

# WORLD ARCHITECTURE

The business magazine for the global architect

Issue number 64 | March 1998 | US \$18.00 | UK £12.00

Ireland – Europe's healthy tiger  
Profile – Gilroy McMahon Architects

## Corporate egos

special report  
on HQ design

ISSN 0956-9758



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KPF's headquarters for IBM in Armonk, New York | New life in Dublin's Temple Bar | Plus a preview of Coverings '98





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## Cover

IBM's new corporate headquarters in Armonk, New York, by Kohn Pedersen Fox (exterior) and Swanke Hayden Connell (interior)  
Photograph: Peter Aaron/Esto

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- 46 Face to face – It takes one to know one**  
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## Profile

- 62 Gilroy McMahon**  
Gilroy McMahon is one of Ireland's most highly respected and successful firms of architects, known particularly as the designers of the giant Croke Park stadium and the National Museum of Ireland, amongst numerous other high-profile schemes. Nicola Turner profiles the practice's work of the 1990s.

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## Special report – Corporate headquarters

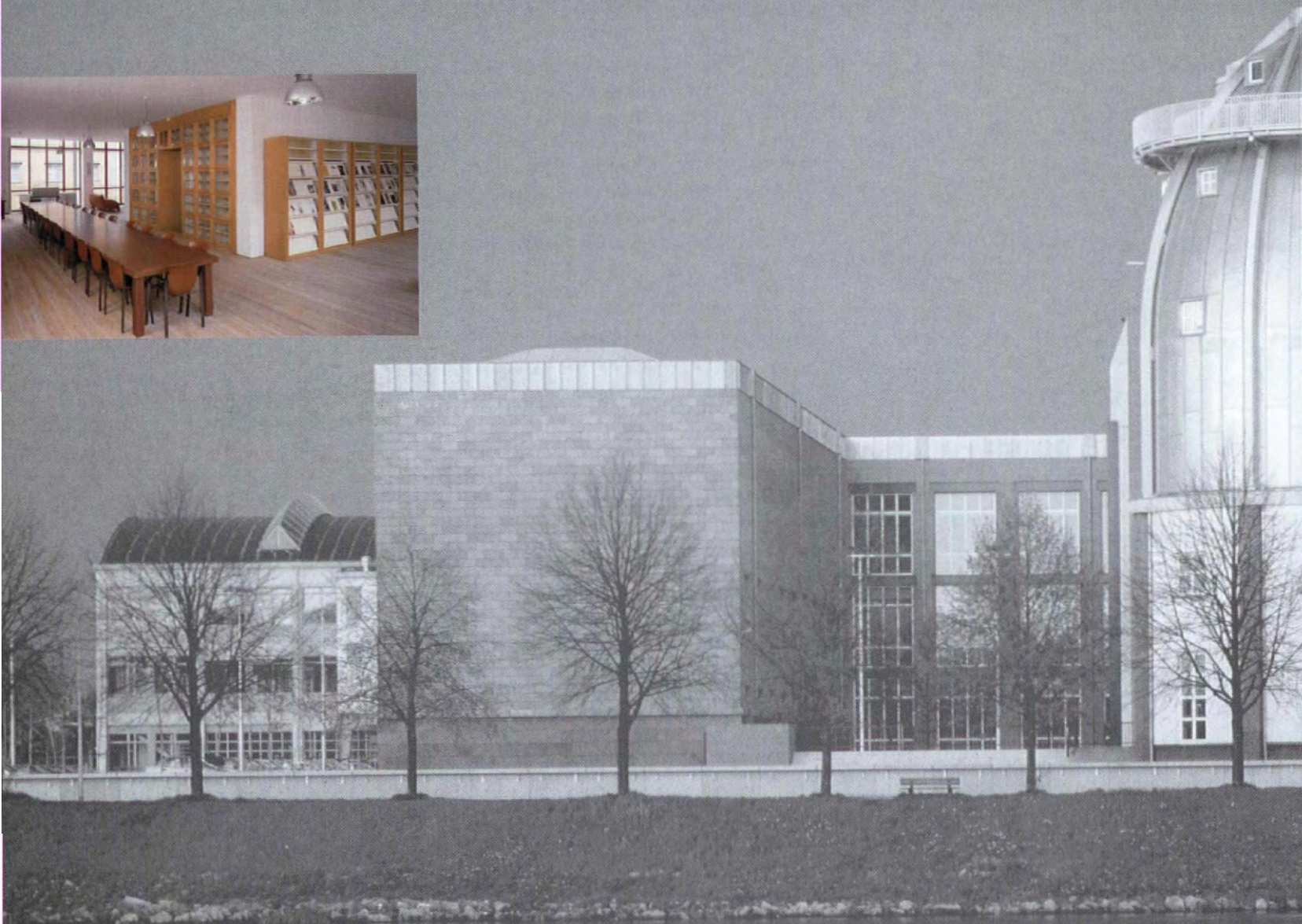
- 76 Corporate ego**  
Corporate clients are the greatest patrons of architecture in the late twentieth-century. David Cohn, Ralph Thomas and Chuck Twardy assess the situation in Europe, Asia and the USA, investigating why corporations have become more frugal with the result that the architecture has become modest rather than monumental. Including reviews of MVRDV's headquarters for VPRO in the Netherlands; IBM's headquarters in Armonk, New York, by KPF, and the King Tower in Shanghai by TaoHo Design Architects.

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The Engineering Enterprise: Year 2, Day 95, 6 pm



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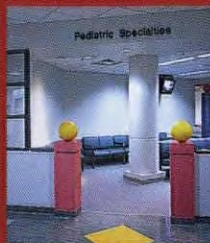
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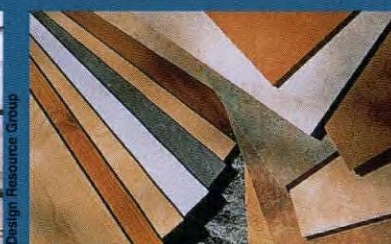
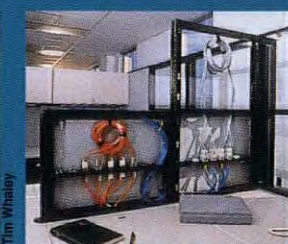
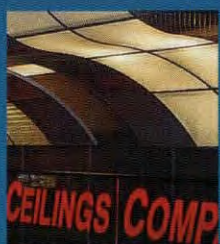
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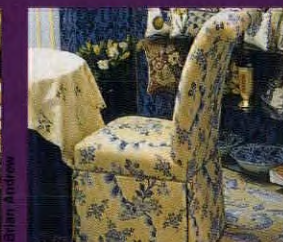
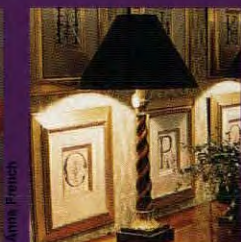
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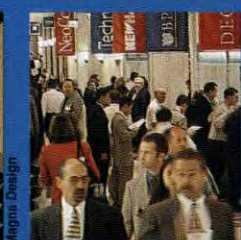
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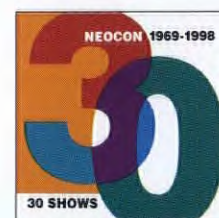
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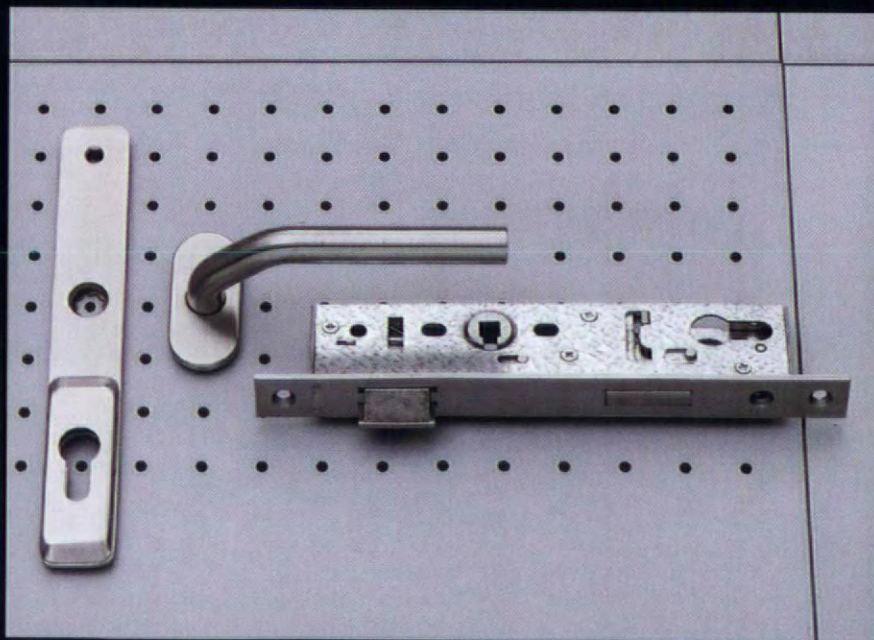
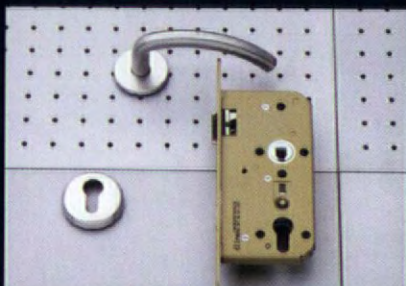
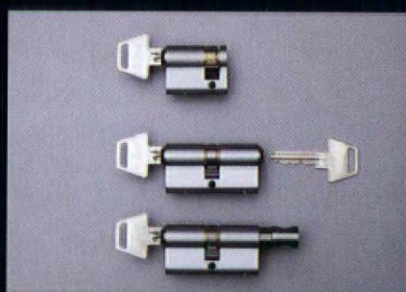
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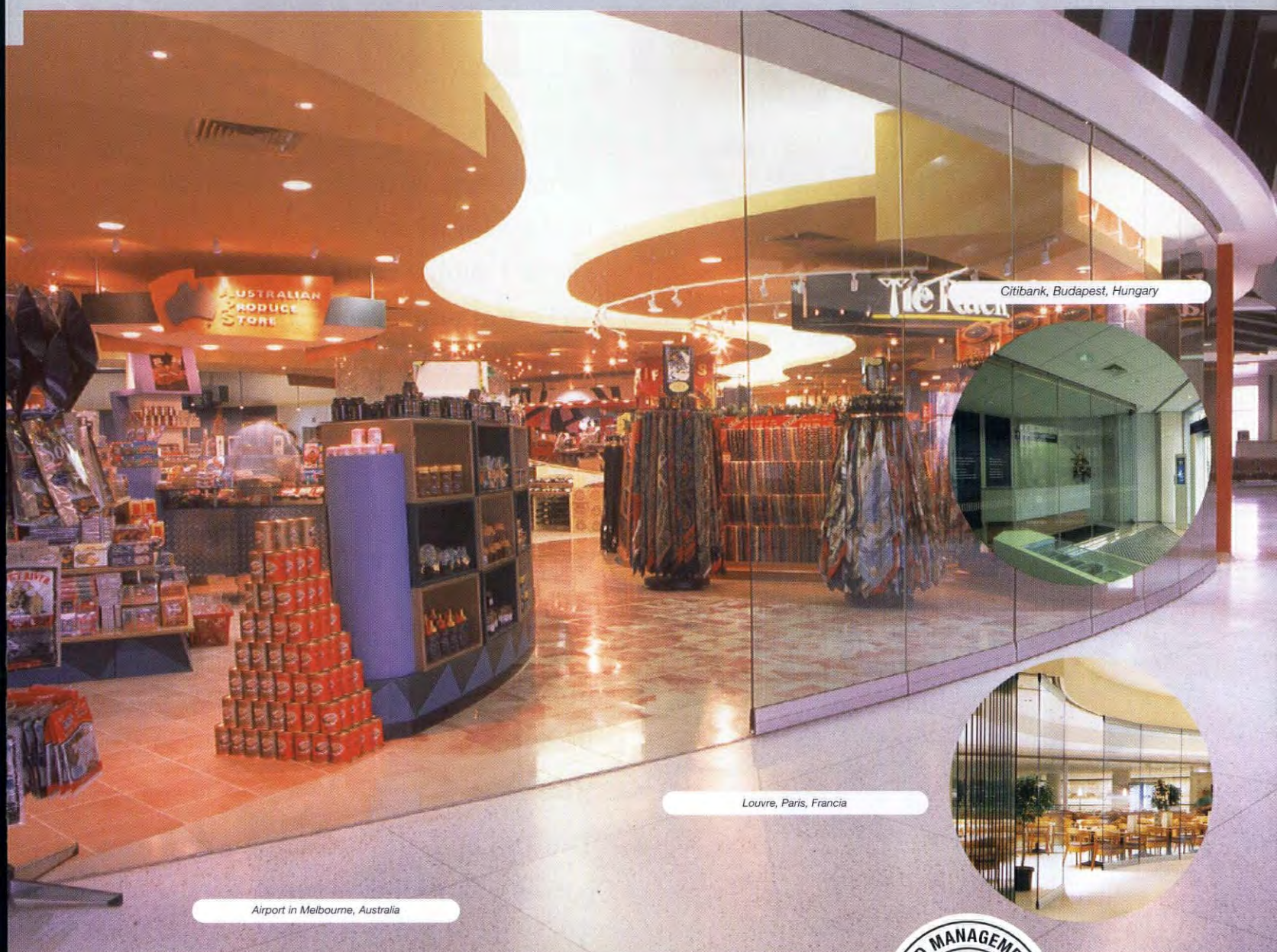
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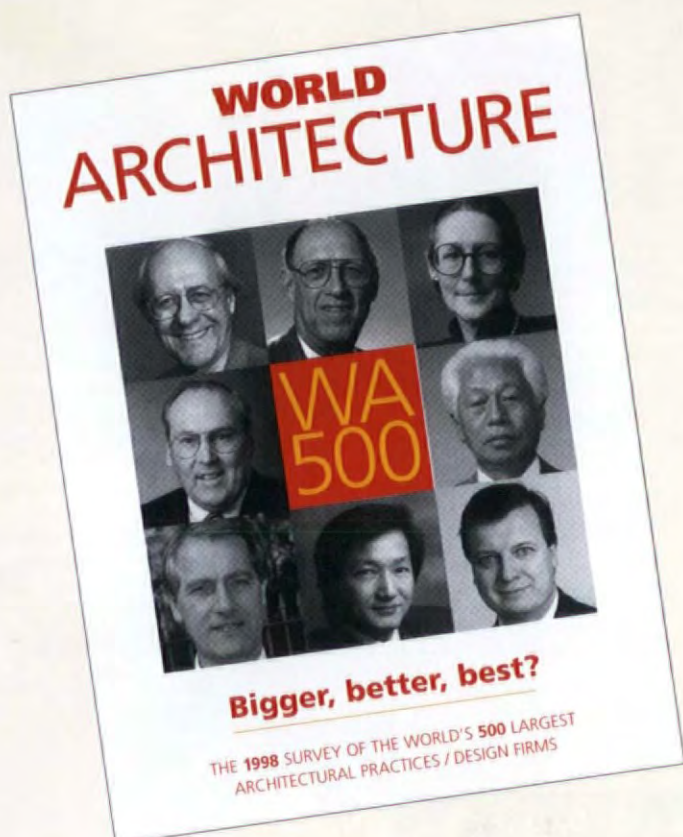
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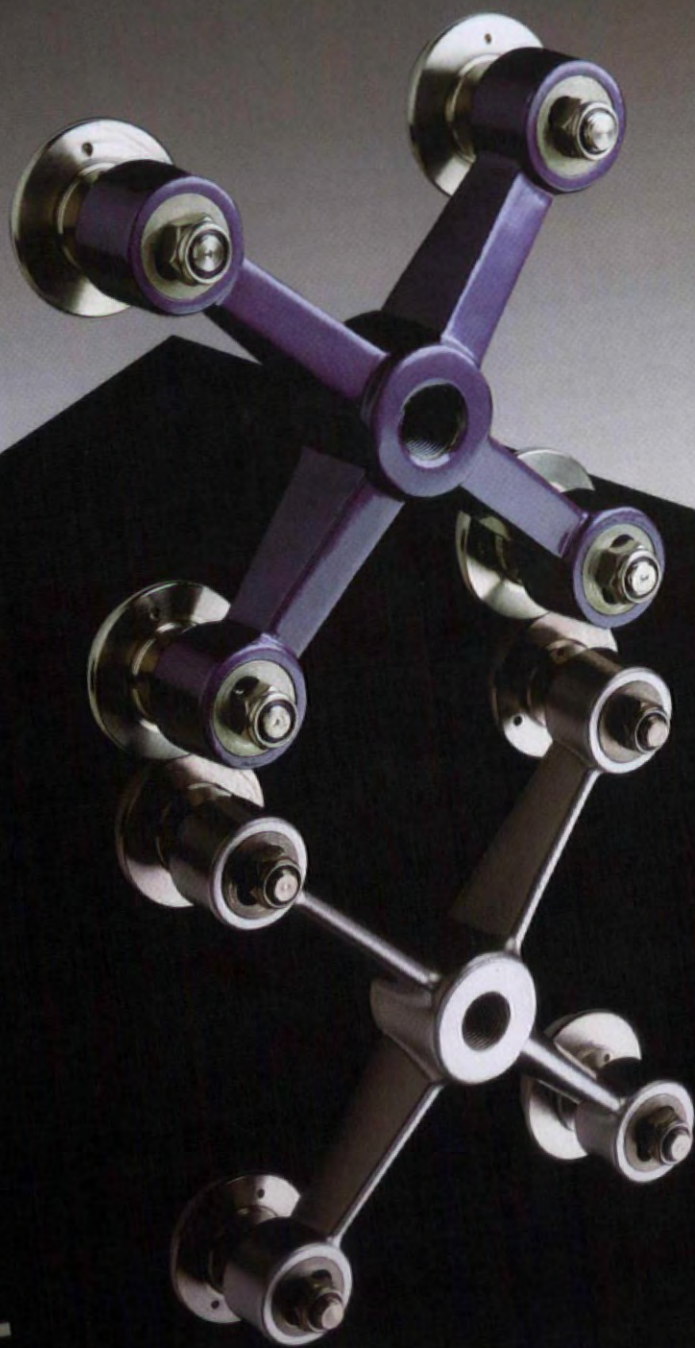
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# A silver lining for Asia's cloud?

News from an architect based in Malaysia making a Europe-bound flight from Kuala Lumpur highlighted the plight of Asia's architects. Of his fellow passengers, he reckoned that at least 25 percent were also architects, returning to their homelands to lick their wounds after turmoil in South-East Asia cost them their jobs. Most Asian practices cannot afford to sit out the hurricane, which by all accounts should have blown over by 2000, without significantly down-sizing. The last in are naturally the first out, hence the dispirited exodus of the region's many ex-patriots. Next month World Architecture will detail the firms across the region who have had to take such drastic short-term measures.

The pages of the world's media in the past few months have been heavy with despondent diagnoses of Asia's economic health. But hot on the heels of this in-flight tale comes the news that although the profession is suffering from a lack of high-profile corporate commissions in the region, the housing market, and demand for infrastructure development, is still growing. This is illustrated by a dramatic rise in the demand for plant and equipment in Asia Pacific, (excluding Japan and including Australia and New Zealand). Recent research published in the USA forecasts sales set to rise by an average of 7.5 percent a year to 2001, almost double the rate for the demand of the whole world; the figure for 2001 is set to reach US\$16.5 billion – around one fifth of expected world sales totalling US\$86.6 billion.

These impressive statistics are of course down on the period of 1987-96, and assume an optimistic year to 18 months recovery period for the region's battered economies. It also ignores the fact that demand for equipment in Central and South America, Europe, Africa and the Middle East is predicted to rise considerably, while Asia Pacific joins Japan and North America on the downward slope. Nevertheless, it offers a glimmer of hope to all those associated with Asia's construction industry, and points to its continued strength, relative to the rest of the world, when many pessimistic observers might assume that demand for building machinery in the region would temporarily peter out altogether.

**Nicola Turner**

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# In next month's WORLDARCHITECTURE



## BUSINESS

International news, reviews and analysis.

## COUNTRY FOCUS – UNITED ARAB EMIRATES

Cities like London and Paris have evolved over hundreds of years. Dubai and Abu Dhabi have existed for barely 15.

Brigitte Schaffer, business reporter for Gulf News, writes about the tale of two cities: how Dubai and Abu Dhabi are competing to be the highest, biggest and most luxurious in the Emirates. She also reports on the Opec headquarters in Abu Dhabi and the souk redevelopment in her native Sharjah.

In domestic architecture, the advent of oil wealth, which coincided with the birth of the UAE in its current form (1971), brought with it a complete revolution in building styles and techniques. WA brings you up-to-the-minute information on commercial developments; the emergence of museums and the renaissance of traditional cultural facilities. And as the UAE becomes an increasingly frequent location for international sports events, we talk to the global firms which have been lured by the oil-rich economy.

Angus Hindley of Middle East News Digest (MEED) interviews the main players in the Chicago Beach Hotel project, taking a particularly close look at the foundations of the tower, located on a man-made island in the Arabian Gulf, off the coast of Dubai.

Plus: the Canadian-designed Etisalat buildings, in the Northern Emirates and Yawar Mian analyses the opportunities for foreign investment in the desert town of Al Ain.



1: City Savings Bank, Wuppertal, Germany by Architekten RKW + Partner in association with Foster & Partners

2: Model shot of the Juma Al Majid Centre for Culture and Heritage, Dubai, UAE by Terry Farrell & Partners

3: Knoll International's new London showroom, designed by Steve Avelly, Knoll's design manager



## PROFILE – RKW + PARTNER

RKW + Partner is the largest firm of architects in Germany, and the second largest in western Europe. The firm was founded in 1950 by the late Helmut Rhode and is now run by six partners with a total staff of 340, including 260 architects.

Headquartered in Düsseldorf the firm has four other offices in Germany, including one at the monster "CentrO" shopping and leisure centre at Oberhausen. RKW has experience in many fields, from prize-winning conservation work to the construction of one of the largest and most modern call centres in the world, for German Railways in Duisburg. With unequalled expertise in department store and retail design over nearly 50 years, RKW was a natural choice for the great "CentrO".

Today the firm is deeply involved in the development of leisure, residential and commercial projects that will convert this successful retail hub into a true city centre for a triangle of small towns, thus laying the foundations for a new community.

## PRODUCTS – SEATING

The latest from the commercial seating market. Plus previews of three of the year's biggest furniture shows: Orgatec; Spectrum and Salone del Mobile.

## SPECIAL REPORT – SHOWROOMS

For the first time WA's monthly Special Report will be written from a marketing perspective, by journalist Paul Gander, who unveils the secrets behind selling products from a showroom.

Taking five product categories, and interviewing global manufacturers, Gander discovers whether showrooms reflect marketing philosophy, and whether/how they vary according to location, climate and local taste.

Project case studies include a comparison of car manufacturers' showrooms in Germany. Mark Dytham comments on IDEE show rooms past and present in Japan, and looks at the relationship between the office and the showroom. Bene furniture showrooms in Europe are compared with those in Moscow, and Jonathan Wheatley reviews a ground-breaking showroom for FORMA in São Paulo, Brazil by the architect Paulo Mendes de Rocha.



International contributors: David Cohn, Spain; Ed Peters, Asia-Pacific; Chuck Twardy, USA; Arbind Gupta, India; Layla Dawson, Germany

## Architects are "prima donnas"

Research indicates that the US public holds architects in high esteem, but feels that they can be "prima donnas", and are in need of polishing their "people skills."

In reaction to the claims, a series of "mock" television commercials, aimed at promoting architects as a "quality brand, to be sought out by the public", have been tested on focus groups around the USA.

Developed by the American Institute of Architects (AIA), it is hoped that the advertisements will run during news programmes on several networks, starting next year.

The ad campaign would be funded by a dues assessment that will have to be approved by AIA members during the organisation's May convention. **CI**

# Residential lifeline for HK

The closure of Kai Tak International airport, to be replaced by Chek Lap Kok – opening in July – presents Hong Kong with a unique opportunity for large-scale housing development.

The residential boom represents a lifeline for Hong Kong's beleaguered architects. As the fall-out from the South-East Asian financial crash begins to cause ripples in Hong Kong (see News Analysis), it is housing projects that are keeping architects busy.

Composed of the former airport (280 hectares), 300 hectares of reclaimed land and 260 hectares of restructured urban land surrounding To Kwa Wan, Hung Hom and Kowloon City, the 840-hectare site is expected to become

home to some 285,000 people.

For once, in a territory that is perpetually short of space, there will be room for landscaping. Kai Tak's new centrepiece will be a park, rather than a runway, and the site will be bordered by a 2.5 kilometre seafront promenade. The redevelopment is being handled by the government.

Elsewhere in the territory, the quasi-independent Land Development Corporation (LDC), an institution which has completed a mere ten projects in nine years of operation, is at last showing signs of coming to life. It has announced a radical US\$10.3 billion (HK\$80 billion) urban redevelopment plan to complete 26 projects by 2005.

The largest of the projects,



costing US\$4.8 billion (HK\$37 billion) and forcing the eviction of 2,000 families, will be in Kwun Tong town centre in south-east Kowloon. A second project in San Po Kong, near Kai Tak airport, will see the demolition of the 600-year-old Nga Tsin Wai village, the only walled village left in the urban area. **EP**

# Landmark hotel survives Euro-scare



After 60 years, London's most talked-about white elephant, the Midland Grand Hotel at St Pancras Station, is to be redeveloped, as part of the Marriott international hotel chain.

The Gothic revival behemoth is to be overhauled in time for the completion of the new Channel Tunnel Rail Link (CTRL), and the high-speed rail link to Heathrow Airport, in 2001.

The news of RHWL's competition-winning scheme broke only days before London & Continental Railways (LCR), which won the contract to develop the Channel Tunnel Rail Link (CTRL) in 1995, announced losses of US\$4.1 billion (£2.5 billion).

The London firm's proposal was developed for LCR's property subsidiary, The Chambers Group (a consortium led by BAA Lynton; including Whitbread PLC and The Manhattan Loft Corporation).

The 1870s original was built before service ducts were standard, rendering any overhaul an expensive process. The conversion will cost an estimated US\$80 million (£50 million).

The top three floors are to be converted into "lofts" apartments, whilst the main public rooms will be restored. A "sensitive" extension will be added on the rear of the building.

LCR's plight is unlikely to impact on the reconstruction schedule of the hotel – BAA Lynton is primarily concerned with the Heathrow link.

However, John Prescott, the British deputy prime minister has stepped into the breach to ensure the completion of the new link on schedule.

Fearing rebukes from its French and Belgian counterparts, the British government has opened the CTRL contract to takers. Railtrack is the most likely beneficiary. **AM**



## In brief

### GERMANY

#### Sculptor designs timber hall for Frankfurt's Ethnological Museum



"The time for expensive museum coffins, like Richard Meier's Applied Arts Museum building [in Frankfurt] is over ... things must be simpler," says sculptor/designer Claus Bury.

If Josef Franz Thiel, director of the Ethnology Museum, has his way Bury may soon have an opportunity to realise his light-weight design. The timber hall would provide 1,000 square metres for US\$2,600,000 (DM4.5 million).

Bury describes his museum concept as a protective shell. His inspiration for the building form came from studying Polynesian long huts.

Financial organisers, a group of Frankfurt companies known collectively as the Elephant Club, aim to raise the money within five years.

### INDIA

#### Singapore consortium back Indian technology park

The Haryana Urban Development Authority (HUDA) and a consortium of five Singaporean companies is developing a technology park in Gurgaon, near Delhi. Covering over 170 hectares, the construction of the project will require an investment of approximately US\$85.7 million. A HUDA spokesperson said: "The park will provide a one-stop hassle-free environment for the establishment of hi-tech, pollution-free industries".

### Delhi-cately poised

A 30-storey shopping-cum-office complex that, if built, would become the tallest building in Delhi has been planned for completion in 2001 by the New Delhi Municipal Council (NDMC). Complete with 106-metre waterfall, the structure, to be located on an 45-hectare plot in the Gol market area, would be visible from anywhere in the city. Ground coverage has been limited to 25 percent of the site, to enable provision of open public space. The cost of the complex, to be borne entirely by the council, is US\$25.6 million.

## NYC falls over itself to celebrate centenary

New York City is celebrating its one-hundredth birthday by looking back, looking forward and falling apart.

On the very date of the anniversary, 1 January 1998 *The New York Times* (NYT) reported several worrying incidents: masonry fell from three buildings and two entire walls crumbled from a fourth on 42nd Street, all during one 24-hour period. Recent cold and blustery weather might have been a common thread, but City officials and structural engineers suggested that pure coincidence was the most likely answer.

Owners of buildings taller

than six storeys are required by law to hire architects or engineers to inspect facades every five years, but the city has been lax in enforcing these reviews in recent years. In any event, the deterioration cannot be good news to the preservation-minded.

Grand Central Station, for so long the apple of the preservationist's eye, is nearing the end of its three-year restoration by the Metropolitan Transportation Authority. Beyer Blinder Belle designed the US\$175 million overhaul, which includes new restaurants on the upper concourse and a food court on the lower.

Across the city, the revitalisation of Times Square, a "preservation" effort that has seen several historic buildings renovated, but with an ersatz edge, has come to define a city that continues to suffer from, as one NYT columnist puts it, "a tug-of-war between past and future".

RM Stern's new "interim" plan for Times Square revives the mid-century era of bold and gaudy signs, but has made some buildings more valuable for their exteriors than for interior rental.

GI

Grand Central Station, saved from the wrecking ball now nearing the end of a three-year restoration



Associated Press/Paul Hirschmann

## Former Indian capital gets make-over

Choudhary Lichfield & Associates, in association with British firm Sir Alexander Gibbs & Partners, have drawn up an estimated US\$100-million plan to salvage the New Market area in Calcutta. A number of heritage buildings are located in the district.

The idea of revamping the heritage buildings in Calcutta was first mooted during a visit by the former British prime minister John

Major, under the Indo-British partnership conference. The UK is keen on participating in the process of salvaging the city of Calcutta to its former glory, when it was India's capital.

The first stage of the scheme concerns Chaplin Square, which is to be cleared and developed into a two-storey underground car park, with a landscape garden and

restaurant on top. In the second stage, the land surrounding the Chaplin park and Free School Street will be cleared and developed, while in the third stage, New Market will be refurbished. Another building under consideration is the Metropolitan Insurance building, home to the famous Whiteway Ludlow department store in the 1950s.

AG





## It's all relative in Berlin


Mosse Palais, the first building to be completed in Berlin's central reconstruction zone, was dedicated on 9 February.

The ten-storey office building, clad in granite and limestone, was designed by Hans D Strauch, principal of Boston-based Hans D Strauch & Associates (HDS). Strauch is also a descendant of the Mosse family, a noted pre-war Berlin-based family of publishers, forced to flee during the Nazi occupation, in whose memory the new building is named. Mosse Palais stands on the site of the former Mosse family home.

Berlin developer Hans Roeder was instrumental in giving a member of the Mosse family the opportunity to build on the octagon-shaped Leipziger Platz site, which was devastated during the war.

Strauch also designed the new European headquarters of the American Jewish Committee (AJC) inside Mosse Palais.

Speaking before the dedication, Roeder said: "It is a fitting tribute to the Mosse family that the AJC has chosen this building and this site for their efforts to bring Germans and Jews closer together". As a further conciliatory gesture, Roeder has given the space to the AJC rent-free for ten years.

HDS has several other projects underway in Berlin, including a residential complex at Spittelmarkt and an office building at the Mosse Zentrum. 


# Madrid's office market warms up

Madrid's office building market has revived after five years of stagnation. Vacancy rates at record lows, rising prices, and rising demand for quality space have made new office construction attractive once again.

1997 broke occupancy records of the past several years with 435,000 square metres of space absorbed by the market, according to the Richard Ellis agency. In Madrid's office park of seven million square metres, only 510,000 square metres are currently available.

Prices have slowly begun to rise,

reaching US\$21 (Ptas 2,000) per square metre, and even US\$27 (Ptas 4,000) in certain cases. Demand is being fed by strong economic growth and low interest rates, as well as the optimism created by Spain's convergence with other European economies towards the Euro.

Demand is especially strong for high quality office buildings, to such an extreme that, according to Dominic White of the investment firm Knight Frank, lease commitments have even been signed for projects still on the drawing boards. 


## Madrid commercial office take-up



Data supplied by Richard Ellis SA Madrid

## Library wins Sir Cowan Award in Australia

An "internalised building", the Sunshine Coast University Library, designed by Lawrence Nield & Partners in partnership with John Mainwaring Associates, has won the Sir Zelman Cowan Award for 1997.

Located at Sippy Downs, Maroochydore, Queensland, the US\$4 million (A\$5.2 million) "human-scale" structure has been described as, "a building of unfolding screens and implied space". 



## In brief

### SPAIN

#### Madrid Regional Library on site

Construction started this month on the new Madrid Regional Library, designed by architects Mansilla and Tuñón.

Located in an obsolete El Aguila beer factory, the library is all that remains of an ambitious plan by the previous Socialist regional government to create a large cultural complex on the site.

Mansilla and Tuñón won a 1994 competition for the complex, but have had to revise their original plans extensively. The 10,000-square-metre library has a budget of US\$12.6 million (Ptas 1,897 million). The regional government is currently considering using the rest of the complex as an administrative archive.

### UK

#### EEA to extend Photographers' Gallery

Erick van Egeraat Associated Architects (EEA), the highly-rated young Dutch practice (see WA47 pages 52-55), has won its first commission in the UK. The extension to the Photographers' Gallery, London will cost US\$6.6 million (£4 million) and be complete by 2001.

EEA won the commission in an open competition, beating Alsop & Störmer, Jean Nouvel, Avery Associates Architects, Caruso St John Architects, Nicholas Grimshaw and Partners and Van Berkel & Bos to the winning post.

Designs will be finalised in June.

#### The British housing dilemma rumbles on

The number of homes for sale in England and Wales has dropped to its lowest level for 15 years. The Royal Institution of Chartered Surveyors blames the slump on strong demand and a high number of first time buyers entering the market. The news comes at a time when the British residential market is already making headlines.

The government's plans to provide between 4.4 million and 5.5 million new homes by 2016 have incited preservationists. Half of the homes are planned for "green belt" locations, but with 60,000 hectares of vacant brown land in towns and cities, environmental campaigners are up-in-arms.

A spokesperson for Green Futures, an environmental initiative for the provision of social housing says, "brown sites are close to jobs and services ... this is where people want to live".

Lord Richard Rogers, who is advising on an all-party Commons inquiry into the debate, takes the view that: "Country and city are two sides of the same coin ... cities cannot have a renaissance if they are full of holes. You have to fill in the cities first".

The RIBA has called on the government to set up a "brownfield agency", with the aim of making all brownfield sites fit for development.



## In brief

### USA

#### Critic pours cold water on "museum boom"

In a signed editorial *Architecture* notes that recent high-profile museums, such as Richard Meier's recently-opened Getty Center in Los Angeles (see WA63 page 25) and plans for expansion at New York's Museum of Modern Art, "upstage the art". "The viewing experience is sacrificed at the altar of the avant-garde."

The magazine calls on architects to resolve, "the inherent conflict between the active, populist spaces now demanded of contemporary museums and the introspective environments they still require".

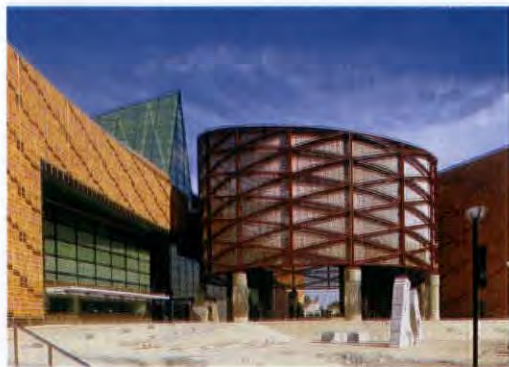
### ZGF lift-off in LA

After three years in construction, phase one of the California Museum of Science and Industry (CMSI) and Exposition Park in Los Angeles opened on 7 February.

Designed by local firm, Zimmer Gunsul Frasca Partnership (ZGF) the 22,760-square-metre California Science Center is the culmination of ten years work, and represents an investment of US\$130 million. The Center includes: interactive exhibits; a Science Court; a 3-D IMAX theatre; a conference centre; food and retail services and flexible exhibition space.

The CMSI occupies a 395-hectare site on the edge of the downtown district of LA. Consulting architect on phase one was RAW Architecture.

Phases two and three – housing an aquarium and exhibit expansion, and additional exhibition facilities respectively – are currently in planning. Funds to build are still being sought.



### 1997 saw bigger profits for small US firms

The American Institute of Architects (AIA) reports that more than half the member firms it surveyed expect double-digit profits from 1997. "Less than one in five firms expects profits to run under five percent on net billings," the AIA says.

Continuing a trend from 1996, smaller firms, with net billings under US\$1 million, expect to do better than larger firms. US architecture firms employ more than 150,000 full-time workers, up from 113,000 in 1992.

AIA website: <http://www.aia.org/>

Edward Pfeiffer



# US architects build big in the superpower of tomorrow

Marine Tower in Shanghai's Lujiazui district, designed by Los Angeles-based AC Martin Partners, has achieved full occupancy only months after completion. The 25-storey granite and glass tower is built in the plan configuration of a ship, reflecting the business of the building's owners, the China State Shipbuilding Corporation and the need to meet the corporate requirements of multi-national firms based in Shanghai, China's booming business capital.

On the other side of the river, Sydness Architects of New York,

have won the international competition for the five-star Hong Ta Hotel. The 38-storey, 385-room hotel is to be located in the Pudong district. The slender tower will be clad in red granite. The design features a 24-metre high "podium", for essential hotel facilities. Sydness won the commission ahead of Arquitectonica of Miami, and two firms from Hong Kong. Construction begins later this year, for a scheduled opening in 2000.

Elsewhere in the imposingly prolific superpower Minoru Yamasaki Associates, of Rochester Hills, Minnesota, has completed the

design for the Xiwang Building owned by Dalian Xiwang Building Co Ltd in Dalian, on the Yellow Sea coast. The 38-storey (170-metre tall), 90,000-square-metre mixed-use office tower will cost approximately US\$100 million to build. Already on site, completion is scheduled for December.

AM

1: Marine Tower, Lujiazui, Shanghai by AC Martin Partners

2: Model of Hong Ta Hotel, Pudong, Shanghai by Sydness Architects

3: The Minoru Yamasaki Associates-designed Xiwang Building, Dalian City

## India rejects Land Act

The Indian Union Cabinet has repealed the Urban Land (Ceiling & Regulation) Act of 1976, to facilitate the entry of vast tracts of vacant urban land into the property market.

As it stands, the Act has lost its relevance and serves only to put an artificial constraint on supply, thereby distorting the entire structure of the market. "Once the Act is repealed, over two million hectares of land lying vacant ... will be available for development in urban India. This will have a sobering effect on the property market as a whole," says Ashoke Kumar Assistant Vice President of property consultants Lloyds Brooke Hillier and Parker.

Though the Union government has decided to repeal the entire existing legislation, there is a requirement for at least two state governments to pass a resolution favouring the move.

AG

## The latest shopping mall of the future

Huge shopping malls and "big-box" retail stores are a staple of US suburbia. But *Building Design & Construction* (BD&C) reports a "hybrid" design that could herald a change. The Mall of Georgia, set to open in 1999 in an Atlanta suburb, "will feature aspects of an outdoor village, as well as those of a conventional enclosed mall," says the US weekly.

Designed by Atlanta, Georgia-based architect Thompson, Ventulett, Stainback & Associates, the plan calls for a crescent-shaped mall to embrace a "village" of small shops on landscaped paths.

Roadway improvements will provide links with three major highways, to allay fears about "congestion," and 6,800 parking spaces "will be carefully integrated into the landscape".

GT



# Piece-meal approach at Paternoster

A mixed-use scheme for the long-awaited development of Paternoster Square has been submitted to the Corporation of London. Developed by architect Whitfield Partners, for Paternoster Associates – owner of the Paternoster Square redevelopment area north of St Paul's Cathedral – the scheme proposes a series of stand-alone sites, each capable of independent construction and redevelopment.

This is the latest in a long line of proposals for the contentious City site. It is the first to propose a "piece-meal" as opposed to "whole-sale" approach. If approved, it would open up views of St Paul's Cathedral not seen for over 30 years.

Bovis and Stanhope are tipped as construction manager and project manager on the first phase of redevelopment,

comprising an area of 26,500 square metres. Christ Church Court, the proposed eight-storey office building, will be located on the site of the existing Sudbury House. The largest of the six available sites, Christ Church Court, has been pre-let to investment bank Schroders.

The masterplan covers an area of 2.16 hectares, comprising 81,000 square metres of new buildings, as well as infrastructure. The site is bounded by Warwick Lane and Ave Maria Lane to the west, Newgate Street to the north and St Paul's Churchyard to the south.

AM



## People and practice

### EUROPE/ASIA

For the fifth consecutive year the turnover of the **Ove Arup Partnership** has increased. In the year to March 1997, the firm earned US\$310 million (£188 million), an increase of five percent on the previous year. Profits rose by 30 percent to US\$12 million (£7.3 million). **Gensler** has appointed John P Diekin as the new Managing Director of its Hong Kong office. The architect of the new British Library in London, **Sir Colin St John Wilson** was knighted in the UK's New Year's Honours List. The recently opened



John P Diekin

**American Institute of Architects Hong Kong Chapter** has elected Nelson K Chen as its first President. Prof George Henderson of De Montfort University, Leicester, UK and Vice President for Education of the Royal Institute of British Architecture has succeeded Rusi Khambatta of Mumbai, India as the **Commonwealth Association of Architects'** new President. He is the organisation's third President since its formation in 1965. **Marya Lilien** (1900-1998), one of the first female Polish architects, died on 12 January. Lilien emigrated to the USA in the late 1930s, where she became a close associate of Frank Lloyd Wright at Taliesin.

### USA

Gregory Bonsignore has joined London-based interiors specialists **DEGW** in the firm's New York office.

**Hammel Green and Abrahamson Inc** (HGA), Minneapolis-based architectural, engineering and planning firm, has announced that William A Blanski AIA has returned to the firm as a senior designer and vice president. New York head-quartered **Fox & Fowle**



William A Blanski AIA

**Architects** has named Nicholas J Toscheff as Senior Associate of the firm, Charles D Eldred as Associate and Stephanie Nigro as Senior Interiors Director. Harold L Adams FAIA, chairman of **RTKL Associates** has been inaugurated as the 36th Chancellor of the



Jan L Bishop AIA

T. Kevin Birch

College of Fellows of the American Institute of Architects. Jan L Bishop AIA has been promoted to Studio Principal of **The Hillier Group's** Health Care Studio. Omaha-firm Henningson Durham & Richardson has changed its name to **HDR Architecture Inc**. Meanwhile, the firm has promoted Dennis Austin AIA and Steve Ellefson to senior vice presidents and Michael D Doiel AIA, Jeffrey S Forrest RA, Bernard J Gehrki AIA and C Steven to vice presidents.

# Downtown Chicago returns to the people



Chicago is witnessing a revitalisation that harks back to the years before its fabled fire of 1879.

Residents are flocking to the city's downtown "Loop", named for its circuit of elevated-train tracks, as developers discover that the small floorplates of aging skyscrapers no longer suit contemporary offices. Over 900,000 square metres of vacant downtown space has begun to fill with condominium residents, occupying such landmarks as the 1926 Singer Building and the 1910 McCormick Building.

The 1905 Chicago Building, a landmark designed by Holabird & Roche, has become a dormitory for the School of the Art Institute of Chicago. Architects Booth/Hansen & Associates and developer/builder Wooton Construction undertook the transformation of the 15-storey classic.

Meanwhile, the district's spine, State Street, has also undergone a transformation. Skidmore, Owings & Merrill was the consultant for the overhaul, which returned the street to automobile traffic and added new landscaping, subway entrances, signs and lighting.

G



## Analysis

# Hanging tough in Thailand ... and Malaysia ... and Indonesia and ...

*The first of a two-part series on how South-East Asia's economic crisis has rocked the region's construction industry. By Dennis Normile in Tokyo.*

Sitting on the banks of the Chao Phraya River, with beautiful views of the tourist district and downtown is Bangkok's newest upscale hotel. It has been mothballed since it was completed last summer. The Thai developer is rumoured to be in financial straits, and Hotel Sofitel, the planned operator, has lost interest because business travel has collapsed. So the building sits empty – for sale in a market with no buyers.

## Freeze frame

The closed-before-it-opened hotel is not alone. Bangkok, and much of South-East Asia, is awash with vacant offices,

were 90 percent complete, in some cases.

And that's just office space. There is similar over capacity and sagging demand in housing and commercial space. Aside from some public and industrial projects, design and construction has come to a virtual standstill.

The details vary from city to city across the region, but the overall picture is very similar. Thailand and Indonesia may be the hardest hit. The Philippines and Malaysia less so. But even in Hong Kong, relatively untouched by the currency crisis, demand is softening. Sun Hung Kai, one of Hong Kong's leading developers, has just put

down in work. Even if there is work, with the dramatic depreciation of local currencies, international firms with fee structures wholly or partly based on developed nation currencies now look even more expensive than their local competitors.

Waiting for a turnaround may not be for the faint of heart, especially since even the economists can't agree on how to achieve stability or how long it might take. Rumours abound of firms closing offices and laying off staff. But others are hanging tough, struggling to keep operations going until things pick up. Woods Bagot has found that its team in Bangkok can provide services at

The way things were supposed to be – a riverbank view of Cesar Pelli's Petronas Towers, Malaysia. The Philippines and Malaysia may not have been hit as hard as Thailand and Indonesia, but office space is still proving very hard to shift



bad locations with poor design and low quality. "There are buildings here that will never, ever be occupied," Beaumont predicts. In Malaysia, for example, shopping centre developers strove to make each project "the biggest and the best," regardless of whether the location or the marketing plan could support it.

## Shaken and stirred

The current crisis is likely to shake such developers and their architects out of the market. More sophisticated players will recognise the importance of such intangibles as good planning and design. The result, Beaumont says, could be "solutions that are appropriate rather than driven by pure speculation".

But more discerning clients are also likely to be more demanding, expecting their designers to be able to show just what added value they can provide. "I think we're going to have to look very creatively at how we can continue to deliver services to our clients," Yager says.

Next month, Puvan J Selvanathan, in Kuala Lumpur, confirms rumours of massive job losses in the region.

**"Even if there is work ... international firms with fee structures wholly or partly based on developed nation currencies now look even more expensive than their local competitors."**

stores, apartments and houses.

Property consultants Richard Ellis Thailand estimate that more than 23 percent of Bangkok's total office space is vacant. Another one million square metres of new space is expected to come on the market this year. David Simister, Richard Ellis' managing director, believes it will take three to four years to absorb the available space. And then there is the other half million square meters of space on which construction was halted mid-stream, even though buildings

ten projects on hold. And other developers are becoming cautious, re-aiming high-end projects for the middle, and rethinking retailing project strategies, although the residential market remains strong.

## Living on a prayer

Many fear it is just the beginning. "We're in for some tough sledding," says Gregory Yager, vice president of RTKL International in Hong Kong. He adds that they've not had any projects cancelled yet, but he believes they are in for a slow

bargain rates, thanks to the depreciation of the baht. And so they are doing design work, often interiors, for multinational clients setting up in China and the Philippines.

If there is a silver lining, it may be that there will be a higher level of professionalism among those architects and developers still in business when the storm passes. Many believe that there were more than a few people who shouldn't have been playing the development game – building the wrong projects in



# Resurrecting Sarajevo

by Shahed Saleem

Spring breaks over Sarajevo for the third time since the Dayton Peace Agreement halted the five year Yugoslav conflict.

Four years as a besieged city saw almost half of its 500,000 population flee and a further 10,000 lose their lives. Most public buildings were left extensively damaged or completely gutted. Those residential areas of the city which hosted front lines, entered peace time with an apocalyptic depopulated emptiness.

It is estimated that less than one fifth of Bosnia's potential employment force is working, and of those only a quarter receive regular wages. It is a problem compounded by the demobilisation of more than 200,000 men. The return of skilled labour from the armies to the civilian job market is a key factor in improving economic stability. But this is just one of the problems being addressed by the international reconstruction machine that has kicked into operation in Bosnia since the fighting stopped.

## The story so far

Although both governmental and non-governmental aid agencies operated in Bosnia

throughout the war, the Dayton Agreement enabled the drafting of a US\$5.1 billion Priority Reconstruction Programme for the years 1996-1999, channelling external funding from over 47 countries and 11 institutions.

Donor money filters through the main economic implementation agencies: the World Bank; the European Commission; the European Bank for Reconstruction and Development; the International Monetary Fund and the International Management Group, who have identified priority rehabilitation needs as being economic reconstruction and the rehabilitation of infrastructure, such as water, electrical power, gas, health, housing, employment.

Although the roles of the implementing agencies differ, the World Bank is responsible for financing about 25 percent of reconstruction projects in Bosnia, which it carries out through Project Implementation Units (PIU) administered by government bodies.

PIUs are set up to implement each of the reconstruction programmes, and interested suppliers and contractors are required to express their interest to the relevant Unit –

contracts being procured through a variety of competitive bidding processes.

Alongside such large scale reconstruction programmes, there are many small Non-Governmental Organisations (NGO) operating in Bosnia, most of them from Sarajevo. These independent operations have the advantage of being able to focus on the more intimate and local needs of a particular community or aspect of reconstruction. NGOs must source funding from various donor organisations by presenting project outlines and feasibilities to the relevant institutions.

Most of the social and physical reconstruction projects implemented to date have responded to the priority needs of the post-war Bosnian situation: shelter; food; services. Progress and long-term stability for the country is seen as being dependent on certain factors which would not only prevent a return to war, but also develop the economic, social and physical infrastructure to a competent, self-operating level.

## Looking ahead

Bosnia faces the dual tasks of re-stabilising after the war, whilst undergoing the transition from a state led to a competitive market economy.

Although the public sector still accounts for 85-90 percent of the economy, and many potentially profitable activities are closed to private firms, Bosnia's coalition government is committed to privatisation, with new legislation placed last year to enable the sale of state assets to claimants.

With the successful implementation of the reconstruction programme and the development and accessibility of this

private sector, foreign investment will be able to establish itself in the Bosnian market, which, being strategically placed between southern and northern Europe, could prove an appealing location.

Before that happens, as peace becomes more of a reality, the reconstruction programmes will need to adapt accordingly as their emphasis shifts from immediate provision and reconstruction of damage, to long term social and physical rehabilitation.

For Sarajevo's citizens, four years of living under siege has forced a ritualised culture of survival to within the everyday: operating radios, generating electricity ... The processes of social and physical reconstruction underway will need to deal appropriately with this collective history if they are to function as strategies aspiring to long term social stability.

*Shahed Saleem worked for Urbforum, a Sarajevo-based urban "think tank" founded during the conflict, for three months in late 1997.*

*(The second Sarajevo Infrastructure Rebuild Exhibition (SIRE) takes place in Sarajevo from 2-5 June – see Events.)*



Sarajevo Library, like most public buildings in the city, was targeted for prolonged shelling. Reconstruction of the historic Austro-Hungarian structure began recently





**Think it's time you made the move from the slip-road to the information superhighway? Then read on. Also in this month's OnScreen: ExtremeZ Workstations – MacFriendly and proud of it, and AutoCAD Release 14 update.**

### Cyberplaces – signposts for architects on the Web

A wealth of information for all industry professionals is waiting on the Web. A perusal of the thought-provoking *Cyberplaces: The Internet Guide for Architects, Engineers & Contractors* by Paul Doherty, AIAI, CSI, might not only convince you of the virtues and values of tapping into the net, but may also help you with the practicalities of utilising the varied on-line resources.

Packaged as a three-pronged tool, the 696-page tome comes with a bundled CD-ROM for extra hours of edification, and a linked companion Web site for further enhancement. All three interrelated media are designed to help construction professionals conduct their business more efficiently.

The book is divided into three sections:

- The first, introduces the basic Internet tools, including e-mail and Usenet discussion groups; explains File Transfer Protocol

(FTP) and connectivity; suggests precisely how to search the Web, and explains how to create your own Web site.

- The second, details applications and implementation of Net tools; discusses security issues that may arise using new applied technology; covers management issues; lists specific resources available, and features illustrative industry-related case studies.
- The final section of *Cyberplaces* previews trends and opportunities at the technological cutting-edge in cyberspace.

You might want to read at least some chapters of *Cyberplaces* with your PC at the ready. Embedded in the margins of the hard-copy text are CD-ROM icons to indicate that the enclosed disk offers more detail or enriched information on the topic under discussion.

The CD-ROM is also designed to act as a bridge to the Internet, so users have the experience of surfing the Web without actually being online. It simulates the experience of being on the Web so you become familiar with how the Web works, without paying for real on-line time.

Acting as its own internal site, the CD-ROM utilises an internal Web browser to affect direct links to selected sites; presents a myriad of Internet software applications, and a model for Web-enabled construction documents.

If you are on-line while using the disk, you can use the hot link to get to the companion Web site: [www.cyberplaces.com](http://www.cyberplaces.com). The site offers interactive workshops and on-line training; frequently updated FAQs; monthly updates of various sections of the book; "Cyberplaces of the month", and Internet-related columns.

*Cyberplaces: The Internet Guide for Architects, Engineers & Contractors*. Paul Doherty AIAI, CSI. RSMears (tel + 1 800-448-8182). US\$59.95.

### Macs have a friend in ExtremeZ

In January, Intergraph Computer Systems affirmed its continued



The new ExtremeZ 2D Graphics Workstation, the latest addition to ExtremeZ's unique line of MacFriendly software

commitment to delivering the best "out-of-box" experience, with the industry's only MacFriendly Windows NT Solutions, and its new ExtremeZ 2D Graphics Workstation – the latest addition to the company's line of Intel/Windows NT-based ExtremeZ Workstations.

**"It simulates the experience of being on the Web ... without paying for real on-line time."**

The ExtremeZ 2D is the only workstation in the industry to provide a host of MacFriendly features that empower users, working predominantly on Mac-based desktop machines, to choose alternative solutions. For example, graphics workstations running Windows NT, that are powerful, easy to use, and fully compatible with Mac systems and media.

MacFriendly Windows NT Solutions deliver key benefits, making it possible for users to integrate leading-edge technologies from companies like Intergraph into existing environments, providing full connectivity to Mac systems through AppleTalk networks, with or without a Windows NT-based server in their current Mac environment. Users are able to

read and write Mac-formatted media, making it easy to reuse existing Mac-based design files and share those same files with other users, regardless of the operating system, and protect investments in legacy Mac systems.

Bundled with the ExtremeZ 2D is a complete connectivity package that offers users the ability to read and write any Macintosh-formatted media, including Iomega Zip and Jaz disks; to communicate with other Macs on existing networks, providing full peer-to-peer connectivity without a Windows NT-based server, with other Mac systems and chooser-level proofing and output devices already connected to Mac 10BT networks. As a result, users are able to accept Mac-formatted files over a network and print to PostScript printers on their AppleTalk networks.

The ExtremeZ is also equipped with Intergraph's InterSite desktop management system, which makes this workstation easy to manage on a network, with an array of administrative tools that let IT staff troubleshoot remotely.

### Autodesk ships over 270,000 copies of AutoCAD Release 14

Less than six months after its unveiling, Autodesk has shipped over 270,000 new and upgrade copies of AutoCAD Release 14 PC-based design software (see WA61 pages 96-98). As of 31 October 1997, AutoCAD's total installation base has grown to 1,816,000, up from 1,537,000 users this time last year.

AutoCAD Release 14 software has been selected by four independent organisations as the recipient of "Best Product" awards.

Mark Dytham is partner of Klein Dytham architects in Tokyo. He can be contacted via WA or Tel/fax: +81 3 3796 1709; or e-mail: [zap-kdarc@gol.com](mailto:zap-kdarc@gol.com)



Cyberplaces tells industry professionals how and where to find a wealth of information that would otherwise remain hidden in "cyberspace"



# Design by evolution

"Everything," as the architect of the Russian revolution Vladimir Illyich Lenin once said, "is connected to everything else". And so it is in the universe of design: from the Patriot Missile to the Mountain Bike, from the VCR to the polio vaccine, from the skyscraper to the microwave oven. It is not too much to say that design has become the connection between humanity and survival.

Design determines the shape of the modern world. A world that is frequently described as disorganised and chaotic, even though it grows, day by day, ever more analysed, planned and organised. Even if we doubt this paradox on the ground, where old city streets and new electronic systems clash in a costly compromise, we see it confirmed from the window of an airliner at night. From there the chaotic expansion of unplanned suburbs reveals itself as a pattern of perfect organisation, while the city centre itself, bathed in light, radiates the precision of a central processing unit writ large. From 5,000 feet all cities look perfect, held together by designed objects and invisible systems, logically composed everywhere we look.

This is not an illusion, for as our century rushes to a close, design becomes more and more universal. Like the root structure of a giant tree, it pumps energy at high intensity through the mass of its urban trunk even as it insinuates its thinnest tendrils into the most isolated rural districts. By this sort of penetration design has displaced ideology as the link between survival needs and human resources. With the prospect of a world population grown to tens of billions in the next century it will be put to the test just as ideology was. Urban humanity confronts a crisis of survival that can only be con-

trolled by a tremendous development of design science, displaying powers of organisation and production dwarfing anything seen before. We have only to consider the squatter settlements of the great cities of the developing world to see that to stay the remorseless spread of poverty, famine and disorder, design must go on refining and attenuating the process of consumption, so that less and less can continue to supply more and more.

The design battle for global survival will not be won by force, for there will be no sides in the conventional sense. Nor will it be fought between nations, for national economies and resources are now so interdependent, and national energy, industrial, welfare and distributive systems so intricate and vulnerable, that to risk a return to the all out warfare of the first half of our century would mean certain global disaster. The coming war for survival will be more like a Medieval siege: force and aggression will count for nothing as compared to endurance and ingenuity.

Design is a process which has been variously defined, and many different groups claim mastery over it. Where the design of spacecraft, aircraft, ships and weapons is concerned, design is conceded to be a matter of specialist technical expertise. Where grand buildings are under consideration, Art History rules, with Royal Commissions, government departments, planners and celebrated architects sharing an uneasy agreement. In the realm of the consumer, the reigning taste is determined by advertising and the power of the manufacturer is supreme. Where clothes, cars, fashion and furniture are in question, the solitary genius may be welcome, but distinctions without differences abound.

All these fields harbour design of a sort, but in too many of them it is seen as an isolated and specialised activity, not as part of a greater process of product and system evolution driven by a process of "unnatural selection" as remorseless as is the process of natural selection in the natural world.

For architecture this is an operational tragedy, for it is at the macro level of building and planning that design can work most effectively, in the same way as the human immune system does, as a dispersed network of productive cells that are capable of co-operating by coincidence and training to provide all the elements of a life-supporting environment.

Like evolution by natural selection in nature, evolution by design in the world of architecture makes its apparently wasteful, but ultimately optimising way towards a perfect reconciliation of needs with resources. Through infinite varieties of form and thought it follows in the footsteps of natural selection, sifting a profusion of alternative forms and systems in the man-made world. In this way evolutionary design becomes a process beyond celebrity architecture, a process that through blind, evolutionary-niche-filling design solutions, will continue to proliferate and cross-fertilise unpredictable patterns of survival.

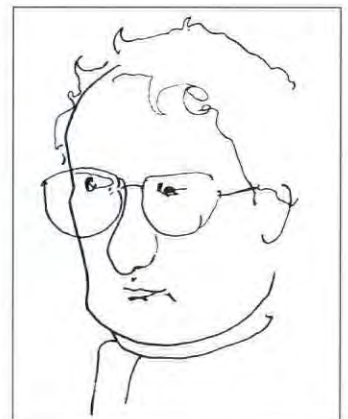
Viewed in this light all architecture has a place in the four-dimensional archipelago of past and present design that is the multi-brain universe of its own history. All commercial architecture is part of the output of this loose-knit network of global intelligences, showing how it communicates through space and time and retains, despite nationalism, chauvinism, competence and incompetence, the integrity of a continu-

ous and cumulative body of knowledge – a thing already lost to the historians of nations, ideologies and the impractical arts.

Evolution is a primer for the number-crunching reality of real architectural design. It illuminates the role of technology transfer even as it diminishes the false claims of individual genius and the distortions of nationalism. Evolution was the first globalisation, and is the final vindication of the globalisation of design. Evolution explains the connection between the disused factory and the new call centre; the connection between the art gallery and the development of modern polymers and composites; the relevance of mathematics to computers; computers to genealogy, and genealogy to ecology.

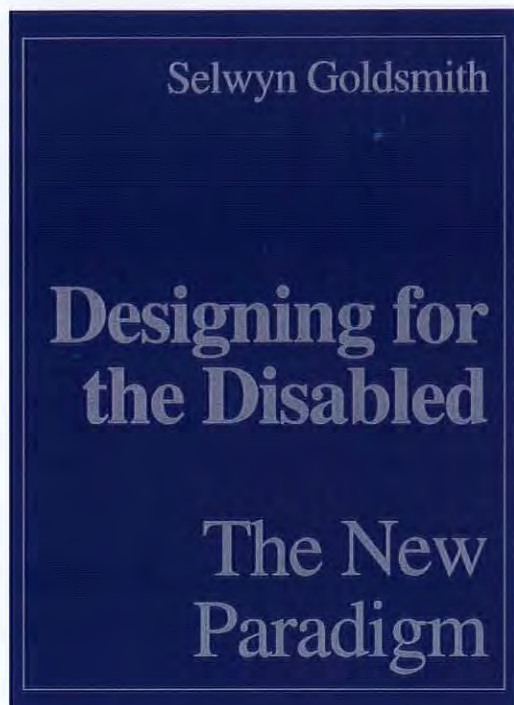
Real design is a language whose meaning can best be deciphered under extreme conditions – want of knowledge, want of resources, want of materials, want of time – so that the product or system then created holds within itself the most extreme state of efficiency possible under the circumstances of its birth. Where design is on the edge of feasibility, particularly in architecture, there the mechanism of evolution is to be found.

**Martin Pawley**



**"The design battle for global survival will be more like a Medieval siege: force and aggression will count for nothing as compared to endurance and ingenuity."**





#### Mutually inclusive

*Designing for the Disabled – the new paradigm. Selwyn Goldsmith. Architectural Press (an imprint of Butterworth-Heinemann), Oxford, UK. 448pp, 38 photographs, 115 line illustrations. £45 (hardback)*

*Reviewed by Stephen Thorpe*

Selwyn Goldsmith's book is not, as one might assume from the title, an update of his seminal masterpiece (1963). Rather, it is an argument pursued through a sequence of themes, among them a fascinating and provocative history of the accessibility movement. This is a personal account from both a mobility-impaired person and a wheelchair user.

Architects should certainly read this book. They may, as a result, come to adopt a richer and much more rewarding design approach.

Risky as it is to summarise a well thought-out book, long in gestation, the underlying message is that the accepted convention, enshrined in legislation, of making special provision for specifically disabled people, while of great and necessary benefit, excludes the pressing needs of many other building users. They may depart from the designer's mythical norm by being women, having young children with them or simply

by growing old.

Goldsmith's argument is that these groups of non-disabled people are nonetheless disadvantaged, even rendered handicapped by the way buildings are conventionally designed. His solution is what one might call the "universal plus" concept, which is that the built environment should be accessible to all users, including disabled people.

In essence, this a macroist rather than a microist approach. In this context, a microist architect would argue that in designing special provision for disabled people others also benefit, a sort of trickle down idea. Whereas a macroist works on a "treat as normal" basis, designing for all users, thus reducing the accepted need for supplementary special provision to a minimum.

This is a real architectural issue and in support Goldsmith quotes Liverpool Street Station, London. The redevelopment of this station, in many ways a fine example of sensitive restoration and renewal, nevertheless demonstrates the shortcomings of the special provision approach and the potential of the universal plus approach. For disabled travellers, there are two designated elements, both discreetly located and signed: a lift connecting the three main levels – street, platforms

and tube booking hall – and a single accessible toilet at platforms level. For other travellers, who might also have special needs because of heavy luggage or young children, there is a choice of stairs or escalators and the toilets are below concourse level. These are approached by steps and restricted pay turnstiles and comprise the usual restricted compartments. A macroist approach could have been to incorporate the needs of all travellers by means of at least one large lift and spacious step-free toilets.

One may take issue with the author at various points in his lengthy argument. But there is no disputing the potential power and relevance of the approach taken at Liverpool Street Station.

*Stephen Thorpe is an architect and accessibility consultant in private practice.*

#### The Lord speaks out

*Cities for a Small Planet. Richard Rogers, edited by Philip Gumuchdjian. Faber and Faber, London. 180pp, illustrated throughout. £9.99 (paperback)*

*Reviewed by Hugh Pearman*

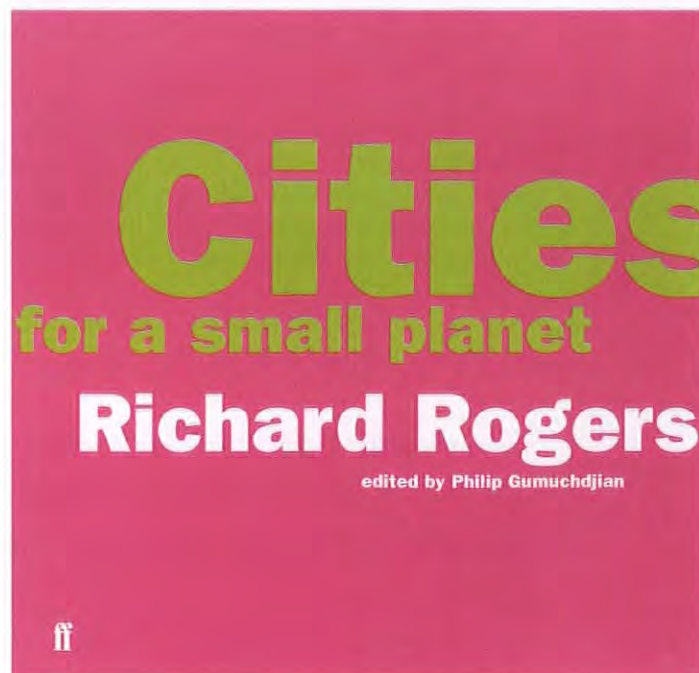
Now that Lord Rogers of Riverside is a key Labour member of the British

Parliament's Upper Chamber, he is taking his role as a public man and defender of the urban faith very seriously. Rogers is a working peer – that is, he is to be found in the House of Lords debating away, most recently on the need for better-quality state buildings. But such interventions, like his BBC Reith Lectures of 1995, are heard by relatively few.

Dealing with the problem face-on, Rogers and his team – notably his young associate, Philip Gumuchdjian, no mean architect himself – have gone into print with an expanded version of the lectures. Designed by a hip Paris studio with a shocking pink and lime-green cover, and a fashionable square format, it is nonetheless properly bound and remarkably cheap.

Subsidised by whom, I wonder?

This is Rogers' latest manifesto update. The title says it all: the planet is small, cities can be our only salvation. How are we to set about this task? The fact that his answers may – to those who stay abreast of the subject – all seem rather obvious is absolutely no reason to write the book off. Rogers acts as a conduit for a lot of ideas about mixed-use communities, urban density, sustainability and so on – and like Prince Charles in earlier times, his involvement gives these ideas a credibility





they would (unfairly) otherwise lack. Moreover, Rogers' contacts book includes some of the most influential people around the world. It is right and proper that he should champion the twenty-first century city, and if his undoubted glamour helps the cause, then great. So it is best to regard this book as an accessible primer on the subject, with Rogers, Gumuchdjian and the team acting as editors for all the ideas out there.

We want to survive, and this book offers a way to do so. OK, so we all know about the explosive growth of the world's population and the concomitant rush to build cities and coal-fired power stations and cars – especially around the Pacific Rim. Ecological and sociological disaster beckons. Rogers puts all the facts before us, and proposes what the sustainable city might be. It is, he says: just, beautiful, creative, ecological. It is a city of easy contact and mobility. It is compact and polycentric. And it is a Diverse City, "where a broad range of overlapping activities create animation, inspiration and foster a vital public life".

The case he makes is convincing. But Rogers knows that political will is necessary and he knows that market forces alone will not build the New Jerusalem. Direct, interventionist state action, co-ordinated on a global scale, is required. He is admirably open about the social agenda that underlies much of his thinking.

What is remarkable is that so much now sounds mainstream, and for this Rogers deserves at least some of the credit. It is difficult to argue with this book, and so it should be. Of course it is Utopian, but his is a practical Utopia, achievable with difficulty, but achievable all the same. He quotes Kevin Kelly to good effect: "When the union of the born and the made is complete, our fabrications will learn, adapt, heal themselves and evolve. This is a power we have hardly dreamt of yet".

*Hugh Pearman is a London-based architectural writer and critic.*

#### Close but no cigar

*Briefing your Architect.* Frank Salisbury. Butterworth-Heinemann, Oxford, UK. 224pp, 36 line illustrations. £14.99 (paperback)

*Reviewed by Peter Wislocki*

Who could have written such an ambitious book? Whilst competent architects should certainly be familiar with the bulk of Frank Salisbury's subject matter, few of our profession have ever formalised the theory, or, even less, implemented the practice, of defining a building brief (or program, in American parlance) in such a systematic fashion.

The book's short bibliography confirms the paucity of texts in this field, and its consequent value as a broad introduction to its subject. The self-evident lack of clarity in all-too-many project briefs, or their inappropriate format and medium, should provide *Briefing your Architect* with an attentive audience.

The author's background does much to explain the methodology – and idealism – intrinsic to such a project. Frank Salisbury is an academic with a background in public sector architectural practice. The concise biographical notes on the book's cover tell us that "he designed many important public buildings during his career with Cheshire County Council's Department of Architecture", which may explain why the very first hypothetical case study discussed happens to be that of a major educational project.

From any architect's point of view, a large school building is something of a dream project – the sort of brief, indeed, which many a student will have tackled in an undergraduate career. In design terms, such a project might include spaces of vastly differing shapes, sizes, functions and other characteristics, providing plenty of scope for formal complexity and inventive planning – the essence of exciting architecture. A school project makes an excellent design teaching vehicle; and, as Salisbury's case study shows, would be just as useful in teaching first year students



about the processes that precede, and iteratively progress alongside design.

But *Briefing your Architect* is not (according to its publisher) a student textbook, but "a desktop reference book", primarily aimed at inexperienced, but ambitious and demanding clients – a rare breed. As workload surveys confirm, most architects are employed, directly or indirectly, by experienced clients – property developers, institutions and the like. These organisations invariably use project managers or client representatives, generally with professional qualifications. Whilst many of these individuals would benefit from adopting a more systematic method of managing their

projects, one suspects that the majority would find the book's diagrams and checklists too superficial to be of any but passing relevance.

Those with professional experience in running projects might feel patronised by the instruction that, "the client should always take care not to press his ideas if they are at variance with the advice of his consultants". The author's presumption that architects should always be paid fees for feasibility studies might be dismissed as Utopian; whilst the intrinsic coherence of some of the book's numerous checklists – such as one in which "policy" and "loading" are given equivalent status – is also open to question.

*Briefing your Architect* would therefore be of greatest interest as an introductory text to students of architecture and related disciplines, wishing to extend the understanding of their profession beyond the traditional core. It would be equally high on a shortlist of books which an architect might consider giving an enthusiastic but inexperienced client.

*Peter Wislocki is a practising architect and regular contributor to WA.*

## BOOKS RECEIVED

### The Architecture of von Gerkan, Marg & Partners

*Edited by John Zukowsky.* Prestel, c/o Biblios Publishers, Munich, Germany. 272pp, fully colour illustrated. DM78/US\$49.95/£29.95 (paperback)

### London Docklands – An Architectural Guide

*Elizabeth Williamson and Nikolaus Pevsner.* The Penguin Press, London. 322pp, fully illustrated. £11.99/AUS\$45 (paperback)

### Stone Built – Contemporary American Homes

*Lee Goff, introduction by Charles Gwathmey.* The Monacelli Press, New York. 272 pp, fully colour illustrated. US\$60/£40 (hardback)

### Hentrich-Petschnigg & Partner – Buildings and Projects 1988-1998

*Edited by Gerhard Feldmeyer. Introduction by Fritz Neumeyer.* Rizzoli, New York. 288pp, 285 illustrations. £40/US\$60 (hardback)

To order books reviewed contact ZWEMMER MAIL ORDER at 24 Litchfield Street, London WC2H 9NJ, UK.

Tel: +44 171 240 6995. Fax: +44 171 836 7049. E-mail: [zwemmer.co@BTinternet.com](mailto:zwemmer.co@BTinternet.com)

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# Events

## Lectures, congresses and conferences

### UK

#### **International symposium on the management of highway structures**

Two-day symposium organised by the Transport Board of the Institution of Civil Engineers and the Highways Agency. Runs from 22-23 June 1998 at the Institution of Civil Engineers, One Great George Street, London SW1P 3AA, UK. For information contact Sabrina Kühn.

Tel: +44 171 665 2313

Fax: +44 171 233 1743

e-mail: WATT\_K@ice.org.uk

Web: <http://www.t-telford.co.uk/coconflict.html>

#### **Aquarium/Nature Center Planning and Management**

The sixth in a series of technical workshops – organised by the Waterfront Center – looks at the issues surrounding the addition of a nature-related centre to an existing community. Runs from 19-21 March 1998 at the Horton Grand Hotel, San Diego, California, USA. For information contact Martine Hergenreder at 1622 Wisconsin Avenue, NW Washington DC 20007, USA.

Tel: +202 337 0356

Fax: +202 625 1654

e-mail: [waterfront@mindspring.com](mailto:waterfront@mindspring.com)

Web: [mindspring.com/~waterfront](http://mindspring.com/~waterfront)

## Architecture and design competitions

### Finland

#### **Aalto Centennial International Student Prize 1998**

International prize to celebrate the centennial of Alvar Aalto's birth. All registered part time and full time architectural and design students world wide are invited to design proposals for a New Library in the city of Seinäjoki, Finland. The winner will be appointed as architect for the realisation of the library. Competition organised on behalf of Seinäjoki and the Regional Council by the Alvar Aalto Museum in association with the

RIBA International Student Competition, London, UK. Application deadline 10 August 1998. Contact Hanni Sipponen, The Alvar Aalto Museum, PO Box 461, 40101 Jyväskylä, Finland. Fax: +358 14 61 90 09 e-mail: [hanni.sippo@jkl.fi](mailto:hanni.sippo@jkl.fi)

### Spain

#### **Office for the Fundació Mies van der Rohe, Barcelona**

Single phase international ideas competition open to young architects and architecture students. Competitors are invited to submit ideas for a building, linked to Mies van der Rohe's German Pavilion in Barcelona (1929), to house the offices of the Fundació Mies van der Rohe. The total built area must not exceed 3,000 square metres.

Toyo Ito heads the international jury which will meet in April 1998 to decide the outcome. Deadline for receipt of proposals 31 March 1998. Contact competition organisers Editorial Gustavo Gili (GG), Rosselló 87-89, 08029 Barcelona, Spain.

Tel: +34 3 430 54 35

Fax: +34 3 430 46 53

e-mail: [2Gcompetition@seker.es](mailto:2Gcompetition@seker.es)

### USA

#### **Spectrum international competition for ceramic tile design**

Design competition open to architects, interior designers, manufacturers, retailers and anyone who included the use of ceramic tiling in a project completed between January 1996 and December 1997.

Categories broken down into commercial and residential, with the Grand Prize going to the "most outstanding" overall project. Jury made up of representatives from the American Institute of Architects (AIA), American Society of Interior Designers and the International Interior Design Association. Winners to be announced at the International Tile & Stone Exposition's All-Industry Awards at Coverings (see Trade shows) in April 1998. For further information and entry information write to Tile Promotion Board, 900 E Indiatown Road, Suite 211, Jupiter,

Florida, USA.

Tel: +1 800 495 5900

Tel: +1 561 743 3150

Fax: +1 561 743 3160

#### **Benedictus Awards 1998**

Annual architectural awards programme for authors of architectural design and innovation using laminated glass as a major element in the project. Open to architects worldwide – individually or in teams – of buildings completed within the past five years. Deadline for receipt of applications 19 March 1998.

Contact the AIA, 1735 New York Avenue NW, Washington DC, 20006, USA.

Tel: +1 202 626 74 45

Fax: +1 202 626 74 25

Web: [www.aiaonline.com](http://www.aiaonline.com)

#### **New York's Other River**

The 1998 Van Alen Prize in Public Architecture focuses on New York's East River. The competition, open to all, calls for entries that, "investigate, envision and promote" the design of a better public realm for East River – a much maligned, major public artery running through the core of New York City. Deadline for registration: 8 April 1998. Deadline for entries: 20 May 1998. Awards/exhibition: June 1998. For a registration form and complete competition brief contact the Van Alen Institute at 30 West 22nd Street, New York, NY 10010, USA.

Tel: +1 212 924 7000

Fax: +1 212 366 5836

e-mail: [vanalen@vanalen.org](mailto:vanalen@vanalen.org)

#### **"Good Design is Good Business"**

Business Week (BW) and Architectural Record (AR) invite entrants for the 1998 BW/AR Awards, an international awards programme recognising, "distinguished collaboration and result between clients and architects who utilise good architectural design in achieving strategic goals". Registration deadline 16 March 1998. Entry submission deadline 17 April 1998. For information: Tel: +1 888 242 4240 Tel: +1 202 682 3205 Web: [www.aiaonline.com](http://www.aiaonline.com)

## Exhibitions

### Canada

#### **Toy Town/La ville en jeux**

The sixth in the Canadian Centre for Architecture's (CCA) series of exhibitions on architectural toys explores how notions of urbanity (whether villages, towns or cities) have been represented through toys. The exhibition attempts to show how children's toys reflect changing social values and different approaches to the design, planning and organisation of urban/village life. Until 31 May 1998. CCA, 1920 rue Baile, Montréal, Québec, Canada H3H 2S6. Tel: +1 514 939 7000 Fax: +1 514 939 7020

#### **Montréal Métropole 1880-1930**

Exhibition charting the transformation of Montréal from a nineteenth century merchant city to the metropolis of Canada. Runs until 24 May 1998 at the Canadian Centre for Architecture, 1920 rue Baile, Montréal, Québec, Canada H3H 2S6. Tel: +1 514 939 7000 Fax: +1 514 939 7020

#### **Sweet Farm 1994-1997**

Exhibition of photographs and models of the PLANT design partnership's Sweet Farm experimental landscape project. Organised by the Toronto Society of Architects, the exhibition runs until 30 April 1998 at Ballenford Books, 600 Markham Street, Toronto, Canada. For opening times and further details contact PLANT: Tel: +1 416 979 2012 Fax: +1 416 979 1283

### France

#### **Kisho Kurokawa retrospective**

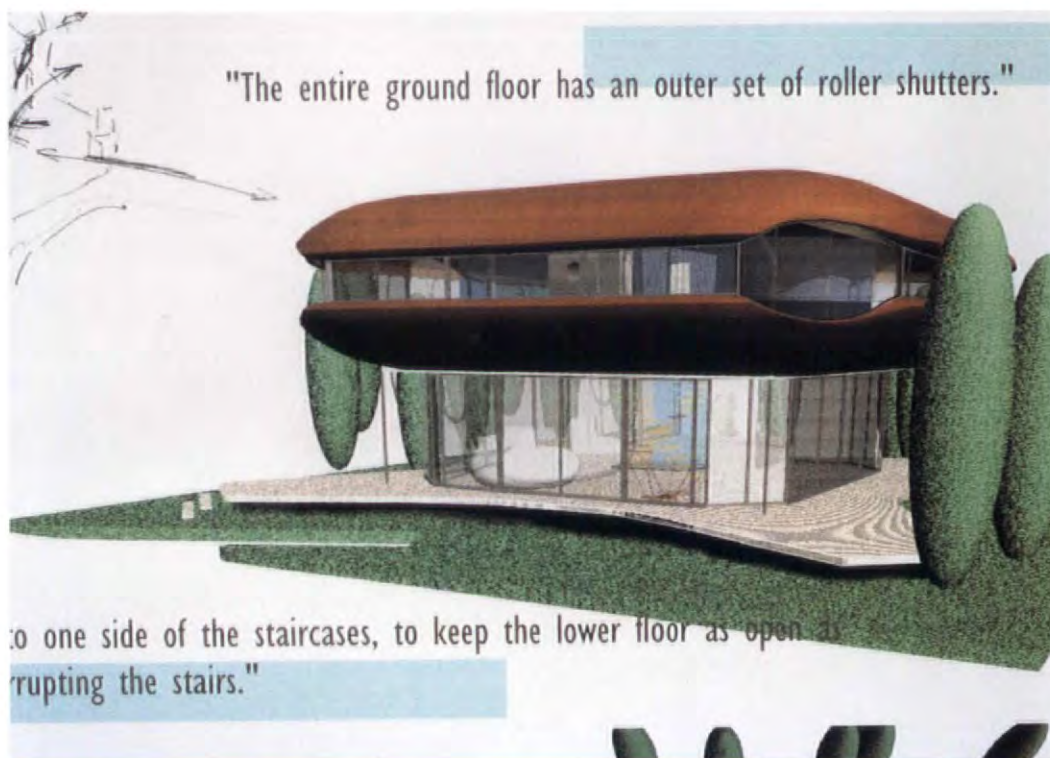
Retrospective of Japanese architect Kisho Kurokawa. Runs until 21 March 1998 at Armstrong Associates' recently completed Maison de la Culture du Japon, Paris (see WA58 page 34). Tel: +33 1 44 37 95 00

### The Netherlands

#### **Mastering the city**

A twentieth century history of proposals for urban developments from





to one side of the staircases, to keep the lower floor as open as  
interrupting the stairs."

## Exhibition: Concept House 98

Architects, designers and product designers were invited to bring contemporary solutions to the concept of the traditional "estate house". Amongst the 13 shortlisted and winning architects' schemes are proposals by the Ushida Findlay Partnership, Denmark's Hoge School and Nigel Coates' winning "Oyster House" – pictured above. Runs until 13 April 1998 at the Architecture Foundation, 30 Bury Street, London SW1 6AU, UK.

Tel: +44 171 839 9389. Fax: +44 171 839 9380

all corners of Europe. The exhibition incorporates a total of 24 projects, some of which have never been seen before. Runs until 5 April 1998 at the Netherlands Architecture Institute, Museumplein 25, 3015 CB Rotterdam, the Netherlands. Tel: +31 10 4401200 Fax: +31 10 4366975 e-mail: info@nai.nl

### UK

#### Architectural changes in Bedlam

An insight into how architecture reflects attitudes towards mental health. Bedlam: Custody, Care and Cure 1247-1997 celebrates the 750th anniversary of the founding of Bethlem, the world's oldest hospital for the mentally ill. Runs until 15 March 1998 at the Museum of London, London Wall, London EC2Y 5HN, UK.

Tel: +44 171 600 3699  
Fax: +44 171 600 1058

#### Four stories

Exhibition exploring how the architects of four very different buildings have used models to develop their

designs. The participating architects are: John McAslan & Partners (see Profile WA63); Behnisch, Behnisch & Partner (see pages 84-85 WA60); Arup Associates (see Profile WA57) and Pawson Williams. Runs until 20 March at the Architecture Centre, Narrow Quay, Bristol BS1 4QA, UK. Tel: +44 117 922 1549 Fax: +44 117 922 1541 Web: <http://www.astra.co.uk/arch/>

### USA

#### L'Enfant to Legacy: Planning Washington's Monumental Core

Exhibition exploring the history of planning in Washington, from Charles Pierre L'Enfant design for the young city (1791), through the Senate Park Commission Plan (1902), to the present day. Runs until 30 May 1998 at the National Building Museum, 401 F Street NW, Washington DC 20001, USA. Tel: +1 202 272 2448 Fax: +1 202 272 2564

#### Japan 2000: Architecture for the Japanese Public

Part of a year-long examination of

the role of government in helping to shape contemporary Japanese architecture and industrial design, organised by the Art Institute of Chicago, 111 South Michigan Avenue, Chicago, Illinois 60603-6110, USA. Exhibition runs until 3 May 1998.

Tel: +1 312 443 3600  
Fax: +1 312 443 0849

### Trade shows

#### Bosnia-Herzegovina

##### SIRE 1998

The second SIRE exhibition takes place at the Centar Skenderija, Terezija BB, 71000 Sarajevo, Bosnia-Herzegovina (tel: +387 71664163) and runs from 2-5 June 1998. The exhibition provides a forum for companies to get involved in the reconstruction programme for the territory. For information about exhibits and exhibiting contact Oliver Strommer at International Trade & Exhibitions in London, UK.

Tel: +44 171 306 0033  
Fax: +44 171 306 0070  
e-mail: [press@ITE-exhibitions.com](mailto:press@ITE-exhibitions.com)

### France

#### ESMA Convention and Trade Show 1998

The European Stadium Managers Association (ESMA) convention and trade show 1998 runs from 4-6 June at Sofitel Rive Gauche Hotel, Paris, France. For information contact Eric Glain or Emmanuelle Obligis.

Tel: +33 1 55 0 95 08  
Fax: +33 1 55 60 95 43

### UK

#### ET 98

Trade show promoting business opportunities throughout the entire environmental market – from pollution control to waste management. Runs from 2-4 June 1998 at the National Exhibition Centre (NEC), Birmingham, UK. For exhibitor information contact Julie Dauncey:

Tel: 44 181 910 7840  
e-mail: [julie.dauncey@reedexpo.co.uk](mailto:julie.dauncey@reedexpo.co.uk)  
For visitor information call the NEC:  
Tel: 44 121 780 4141

### USA

#### COVERINGS 98

Trade show featuring the International Flooring Exposition, the International Wall Covering Exposition and the International Tile and Stone Exposition runs from 21-24 April 1998 at the Orange County Convention Center in Orlando Florida, USA. Write to, COVERINGS 98, East Indiatown Road, Suite 207, Jupiter, Florida 33477, USA. Tel (free): +1 800 881 9400 Fax: +1 561 747 9466

#### A/E/C Systems 1998

The nineteenth international computer technology show for the design and construction industry runs from 2-5 June 1998 at McCormick Place, Chicago, Illinois, USA. For information contact Pat Smith, A/E/C Systems 1998, 415 Eagleview Blvd #106, Exton PA 19341-1153, USA. Tel: +1 800 451 1196 Tel: +1 610 458 7689 Fax: +1 610 458 7171





# Ireland



## Country Focus

Frank McDonald of *The Irish Times* reports on an unprecedented economic boom in The Republic of Ireland. The country now has by far the highest annual growth rate among European Union member states, and its economy has been labelled that of a “Celtic Tiger” – although it currently shows no signs of nosediving into recession. Dublin’s skyline is dotted with dozens of tower cranes as developers cash in on the economic upturn, and the construction industry rises to the challenge. Anne Davey Orr, editor of *The Ulster Architect*, highlights the effects of the Republic’s boom on architects in Northern Ireland.



Detail of the Fire Station in  
Dun Laoghaire, Co. Dublin  
by the Dun Laoghaire  
Architects Department.  
Photograph: Keith Collie



**W**ith the singular exception of Barcelona, no other city in Europe has been so utterly transformed as Dublin within the space of just a decade. Ten years ago, the Irish capital was on its knees, steeped in black depression and littered with derelict sites, especially along the Liffey Quays. Now, it is the confident symbol of Ireland's much-vaunted "Celtic Tiger" economy.

The unprecedented number of tower cranes on the city's skyline is a real measure of the frenetic level of construction activity. Official figures show that the building sector grew by nearly 23 percent in 1996, on top of more than 17 percent growth in the previous year, and the figure for 1997 is likely to be around 15 percent. Overall, the Republic's construction industry is worth more than US\$10 billion a year.

### Before the boom

A great deal of the success of recent work can be traced back to that period of "enforced contemplation" during the 1980s recession, when young architects who didn't emigrate to Britain, Europe and the USA began to think long and hard about the city's future. By that stage, as noted by Angela Brady

and Robin Mallalieu – authors of *Dublin – A Guide to Recent Architecture* – Dublin's fabric had been "mercilessly plundered" by property speculators and equally rapacious municipal traffic engineers, whose "insane" road-widening schemes blighted whole areas of the city centre for decades. It was crying out for a "new brand of urbanism".

### Temple Bar and Group 91 – setting a European standard

This new approach was refined and developed by a group of young architects centred around University College Dublin's School of Architecture. Their paper projects, notably the "Dublin City Quays" (1986) and "Making a Modern Street" (1991), put forward a more sympathetic contemporary architecture and tackled such issues as the need to repopulate the city centre. "By the time construction in Ireland began to increase in the early 1990s, these ideas had filtered down through the profession, even as far as some of the big commercial practices, and a new modern Irish urbanism evolved." And the UCD group became Group 91, authors of Dublin's "figurehead project" – the reconstruction of Temple Bar – as the city's designated cultural quarter (see feature in this Country Focus).

Until the late-1980s, this area of narrow cobbled streets in the heart of Dublin was threatened with demolition for an underground transportation centre, topped by the usual assortment of office blocks, hotels and shopping malls, in a concept design by Skidmore Owings and Merrill. But this scheme was ultimately abandoned. Under pressure from artists, architects and conservationists, the Government set up a State agency, Temple Bar Properties, to oversee the transformation of this area of some 25 acres as Dublin's cultural quarter and provided US\$64 million in grant-aid – half of it from the European Union – to fund the development of nearly a dozen new or improved cultural facilities.

Laden with architectural awards, the Temple Bar project is now entering its final phase with the construction of 189 apartments in a mixed use scheme designed by the all-Irish firms of architects which make up Group 91. And though the area has got some bad press for its "pub culture", the kudos for its contemporary architecture is well-deserved. Temple Bar may be a model of European significance, though it is far from typical of what happens in Dublin, where many of the new apartment buildings in the city centre have been erected with no input at all from professionally-qualified architects. It is only in recent years that the city's largest single developer – Liam Carroll of Zoe Developments – has sought architectural advice; previously, he designed his own schemes.

### The professional quest for status

Most housing in Ireland is turned out by technicians and engineers or borrowed from pattern books such as *Bungalow Bliss*. Architects do not enjoy anything like the same social standing as doctors, lawyers and even accountants. And to the intense dismay of the Royal Institute of the Architects of Ireland, there is still no registration of title; anyone, even the local butcher, may call himself an architect. Local authority planners, in Dublin and elsewhere, seem to feel challenged by good contemporary architecture. With some exceptions, their stock-in-trade is Georgian pastiche and nostalgic "neo-vernacular" styles. And since few developers in Ireland have any concept of being involved in the creation of a cultural legacy for the twenty-first century, it has

### COUNTRY FACTFILE – THE REPUBLIC OF IRELAND

**The land:** The Republic of Ireland occupies most of the island of Ireland in the Atlantic Ocean, west of Great Britain, with a land area of 68,890 sq kms, extending 486 km from north to south, and 275 km from east to west. The only land boundary is with Northern Ireland to the northeast.

**Capital:** Dublin

**Population:** The 1996 population estimate was 3.63 million. About 65% of the population is urban with 44% living in the top 20 urban counties. The population density is about 52 people per sq km.

**Number of architects:** Approximately 2,000 of which 80% are registered with the RIAI.

**Language:** Gaelic, the Irish language, and English, are the official languages. English is more widely spoken and is the main business language.

**Religions:** 93% Roman Catholic, 3% Anglican, 4% other.

**Currency:** Irish Pound (or punt) which has 100 pence. (Symbol IEP or IR£) Ireland is on course to join the first wave of the European Monetary Union.

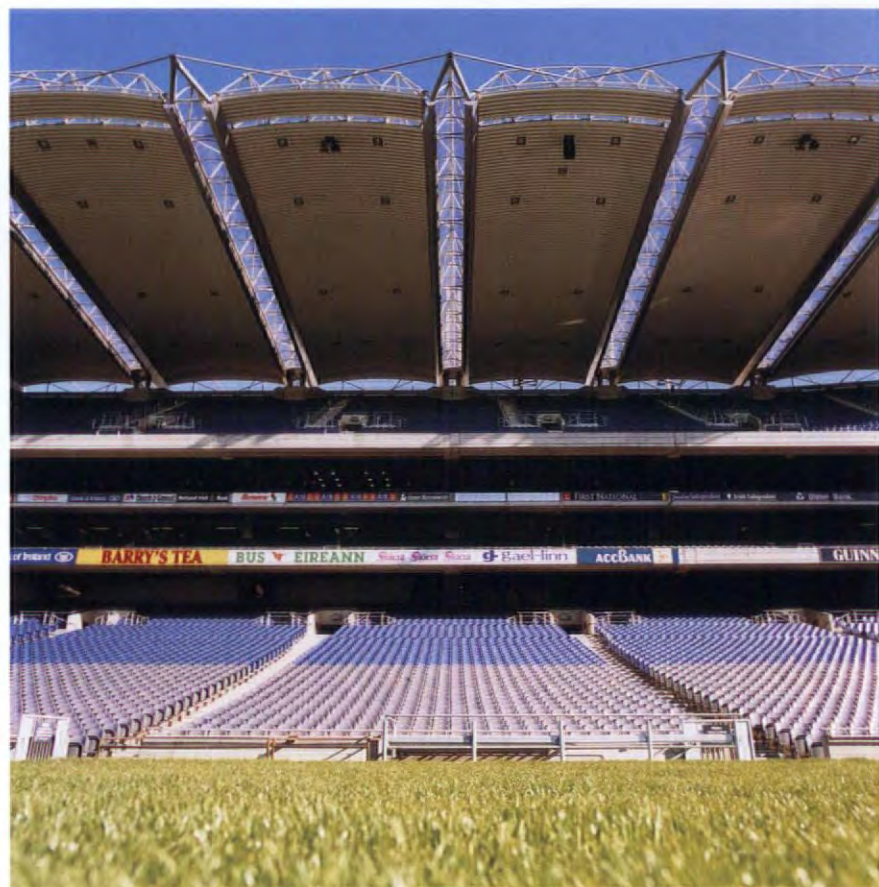
**Airport information:** Dublin Airport is 10 km from Dublin and is serviced by most major carriers. There are also international airports in Cork, Shannon and Knock. (Connaught).

**Dialling code:** To dial into Ireland the country code is 353. To dial out internationally the code is 00 (08 for Northern Ireland).

**Time difference:** Ireland is in the Greenwich Mean Time (GMT) zone and is 5 hours ahead of Eastern Standard Time (EST) and 1 hour behind Central European Time (CET).

**Miscellaneous:** The once agricultural economy has transformed into an industrial one. Industrial exports account for 80% of all exports, which are an important part of Ireland's growth. Ireland has been particularly successful in attracting high-tech industries. Growth of the manufacturing sector will be an important factor in the well being of the construction sector. Tax Relief and/or Government/EU grants are available for capital investment, with some special tax-based schemes available in "Designated Areas" – either Urban Renewal or Coastal Resort Regeneration.





Keith Collie



John Searle



- 1: The US\$174 million Croke Park, ground of the Gaelic Athletic Association, by Gilroy McMahon
- 2: Visitor centre on the remote North Mayo coast, by Mary McKenna (Office of Public Works)
- 3: O'Reilly Hall, University College Dublin, by Scott Tallon Walker

become a case of "the bland leading the bland". Hack architects get more of the work than they deserve and the current pace of development is so fast that there is almost no time to mitigate their mistakes through the planning code.

### A new approach to housing

Incredible as it may seem, there was not one private apartment available in the centre of Dublin before 1990. Since then, more than 7,000 have been built, too many of the "shoebox" variety in large schemes of 100-plus units which seem destined to become the low-grade tenements of the twenty-first century.

This is not to say that no good architecture is being produced outside Temple Bar. One of the most significant projects in Dublin is the dramatic reconstruction of Croke Park, hallowed ground of the Gaelic Athletic Association. This US\$174-million

Quarryvale, in which the Duke of Westminster has a 50 percent stake. BDP are also consultant architects for the remodelling of Connolly Station, in the city centre.

### Pick of the bunch

Scott Tallon Walker, one of the few Irish firms with an international reputation, produces consistently good work in the Miesian idiom that has long been its hallmark. It won a competition to design the second phase of the Dublin Civic Offices at Wood Quay and managed not only to mask the earlier "bunkers" by Stephenson Gibney but also to deliver a very fine public building which reflects great credit on the city. The State's own architectural establishment in the Office of Public Works has also been a major force, supervising a public building programme which ranges from police stations to

**"To the intense dismay of the Royal Institute of the Architects of Ireland, there is still no registration of title; anyone, even the local butcher, may call himself an architect."**

scheme, designed by Gilroy McMahon, perhaps the most respected firm of architects in the city, will turn it into one of the finest sport stadiums in Europe. The project architect, Donal Friel, has since set up an office in Dublin for Building Design Partnership (BDP), headquartered in London, and now includes Marks and Spencer (Ireland) among his clients. (See Face to Face in this report.) Marks and Spencer are anchor tenants for the city's most strategically located out-of-town shopping centre at

visitor centres. Inevitably, the results are uneven, though it recently scooped the RIAI triennial Gold Medal for a widely acclaimed pyramid-style visitor centre on the remote North Mayo coast, designed by Mary McKenna.

One of the Dublin firm deBlacam and Meagher's most admired projects is the library at Cork Regional Technical College, a virtual symphony in brick inspired by the work of their spiritual guru, Louis Kahn. Cork, which has taken a more >





conservative approach to urban renewal than other Irish cities, is about to see something really radical – an almost Gehry-like extension to its Crawford Art Gallery by Dutch architect Eric van Egeraat.

Limerick, on the banks of the River Shannon, has also been transformed under the guidance of Jim Barrett, who now holds the plum job of Dublin City Architect. For ten years, he pursued the single-minded vision of turning the city around to face the Shannon, assisted in no small way by the presence in Limerick of one of Ireland's leading architectural practices, Murray O'Laoire Associates, which helped to put once-bedraggled Limerick on the architectural map. (See review in this Country Focus).

Sean O'Laoire, one of the firm's principal partners, has also emerged as a considerable force in the arena of urban design and master planning, particularly in Dublin. He drew up the planning scheme for the 27-acre Custom House Docks site, the scene of Ireland's largest single exercise in urban renewal, and recently headed the consortium which drafted a masterplan for the extended docklands area.

#### **Tax incentives and joint ventures – but no star performers from the international stage**

The provision of lucrative incentives, including a ten percent rate of corporation tax, ultimately assured that the International Financial Services Centre, a sort of off-shore tax haven built alongside the city's late-eighteenth century Custom House, became a roaring success. This US\$500-million scheme has attracted financiers from far and wide and now returns some US\$580 million annually in tax revenue. (See review in this Country Focus).

The original development package competition for the Custom House Docks site in 1987 was won by a consortium which included British Land with the architectural input provided by Benjamin Thompson and Associates, a US firm of harbourfront redevelopment specialists, in collaboration with Burke-Kennedy Doyle and Partners, one of the largest and busiest commercial architectural firms in the Republic of Ireland.

This form of partnership is virtually the only route, short of winning an open competition, for foreign architects to work in Ireland. Perhaps because the country is small, and the pickings





correspondingly modest, Dublin has no new buildings by any of the bigger "stars" on the world stage. Similarly, most of the multi-national corporations locating in Ireland do not bring their own architects with them and appear content to rely on the expertise available locally to steer new projects through the Republic's planning and building codes. The three largest industrial projects of recent years illustrate the point. Whereas Jacobs International designed the Intel plant near Leizlip, ten miles from Dublin, the nearby Hewlett Packard plant was designed by Irish architects Robinson Keefe and Devane, while IBM used Scott Tallon Walker (phase 1) and Henry J Lyons and Partners (phase 2) – both Irish, with US firm HOK playing the role of project manager.

Not even Kevin Roche, the Irish-born and trained Pritzker laureate and one of the most prolific corporate architects in the USA, has been given an opportunity to build in the capital city of his native country. But this may be put right if Treasury Holdings, one of the contenders for a proposed National Conference Centre in Dublin, wins the contract; Roche has provided the design for their scheme.

The US\$58-million conference centre has been under discussion, on and off, since the mid-1980s. An earlier development package competition was cancelled at the final fence in 1996, to the intense annoyance of the contenders, including several from overseas, who had spent considerable time and money on their entries. The latest competition is intended to ensure that Ireland does not lose some US\$33 million in EU aid for this project.

Two years ago, the US-based Ogden leisure group believed it was well-placed to scoop the contract with its daring US\$435-

**"Not even Kevin Roche, the Irish-born and trained Pritzker laureate and one of the most prolific corporate architects in the USA, has been given an opportunity to build in the capital city of his native country."**

million Sonas Centre scheme for Dublin's former Phoenix Park racecourse, which would have provided a conference centre with the required 2,000 capacity linked to the largest casino in Europe as well as a five-star Sheraton hotel, a 63,000-seat multi-purpose stadium and a 12,000-seat indoor sports arena. Ogden conceded that the controversial casino would be the "financial engine" driving the whole development. But the company did itself no favours by producing an insensitive American-designed scheme by Ellerbe Becket; this was later withdrawn in favour of a more sophisticated plan by Burke-Kennedy Doyle, which received planning permission on appeal but has so far failed to secure a casino license.



1: Dun Laoghaire ferry terminal development. Burke-Kennedy Doyle & Partners

2: Interior detail of Cork Regional Technical College library. De Blackham and Meagher Architects



### ► Overseas interest largely from the UK

Meanwhile, UK-firm Ahrends Burton and Koralek (ABK) are carrying out a US\$17.4-million refurbishment and extension of the Dental Hospital in Dublin. It is their first Irish project for 20 years, since the Arts Building in Trinity College was completed. Paul Koralek's association with the college dates back even further, as he won a competition to design its Berkeley Library (1967), still one of Dublin's finest modern buildings.

Another British firm – Benson and Forsyth – is involved in a rather more controversial project close to the Dental Hospital. This is the proposed US\$18.85-million extension to the National Gallery, which was the subject of a limited competition in 1996 for architects with experience of museum and gallery design. The other entrants included ABK, Dixon and Jones, Daniel Liebskind and Moshe Safdie. To the astonishment of everyone, including the conservationists who had opposed Benson and Forsyth's scheme, permission

## Belfast

**Since "peace" in 1995 tourism has increased and business has started to look up. But many of Northern Ireland's architects have followed the boom south, where the money is up to three times better.**

Northern Ireland experienced its first year of peace in over 25 years in 1995. "The peace" focused world attention on what was essentially a "closed" economy. Tourism increased; southern companies such as Jury's hotel chain and Bewley's coffee shops looked northward and the work of Laganside, a government-funded corporation set up in 1989 to revitalise Belfast's derelict docklands, came into its own. The Washington based Enterprise

Development Company, part of the Rowse Corporation, through 3D International, responded to a Laganside sponsored international competition for the first docklands development and won it. They subsequently sold their interest to the Belfast consortium Ewart Plc and O'Hare & McGovern. The project resulted in the creation of Lanyon Place – of which more later.

Seagate Technologies of Minneapolis, wooed by the

Industrial Development Board, chose to locate in Londonderry following research on clean room technology by Belfast's Brodie Hawthorne – the architects for the ill fated DeLorean plant. ADP of California provided the concept and Kirk McClure Morton (KMM) of Belfast project managed.

There was an air of optimism and opportunity. The northern economy, it seemed, was about to take off. In prime retail areas of central Belfast long established multiples were joined by Debenhams, Laura Ashley, Dillons, Virgin and Waterstones. These Belfast stores out-perform their British equivalents. But in spite of the optimism construction growth has been flat according to Tony

Doran, Director of the Construction Employers Federation (CEF), due to a substantial reduction in public expenditure. Investment has come instead through the British super-stores who belatedly followed Marks & Spencer's profitable lead. The arrival of Sainsbury's, Tesco, Asda and Costco was dubbed "Store Wars" and forced local retailers into a battle which led in the end to the take over of the Northern Ireland owned Stewarts and Crazy Prices by Tesco. The Sainsbury plan to build 12 superstores and Tesco's plan to build three promised jobs in construction and retail but their presence has led, as predicted, to the closure of some long established



1: Night view of Robinson & McIlwaine's acclaimed Waterfront Hall, Belfast

2: Lanyon Place, Belfast showing The Hilton and BT headquarters - with the Waterfront Hall in the foreground





was refused last month by Bord Pleanála – the Republic's planning appeals board – because it would have involved demolishing an eighteenth-century house to make way for an angular, stone-clad modern building on one of the main approaches to Merrion Square, the centrepiece of Dublin's Georgian core.

A third UK firm, McCormac, Jamieson and Pritchard, which was also among the entrants for the National Gallery competition, has popped up again as master planners for a much

larger project – the demolition and reconstruction of Ireland's only 1960s high-rise housing estate at Ballymun, within sight of Dublin Airport, at an estimated cost of US\$261 million. Its Irish partners are architects O'Mahony Pike. A separate masterplan aimed at rejuvenating the north inner city, one of Dublin's most deprived areas, is being finalised by a team of consultants led by Urban Initiatives, the British firm headed by Kelvin Campbell, in partnership with Anthony Reddy Associates, another busy Dublin practice. This has the



3: Model of the Odyssey Science Centre – a millennium project designed by Consarc Design

4: Aerial image of the Odyssey Site



local companies. As one wit put it, "Just because we're at peace, doesn't mean we eat more".

The arrival of the superstores in Northern Ireland has changed the construction industry radically by bringing in increased competition at all levels. Northern Ireland companies have had to become more competitive to survive. Many have grasped the opportunity which the Dublin boom has offered. Design + Management, Belfast based architects, designed a new shopping complex in Jervis Street, Dublin and now have an office in the city. Quantity Surveyors DRA now operate as Gleedes Rooney in Dublin. Philip Downie Consulting Engineers have linked with Dublin based Michael Buckley while KMM has established a Dublin office. Grahams, members of the new Export Development Group set up by John Armstrong of the CEF in Belfast in 1997, have been awarded

a US\$74 million contract to build the new Dundalk/Dunleer bypass in a joint venture with the south's Uniform and will build a new US\$4 million development for Dundalk Technical College designed by Scott Tallon Walker. There has been movement inwards as well – but little from the south in construction. The UK engineering company Binney bought a 15 percent stake in Ferguson & McIlveen of Belfast. London D Y Davies opened a Belfast office to design the city's Yorkgate and subsequently the Shipquay Shopping Centre in Londonderry before the company collapsed.

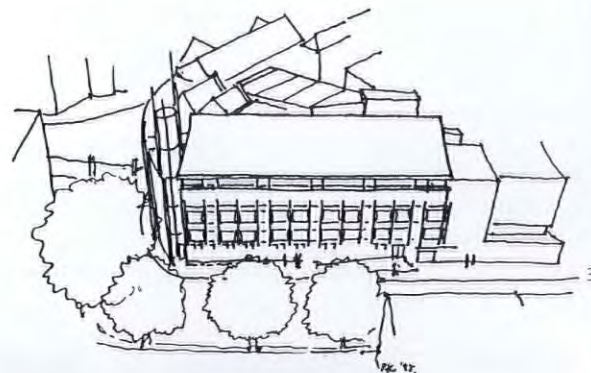
Within Laganside's remit Belfast City Council's new Waterfront Hall, designed by Belfast's Robinson & McIlwaine and built by Gilbert Ash (NI) Ltd, is the focus of Lanyon Place – a new business address for the city. (See building review WA57 page 118-119). BT has located its NI headquarters there and the new

Belfast Hilton is rising beside it – both designed by the high profile Belfast architects, Taggart. An indication of the Hilton's confidence in the Belfast market is the fact that they have put 75 percent of their own equity into the project. Nearby at Clarendon Dock Scottish based Morrison Homes are building luxury apartments. At Mays Meadow a mixed development by Finbrook of Dublin is under way.

While there has obviously been a spin off from Dublin, the down side for Northern Ireland is that there is now a shortage of skilled labour and trained technicians. In Dublin the money is better (up to three times in some cases) and Ireland is small

enough for people to commute on a daily or weekly basis. Perhaps this will change if Tony Doran is correct in predicting a mini boom for Northern Ireland in 1998. It will depend on peace; the Private Finance initiative and millennium projects such as the US\$144 million (£90 million) Odyssey Science Centre being developed on the Lagan by the Ulster Museum and the Sheridan Group, designed by Consarc Design. Unlike Dublin, Belfast's infrastructure has made it one of the easiest cities to travel through by car in the UK – albeit at great cost to the Victorian city. Because of its good road system it is an efficient and very effective business centre.





personal backing of Bertie Ahern, the Irish Prime Minister, whose constituency includes the north inner city.

#### Masterplanners wrestle with history

A third masterplan has been produced by the municipal authority, Dublin Corporation, for the Smithfield-Markets area, where one of the largest schemes currently under construction will provide over 200 apartments and other facilities. This US\$58-million development was designed by Polish-born architects Andrej and Danuta Wejchert, who have been practising in Dublin for more than 20 years.

Last year, the Corporation sponsored an international

regeneration of the area as its physical renewal. Over the next 10 to 15 years, the DDDA aims to create up to 40,000 new jobs in the area, through such developments as a Dublin Technopole, on the model of Montpellier, in the southwest of France, though with a more appropriate urban form, as well as a major extension to the International Financial Services Centre. The plan also envisages the provision of 10,000 new residential units in the docklands area.

Most of the investment required to realise the US\$2.5-billion masterplan will come from the private sector, which favours peppering Docklands with high-rise buildings – and in the context of a city that has generally held on to its historic

### "The US\$2.5 billion masterplan favours peppering Dublin's Docklands with high-rise buildings, (anything over ten storeys). There will be a lot of work to spread about"

competition to redesign the central space of Smithfield, potentially one of the finest public spaces in Dublin with dimensions similar to the Piazza Navona. It was won by architects McGarry NiEanaigh, members of the Group 91 consortium, with a dramatic scheme to provide a dozen "beacons", each nearly 90 feet high, to illuminate the space and draw people to it. However, much of the focus in Dublin over the next decade will be on the Docklands area, further downriver. This is almost inevitable, given the south-easterly drift of the city's centre of gravity over the past two centuries. But the redevelopment of Docklands will also be fuelled by the provision of urban renewal tax incentives in selected areas and driven by a State agency with a very ambitious masterplan.

The Dublin Docklands Development Authority (DDDA), set up with a mandate to secure the renewal of some 1,300 acres of redundant port-related land, is well aware of the pitfalls of *laissez faire* planning which so characterised the London experience. Indeed, the legislation under which it was established attaches equivalent importance to the social and economic

skyline, that means anything over ten storeys in height. Even the DDDA's masterplan signals that several towers, perhaps 20 storeys or more, are likely to be permitted. The details are to be worked out in planning schemes and action plans for particular parts of the area, where nearly 200 acres of land – much of it owned by public utilities – are available for redevelopment. So there will be a lot of work to spread around. And the DDDA favours architectural competitions, whether by interview or open submission, as the most appropriate means to secure the best design advice.

#### Onwards and upwards?

Nobody knows how long the current boom is going to last, though there are optimistic expectations that it will go on for several years. It has already led to Dublin being hailed as the new Barcelona, at least for the vibrancy of its Mediterranean-style nightlife. But the Celtic Tiger has its downsides, too. Traffic congestion in the city, fuelled by record car sales, is fast making it the most maddening capital in Europe.

1: Computer generated image of Fingal County Hall, due to start on site this month, by Bucholz McEvoy Architects, in association with BDP Dublin

2: Model of Benson and Forsyth's ill-fated scheme for the National Gallery extension, in Dublin

3: Sketch of ABK's nearly-completed Dental Hospital, Dublin



**CONSTRUCTION FACTFILE compiled by Hanscomb***(with thanks to Niall O'Kelly & Partners of Dublin, Ireland).*

**Construction outlook:** Construction volume grew about 9% in 1996. This increase caused tender prices to rise during the later half of 1996, which continued throughout 1997. Material costs rose 1.3% (July-July), while labour costs rose 7.0%. Material costs have started to rise again, although labour increases have been pre-agreed and should not be substantial. In the period 1992-2002 infrastructure expenditure will average in excess of £1,000 million per year. Over the next four to five years, public spending on construction is likely to stabilise, or reduce slightly, as EU structural funds are gradually reduced.

**Inflation:** 1997 inflation for the construction industry was about 7%; 5% expected in 1998. Tender price inflation has exceeded cost inflation at around 15%-20% per annum in the main sectors.

**Economic data**

Consumer Price Index: 1991=100		Average Exchange Rates: Irish Punt per US\$	
1992	106.4	1992	0.614
1993	108.0	1993	0.709
1994	110.5	1994	0.646
1995	113.0	1995	0.626
1996 (est.)	115.1	1996	0.600
1997 (est.)	117.4	1997	0.670

**Procurement of construction:** Owners traditionally issue separate contracts to the architect and the engineers. Design is usually 75% (engineering) to 85% (architectural) complete when a project is tendered. The designers complete design during tender or after contract award. The successful contractor may make suggestions to the designers during completion. Besides the drawings, the bidding package generally includes specifications, form of contract, contract appendix insertions, Bill of Materials (BOM) and form of tender. Usually, a BOM is used for larger projects. If a BOM is used, it is prepared by a Quantity Surveyor. Lump sum tendering or negotiation is the most common method for selecting a contractor. For private sector projects, contractors may be selected to bid. If a BOM is used it becomes a contract document and is guaranteed by the owner. Quantities may be re-measured after completion of construction. A General (Main) Contracting approach is used with provisions for nominated specialist sub-contractors by prime cost sums. Lump Sum contracts are by far the most regularly used. The main form of contract for private general building work is the RIAI (Royal Institute of Architects of Ireland) Form of Contract 1996 (with/without quantities).

**Design professions:** The design professions follow the British format. Recommended fee scales are for the most part disregarded by clients and professionals alike.

**Contractors:** General contractors are mainly small to medium in size. Subcontractors are available to carry out specialist work.

**Bonds and insurances:** Historically, contracts use a retention system whereby clients build-up a fund during the course of

the contract, by reducing interim payments, to act as an inducement to the contractor to remedy defects. General performance bonds have not been a common feature of Irish construction contracts. Bond requirements are becoming more common. Typically, bonds are for 25% of the contract sum.

**Governing codes, standards and approvals:** A prospective developer needs to get Planning Permission and Building Regulations approval before construction work can begin on site. The local council operates the general system, with appeals going to the national Planning Board. Planning Permission is valid for five years from the date of decision.

Fire Officer approval is required. Irish Standard Specifications are published in relation to building materials, and British Standards are quoted regularly. The Department of Environment issues the Building Regulations. A voluntary code of practice, "Tendering and Contractual Practice Notes" published by the Liaison Committee for the Building Industry, while not binding, sets a minimum standard for contractual procedures.

**Equipment and material availability:** Mostly available locally.

**Labour availability:** With the boom demand for skilled workers in the industry has increased sharply, with many workers returning from the UK and Germany.

**Construction cost guides (effective Autumn 1997)**

**Pricing manuals:** There are no price books published specifically for the Irish construction market. The British price books are sometimes used as a rough guide.

**Approximate construction costs:** The following are square metre unit rates, typical for the Dublin area. (They exclude land, site work, infrastructure and professional fees, and VAT).

Building type	IR£/m <sup>2</sup>
Office building, low rise, including tenant fit-out	900-1,500
Hotel, five star excluding FF&E	1,500-2,000
Apartment building	550-1,200
Industrial building	420-540
Warehouse building	370-470
Parking garage	450
Shopping mall, shell only	500-750

**Approximate regional cost variations:**

City	Index
Dublin	100
Dublin (city centre)	110
Limerick	100
Cork and other urban areas	90
Rural	80

**Useful address:**

The Royal Institute of Architects of Ireland  
8 Merrion Square, Dublin 2. Phone: (353) 1 676 1703.  
Fax: (353) 1 661 094. E-mail: infor@riai.ie



*Face to face*

# It takes one to know one



The success of Donal Friel, the Irish Director of the Dublin office of the UK's Building Design Partnership (BDP), is proof of the importance of employing an Irishman at the helm of any foreign venture in the Republic. Friel relates the story of BDP's presence in Northern Ireland since the 1960s and its expansion into the Republic of Ireland over the last decade. As one of only a few foreign firms with offices in Dublin, BDP is making its name in the commercial sector, particularly for the international retail store Marks and Spencer, and education projects in Dublin and Limerick. Interview: Nicola Turner.



The Building Design Partnership (BDP) is one of the largest firms of architects in the UK. With three offices in England, one in Scotland, one in Northern Ireland, one in the Republic of Ireland, and a developing European network of offices and alliances working worldwide under the name of BDP

International, the firm is becoming increasingly well-known in the global market place. Setting up shop in Dublin was a natural progression for a firm already enjoying success in Northern Ireland. Added to that – explains Donal Friel, Director of the Dublin office since 1996 – BDP had already worked in Limerick on the National Institute for Higher Education in the early 1960s.

“During the 1970s to the mid 1990s BDP enjoyed occasional projects in the Republic, but none of any great significance. Due to the presence of the Belfast

office, we were aware of the market in the Republic. That, and the continued link with the University of Limerick, led to a decision in the late

eighties to establish BDP in Dublin. This was done on a low-key basis initially, relying on support from the Belfast office. The office grew slowly but steadily and by early 1996 it consisted of around ten staff including M+E engineers, architects and administrators, headed by an associate architect, then because of the significant movement within the Irish economy BDP decided to recruit an architect at director level. That’s when they approached me. I think they wanted me to walk on water and turn water into wine, but I’m not sure I’ve achieved that yet!”

The staff has since grown to a total of 25 at the start of 1998. Friel is amusing in his analogy of the spurts of growth experienced by his Dublin office.

“We’re still very much in what I call the teenage stage. I suppose you could say that we’ve got to learn to hold our drink and discover how much we can take on! We’re not yet at our optimum operational size.”

He also refers to the raspberry jam theory: “You can only spread yourself so far. We are a multi-disciplinary, but there are some sectors into which we haven’t made in-roads yet, and which might be moves for the future.”

BDP is one of the most significant overseas firms to have set up in Dublin – both in size, and the quality of commissions undertaken. On an international scale even the largest firms in Dublin are small. As a Dubliner, born, bred and trained, Friel is quick to stress the importance of employing an indigenous architect at

English.” He laughs: “The saying goes: ‘Even if they hadn’t existed, the English would have had to invent the Irish in order to establish their own identity.’ Or another one is: ‘The English invented whiskey to stop Irish world domination.’”

“At both a cultural and business level the norms are a little different, and the Irish insist on them being observed. It’s a small society. The Republic is only three million people, so in fact it’s really not worthwhile for an American firm to set up here in isolation. Only if it’s a logical step as part of a more general regional expansion.”

Listening to Friel’s anecdotes about colleagues and competitors, and the inside information he has of ongoing schemes around the country, you are left in no doubt as to his rigorous

### **“To operate in the Republic you can’t afford to fall out with even one client or one contractor. Everyone knows everyone.”**

knowledge of Ireland. The construction industry, and architectural profession in particular, apparently revolve around a small and incestuous circle, and Friel gives the impression that in stepping out of line, any architect risks his own demise.

“It’s not as if by falling out with a contractor you can walk away without ever crossing paths again. To operate in the Republic you can’t afford to fall out with even one client or one contractor. Everyone knows everyone.” A cautionary tale indeed.

Does he think that the reason for BDP’s Dublin success was fuelled by its existing presence in Belfast?

“Belfast was essential for us in the circumstances, and was certainly the key to the expansion, but it wouldn’t necessarily be for everyone. In normal circumstances the route should be straight into the Republic – Dublin, after all, is twice the size of Belfast. It’s very unusual for a multi-national to open up in Dublin in isolation. It’s almost always as part of a regional expansion. Huge American firms such as HOK [Hellmuth Obata + Kassabaum] and Ellerbe Becket have come in for one-off projects, but the ‘Flying Circus’ doesn’t work. Generally speaking, it’s not that good for a country as small as Ireland, or that profitable for the visiting architects.”

As an Irishman he is bound to say that, but, given the quality of the work produced by the indigenous architects, it is hard to see why clients would see a need for employing overseas firms. And yet BDP is making a success of its venture in the Emerald

Isle. Does that mean that the firm is local or ‘foreign’? Friel confirms that BDP does not need to form partnerships with ‘local’ firms, (nor, legally, do any foreign firms –

although many find it necessary). The firm is now sufficiently well established for clients, such as Marks and Spencer and Limerick University, to return time after time, which in turn gives new clients the confidence to come forward. The Dublin office has been set up as an independent company, with the luxury of relying on the resources of its “parent” in London when necessary. Perhaps it’s a simple case of disguise. With his charm, humour and steely determination Friel has fostered a firm of Irish architects in all but name.

### **“BDP made a positive decision to formally establish itself in Dublin with an Irishman as director.”**

the head of any overseas operation in the Republic.

“BDP made a positive decision to formally establish itself in Dublin with an Irishman as director. Although practice in Ireland is very similar to the UK 95 percent of the time, there is at least a five percent differential which will trip you up very badly if you are not aware of it. This extends to cultural differences, however small. For example, to us ‘the mainland’ is Europe. If you refer to England as the mainland, you’ll be shot! I suppose we’re all overly conscious of our identity, even the



## *New buildings in Ireland*

# Down on the docks



The Custom House Docks in Dublin used to be lined with brick-vaulted bonded warehouses. Frank McDonald relates their transformation over the past decade into a highly profitable tax haven – the International Financial Services Centre (IFSC). The three key buildings of the IFSC were designed by US harbourfront specialists, Benjamin Thompson and Associates, in partnership with Irish architects Burke-Kennedy Doyle & Partners. Since these green-tinted glass blocks were completed in the early 1990s, the Dublin firm has continued alone, designing several other office blocks along Harbourmaster Place and George's Dock, Numbers five and six of which are in the final stages of completion. But although Dublin's highest-profile commercial development has been a huge financial success, it has yet to live up to the initial promises of providing "an exciting people place".





Keith Collie

reflecting the best of its urban heritage as well as looking confidently to the future by transforming the relationship between Dublin and its riverfront. A State agency, the Custom House Docks Development Authority, was set up with a mandate to secure its renewal, aided by a package of tax incentives designed to attract private sector developers. It was also required to produce a planning scheme for the site, taking it into the realm of an enterprise zone outside the normal planning process.

Drafted by architect Sean O' Laoire, this scheme set down fairly loose parameters for the development of the 27-acre site, stressing that it should become a lively new quarter. Behind the scenes, Ireland's most mercurial financier, Dermot Desmond, who had the ear of Charles J Haughey, the then *Taoiseach* (prime minister), floated the idea of developing it as an international financial services centre. Haughey, now in disgrace after being exposed for taking US\$1.8 million (IR£1.3 million) from another leading businessman, bought it.

#### The developers and their dream team

After the Custom House Docks had been elevated to this new plane, the development authority – CHDDA or *Cha-da*, as it became known – invited tenders from developers to undertake the US\$435 million (IR£300 million) project. There was widespread interest in this development package competition, not just from Irish firms but also from Britain and the USA.

The eventual winner, beating off competition from the likes of London-based Taylor Woodrow and O'Connell Developments, of Boston, was a consortium comprising British Land and two long-established Irish property firms – Hardwicke and McNerney – with Boston architects Benjamin Thompson and Associates and their local partners, Burke-Kennedy Doyle. Almost alone among the eight entries, the winning team fulfilled the requirements of the planning scheme by providing a broad mix of uses on the site – not just office blocks for the IFSC – in a way that respected the scale and grain of Dublin, according to the adjudicators. It also scored highly in terms of “deliverability”, because of the financial muscle behind it.

The initial concept, which bore the imprint of Thompson's work on harbourfront developments in Boston and Baltimore, promised a very lively scheme. Apart from the IFSC, designed to the high specifications of “third generation” office space, it included a whole range of other facilities, with something of the atmosphere of a carnival fairground.

It was to be developed, as the winning consortium's brochure said, “with style, flair and imagination” as an “exciting people place”, “lively by day, luminous by night”. Unveiled in November 1987, the package included such attractions as a yacht marina, canoe club, sculpture park, open-air market, museum of folk art, riverside park, bandstand pavilion, fountain plaza, hotel, conference centre and winter garden as well as bars, restaurants, cinemas and nightclubs – most of which have not materialised.

#### More work, less play

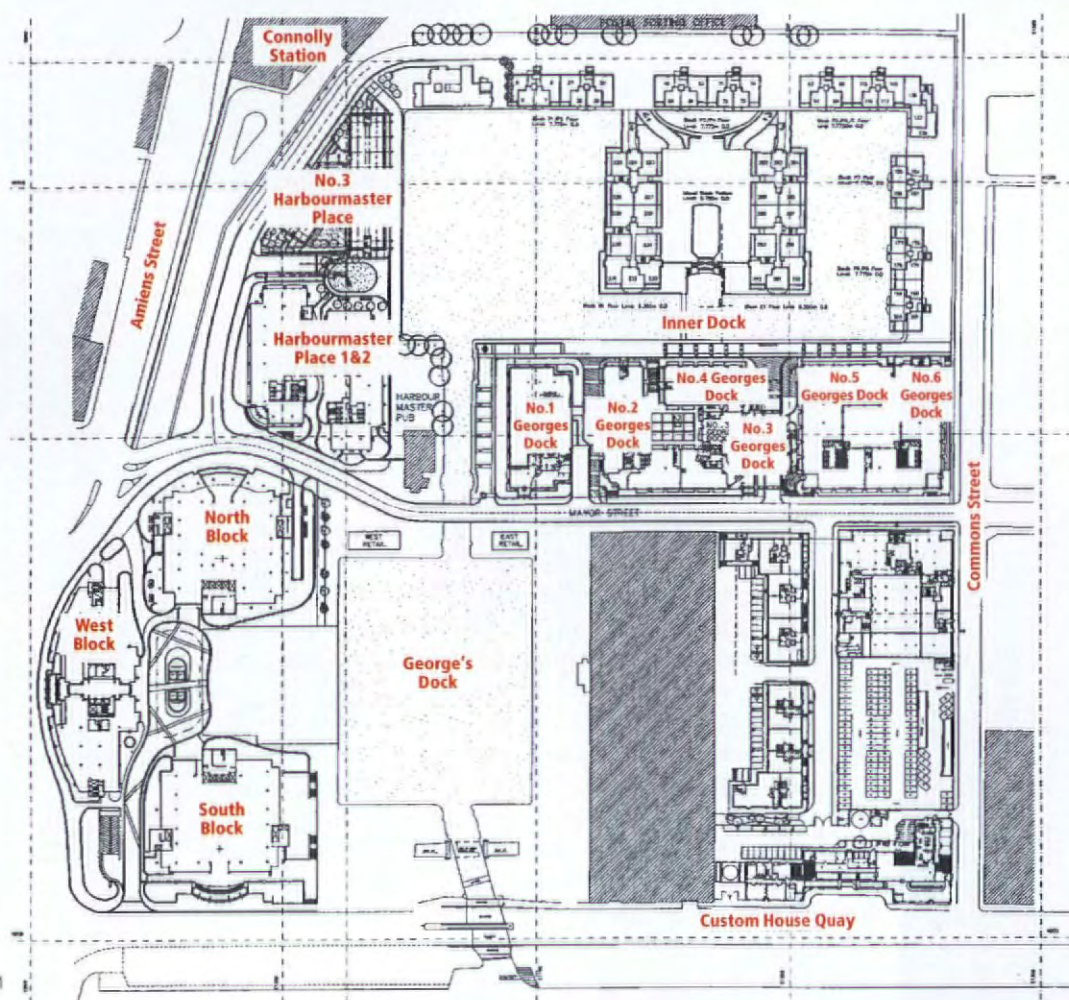
Perhaps not surprisingly, given the onset of recession not long after building work started in 1989, the developers concentrated on the safer, more profitable elements of the scheme – particularly the office space. By that stage, McNerneys had dropped out, leaving Hardwicke and British Land to carry out the development on a 50/50 basis.

1: West block of the IFSC, by Benjamin Thompson and Associates, and Burke-Kennedy Doyle & Partners

**T**he 27-acre Custom House Docks site was not exactly crying out for redevelopment when the Irish government, anxious to find a “flagship project”, designated it for a strong dose of urban renewal in 1986. At that stage, nobody envisaged that it would be developed as Dublin's International Financial Services Centre (IFSC). The site had two stone-walled waterbodies, George's Dock and the Inner Dock, containing seven acres of water, built after the adjoining Custom House was completed by the English-born architect, James Gandon, in 1791. It also had a number of large, low-slung warehouses with brick-vaulted basements stretching as far as the eye could see.

At the time, it was the largest single parcel of inner-city land to come up for redevelopment in Dublin for a century or more. The aim was to “set a standard” for the renewal of the city in general,





#### Key to North block elevations showing glazing system ►

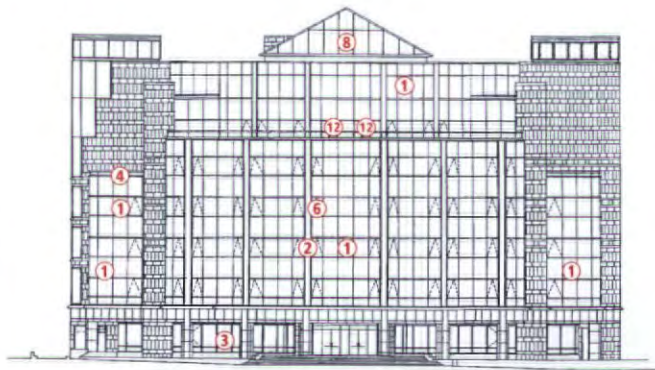
1. Aluminium curtain wall system above ground floor
2. Glazing to columns
3. Aluminium curtain wall, ground floor
4. Curtain wall parapet with circular aluminium railing
5. Opening windows, ground floor
6. Opening windows, curtain wall
7. Aluminium curtain wall to stair towers
8. Atrium roof glazing
9. Glazed plantroom cladding system
10. Louvred plantroom cladding system
11. Selected stone cladding
12. Doors to terraces
13. Cladding screens to plantroom

1: Site plan

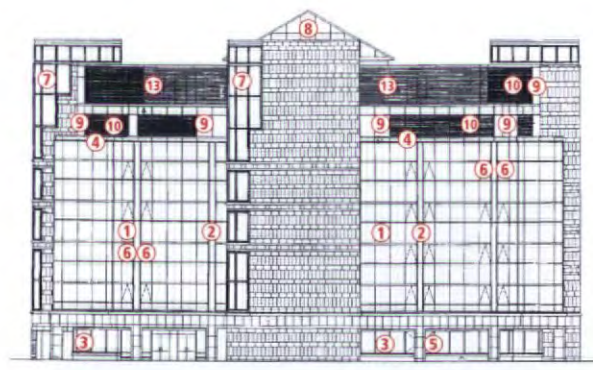
2: Two of the three main glass blocks of the IFSC; North block (in the foreground) and South block



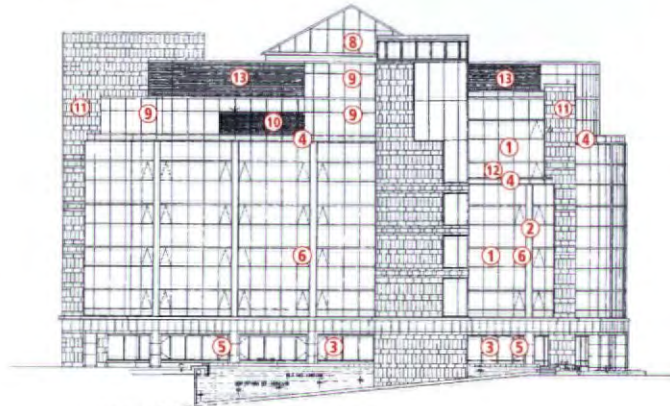




North elevation of North block



South elevation



East elevation



West elevation

They had the benefit of an exclusive contract with the CHDDA, fostering a symbiotic relationship which lasted for seven years; the authority was providing the land as equity and needed the Hardwicke/ British Land consortium to develop it, if there were to be any chance of seeing some profit from the still-secret 1988 "master project agreement".

It is believed that this agreement was "front-end loaded" – in other words, the developers stood to gain more from earlier phases of the scheme with the CHDDA's proportion of the overall "take" rising as later phases were developed. And the developers' profit was sizeable, given the initial high rental level of US\$40 (IRE27.50) per square foot set for IFSC office space.

#### The occupants – domestic and international

The two largest Irish banking groups, Bank of Ireland and Allied Irish Banks (AIB), were the first investors in the IFSC, each of them acquiring one of the three blocks in the initial phase along Memorial Road, between the late-eighteenth century Custom House and Dublin's first major modern building, Michael Scott's *Busaras* (bus station), built in 1952.

This vote of confidence, albeit by domestic investors, was sufficient to get the IFSC off the ground. Foreign financial institutions were slower to show an interest but, after they woke up to the tax advantages Dublin had to offer, they came in like a flood – including such names as Barclays, Citicorp, Chase Manhattan, Daiwa and Dresdner Bank.

Selling the IFSC concept was critical to its success. Visiting bankers and other potential investors were given glowing audio-visual presentations, while a three-man team of senior officials toured the world scouting for the right kind of business.

By the end of 1991, around 46,450 square metres of office space had been built on the Custom House Docks site for the 170-plus projects licensed by the Government to trade in the IFSC. Since then, the number of approved projects has soared to

nearly 500 – many of them, admittedly, little more than "brass plate" operations employing a handful of staff.

#### The architecture

The IFSC's showpiece is a complex of three office buildings, the North, South and West blocks, by Benjamin Thompson and Associates and Burke-Kennedy Doyle on the western side of the site, providing a total of 33,444 square metres of high-quality office accommodation, partly open-plan, with raised floors and suspended ceilings. In two blocks the offices are arranged around full-height atriums, giving an added sense of space.

Green-tinted glass and aluminium curtain walls, made in Belgium by Chamebel, appear to float over a columnar base of imported York stone in the five-storey west block, the first to be completed in 1990. Irish limestone was used for the north and south blocks, both of them a floor higher, with the same patent glazing for their curtain walls.

The structure is a reinforced concrete waffle slab and column system with a 1.5 metre planning module, which also generates the vertical curtain wall grid. Floor-to-floor heights are 4.2 metres, with clearances of 2.725 metres on the upper floors. Ove Arup and Partners, who have had an office in Dublin for many years, were the consultant engineers.

Currently being completed are Numbers 5 and 6 George's Dock, which provide six floors of office space for Banque Natinale de Paris and Statoil, laid out around a landscaped courtyard. Walls are clad in a "Commercial Red" clay brick, with green-tinted solar control glazing, bris-soleil and a pair of tall, south-facing "Planar" glazed entrances framed in York stone.

#### Recent developments

As the development programme progressed, specifications were reduced to brick cladding and 3.6 metre floor-to-floor heights for a further ten office blocks at Harbourmaster Place, ➤



George's Dock and Exchange Place. These buildings provided an additional 19,695 square metres, 28,148 square metres and 6,410 square metres respectively.

One of the more recent dock warehouses was also converted into an exchange facility, providing 1,393 square metres of space for clients involved in international futures markets. The Stack B warehouse, built around 1820, was sensitively converted and extended to provide further corporate office space, by Dublin architects deBlacam and Meagher.

Unfortunately, the disposition of the structural grid for the IFSC did not permit the spectacular vaults of Stack C to be retained. The warehouse and its vaults were demolished, in what conservationists saw as a betrayal of the 1986 planning scheme. Part of the vaults was later rebuilt, but with the brick-work perforated by concrete columns.

Another major crisis hit the Custom House Docks in 1990 when Frank Benson, then executive chairman of CHDDA, was forced to resign after losing a vote on the issue of whether to go ahead with a fourth block at the edge of George's Dock. Benson favoured this "centre block", but other directors were strongly opposed to it, for a variety of reasons.

By that stage, the development had entered a hiatus because of the continuing recession. Benjamin Thompson, who had played a crucial role in masterplanning the site for the winning consortium, gradually faded out of the picture, leaving Burke-Kennedy Doyle to do the bulk of the design work after the initial three glass blocks had been completed. Blocks 5 and 6 of George's Dock are in the final stages of completion.

All of the major Irish contractors have been involved in building elements of the scheme – Crampton, Sisk, Pierse, Hegarty and Walls. Another contractor, McNamara, built 333 apartments in and around the Inner Dock, and this helped to

inject some life into the area. A 235-bedroom budget hotel followed, on the River Liffey frontage.

The small retail element, totalling 303 square metres, consists of a couple of shops and restaurants. There is also a Boston-style bar in the former Dock Offices, a small mid-nineteenth century building next to a bridge spanning the water between the inner and outer dock basins. Multi-storey and underground car parking has also been provided on the site.

#### In the future

Meanwhile, the exclusive arrangement between CHDDA and the Hardwicke/British Land consortium was broken in 1994 when another developer, Brian Rhatigan, bought the former main postal sorting office on Sheriff Street – at the rear of the Custom House Docks site – and, against the odds, managed to win approval to redevelop it. Designed with some flair by the Dublin firm, Anthony Reddy Associates, Custom House Plaza – as the Rhatigan scheme is called – was hollowed out of the old sorting office. It provides 20,438 square metres of office space in six blocks, arranged on both sides of a longitudinal atrium, two and a half storeys high, which extends to nearly 150 metres.

The next phase of the development will extend the IFSC into an adjoining 12-acre site, with a frontage on the Liffey between the Custom House Docks and Spencer Dock, where the Royal Canal enters the river. This will provide a further 46,450 square metres of space for IFSC companies not already accommodated on the original site. The only joker card in the pack is Dermot Desmond's hugely-ambitious "eco-sphere" project, which would involve building an irregularly-shaped glass structure – rising to the equivalent of 20 storeys – in George's Dock and populating it with exotic wildlife to create a major tourist attraction. It is most unlikely to win approval, however.



1: The IFSC from over the river with the West block on the left, North block on the right

2: View from Mayor Street of Numbers 5 and 6 George's Dock, by Burke-Kennedy Doyle, currently nearing completion

3: Detail of the main entrance of Number 4 George's Dock

4: Ground floor plan of Numbers 5 and 6 George's Dock

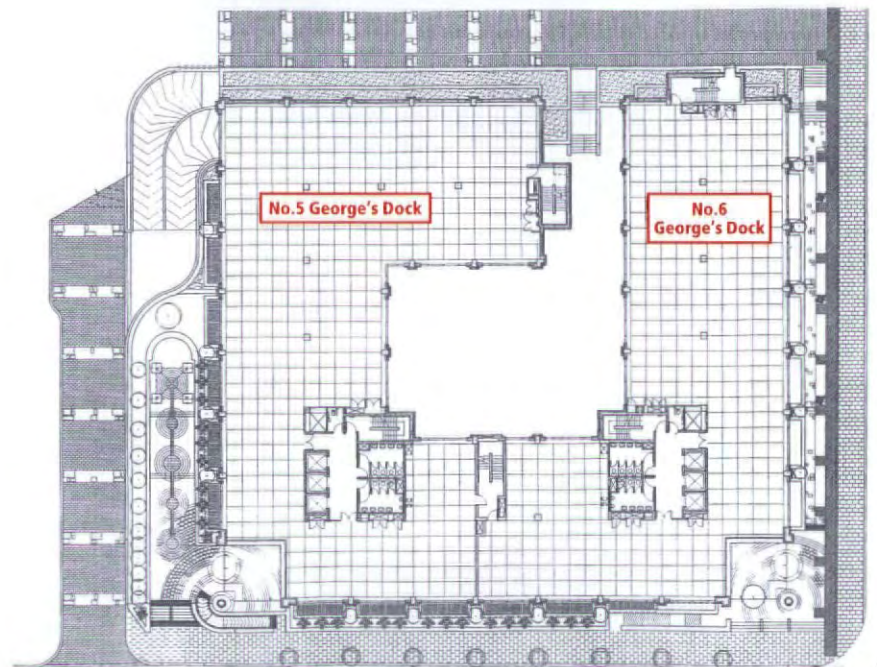




## Appraisal

There can be no doubt that the IFSC is a roaring success, at least in financial terms, with the companies trading under its umbrella now returning an estimated US\$580 million (IR£400 million) to the Irish Exchequer, at a ten percent tax rate. However, a high proportion of the space is taken up by firms relocating from other parts of the city centre, causing a degree of dislocation in the Dublin office market, and it has had only a minimal impact on the immediate area, in terms of spin-off urban renewal.

Surrounded by a "ring fence", both fiscal and physical, the IFSC stands apart from the rest of the north inner city. The campus-style layout is reminiscent of an upmarket business park, rendering it quite an alien element of Dublin's urban structure. As yet, it is far from the "exciting people place" promised in 1987. Had its Stack A warehouse been used to house the Irish Museum of Modern Art, as envisaged, this might have provided an anchor for other leisure-based activities. There can be no doubt, however, that the IFSC has been developed to a high architectural standard; its power-dressed form and shimmering glazed curtain walls constitute the most potent symbol of Ireland's "Celtic Tiger" economy.



### Clients

**Custom House Docks Development Company Limited**

### Architects

**Burke-Kennedy Doyle & Partners**

### Project managers

**Hardwicke Project Managers**

### Structural & services engineers

**Ove Arup & Partners**

### Quantity surveyors

**Bruce Shaw Partnership**

### Main contractors

**G&T Crampton Limited**

**PJ Hegarty & Son**

**PJ Walls Limited**

**John Sisk & Son Limited**

**Pierse Contracting Limited**

**Michael McNamara & Company**

### Major sub-contractors

**Chamebel, Belgium; Alucraft Limited; Architectural Aluminium; Capital Stone International Limited; Cableplan Limited; Firebourne Engineering Limited; General Woodworking Company; Gem Construction; H&E Costello Roofing Limited; Otis Ireland; Schindler; Stone Developments; Tim Hayes Carpets Limited; Sean Kelly Tiles; Feely Stone; SAP Landscaping Limited; Kirby Electrical Limited; Mercury Engineering; HA O'Neill Limited; T Bourke & Company Limited**



Architects

**Masterplan: Group 91/ Gallery of Photography: O'Donnell + Tuomey**

Reviewed by

**Hugh Campbell**

# Clear vision

## Temple Bar and the Gallery of Photography, Dublin

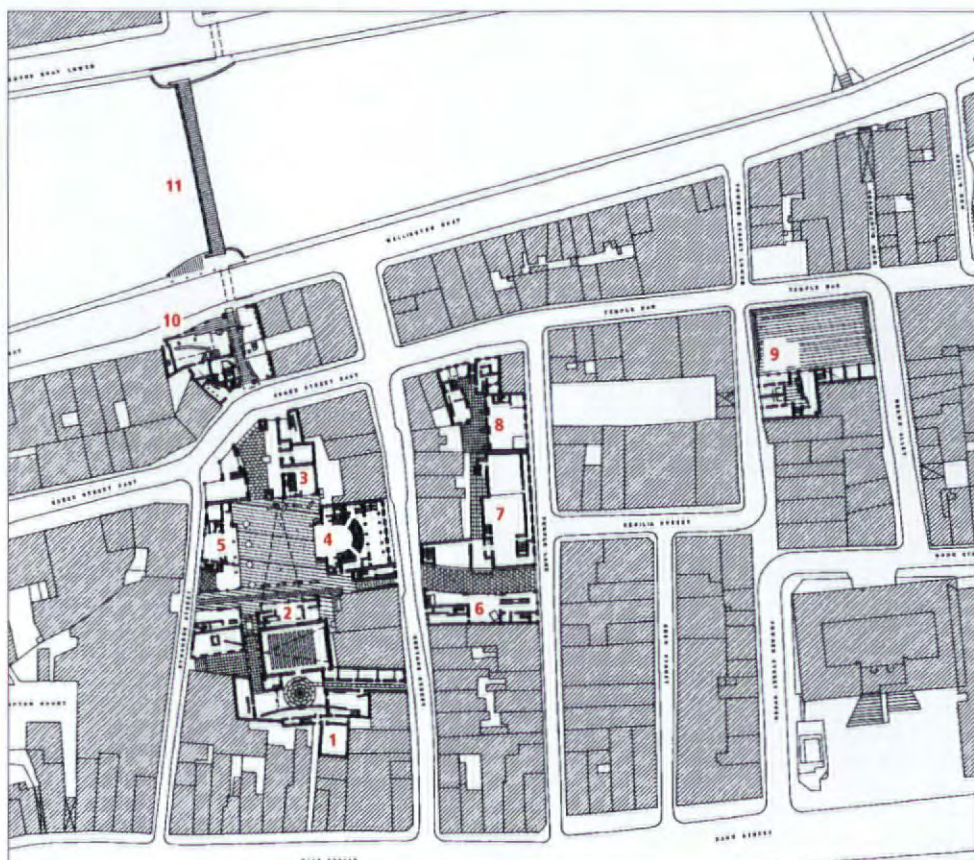


**S**ince 1991, Dublin's Temple Bar quarter has been the focus of an intensive and innovative urban regeneration project which is now practically complete. Eight local practices – known collectively as Group 91 – have been implementing their masterplan for the redevelopment of the area. Through a series of additions and interventions, the project seeks to maintain and nurture the bohemian culture which emerged while the area was threatened with imminent demolition to accommodate a vast new bus-station. The work is being overseen by Temple Bar Properties, a government-owned company with powers to acquire and manage properties and to attract the EU funding which has facilitated much of the development.

A new east-west pedestrian route punctuated by two new squares forms the spine of the Group 91 project. While on Temple Bar Square existing facades frame a single new elevation, Meeting House Square has new buildings on all four sides. The popular new Eden restaurant faces the Ark's dramatic theatre proscenium across the square, whose other two sides are occupied by a pair of buildings by O'Donnell and Tuomey – the Photographic Archive and the Gallery of Photography. The connection between this pair is made explicit when films are projected from the Archive onto

### Key to site plan

1. Irish Film Centre and Archive (O'Donnell & Tuomey, 1987-92)
2. Gallery of Photography (O'Donnell & Tuomey, 1996)
3. National Photography Archive and School (O'Donnell & Tuomey, 1996)
4. The Ark Children's Centre (O'Toole & Kelly, 1995)
5. Gaiety School of Acting (Paul Keogh Architects, 1996)
6. Eden Restaurant (Tom de Paor Architects, 1997)
7. Art House multimedia centre (Shay Cleary Architects, 1995)
8. Music Centre (McCullough Mulvin Architects, 1996)
9. The Printworks Apartments (Derek Tynan, 1994)
10. Temple Bar Square (Grafton Architects, 1996)
11. Proposed mixed-use building
11. Proposed Liffey bridge

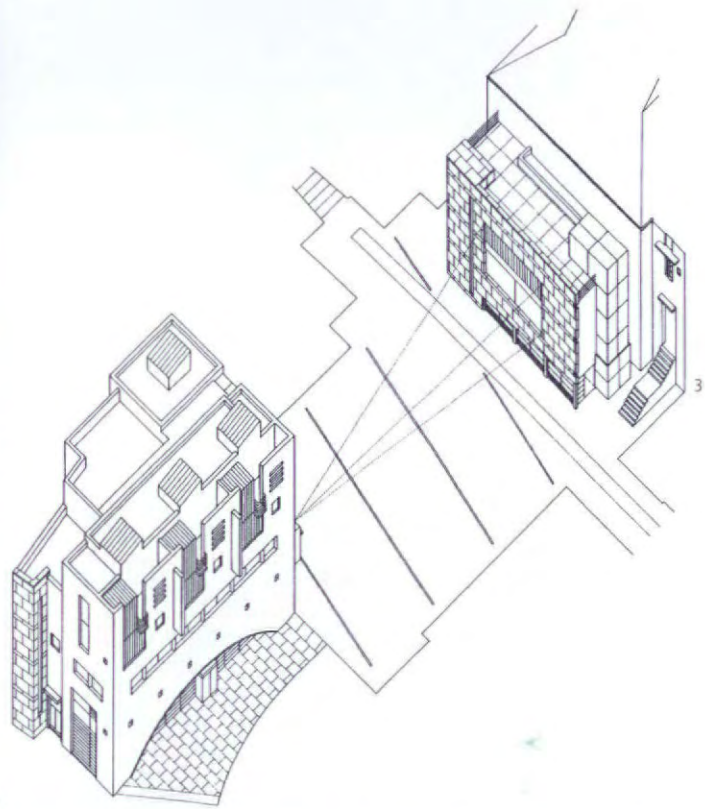






Hélène Binet

2



Bill Hastings

- 1: Beyond the entrance to Meeting House Square is a long building housing The Gaiety School of Acting by Paul Keogh Architects, on the upper floors, and the new Eden Restaurant below, by de Paor Architects
- 2: Detail of O'Donnell + Tuomey's Gallery of Photography
- 3: Axonometric showing the Archive from which films can be projected onto the facade of the Gallery of Photography (both O'Donnell + Tuomey)
- 4: Meeting House Square has new buildings on all four sides: the pair by O'Donnell + Tuomey; the School of Acting and the Eden Restaurant, and the Ark Children's Centre, by O'Toole & Kelly, shown here

4

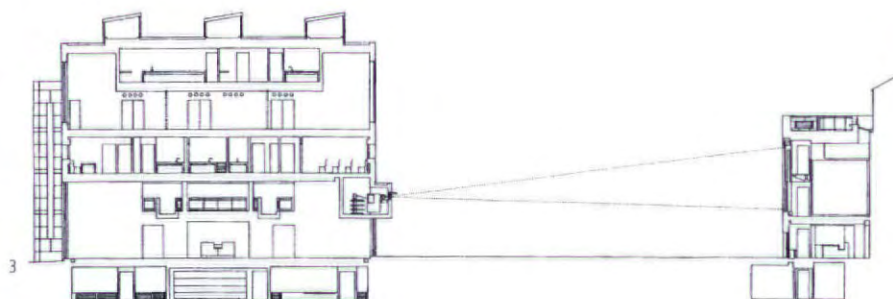








▲ ▼ Hélène Binet



▶ the facade of the Gallery at regular outdoor screenings.

The Gallery of Photography is, appropriately, attached to the wall of the Irish Film Centre's main cinema, its spaces tucked between this wall and the Portland stone front which it presents to the square. From across the square the composition of stone, render, zinc and glass reads as a collage mounted on the wall of the film centre, the building's depth revealed solely, but powerfully, by the principal opening which allows a view into the main exhibition space. The room is framed and displayed to the square, like a safe in a wall.

This large, double-height room is the building's greatest asset. An even north light floods in from the square, while its rear wall is washed by light from above. After being folded out of the square and up a staircase, the sudden opening of a view reconnects visitors with the outside space. Furthermore the room allows the full extent of the building – its height and depth – to be gauged. Overhead a narrow steel walkway spans the main gallery and connects to a small seminar and exhibition room which looks back down into the double-height space. There is a dynamic interaction between the larger and smaller volumes.

This is a building which slowly reveals itself, its mask-like exterior yielding to an interior world which has been painstakingly invested with character and incident. While some

elements are small-scale and finely crafted, other pieces, like the staircase, have a robust, industrial quality. The conjunction of the two gives the building an ambiguous presence: sometimes it seems much bigger than its true size, at other times it feels reassuringly intimate. Like its main sources – Villa Müller, Maison la Roche, Maison de Verre, the John Soane Museum – it combines compactness and expansiveness, domesticity and display. Rather than a gallery, it feels like a private house, filled with photographs and opened to the public.

*Hugh Campbell is an architect and writer, currently teaching at University College Dublin.*

*Credits for the Gallery of Photography*

Client

**Temple Bar Properties**

Architects

**O'Donnell + Tuomey/Group 91**

Structural engineers

**Muir Associates**

Services

**J V Tierney**

Quantity surveyor

**Bruce Shaw Partnership**

1: The double-height exhibition space in the Gallery of Photography

2: The Gallery's facade of Portland stone through which the main exhibition space can be viewed like a safe in a wall

3: Section showing the Archive (left) and Gallery (right)

4: The entrance to Meeting House Square, O'Donnell+Tuomey, with the red-brick Archive in the foreground



Architects  
**Murray O'Laoire**  
 Reviewed by  
**John Barrett**

# Constant high

*Urban regeneration projects 1990-98, Limerick*

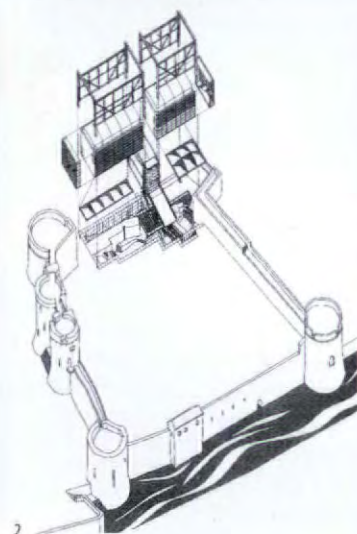
Eamon O'Mahony



**L**imerick in the early 1980s could best be described as stagnant. The public perception was one of vast dereliction, a two dimensional "one street town" which had turned its back to the vastness of the magnificent River Shannon. The Urban Renewal Act 1986 provided tax relief for new development in prescribed derelict areas of inner cities and this sparked a new focus on urban regeneration, especially in Limerick, which enjoyed particularly strong public leadership and the full support of the local Regional Development Agency (Shannon Development).

The city also benefited from a strong body of young professionals including the emerging – and now well established – firm of architects, Murray O'Laoire. The firm was commissioned by the Local Authority to undertake a study of the quay frontage which for all its potential was largely made up of disused warehouses and car parking, reflecting its evaporated shipping history.

An early flagship project was the old Arthur's Quay which had been partially filled in to operate as a public car park. Murray O'Laoire was commissioned to develop its proposal to create a public park in this central location, and a joint entrance gateway/tourist office project was conceived in tandem with the



2



3

Arc Photography





**1:** The first of two phases of a US\$32 million development for the Regional Hospital Limerick, was completed last year. Phase 2 is due for completion in 1999

**2:** Exploded drawing showing the insertion of the suspended bridge at King John's Castle

**3:** King John's Castle restoration and Interpretative Centre; one of Murray O'Laoire's most dramatic designs for Limerick

**4:** Interior detail of Limerick Regional Technical College

**5:** Exterior detail of the Library and Information Services Building at the University of Limerick, currently under construction



redevelopment. The design departs from a traditional Irish approach to the built environment, with buildings that are light – rather than more predictably fortress-like. The scheme was an immediate public success, and its architecture awarded with the RIAI gold medal. The public location of the scheme contributed to accelerating the urban regeneration of the city.

Murray O'Laoire has continued to produce a range of buildings of a very high architectural quality in the city since then, from sensitive refurbishment projects like the brave reconstruction of the Old Milk Market, to highly sophisticated office developments, and large education projects at the Regional Technical College, and the library at the University – now under construction. The current economic boom has seen the expansion of healthcare facilities and Murray O'Laoire is currently undertaking a major expansion of the Limerick Regional hospital.

These are just part of a significant body of work which has changed the shape and public perception of Limerick, but perhaps the building which created the greatest public response was the Interpretative Centre in King John's Castle, one of Ireland's finest Norman Castles. A number of its enclosing walls had been demolished and 20 local authority houses constructed in the courtyard.

The architects' response respects the integrity of what was left of the original building, and of the archaeological remnants of even earlier buildings, by inserting a lightweight suspended bridge structure which houses an AV theatre, two floors of exhibition space and orientation areas. The ephemeral light steel structure shocked the public, but has since been positively received.

Limerick has changed dramatically in these last ten years and the energy, vitality and freshness which Murray O'Laoire and its contemporaries have contributed is evidence of a revitalised city and a statement that things have changed in Limerick. **WA**

*Jim Barrett, now Dublin City Architect, was Senior Architect to the Limerick Corporation from 1984-94, and from 1986-94 was part of the City's Urban Renewal Team.*

King John's Castle restoration and Interpretative Centre

**Shannon Free Airport Development Co Ltd; US\$3.5 million; 1991**

Limerick Regional Hospital

**Mid Western Health Board; US\$16 million (phase 1); completed 1997**

Limerick Regional Technical College

**LRTC; value to date US\$23 million; phase 1 and 2 (of 3) completed 1997**

Library and Information Services Building, University of Limerick

**University of Limerick; US\$20 million; completion due early 1998**



Architects  
Office of Public Works  
Reviewed by  
Katherine MacInnes



## Island life

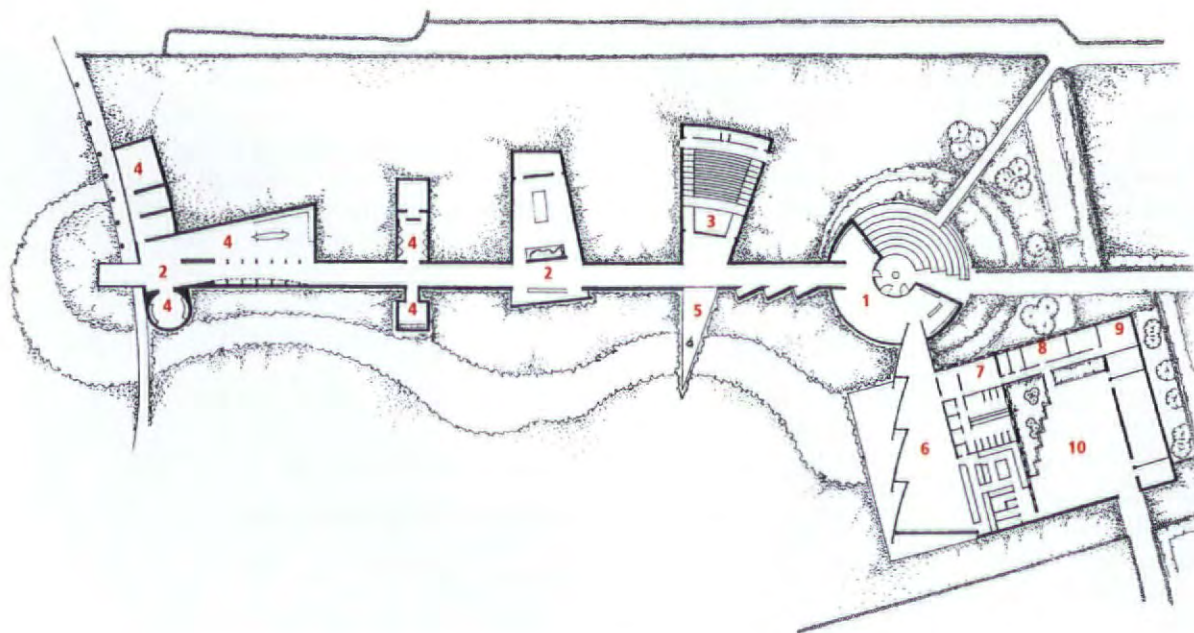
### Blasket Centre, Dingle Peninsular, Ireland

Life on the Blaskets alternated between survival and literature – a famous tradition based on the islanders’ “Homeric” story-telling powers and the efforts of Robin Flowers to record them for posterity. The Blasket Centre was built on the peninsular opposite the islands, in memory of the Blasket Community, after a local Irishman working in the USA in 1986 saw the Islands – now uninhabited – for sale in *The Wall Street Journal*. It is a spare space with white walls, cool watery light and endless sight lines extending out across the ocean. The private funding raised by the Blasket Foundation both to secure National Park status for one of the islands and to fund the Centre, was supplemented by a European Community grant. From the results of no less than 43 meetings with the community and impartial research into the Blasket tradition, the Office of Public Works architect Ciarán O’Connor produced a building that prompted two of the surviving Islanders to ask him if they could be buried in it. The *trompe d’oeil* effect created by the flared section of the Slí (corridor – see below) seems to draw the islands closer. O’Connor first visited the islands 20 years ago with a copy of Robin Flowers’ *The Western Isle* in one pocket and a translation of *The Irish Tradition* in the other. In this building he has done justice to both.

WA



1



#### Key to site plan

1. Entrance foyer
2. The Slí
3. Audio-visual theatre
4. Exhibition space
5. Sculpture
6. Restaurant
7. Community room
8. Offices
9. Archive
10. Courtyard





1: View showing the slate roof of the Sli as it joins the disparate building elements

2: South elevation and plan showing exhibition halls on one axis and the community rooms on the other

3: Statue of Tomás Ó Criomhthain, one of the authors from the Blasket's famous literary tradition

4: Interior of the Sli culminating in a window looking out over the Blasket Islands to the west

5: View of the north elevation showing how easily the building fits into the landscape



Client

**The Blasket Foundation**

Engineers

**Malachy Walsh & Partners**

Quantity surveyors

**John J Casey & Co**

Mechanical and electrical engineers

**P Womey Associates with M Buckley Associates**

Main contractor

**Murnane & O'Shea Ltd**



# Gilroy McMahon Architects: rising to the Irish challenge

In a country the size of Ireland architects might be expected to seek work overseas in order to supplement their income and expand their horizons. But such is the effect of the economic boom, centred on Dublin, that most firms are finding that there is more than enough work, of international standard, to be done at home. This is the case for Gilroy McMahon Architects, which has been responsible for some of Ireland's most significant projects in the last decade, including the magnificent Croke Park stadium. Nicola Turner profiles the firm's work in the 1990s.





Detail of the cantilevered canopy over the first completed stand at Croke Park, one of the largest projects under way in Ireland



John Scobie



**T**he Dublin firm of Gilroy McMahon is probably “the most respected firm of architects in Ireland,” according to Frank MacDonald, *The Irish Times* journalist who is credited with putting architecture and the environment onto the Irish political and business agenda since the late 1980s. Such accolades don’t come cheap from MacDonald, and the partners of Gilroy McMahon have had their run-ins with the journalist, despite his high regard for their work.

Gilroy McMahon was formed in 1972 by Des McMahon and John Gilroy. The partnership was to be short-lived; soon after their first competition Gilroy was killed in a car crash.

McMahon chose to keep the name and has since presided over the firm with Colman O’Donaghue, a partner for the last ten years. The practice occupies one house in a Georgian terrace in

Rathmines, Dublin, belying the innovative architecture designed within. But the building is appropriate given Gilroy McMahon’s respect for Irish culture and history, and the walls are papered with award-winning designs of some of Ireland’s most significant projects of the last decade.

Despite being a firm of only 25 Gilroy McMahon has its fingers in many pies, from office building to stadium design; museum renovation to public offices – and each project is approached as the first. “The huge advantage of working in a small economy is that you can neither afford, nor be allowed, to specialise in one building type.” The relatively small scale of the operation allows for the hands-on approach of the partners and, as they explain, by Irish standards they are bordering on the “large”; the majority of practices operate with fewer than ten architects. And Gilroy McMahon is still expanding. As ex-patriot architects flee, or are pushed, from Asian countries in the shadow of the current financial crisis, most Irish firms are still recruiting to allow for the increased volume of work brought in with the boom. “In the last fortnight we have interviewed three architects from overseas.”

In a round-table discussion (McMahon is keen to promote a democratic approach to all aspects of office life), the architects confirm that they are now at a size where they are equipped to qualify for projects with European Union funding, all of which demand the requisite professional indemnity insurance and experience. But it has also been necessary to secure alternative patronage and work the competition system.

“The competition system in Ireland is extensive, but expensive. We’ve done seven in the last three or four years, and

won one for the civic offices in Tallagh, and been the runners up in most of the others. It’s excellent for publicising our work, whatever the results, and it gives us opportunities to reassess the direction of the practice, by putting ideas down on paper.”

Des McMahon is a larger than life character with a shock of white hair lending him the air of a mad professor. But he is a far cry from this distracted caricature, and talks with clarity and insight about his firm’s work. You get the impression that it is his energy and dynamism that propels such a volume of high-quality work through the office. Originally from Northern Ireland, McMahon studied and taught art in Belfast

**“You have to go out and lock horns with society, even if it’s not prepared to play. You don’t get away with remaining untested.”**

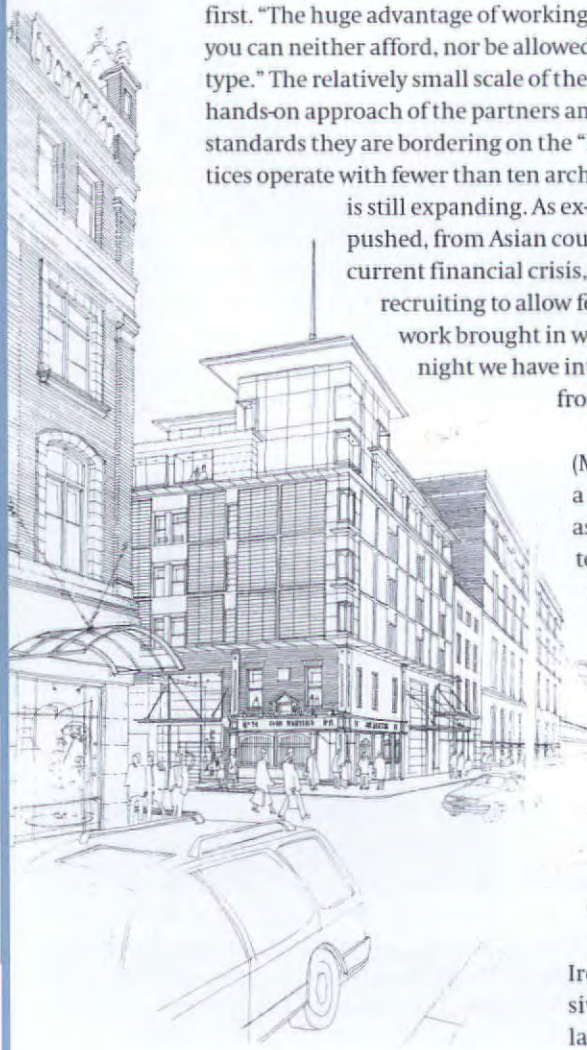
before recognising architecture as “an agency for cultural change where form is absolutely subordinate to the more social and environmental requirements” of a scheme. The challenge of architecture, as he sees it, is that “you have to go out and lock horns with society, even if it’s not prepared to play. You don’t get away with remaining untested ...” Architecture, unlike art, he believes, is a business; a discipline which requires intense public interaction and commercial understanding in order to make a success of it. McMahon rails against the “isms” which pepper architectural academia: “Architecture has to have a liturgy – form and movement, dynamics and statics...” regardless of whichever “ism” it incidentally belongs to.

The quality and quantity of work throughout Ireland, but particularly in Dublin, is inextricably linked with the new prosperity of the country, its membership within the European Union, and most importantly, a new understanding of both public and private bodies regarding the development of Dublin as a coherently designed urban centre.

“Dublin used to have a rural population which didn’t understand the city, and which was destroying it. All this has now changed and urbanisation is on the way. The new aspiration is to own your own home, and apartments have become fashionable like never before.” The wealthier families used to live in the suburbs or the larger town houses in the centre of Dublin. Apartment living was never considered an option. Now the tables have turned and the city is “largely building apartments, and the housing market now has a problem with supply and demand. In 1997, 15,000 *émigrés* returned to Ireland. The emigration trend has reversed and skilled professionals are coming home.” The downside to the trend is that, although Ireland is still enjoying a boom, “in a country this size it only takes a small amount of movement to create a crisis and reflect prices across the board”.

Gilroy McMahon has benefited enormously from the boom in housing requirements. The Isoldes Tower development on Essex Quay, incorporating apartments and retail, has been hailed both an architectural and commercial success, and the client, Temple Bar Properties, has rewarded the firm with similar commissions along the quays. It is typical of Gilroy McMahon’s determination to buck the trend of mindless pastiche, and take risks with a brave new approach to old problems. But the architects see enormous problems within the housing market. Architects are

Design for Mary Street Hotel to go on site later this year







still not registered in Ireland, and as a result, "only about ten percent of housing is by an architect".

With rapid expansion in Dublin Gilroy McMahon does not need to expand internationally, and its most high-profile work is centred in Dublin, although there are several schemes now under way elsewhere in Ireland, including a leisure development on the Shannon River and a city centre study in Wicklow. "Any aspiration for us to move overseas would be part of a cultural expansion, not one of commercial necessity," McMahon talks about the attraction of working in both the Middle East and South-East Asia, but in an office which places so much emphasis on the anthropology of architecture and which steep itself in an intricate knowledge of national politics, economics and history, it is hard to imagine such a move ever becoming viable. McMahon

reflection of society. Perhaps it failed in this part of Europe because we weren't ready for it ... If architecture is an art at all, then it is a manifestation of society's value system, which allows you to distinguish between style and fashion. Scandinavian modernism is a style – an architecture of social democracy". Throughout many of Gilroy McMahon's major projects, including the civic offices in Tallagh and the Bolton Street College of Technology with its warm bricks and horizontal emphasis, this passion for Scandinavian modernism is apparent.

McMahon also looked abroad for inspiration for the prestigious Croke Park stadium project. He was sent to the USA and Europe (particularly Italy) for extensive research into stadium design. Americans, Hellmuth Obata Kassabaum and the UK's Lobb Partnership were involved in the consultancy stage, and

the success of the scheme owes much to the international pooling of ideas. McMahon points to the economic reasons for being sent to the USA. "There, unlike in Italy, such stadiums

Some of the key players at Gilroy McMahon. Des McMahon second row from the back, far right; Colman O'Donoghue front row, first left

## **"In a country this size it only takes a small amount of movement to create a crisis and reflect prices across the board."**

also points to the fact that "the Irish client is becoming more sophisticated. They used to find it difficult even to write a brief. It has been a huge learning curve both privately and publicly... in so many ways architecture is like politics. Society gets what it deserves." With regard to foreign practices coming into Ireland McMahon points to a "healthy absence of provincialism in public opinion. For the National Gallery competition [won by UK-based Benson and Forsyth] there were only three Irish firms out of the ten competitors ... the lack of a significant foreign presence in other cases is all just a question of logistics and economy".

This is not to say that the practice is not international in its outlook. Des McMahon has studied the architecture of Sweden and Denmark intently, believing that "only in the Netherlands and Scandinavia has modernism succeeded – where it is a true

are not publicly funded, and the buildings themselves have to generate money. Economics now demands far greater sophistication throughout sport. The 'front' of the stadium really hasn't changed since the Colosseum, but back-of-house has had to change to reflect the different commercial attitude to sport."

It is this willingness and ability to adapt to the rapid changes taking place within Ireland's economy and culture that has assured Gilroy McMahon a place amongst the best of Ireland's architects. Des McMahon recognises the importance of listening to the people, whilst promoting an international standard of architecture. "Our major generator in any project is the social requirement – social betterment. There should be no 'rule' except that." Through a combination of luck and judgement, this emphasis has proved to be a commercial winner.



## Croke Park Stadium Redevelopment, Dublin, Ireland

### Description

The redevelopment of Croke Park Stadium, home of the Gaelic Athletic Association, is one of the largest schemes currently redefining Dublin's growing skyline. The GAA consulted stadium experts, HOK and The Lobb Partnership, when devising the masterplan for the city site. Gilroy McMahon fought off competition to win the commission to develop the design of the horseshoe-shaped stadium. Phase one is now complete, and Phase two will be starting on site this month.

The resulting urban composition provides a landmark appropriate to the historical and cultural significance of Ireland's largest amateur sports organisation in an original style, evocative of the colour and vigour of the Gaelic football and hurling which it accommodates. Consideration had to be given to inserting a building of this mass into a sensitive urban environment, and to the increasingly rigorous international safety, circulation and sight-line requirements.

The design exhibits the classical virtues of tripartite division, representing the spectators, the surrounding neighbourhood, and the city skyline from the ground up. The reinforced concrete structure is humanised at concourse level, and the dramatic steel bracing provides drama and interest against the sky.

The entire scheme is scheduled for completion in 2000, making it Ireland's most significant millennium project.

### Date

**Phase one completed 1995**

### Cost

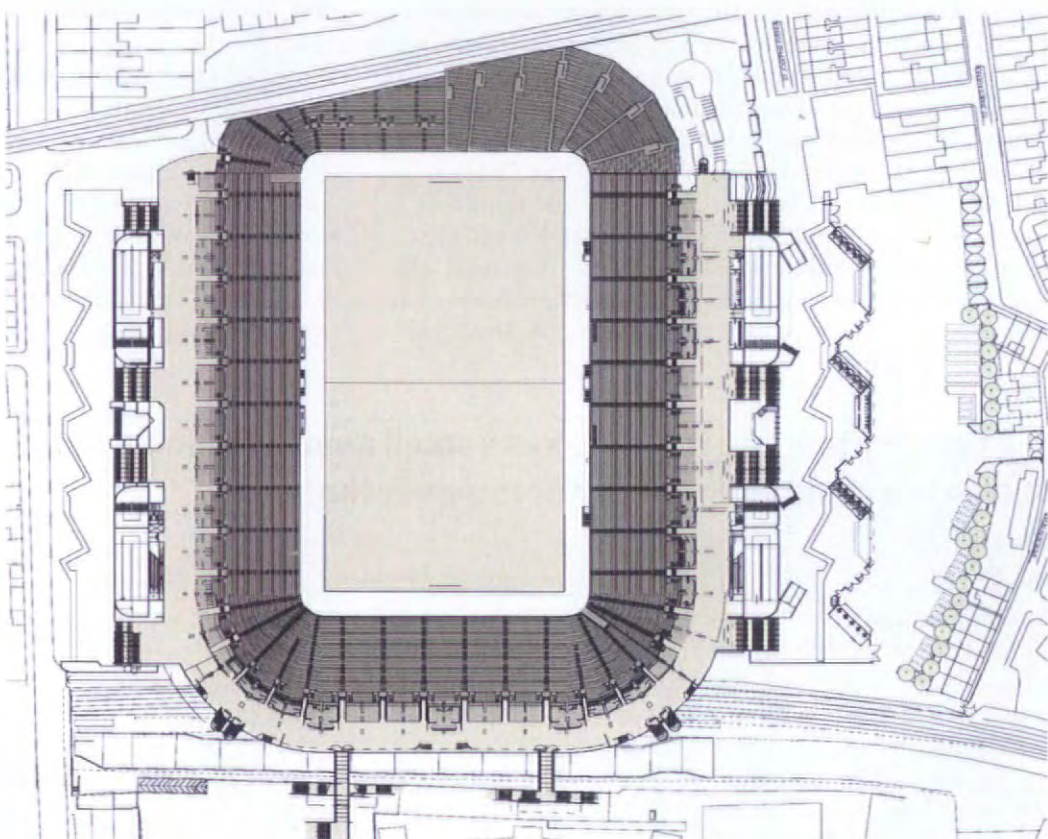
**US\$36 million (IR£25 million) Phase one**  
**US\$158 million (IR£110 million) Total project**

### Client

**Gaelic Athletic Association**

### Consultants

**Hellmuth Obata + Kassabaum; The Lobb Partnership**



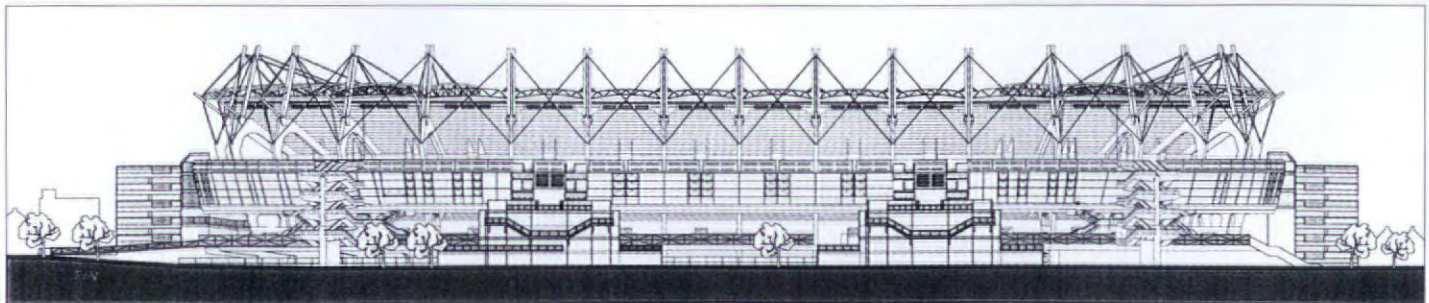


All photographs © John Soarle

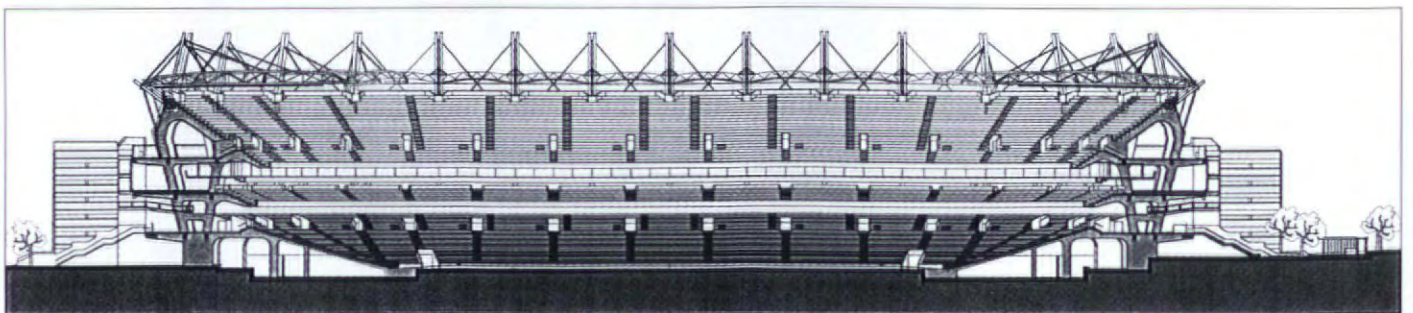
- 1: The base is articulated by a series of stairs and ramps, for the evacuation of 80,000 people within eight minutes
- 2: Site plan of horseshoe-shaped stadium in its entirety
- 3: The "middle" stand is currently the only completed section of the horseshoe
- 4: Detail of the steel suspension structure which supports the cantilevered canopy
- 5: Canal end elevation. Five tiers of seating with hospitality suites, bars and restaurants accommodated below
- 6: Sectional elevation



4



5



6



## Isolde's Tower development, Essex Quay, Dublin, Ireland

### Description

In response to a new demand for apartments in central Dublin, Temple Bar Properties commissioned Gilroy McMahon to design high-spec apartments (plus six retail units, restaurants and a pub) on the River Liffey, at Essex Quay. The scheme included existing buildings and infill. Although on a prime site, the architects had to consider the hostile environment of a busy through-road between the new building and the river, and an unpredictable climate – while still providing uninterrupted views from the rooms within.

The eccentric configuration of the design is partially due to the archeological significance of the site. A permanent archeological display of the Norman Isolde's Tower is echoed in the form of the building on the skyline. The vocabulary has been taken more from the commercial nineteenth-century buildings along the quays, with their generous windows and proportions, than the Georgian residential properties. Enclosed glazed winter gardens face the river providing light and shelter. The neighbouring "Lombardy Romanesque" nineteenth-century building, is echoed in a high level

ceramic frieze on the river frontage.

Internally, residents benefit from a continental-style flexibility of interconnected spaces providing a variety of use and a degree of grandeur.

### Date

1997

### Cost

US\$5 million (IR£3.3m)

### Client

Temple Bar Properties







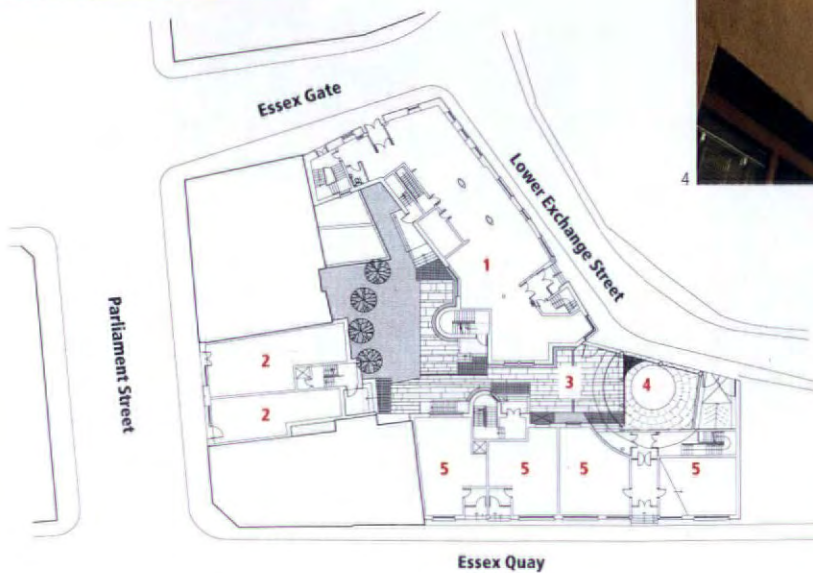
All photographs Vincent Vidal

1: View of the river elevation with retail facilities below the apartments

2: River-front elevation showing the nineteenth-century Lever building alongside

3: The Norman Isoldes Tower is echoed in the building's form

4: The apartments are approached via a sheltered courtyard



#### Key to ground floor plan

1. Public house
2. Restaurant/retail
3. Landscaped courtyard
4. Isoldes Tower
5. Retail/office



# National Museum of Ireland, Collins Barracks, Dublin, Ireland

## Description

Gilroy McMahon has been involved in the first phase of a future new National Museum for Ireland, within the first purpose-designed military barracks in Europe – and the last still in use. The brief required a certain amount of restoration work – including the clock tower – and the insertion of new galleries and circulation spaces. The expansive Clarke Square which is crossed in order to enter the museum, has been left untouched.

The primary task was to convert 7,500 square metres into fully flexible twenty-first century museum space, incorporating highest quality air conditioning, security and communication systems, and to allow for maximum flexibility for the future. The first phase included the conversion of two sides of Clarke Square (the former parade ground), to create a varied but legible and linear main circulation route through the principal new galleries.

Internally, the challenge lay in reconciling the needs of a highly serviced modern museum within the shell of a 300-year-old

building. Evidence of the original structure is complemented by the use of textural self-finished materials such as polished plaster, oak, granite and cable-tray ceilings giving the "new" building a tactile quality entirely appropriate to its role as an interactive museum.

Date

**1997**

Cost

**US\$17 million (IR£12m)**

Client

**National Museum of Ireland**

Collaborators

**Office of Public Works Architectural**

**Services**

Lighting

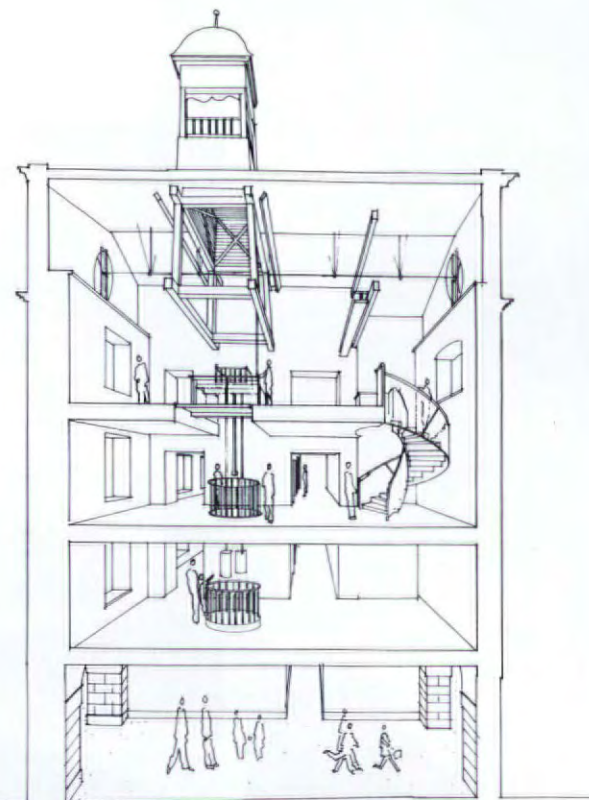
**Sutton Vane Associates**

Multi-media

**X Communications**

Graphics

**Designworks**



1

**1:** Section showing renovation of the central bell tower, and new spiral staircase

**2:** Clarke Square has been left almost untouched. Two glazed "bridges" between the original wings provide a re-orientation point and act as punctuations in circulation. Glazing on the city-side is obscured in order to focus attention on Clarke Square



2



3: Entrance hall which lends a clear view out to Clarke Square

4: Granite staircase leading from the entrance into the new galleries

5: Existing iron columns have been incorporated within the internal restructuring



3



4



All photographs Barry Mason

5



## Viking Centre, Temple Bar, Dublin, Ireland

### Description

The buildings which now make up the Viking Centre museum were acquired by Temple Bar Properties in 1990. The Dublin Corporation Development Plan identified that, as a major tourist attraction, the Viking Centre (which documents Dublin's rich Viking heritage along the quays) might act as a catalyst for stimulating change in the derelict sites along the backbone of Temple Bar, away from the main pedestrian route.

The starting point for the design were the existing buildings, which included a church, schoolhouse and community hall, built on the foundations of earlier medieval structures, which were discovered during this project development. The brief was to provide a variety of accommodation containing formal and interactive exhibition spaces, linked through the existing buildings in a specific circulation sequence. The result is a "suspended museum" with a glass and steel bridge structure. Internally, the modern interventions have been treated as installations in order to ensure maximum flexibility.

Much of the surface area of the external walls are finished in glass reinforced concrete panels into which murals are "woven", depicting Viking navigation routes layered over cloud sequence observations and the meteorological charts of that time.

### Date

1996

### Cost

US\$8 million (IR£5.5m)

### Client

Temple Bar Properties

### Artist

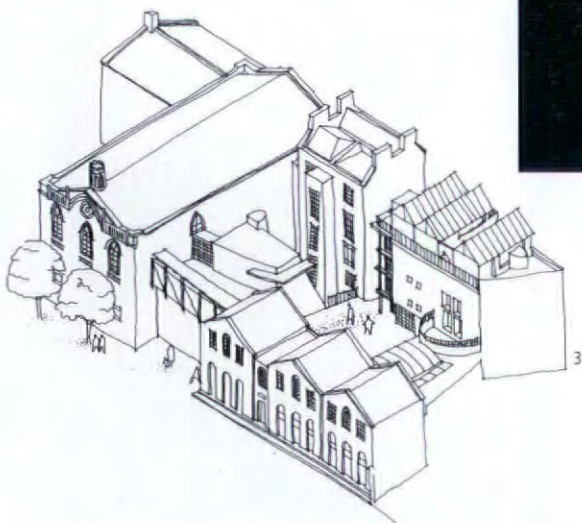
Grace Weir



1: Entrance to the building is via a glass and steel bridge between the boys' school and the church

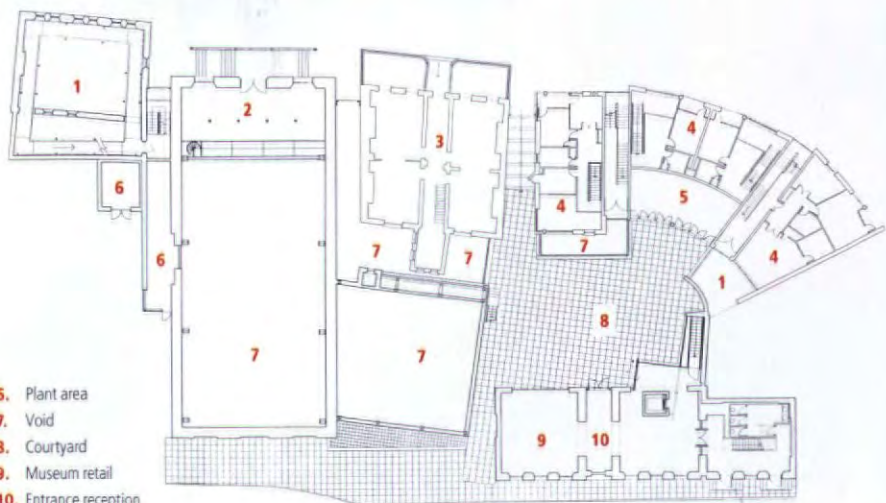
2: The external walls are adorned with glass reinforced concrete panels by Grace Weir, depicting Viking navigation routes

3: The original group of four buildings; the church, presbytery and former boys' school all facing Exchange Street, and a girl's school facing Essex Street have been reconfigured to create the museum



### Key to ground floor plan

- |                                  |                        |
|----------------------------------|------------------------|
| 1. Ramp exhibition               | 6. Plant area          |
| 2. St Michael & Johns exhibition | 7. Void                |
| 3. Presbytery                    | 8. Courtyard           |
| 4. Residential                   | 9. Museum retail       |
| 5. Coffee shop                   | 10. Entrance reception |





## Civic Offices, Tallaght, Ireland

### Description

The brief for the civic offices for the new administration of South Dublin County Council comprised a Council Chamber and members' offices; a major public concourse, staff restaurant, and a public library of some 2,000 square metres – Dublin's largest library. The total area of new building is around 11,000 square metres.

The design of the building and the arrangement of its massing around an open paved area, was chosen to promote a more transparent and accessible civic quality – in line with recent European Union and National Policies encouraging less bureaucratic local government relations with the public.

Brick was chosen to echo the domestic relationship with the council's constituency, but has been detailed to express a scale befitting a public building, without being overtly institutional. The form also counteracts the hostile prevailing winds. Together with the surrounding trees the pitched roofs direct the wind up and away from public spaces.

In the ellipsis book *Dublin: A guide to recent architecture* Angela Brady and Robin Mallalieu write of being transported from Tallaght to Scandinavia: "Soft brown brick, Louis Poulson lights and pantile roof swooping down close to the ground strike that delicate balance between civic stature and friendly, approachable domesticity encountered in the best Danish work". This accurately reflects McMahon's intense study of Danish and Swedish architecture.

Date

1995

Cost

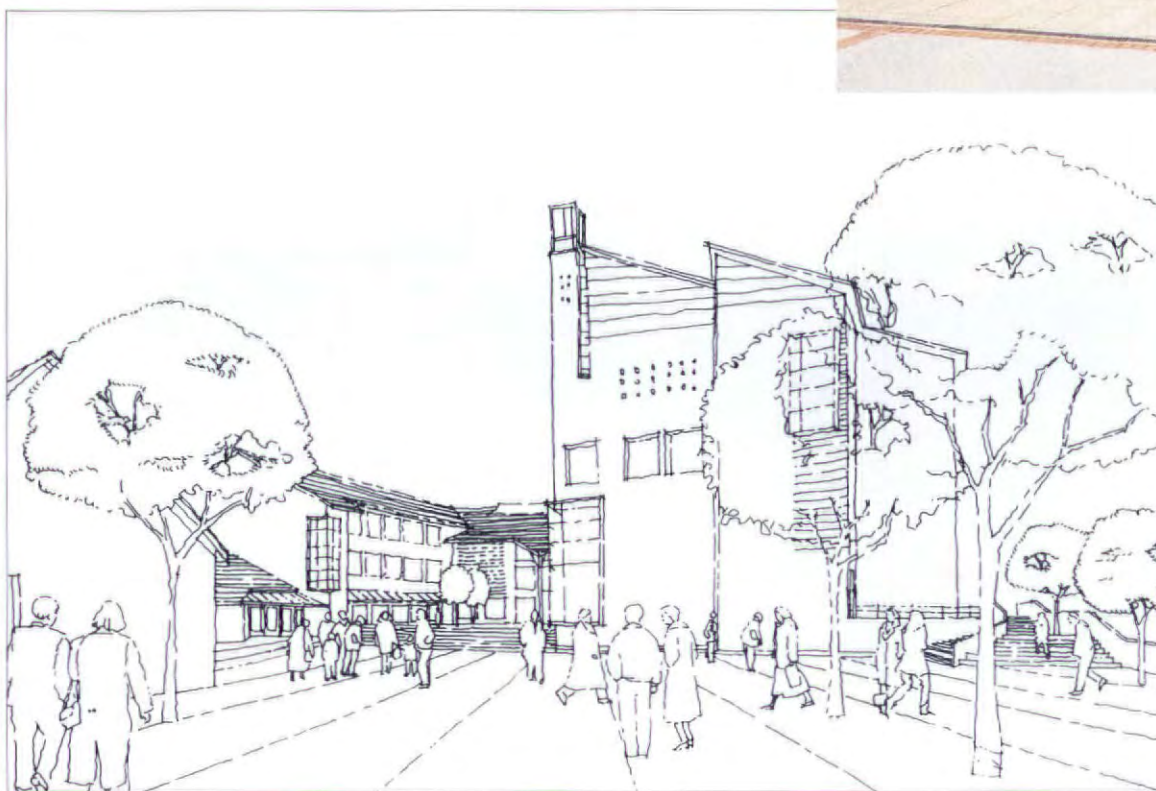
US\$12 million (IR£8.4m)

Client

South Dublin County Council



▲ John Scallie

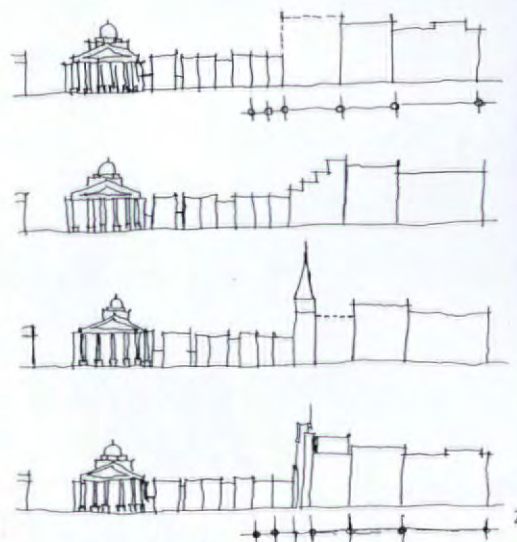
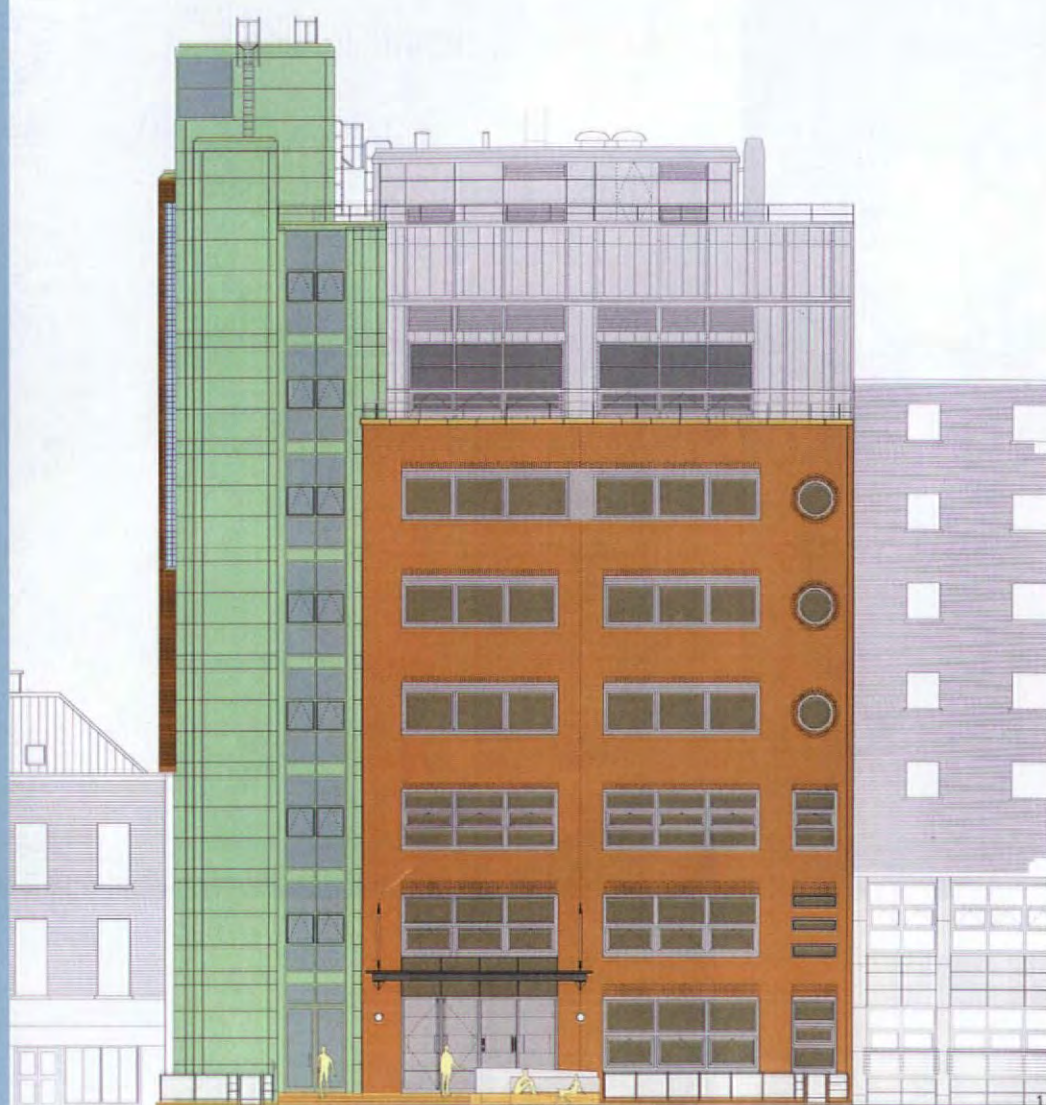


1: View of the dramatic form of the more "democratic" civic offices, which were built under a design and build procedure, which is new to Ireland

2: Entrance to the offices. Public spaces were Gilroy McMahon's prime concern

3: Concept sketch





- 1: Street elevation showing the tower clad in light green steel adjoining the brick block
- 2: Concept sketches demonstrate the development of the tower in relation to the streetscape
- 3: Section

## College of Catering, Marlborough Street, Dublin, Ireland

### Description

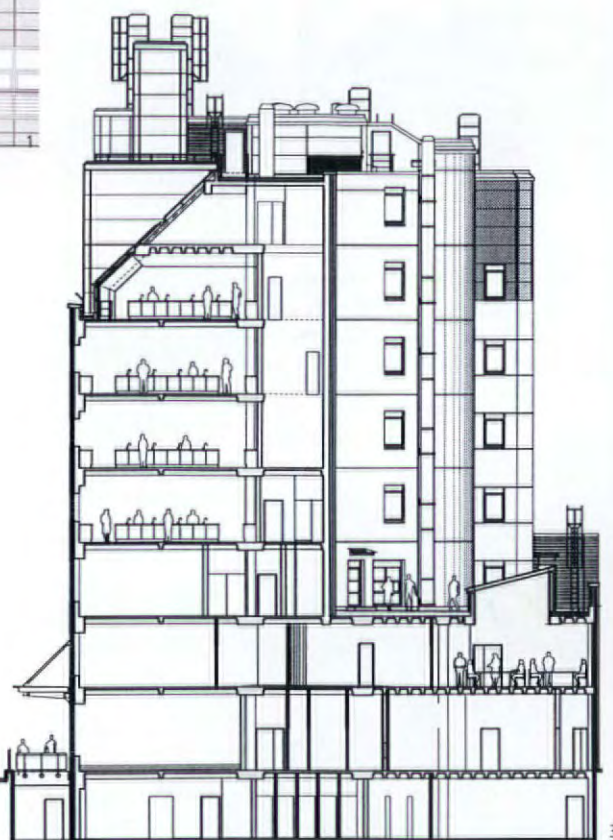
Gilroy McMahon was responsible for both the College of Technology on Bolton Street, and for the Dublin Institute of Technology, in 1988. Such was the success of the scheme, the Institute commissioned the firm to design the College of Catering, completed last year. On Marlborough Street the challenge was to insert a new building into an architecturally varied and complex street. The site of the college is where the street changes in scale from the large mass of the earlier college and the rear of the Gresham Hotel, to the more delicately proportioned eighteenth century housing, as the street proceeds towards the neo-classical Protestant Cathedral.

The nine-storey building has been designed to disguise its bulk and to bridge the street's two contrasting characteristics of scale. The two floors of laboratories are accommodated within the "attic" roof enclosure set back from viewers at street level. The building has been split into two asymmetrical forms: the larger one in brick and the smaller in direct contrast, in light green steel – the height and form have

been emphasised to provide verticality, as a church spire in a medieval street. The green also echoes the familiar copper clad domes and copulas of Dublin.

This highly serviced and technically advanced research and teaching facility, now completed, accommodates laboratories, lecture rooms, and staff/student rooms covering around 4,000 square metres over nine storeys.

Date  
**1997**  
Cost  
**Phase 1 US\$6.5 million (IRE4.5m)**  
Client  
**Dublin Institute of Technology**







1

## Sweepstakes Centre Offices, Ballsbridge, Dublin, Ireland

### Description

The speculative office building has never been popular in Ireland. In the Irish mind it has been thought of as the great urban destroyer, the cuckoo in the nest. This is largely to do with the small scale of the capital city, but with the onset of the boom more office buildings have been completed and many with considerable success, in both financial and architectural terms. Gilroy McMahon was

approached to design a series of three offices (the first of which is completed and occupied by Eagle Star insurance) on Dublin's prestigious "Embassy belt". The brief included the creation of a new city avenue and office park. The configuration of the buildings at a 45 degree angle was to promote equality from one building to the next, avoiding a sense of hierarchy, and creating "positive" public spaces between them.

The glazed atrium, which has become so popular in speculative office design, has been substituted in this case with a more enclosed solution, which still allows for maximum daylight penetration, but avoids glare and overheating. The design also breaks away from the more traditional horizontal layering approach.

Sweepstakes stands in stark contrast to the majority of the firm's work, which is in dense urban surroundings.

### Date

**Phase one completed 1991**

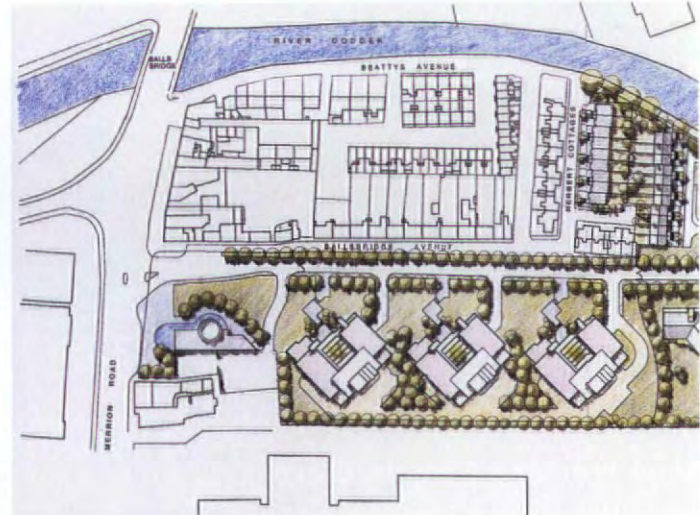
**Phase two to be completed 1999**

### Cost

**Phase one US\$7 million (IR£5m)**

### Client

**Ryde Development**




- 1: Entrance elevation to the office block – the first of three – clad in granite and mirror glass
- 2: Gilroy McMahon was responsible for the extensive landscaping around the offices
- 3: Site plan showing 45 degree orientation of the three blocks

3



## Special Report – Headquarters

# Corporate ego

- 
- 86 Andrew Lett of Aukett discusses clients: Nike, Sony, Proctor & Gamble, Glaxo ...
- 88 IBM's KPF/SHC-designed headquarters provides a model for offices of the future
- 92 The stunning headquarters for MVRDV reveals "method in the madness"





MVRDV's headquarters for the Dutch TV station, VPRO in Hilversum, Holland (See project report to follow. Photograph by Christian Richters Fotograf)

# – a thing of the past?

For many years corporate clients have provided architects with the opportunity to display their design talents. However, with an ever increasing emphasis being placed on fiscal responsibility corporations have become more frugal. Chief Executives' compensation is more closely tied to profit and buildings now tend to be less lavish and less monumental than they were ten years ago. Architects are now being called upon to direct their skills towards designing buildings which are more efficient and which contribute to the productivity of the people they house. David Cohn, Ralph Thomas and Chuck Twardy assess the situation in Europe, Asia and the USA respectively.







- 1: Rocco Design's headquarters building for Citibank, Hong Kong
- 2: P&T Architects and Engineers Ltd design for Citic Tower, Hong Kong
- 3: Cesar Pelli & Associates designed the NHK Broadcasting Centre, Osaka Japan
- 4: Pelli's famous Petronas Towers, Kuala Lumpur, Malaysia
- 5: KPF-designed Hong Kong Electric Company headquarters, Hong Kong
- 6: RMJM's design for the EGI Tower, Manila, Philippines

## Asia

The corporate clients of Asia's headquarters have been hit by the recent collapse of financial markets. The repercussions for global architects involved in uncompleted projects either in Asia or with Asian clients abroad are substantial. In fact exposure to difficulties in Korea, Japan, Hong Kong, Malaysia and Indonesia reads like a *Who's Who* of the architectural pantheon. Headquarters clients have had to postpone or cancel projects including the UK-based Richard Rogers Partnership, which won the commission for the Seoul Broadcasting Corporation tower in Korea in 1995, and has since been asked to reduce the building from 36 to 25 storeys. But the ripples have reached further than that. UK-based Terry Farrell & Partners' headquarters for Samsung in west London which was due to start on site this year has been put on indefinite hold. A Samsung spokesman said "we will have to wait and see how things shake down and when it will go ahead".

However on a more positive note, "some of the most beautiful office buildings in the world are in the Philippines. They are very sophisticated, not quite so market driven as in Hong Kong – they're more functionally driven" according to

Scott Findley of RMJM in Hong Kong. One of RMJM's projects is a joint venture tower for a developer and a bank. "Some banks have briefs which they use internationally. They like 12 metre column-free spans for banking halls, for example". RMJM offered their clients both central core and side core options. "They analysed the premium they would pay for side core and decided to pay the cost."

"The owner occupier is the ideal client" agrees Ken Yeang of Hamzah & Yeang in Malaysia. Yeang claims that it is impossible to generalise about Asia's contribution to headquarters building, in temperate regions the floor plate is 14 metres but the further south you go, the less likely it is that people will want to sit in sunlight so you get deep floor plates 20 to 30 metres.

Remo Riva of P&T in Hong Kong particularly enjoys building headquarters offices. "It's nice. You're designing for a specific client, his hopes and dreams. The other thing is they spend more money. You can be more innovative, more daring, like the Hong Kong Bank. You are not just providing a container. Most people lease space in the market. If they lease enough, they get naming rights." This means that many companies which look as if they have built

their own buildings are actually just tenants.

However Rocco Yim, of Hong Kong based Rocco Design, disagrees. He doesn't think that there are profound differences between speculative offices and purpose built headquarters in Hong Kong. High plot ratios mean that buildings are usually too large for one occupant, so that even purpose-built offices have some leased space. Similarly "the competition between developers is so keen that they don't economise when it comes to facilities and finishes. They may spend more money than an end-user client whose needs are known".

P&T's design for the headquarters of the Hong Kong mainland conglomerate, Citic is a quirky, triangular building which looks over the site of last year's British farewell ceremony. It is hard to imagine that this is a speculative project. It is representative of P&T's specular brand of modernism which uses Chinese characteristics. This practice has also completed the Tai Fung Bank in Macau, a design manoeuvre within the constraints of the Southern European planning tradition in the Portuguese enclave. The client also had unconventional requirements: the building is split vertically between the bank and speculative office space, leading to duplication of cores, an arrangement





Jun Mitsui



P. Follett/CIBA



unlikely in a speculative building.

In China, Kohn Pedersen Fox are working on large speculative projects including an exuberant 200,000 square metres of offices over retailing at Nanjing Xi Lu and the show-stopping, 95-storey World Financial Centre, also in Shanghai, an original solution which is already influencing other designs even before it is built.

Less famous names have found major opportunities in China. Development Professionals in Hong Kong recently completed Full-Link

Plaza, 100,000 square metres of offices over retailing next to the Foreign Ministry in Beijing, an auspicious first project with which to start the practice. As one of a first wave of international standard buildings in the capital, the building is representative of a rapid but sensitive change in work patterns. "They asked us for a true Grade A office building. In '94 we had to decide how to deal with this. The building will stand for 20, 30, 40 years. In ten years the scenario will be completely different," say Lawrence Chum and Arthur Chan. "The

Chinese market is always changing. Working to finalise the brief is a very important process. Small issues have to be discussed with the design institutes. We have to explain why."

The final buildings are similar to Hong Kong solutions in size and content, with shallow, column free office space (10.5-12 metres) western standards for lifts and washrooms. The office lobbies are approached through a high class shopping mall, which has been successfully let to Hong Kong and international tenants. Development Professionals also

### Benchmarking

There is a current vogue for benchmarking but as with most building types the difficulty of comparison is complicated by many factors including building image, type of business, structure of the organisation, mix of office layouts (ie – open/cell), quality, density, building height, flexibility, extent of conference rooms, day care facilities, food service and fitness rooms, extent of shared working spaces, furniture systems, extent of IT, air-conditioning, suburban or downtown location, basement or on grade parking.

### The big squeeze

There is a world-wide trend towards reducing the floor area allowances per staff member. In America around 28 to 32 square metres per person was once acceptable but now the range is around 14-23 square metres and one architect we talked to had recently been given the target of nine square metres per person. The reduction in area is being achieved through innovative design, changing work habits, sharing of work stations, reductions in core area and reductions in storage and filing space requirements. Wasteful use of office space goes

right to the bottom line.

Buildings can have a crucial effect on a business. Through negotiation it is always possible to escape from a leased building, but it is not quite so easy when the space in your own headquarters becomes too abundant. With the bottom line in mind there is an increasing demand in the USA for architects to develop both single building and campus style headquarters with the flexibility for potential sale or sublet in the future. The exit strategy is set from day one.

*Provided by Hanscomb*





Andersson Teng



JVA Montheis



► proposed the underground vehicle delivery and drop-off area below a pedestrian plaza, now shared by the four buildings around this city block. In expression Full-Link Plaza responds faithfully to local tastes for formal massing, granite and curtain walling. Like most new buildings, it was required to have Chinese design references, in this case, discreet Suzhou gables.

Locally designed offices in China for end-user clients differ markedly from international practice: circulation spaces are generous and working spaces loose-fit. Staff facilities reflect the socialist past. Employers usually provide staff accommodation in an adjacent building but it is normal for an office to provide a canteen and common to provide shower facilities for workers who have none elsewhere. Even the multi-tenant offices will have shared kitchen facilities on each floor.

"We're also working in Chengdu, Kunming and Xian," explain Lawrence Chum and Arthur Chan. "They don't have very strict regulations, compared with Beijing." In places where market research is unavailable, developers may require building accommodation to be adaptable, not only from large units to small units but from office to hotel or serviced

apartments and back. "The design isn't finalised until the building is built. Many units in China are bought by speculators. They have to cater for this."

Cesar Pelli's office specialises in end-user headquarters. The Petronas Towers, which have become a symbol of the new Malaysia, have not only had to accommodate the functional needs of Petronas but also "their philosophical objectives, such as wanting to have open floors that bring light and views to everybody working there". Other forces came from "shaping the building from the outside in, such as our desire to give graceful forms to the building and those of our clients who wanted the basic geometry of the design to reflect Islamic traditions of design ... We endeavoured to create a design that is felt as Malaysian".

## Europe

Expanding economies have made Europe an active market for corporate headquarters facilities and for office space in general, although as always conditions vary in individual regions. London, Berlin and points in Eastern Europe including Moscow are notable centres of activity, while France and Spain are still in a

phase of absorbing existing surpluses.

Recent corporate projects in London are generally client-led, differing from the predominantly speculative developments of the pre-recession 1980s. Interior planning innovations imported from the USA, and responding to the impact of the personal computer and new communications systems, are notable in work underway by and for American companies. In central Europe, ecological and humanistic concerns continue to play a role in representative "signature" buildings for specific corporate clients, especially in the public sector. Eastern European markets on the other hand remain largely speculative, with only a few well-known players established in the development or architectural fields.

The American invasion of London's financial centre has brought an emphasis on professional service rather than representation in corporate architecture: clients are generally more interested in cost-effective space planning than the prestige and publicity that outstanding design can bring. Projects underway include new buildings and retrofits of existing buildings as the 1980s surplus is absorbed, affording opportunities to both





G B Gardin



1: Foster and Partners' 4,830-square-metre Citibank European Headquarters at Canary Wharf, London, UK

2: CNP Headquarters in Angers, France designed by Dusapin and Leclercq

3: Hector Computer Centre in Warsaw, Poland by Kuteowicz & Associates

4: Murphy Jahn Architects' Sony Centre Berlin, Germany

5: Debis Tower, Potsdamer Platz, Berlin, Germany by Renzo Piano

6: Aukett Associates' Proctor & Gamble headquarters in Surrey, UK

architects and interiors firms.

Swanke Hayden Connell (SHC) are consultants and interior designers for Citibank's 46,000-square-metre headquarters building in Canary Wharf designed by Foster and Partners. They have designed a new 42,000-square-metre building for Deutsche Morgan Grenfell, and are designing both the building and interiors for Merrill Lynch in a 75,000-square-metre project now seeking planning approval.

In all these cases, SHC performs space needs

another Canary Wharf building by the interiors division of Skidmore Owings & Merrill, London.

According to George Alexander of SHC, the success of "hotel-type" non-individualised workstations for accounting firms or businesses with large sales forces has caused all American corporate clients to "take a new look at making space standards more efficient." American designers specialise in studying future growth needs and company organisation for strategi-

become "more savvy," according to Alexander. "They're not just throwing up space and selling it for short-term profits. They're working with the client, building a long-term service-oriented relationship."

The reactivation of the office market in France and Spain has resulted in few new projects as yet. Public companies such as the Caja de Madrid savings bank and the Red Eléctrica utility have built distinguished headquarters in the last two years in the northern suburbs of Madrid, both by local architects Junquera / Pérez Pita. In Barcelona, the city government encourages architectural quality in private ventures as well, such as the 1995 Carbureros Metálicos Offices by architects Domènech & Amadó.

Surplus office space in Paris peaked at two million square metres after the last recession, with the result that older buildings in choice districts are even being converted to residential use. French public companies stand out for quality architectural designs in regional markets, such as the troubled Crédit Lyonnais' spectacular new tower in Euralille by Christian de Portzamparc, or the Electricité de France (EDF) regional headquarters in Bordeaux by Foster and Partners. The EDF building makes a

## "The American invasion of London's financial centre has brought an emphasis on professional service rather than representation in corporate architecture."

and site analyses for clients and organises competitive bidding among developers, who offer to build and manage buildings to clients' specifications. Similar projects underway include the outfitting of a 50,000-square-metre existing building in Canary Wharf for Morgan Stanley by The Phillips Group, American interior designers, and the consolidation of the London offices of Reader's Digest in

cally "stacking" company divisions on different floors, according to The Phillips Group's London head William Alisse. Often with long-term ties to clients (SHC has worked with Citibank for 60 years), they import American "corporate culture" to foreign branch offices, and have the necessary experience in specialised facilities such as trading floors.

The new climate has forced developers to



statement through passive energy-savings measures such as sunshades and the use of natural ventilation, like Foster's Commerzbank in Frankfurt or the recent RWE Headquarters in Essen, Germany by Ingenhoven Overdiek + Partners. The transparent and minimalist monumentality promoted by former President Mitterand's *Grand Projets* has also had repercussions in corporate commissions such as the CNP Insurance Company offices in Angers (central France), by architects Dusapin and Leclercq, whose horizontal glass volume is carefully scaled to the historic town.

Development projects in Berlin are required by the city to incorporate housing and retail facilities to make a more complete urban fabric. Leading corporations have thus taken a highly visible role as flagship enterprises in the reconstruction of the capital's urban texture, a role that extends beyond their immediate spatial needs. In Potsdamer Platz, Renzo Piano's main tower for Daimler Benz' multi-block project was completed last October, while Murphy/Jahn's 156,000-square-metre Sony

Centre is now under construction for completion in 2000. The Sony Centre includes a Sony headquarters building, offices, apartments, the Berlin Filmhouse (a film archive and study centre), an IMAX cinema and an underground entertainment complex, unified by a central covered plaza. American developers Tishman Speyer work for Sony on the project.

In Eastern Europe, many corporations occupy renovated existing buildings, especially in historic centres such as Prague. Moscow is booming with both new construction and rehab work. Leading national banks, for example, prefer pre-revolutionary *osobniaks*, or mansions with walled gardens. Moscow has some of the world's most expensive real estate, with demand outstripping supply and rents as high as US\$800 to US\$1,300 per square metre per year. According to business consultant David Northrop of Alfa International in London, architects and developers in these unstable and often Byzantine markets tend to be small, lesser known firms seeking unique opportunities, such as the

Turkish-Russian developer Mosenka in Moscow, responsible for over 50,000 square metres of office space since 1990.

A plucky newcomer in Poland is architect Stefan Kurlywicz, who first attracted attention for the award-winning Fuji Film offices in Warsaw of 1993. Among a variety of commissions for local and western companies, he has built the Hector Computer headquarters in Warsaw (1995), and is now designing a 83,000-square-metre tower for the PZU National Insurance Company in Warsaw, with a budget of US\$120 million, a commission won in competition over international firms. Working with international clients since 1980, Kurlywicz has established a solid bridge between East and West, an accomplishment that continues to elude many leading Western professionals.

## USA

It's hardly news that a new kind of corporation demands a new kind of headquarters in the USA. Nor is it novel that the team-based office has

## USA/Europe comparisons

provided by Hanscomb

Although the basic intent of a headquarters building is to consolidate a company's work force there are some distinct differences between buildings in the USA and those in Europe. Some of those differences include:

- Building size – as would be expected the American offices tend to be much larger with foot plates up to 7,400 square metres for suburban locations and 2,000 square metres for downtown.
- Because of daylight requirements European buildings are generally narrower than their US counterparts. For example, due to the power of the white collar unions in Germany everyone has to sit within 6.5 metres of a window. In order to comply with this regulation buildings are either 14 metres wide or are built around a courtyard. This can result in wall to floor ratios 80 percent greater than the USA.
- Many planning authorities in Germany are mandating green landscaped roofs.
- European lobbies are generally less grand.
- Floor allowance areas per person are less in Europe.
- Raised floors are common place in Europe.

- Cellular office layouts are very popular in some European countries, in particular Germany.
- More use of underground parking levels in Europe due to restrictions on plot size and planning requirements.
- Greater use of solar shading in Europe.
- In order to maximise the chance encounter of staff in different divisions European offices tend to create larger amounts of circulation space for internal meetings and collaboration.
- Design fees are higher in Europe.

In an effort to increase natural light and create a hi-tech appearance corporate giants in Europe have popularised transparent, highly glazed buildings. Initially these buildings created problems of heat gain for engineers but they have now overcome these problems and developed what has become known as a climate facade. The systems, which are expensive have two skins – one is a conventional, double-glazed curtain wall, the other is a layer of single glazing. A large gap/plenum from 100 to 1,000 millimetres separates the two skins. Heat generated in the plenum is extracted and replacement air is drawn in behind it. Motorised blinds are also incorporated into the system. This system has not become popular in America.

Full-blown air-conditioning is as popular in

the USA as it ever was but it never really took hold in Europe where there is an ever increasing environmental awareness. There is a greater readiness in Europe to tolerate wide ranges of temperature differences and many countries have adopted a policy whereby it is not permitted to cool an office below 26°C (79°F). The higher cost of energy makes it attractive to look for other options to heat and cool their buildings. One option is to use displacement air which passes through a raised floor, picks up heat as it rises and finishes up in returns in the ceiling. A second is to use the thermal mass of a building; during the night the floor slab is cooled in the summer and heated in the winter. Yet another option is a chilled ceiling system with cooled water circulating in mini bore piping. And as always in Europe there is the option of opening the window, even in a high rise building. The Hanscomb Group is working on one project in Dresden for an American client where they are calling for air conditioning and the German staff are insisting on operable windows.

### General planning

In planning a new facility the architect has to be ready to meet the changing profiles of both the client's and user's requirements and has to consider many aspects, including:



forced American architects to work with teams.

Architects are accustomed to collaboration, of course, but some observers see peril in the latest trends in corporate headquarters. The design team includes such players as management consultants, information technology experts and office-furniture manufacturers, as well as the future "workstation" denizens

time you're designing the building." Unless architects add management, real-estate development and information-technology to their skills, they'll be relegated to shrouding the guts of the building in a pretty skin.

Partner Richard Carlson of Swanke Hayden Connell is not worried, however. He sees IBM's new headquarters in Armonk, New York, as a

from trophies to teams. American corporations no longer commission signature palaces. Consider Chrysler Corporation, whose name still christens the hubcap-finial icon of the New York skyline that it long ago ceased to own. Having built its sprawling Chrysler Technology Center on a 200-hectare swath of suburban Detroit, the automaker last year moved its corporate headquarters from downtown Detroit to a 15-storey office tower adjoining the Center.

This is a move familiar to Jon Ryburg, whose Facility Performance Group, based in Ann Arbor, Michigan, researches trends in corporate facilities. Research and development units, says Ryburg, run the corporate show. "They become the defacto headquarters," he observes. "The headquarters group has to move over to where the tech center is."

The new model, in which open plan supplants private offices, has roughly three times the amount of meeting space as the old, says Ryburg. The need for instant communication, both electronic and personal, mitigates against large buildings. Generally these are no

## **"Unless architects add management, real-estate development and information-technology to their skills, they'll be relegated to shrouding the guts of the building in a pretty skin."**

known as employees.

"Increasingly the architects are not driving the team," warns Michael Joroff, professor of urban studies and planning at the Massachusetts Institute of Technology. When a corporation looks at building a new headquarters, it looks to rebuild itself, says Joroff: "You're designing the organization at the same

perfect example of teamwork. Kohn Pederson Fox designed the building, which plays the contours of the site, while SHC designed the interiors. Integrating input from a variety of sources at IBM was crucial. "Without our coordination, it would not have been built," Carlson says.

Moving from a Skidmore, Owings & Merrill temple built in 1964, IBM exemplifies the shift

- Different space planning needs of the various departments of an organisation. There is nothing less productive than the attempt to impose a homogeneous layout on a heterogeneous organisation.
- Determine the layout best suited to the working patterns of the different departments.
- Anticipate how the use is likely to change through time.
- Determine the type of organisation. Is it traditional, experimental, formal or informal? Is it a high/low interaction company and what is the interaction within departments or across groups?
- Categorise each department in terms of level of interaction – ie cell-type offices for low interaction and open plan for offices with high interaction between staff.
- Involve the users to engender commitment to the layout and the environment.
- Look for and promote better ways for different departments to work with each other.
- Provide flexibility.
- Conduct workshops with both management and users to determine the best form of office layout appropriate to each department – ie cell, hive, den or club layouts.
- Take into account the views of both senior management and operations staff.

- Observe and determine if the existing space is being used wisely. Generally spaces are not occupied as frequently as would be thought. Even in workspaces where it is thought that staff spend most of their time they rarely occupy the space for more than 50 percent of the time. People spend a considerable amount of time in meetings both informal and formal. Space for team meetings and collaboration are often under-provided.
- Determine the short-comings of the existing work spaces.
- Look for ways to increase the productivity of the office in general and individual work spaces in particular. Ninety percent of the cost of employing someone is related to their salary and associated labour burden so any increase in efficiency brought about by good design is very valuable.
- Look for ways to improve the management of storage and filing and reduce the core areas.

### **Value engineering – more for less**

With the potential for so many fingers in the pie during the design phase of a headquarters building "scope creep" is almost inevitable. Therefore this type of facility will benefit greatly from a formal Value Engineering (VE) workshop. The VE team would address three basic questions:

- Which criteria are most important (ie add the

most value) to the owner in terms of components system and building performance?

- Are there alternative solutions or design options which satisfy the primary performance requirements?
- Which alternative will result in the lowest construction and /operating cost?

Reaching the answer to those questions through an explicit, formal, interdisciplinary problem solving and co-operative approach ensures the owner receives full value for the funds expended. Value engineering is not just cost cutting, it is a conscious and explicit set of procedures designed to seek out optimum value for money for both the first and long-term investment. Changing company structures, globalisation, re-engineering, advances in information technology, changing work habits and new regulations regarding health and safety and energy consumption will serve to hone the designers talents for years to come.

*World Architecture and the Hanscomb Group wish to acknowledge assistance given by Don Hackl of Loeb, Schlossman and Hackl, Chicago and Lee Poliso of Kohn Pedersen Fox in London, in compiling this information, and would recommend for further reading The New Office written by Francis Duffy of DEG, London.*



more than three storeys or 45 metres to a side, he says. As you grow, you erect a “cookie-cutter” building next door. “We’re really talking about growing horizontally.”

The headquarters RTKL Associates designed for the mutual-fund firm T. Rowe Price in suburban Baltimore exemplifies this. The campus comprises four 9,290-square-metre buildings, each with a detached parking deck. Arcades connect these brick-and-curtain-wall buildings, but they are sufficiently distinct to allow for an “exit strategy” – the ability to sell or lease them later.

RTKL designers say the trend toward campuses of pleasant but non-palatial buildings all but precludes building downtown. Ryburg seconds this, but other observers disagree. MIT’s Joroff points out that older industrial buildings in some cities offer the kind of adaptable flexibility companies crave: “I don’t think the downtowns are over yet.”

Several cities have convinced corporations to build within their borders. To keep Owens Corning, the city of Toledo, Ohio, offered a 20-year tax abatement and invested US\$9 million in a US\$116 million, 37,000-square-metre river-front headquarters. Cleveland went one better to retain Applied Industrial Technologies, acquiring a four hectare site in its Midtown Corridor and building the US\$35 million, 14,000-square-metre headquarters, which it

leases to the company, throwing in a 10-year tax abatement, too.

Both headquarters, however, are essentially suburban – low and sprawling, stressing communication and flexibility.

GSI Architects, a Cleveland firm, designed the AIT headquarters in a late-modern, glass-and-steel aesthetic, with two wings spun from a circular atrium to suggest the company’s historic business, gears and bearings. An exuberant steel crown capping the atrium marks a rare signature touch. Each wing houses separate uses, but flexibility remains key, as the city might find itself renting one or both to other firms.

Cesar Pelli designed the Owens Corning building, but the Harley Ellington architecture/engineering firm and the office-furniture maker Steelcase collaborated on interiors. Among the notable features of the design is that the raised flooring, in addition to work-station wiring, also carries ventilation ducts, in a system more common in Europe. Its 400,000-square-foot, three-storey “Teaming Center” adjoins a separate building comprising a lobby, auditorium and dining, fitness and learning facilities.

While corporations have shed both employees and the amount of space devoted to each, they simultaneously find themselves competing for workers in a low-unemployment



- 1: Headquarters for Blue Cross Blue Shield, Chicago, USA designed by Lohan Associates to expand vertically without the interruption of business, adding up to twenty-two floors and 800,000 square feet of space
- 2: Grainger Inc corporate headquarters in Lake County, Illinois designed by Perkins & Will
- 3: Applied Industrial Technologies’ headquarters, Cleveland Ohio designed by GSI Architects

**Examples of costs for headquarters from different sectors.** *Provided by Hanscomb. (Costs in US\$ per square foot.)*

**FOOD CHAIN COMPANY, SUBURBAN CHICAGO, USA**

**Project information:**

- Low rise building.
- Additional building on an existing campus.
- Total floor area 700,000 square feet.
- Part open-plan, part enclosed offices, fully air conditioned.

**Project cost summary**

Element	US\$/square foot	%
Foundations	3.10	2.70
Superstructure	20.10	17.40
External closure	9.50	8.20
Roofing	4.40	3.80
Interior construction	20.00	17.30
Conveying	2.70	2.30
Mechanical	29.30	25.30
Electrical	17.40	15.10
General conditions	9.10	7.90
	<b>115.60</b>	<b>100.00</b>

Escalated to IQ/1998

Excludes furniture, siteworks

**MEDICAL INSURANCE COMPANY, FLORIDA, USA**

**Project information:**

- Three low-rise buildings
- Total floor area 650,000 square feet.
- Generally open plan, fully air-conditioned.

**Project cost summary**

Element	US\$/square foot	%
Substructure	3.00	3.20
Superstructure	13.70	14.50
External walls/roof	18.00	19.00
Internal construction	18.20	19.30
Conveying	2.40	2.50
Mechanical	16.10	17.00
Electrical	14.40	15.20
General Conditions	8.80	9.30
	<b>94.60</b>	<b>100.00</b>
Site development	11.60	

Escalated to IQ/1998

Excludes furniture and equipment





economy. "I do think there is a tremendous attention paid to the living conditions from the inside out," says SHC's Carlson.

Even as open-plan space increases so does hard-construction, by way of auditoriums, conference centres, and various employee-amenity areas.

It's telling, too, that Owens Corning calls this centre "The Village," for the new headquarters strives for urbanism in suburbia. "What we're trying to create is the village square," says David Hansen of Perkins & Will, speaking of the still-growing headquarters the firm designed for the retailer Sears in suburban Chicago.

When complete, the project will comprise some 190,000 square metres for 6,000 employees. (It replaces the signature tower Sears abandoned several years ago in downtown Chicago.)

Hansen also designed a smaller, but similarly phased, headquarters for WW Grainger in suburban Chicago whose wings are like fingers, with atria like webbing between them. Bridges slice through the atria to connect the office areas.

Perkins & Will is looking into a few potential speculative projects, says Hansen. Both the general press and some architects note the possible return of speculative office-building,

which for several years had exiled itself offshore. With flexibility so much in vogue, and ego-identity passé, building a headquarters or leasing space would seem a toss-up.

"It's the numbers. It all has to do with what your books look like. Can a developer give you the flexibility you're looking for?" says MIT's Joroff.

But amenities remain important, and could spell the difference for architects and their clients. Lending the humanising touch, whether in "wellness centres" or in the configuration of personal and electronic communications, might enable architects to lead the team. **WA**

## HEALTH CARE COMPANY, KENT, UK

### Project information:

- Single building with attached restaurant.
- Total floor area 10,800 square metres.
- Generally open plan.
- Raised floors, triple glazed windows, atrium, natural ventilation.

### Project cost summary

Element	US\$/square foot	%
Substructure	96.00 (£58.00)	6.00
Frame	96.00 (£58.00)	6.00
Roof	81.00 (£49.00)	5.10
External closure	168.00 (£102.00)	10.60
Interior construction	280.00 (£170.00)	17.60
Conveying	31.00 (£19.00)	2.00
Mechanical	396.00 (£240.00)	24.90
Electrical	365.00 (£221.00)	22.90
Preliminaries	78.00 (£47.00)	4.90
	<b>1,590.00 (£964.00)</b>	<b>100.00</b>
Site development	228.00 (£138.00)	

Escalated to IQ/1998

Excludes kitchen equipment and system furniture

## COMPUTER SOFTWARE COMPANY, CALIFORNIA, USA

### Project information:

- Campus setting.
- Five buildings.
- Gross floor area 630,000 square feet.
- Building 2-3 floors.
- Generally enclosed offices, fully air conditioned.

### Project cost summary

Element	US\$/square foot	%
Foundations	6.70	4.60
Superstructure	20.60	14.30
Exterior closure	15.80	10.90
Roofing	6.30	4.40
Interior construction	39.60	27.40
Conveying	1.30	0.90
Mechanical	23.30	16.10
Electrical	19.60	13.60
General condition	11.30	7.80
	<b>144.50</b>	<b>100.00</b>
Site development	19.00	163.50

Current IQ/1998

Excludes furniture



# Old-fashioned boy

**Headquarters buildings are Aukett Associates' staple diet. Managing Director, Andrew Lett, explains to Peter Wislocki that the firm's success is not based on any sophisticated marketing or management strategy, but good old-fashioned networking. Speaking from personal experience of working in similar markets, Wislocki tends to agree. Aukett's impressive corporate client base includes world famous brand names such as Glaxo, Proctor and Gamble, Nike and IBM. Lett reveals how to attract these clients, and keep them.**

Not having all of your eggs in one basket is, of course, common sense – yet few British design firms have been quite as successful as Aukett Associates in applying this simple logic. Aukett began learning the lessons of the late 1980s boom even before it became the early 1990s crash, where dependency on speculative work for British developers was a recipe for instability, if not ruin.

Aukett has repositioned its client base, winning commissions from the likes of Glaxo, Proctor and Gamble, Nike and IBM. Andrew Lett, Aukett's Managing Director, sees this transformation as a dynamic, self-perpetuating process.

"Once your client list includes some blue chip companies, you gain the credibility to approach other clients of similar size."

In Lett's experience, local expectations define building typologies more than multinationals' corporate culture. The same client is likely to commission radically different buildings in different locations.

There are national variations, Lett explains.

"Every country is unique." Where US office workers are routinely expected to sit "miles away from a window",

European Union law requires everyone's permanent workplace to be within a few metres of a window. "In Scandinavia, everyone from the MD to the office junior expects their own, cellular, naturally lit office."

Whilst all big businesses see good premises as a prerequisite to staff recruitment and motivation, the ever improving standards of headquarters buildings merely reflect the underlying evolution in management structures and corporate cultures.

"Managers in any big firm are aware of what makes a good office building, and expect no

less than other multinationals with which they compete or do business."

The individualism of the European workplace is not confined to daylighting and external views, Lett points out, but the total design.

"Buildings are built to suit a moment in time" – a good thing, encouraging diversity. "The kind of building that might be commissioned in Holland wouldn't stand a chance in this country, just because of institutional attitudes."

The differences, Lett believes, are less related to ownership structures than ingrained cultures. Diplomatically, he is keen to emphasise the need for compromise between the obsession with flexibility of British and American clients, who see buildings as commodities, and Europeans, "who might well end up with some white elephants".

In recent years the practice has transformed a loose network of associated offices into a formal entity: Aukett Associates Europe, comprising

attempt to have a unit, which can deal with multinationals, wherever they move, in the UK and in Europe."

Aukett's contribution in all of its European joint ventures is always based on the added value of its range of specialist services, applied in tandem with the contextual and core design skills of the local partner.

Having 130 staff, Aukett is able to offer expertise seldom readily available in most continental markets, in which, "a firm of 20 architects is considered large, and multidisciplinary practices are unheard of".

But this is not to say that Aukett has no competition. While global corporations might choose large firms where the range of specialist departments offer a one stop shop service, Lett explains that Aukett "have had to be entrepreneurial. People don't just walk through the door. We've learned to take marketing very seriously in the UK, and are now applying the same

**"Senior members of each office meet every month. It's a positive attempt to have a unit, which can deal with multinationals, wherever they move, in the UK and in Europe."**

individual partnerships in Germany, the Netherlands, Belgium, Italy, Ireland and, most recently, in Spain. It is significant that Aukett + Heese, for example, is based in Berlin, even though Heese, the German parent company, has its headquarters in Munich.

"This arrangement began with our network of consultants. We got to know Heese, helping them to pitch for projects. It only developed into a joint venture gradually."

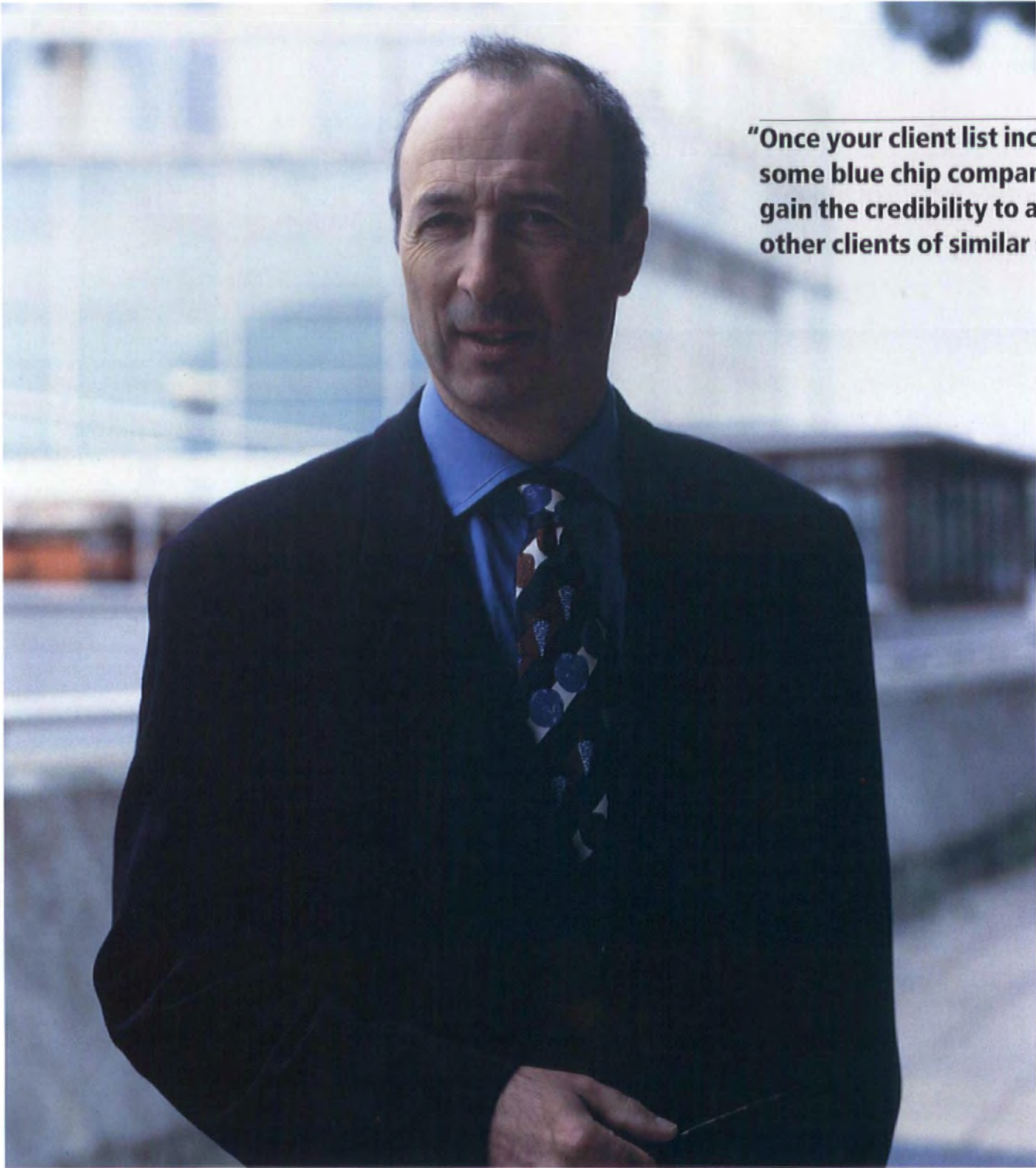
Aukett Europe has a permanence beyond individual projects, however. "Senior members of each office meet every month. It's a positive

in Europe, where it's still rare".

Surely there is more to pitching successfully for the global brand names – the richest patrons of architecture in the twentieth century – than simply "networking"? But Lett insists that when it comes to winning work in any new market, glossy brochures and expert PR consultants are no substitute for good old-fashioned networking – getting to know key decision makers, and using satisfied clients' recommendations as a basis for new contacts.

Lett sees the differences between British and foreign practice in the headquarters market in





**"Once your client list includes some blue chip companies, you gain the credibility to approach other clients of similar size."**

evolutionary terms.

"Whether being 'ahead' is good or bad doesn't matter, but what is clear is that we are ten years behind the US, and ten or more years ahead of continental Europe."

Aukett's business philosophy is to accept commercial considerations and target potential clients by approaching them using marketing techniques that they recognise. Andrew Lett finds that while his European counterparts retain their commitment to a style of professionalism which attempts to deny commercial considerations, British architects have become

"more truly professional", embracing innovations such as Quality Assurance, and "not learning at other people's expense".

The firm's diversification has been pragmatic, guided by "snippets" of information about openings in specific markets, rather than sophisticated economic research. Europe, for now, remains Aukett's operational territory. "Across the Atlantic in the US we think it's a one-way ticket", Lett muses, acknowledging the direct competition presented by American multinationals in his own firm's home market and the protectionist regulations which

requires foreign companies to register separately in every state.

Lett is positive about the future. "There has been a generation switch. The decision makers have become younger. They're a different kind of person – better travelled. They know you can do business in a modern building."

The climate seems to have changed in Aukett's favour, yet the firm's continued success will owe more to years of patient confidence-building in the corporate premiere league, rather than any instant management strategy or marketing ploy.



Architect  
**Kohn Pedersen Fox**  
 Reviewed by  
**David Cohn**

## Down-sized, re-tooled and re-styled

### IBM, Armonk, New York, USA

Photography by Peter Aaron/Esto



1: The sleek stainless-steel volumes are canted outwards at an angle of one and a half degrees

2: Window over the main entrance. The building forms are fractured – like the vector planes of a computer rendering



IBM's new headquarters is perhaps the first serious attempt to address, in architectural terms, the profound changes that have transformed the American corporation over the past ten years.

Following workplace innovations introduced in projects such as Chiat-Day's New York quarters by Gaetano Pesce, and now widely applied by the interior design profession, architects at Kohn Pedersen Fox have investigated the impact of more flexible, team-oriented and project-oriented office organisations on building form. Together with IBM's Chairman Louis Gerstner, KPF has also reinterpreted the role of architecture in the forging of corporate identity.

The new building marks the end of a crisis that threatened IBM's very survival. Severely battered by fierce competition in the late 1980s and early 1990s, it underwent a drastic restructuring, cutting over 100,000 jobs and losing US\$15 billion. The now-profitable enterprise that emerged from this cataclysm, "is thought of as an entirely different corporation", according to KPF Design Principal William Pedersen.

The transformation is dramatically evident in the contrast between the new building and IBM's old headquarters, designed by SOM in 1964, which now stands vacant on an adjoining parcel. The new building is almost half its size, down to 26,000 square metres from 40,000, and accommodates roughly half the number of employees (from 900 to 500). Instead of crowning a hill, it is hidden from view among densely wooded ravines. And rather than projecting a monumental image of solidity, its asymmetrical arms follow the steep contours of the land, while its sleek stainless-steel volumes are canted outwards at one and a half degrees and fractured like the angled vector planes of a slick computer rendering.

Its lean footprint, with 30 feet between windows and core (a depth equivalent to four work stations or two executive modules), reflects the new typology of the corporate office. Largely shed of support staff and middle managers, it has been streamlined to handle strategic long-term planning and financing, with day-to-day management





**3:** Rather than projecting a sense of monumental solidity, the asymmetrical form of IBM's new headquarters is tied to the contours of the land

**4:** Daytime view of boardroom and lobby "prow"

**5:** View of typical office wing









handled elsewhere at a local level. There are only a handful of private offices outside the executive suite (located in the centre of the building) to facilitate communications). Instead, 34 conference rooms are packed with hi-tech networking equipment to complement open office floors. George Alexander, Partner of Swanke Hayden Connell, the building's interior designers, explains that desks are conceived as non-individualised "touch-down stations" for workers who may spend 75 percent of their time in meetings or on the road. Employees can plug into their communications and computer files from any desk in the building.

The building also represents a decisive break with the post-modern historicism of 1980s corporate architecture. KPF's design is a well-timed adaptation of the designs of Zaha Hadid, and in the corporate mould of Peter Pran, formerly of Ellerbe Beckett. It is a vindication of the work of these struggling prophets of the 1980s who championed – largely in vain – a renewed modernist look, updated for the computer age.

Rather than directing this new design message outwards as a public image, IBM's Gerstner was more concerned about using architecture, "to help promote an internal *esprit de corps* among his own people", according to Pedersen. Gerstner told KPF that he "didn't want a building that's going to win any prizes". Instead, "IBM wanted a building that gave their people a sense of what they were about, a building more responsive to change, a more adaptable institution". After the savage blood-letting of the past decade, IBM presents a new face to its top employees: lean, fit and confident, high-tuned and ready for battle.

VA



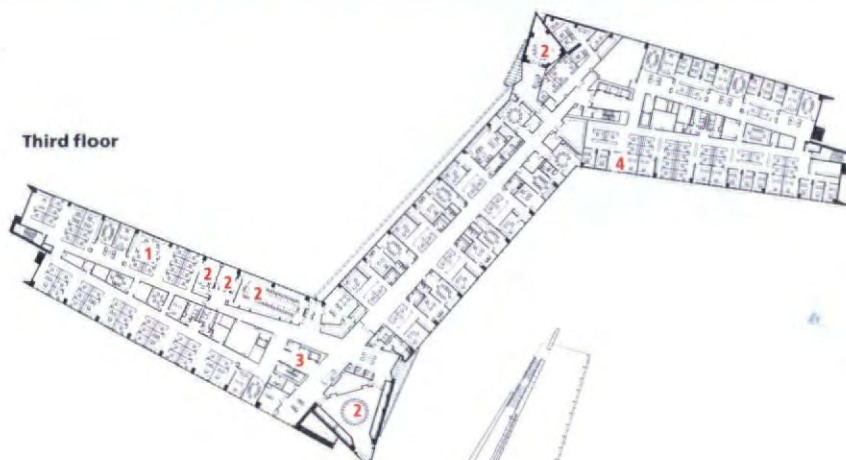
#### Opposite page:

Communal areas, both internal and external – such as the South dining terrace – are a defining feature of the campus

1: View of the Swanke Hayden Connell-designed interior. Designed as a series of non-individualised spaces, the theory is that employees can plug into their files from any desk in the building

2: The headquarters is largely hidden from view by densely wooded ravines

Third floor



Ground floor



#### Key to floor plans

- |                     |              |
|---------------------|--------------|
| 1. Workstations     | 5. Restrooms |
| 2. Conference rooms | 6. Lobby     |
| 3. Core             | 7. Entrance  |
| 4. Offices          | 8. Terrace   |

Client

**IBM**

Interior

**Swanke Hayden Connell Ltd**

Structural engineer

**The Cantor Seinuk Group**

Environmental engineers

**Ronald A Freeman Associates**

Landscape consultant

**Rolland/Towers, LLC**

Lighting

**Jerry Kugler Associates**



Architect  
**MVRDV**  
 Reviewed by  
**Peter Wislocki**

## Method in the madness

*Villa VPRO broadcasting corporation headquarters, Hilversum, Netherlands*



1

**T**he VPRO is the Dutch public service broadcaster, a publicly-funded organisation, providing a wide audience with a more challenging alternative to commercial radio and television.

When the corporation decided to move from its previous premises, distributed in a group of 13 vernacular villas, a fundamental requirement was that the informality and variety of the programme-makers' accommodation

should be transposed in any new building. The VPRO recognised the intrinsic symbolism of its new headquarter "Villa" – and the means of procuring it – and resolved to commission a boldly innovative building, far exceeding the self-censoring tendencies of more conservative, financially-driven organisations.

The result is in many senses the antithesis of the headquarter building as we (particularly in Britain, the USA and South East Asia) have





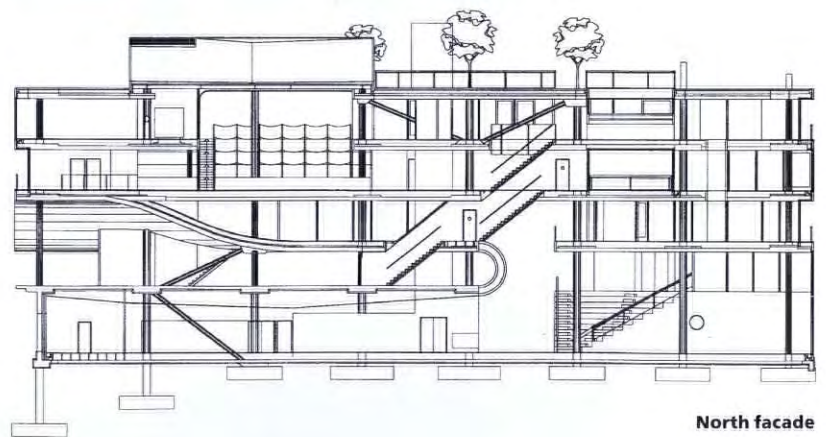
1: Blue illumination of the car park ramp

2: Level two showing the generous space solution for the ceiling of the car park

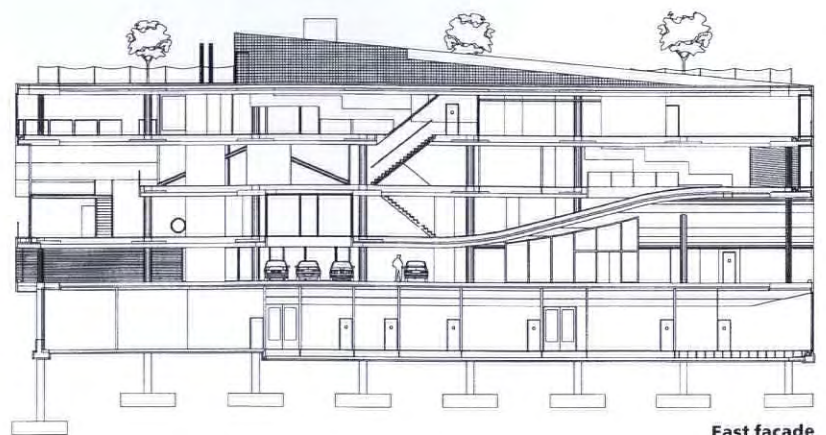
come to know it. The design's uniqueness – and, it has to be said, occasional impracticalities – make it of negligible value as a financial asset. This is not a building which an estates manager could recommend to his shareholders in investment terms. It is of greater relevance to ask whether it is a building fit for its specific purpose.

Strongly reminiscent of a multi-storey car park, the VPRO Villa's exterior communicates little of the specificity of its programme, beyond the post-Pop iconoclasm inherent in reinterpreting a corporate office as an overtly utilitarian structure. By any conventional standards, the building's entrance is neither impressive nor welcoming. The indeterminate overlap between the fractured interior and the sloping car park is neither exhilarating nor sheltering – more horror movie than light entertainment or educational documentary. To followers of current Dutch architecture, moreover, the blatantly OMA-esque vocabulary devalues the building's true inventiveness.

Which is a great shame, because, despite the design's approximation to a pastiche of recent Rem Koolhaas projects, there is much radical, and appropriate, thought in the scheme. The VPRO selected MVRDV, having dismissed the idea of an architectural competition, wishing



North facade

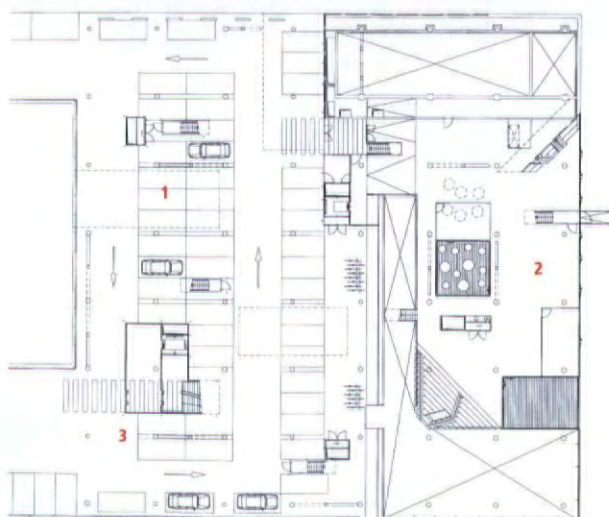


East facade



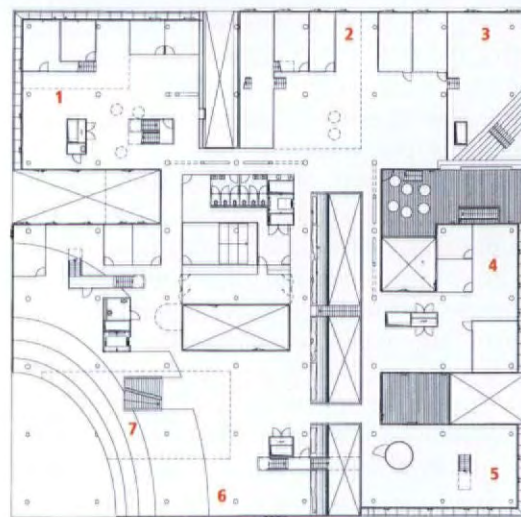


1: Television office with screens and restricted natural light through a circular window



**Key to level one**

- 1. Parking
- 2. Office – radio 3
- 3. Entrance



**Key to level two**

- 1. Office – TV youth
- 2. Office – planning & production
- 3. Office – radio 4
- 4. Office – public relations
- 5. Office – VPRO magazine
- 6. Office – public service
- 7. Main entrance





2



3

2: Transparent walls provide a layering effect between offices

3: Grass roof with walkways

4: Double height space for the refectory with steps that transform the eating area into a theatrical experience

5: Curved corrugated roof of the reading room



4



5

Instead to evolve a highly specific design in dialogue with a young, progressive designer. The achievement of the Villa's working environment has little to do with its polemically raw finishes and "ironic" chandelier in the entrance foyer. Beyond these distractions lie an enormous variety of workspaces, each open yet private, intimate yet exhilarating.

MVRDV's strategy was to maximise the building's density, yet retain its transparency. Within a 52-metre square footprint, a number of irregularly proportioned fissures provide nearly all internal spaces with external views and daylight, and divide the 10,500 square metres of floorspace into humanly-scaled team bases, with only exceptional use of physical partitions. Among the most memorable of the building's interiors are the Production Department's cascading terraces; the canyon-like slit crossed by incredibly light, suspended stairways; the main meeting

room, glazed on all sides and accessible only via an external terrace; and the vertiginous, monumental stairways, doubling-up as informal meeting spaces. Without the creature comforts associated with high quality speculative office buildings, MVRDV have given the VPRO's 380 staff a building which more accurately reflects their style of living and working, with such unusual features as a lawned rooftop, equipped with power and data points; and a refectory whose stepped terraces transform meal breaks into theatrical experiences.

All this could not have been achieved without complete mutual confidence between the client and the designers – and an acceptance that even a headquarter building can be dynamic and informal, capable of being fine-tuned through the experience of its users, adapting their habitat to suit their everyday needs.

#### Client

**VPRO**

Interior designers

**MVRDV**

Structural engineers

**Pieters Bouwtechniek, Haarlem and Ove Arup**

Service engineers

**Ketel R I, Delft and Ove Arup & Partners, London**

Acoustic engineers

**Centrum Bouwonderzoek TNO-TU, Eindhoven**

Main Contractor

**Voomolen Bouw BV**

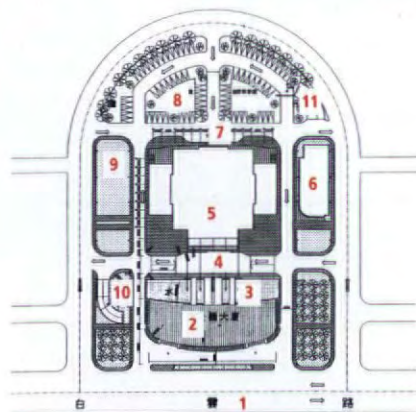


Architect  
**TaoHo Design Architects**  
 Reviewed by  
**Ralph Thomas**

# Splendid isolation

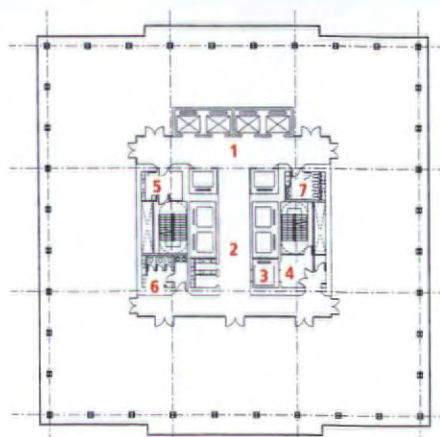
*King Tower, Shanghai, People's Republic of China*

**1:** A contrast typical of contemporary China. King Tower at dawn, viewed from single storey buildings, characteristic of old Pudong



## Key to ground floor

- |                              |                                   |
|------------------------------|-----------------------------------|
| 1. Public street             | 8. Landscaped parking             |
| 2. Paved plaza               | 9. Planting                       |
| 3. Pool with fountain        | 10. Ramp down to basement parking |
| 4. Main entrance with canopy | 11. Ramp up from basement parking |
| 5. Base of tower             |                                   |
| 6. Air conditioning plant    |                                   |
| 7. Service entrance          |                                   |



## Key to typical rental floor

- |   |                                    |
|---|------------------------------------|
| 1. Six lifts serving lower rental floors              | 5. Protected lobby to escape stair |
| 2. Four lifts serving upper headquarters floors       | 6. Male washrooms                  |
| 3. Fireman's lift                                     | 7. Female washrooms                |
| 4. Protected lobby to fireman's lift and escape stair |                                    |

In Shanghai, Puxi (west of the river) was traditionally the focus of attention. In comparison, Pudong (east) hardly registered. Hong Kong architect Mr Ho is one of the people who makes things happen in China. "In 1986 I told Minister of Construction Rei that new development in Shanghai should take place across the river, in Pudong."

Much later Ho was introduced to Zhou Siao Ming, head of the JinQiao Reprocessing Zone in Pudong. "He said, 'Why don't you come and design our headquarters?' He's a good client. He always told me, 'Push to be innovative'. The building is only 38 storeys high and structurally speaking, there's no need in Shanghai to build in steel. Although it costs more in steel, he felt that it had good symbolic value. His idea was to design an architectural symbol for the area to suggest a progressive spirit. He wanted a dynamic shape." That, undoubtedly, is what he got.





2

King Tower looks like something that has landed from another planet in the context of Pudong. Up to the nineteenth floor the plan form is square, and expressed plainly. The twentieth and twenty-first are refuge floors, identified as a recess on elevation. Above the twenty-second floor the headquarters offices are more expressively modelled. The form is a cruciform penetrated by a pyramid, the upper part of which is an open structure.

"The planning department recognised that I had gone above the legal height limit. I had a



3

2: Upper part of the tower, with headquarters offices above recessed refuge floor. The chairman's office and boardroom are located on the top floor beneath the open pyramid structure

3: Main entrance and lower office floors for rental purposes. The glazed canopy is intended to act as environmental buffer during both summer and winter

4: Entrance lobby, viewed from below. The balcony is curved on the upper level



4

model. I took off this part. They said, 'Put it back'. In China, if you can convince them, they will take aesthetics into account. At the entrance we have a four-storey lobby. I wanted clear glass but it would have got very hot. Shanghai gets very hot and very cold. I put a huge canopy which acts as an environmental shield. I just told them it would be the grandest canopy in Shanghai."

The remainder of the exterior comprises horizontal bands of blue tinted reflective glass and grey powder-coated aluminium, a finish which is continued on the structure in the entrance lobby. Job architect Jin Oon reports that the local engineers insisted on a more complex structure than he expected. In China all architectural projects have to be administered by a local design institute, even when foreign consultants do much of the work. He describes them as "very conservative".

The building tenants have six lifts at the

back of the building. There are four lifts for the client at the front, which serve an upper lobby at refuge floor level. Here a receptionist controls transfer to separate lifts serving the upper floors. There is also a restaurant and lounge for the headquarters. At the top of the building is the chairman's office, boardroom and clubroom. Business in China often focuses on hospitality.

This building is very much the product of that social context: an expression of pride, intended to impress, consciously progressive, it derives from a process where personal relationships remain the most important factor in defining the product.

WA

#### Client

**JinQiao Reprocessing Zone**

Structural and electrical engineers

**East China Architectural Design Institute**

Curtain Wall suppliers and engineers

**Permasteeliza, Australia**



## Floors, ceilings, internal walls and partitions

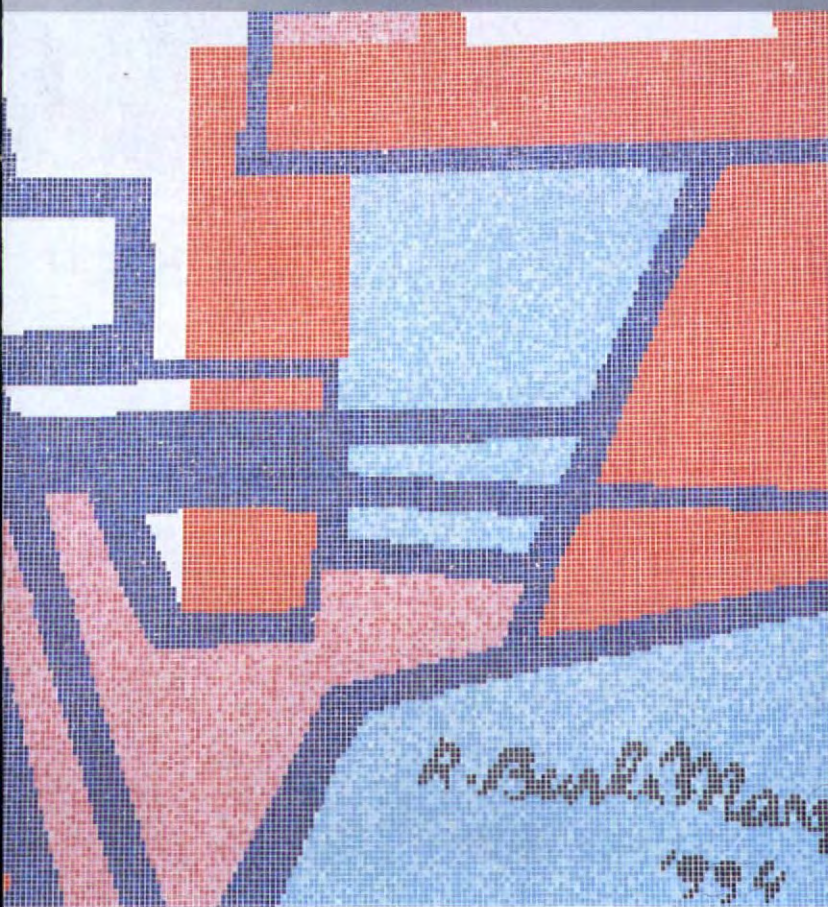


# Above, below and beyond



**Top row, left to right:** Folding walls and lacquered panels by Siparium; Junckers' Sylvea hardwood flooring, for light commercial usage; Circo by Intarsia; Arc partition wall for Pearson Television's new London HQ

**Bottom row, left to right:** Opus Romano glass mosaic by Bisazza; Coloured glass tiles on show at the ITSE 97; Le Gemme series by Bisazza; Debra Yates' award-winning ceramic tile mosaic in situ



George Demetri reports on what's new in the world of internal fittings, and reveals that at Interface sustainability has become more of a must than a maybe; linoleum is bouncing back and that the European vogue for internal glazing is linked to longterm corporate planning. Plus: A preview of the flooring and wall coverings industry's premier trade show – "Coverings 98".



If a manufacturing presence in China is fast becoming one of the hallmarks of a truly global company, US-based carpet manufacturer Interface must view the imminent opening of its Chinese plant with a great sense of achievement. Not that global status has only just arrived: the company is a recognised name in the world-wide commercial interiors market, offering not only floor coverings and fabrics, but also a diverse range of interior architectural products. As the world's largest manufacturer of modular carpets under the Interface, Heuga and Bentley brands, it is responsible for the production of 40 percent of all carpet tiles used in the global commercial environment.

With a turnover of over US\$1 billion, 27 manufacturing facilities on



**"... impressive as Interface's intentions are, their effects will be diluted by the activities of others ..."**

four continents and sales offices in 110 countries it is surprising to learn that a business of this magnitude has the vision required to tackle head-on the thorny problems of sustainability, pursuing impressive environment-friendly policies which it hopes will not only curry favour with end-users, but also encourage other companies to see the light.

Interface's "path to sustainability" is still in its infancy, but progress is being made on all fronts. Even the proposed Chinese factory will impact on transportation demand and efficiency, and help not only to serve the Asian market more efficiently but also use local materials where possible.

But impressive as Interface's intentions undoubtedly are, their effects will be diluted by the activities of others in the chain. Be as eco-minded as you like, but if your major fibre suppliers are still giving you oil-based products, then your impact will be limited. But even here, by exercising its rights as a consumer, it expects some progress to be made: the company has made it known that whichever manufacturer produces recycled

nylon yarns will get Interface's custom. So whether by example or the use of commercial clout, it looks as if Interface is likely to get its way – hopefully to the benefit of all.

### Linoleum – what goes around comes around

Aromanature is the marketing name given to linoleum in Japan. The growth of the linoleum market over the past 15 years in Asia has come to symbolise the extraordinary revival of a material which only 35 years ago had embarked on a steady course of decline in inverse proportion to the rising popularity of PVC. The Swiss-based Forbo-Krommenie now markets the material world-wide as Marmoleum. Its revival owes much to the rising tide of interest in environmental issues: it is made from natural raw materials such as linseed oil, wood flour, jute, resins, cork and pigments. When combined by a complex process, the result is a durable floor sheeting possessing natural anti-static and anti-bacterial properties, and available in a wide range of colours and effects. The advent of laser or water jets and computerised cutting

- 1: Eternel soft flooring by Interface
- 2: Forbo-Krommenie Marmoleum flooring at Reading Crown Courts, UK
- 3: Flush glazing at Reuters, Geneva by Clestra Hauserman





allows intricate inlaying techniques which can accommodate individual design requirements. A continuous, monolithic surface can be achieved by making watertight seams and pre-fabricated corners for floor-wall connections. Applications are wide, ranging from public buildings to hospitals, schools, offices, hotels, restaurants and domestic applications.

#### Armorex prepares to migrate

Another material which looks set to migrate from the industrial sector into commercial and domestic applications is the Armorex floor. The UK-based company manufactures specialist industrial flooring products which are now used in 25 countries. With half its business abroad and recent contracts covering an airport extension in Moscow, Opel Motors in Warsaw and several industrial projects in China, the company's literature is available in Russian, Mandarin Chinese, Hungarian and Portuguese.

Its Sipertop metallic "dry-shake" powders are sprinkled and trowelled into wet concrete. The reaction with water produces a monolithic bond which even at only three millimetres thick results in a surface claimed to be 20 times more abrasion resistant than ordinary power-floated concrete.

Armorex is soon to launch a cementitious screed which will be available in 15 colours, a feat claimed to be a "first". Cemlevel Coloured can be applied in one go over existing concrete in a five millimetre minimum thickness. The result is a top surface with a continuous metallic aggregate suited to industrial and commercial applications.

#### Europe glazes over

The recent progress in glazing technology and the resulting fashion of flush glass detailing has created transparent building facades which sometimes appear almost devoid of structure. This craving for transparency and



3



lightness is now expressed in internal partitioning, with the result that wealthy clients are opting for fully glazed floor-to-ceiling partitions, using clean sweeps of glass uninterrupted by any structural members.

Europe is leading this trend. This can be seen in two very striking uses of

movement. Further development applied to the designs on both projects resulted in the Synops-I range.

According to Clestra, because large organisations are increasingly signing longer-term property contracts, the ability to accommodate future growth and change without

**"The ability to accommodate future growth and change without moving is becoming a decisive factor in the choice of internal elements."**

glass partitioning, one at Jean Nouvel's Galleries Lafayette in Berlin, and the other at Sir Norman Foster's Commerzbank in Frankfurt. In both cases, French-owned Clestra Hauserman developed bespoke designs according to the architects' requirements and to suit the particularities of the site. At the Commerzbank, for example, the column-free interior and consequent large spans produce slab deflections of up to 40 millimetres at centre span, so Clestra designed a telescopic partition head to absorb this

moving is becoming a decisive factor in the choice of internal elements, and so companies are thus more likely to invest in interiors possessing enough flexibility, durability and attractiveness. Surprisingly enough, with such an integrated approach to office layouts, the company does not supply raised access floors, a fact linked to what it perceives to be a declining market, caused primarily by the rise of cordless communications and improvements to office functionality.



## Preview: Coverings 98

**C**overings, now in its eleventh year, is the international exhibition in the flooring and wall coverings calendar. Set for 21-24 April at the 1.3 million-square-foot Orange County Convention Center, Florida, the event will play host to 1,200 firms representing manufacturers and exporters from over 40 countries. If past years are anything to go by, hard flooring, especially ceramics, and stone, will feature heavily. Certainly, the European presence in stone and ceramics will be strong, with heavy rustic and natural influences, particularly in Italian and Spanish products.

With over 100 seminars and debates, Coverings is billed as the

"Solution Source" by conference organisers. It would certainly be fair to say that it is the one show that manufacturers and specifiers cannot afford to miss. Of the visitors and manufacturers that WA has spoken to, the general consensus is that Coverings presents a one-off opportunity for interested parties the world over to renew acquaintances and make contacts in a relaxed, non-competitive atmosphere.

In 1997 the event attracted a total attendance of 27,689 – nearly 20 percent of whom came from outside the USA. This year Coverings was sold out before Christmas, and plans are already in place to increase the exhibition space for 1999 by 125,000 square feet. With 86 percent of 1997 attendees rating the show "good to excellent" the prospects are good for 1998.

### So, what's new?

Spanish tile manufacturer Roca will be launching three new natural looking lines in 40 x 40 centimetre format: a limestone effect; a cross-cut travertine and a rustic tile with edging. Also from Spain is Natucer, which will exhibit new ranges that will have been launched six weeks earlier at the Valencia exhibition. New colours, including the Diamanti range, will be on show, and many of the tiles are also designed for external applications, a point the company is quick to highlight by citing products which have been used externally ... in Moscow.

Pyrolave from France – one of

the few western European nations without a strong presence at Coverings – will be making its fourth consecutive appearance. Specialising in enamelled volcanic lavastone, Pyrolave count among its clients Microsoft's Bill Gates, whose private residence in Seattle is adorned with Pyrolave tiles and kitchen countertops. Jean Pauwels, North America Manager feels that the reason French companies tend not to make the trip across the Atlantic is fear.

"To break into the US market requires long-term commitment. The problem with French companies is that they don't look beyond what they know. Yes, the US market is tough. It has taken us five years to establish ourselves, but Coverings allows us an annual opportunity to maintain our presence, and however small our display is, it makes a difference".

Meanwhile, Italian manufacturer Cerdomus is remaining tight-lipped about new launches for the show, but has confirmed the increase in demand for rustic tiles, especially in its US and European markets. However, it has been revealed that the company will be exhibiting Thermae, a range of rustic porcelain tiles with a "time-worn" patina. Generally regarded as specialists in porcelain tiles, Italian manufacturers at the show will also be presenting a wide selection of medieval and renaissance motifs.

From the UK, Original Style will be on-hand with its latest offerings of tiles for the kitchen and bathroom, including a full range of traditional Victorian floor tiles. However, the company is keen to point out that these are just as suited to modern applications as to traditional. Indeed, the characteristic and sometimes complex geometric patterns – no doubt originally inspired by Islamic art – have proved to be highly popular in the Middle East.

A staggering number of US manufacturers will be present (340 at the last count), including large tile makers, art and decorative tile makers, installation material members, raw material suppliers and equipment makers all with operations in the US and Canada. According to Jonathan Smiga of Intarsia, US companies view Coverings with the same



**"Yes, the US market is tough. It has taken us five years to establish ourselves, but Coverings allows us an annual opportunity to maintain our presence ... it makes a difference."**

Jean Pauwels, Pyrolave (France)



- 1: Geos by Vitromex, one of the 340-plus US firms showing at Coverings 98
- 2: Enamelled volcanic lavastone kitchen surface by Pyrolave
- 3: Detail of high resistance, rustic-style tile by Spanish manufacturer Roca
- 4: Original Style's Islamic-inspired tiles in situ



sense of significance as the Europeans: "It is part of a network, that includes recognising trend directions and sustaining a fundamental presence". When questioned about changes in the US stone and tile market Smiga points to a move towards "one-off, decorative work" that is equally applicable to public as well as residential, private areas.

From South America, Colombia will be represented by nine companies. Until recently Colombian manufacturers of floor, wall and roof tiles catered almost exclusively for their domestic market. The strong Colombian presence this year is indicative of a concerted effort to break into the US market over recent years – the Colombian Government Trade Bureau estimate that in 1997 Colombian producers

increased their share of the US tile market by 30 percent. Amongst the companies present in the Colombian Pavilion will be: Alfagres, Santafé, Santa Teresa, Ceramica Andina and Granitos y Marboles SA.

At the Marble Association of the Philippines Pavilion the full spectrum of the Philippines marble market will be on show: from traditional, polished surfaces to rustic and weathered finishes. The Philippine Pavilion, which this year requires twice as much space, will comprise 80 percent of the nation's marble production capacity – a monthly potential output of 700,000 square feet of tiles. Exhibitors include: Teresa Marble Corporation, Seven Marble Quarries Group, Marbleland Mining & Development Corporation and Dragon DF Sabariaga.





## Ceramiche Ragno

Zodiaco is a new porcelain tile collection that comes in six soft, warm tones: Verde Alpi, Nero, Travertino, Rosato, Bianco and Rosso Verona. It offers excellent wear and shock resistance and low water absorption and is available in a wide range of sizes, both square (30x30, 15x30, 15x15, 5x5 and 5x15 cm) and triangular (10.5x21 and 5.2x10.5 cm)

and is complemented by a series of special pieces (skirting and normal and corner steps).

**Ceramiche Ragno**  
**Viale Virgilio 30, Bruciata**  
**41100 Modena, Italy**  
**Tel: +39 59 384111**  
**Fax: +39 59 384555**

## Dalsouple

Dalsouple is a specialist manufacturer of high quality rubber flooring for contract installations worldwide. Dalsouple offers extraordinary design flexibility with a huge range of colours and textures plus a special colour matching facility. With Dalsouple's latest interactive CD Rom, specifiers can create their own

marble and terrazzo finishes in any colour combination.

**Dalsouple global sales:**  
**PO Box 140**  
**Bridgwater**  
**Somerset TA5 1HT**  
**UK**  
**Tel: +44 1984 667233**  
**Fax: +44 1984 667366**



## Intarsia Inc

"Vincenza" medallion 72" dia. Original design by Cathy Ma, Design Group M, Minneapolis, Minnesota for private residence, Palm Beach, Florida. Custom borders and field tile, all reground in place for seamless, unitized finish. Materials: rojo alicante, verde jade medium, china black, crema marfil marbles with brass inserts surrounding decorative elements and borders.

**Intarsia Inc**  
**1851 Cypress Lake Drive, Suite B**  
**Orlando**  
**Florida 32837**  
**USA**  
**Tel: +1 407 859 5800**  
**Fax: +1 407 859 7555**



## Brancós SA

GRES BISBAL is the result of a large experience and tradition in ceramic products and pavement production, with the most advanced industrial technologies. This symbiosis, together with a strict and rigorous control of materials selection has made INDUSTRIAS CERAMICAS BRANCOS one of the leading extruded tile manufacturers in Spain.

### Brancós SA

Mediodía s/n

Apdo. 10

17100 La Bisbal

Girona

Spain

Tel: +34 972 64 10 00 - 64 10 01

Fax: +34 972 64 16 58



## Original Style

Victorian floor tiles lend authenticity to period-style bars, restaurants and hotel lobbies as well as being a durable, low-maintenance flooring material. These and Original Style's extensive range of decorative glazed wall tiles can be seen on Stand 3672 at Coverings '98 in Orlando, Florida, from 21 to 24 April.

Original Style tiles are distributed in over 40 countries worldwide.

### Original Style Ltd

Falcon Road, Exeter EX2 7LF  
UK

Tel: +44 1392 474011

Fax: +44 1392 219932

e-mail: [info@originalstyle.com](mailto:info@originalstyle.com)

## Intec SpA

### Monointec: the waterproof raised flooring system

Monointec represents a significant advancement over traditional raised floor panels. Whereas conventional modular flooring comprises a structural panel of some type with its top finish material glued on, Monointec is virtually "monolithic". Composed of state-of-the-art monomer-based composite material, the substructure of the Monointec "mini-slab" adheres itself to the top finish during the manufacturing process with an aggressive, impermeable bond. There is no "third element" adhesive. Specifically

engineered for use with ceramic and stone, Monointec offers the combination of exceptional physical characteristics and performance with minimal panel thickness. Monointec is produced by Intec, a leading company in the production of raised flooring systems.

### Intec SpA

Località Grangia

12048 Sommariva Bosco (CN)

Tel: +39 172/53204. Fax: +39 172/53277

Internet: <http://www.alpcom.it/intec>

e-mail: [Intec@ALPcom.it](mailto:Intec@ALPcom.it)







## Eco Ceramica s.r.l.

PROGETTO ECO offers artistical ceramics whose refined originality springs out of specific historical research aiming at the recovery of iconographic and aesthetical rules of an age plunged in darkness. The "MEDIOEVO" (literally "Middle Ages") series, six colours in 35.2x35.2cm format, together with "Tavole Incise" decors, meet the needs of customers who like

simplicity but will never give up elegance and wish to have art within reach.

**Eco Ceramica s.r.l.**  
**Via Don Borghi, 5**  
**42010 S. Antonino (RE)**  
**Italy**  
**Tel: +39 536 990177**  
**Fax: +39 536 990164**

## Collins & Aikman Floorings

Managers at St. Joseph's Private Hospital in Newport, Gwent are so impressed by the performance of carpet fitted four years ago by Collins & Aikman Floorcoverings, they have ordered 600 square metres of The Monet flooring for the whole of its Out-patients Department. The installation features the company's unique Powerbond backing system.

**Collins & Aikman Floorings**  
**24 Erika Road**  
**Stacey Bushes**  
**Milton Keynes MK12 6HS**  
**UK**  
**Tel: +44 1908 313 222**  
**Fax: +44 1908 313292**



## Casagrande Pisos Ceramica Ltda

### Brazilian Ceramic Floor Tile Manufacturer

Series: Memphis, Phoenix; available in four colours and three sizes. We have produced ceramic floor tiles since 1975 in the sizes of 8"x12" and 12"x12" with a monthly production of 350,000 square metres. Casagrande export to more than 25 countries; our objective is to always improve our range of products and their quality of finish.

**Casagrande Pisos Ceramica Ltda**  
**Rua Padre Agosinho No2260**  
**Cunitiba**

**PR 80710-000**

**Brazil**

**Tel: +55 41 335 8228**

**Fax: +55 41 335 9472**

**e-mail: casagran@cwmatrix.com.br**



## UNIFLOOR

### Venetian Terrazzo flooring and the "Opus Tessellatum Mosaic".

UNIFLOOR has devised and patented a new procedure to create a product that is an improvement on slaked lime venetian flooring used in classic "Canal Grande" venetian palaces. This continuous faced flooring made of marble or glass, can also be used to create stunning mosaic designs. It can be used in museums, hotels, villas and shop projects internationally. Main advantages: absence of joints; reduced thickness (approx. 1 cm); quick application time. Tiles are also available in maximum sizes of 120 x 120 cm and 1.7 cm/depth. Unifloor also specialises in resin flooring for civil and industrial use.

#### Unifloor

Via Roma 53, 31044 Montebelluna

(TV) Italy

Tel: +39 423 601 566

Fax: +39 423 240 60



## Carmalasa

Display unit with twelve interchangeable panels of 101x197 cms. Faster panel replacement. Easy assembling, with a perfect system to see all the panels from different angles. Free base, any finish and colour available.

#### Carmalasa

Ctra N-340 Km 62.00

12550 Almazora

Castellon

Spain

Tel: +34 64 53 18 58

Fax: +34 64 53 18 09

e-mail: Carmalasa.Export@

cst.scrivicom.es

## Pyrolave

Countertops, tabletops and tiles made of Pyrolave enamelled lavastone offer an exceptional resistance to household and weather attacks thanks to coloured enamel fired at 1050°C. Indoor or outdoor use, the lavastone is cut and sculpted into an unlimited number of sizes (up to 5' x 9'), shapes and designs. The material is available in 30 standard colours and custom colours on request. Available in selected stores in USA, Canada, UK.

Coverings (ITSE), Orlando, April 21-24, Stone Selection Booth.

#### Pyrolave

11 rue Beaugrenelle

75015 Paris

France

Tel: +33 1 45 71 08 30

Fax: +33 1 45 71 08 60

e-mail: pyrolave@wanadoo.fr







## Coronado Stone Products

Coronado Stone Products has been creating and manufacturing the most innovative simulated stone veneers for almost 40 years. But natural beauty is not Coronado's stones only feature, our stone is designed for easy, time-saving installation. Coronado Stone Products also makes matching quoins, wallcaps and pavers to complete an authentic "Old World" look.

For more information on the best choice in light weight stone veneers, call Coronado at 1(800) 84 STONE/ 1 (800) 847-8663 or write to us at:

**Coronado Stone Products**  
**11191 Calabash Avenue**  
**Fontana**  
**CA 92337**  
**USA**  
**Tel: +1 909 357 8295**  
**Fax: +1 909 357 7362**  
**e-mail: [www.coronado.com](http://www.coronado.com).**

## R.A.K. Ceramics

R.A.K. Ceramics is one of the biggest and most modern factories in the world producing 25,000,000 square metres of ceramic floor and wall tiles in various sizes and designs and 1,000,000 pieces of sanitary wares in various models per year. R.A.K. Ceramics products are exported to 85 countries around the globe. R.A.K. Ceramics is ISO 9001 certified by C.I.C.S. Ltd of the UK.

**R.A.K. Ceramics**  
**PO Box 4714 Ras Al Khaimah, UAE**  
**Tel: +971 7 445046. Fax: +971 7 445270**  
**e-mail: [rakceram@emirates.net.ae](mailto:rakceram@emirates.net.ae)**



## Lasting impressions by nature.

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**TERESA MARBLE CORPORATION**  
 117 Shaw Boulevard, Pasig, Metro Manila, Philippines  
 Tel No: +632 631 9123 • 632 631 9125 • 632 631 9127  
 Fax No: +632 632 5249 • 632 7621

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## Teresa Marble Corporation

TMC maintains a local inventory of special colours of imported granite and marble to supplement its local product line. For large projects using foreign materials, TMC can link your stone requirement with reliable foreign stone producers, select and quality control their deliveries to suit your needs and timetable. Other services offered by TMC include stone consultancy, installation and repair and maintenance.

**Teresa Marble Corporation**  
**117 Shaw Boulevard, Pasig**  
**Metro Manila, Philippines**  
**Tel: +632 631 9123/631 9125**  
**Fax: +632 633 5249/632 7621**





## Seieffe Srl

KUARON is a brand new product launched on the market exclusively by Seieffe. It is a monolayer compound stone tile 400x400x17mm, calibrated, rectified, honed/polished surface, chamfered, supplied in a wide range of colours. KUARON is the result of the highest processing technology through vibro-compaction under vacuum, ideal for airports, shopping centres, hospitals – for all large surfaces.

**Seieffe Srl**  
**SS Appia Km 240.300**  
**82013 Bonea (BN), Italy**  
**Tel: +39 824 891111**  
**Fax: +39 824 891215**

## Circle Redmont, Inc

Circle Redmont the world's premier manufacturer offers structurally engineered, prefabricated monolithic glass panel systems. Pre-glazed and fully waterproof frameworks of aluminium, pre-cast concrete, steel and cast iron incorporate hollow glass blocks, solid glass pavers, glass bullets and plank or insulated glass. Standard and custom panel sizes are available for installation as windows, walls, flooring, stair treads and landings, bridges, side-walks, skylights, complete structures or virtually any application imaginable.

**Circle Redmont, Inc**  
**2760 Business Center Boulevard**  
**Melbourne, Florida 32940, USA**  
**Tel: +1 407 259 7374**  
**Fax: +1 407 259 7237**

### PREFABRICATED GLASS BLOCK PANELS



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 Outlook® & PSG 2000™ Custom Skylighting Systems

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## KlinkerSire

The essence of Neolite is in fact red granite, broken up and baked for up to 34 hours at an incredibly high temperature, 1300°. This creates a floor that is as strong and durable as stone itself, like the thickness: 16 mm of pure material in a choice of formats – 16x16, 16x32.5 and 32.5x32.5. A total of six different colours are available, which can also be personalised by choosing from a variety of decors (ornaments, bands and rosettes).

**Sire SpA**  
**Casello Marene**  
**Autostrada Torino Savona**  
**12060 Roreto di Cherasco (CN)**  
**Italy**  
**Tel: +39 172 471111**  
**Fax: +39 172 474139**





## Emil Ceramica

### Ergon/Alabastro Series (certified ISO-9001)

A fine impervious porcelain reproducing the typical chromatic variation of natural "alabasters" with non-directional repeated veining, Alabastro stands out for its superior quality and for aesthetic appeal thanks to the innovative achievements of our "double loading technique", performing outstanding stain resistance for polished and unpolished surfaces. Available in nine colours; three sizes, three surface finishes; trims and accent pieces.

#### Emil Ceramica

Via Ghiarola Nuova 29  
41042 Fiorano Modenese (MO)  
Italy  
Tel: +39 536 835111  
Fax: +39 536 832511

#### USA and Canada

Creative Tile Marketing Inc  
222 SW 15th Road  
Miami  
FL 33129  
USA  
Tel: +1 305 858 8242  
Fax: +1 305 858 9926

## Orcon Corporation

Orcon is in the floor covering accessory business, moving towards offering the industry a full assortment of value-added floor covering accessory products, systems, and services that are: environmentally responsible; highly reliable; easy to buy, sell, and to use; in demand in the marketplace; innovative; and profitable to both Orcon and its customers.

**Orcon Corporation**  
Floor Covering  
Installation Systems  
Division  
1570 Atlantic Street  
Union City  
CA 94587-3299  
USA  
Tel: +1 510 489 8100  
Fax: +1 510 471 3410  
Website:  
<http://www.orcon.com>  
e-mail:  
[info@orcon.com](mailto:info@orcon.com)



## Mureks Inc

- Importer and distributor of natural stone tiles and slabs
- Miami and California warehouse distribution
- Specialised in travertine and limestone – cross-cut, vein-cut, filled, honed, polished, tumbled, sandblasted
- Travertine products: white, silver, ivory, walnut, gold, pink and red
- 4", 6", 8", 12", 16", 18" and 24" tiles and antiquated stone also in borders and medallions and cut-to-size projects.

#### Mureks Inc

6046 Jet Port Industrial Boulevard  
Tampa, Florida 33634, USA  
Tel: +1 813 249 5800  
Fax: +1 813 249 5321





## Laufen International

### Laufen's new Ceridian ceramic tile lends a natural look to floors and walls

Laufen's Ceridian features a refined rustic surface. Coordinating wall and floor tiles feature faint fossilised imprints and a stone-like finish. Lists are also available for the look of carved limestone. Ceridian is available in Cambrian Grey for cool colour palettes – Golden Ammonite for warm palettes. For more information, call 1-800-785-TILE.

#### Laufen International

PO Box 6600

Tulsa

OK 74156-0600

USA

Tel: +1 918 428 3851

Fax: +1 918 428 1279

## Metropol by Gres Safont

Metropol presents the new range "Amadeus". These 10x10cm tiles come in a selection of colours. Also available are our attractive Sahara and Victorian ranges (10x10cm).

Use: walls and ceramic floors.

Suitability: bathrooms and kitchens.

Our new computerised warehouse and larger office premises will be in operation in April. As a competitive company we aim to provide you with a fast and effective service.

#### Gres Safont

PO Box 46

Ptda Vinals/N

S/N 12110 Alcora

Castellón

Spain

Tel: +34 964 360206

Fax: +34 964 386061



## Refin Ceramiche spa

### HERCULES (Refin)

The strength of the mythical hero Hercules is made real in this series by Refin Ceramiche. Hercules is a fine gres porcelain made with coloured clay body, 10mm thickness, frost and abrasion resistant with rough and antislip surface. This new series is available in six colours, two formats, (30x30, 45x45), decors and all special pieces. Hercules is recommended for internal and commercial use, patios, pubs and swimming pools.

#### Refin Ceramiche spa

Via 1° Maggio 22, 42010 Salvaterra (RE), Italy

Tel: +39 522 990499. Fax: +39 522 841530





## Hard Rock Flooring

Hard Rock Flooring supplies a wide range of terracotta, slate and stone flooring, sourced from all over the world. We specialise in traditional stone from British quarries which are having a renaissance with architects and designers worldwide. Hard Rock Flooring has a wealth of experience in supply and installation from barn-conversions and hotels to conference rooms.

### Hard Rock Flooring

Fleet Marston Farm, Fleet Marston, Aylesbury, Bucks HP18 0PZ, UK

Tel: +44 (0) 1296 658755. Fax: +44 (0) 1296 655735

e-mail: [showroom@hard-rock-flooring.co.uk](mailto:showroom@hard-rock-flooring.co.uk)

## Ceusa Wall and Floor Tiles

Advanced technology, high quality of the raw materials. Outstanding skills of Ceusa employees and the care with which they are produced make the difference. Specify our goods. Ceusa Wall and Floor Tiles, a rare and enjoyable distinction.

### Ceusa Wall and Floor Tiles

Rodovia 446-km 17

Urussanga, SC 8884000

Brazil

Tel: +55 48 465 1311

Fax: +55 48 465 1332

e-mail: [ceusa@ponta.com.br](mailto:ceusa@ponta.com.br)



## Naturestone

### Naturally beautiful

Naturestone sources and supplies a wide range of natural stone for classical and contemporary decors, offering an extensive range of more than 100 types of flooring or cladding derived from limestone, slate, marble, granite, quartzite and sandstone. Since its founding in 1983, Naturestone has been a market leader by not only offering a comprehensive product selection but by also providing the technical expertise that helps architects or specifiers confidently select the best stone for their needs.

### Naturestone

Classical and Contemporary Stone Floors

Sunninghill

Ascot

Berkshire SL5 0PZ

UK

Tel: +44 1344 627617

Fax: +44 1344 873185

e-mail & internet: [www.stone.co.uk](http://www.stone.co.uk)







# ARIOSTEA Spa



## Head office

Via Cimabue 20  
I-42014 Castellarano (RE)  
Italy  
Tel. + 39 536 816 811  
Fax + 39 536 816 850  
E-mail: info@ariostea.it  
Internet:  
HTTP://www.ariostea.it

## Recent projects

- Metropole Arcade and Hotel, Am Steinertor Shopping Centre (Austria)
- Tefal Company Building (Belgium) - Confederation Life Head Office (Canada)
- Montecarlo Shopping Centre (Chile)
- Fafalos Building (Cyprus) - McDonald's restaurants (Czech Republic, The Netherlands)
- Netto Supermarkets (Denmark, Germany, Great Britain)
- Scandinavian Center (Denmark)
- Opéra Shopping Centre, Arte de Vivre Shopping Centre (France)
- Nouveau Marché St. Germain, Logisud "Purpan" Hospital (France)
- Law Courts, Hotel Schools, University of Provence (France)
- Dern Passage Shopping Centre, Familia-Centre (Germany)
- Sophienhof Shopping Centre, Isenburg Shopping Centre (Germany)
- Heathrow Airport, Terminals 4/2 - Marks & Spencer (Great Britain)
- Interspar Shopping Centre, Kereskedelmi Bank (Hungary)
- New Yuen Long Centre, Kowloon City Plaza (Hong Kong)
- Sony Building (Greece) - Rover Shopping Centre, Rocchetta Head Office (Italy)
- Hunters Plaza Shopping Centre, ASB Bank (New Zealand)
- Trondheim International Airport (Norway) - Citroën Center (Sweden)
- Migros Shopping Centres (Switzerland) - Abu Hail Shopping Centre (UAE)
- Heathrow Airport, Marks & Spencer (UK)
- Centennial Bank, Motor Ford Showrooms (USA)

## Company profile

Ariostea is one of the leading manufacturers of porcelain stoneware, a flooring material that has increasingly expanded its application in architecture, both for residential, commercial and institutional buildings. The Ariostea product research and development has led to the creation of prestigious materials, combining outstanding technical features, such as a very low absorption rate and a high shock- and scratch resistance, to an uncomparable aesthetic level. The company is also providing its clients and architectural firms with design service and water-jet cutting technology. Ariostea distribution network is available worldwide. The company in-house quality system has been certified accordingly to the standard from the ISO 9000 series.

## Product range

Ariostea's product range of porcelain stoneware includes more than 140 different chromatic versions, allowing any kind of floor design and matching any style of interior decoration. Ariostea porcelain stoneware can also be used for exterior facade cladding or, in the appropriate antislip surface version, for outside flooring. Certifications for the technical properties of Ariostea porcelain stoneware have been issued by the main international official institutes.

## Area of specialisation

Ariostea company is highly specialized in the production of fully vitrified porcelain stoneware, a ceramic material resulting from advanced manufacturing technologies as well as in-depth laboratory researches. Ariostea porcelain stoneware is made of the finest raw materials, such as quartz sands, feldspar and first quality clay. The manufacturing process, through wet grinding, homogeneous mixing, pressing and firing at 1300 degrees Celsius, forms one vitrified and extremely hard body, coloured throughout the thickness.



1: "Montecarlo" shopping centre, Santiago, Chile

2: "Progetto Cosmos" collection, "Gemini" version, 40x40 cm - 16"x16". Polished porcelain stoneware

3: Private residence, Århus, Denmark

4: Trondheim International Airport, Norway

5: "Grandemela" leisure centre, Perugia, Italy

6: Isenburg shopping centre, Frankfurt, Germany





# Ceramic floor tiles – development and technology

In a short time, the Spanish ceramic floor tile has become one of the most important in the range of ceramic products. Due to new technology introduced in Spain in the 1970s, the floor tile has now matched the ceramic wall tile in sales and production. As with the wall tile, the use of the floor tile has extended all over the world due to its properties and technological evolution.

The single firing system has allowed Spanish manufacturers to produce products with better technical characteristics which are required of floor tiles exposed to a high level of wear and tear. Floor tiles also generally have a low porosity level of less than 3 per cent, which compares favourably with water absorption levels of wall tiles.

Today, there are a wide range of ceramic floor tiles available which are suitable for endless applications. These floor tiles differ not only in format and colour, but also in technical characteristics (physical, chemical, mechanical, etc).

The EN European Standards subdivide ceramic floor tiles into various classes depending on their characteristics and tolerance levels.

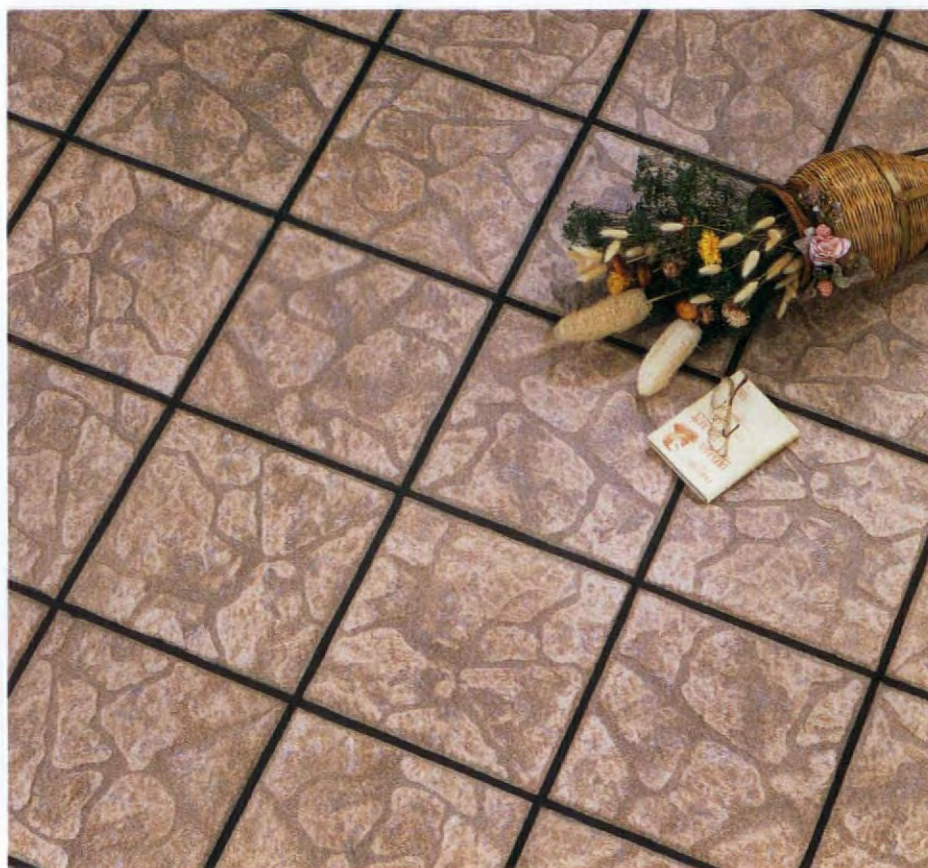
## Ceramic floor tiles trends

1997 concludes with the continual evolution of floor tile trends:

- Due to the quality of clays used and applied technology, ceramic floor tiles are available in large formats. The 50x50cm format stands out especially,

giving a feeling of spaciousness. The Spanish sector is a pioneer in the production of these formats within the world industry.

- Floor tiles demand extremely high technical qualities. At the present time their use in public areas is becoming more and more popular due to the qualities of the product. More technical collections, suitable for high traffic areas are appearing with high mechanical resistance, minimum water absorption levels, slip resistance and abrasion resistance. They are used in commercial centres, train stations, airports etc.
- Imitations of painted material, silks and embroidery effects are starting to emerge in floor tiles. Marble, rustic and stone effects continue to be popular.
- As in wall tiles, polished floor tiles are being produced to imitate exotic marble almost perfectly. A glaze is applied to the biscuit base which is then polished creating a shiny appearance. The four sides of the pieces then undergo a hydraulic process thus creating a perfect finished product.
- Modular systems are starting to be used in floor tiles. Creative designs for different surroundings can be achieved with very few pieces. Rosettes and borders are presented on mesh to ease fixing.
- Natural textures which create a grain are being used for floor tiles in high traffic areas as they are usually slip resistant. They have a rough and natural appearance.
- Hydraulic cement can be imitated achieving the same designs and colours.
- The surface of porcelain earthenware floor tiles, a product which is noted for its resistance and limited water absorption, is glazed to achieve bright and glossy effects.
- Natural products such as wood, stone etc. continue to be imitated. Tiles are decorated with fossils, sea creatures, heraldic emblems. Warm colours, natural and time-worn white are those which stand out most.
- Both floor and wall tiles are designed to co-ordinate and produce effects and surroundings to suit the needs of the individual customer.



## Porcelanite, S.L.

Porcelanite S.L. present their 750 Model in white, beige and brown. This exterior floor tile is shown in the 33.3x33.3cm format, is frost-resistant, slip-resistant and has a PEI IV and Mohs 9.





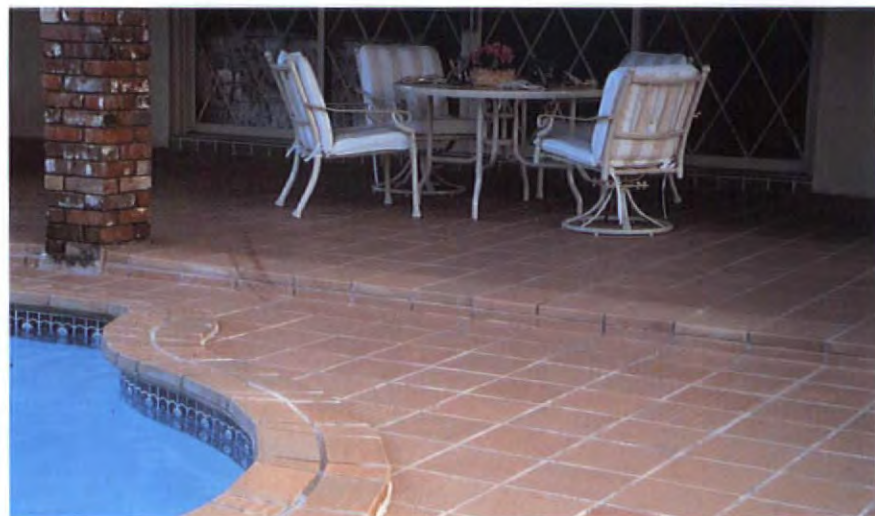
**"Gayafiores", Hijos de F. Gayafiores, S.L.**

Gayafiores present their CALZADAS series. The model shown is the Pietra Circulo Negra, a single fired white body floor tile in the 33.3x33.3cm format. With a PEI V, Mohs 7 and water absorption level of 3, this tile is also frost resistant.



**Industria Cerámica Alcorense S.L. "Incea"**

Incea introduce their Stone model in the 33.3 x 33.3cm format available in beige, green and papin. This tile is suitable for exterior use for façades and pavements because of its frost resistant quality, also it can be used for the interiors of country houses, fireplaces etc.



**Cerámicas Calaf S.A.**

Cerámicas Calaf produce extruded floor tiles, terracotta floor tiles and a wide range of decorative and special complementary pieces. The picture shows the MONTSERRAT series in the 27x27cm format in red. This extruded, semi-vitrified and unglazed floor tile made from select clays is available in red and beige.

**Gres Breda S.A.**

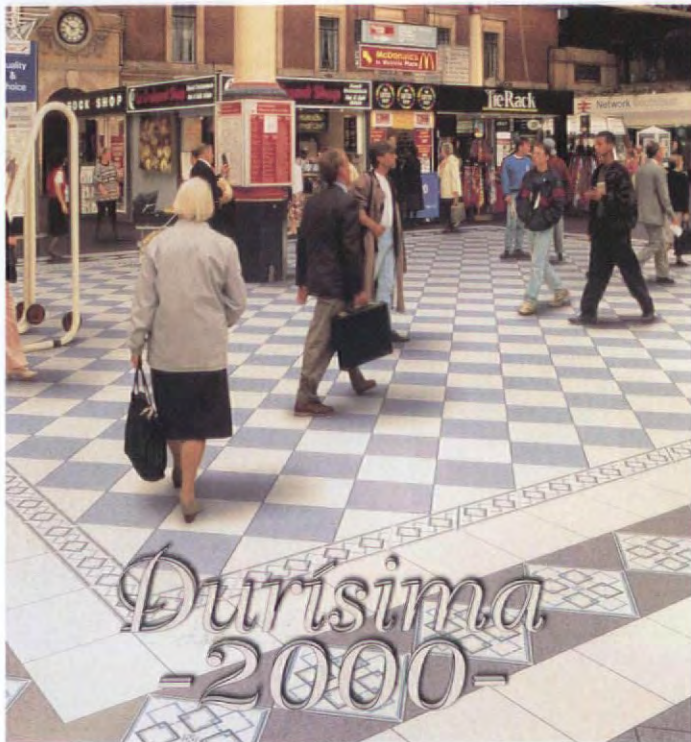
Gres de Breda introduce their natural extruded stoneware which is the result of a blend of different selected clays. The picture shows their 33x33cm format interior floor tile. Due to the high firing temperature, Gres de Breda products are quality tiles with high technical characteristics.





### Gres de Valls, S.A.

Gres de Valls, S.A. introduce the DURISIMA-2000 series which completes a stage in their development of heavy duty products. Advanced quality control systems ensure that this product complies with all the required technical standards.



### Natucer, S.A.

Natucer S.A. have recently introduced their TRAFIC series available in the 25x25 and 31.6x31.6cm format in brown and mahogany together with a range of complementary pieces. This floor tile is suitable for interior or exterior use in high traffic areas such as hotels, commercial centres, restaurants etc. due to its frost-resistant and slip-resistant qualities.



### Cerámicas Alteret, S.L.

Cerámicas Alteret manufacture handmade products based on centuries old craftsmanship, combining elegance and comfort with top quality, long lasting materials. Glazed, unglazed and marble tiles are available in a wide range of colours together with their corresponding complementary special pieces.

### Guillamon Bou, S.A. "Guibosa"

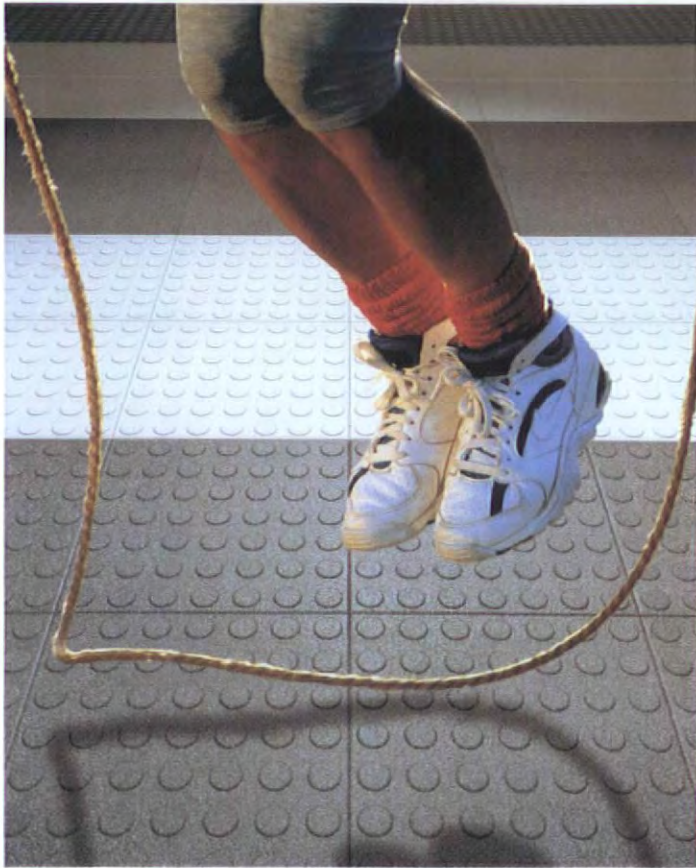
Guibosa introduce their BLANCO LISO series in the 31 x44cm format and their RUSTICO 6 floor tile in the 33x33cm format, shown with a border which gives the appearance of an imaginary rug. This floor tile has a Mohs 5 and is resistant to crazing.





### **Cerámica Cabrera S.A. "Ceracasa"**

Cerámica Cabrera S.A. "Ceracasa" introduce their TECNICA series in the 25x25cm format in a range of seven colours in a smooth or structured finish. This floor tile is suitable for exterior use and is accompanied by a special skirting which has been designed to facilitate cleaning. Technical characteristics include water absorption of 3 percent, Mohs 9, PEI V, slip resistance, resistance to frost, crazing and thermal shock.



### **Azu-vi, S.A.**

Azu-vi, S.A. introduce their ALAVA series. The picture shows the 31.6x31.6cm format floor tile in brown, the brown Gasteiz border 15.8x31.6cm and the brown Gasteiz angle 15.8x 15.8. This series is also available in ivory and grey and is slip resistant, resistant to crazing, thermal shock, frost, and has a PEI V and Mohs 8.



### **Cerámicas del Foix, S.A.**

#### **"Roca"**

The picture shows the PG1N series which is available in the 20x20, 31x31 and 40x40cm formats in 15 different colours together with a wide range of complementary special pieces.



# WORLDARCHITECTURE

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