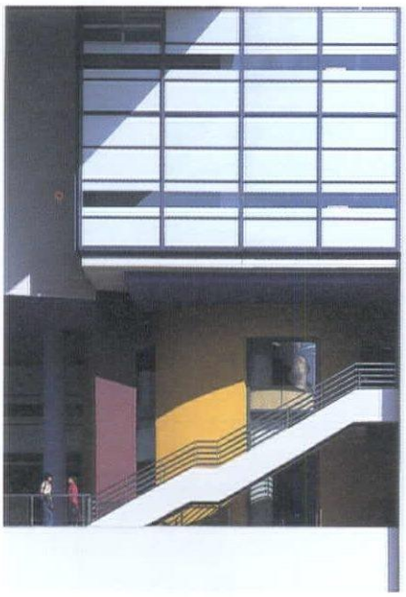


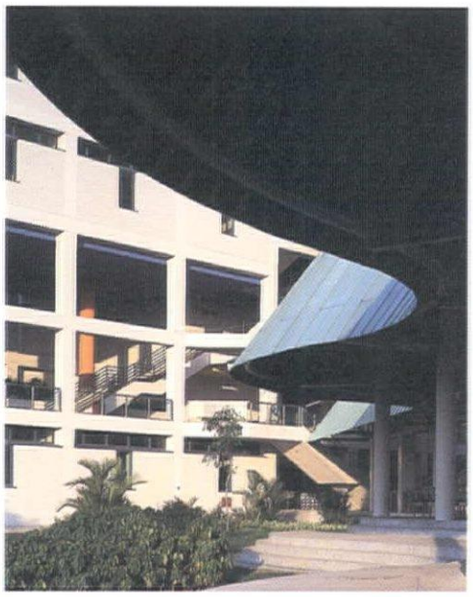
Administration building and Library – down axonometric

***Opposite from bottom left*** *School of Technology; pilotis supporting the lower floors allow students to use the outside space; yellow brick arcade around the central plaza.* ***Below from left*** *Sophisticated white glazed windows in the concrete frame contrast with the brightly coloured walls; curved copper roofing is set against the geometric grid of the facade*

coherence from any individual designer's hand. In urban planning, it is now widely accepted that it is best to divide large masterplans between a number of architects, in order to achieve genuine heterogeneity without contrived picturesqueness. It would be unfair to criticise Stirling for having been given a commission so big that even his rich formal vocabulary could not break down the power of the great institution to be created.

In the final analysis, Stirling's formalism – his use of axes, symmetries, pure geometrical figures and neoclassical planning devices – cannot do other than to accentuate the hierarchical and paternalistic academic culture of Singapore's polytechnic system, a microcosm of the island state's society. Temasek would probably feel uncomfortable were it turned into a *hochschule* in Germany, and would be condemned as authoritarian had it been constructed in Oxford or Princeton. But, just as Le Corbusier found a unique measure of empathy in the lifestyles and aspirations of La Tourette's Dominicans (not so readily apparent in the tenants of his mass housing projects), so Temasek's Singaporean conventions have proved a most fertile and accommodating ground for Stirling's personal architectural agenda. To celebrate such projects as masterpieces is only proper, but to transfer their forms to other cultures and climates is one of the most dangerous practices in contemporary architecture.





| | |
|---|---|
| **Project** | Temasek Polytechnic |
| **Client** | Temasek Polytechnic Singapore |
| **Architect** | Stirling, Wilford and Associates, in association with DP Architects Pte Ltd |
| **Engineers (UK)** | Ove Arup and Partners International Ltd |
| **Structural Engineers (Singapore)** | Ove Arup and Partners, Singapore |
| **M&E Engineers (Singapore)** | PCR Engineers Pte Ltd |
| **Cost consultants** | KPK Quantity Surveyors, Singapore |
| **Landscaping** | PDAA Landscape, Singapore |
| **Acoustics** | Acviron Pte Ltd, Singapore |
| **Contractors** | |
| **Phase 1A** | Joint venture: Lee Kim Tah Pte Ltd and Woh Hup Pte Ltd, Singapore |
| **Phase 1B** | Deenn Engineering Pte, Singapore |
| **Phase 2** | Singapore Piling and Civil Engineering Pte Ltd, Singapore |

# Heinz-Galinski Jewish Elementary School

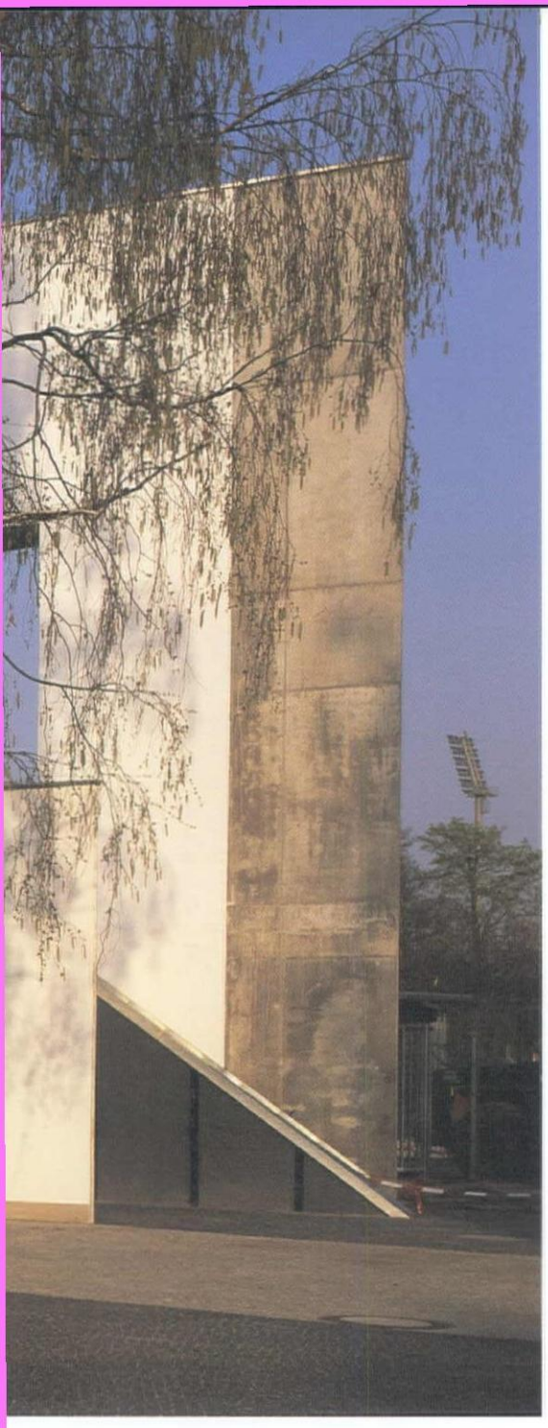
## Berlin, Germany

**Architect** Zvi Hecker
**Text** Layla Dawson
**Photography** Angelo Kaunat

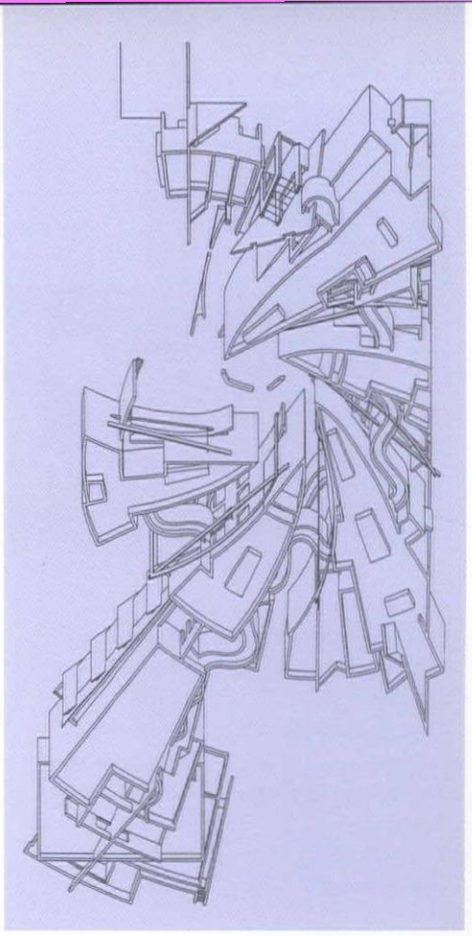
*"Sterility and anonymity of the environment is contrary to the very goals of education, to the development and blossoming of children's creativity."*

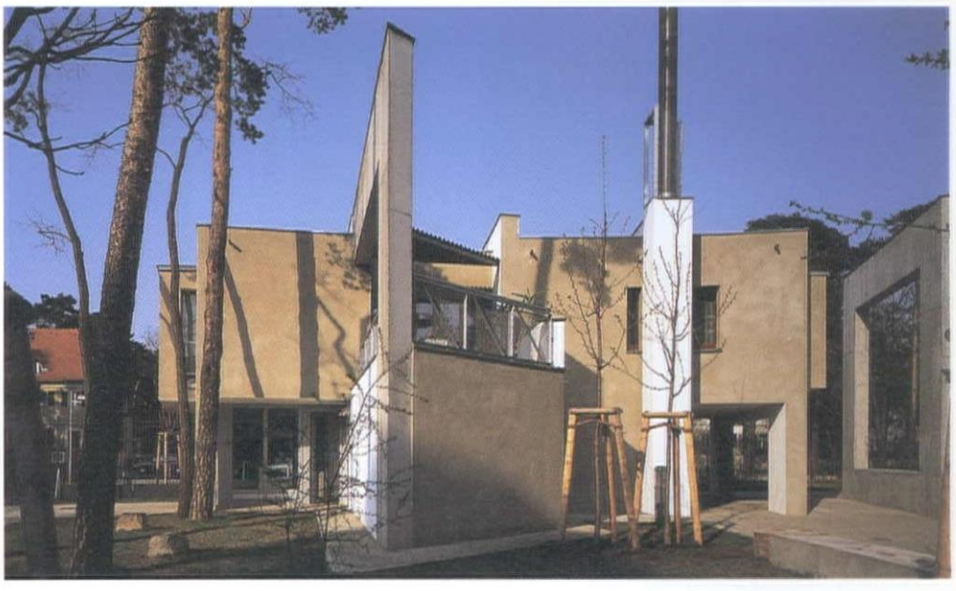
The Polish born Israeli architect Zvi Hecker has wrapped two kilometres of perimeter wall around a childrens' city in which nothing is standard. A labyrinth of ways meet at courtyards and run into cul-de-sacs with hidden corners and seating niches, balconies overlook roofs and wavy corrugated walls, flying beams conceal rainwater pipes, and concrete, plastered and bitumen felt covered walls are punctured by redwood window frames facing into the woods.

Following an international competition in 1990 the school opened in September 1995. Three floors totalling 4,858 square metres fit in and around existing trees on a 16,404 square metre site in Charlottenburg. Berlin's Jewish Community administers the school but the city



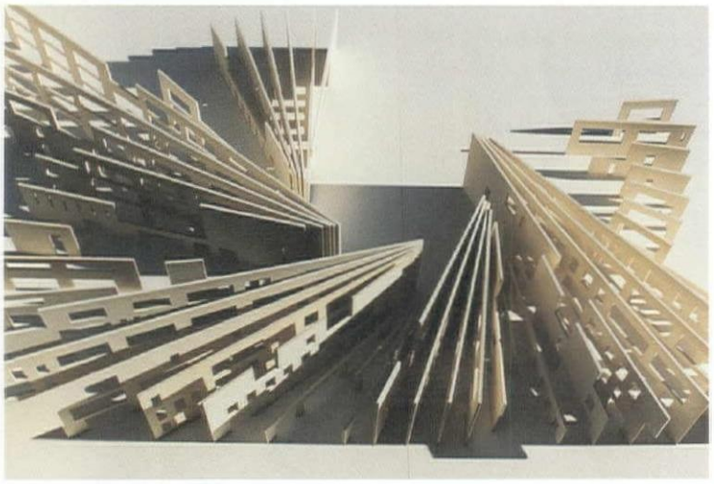
***Left and below*** *The rich combination of angles and planes at the Heinz-Galinski school by Zvi Hecker, administered by Berlin's Jewish community but financed by the city. The design is based on the image of a sunflower reflected in the criss-cross tracery of radiating exposed concrete and laminated timber beams. The words "fish", "snake" and "mountain" were given during construction to distinguish points of orientation.* ***Right*** *Three dimensional projection*





financed the building. Fifteen percent of the DM 46.3 million budget paid for security (a necessity for every Jewish building in Germany), extra rooms for a Torah school, language classes for Eastern European immigrants, Kosher catering and a multi-purpose hall which also serves as a synagogue. As the first Jewish school to be built in Berlin since the war it follows Moses Mendelsohn's 1778 founding philosophy of tolerance and enlightenment, welcoming children of every religion. Exceptional in Germany for being an all day school there are many single-parent children among the 360 pupils.

The architecture could be called deconstructive but emerging from organic images it is subversive in its simplicity. As a child Zvi Hecker fled from the Germans into Samarkand, existing on sunflower husks meant for cattle. Symbolizing warmth, light and nutrition, the sunflower concept was his

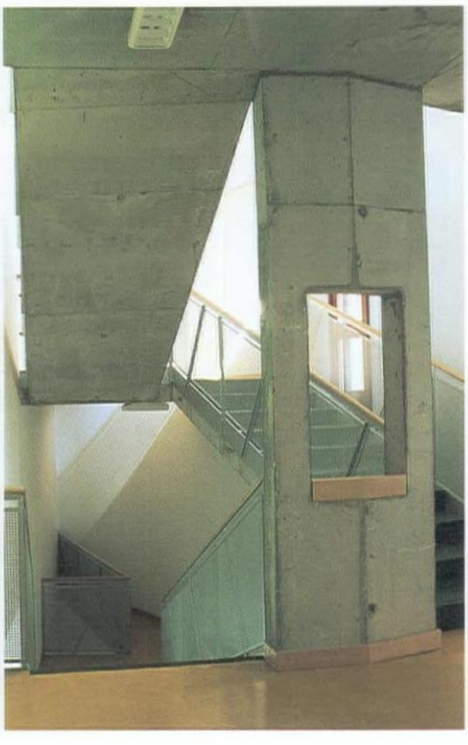


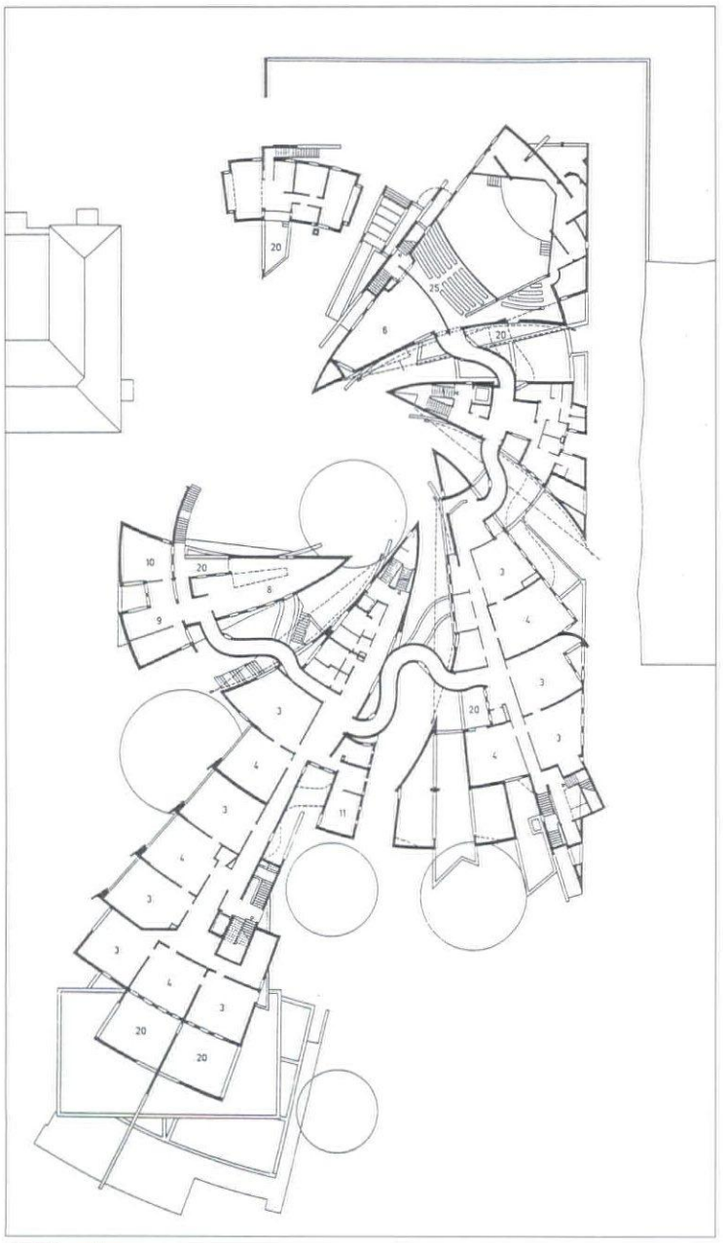
**Key to plans**

1 Main entrance
2 Secondary entrance
3 Classroom
4 Free time classroom
5 Corridor
6 Art workshop & laboratory
7 Library
8 Conference room
9 Administration
10 Headmaster
11 Staff room
12 Doctor's room
13 Store room
14 Mechanical room
15 Change & shower room
16 Gymnasium
17 Equipment room
18 Stands
19 Courtyard
20 Terrace
21 Play court
22 Entrance hall
23 Maintenance room
24 Auditorium & assembly
25 Gallery
26 Kitchen
27 Dining hall

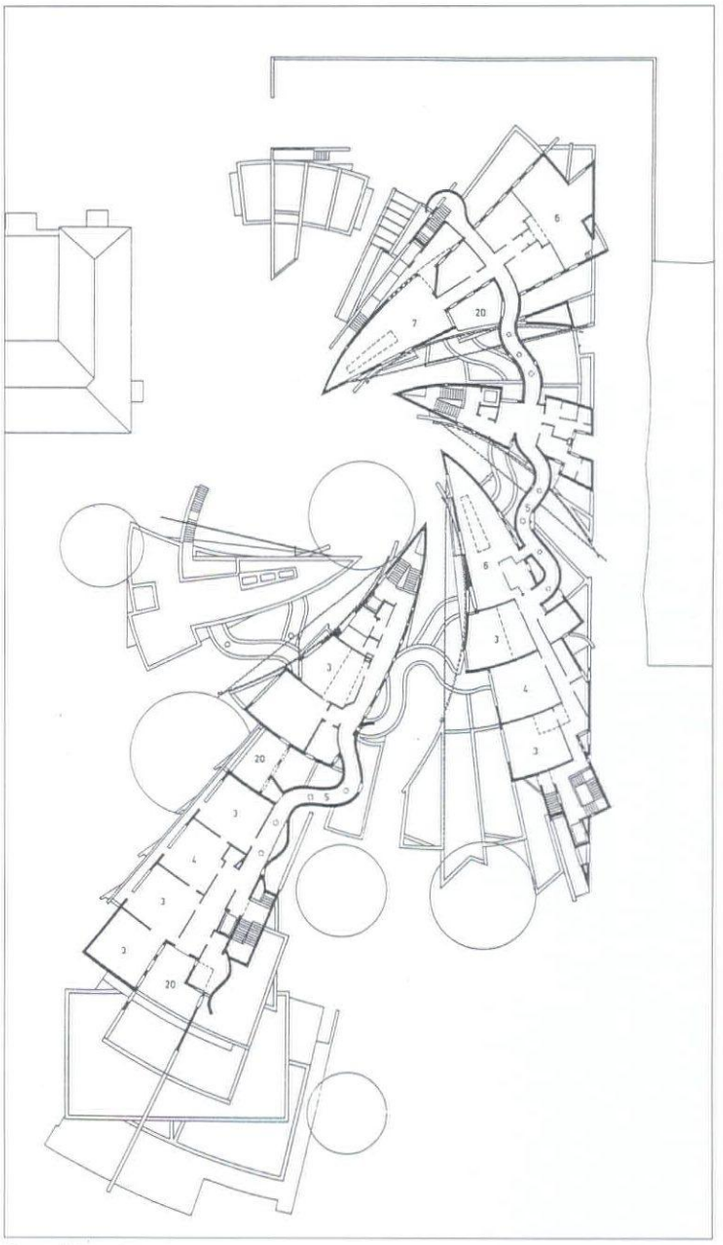
***Top*** *Model showing the school opening up "like leaves of a book".* ***Below*** *The "snake" corridors (seen in exterior to the left, and interior far right) link the "fish" pavilions.* ***Below centre*** *Interior view of stair well*

*Ground floor plan*



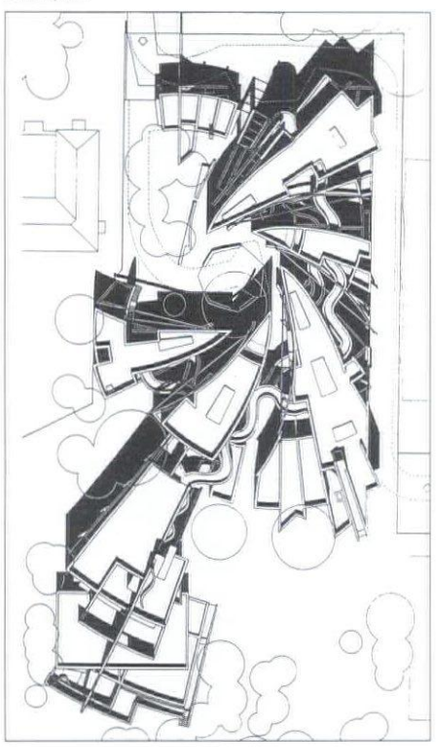


First floor plan



Second floor plan

Block plan



starting point but the design developed its own geometry. Now only the criss-cross tracery of radiating exposed concrete and laminated timber beams reflect the flower head pattern. During construction architects and engineers started using "fish", "snake" and "mountain" for elements which have become orientation points in the building.

The school opens up like the leaves of a book, around a lawn with trees, the still eye of a vortex. Five "fish" pavilions house classrooms, gymnasium, multi-purpose hall, library, dining facilities, and administration. Classrooms, based on a 7.20 metre module, have two parallel and two converging walls focusing on the teacher. Every room is unique. Beyond the windows the trees seem close enough to touch. Timber benches pushed against the low sills form steps out of the windows on to asymmetrical balconies. The "fish" communicate via "snake" corridors which bridge water and paths below. Inside the walls are plastered, bare concrete or red clay block, ideal drawing surfaces for games and messages. Their yellow linoleum floors gently rise and fall. "Mountains" are straight stairways attached to the sides of "fish". In reception the Jerusalem stone crazy paving comes from real mountains. To complete the fish analogy the caretakers entrance canopy is a rolled back sardine can lid.

Zvi Hecker has been awarded the "Deutsche Kritiker" prize. "I shouldn't really be given an award. It's a traditional way of building. If it's turned out looking different perhaps I did something wrong." WA

| | |
|---|---|
| **Client** | Judische Gemeinde zu Berlin and Senatsverwaltung fur Bau-und Wohnungsweser. |
| **Architect** | Zvi Hecker, |
| **Architect's assistants** | Peter Kever, David Evans. |
| **Berlin Contact Architect** | Inken Baller, |
| **Berlin assistants** | Uwe Wittig, Andreas Hilbert. |
| **Structural Engineer** | Gerhard Pichler, |
| **assistant** | Carsten Pammer. |
| **Landscape Architect** | MKW, Kamel Louafi. |
| **Building Services Engineer** | GTA. |
| **Contractor** | Pegel & Sohn GmbH & Co. |

# Harrow Campus, University of Westminster

## London, UK

**Architects** RMJM
**Photography** Chris Gascoigne

RMJM's project brief for the development of the new £40 million Harrow Campus, University of Westminster in London, included master planning and implementation of phase one. Located at Northwick Park, not far from the famous Wembley Stadium, the campus is a purpose-designed university for the twenty-first century, and a home for a new academic community. The development comprises 12,000 square metres of new build space, the refurbishment of a further 12,000 square metres of existing buildings (built by RMJM in the 1970s) and a new residential scheme, with associated landscaping in phase two.

The masterplan concept proposed a pedestrian covered street linking new and existing buildings and creating a series of landscaped courtyards. "The Street", which forms the social heart of the campus, connects at its eastern boundary with Northwick Park Underground station which in turn provides a direct link to the West End Campus (at Baker Street) and forms a gateway to Harrow and the local community to the west.

The covered area includes shops as well as social and catering facilities. The Street's relevance as a cohesive device within the overall campus design is emphasised by the dramatic steel structure – constructed from galvanised steel structural masts rising two storeys into the air, from which PTFE teflon tensile canopies are suspended – challenging the scale of the old buildings. The tensile theme is repeated throughout the campus, at times looking like a gratuitous "add on" without the majestic masts, but on the major facades the combination of glass, steel and fabric, is satisfying.

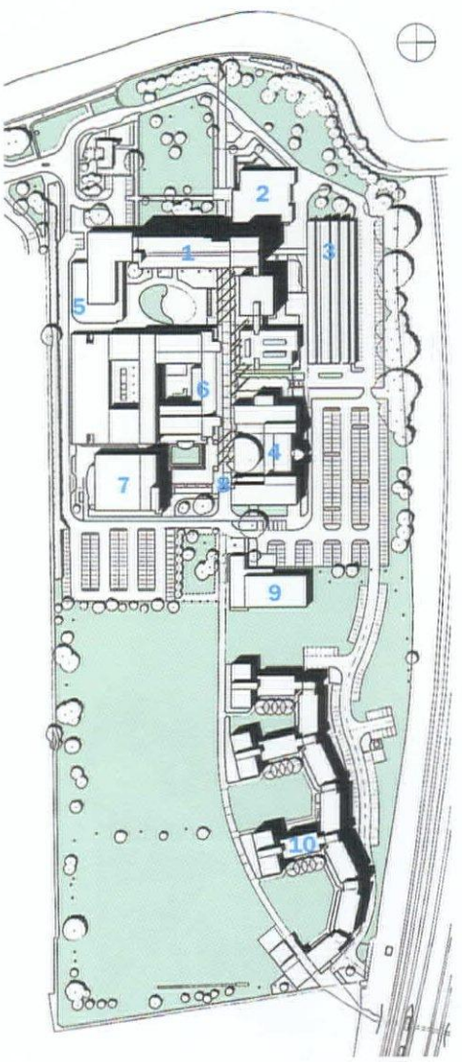
The Street is punctuated with all the major social and communal spaces – the auditorium, information resources centre, entrances to the academic schools, shops and exhibition spaces. The main reception stands midway along it. It was designed as an area to encourage chance encounter and acts as a backdrop to campus life.

The framed concrete structure of the new buildings allows a degree of versatility within teaching areas. The services are generally exposed in order to facilitate access for change and renovation.

The building services design was formulated on the basis of self-contained systems, which could be commissioned independently to support the construction programme, as well as academic requirements. The infrastructure works have anticipated future construction phases without substantial pre-investment, by independently servicing the new buildings. The value-for-money criteria applied by the client required the building services systems to be capable of significant adaptation to accommodate future needs.

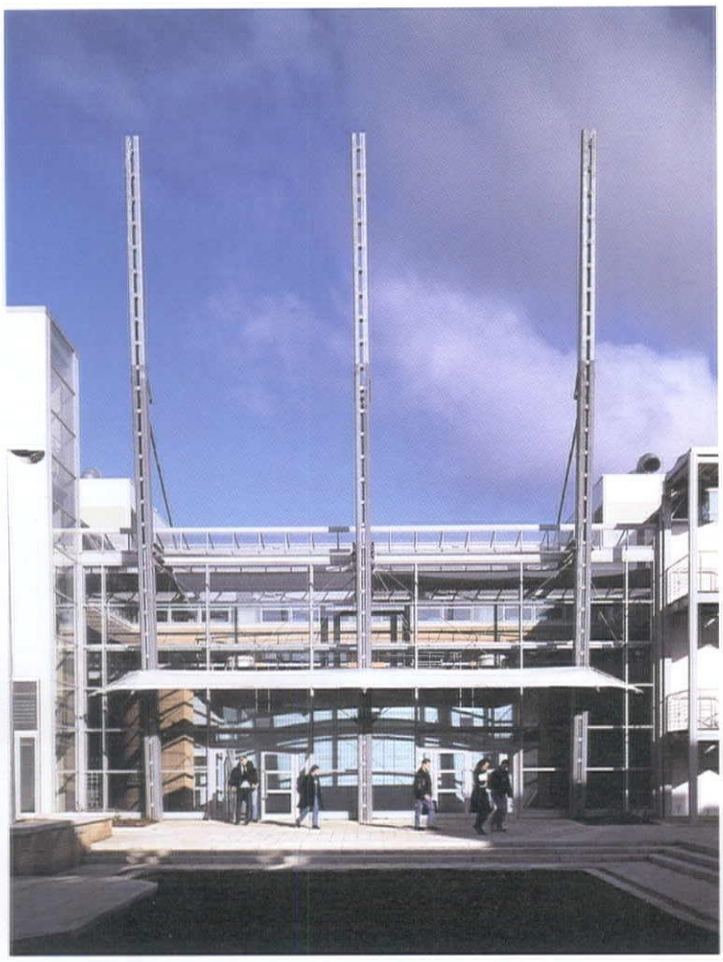
The academic facilities at the Harrow Campus include a central learning resource centre, specialised media facilities – for television, radio and commercial music – together with art and design studies, and computer science laboratories. WA

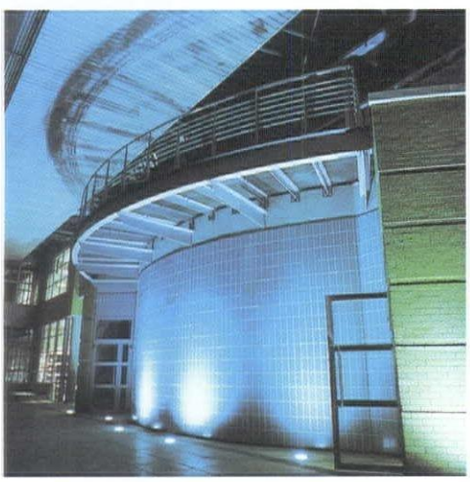
| | |
|---|---|
| **Project** | Harrow Campus, University of Westminster |
| **Client** | University of Westminster |
| **Architect, Engineers and Planners** | RMJM |
| **Construction** | Tarmac Construction Building Division |
| **Client Representative and Quantity Surveyors** | Hanscomb |

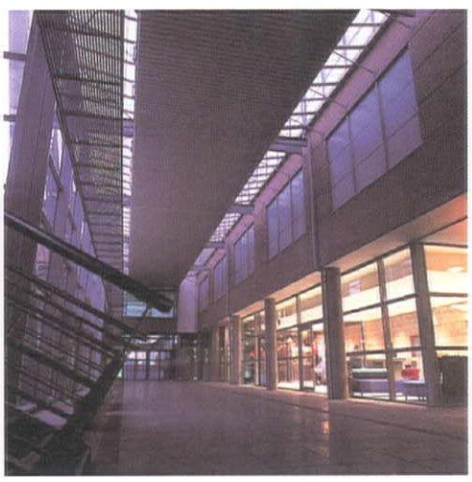



**Block plan – Key**

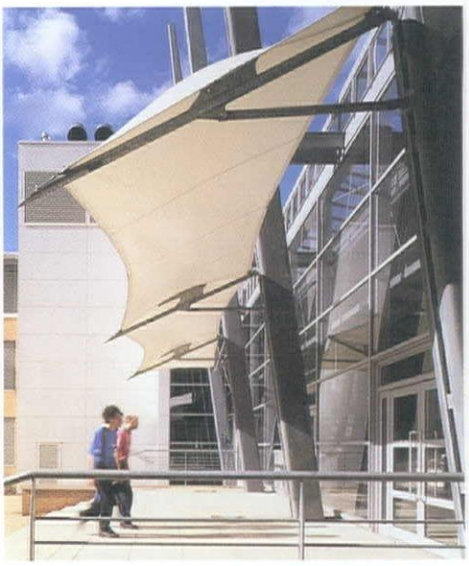
1 Existing nine-storey teaching block
2 Catering and student union
3 Existing workshops
4 Learning Resources Centre and lecture theatres
5 Photographic suite
6 Design and media studios and laboratories
7 Television, film and radio studios
8 "The Street"
9 Existing sports hall
10 Student residential accommodation, 465 units







***Above left and below*** *The dramatic entrance to the Harrow Campus. PTFE teflon tensile canopies are suspended from structural galvanised steel masts.* ***Above right*** *The Street links the new and existing buildings, and forms the heart of the campus, with all the social amenities at the west end.* ***Far left*** *The drum of the Queen's Building, the focal point of the east end of the street, housing four lecture theatres, a 213- seat auditorium and the Learning Resource Centre.* ***Left*** *The entrance to The Street with reception on the right.* ***Below left*** *Cross section through The Street and LRC*



# St Peter's Campus University of Sunderland

## Sunderland, UK

**Architects** Building Design Partnership (BDP)
**Photography** Martine Hamilton Knight

St Peter's Campus lies on the north side of a bend in the River Wear, below Wearmouth bridge. A nearby landmark, the seventh century St Peter's church – the only remaining element of the monastery founded on the site by Benedict Biscop, 675AD – offered the architects an historic focus and structuring device around which to design the new campus. An axis connects the Saxon tower of St Peter's with that of the neo-classical Holy Trinity church, south of the river, generating the masterplan's radial development.

Phase one, comprising the Business School and the Learning Resources building, was completed in September 1994. The principle themes of the campus design: clarity, openess and a sense of identity, are accentuated in the second phase buildings, which are currently under construction. Consisting of the School of Computing and Information Systems and an extension to the Learning Resources Centre building, phase two will be completed in time for the beginning of the 1996/7 academic year.

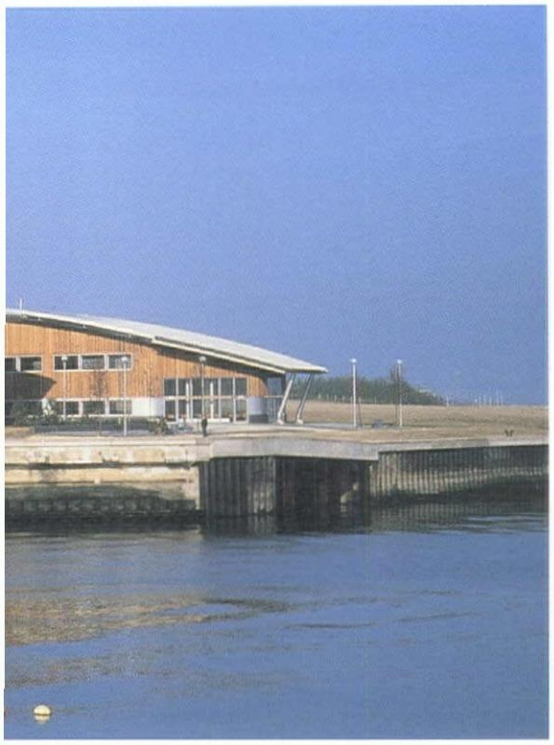
The campus buildings make use of the line of sight connecting St Peter's with Holy Trinity Church. The plan creates a clear communal identity, while the junction of the two building phases forms a new open heart to the campus – University Square. Building forms maximise the capacity for attracting daylight and solar warmth, as well as providing protection from the harsh north winds.

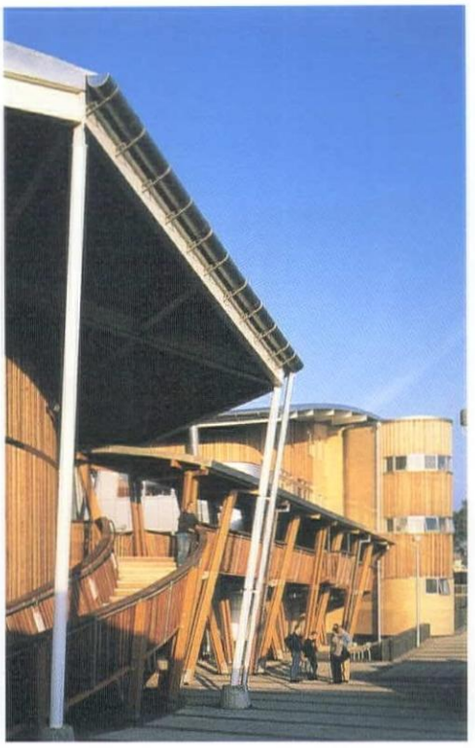
The design for the School of Computing and Information Systems uses the shape of the slope down to the river to create an open and accessible teaching environment. A series of terraces, which can accommodate up to 600 students for informal group teaching, forms the activity hub of the building. A separate north wing provides space for formal teaching.

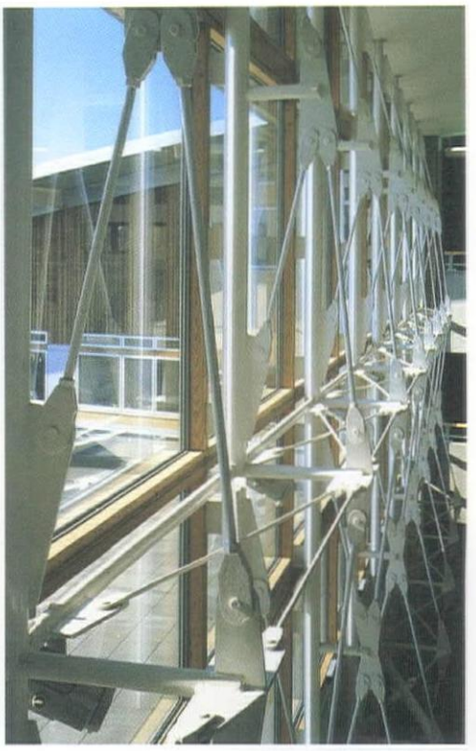
The Learning Resources Centre extension is a two-storey courtyard building with the library forming a U-shape enclosing a sheltered garden and reading room.

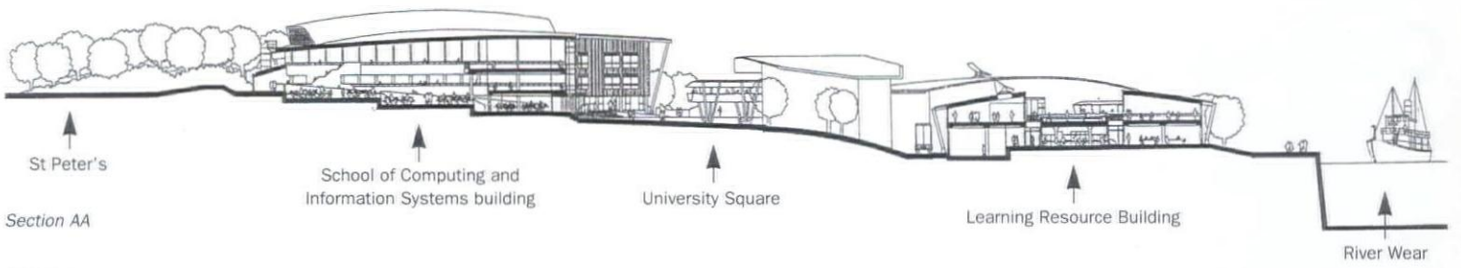
The campus is a product of the Further and Higher Education Act (1992), which galvanised previously peripheral institutions into asserting themselves in the increasingly anonymous context of British higher education. BDP's overall design strategy for St Peter's Campus focussed on the need to create a clear and authoritative identity. This is particularly evident in the curved roof planes of the Business School, with its immense overhangs at verge and eaves. **WA**

**Project** St Peter's Campus Phase II, University of Sunderland
**Client** University of Sunderland
**Architect, landscape engineer, civil, structural, mechanical, electrical engineer, lighting and interior design, acoustic consultant, quantity surveyor** Building Design Partnership (BDP)



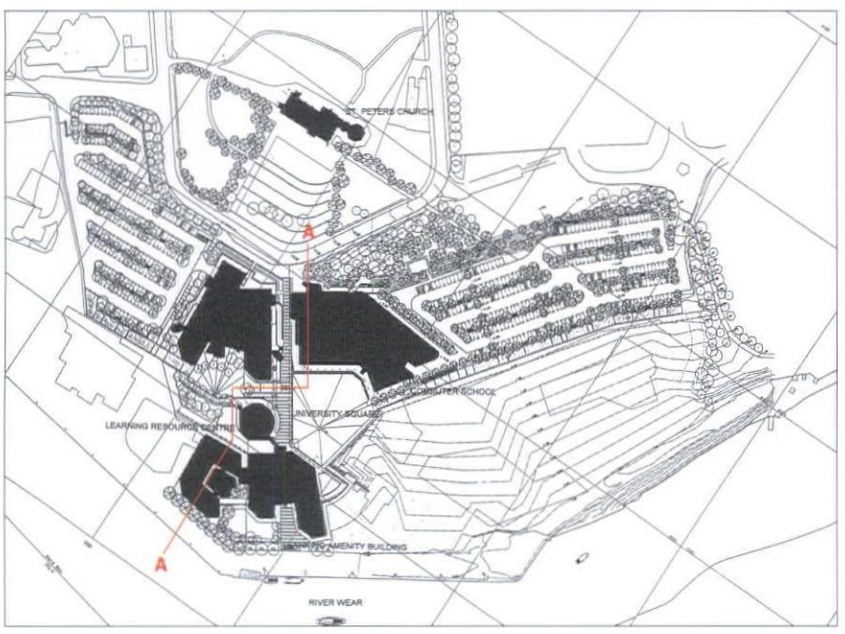


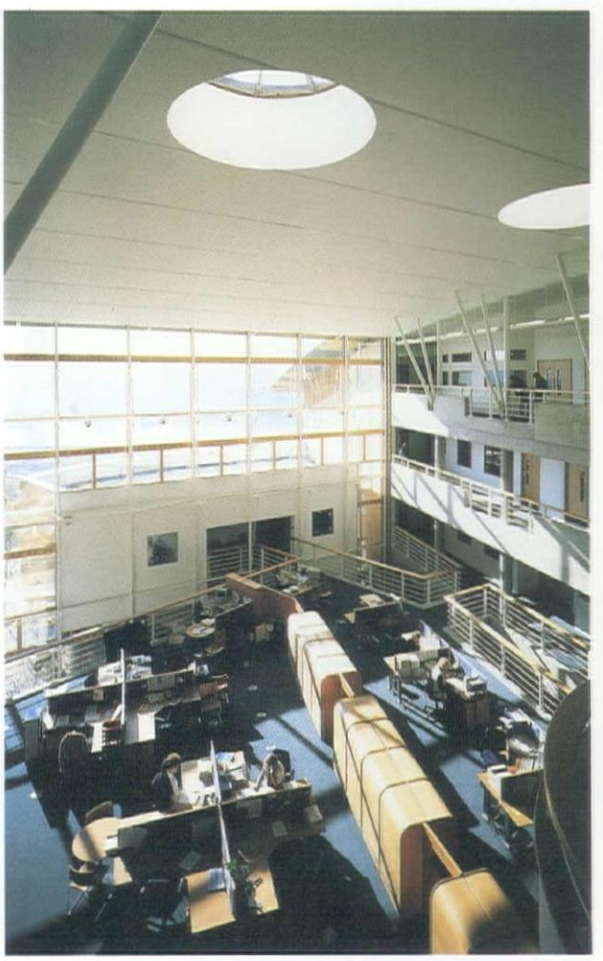




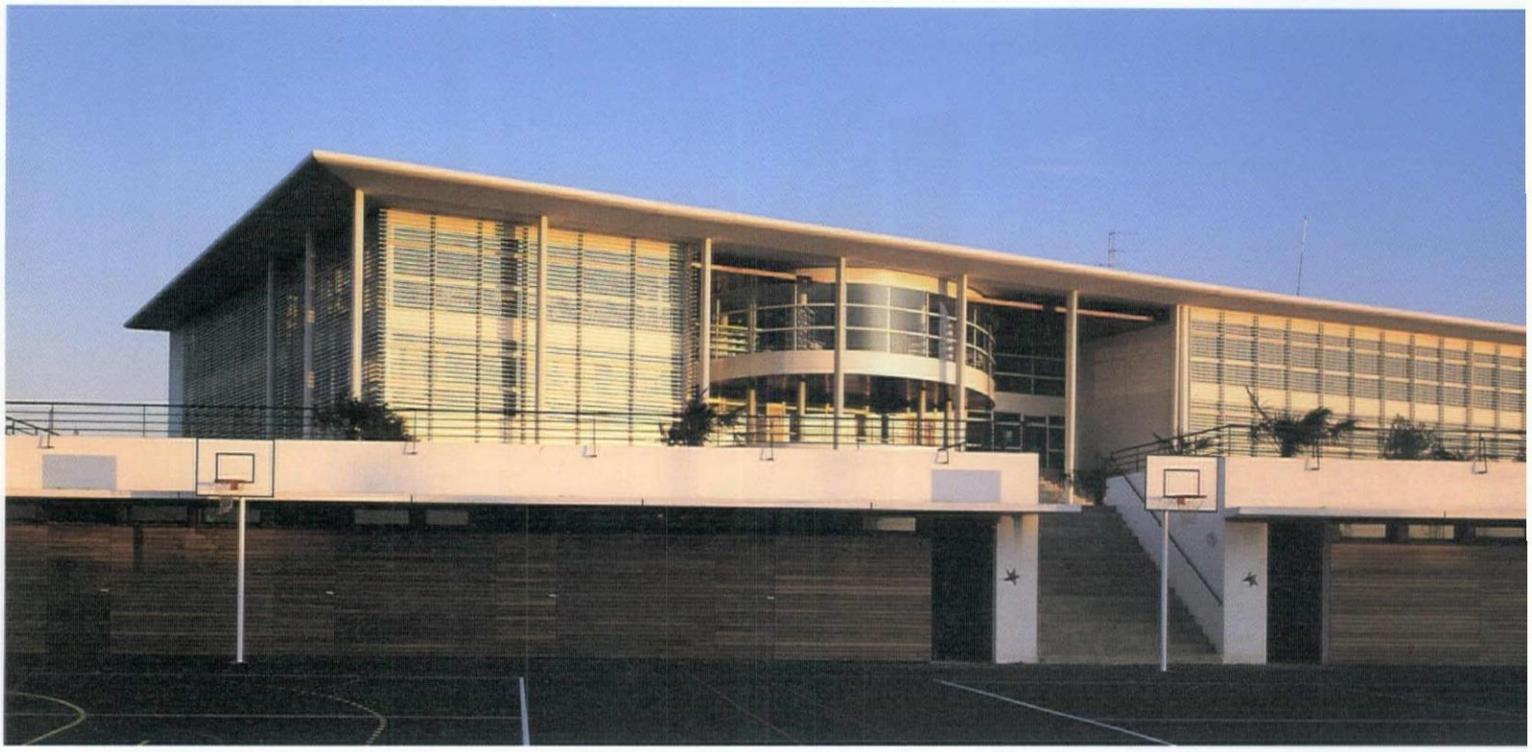

*Section AA*

*Site plan*



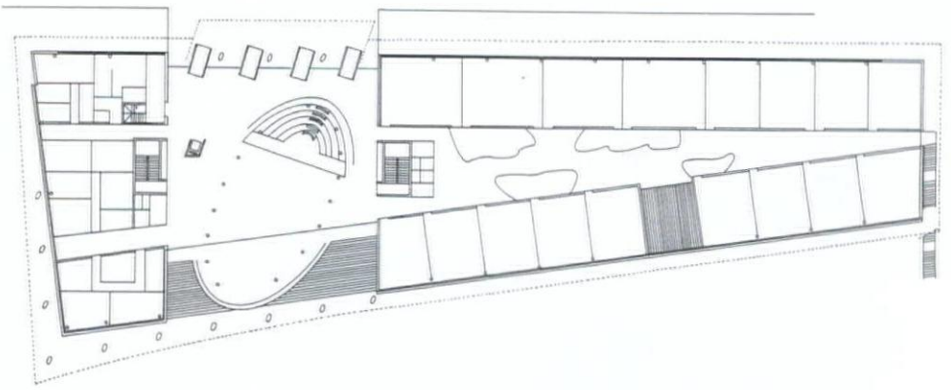
***Opposite page*** *View of business school,lecture theatre and learning amenity building, from the south.* ***Top centre*** *Timber link bridge between the business school and the lecture theatre. A principle theme of BDP's campus plan is openess.* ***Top right*** *Business school atrium with glazed wall detail.* ***Centre*** *Section of the campus indicating the cohesive presence of the phase two buildings; the School of Computing and Information Systems and the extension to the Learning Resource Building.* ***Above*** *Site plan showing phase two buildings.* ***Right*** *Interior view of the Business School*



# Collège de la Côte Bleue

## Sausset-les-Pins, France

**Architect** Rudy Ricciotti
**Text** Georgi Stanishev
**Photography** Paul Raftery



The college is located on a hill, near the Mediterranean coast, 31 kilometres from Marseilles. According to Rudy Ricciotti, the rich architectural language of the college far exceeds the requirements of the small town of Sausset-les-Pins, to which it actually belongs. Besides the classrooms, college administration area, sport facilities and service spaces, the complex includes a large lobby and forum stepping between the two main levels of the building, and establishing a common plaza for gatherings and recreation.

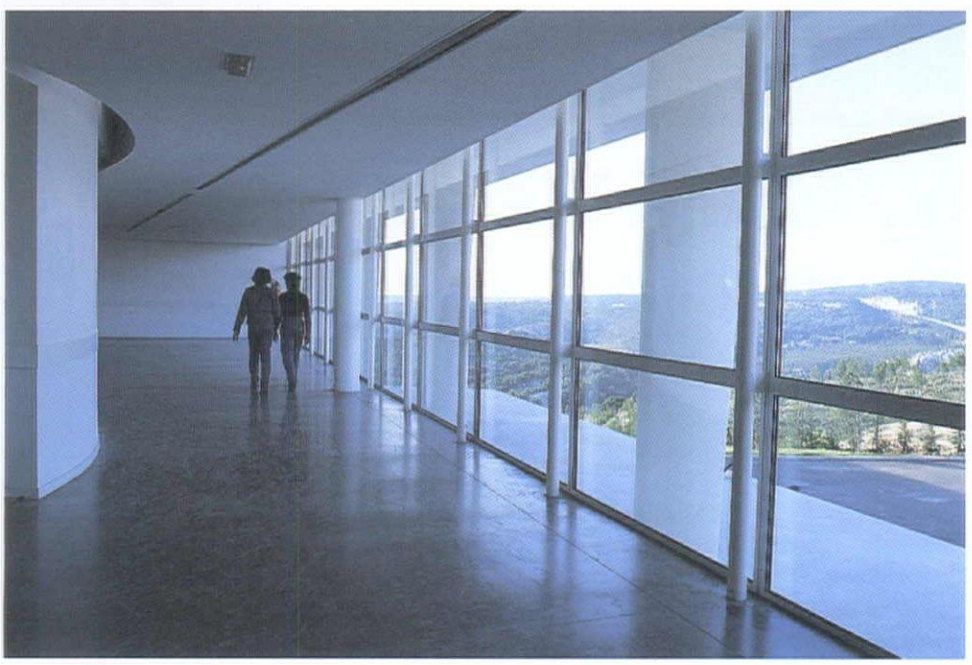
The elliptical forum is installed diagonally across the lobby space, traced by the sequence of columns and the configuration of the stepped seats, in the style of a minature coliseum, looking towards the sea.

The principle features of the building are the slight but consistent irregularities at different levels, starting from the plan and leading up to the exterior of the columns. The spatial composition of the building places the classrooms along a main corridor, which gets wider towards the main lobby space, resulting in the irregular quadrangle configuration of the whole building.

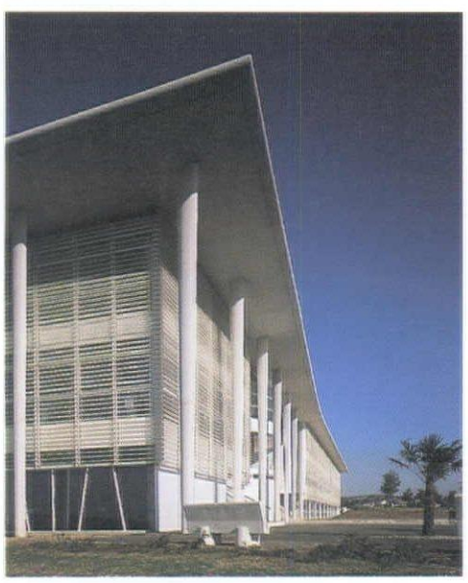
The series of columns are neither parallel to the elevations of the building, nor do they follow a regular rhythm. In addition to this lack of conformity, the columns, whilst round at the base become elliptical at their top. "I like things that present themselves as if they are hand-made", says Ricciotti. In his opinion these irregularities and deviations give a baroque flavour to the otherwise white, modernist appearance of the building, because "the essence of baroque is in the doubt generated by visual perception".

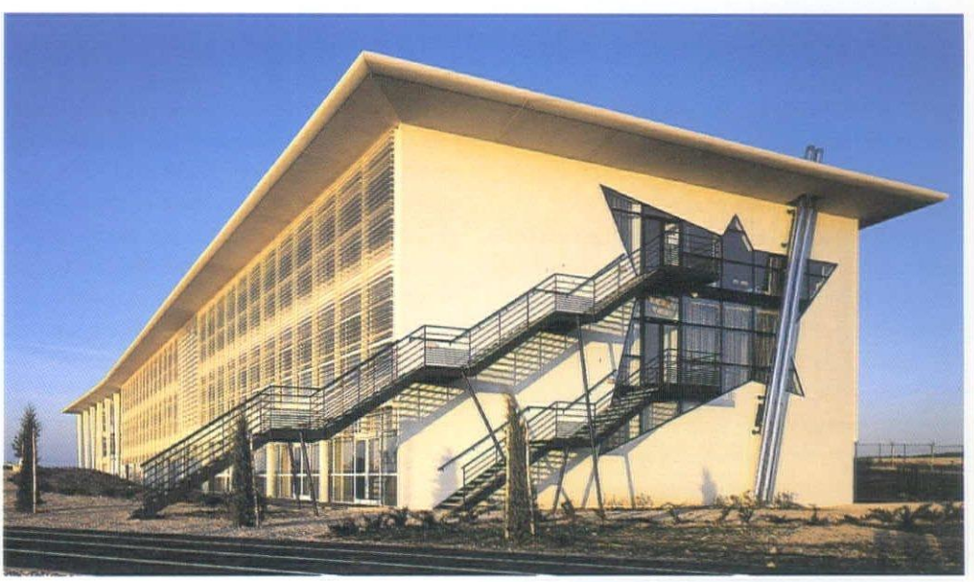
These shifts from standard ordering principles correlate the college to both the contemporary avant-garde and to historical mannerist poetics. However, in the context of France, where regional distinctions in architectural style are very strong, the college stands as a modern response to Mediterranean cultural conditions. Built in white concrete, its forms facilitate the discussion of architectural qualities in simple categories of light, shadow, volume correlation and elegance of silhouette. **WA**

| | |
|---|---|
| **Project** | Collège de la Côte Bleue, à Sausset-les-Pins, France |
| **Client** | Conseil General des Bouches du Rhone |
| **Architect** | Rudy Ricciotti |
| **General Contractor** | Travaux du Midi |



***Opposite above*** *Facing the sea, the rectangular facade is lent movement by the curvilinear element at the entrance.* ***Opposite below*** *Plan of the first floor of the building showing the diagonal positioning of the eliptical lobby space.* ***Above*** *The glass lobby space is traced by the sequence of columns and stepped seats in the style of a coliseum.* ***Left*** *Second floor interior of the college showing views of the French countryside afforded by the glass curtain wall.* ***Below left*** *The columns whilst round at the base become elliptical at their top to add a baroque flavour.* ***Below right*** *The starburst window at the end of the building is an example of the essence of Riciotti's baroque which he describes as "the doubt generated by visual perception"*





# Mary Murphy/Mary Tisko Schools
## Branford, Connecticut, USA

**Architects** Roth & Moore
**Photography** Steve Rosenthal

The Mary T Murphy and Mary Tisko and are two identical schools that were built in Branford, Connecticut in 1962. They were designed to accommodate the same educational programme serving very similar neighbourhoods on remarkably similar sites via the most cost-effective means possible. The Branford Board of Education commissioned Roth & Moore Architects to design identical extensions, following the original philosophy that duplication of design results in some savings on architectural and engineering fees and, more significantly, optimises unit costs for material purchases.

Roth & Moore have a distinguished list of educational buildings under their belt, from the Academic Arts Building in New Jersey to the Computer Centre for Vassar College, Poughkeepsie, New York and were well qualified to address the extensions to these Connecticut primary schools.

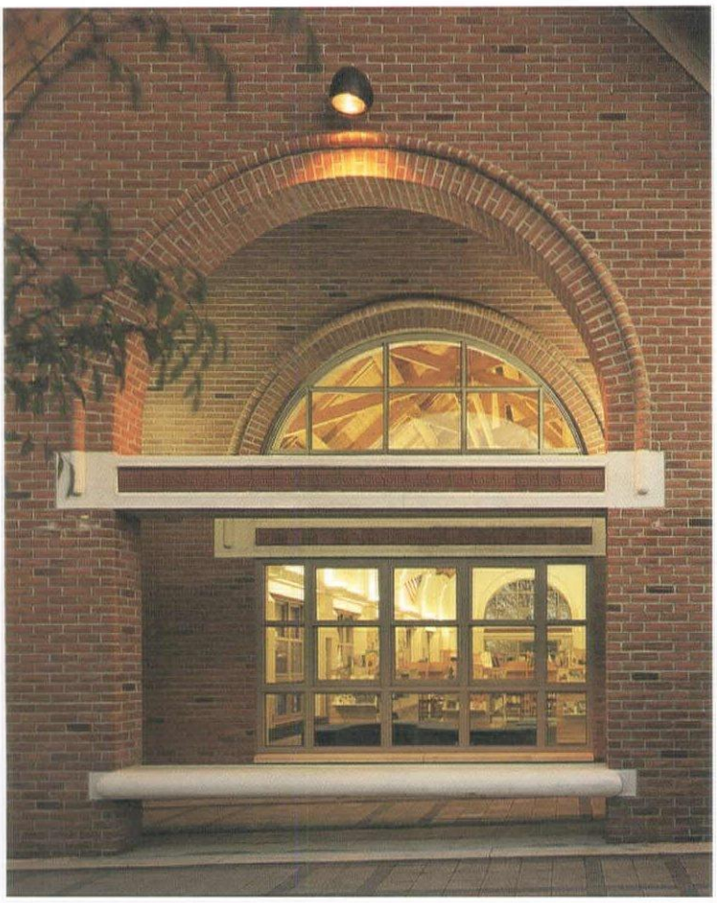
Three specific challenges shaped the design: firstly the existing school buildings were deemed "unremarkable" and, in an effort to control the entry sequence and unify the new image of each school, they are concealed behind the extension: an additional library and lunch room, accommodated in simply detailed pavilions with sloping roofs which conceal the original structures. These pavilions are constructed of load-bearing masonry and laminated wood scissor trusses, creating strong and memorable spaces appropriate to their respective functions.

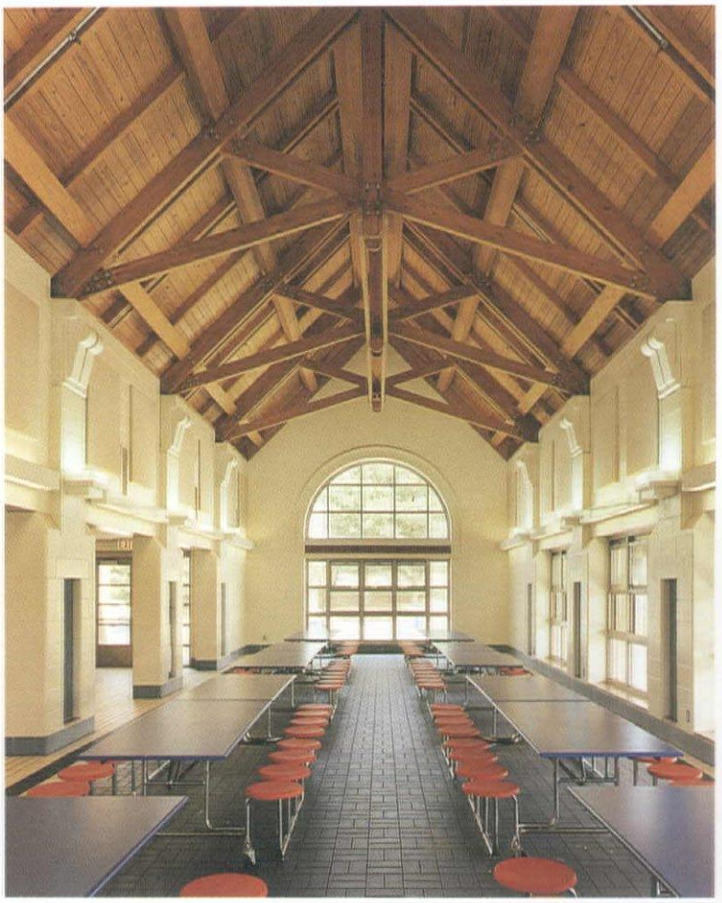
The second challenge was to accommodate the needs of children between the ages of five and nine. "We felt that the experience of entry was critical to the success of the schools," said David Thompson, project architect. The design was carefully conceived to allow safe movement from buses and cars, along a covered walkway to an enclosed entry courtyard, in turn through a carefully scaled entrance lobby overlooking the main interior court space. "But more importantly" continued Thompson, "it is an intimate and welcoming series of spaces that allows each student to proceed into school in many different ways, at a pace appropriate to their own personality or disposition on any given day".

The third challenge concerned the organisation of all the spaces around the central courtyard. This central space is intended to accommodate specific educational uses, and was conceived as a "roofless classroom" on its own. It includes terraces for art activities, planting beds for gardening projects and a small amphitheatre for drama exercises.

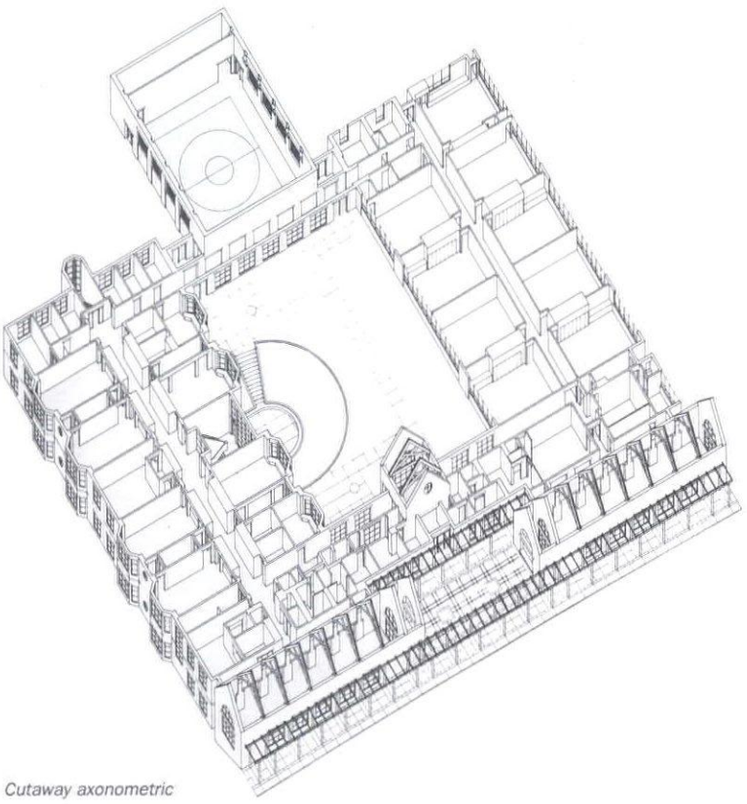
All interior and exterior walls are constructed of masonry with load bearing in the main pavilions and an enclosed structural steel frame in the new classroom wing. Pre-cast concrete is used for the arcade columns as well as for sills, lintels and parapet copings. Exposed laminated timbers are used for spanning major spaces. Thompson concluded "We have aimed to make the detailing and character of the building simple yet substantial, to reflect a deep commitment to the long-term educational needs of the community it serves." WA

| | |
|---|---|
| **Projects** | Mary Tisko and Mary Murphy Schools |
| **Client** | Branford Board of Education |
| **Architect** | Roth & Moore Architects |
| **Structural Engineers** | Tor, Smolen, Calini, & Anastos |
| **Landscape Architects** | Rolland/Towers |
| **General Contractor** | F W Brown Construction |



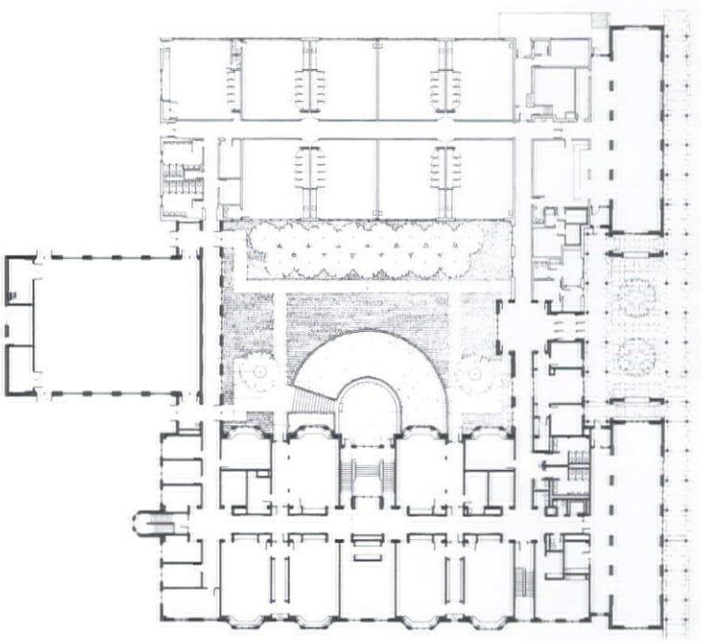


***Opposite page*** *Exterior front elevation of Mary Murphy School.* ***Above*** *Entry court, looking into the library.* ***Above right*** *Interior of dining room pavilion, with laminated timber scissor trusses supported by masonry bearing walls*



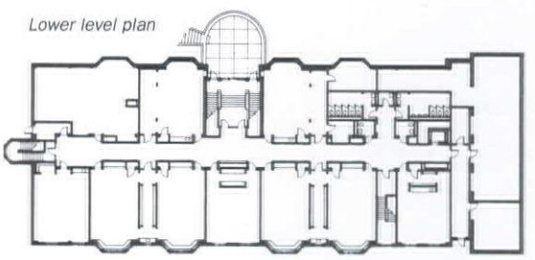
*Cutaway axonometric*

□ Existing construction ■ New construction



*Upper level plan*

*Lower level plan*



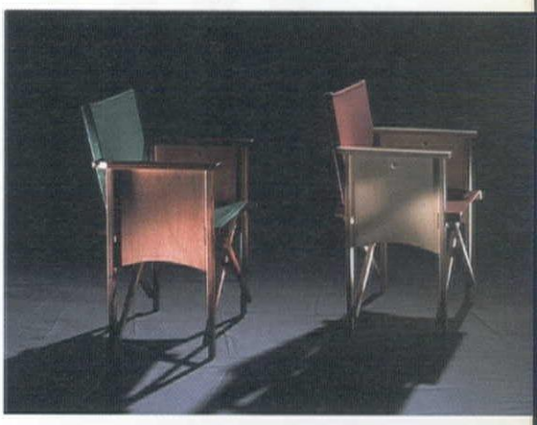
# Are you sitting comfortably?

**Philippe Starck once said "I don't know why I design chairs. There are so many perfect chairs already, why make others? It's madness!". Barcelona-based architect Jorge Pensi maintains however that "everyone wants chairs", and the wealth of new product launched at this year's European trade fairs would seem to endorse this viewpoint. Nicky Churchill seeks out the latest designs .**

The chair has become a symbol of twentieth century design. Over the years, architects and design studios have explored with new materials and new technology, producing innovative and occasionally enigmatic designs in three dimensions. This year was no exception.

Cologne's Internationale Möbelmesse held each January, invites visitors from across the globe to view the newest furniture designs from Europe. This is the place to be if you want to do serious business and it is here that you will find the latest contemporary collections from the likes of Germany, Spain, France, and Scandinavia. Although the majority of the Italians tend to hold out for their own show in Milan, there were a few new delights from Italy such as the first public showing of the Coast chair, by Australian furniture designer Marc Newsom for Atlantis. Originally conceived as a restaurant chair, it is made from ashwood with a seat and back in latex rubber. From elsewhere in Europe, Spanish manufacturer Casas showed the Canasta chair and sofa series by British designer Terence Woodgate. Wittmann from Austria displayed the Kunsthalle stacking chair by Adolf Krischanitz and the highly adaptable Fifty-Fifty dining chair by Wolfgang Hints. And from Denmark, Fredericia introduced Tuba by Nanna Ditzel, a stately high backed chair in laminated wood. Aimed more at dining than café use, this is a natural progression from Ditzel's successful Trinidad series and should do equally well.

Like Milan, the Cologne fair extends into the city with more and more companies choosing to exhibit in empty wharf buildings on the edge of the Rhine and city centre showrooms. But the annual April pilgrimage to Milan is somehow more pleasing than a blustery January in Cologne, and this year



***Opposite page*** *Doctor No, designed by Philippe Starck for Kartell. Polypropylene seat in a range of vibrant colours for outdoor use.* ***Right*** *Monsieur X, designed by Philippe Starck for XO. The modern version of the classic directors chair.* ***Below right*** *Sitting Duck, designed by Ron Arad for Zeus. The quirky backrest revolves to create a high or low-back chair*

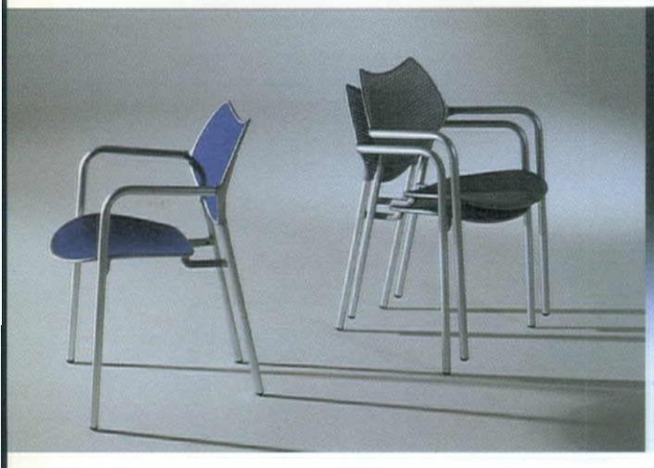
***Left*** *Sawaya and Moroni showed the sculptural Numeri sofa system by Toni Cordero.* ***Right*** *Coast, by Australian furniture designer Marc Newsom for Atlantis, shown here in ashwood and latex rubber.* ***Centre right*** *Cassina - Charles R. Mackintosh re-edition of the Ingram chair designed in 1890.* ***Far right*** *Lima easy chair with folding back, designed by Jasper Morrison for Cappellini*

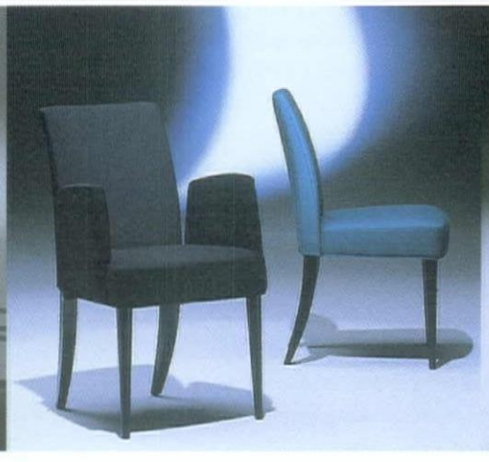
***Below, left to right*** *Irta chair by Jorge Pensi for Driade produced in shotblasted die-cast aluminium. The highly adaptable Fifty-Fifty dining chair by Wolfgang Hints for Wittmann, available in one or two arm versions. The Kunsthalle stacking chair by Adolf Krischanitz also for Wittmann*

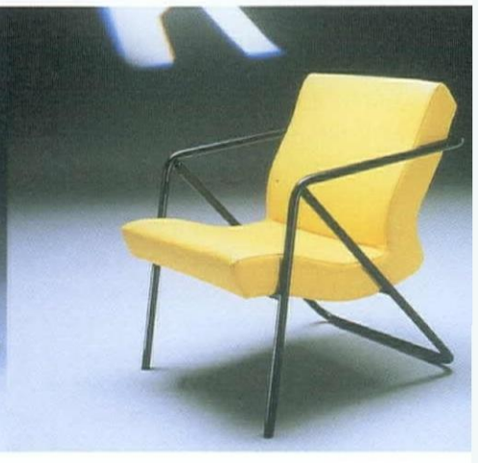
***Opposit page bottom, left to right*** *Cassina - Frank Lloyd Wright, classic styling of the Imperial Tokyo seating. Jim contract seating range by Enrico Franzolini for Moroso. The stately Tuba chair in laminated wood, designed by Nanna Ditzel for Fredericia*

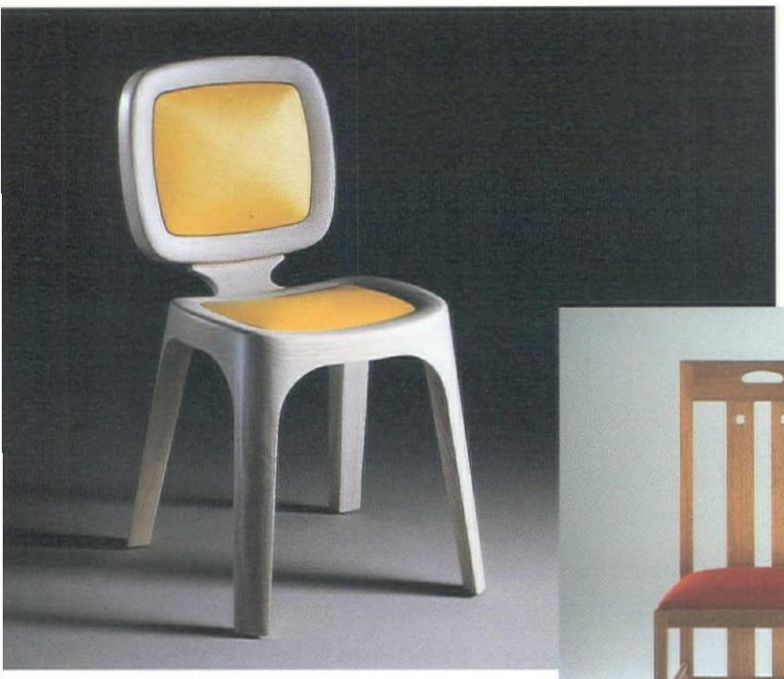
we were blessed with Mediterranean temperatures enhancing the typically Italian festivities. Despite the general air of caution, no doubt prompted by the stagnant local economy and the recent political uncertainties, the Salone del Mobile celebrated its 35th anniversary in style, with a number of special events and two extensive exhibitions on Joe Colombo and Achille Castiglione. Outside the fairground, the city centre joined in with over 100 product launches and parties throughout the day and night.

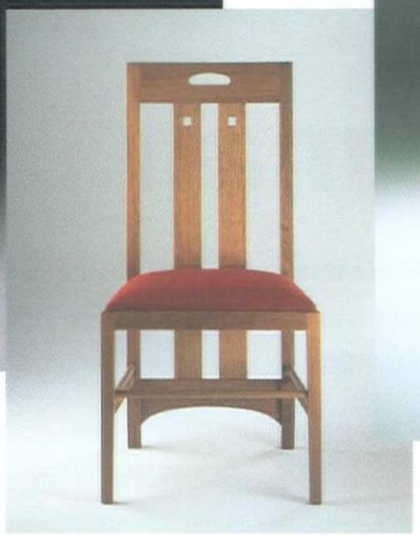
In the heart of the city on the Via Montenapoleone, Cappellini introduced a wealth of new product in a showroom adorned with white daisies. A notable introduction was the Lima easy chair by Jasper Morrison produced in aluminium and brightly coloured polypropylene. Around the corner at the Driade showroom, Jorge Pensi played host to his latest design, the Irta armchair with a perforated and shotblasted die-cast aluminium seat and back. And across the road at Sawaya

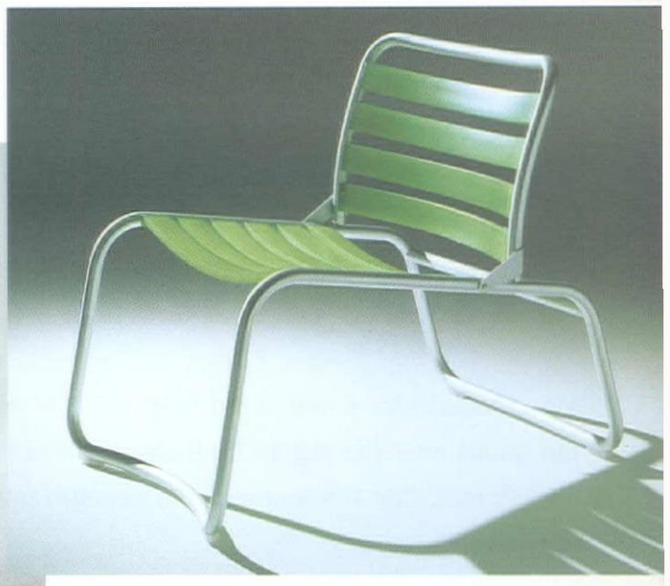










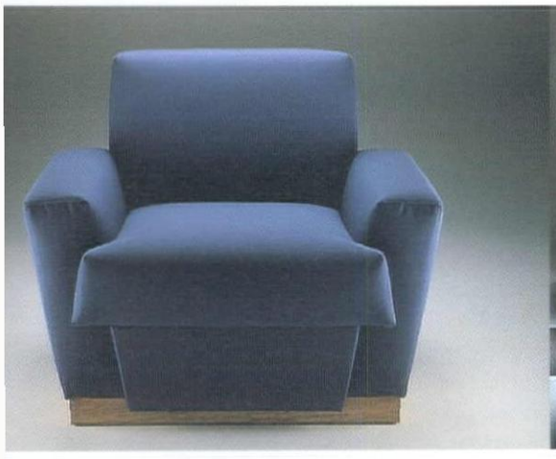


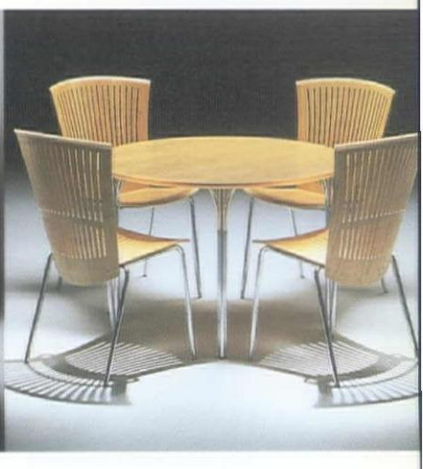
and Moroni we were treated to the sculptural Numeri sofa system by Toni Cordero and new tables and cabinets by Matthew Hilton and William Sawaya. Italian giant Cassina launched MET, a system of seating units and sofas designed by Piero Lissoni and showed us new additions to the classic "Cassina I Maestri" collection – early designs by Charles Rennie Mackintosh and seating by Frank Lloyd Wright originally designed for the Hotel Imperial in Tokyo in the early 1920s. And in the south of the city, Zeus hosted its Blue Garage Party and gave us the quirky Sitting Duck by Ron Arad, a padded easy chair with a revolving backrest which moves to create either a high or low backed chair.

Back at the fiera, coloured plastic dominated the Kartell stand, itself a main attraction with its impressive shiny steel floor. New products on display included Maui by Vico Magistretti (see product focus), the Dolly folding chair in vibrant colours by the design team of Antonio Citterio and Oliver Lowe and two introductions by the ubiquitous Philippe Starck – the Miss Trip 'cash and carry' chair seen first at Cologne and the new Doctor No for outdoor use. This latest Starck design continues his exploration with moulded polypropylene and pastel colourings and is the first of a new product line that will include tables, chairs with castors and rocking chairs. For French company XO, Starck has taken a more traditional stance with Monsieur X, a directors chair with solid sides shown in dark woods and earthy fabrics. The range also includes a directors rocking chair and an elongated version or chaise longue. An inexpensive design in keeping with the general trend this year.

It was also back to basics for upholstered seating, with "no-nonsense" designs very much the order of the day from the Italians. B&B Italia celebrated 30 years with new sofas by Andreas Störiko and Antonio Citterio; Zanotta introduced the solid Neoradha divan by Sottsass Associati, alongside a new family of storage units; and Moroso launched Jim and Jules, two families of seating by Enrico Franzolini aimed respectively at the contract market and the home – not as exciting as last years "Los Muebles Amorosos" collection, but nevertheless continuing the Moroso philosophy of quality and styling.

The careful and 'safe' approach adopted by many of the major players suggests a new sense of maturity in Italian design. But with growing interest from overseas markets (organisers Cosmit report that foreign visitors this year accounted for 40% of the total) coupled with the recovery in the local economy, next year should see a return to the more speculative and adventurous designs that have become synonymous with Milan. **WA**





***Opposite page, clockwise from top left***
*Ospite for Campeggi; Scriba for Campeggi; Maralunga for Cassina; Selene for Artemide; Flower for De Padova; Gaudi for Artemide; Sinbad for Cassina*

# The chair man

**Vico Magistretti is one of the "old lions" of the Italian furniture design company, ÑÑ but as his new seating for De Padova, Kartell and Campeggi show, he still has a mighty roar. Carl Gardner met the maestro in Milan to talk about his chair designs old and new**

Vico Magistretti walks into the DePadova showroom in the Corso Venezia. He is smaller, more frail, less magisterial, than last time I met him in London in the late 1980s, but the effect is still electric, people make way for him, line up to shake his hand, even ask to be photographed with him during my interview. As one of the five or six key figures who shaped post-war Italian design, the Milanese treat Magistretti, quite rightfully, like a star. And if there's one area of design where he has made his biggest mark, it's chairs and seating: Selene, Maralunga, Gaudi and Sinbad are just some of his instantly recognisable seating designs which span more than three decades, and at this year's Milan Fair, well into his seventies, he treated us to three more notable collections. "It's true, I've designed too many chairs in my life," he admits, "some are good, others not so...but the chair is the most difficult thing to design. It's not like a building, it has no exterior and interior, so there's no possibility of cheating."

Magistretti's first commercial chair is in fact 50 years old this year (I had to prompt his memory, but then I don't have five decades of design work cluttering my head). Designed by the young, newly graduated architect/designer in 1946, when Italy was still picking itself up from the devastation of World War II, his debut was a lightweight, deckchair-like design with stripey fabric body and soft, folding armrests. But it was the early 1960s before Magistretti's seating classics, for companies like Cassina and Kartell, made a lasting impact on the resurgent Italian design scene. First up was the unimaginatively titled Model 892 for Cassina (1963), a rationalist reworking of traditional form and material (timber frame, plaited rush seating) that still graces many a *trattoria*. But Magistretti soon moved into modern plastics, most notably with Selene, designed in 1961 but not produced by Artemide until 1966. The subtle curves and radiussed corners of this archetypal stacking chair in ABS were instrumental in establishing a new aesthetic for Italian plastics products. "Certain angles and turning points are impossible in a wooden chair," Magistretti explains. "Plastic allows you to give it a distinctive identity or character."

**"...the chair is the most difficult thing to design. It's not like a building, it has no exterior and interior, so there is no possibility of cheating."**

It's an advantage that Magistretti has continued to exploit, most recently in the Maui chair for Kartell, launched in Milan in April. "It's a simple chair with a strong image, I will have the lime green version in my living room," Magistretti avows. Like many of this year's Milan offerings, Maui was designed with a relatively low price and broad market in mind, hence the potential to add arm-rests and writing-table, for a range of conference and educational applications. "I don't really believe in the concept of a contract chair, of aiming chairs at a particular sector," Magistretti explains. "If it's good for contract, it's good for the home and good for the office. After all the bottom is always the same."

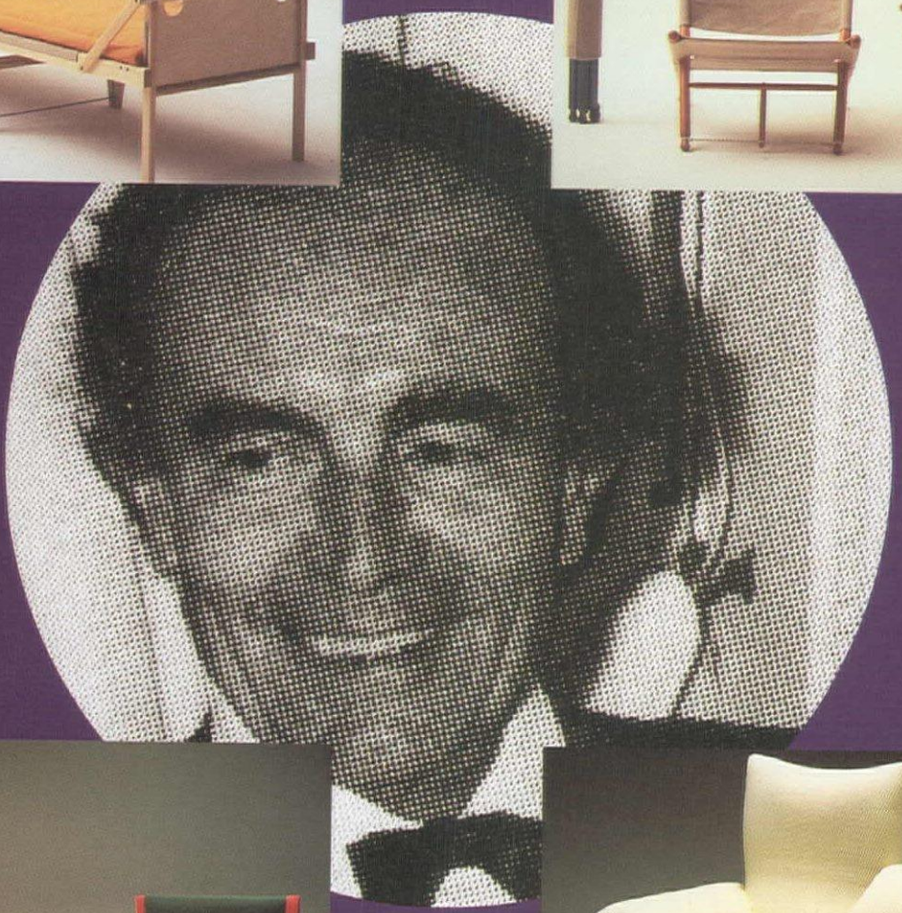
But Magistretti continued to work in more traditional materials too, most notably in two consecutive pieces for Cassina, Maralunga (1979), a hugely opulent armchair in sumptuous leather, redolent of the 1970s good life, and Sinbad from 1981, one of the designer's best-loved creations. With its jokey *objet trouvé* origins, a horse-blanket thrown over a solid frame (undoubtedly influenced by the new informality of Studio Alchymia and the emerging Memphis group) it represents the simplicity and sophistication of Magistretti's work at its best.

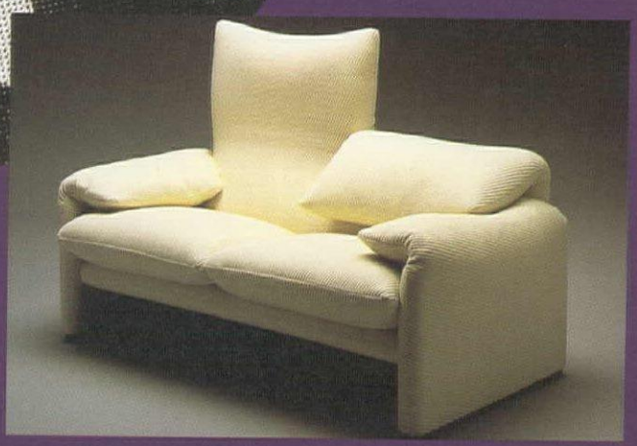
This spirit of spontaneity, not to say improvisation, is reflected in his working methods. "Nobody ever asks me to do a particular design. We talk about what we would both like to do and it evolves. Or I talk with my publisher and I say, 'look I would like to do this' and we talk about it...design is chat. A good design has to have a strong concept, basically it should be able to be transmitted by telephone." This final piece of heresy, often repeated to students at London's Royal College of Art where he was long-time visiting lecturer, has been known to cause outrage and intrigue amongst those who think that design is purely image or visual line.

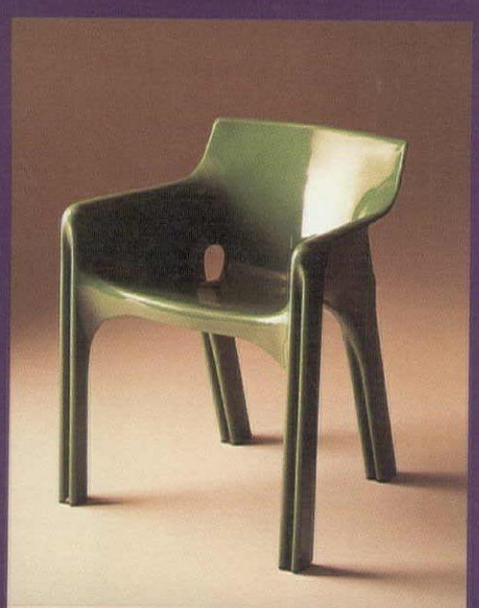
This year saw further additions to the maestro's soft seating portfolio, in ranges for Campeggi and DePadova. I talked to him about the latter company's adaptable Variantes sofa range, which comes with or without metal or upholstered arms. "It has a very open, giving structure, without cushions. I like the 'dry' type of sofa, such as the famous Charles Eames' sofa for Herman Miller. It's reasonably deep but the deep roll at the back allows you to change the depth, if you want."

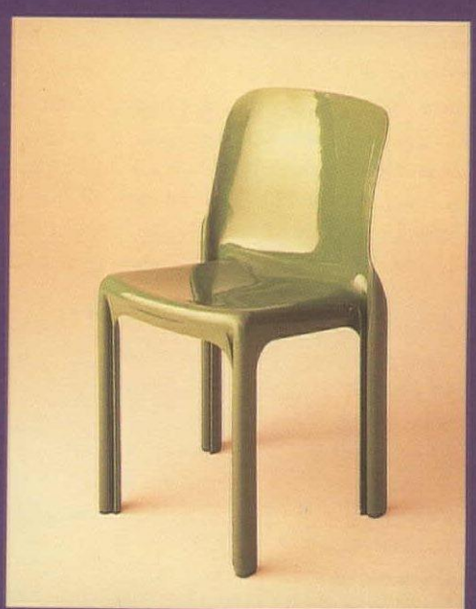
The work for Campeggi, a company that started out making equipment for camping, is totally different, a quixotically eccentric series of folding and wheeled chairs and sofas, explicitly designed for "young, informal people, who need simple things for their small homes". Materials are lightweight, timber, ply, canvas and even pieces of rope, and the forms stripped down, almost transitory. The Kenia armchair from 1995, for example, is basically a fabric "dress" over a hinged aluminium frame, which folds down into a compact bundle when not in use.

This year's main additions to the range are Ospite, a skeletal chaise longue, with roll-up upholstery, and Scriba, a canvas and timber model that almost takes us back 50 years to the deck-chair design of 1946. Good, simple ideas *are* worth repeating, and now I know why he couldn't remember it. WA









# The British Council, Hong Kong

The new headquarters for the British Council in Hong Kong will be located alongside the British Trade Commission in two buildings designed by architects Terry Farrell & Partners. Set in a hillside location, the eight storey complex provides a dignified landmark set amidst the towering skyscrapers of the city.

Selection of the furniture and fittings was carried out from London by the British Council's in-house design team and involved a rigorous process of assessment. In many of the public areas and receptions, they have specifically chosen to showcase British furniture design of the twentieth Century.

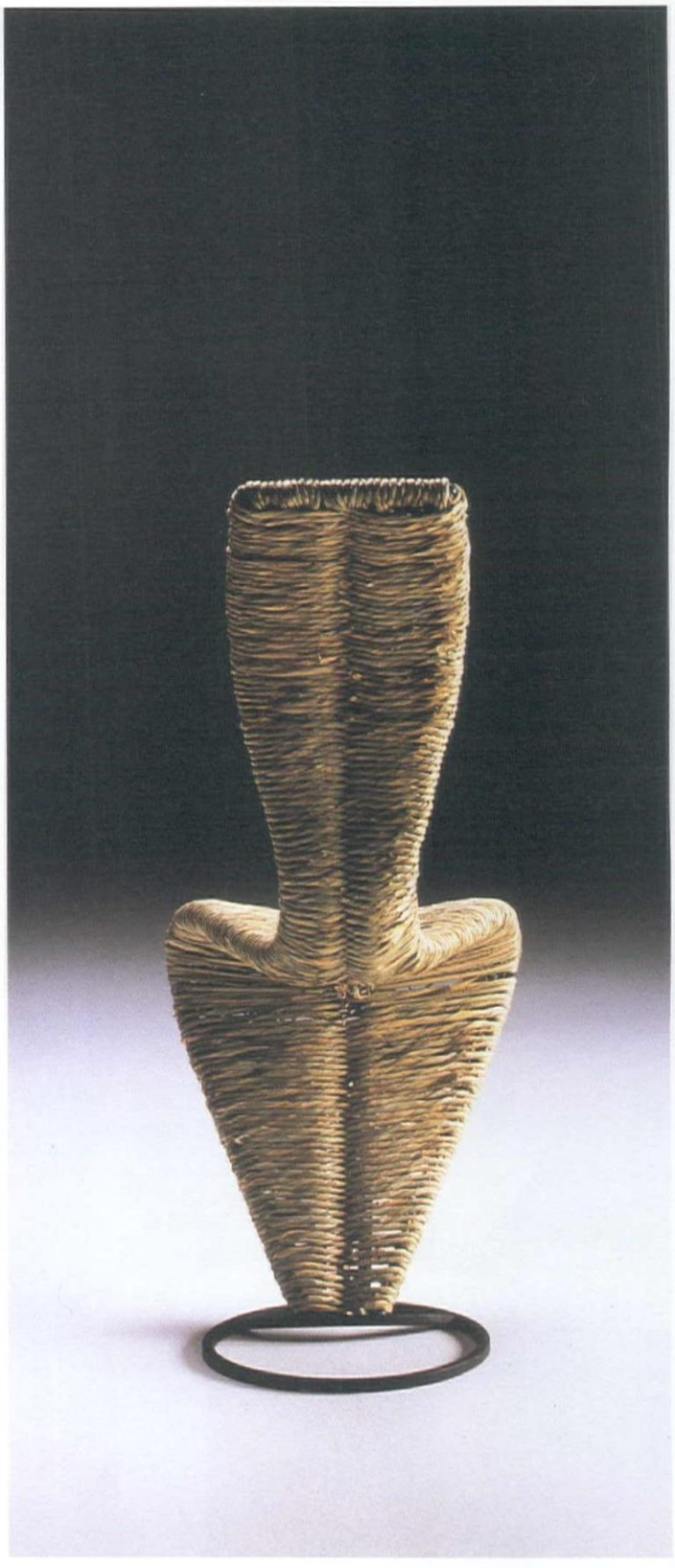
Entering the ground floor entrance foyer, the visitor is directed up an escalator to the first floor exhibition hall, which will house touring exhibitions and artworks from the British Council's permanent collection. Here the design team has selected one-off and production pieces to give visitors a taste of the diversity and quality of the work of British furniture designers. Two curvaceous S-chairs designed by Tom Dixon for Cappellini SpA have been upholstered in a soft rush and accompany a colourful, sculptural table by artist Peter Chang. These two items form part of a formal seating arrangement offering panoramic views over Hong Kong bay. A more informal seating area features two Fat Chairs, again by Tom Dixon for Cappellini, and the Tongue sofa designed by Nigel Coates, upholstered in a bright red fabric. These are situated around the distinctive Chameleon table by Rock Galpin.

Moving up to the Information Centre on the third level, brightly coloured tub chairs from Hitch Mylius dominate the central library area. In the office of the Assistant Director of Information, the designers have chosen a bright yellow chaise designed by Sarah Jane Wakely also for Hitch Mylius. A further selection of British designed furniture can be found on the seventh floor where the Directorate offices and conference/training suites are housed. Here the glass and steel Nomos table designed by Sir Norman Foster for Tecno, has been specified both for the conference room and office. (Both these spaces provide the user with a view in direct line with Foster's Hong Kong Shanghai Bank). Seating is provided by tub chairs from The Plan and the Kerouac sofa by Matthew Hilton, both upholstered in tan leather.

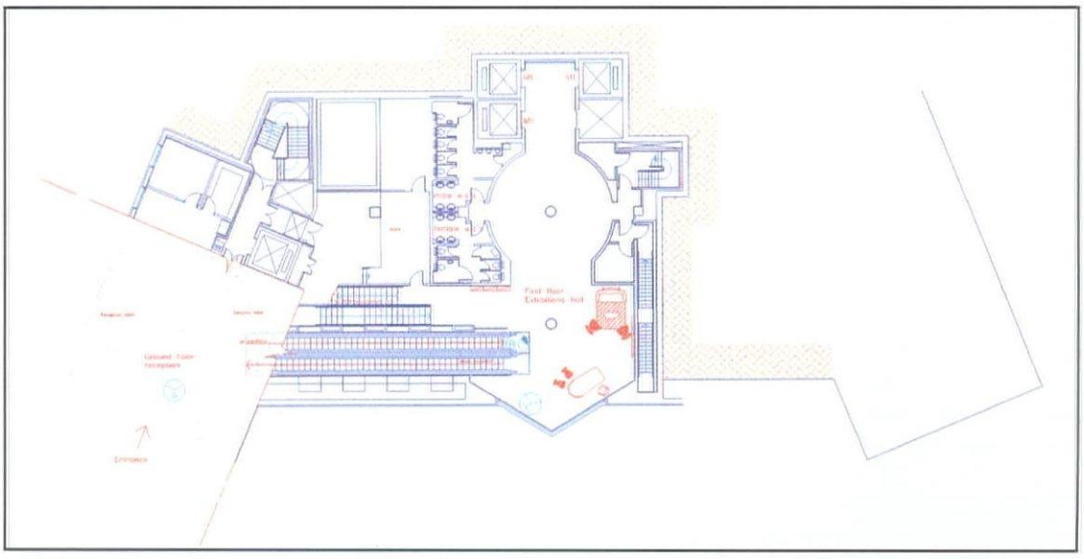
The British Council promotes educational, cultural and technical co-operation between Britain and other countries and its new 80,000 square foot premises have been designed to accommodate a range of services, from an English Language School and information centre providing on line information about Britain and its educational system, to support facilities and office accommodation for the 200 staff.

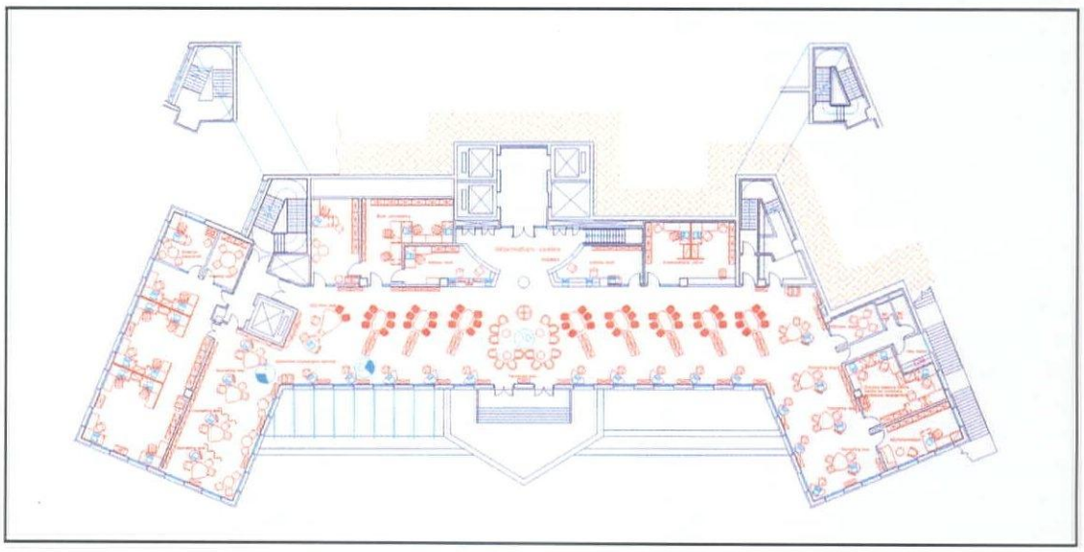
The new British Council building will open at the end of 1996 with an exhibition of British Architecture and Design.

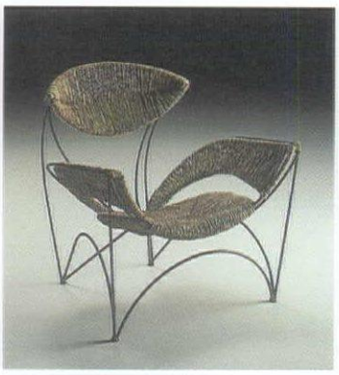
| | |
|---|---|
| **Project** | The British Council, Hong Kong |
| **Furniture suppliers** | Aram Designs |
| **Workstations** | Samas Roneo, Jensen |
| **Office Seating** | Boss |
| **Classroom furniture** | Matthews, SKS.howe. |
| **Architects** | Terry Farrell & Co |
| **Engineers** | Ove Arup Partnership, Windell Hong Kong |
| **Project Managers** | Swires |
| **Interior Design** | Ian Gunter, British Council |

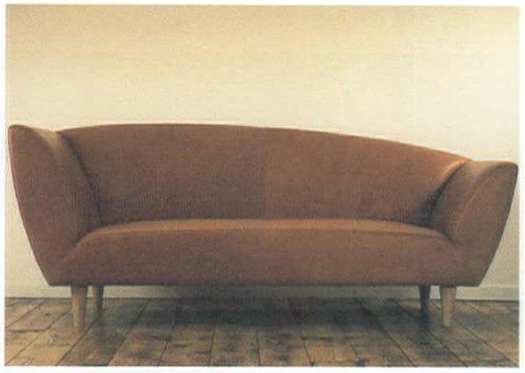


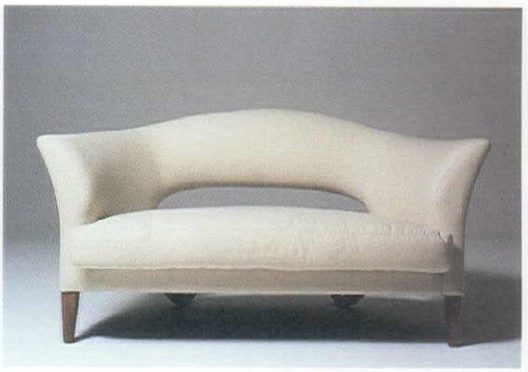
***Opposite page top*** *S-chair by Tom Dixon.* ***Opposite bottom*** *Exterior model shot of Terry Farrell & Partners British Council in Hong Kong by Nigel Young.* ***Right*** *Furnishing plan, level 1.* ***Below right*** *Furnishing plan, level 3.* ***Bottom, clockwise from top left*** *Fat Chair by Tom Dixon for Cappellini; Kerouac sofa by Matthew Hilton; Tongue sofa by Nigel Coates; Chameleon table by Rock Galpin; HM291 chaise by Sarah Jane Wakely; tub chairs by The Plan*

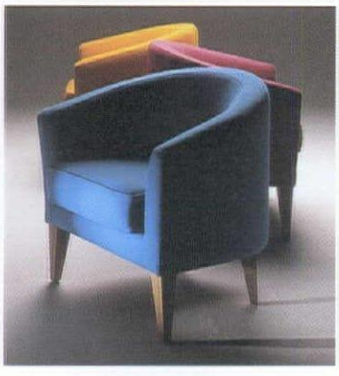


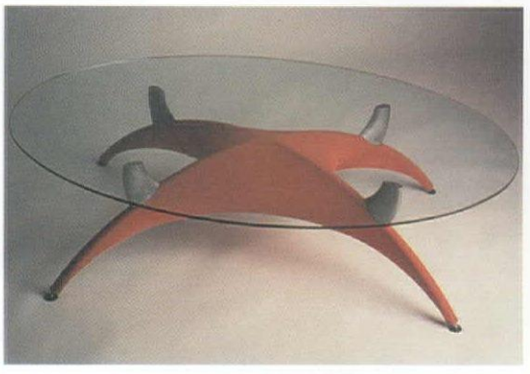












# Satellite D Terminal, McCarran International Airport, Las Vegas, USA

McCarran International Airport is the gateway to the resort destination of Las Vegas, and is one of the ten busiest passenger airports in the United States, serving over 28 million passengers per year and expanding rapidly. In association with Leo A Daly, local architects Tate & Snyder have designed a much needed "Terminal D" scheduled for completion in March 1998.

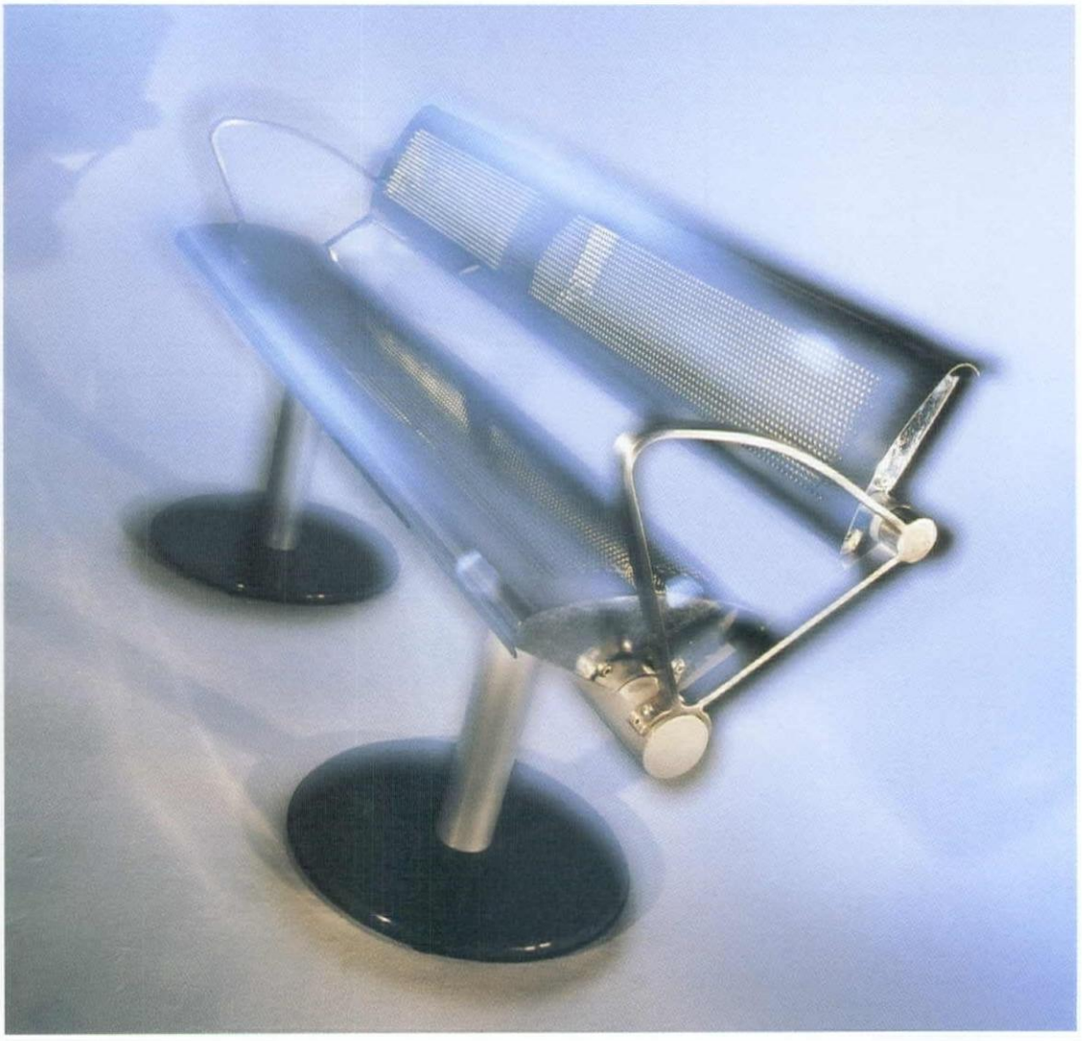
The new terminal has a sweeping curved roof over the Main Hall culminating in a full height glass wall offering views out to the runways beyond. The public spaces incorporate elements from the famous Las Vegas "strip" set amidst a marble, glass and steel interior.

In keeping with this hi-tech image, the architects have chosen the Zenky beam seat by Zoeftig + Company to be installed throughout the new terminal. Selected from a shortlist of three, Zenky was originally conceived for the Buchanan bus station in glasgow, Scotland, and has since been developed into a sophisticated and versatile system for station and airport environments.

The modular design accommodates back-to-back seating, long rows of seats with intermediate tables and more intimate arrangements. The elegant curving forms of the seat and back are available in perforated or plain steel, moulded plywood and upholstery, and the sculptural armrests in mild steel or cast and polished aluminium.

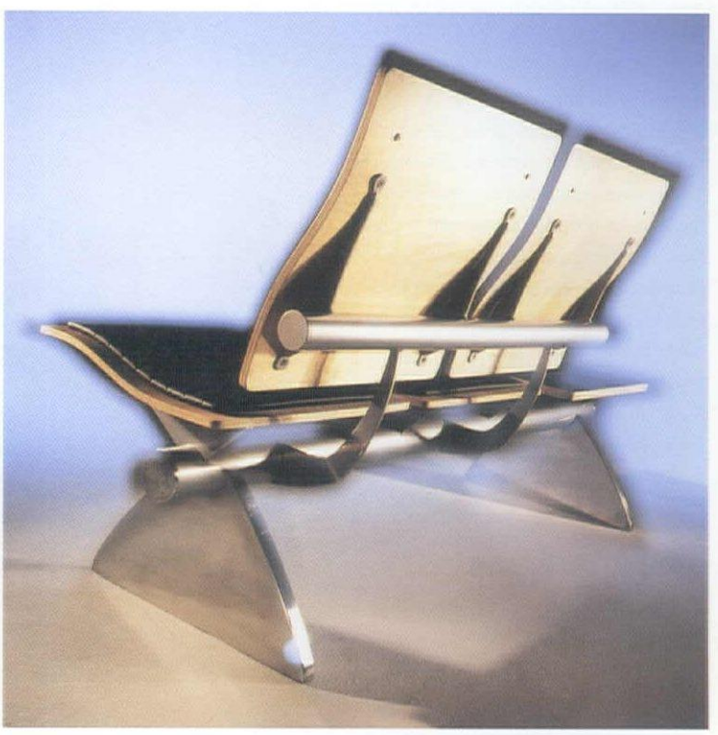
Here the architects have specified a pressed and rolled mild steel seat with aluminium arms and feet. The system has also been selected for the existing terminal building at McCarran International where the first thousand seats have been installed, but it is in the new terminal D that Zenky will come into its own. WA

| | |
|---|---|
| **Project** | McCarran International Airport |
| **Client** | Clark County Department of Aviation |
| **Terminal seating** | Zoeftig + Company |
| **Architects** | Tate & Snyder Architects |
| **Aviation Architects** | Leo A Daly |
| **Interiors Consultant** | Fielden & Partners |

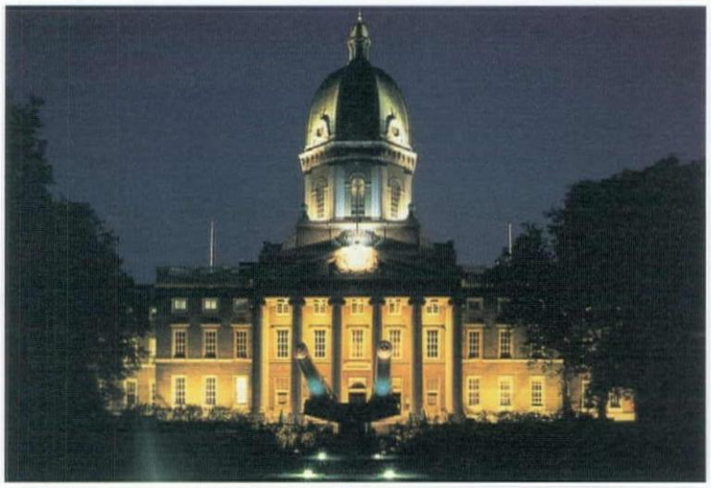


***Below*** *The first thousand Zenky seats have already been installed in the existing terminal building, specified with a ribbed PVC cushion. Other options include moulded plywood* ***bottom right****, and perforated or plain steel* ***opposite page top***

***Opposite page bottom*** *Photograph of Satellite D Terminal model showing the Main Hall with its full height glass wall.* ***Below*** *Computer rendering of the interior of the new Satellite D Terminal*



# Imperial War Museum, London, UK



London's Imperial War Museum has recently benefited from new gallery seating designed by Terence Woodgate for SCP. The Public Seating System, (which will also be used in the Glass Hall at the Leipzig Exhibition Hall, Germany) provides a restrained yet versatile solution to meet the demands of public spaces – from galleries and museums to airports and reception areas.

In the ground floor exhibition area and first floor mezzanine levels, the client has chosen a three-seater version with cantilevered seat and back in structural aluminium alloy. Arms are fitted directly to the beam which in turn is mounted on tapered extruded aluminium bases. It is a hardwearing yet comfortable system with a flexing back which moves independently for optimum comfort. The bench version situated in the centre of the main exhibition space was specially produced in aluminium at the request of the museum.

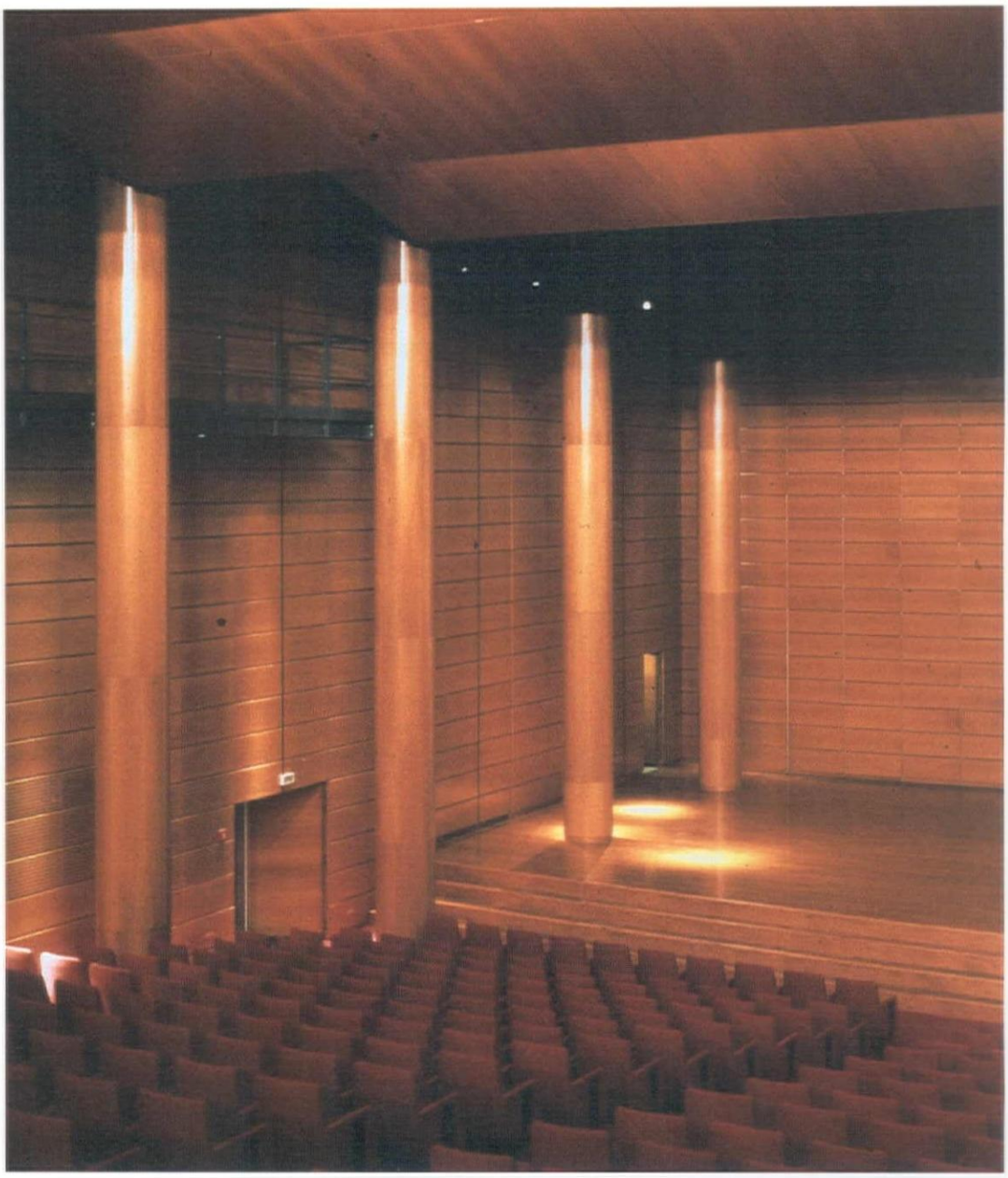
Upstairs, the large north-lit art gallery features four-seater benches upholstered in leather. Next to this in a smaller gallery, two three-seater benches have been installed, also in leather, together with a bespoke commemorative table funded by donations from friends of the museum. A plaque inset into the slate top honours Dr Alan Borg, Director General of the Museum from 1982 to 1995.

The Imperial War Museum is housed in the surviving central part of the Bethlem Royal Hospital, designed by James Lewis and completed in 1815. The Crown acquired the premises in the 1930s to provide a permanent home for the museum and its growing collection of reference material, art and and military exhibits. Some 50 years later, the museum initiated a major redevelopment and appointed Arup Associates to prepare a feasibility study for a phased programme of work. The first two stages are now complete and stage, a new extension to the southwest, is currently awaiting funding. **WA**

| | |
|---|---|
| **Client** | Imperial War Museum |
| **Architects** | Arup Associates Architects + Engineers + Quantity Surveyors |
| **Bench Seating** | SCP Contracts |

***From above*** *Imperial War Museum; three-seater cantilevered seat and back in structural aluminium alloy. The arms are fitted directly to the beam which is mounted on tapered extruded aluminium bases; two leather-upholstered benches in the main gallery space*

# Cité Internationale de Lyon, France



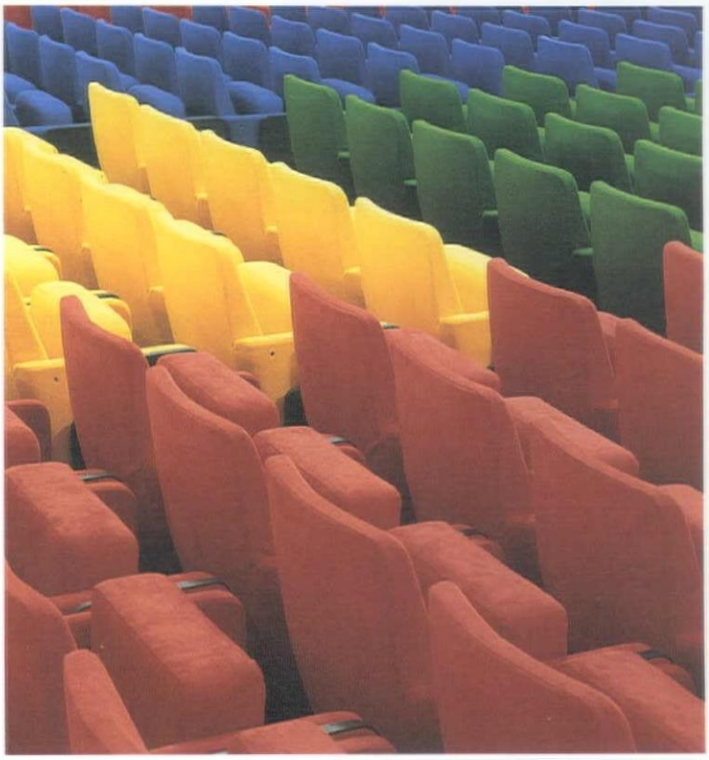
The Lingotto seating range for conference centres, concert halls and lecture rooms was launched at Orgatec two years ago by the office division of B&B Italia, now Herman Miller Italia. Designed by Renzo Piano originally for the 3500-seat multipurpose hall at Lingotto in Turin, the seating is now finding its way into other projects, most recently the Cité Internationale de Lyon, also designed by Renzo Piano Building Workshop and completed earlier this year (*see WA 45*).

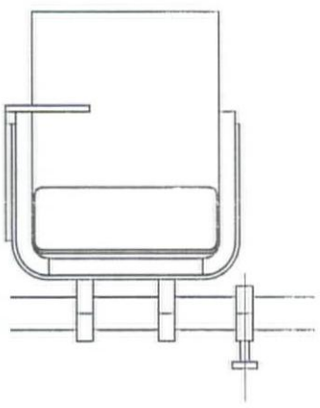
Two main factors have contributed to the design of the chair – acoustics and comfort – both major requirements of any concert hall. Here the seat, backrest and arms are constructed of layered polyurethane foam which gives the chair a greater softness and guarantees good acoustic insulation. It is also a flexible system with each chair separately anchored to the steel beam using a vice clamp. This allows different specifications of seat to be used next to each other, and facilitates the temporary removal of individual chairs to make space for the disabled. Optional accessories include row numbers, wire baskets and a writing tablet that retracts neatly into the armrest. The backrest has also been designed to fold down into the seat, to allow a height-adjustable two-tier table unit to be installed for the person behind.

At the Cité Internationale de Lyon, the Lingotto seating can be found in both the 900-seat and the smaller 400-seat auditoriums, upholstered in vivid red to blend in with the warmth of the wood panelled rooms. **WA**

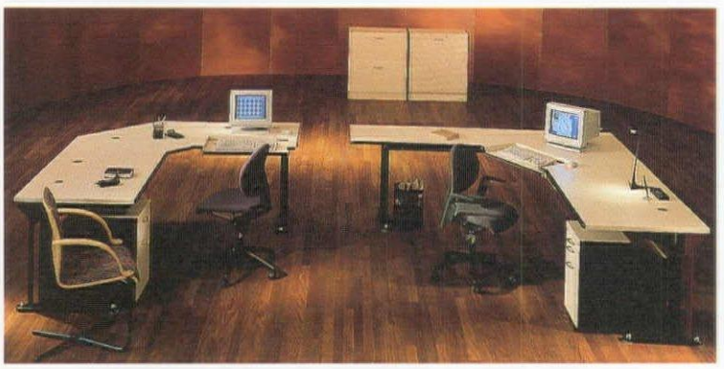
| | |
|---|---|
| **Architect** | Renzo Piano Building Workshop |
| **Associate Architects** | Curtelin-Ricard-Bergeret |
| **Seating** | Herman Miller Italia |

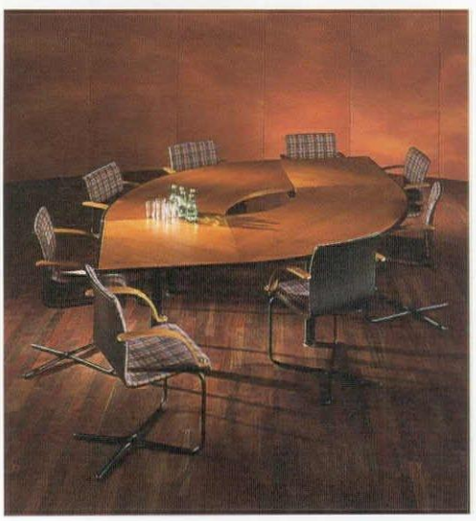
***Above*** *The 900-seat auditorium with wood-panelled walls and concrete columns.*
***Right*** *Detail of the Lingotto seating showing the soft padded seat and the colour options available*





# Portfolio



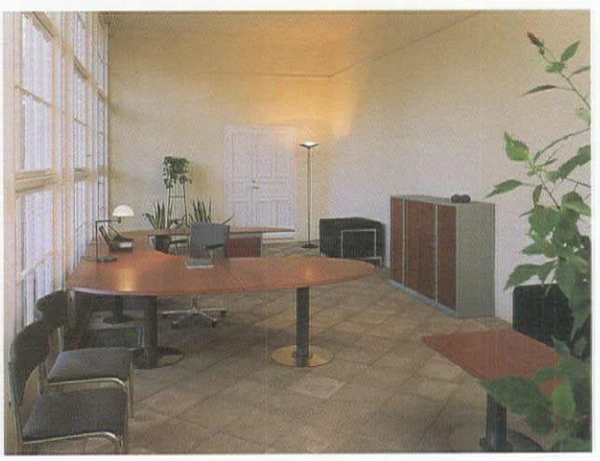


**System B8**
System Aritmo is a office furniture system from Danish manufacturer, System B8. Designed for the modern office environment, the range includes both office (above) and conference furniture (left). The desking is particularly user friendly with the legs designed at the back of the desk, well out of the way of the user. Warm materials and colours have been used throughout and the desk and table surfaces have sturdy solid timber edging.

**System B8 møbler a/s**
Martin Backs Vej 3-5
DK-8850 Bjerringbro, Denmark
Tel: +45 89 50 50 50
Fax: +45 89 50 50 70

**Facit Office Furniture**
Facit io, created by Frank Duffy, Knud Holscher and Tony Wills for Facit office Furniture, is based on three elements: desk, service wall and storage. The flexibility of the design makes it suitable for both open plan and the combi-office.

**Facit Office Furniture**
AB Åtvidabergs Industrier
Box 185, S-597 24
Åtvidaberg, Sweden
Tel: +46 120 815 00
Fax: +46 120 126 40

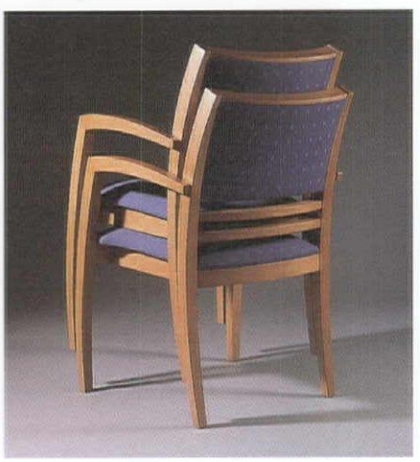


**Hawa AG**
Topfold 40 and Multifold 30 are two carefully conceived hardware systems from a range by Hawa AG. Topfold 40 is a solid, smooth running "Vorfront" folding hardware system for cupboard doors with a panel weight of up to 40 kg each. Multifold 30 is a folding cupboard multi talent hardware system, featuring three design options: Infront, Mixfront and Vorfront. It is suitable for both small models and multi-panel wall cupboards, for doors having a panel weight of up to 30 kg each.
Both systems permit a simple cupboard construction, reduced installation time on site and allow the folded panels to be moved silently and effortlessly. Ideal for high cupboards in demanding interiors as well as for series-production furniture.

**Hawa AG**
CH-8932 Mettmenstetten, Switzerland
Tel: +41 1 767 91 91. Fax: +41 1 767 91 78

**Morgan Contract Furniture**
Spider designed by James Wright is a new range of chairs for the hotel and leisure market. Crafted from solid beech, Spider has a distinctive curved arm detail, tapered legs and padded seat and back providing an elegant and comfortable solution for hotel interiors. The range includes low and high back side chairs and an armchair in both stacking and non-stacking versions.

**Morgan Contract Furniture Plc**
Clovelly Road, Southbourne, Emsworth,
Hampshire PO10 8PQ, UK
Tel: +44 (0)1243 371111
Fax: +44 (0)1243 378796



**Grammer**
Enviro is a new multi-purpose chair from Grammer. The versatile design allows the specifier to mix and match armrests, upholstery and finishes to suit the particular requirement whether it is for the cafeteria, conference room or lecture theatre.

**Grammer Bürostühle GmbH**
Wernher-von-Braun-Str. 6
D-92224 Amberg, Germany
Tel: +49 (0)96 21 601-0
Fax: +49 (0)96 21 601 150

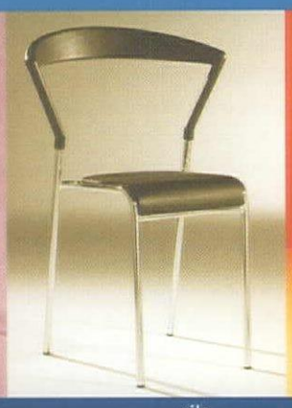
LLERMUIR

# meeshak

(designed by tom beesley and paul matthews of arc design)

‹ ARC have designed 'Meeshak' for Allermuir, a range of seating which exemplifies both companies commitment to producing original designs that meet functional requirements. ARC's concept displays an innovative and striking mixture of tube sections, flattened tube armrests and subtle angles, creating a refreshingly clean, lightweight modern look. This comprehensive family of products offers leg link and arm pad accessories, an exciting array of finishes, and a full range of complimentary tables ›

zupo



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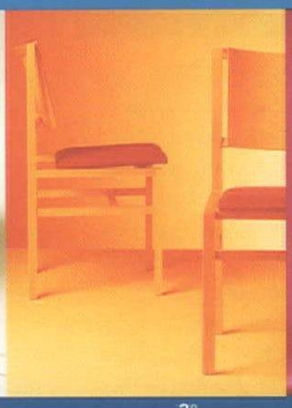

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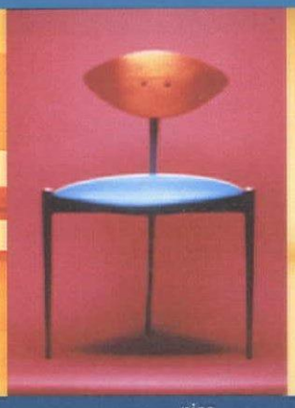

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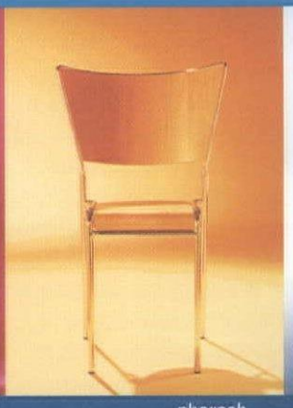

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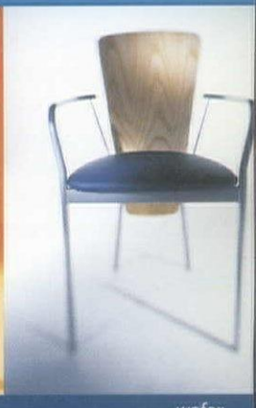
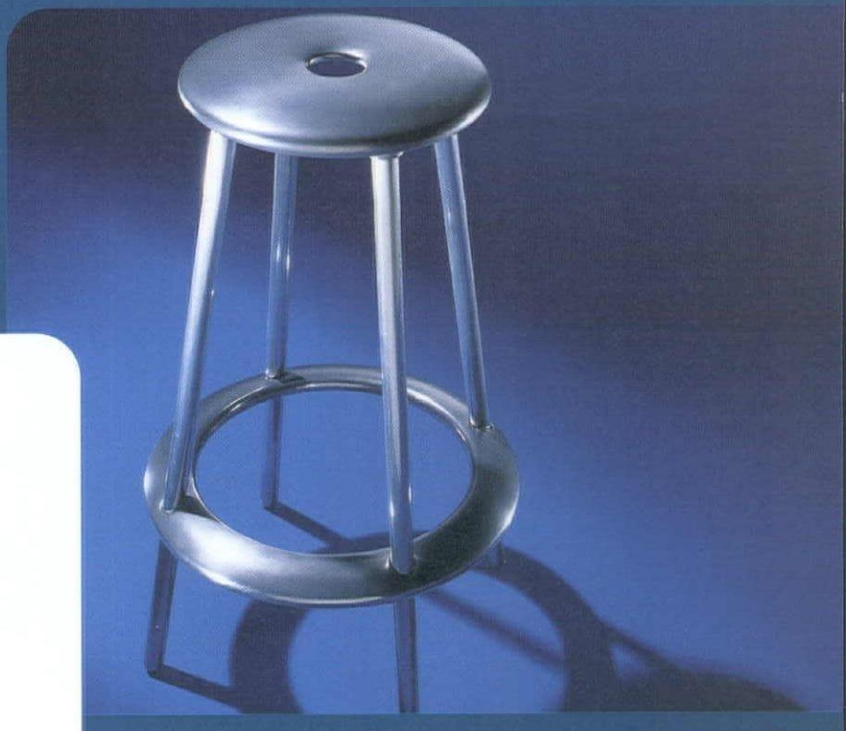


wafer

## LUNA

DESIGNED BY AMOS MARCHANT AND LYNDON ANDERSON OF BLUE

MANUFACTURED BY ALLERMUIR, DESIGNED BY BLUE, 'LUNA' HAS A TRULY SPACE AGE LOOK WITH CLEAR LACQUERED, POLISHED CAST ALUMINIUM SEAT AND FOOTRING, AND BRIGHT SILVER ANODISED TUBULAR ALUMINIUM LEGS. MATERIALS AND FINISHES APPROPRIATE, FUNCTIONAL AND DESIRABLE FOR BOTH INTERIOR AND EXTERIOR SCHEMES. CONTEMPORARY CLEAN LINES, AND SENSUAL FORM, MATCHED WITH ENGINEERED DETAILING, ARE CONSISTENT ELEMENTS THROUGHOUT THE RANGE, WHICH CONSISTS OF HIGH AND LOW STOOLS, A STACKING CHAIR, AND TABLES.



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# Dynamic sitting - that's all there is to it!

"Now, will you sit up straight? Sit still" – we can all recall these words from our childhood. But this jiggling and fidgeting, in particular during endless school lessons or at the dining table is just a natural response to move as an antidote to static postures which are harmful. It is a well known fact that, while growing up, we spend more time sitting – in college or vocational school, and most of all in professional life. Doctors, health care organisations, trade associations and, in particular, those who have suffered from bad seating can tell a thing or two about the inevitable results of sitting wrongly. For example, research initiated by the public medical insurance in Germany revealed that over 70 percent of office workers complain about frequent or permanent backache. Children show how to sit better: Moving while sitting – that's all there is to it!

Wilkhahn has for decades been developing swivel chairs for "dynamic sitting", based on a spring controlled synchro-mechanism which enables the chair to respond to movement and automatically adapt to any posture of the user.

Today, the internationally renowned manufacturer offers three complete product ranges which, with differing emphasis, combine form and function of dynamic seating on a high level.

**The Ecologist**

Since 1992, the Picto range exemplifies Wilkhahn's far-reaching ecological change which began in the late 80's. Being logically and consistently developed according to the ecological principles of product design, Picto reconciles ergonomic competence (load-controlled synchronous adjustment, lumbar and pelvic support), environmentally friendly construction and materials; in an original range of office chairs which may be best characterised as "ecological individuals" and which are establishing a strong reputation abroad. Thus, for example, Picto is the first office chair to be awarded the label of Netherland's "Milieukeur" (environment protection) foundation which applies rigid standards.

the stunningly simple but extraordinary comfortable synchronous automatic adjustment, the active lumbar and the shoulder support or other characteristics - the result is a successful range of swivel chairs.

Since its introduction, Modus has received many awards and was featured in "Made in Germany" and "Business Week": In the US IDEA Contest (Industrial Design Excellence Award) Wilkhahn ranked amongst the ten best companies world-wide – not least because of Modus. It is a basic principle of Wilkhahn not to see an office chair as a single piece of furniture, but instead as one part of a large and longlasting product "family". That makes it possible to fulfil the numerous demands in respect of ecology, interior design and representation which apply to contract furnishing. And more, to do so in a consistent style that will remain valid for a long time. Permanent extension and completion of its product ranges therefore is a main task for Wilkhahn. The latest results are shown at the ORGATEC '96 in Cologne (15-20 October) hall 10.1, stand E20 F21.

*Designers*
*FS-line: Klaus Franck and Werner Sauer.*
*Picto: Produktentwicklung Roericht, B. Schmitz and F. Biggel.*
*Modus: Klaus Franck, Werner Sauer and Wiege.*

**The Classic**

The FS-Line, regarded as a classic, has been successful for 15 years. With its flexible seat shell, kinetic function, characteristic slim contours and great variety of models it inspired a whole generation of ergonomic office chairs. Numerous international awards substantiate the FS-Line as a standard of modern office seating.

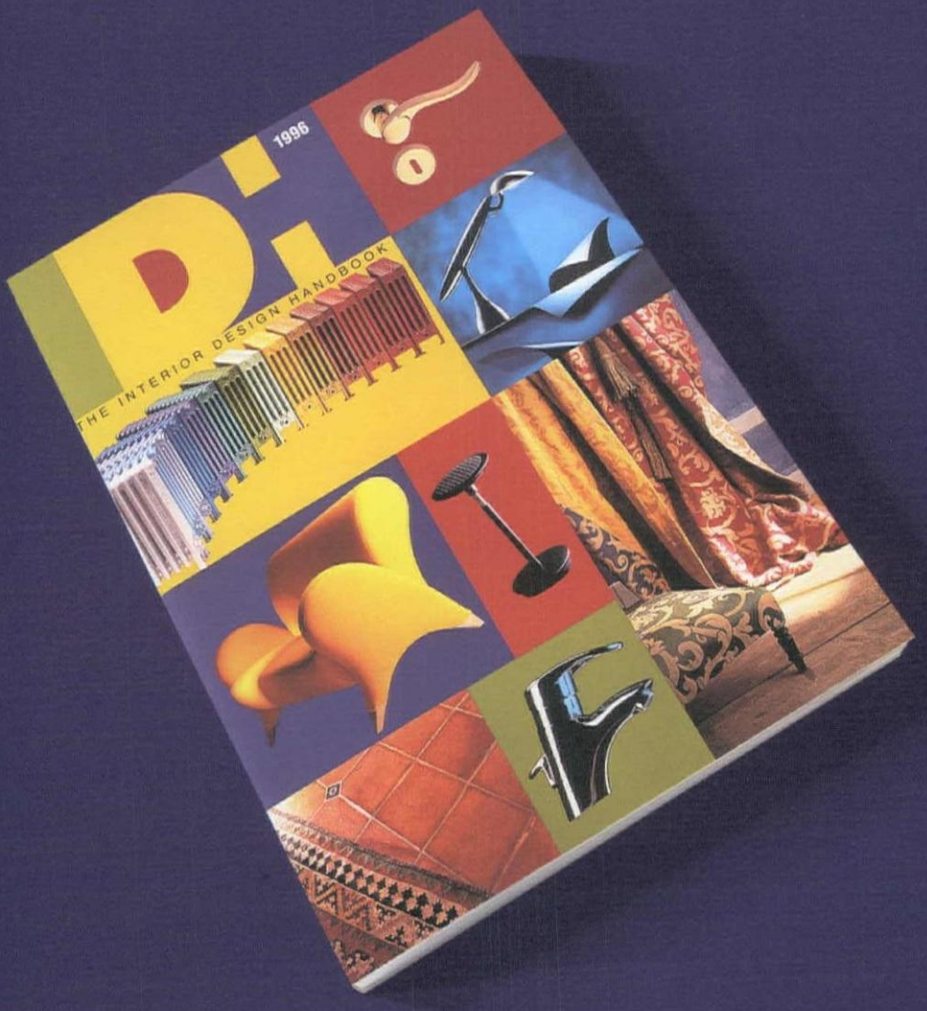
**The Futurist**

Modus, first presented to the public in 1994, comes as the unification of the merits of both FS-Line and Picto: ergonomic and functional perfection, ecological construction and an innovative, forward-looking shape. Take the membrane-like backrest with its flexible frame,

**Wilkhahn**

*For further information please contact the Wilkhahn Export Division, P.O.B. 2070, D-31844 Bad Münder, Tel. +49-5042-999 118. Fax 999 245*

# The interior every designer should look at.

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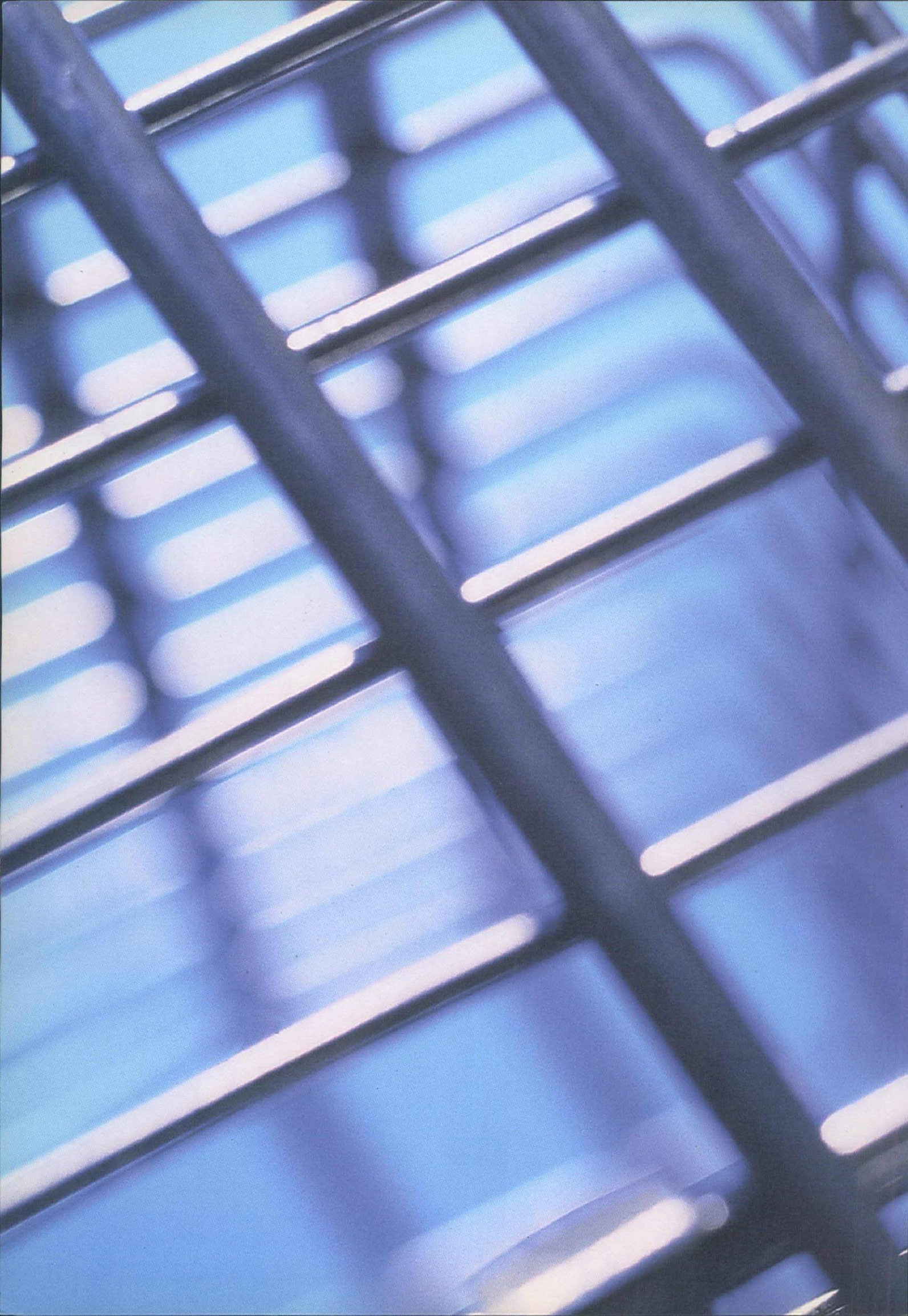

# Retail Centres from around the World and their Architects

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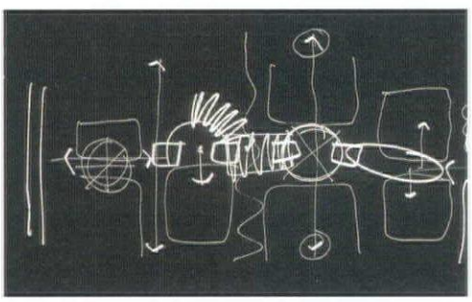
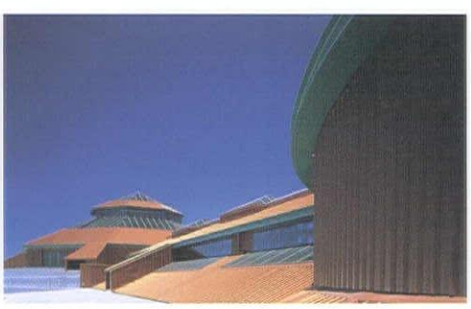
The developments themselves traverse the globe. We visit such places as Beijing in China and Selangor in Malaysia, as well as the USA, UK, Australia and Germany.



Downtown Plaza, Sacramento, USA.

Along the way, we talk to the various architects and developers involved. We hear of the problems they faced, and the often astounding solutions that would propel their developments to the top of the world league.

Throughout, we place these significant achievements in context, with reports on the history of shopping centres, current international trends and costs, and an exclusive interview with Rodney Fitch on retailing worldwide. Hugh Pearman reviews the history of large scale retailing, and John McCloud looks to the future.



Galleria Morley, Perth, Western Australia.

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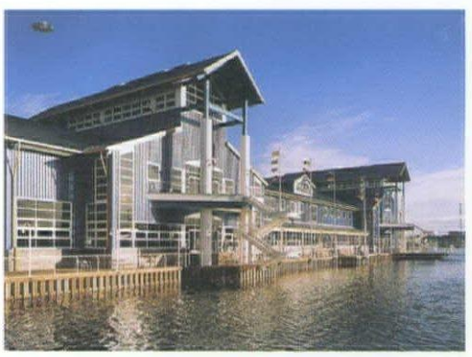


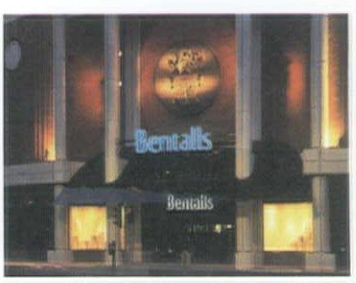
Lakeside, Thurrock, UK

*Shopping trolley photograph, opposite, by Robert Clifford.*

The Mines, Selangor, Malaysia.

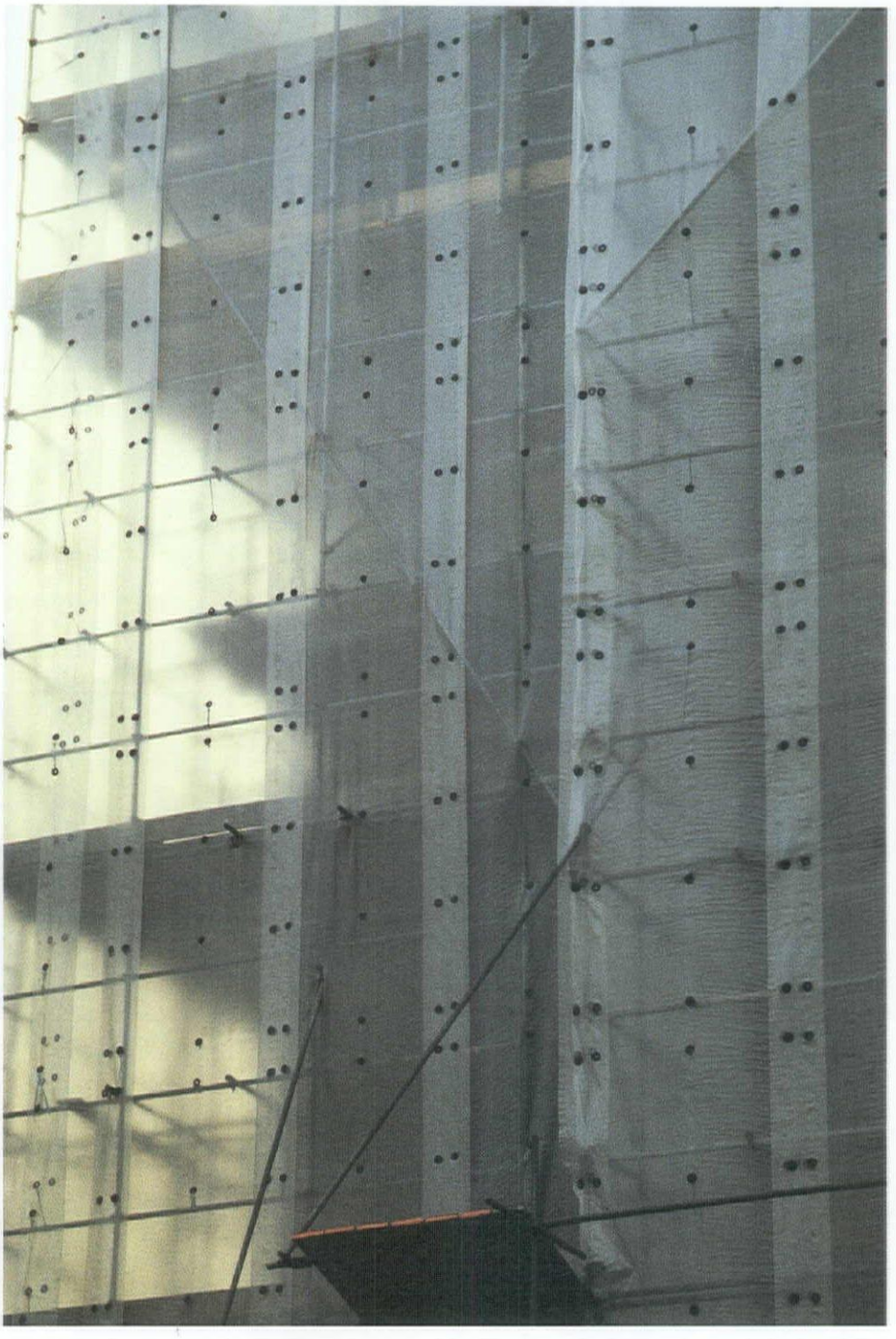
Sun Dong An Plaza, Beijing, China.

Centro Park, Oberhausen, Germany.




Bentalls, Kingston-Upon-Thames, UK.

# Gallery



A

## Clair O'leary

**Contact details:**
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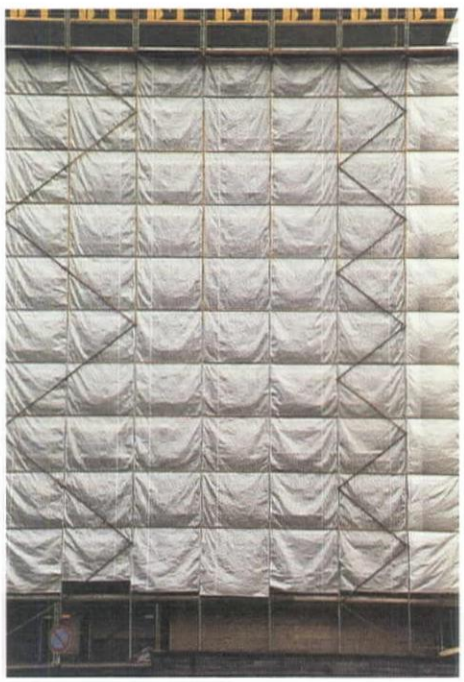
London SW9 9QR, UK
Tel: +44 171 274 2615
+44 171 831 1772
Fax: +44 171 240 0591

I am fascinated by many aspects of architecture, ranging from the aesthetics of power to the aesthetics of refurbishment. The transformation of mundane materials such as plastic coverings and scaffolding into objects of beauty, and the veiling and/or revealing of the building underneath, combines to produce a new interpretation of the original structure.



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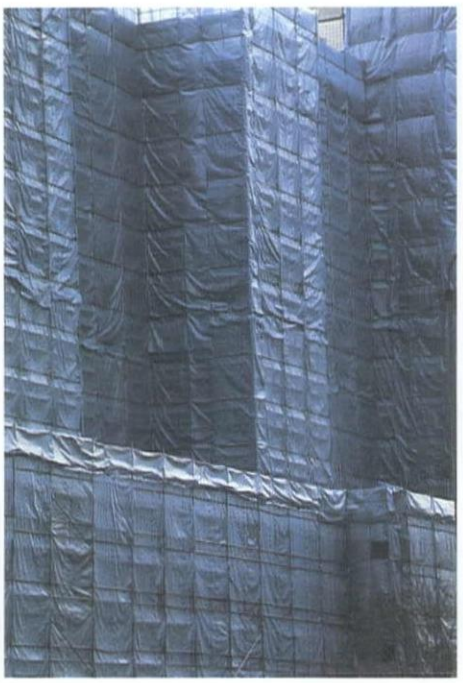

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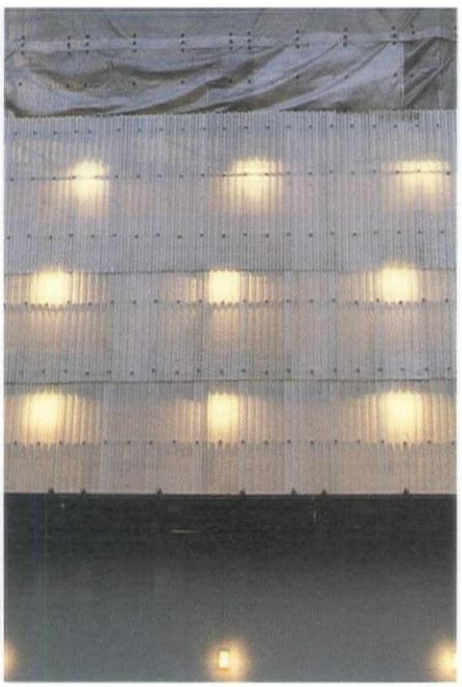

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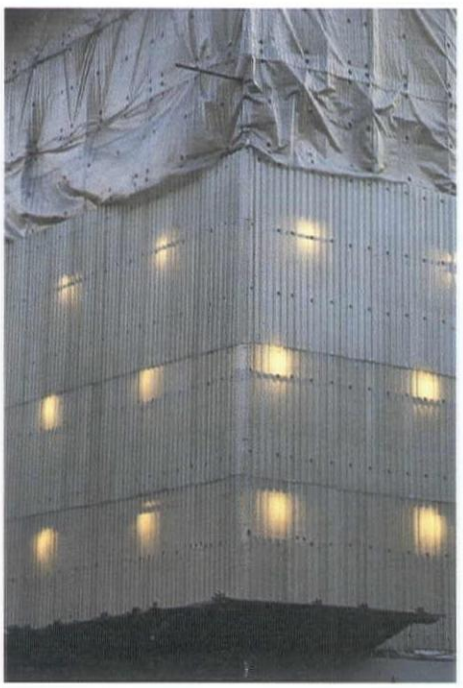

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