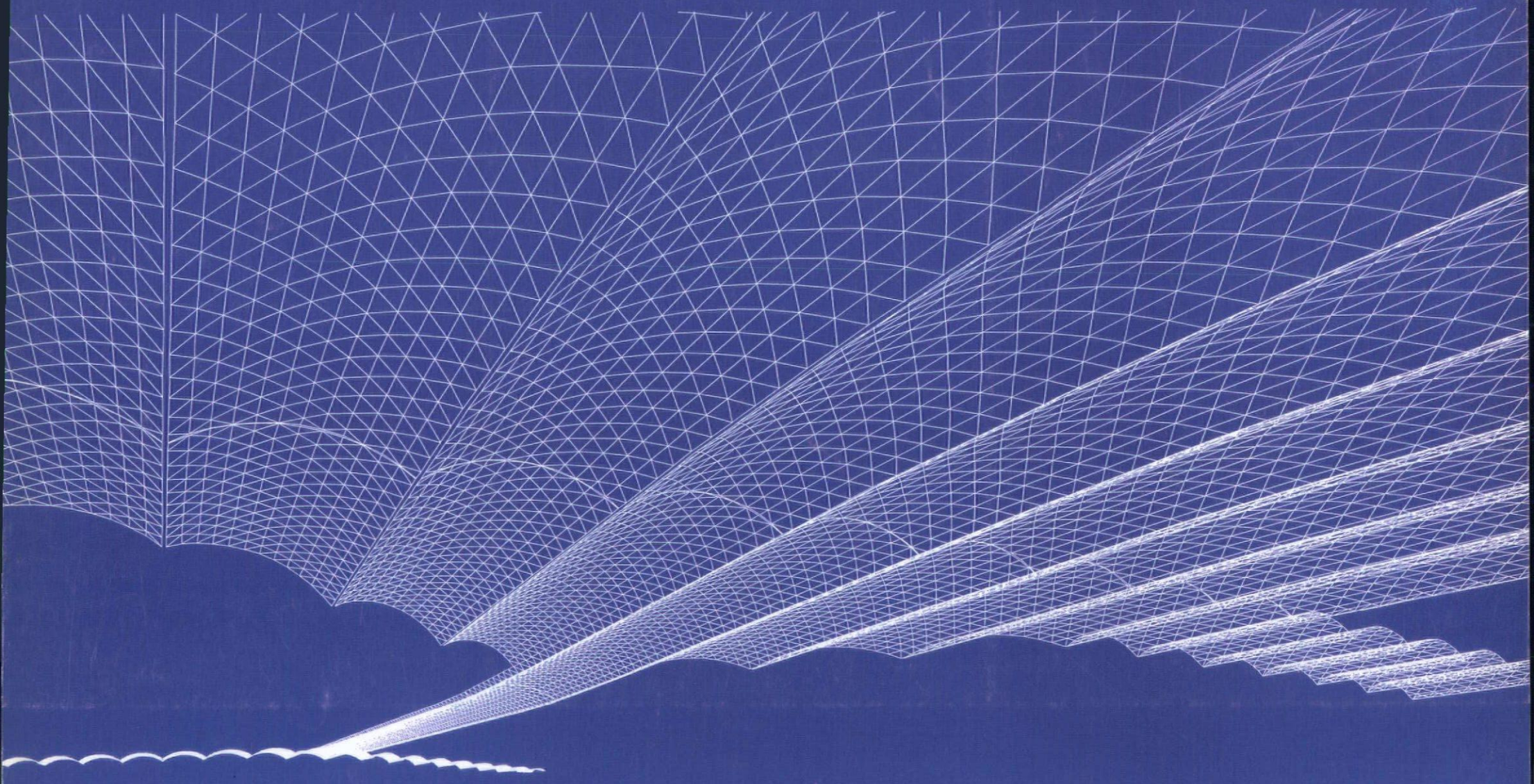
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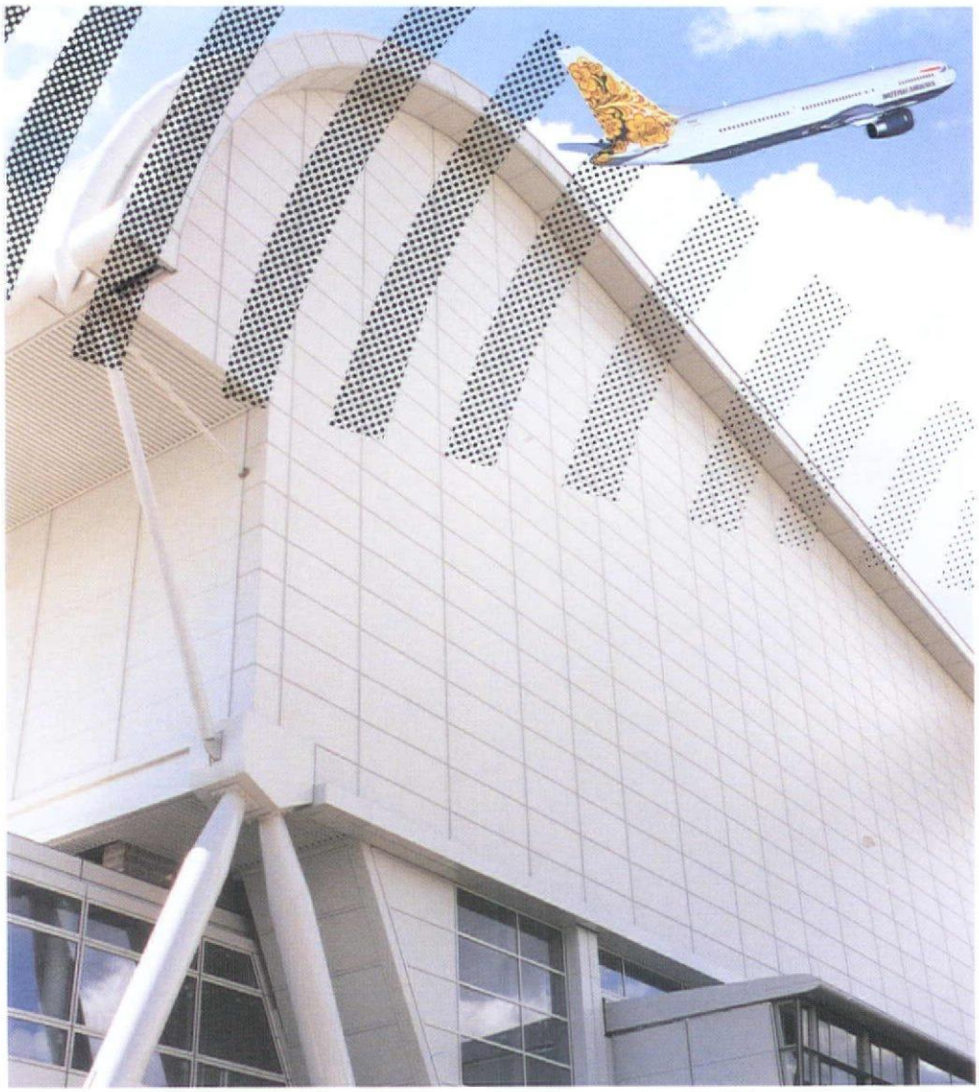
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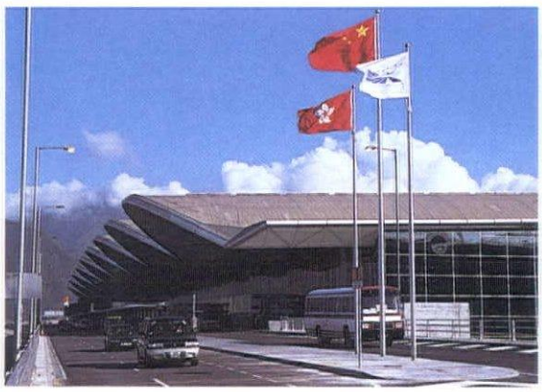
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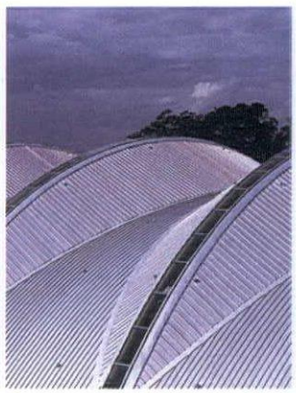
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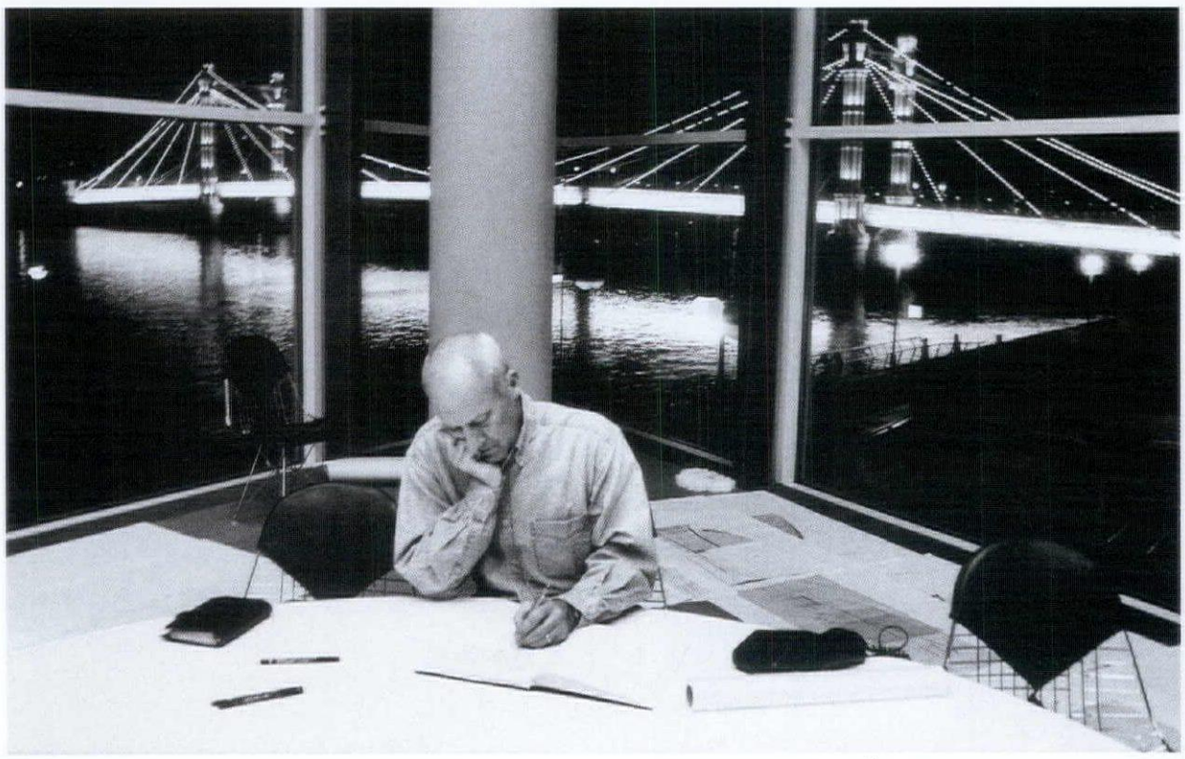
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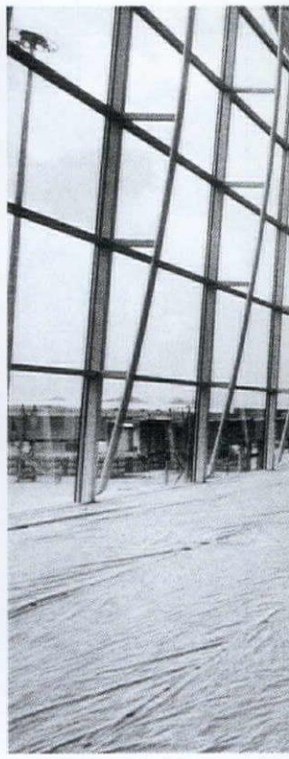
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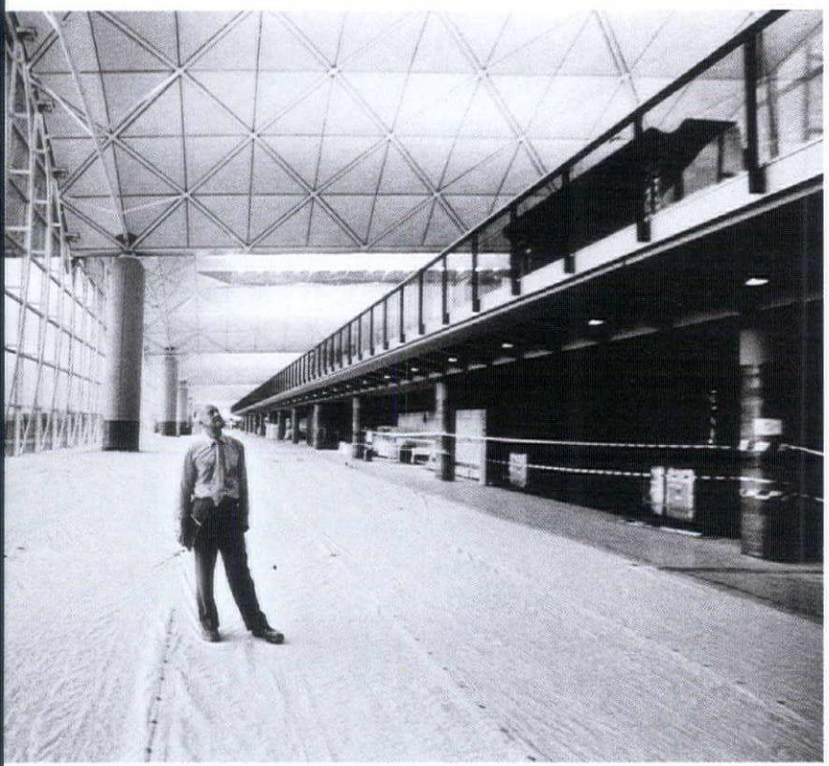
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Seated at a table of his own design, Sir Norman Foster works late into the night at the headquarters of his architectural practice on the River Thames. Half a world away, the finishing touches are being put to another of Foster's designs: the giant terminal building at Hong Kong's new airport. It is more than a kilometre long, yet every detail of this gleaming steel and glass structure can withstand the closest scrutiny. As, indeed, can the Rolex GMT-Master II that never leaves Sir Norman's wrist. Thanks to its 24-hour hand and rotatable bezel, Sir Norman can keep track of his architectural projects right around the world.

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GROUNDING THE AIRPORT

The airport, the twentieth-century's unique building type, seems to be growing up – to be starting to have the ability to celebrate rites of passage as well as brute function. But while airports are likely to be some of our most permanent buildings, we are far from being able to evolve ways of relating them to the fabric of cities.

We tend to have a rather exaggerated notion of twentieth-century mobility. Patrick Geddes once remarked that the Roman Empire had a communication system so efficient that it was not bettered in terms of speed until the nineteenth century,[1] and not equalled in density of network until this one. Even in medieval times, he pointed out, after the destruction of the Roman road system, huge numbers of people went round Europe on pilgrimages, and (often monstrously) on the Crusades.[2] In the Muslim world, many moved over vast distances to undertake the hadj, and the great trans-Asian caravans linked China and Europe by very well ordered routes. The explorations of the world by Europeans in the seventeenth and eighteenth centuries[3] paved the way for quite large proportions of then much smaller populations to travel long distances. So the notion that before the advent of mechanical transport, people travelled little or not at all is another example of twentieth-century hubris. Travel has always been part of human culture since our species emerged as hunter-gatherers.

But of course the frequency and convenience of long-distance travel have greatly improved, and for the individual traveller it has never been cheaper. Yet in terms of investment, in vessels, tracks and systems and in arrival and departure buildings, transport has never cost more. As David Harvey has pointed out, this has led to some interesting contradictions in modern capitalism which, he holds, is concerned to 'reduce spatial barriers, to annihilate space through time' with mass transport, free flows of capital, resources and information.[4] But 'spatial barriers can be reduced only through the production of particular spaces (railways, highways, airports, teleports and so on) ... The production, restructuring and growth of spatial organisation is a highly problematic and very expensive affair, held back by vast investments in physical infrastructures that cannot be moved, and social infrastructures that are always slow to change'.[5] So in a curious way, the very investments made in the transport structure to make it more efficient and universalizing tend to provide stabilizing points and elements in the constant flux of the post-modern world.

While airports, stations and other such buildings cannot, as some have argued, be a substitute for the traditional city (see p50), because of their stabilizing effect and their huge human and economic importance, they need special treatment. This is only gradually being realized: think for instance of the shambolic accretive chaos of Heathrow Terminals 1 and 2 (and hundreds of others round the world). Or the dreary processing shed at Heathrow Terminal 4 and all its many cousins. Piano and Foster have shown how the experience of airports can be agreeable, dignified and efficient, with well-lit spaces, clearly planned routes to lead passengers between land and air transport, and, most important of all, sense of individual place within the mighty whole. Distracting excrescences and events are minimized, while views out to the aeroplanes (and over sea and mountains in the case of Osaka and Hong Kong) are offered in ways which open the buildings to their surroundings, and allow their users to orientate themselves in relation to earth and sky.

The parade of human life

While they may not be city squares, airports do have analogies with traditional city forms: the most obvious being the gate in the city wall, and by extension, the station. From the earliest times, transition from travel to stasis has been celebrated in buildings which are both security barriers and monuments to arrival and departure. With the new generation, it can be argued that airports have begun to show that they are capable of embodying such rites of passage in agreeable, efficient and dignified ways. They have perhaps achieved the degree of integration with the web of ordinary life which Frith and Monet celebrated in the nineteenth century. Yet a mere couple of decades earlier than those artists made their great paintings which show the station as a setting for the parade of human life, Dickens could portray the railways' arrival in London in *Dombey and Son* as the 'track of the remorceless monster, Death'. A train 'shrieks and cries[6] as it comes tearing on resistless to the goal: and now its way, still like the way of Death, is strewn with

Opposite
Railway stations became essential parts of the city fabric in a surprisingly short space of time. Frith's extraordinary painting of Paddington shows how, by 1865, a mere three decades after the first railway station was opened, the whole of society could be seen there. Airports have still a long way to go before they are so integrated with daily life.
(The Railway Station, 1862 by William Powell Frith, 1819-1909. Royal Holloway and Bedford New College, Surrey, UK/Bridgeman Art Library, London.)

ashes thickly. Everything around is blackened. There are dark pools of water, muddy lanes and miserable habitations far below'.[7]

Half a century ago, Heathrow (now the busiest international airport in the world) was a cluster of second-hand military tents in a muddy field.[8] Air travelling then was as crude and horrid as rail journeys in Mr Dombey's day. While no one could possibly claim that travel through any of Heathrow's terminals is agreeable, it is now neither frightening nor disgusting. Presumably the technology of air transport will continue to improve (if not perhaps at the same pace), and we can look forward to at least the difference in experience between Dickens and Frith.

Railway stations are so much taken for granted now that they are seen as essential parts of the structure of cities. Habitude and changes in technology (mainly the abandonment of steam, and the general acceptance of the less obviously polluting internal combustion engine) have made such a difference in our perception of stations that few find them disagreeable any more (at least on the continent of Europe, Japan and other places in which rail travel is properly regarded as being a civilized form of locomotion): indeed no self-respecting German speaking town is without its Bahnhofstrasse, or a French one without its rue de la Gare. And we now have a climate in which stations are beginning to extend their roles. In the more civilized parts of Europe, stations have never been ashamed of giving a decent meal.[9] Now, they are taking on and renewing other roles, as for instance in the extension to the Zurich Hauptbahnhof shows (p79) with its new arcades and automated supermarkets, which can be used at night when (quite reasonably) no Swiss shop assistant will work.

Harvey is surely correct in his analysis that the investment in a transport terminal is so colossal that we must expect stations, airports and so on to be almost the only stable elements in a constantly shifting modern urbscape in which only quite a small proportion of the general fabric will remain (saved for aesthetic, historical or peculiar economic reasons). Termini may grow and change, but they cannot be relocated. So they had better be tamed. Osaka and Chek Lap Kok (p50) show how they can be made into memorable and humanly enriching places.

New synthesis needed

What is still unclear is how they can be related to the rest of the city. Without radical new technologies, we cannot expect to see the close integration of city and airport that was attempted in '30s experiments like Tempelhof and Croydon.[10] We should be looking forward to a new symbiosis in which city and transport termini can grow together, as they did with such pain in the nineteenth century.

Architecture seems to be gradually getting airports right. Planning, architecture's now often neglected sibling, seems not to have caught up. In Hong Kong, the smallness of the territory (and the nature of its previous government) ensured that Chek Lap Kok had to be intimately related to the centre of the city. And that it would generate a city quarter on Lantau. Contingencies have made the new Hong Kong airport a crucible of thought about how to make gateways and memorable places. We need many more such experiments.

PETER DAVEY

1 Though now every time a 747 takes off, it uses the same power as all the horses of the Roman Empire.

2 Geddes, Patrick, *Cities in Evolution*, Williams and Norgate, London, 1949, p60.

3 And, it must be said, the infamous Atlantic and Indian Ocean slave trades.

4 Harvey, David, *The Condition of Postmodernity*, Blackwell, Cambridge, Mass and Oxford, 1992, p232.

5 *Idem.*

6 You can still hear this shrieking and crying on London's Docklands Light Railway, which seems to have been designed to Victorian track specifications.

7 Dickens, Charles, *Dombey and Son*, chapter XX (the novel was published in parts during 1846 and 1847).

8 Best, Alastair, AR May 1991, pp58-61.

9 Nor in the best of America. The oyster bar at Grand Central in New York urbanely continues to offer memorable gastronomic pleasures.

10 More recent experiments like the City Airport in London (which provides international flights to neighbourig capitals from the old inner London Docklands) scarcely count, for their traffic is only a trickle.

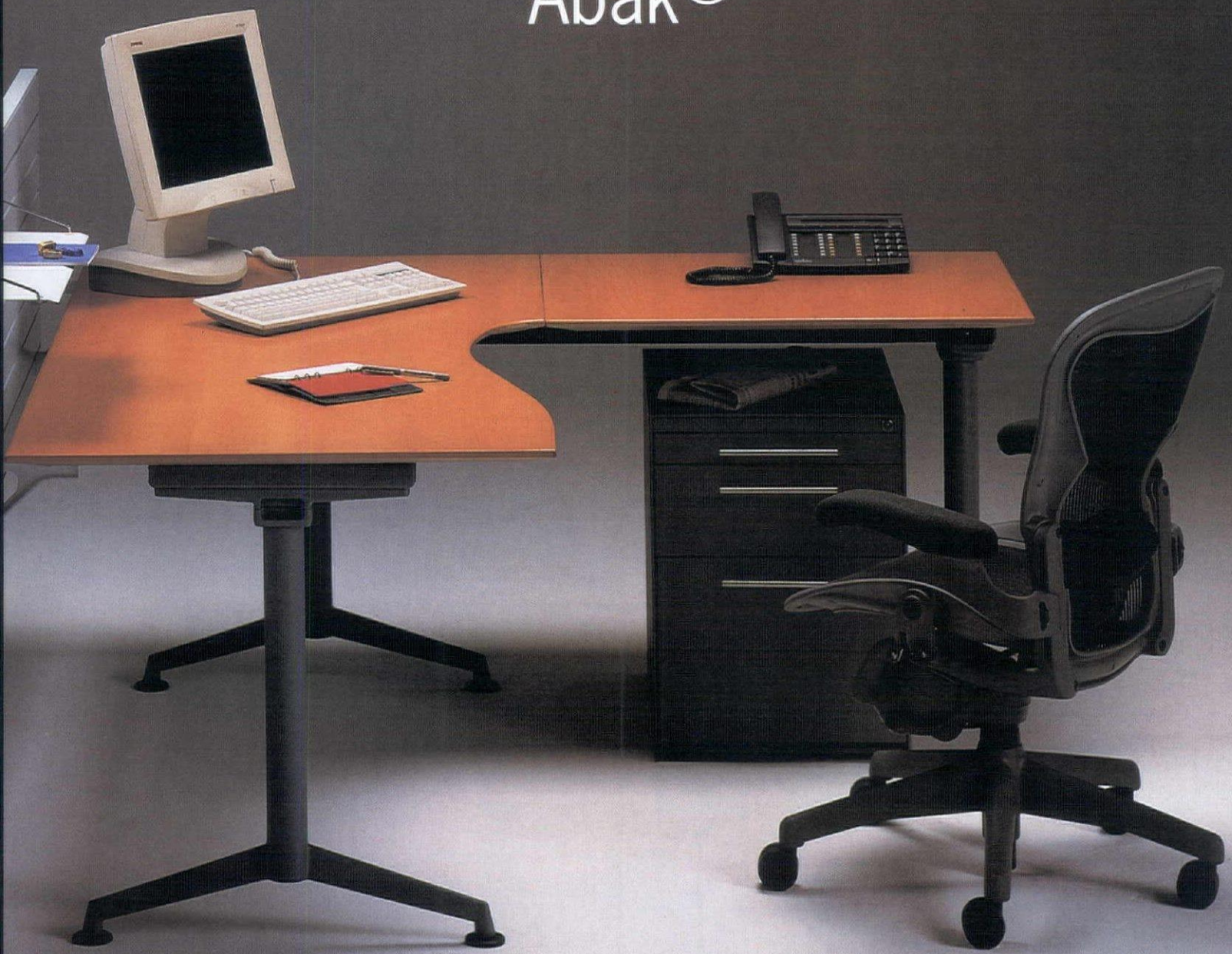




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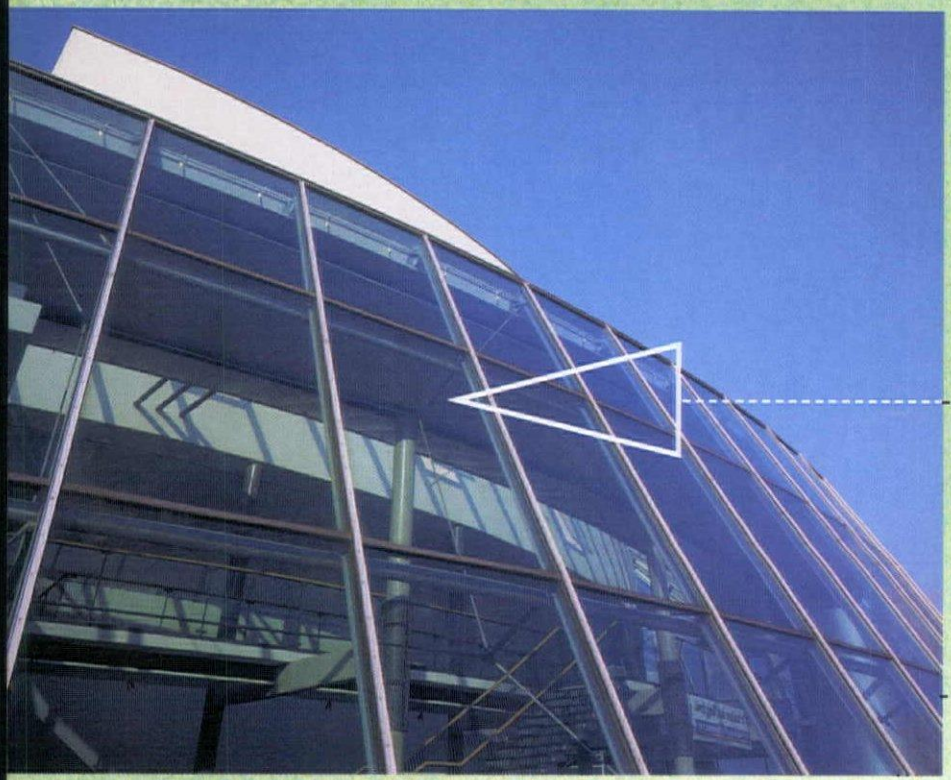
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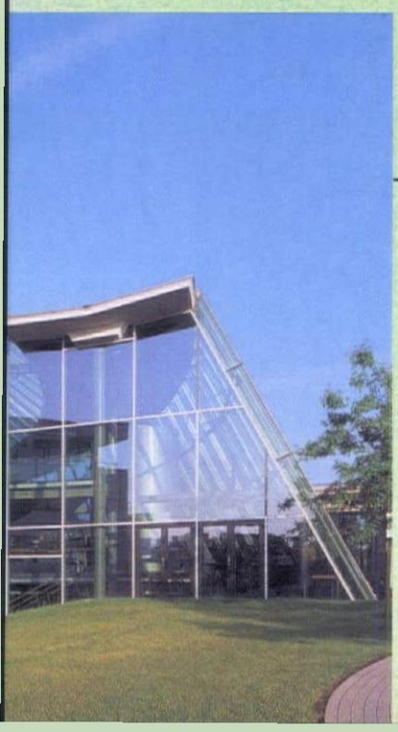
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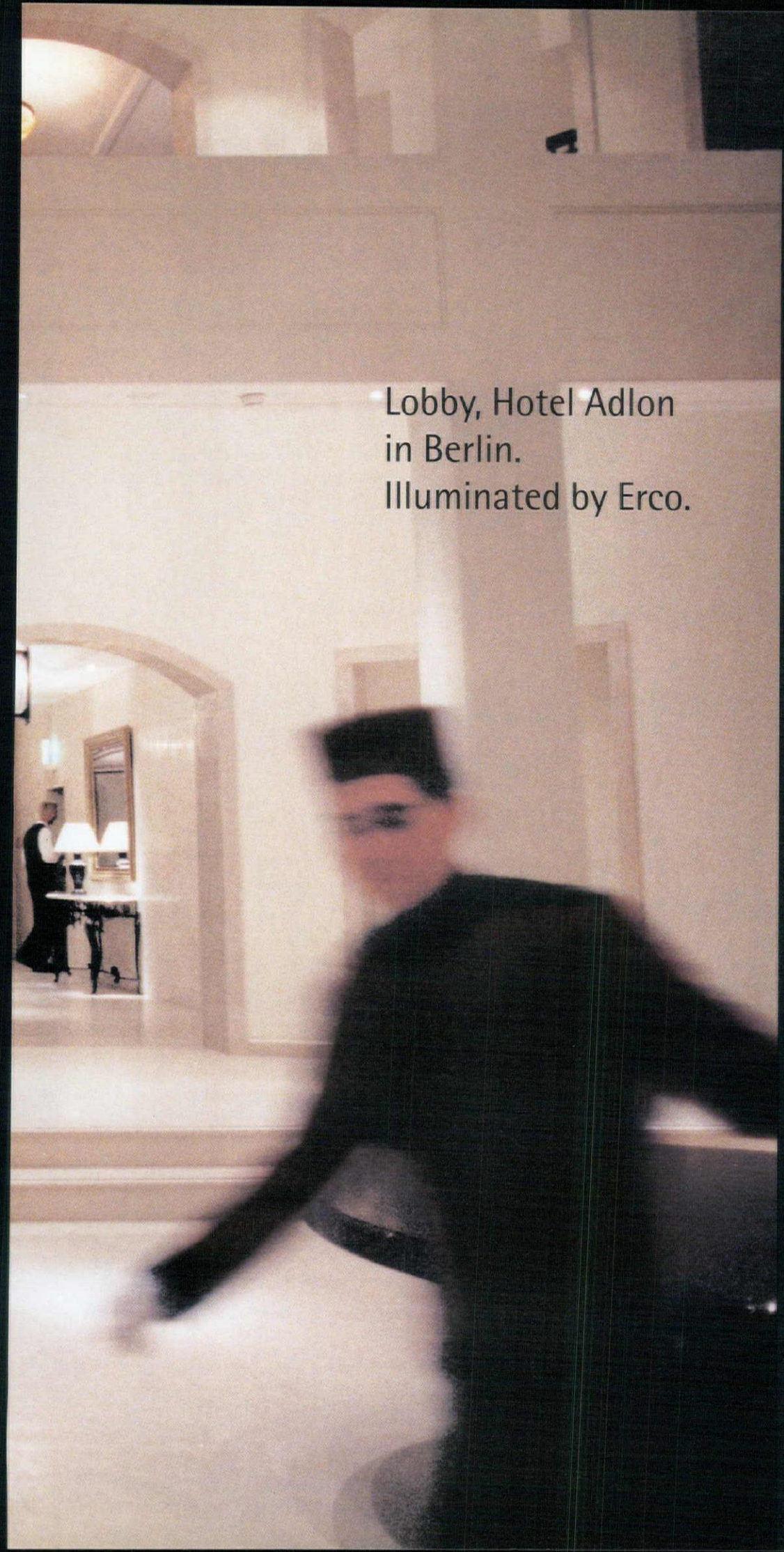
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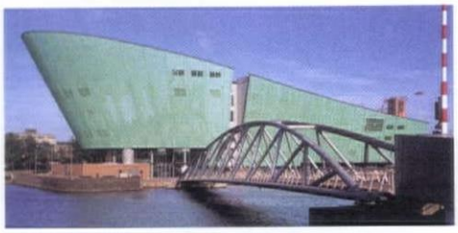
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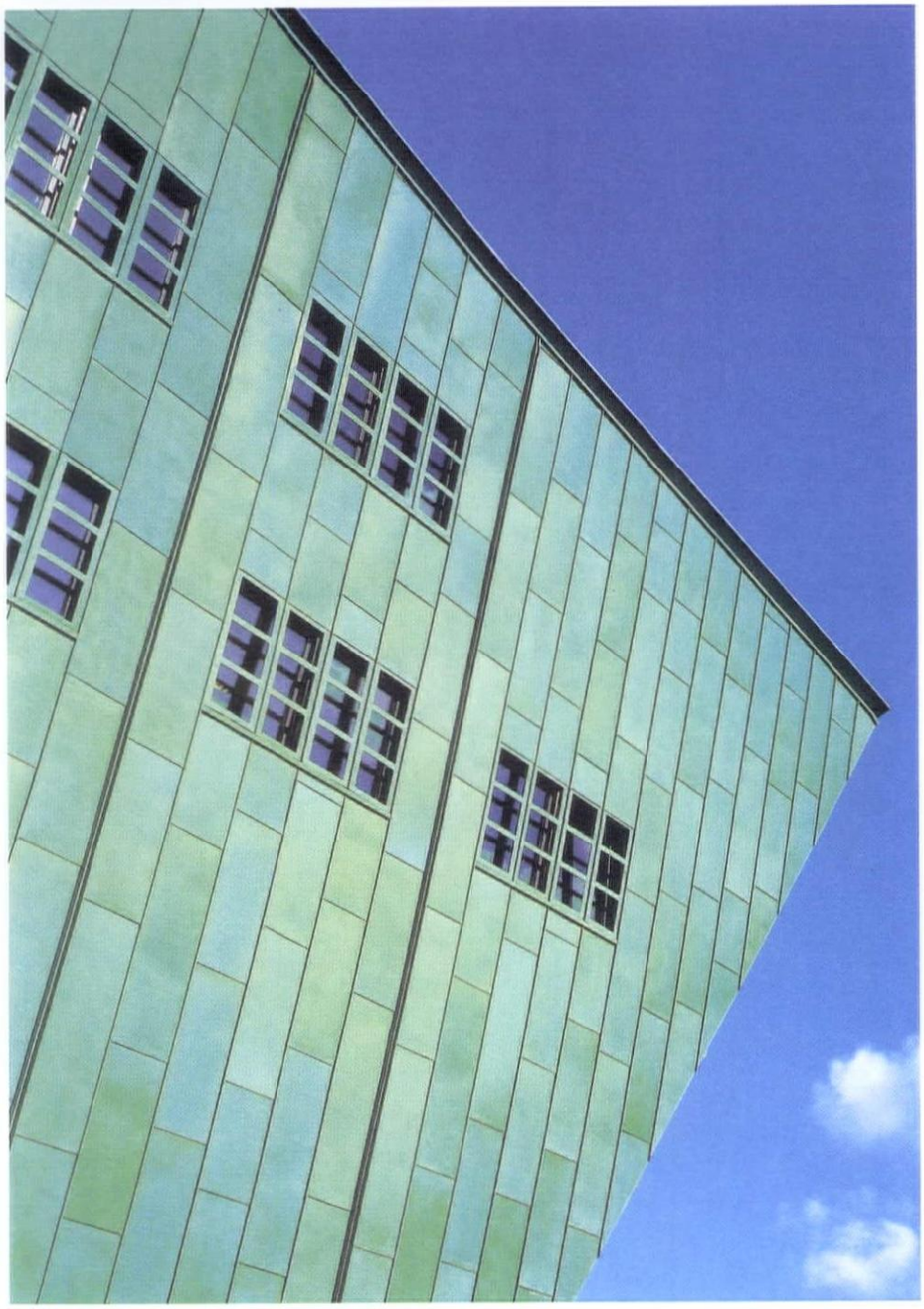
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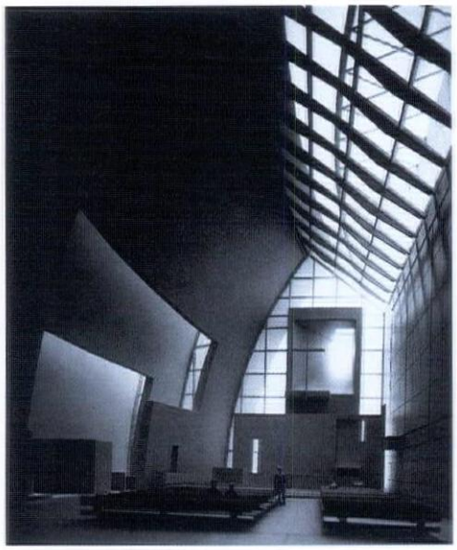
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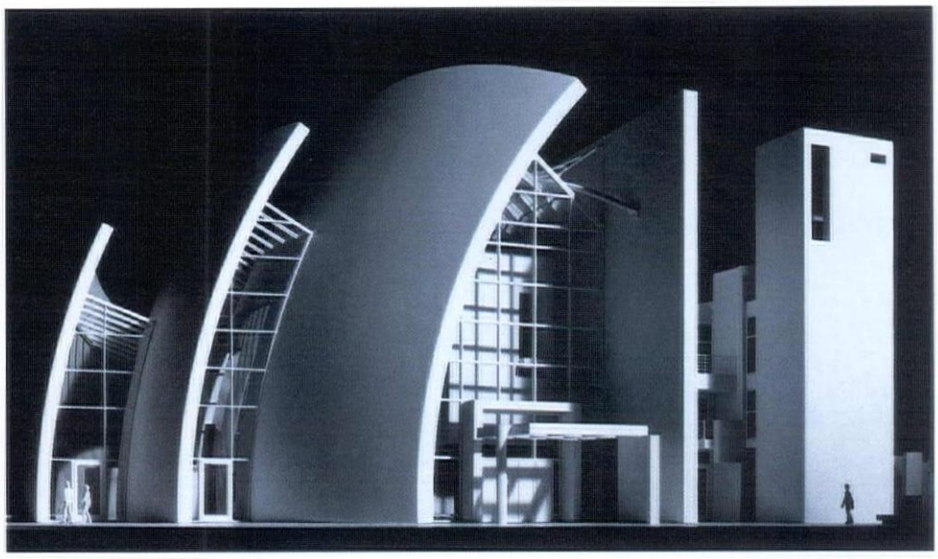
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VIEW



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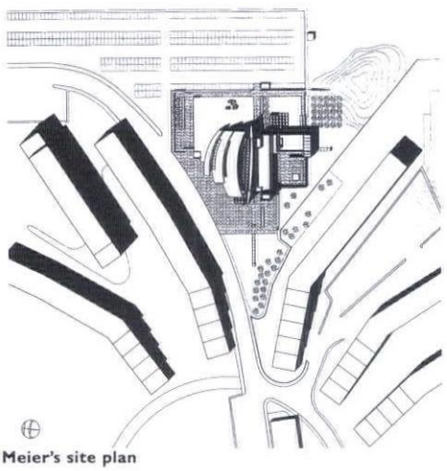


Model of the Church of the Year 2000.

Meier in Roma

Since the early 1990s, the Vacariato di Roma (Church of Rome), has planned the building of 50 new parish churches for the Christian Jubilee of the year 2000.

The new churches will be built among relatively new neighbourhoods on the periphery of the city. Of the 50, the Vacariato wanted one church particularly to signify the importance of the *Jubileo*. Designs for a Church of the Year 2000 were sought from five international architects – Behnisch, Calatrava, Eisenman, Gehry and Meier. Meier's proposal won and construction work has just begun in the city's Tor Tre Teste quarter.



Meier's site plan

On the outskirts of Rome, the site is in one of the peripheral zones typical of the 1960s and '70s private housing neighbourhoods. It lies next to an open park containing the impressive remains of an ancient Roman aqueduct. The triangular plot of the Meier church divides the site in two. The sacred realm to the south (where the nave is located) is separated from the secular precinct to the north. A paved *sagrato* (churchyard) to the east reaches into the heart of the housing complex and provides an open piazza for outdoor gatherings. The northern half of the site is divided into two courts: the eastern court is sunk by one storey to provide light and access to the lower floor community centre, while the western court is separated from the adjacent meditation court behind the church by a paved walkway.

The structure of the entire complex is based on a series of squares and four circles. Three circles of equal radius generate the profiles of three concrete shells that make up the body of the nave together with the spine wall. The three shells embody the Holy Trinity, while the reflecting pool symbolizes the ritual of baptism. The nave is enlivened by a constantly changing pattern of light and shade from the glazed skylights suspended between the shells. The particular character of the different spaces of the interiors will depend on the play of weather, the seasons and the diffusion of light through the inner volume of the church.

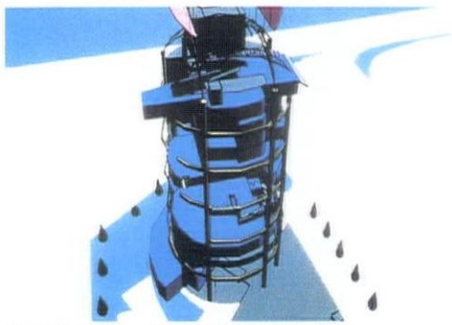
Meier's Church of the Year 2000 is the only building assured of completion in time for the *Jubileo*. Of the remaining 49 proposed parish churches, not all have yet been initiated, and of those that have, only some will be completed by 2000.

Rome itself is making grand preparations for the *Jubileo*, which runs from Christmas 1999 through to January 2001. Events will focus on the city's historic and cultural heritage and will have a major impact on the entire city, especially the historic centre. The Commune di Roma is responsible for 300 urban projects worth $2 billion, including restorative work to the significant monuments on pilgrims' itineraries, new building projects, communication facilities and transport infrastructure. In addition, smaller scale private investments estimated at around $1.5 billion will be distributed mainly in the tourist sector, but will also include restoration to monuments and cultural events. ELEANOR CURTIS

Aga saga

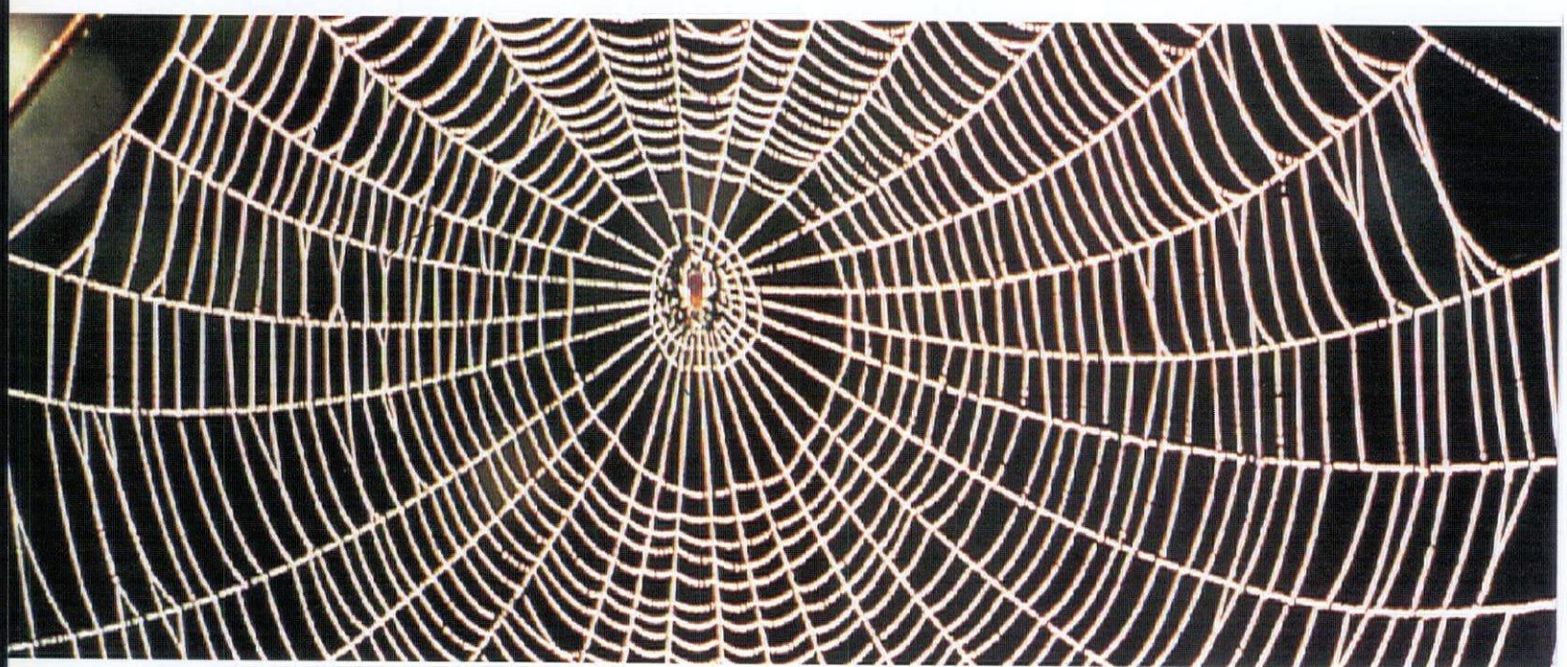
The extraordinary range of the Aga Khan's Awards for architecture is shown at an exhibition at the RIBA in London (until 15 September).

The aim of the scheme (which has had six three-year cycles now) is to celebrate the work of people who have 'improved the physical environment of Muslims and those among whom they live'. The awards are the only ones which are carefully given only after buildings have been in use for a while, so that premiated work has some chance of standing the test of time.



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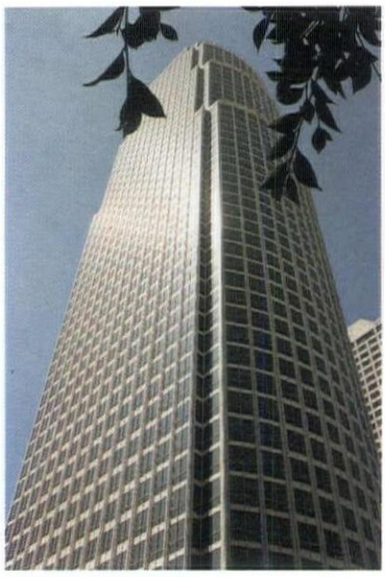
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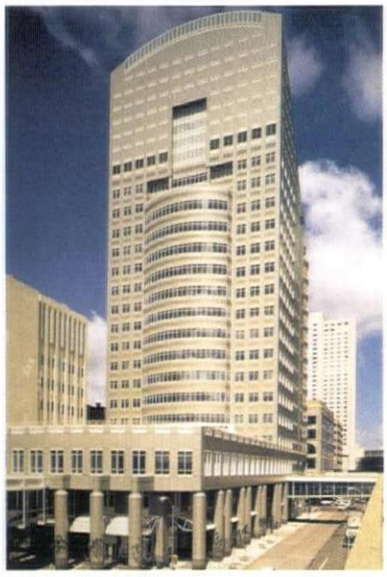
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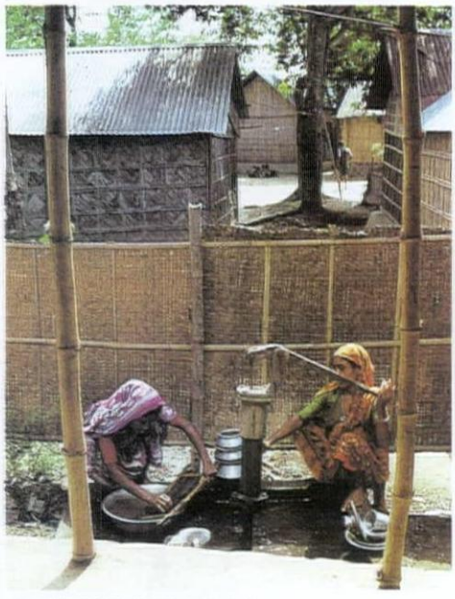
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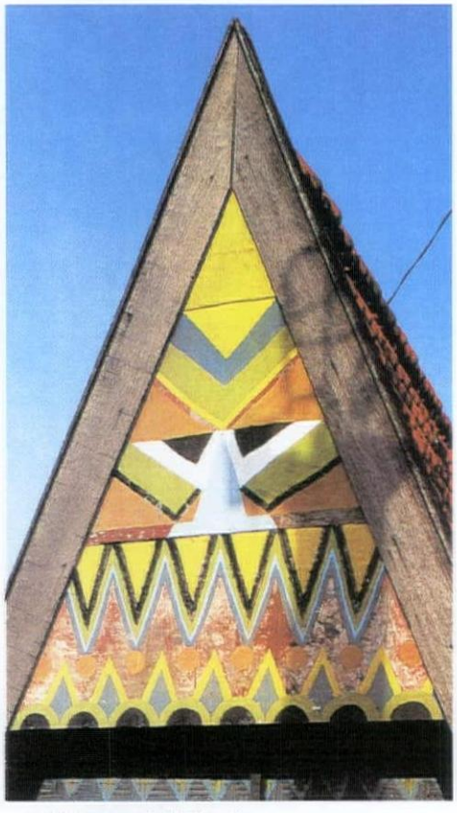
VIEW

Bravely, the Awards have recognized work as different as village improvement projects for the very poor in the Third World to conservation and High-Tech glamour like Jean Nouvel's Institut du Monde Arabe in Paris (AR January 1989) and Ken Yeang's Menara Mesiniaga bioclimatic tower in Kuala Lumpur (AR February 1993). Such buildings would doubtless be recognized by the world's architectural press in any case. But, without the Awards, we would probably never have heard of the Kampong Kali Cho-de improvemnet in Yogyakarta, Indonesia (AR October 1992), in which a wonderfully courageous priest architect, Yousef Mangunwijaya, helped a crowd of thieves and prostitutes to become a community and create a beautiful urban village on what was previously a municipal rubbish dump. Nor, probably, would the work of the Grameen Bank in Bangladesh (AR November 1989) have been heard of. The bank mounts a programme to provide poor peasants with four precast concrete columns that enable them to construct houses that can withstand the chronic floods of the area, enable them to retain their capital and start again when the waters subside.

All the Aga's award-winning buildings, landscapes and urban schemes set examples and provoke thought, but none more so than the work for the very poorest. PETER DAVEY



Aga premiated Grameen Bank ...



... and Kampong Kali Cho-de.

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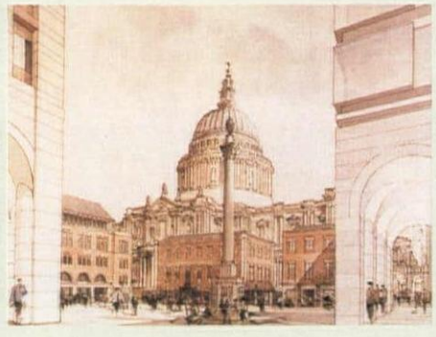
The Jubilee line extension is the most significant addition to the London underground network in 25 years.

Connecting with Green Park in central London and running to Stratford, the 10 mile extension will provide a direct and much needed link out to London's Docklands, with journey times of around 20 minutes. In a conspicuously enlightened act of patronage, each of the 11 new stations have been designed by a different London-based architect, generating a series of elegant, modern designs. Co-ordinating this huge enterprise is an in-house London Underground team headed by Roland Paoletti, who originally commissioned the stations and has been memorably described as the 'Underground Medici'. One of Paoletti's showpieces is the new North Greenwich station by Alsop, Lyall & Störmer at the tip of the Greenwich Peninsula, which will serve the Millennium Dome and its regenerated surroundings. Now nearing completion, Alsop's design is a Piranesian fantasy of vertiginous levels, bisected by bridges, stairs and escalators. Angular *pilotis*



North Greenwich's new underground station.





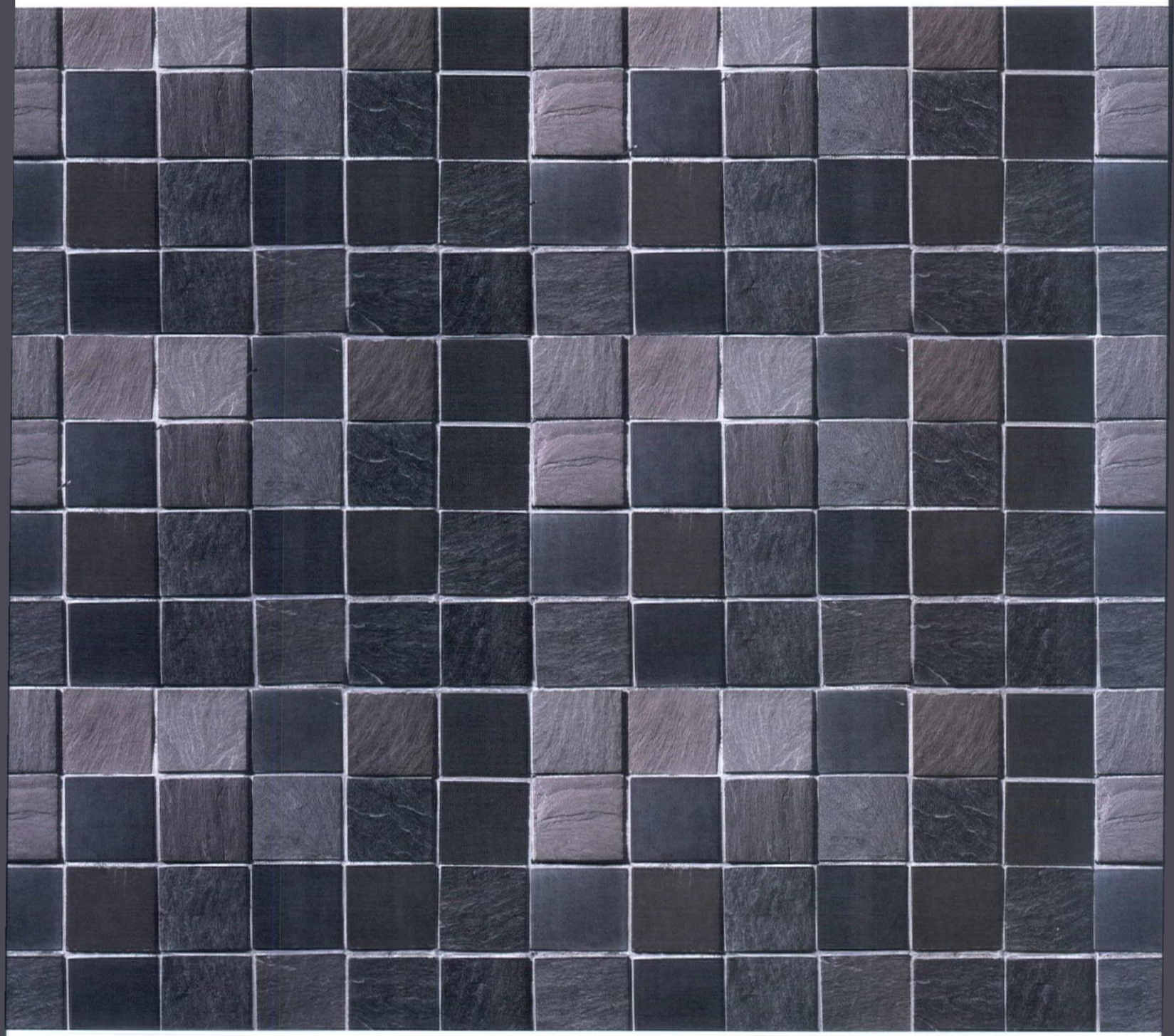
The chaotic story of Paternoster Square, next to St Paul's Cathedral in London, has taken another lurch forward, with planning being granted to William Whitfield's masterplan by the City of London Corporation.

This, it must be hoped, is the last act (until building starts) in a very unhappy drama which demonstrates the British Establishment's appalling lack of cultural confidence. In 1988, Arup Associates won an international competition to rebuild the area (now occupied by most unfashionable post-war slabs by William Holford, AR January 1988).

The scheme was thrown out after criticism by the Prince of Wales, who lent his imprimatur to a vulgar and hugely overblown PoMo proposal : the new buildings were so gross that they masked the cathedral and competed with it in scale. The project was abandoned in the early '90s slump.

Whitfield's scheme promises to be more modest and decorous, for the commercial elements (which fund the whole operation) are to be held in check, and their massing will not dominate Wren's masterpiece. Though the model and perspectives give the impression of mincing Neo-Georgianism, reality is likely to have a good deal more bottom, for (as well as Whitfield) Richard MacCormac, Michael Hopkins & Partners, Arups and Allies & Morrison will be involved on particular buildings: all have shown that they can contribute to the urban scene with sensitivity and appropriate scale – and without pastiche. PETER DAVEY

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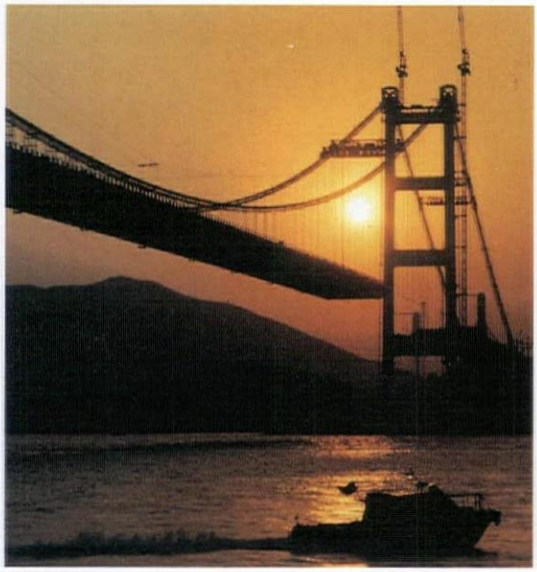
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stalk imperiously through the cavernous space, and great planes of cobalt blue mosaics add drama and sensuousness. It is mercifully far removed from the drear dilapidation that Londoners have come to accept as their lot on the Underground and should set new standards for the design of public transport facilities in the capital. The AR will consider the entire Jubilee line project in greater detail next year. C. S.

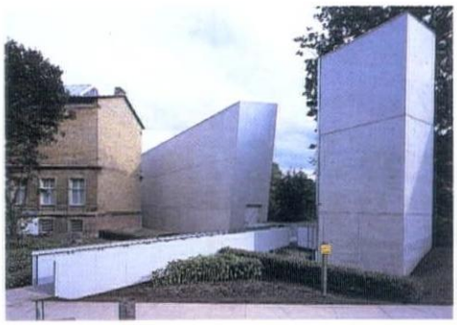
The Italian job

An international two stage competition has been launched for a Contemporary Arts Centre in Rome.

The Italian Ministry of Cultural Heritage has allocated 90 million lire to generate a 26 000m² complex which will house works principally of the twenty-first century, but which will start its collections including architectural items 'from the symbolic and revolutionary date of 1968'. It will, say the organizers, 'be a place where the philosophical problems of modernity ... will be addressed by artists and the public in an immediate, informal way through a variety of means of communication and media'. The three hectare site is a redundant military barracks in the Flaminio quarter, near the Tiber and the '60s Olympic Village, and Nervi's world famous Palazzo dello Sport.

Entrants (qualified architects and engineers) are initially required to submit curriculae vitae and evidence of appropriate design work. Up to 15 designers will then be asked to develop preliminary designs in stage two; stage two entrants will be reimbursed to the extent of 30 million lire.

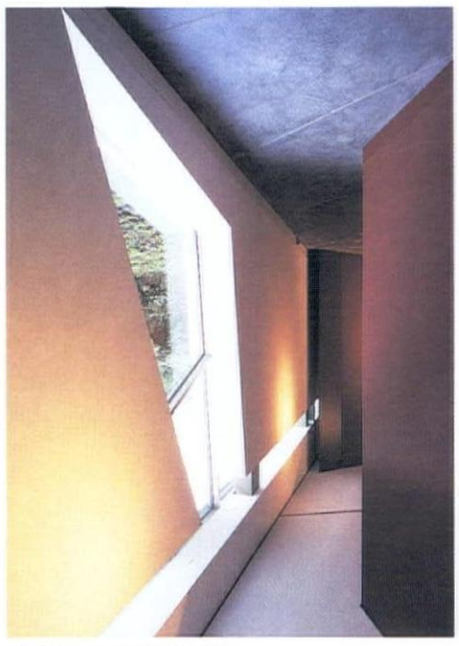
Further details from the competition secretariat: Luciano Chianese, *Centro per le Arti Contemporanee, Roma, Concorso internazionale di progettazione*, Soprintendenza Speciale Arte Contemporanea, viale delle Belle Arti 131, 00197 Rome. Tel +39.06.80662518; fax +39.06.8082146.



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Osnabrück opens

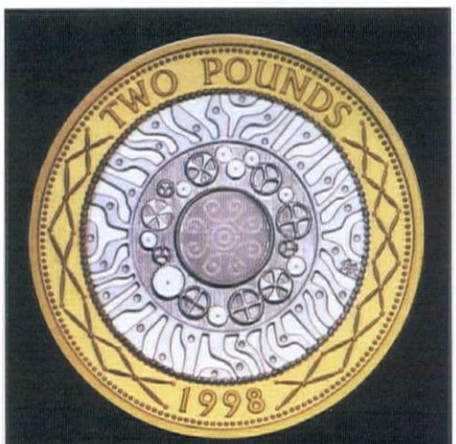
The museum at Osnabrück by Daniel Libeskind, dedicated to the paintings and life of Felix Nussbaum, opened in July and is the first of the architect's building commissions to have been completed.

It was built by the city in recognition of one of its native sons – now considered one of the most important artists of the early twentieth century – who died in Auschwitz in 1944, and more generally as a mark of reparation for the Jewish community which was annihilated. Nussbaum's early work of the '20s and '30s drew comparisons with van Gogh and Rousseau, but later paintings done in exile in Belgium reflect menace, persecution and his increasing artistic isolation. The museum has spent 30 years putting the collection together.

Apart from the Jewish Museum in Berlin, we have not so far seen much of Libeskind that is tangible, but in both the Berlin and Osnabrück museums the same oblique hand is recognizable. You can find it in the way fractured blocks are set askew one another; and in the strong narrative undertow that directs composition and plan, and the orientation of buildings.

At Osnabrück, Libeskind has made restlessness and disorientation tangible, and on a first visit to interiors in which volumes are displaced or distorted, perspectives and planes seem to shift, the building is an exceedingly disconcerting place. This is before you have absorbed the contents of the phantasmagoric, often nightmarish, paintings.

The building like the Berlin museum is part of Libeskind's abstract insistence on the importance of never forgetting history. The distinctive parts of the museum are related through various means – disposition, oblique chinks like scratches in the external carapace, odd shaped



Britain has recently acquired a bi-metallic coin which, like its equivalents on the continent of Europe, is the highest denomination on offer before you get to paper.

Nothing wrong in that of course, but the reverse shows the awful fidgetiness which has afflicted the Royal Mint for generations. Every space must be filled. The round objects in a circle are in fact cogs, making the world's most meaningless machine; the squirms in the outer silvery ring defy explanation, but give a nasty impression of being related to the nameless, blind things that populate the bottoms of the oceans; the pattern in the gold circle looks as if it were knocked up by Adam as a bit of furniture decoration on a very bad day. Nothing relates to anything else: nothing has meaning.

Of course, we shall be told that the mess is to frustrate coiners. But the almost equal fiddliness of the one pound coins does not seem to prevent this (I have found more counterfeits in my pocket in the last few months than ever before). The Americans have the best coins in the world. They are simple, chaste and elegant. We seem to copy the United States in almost everything except when they do something decent.

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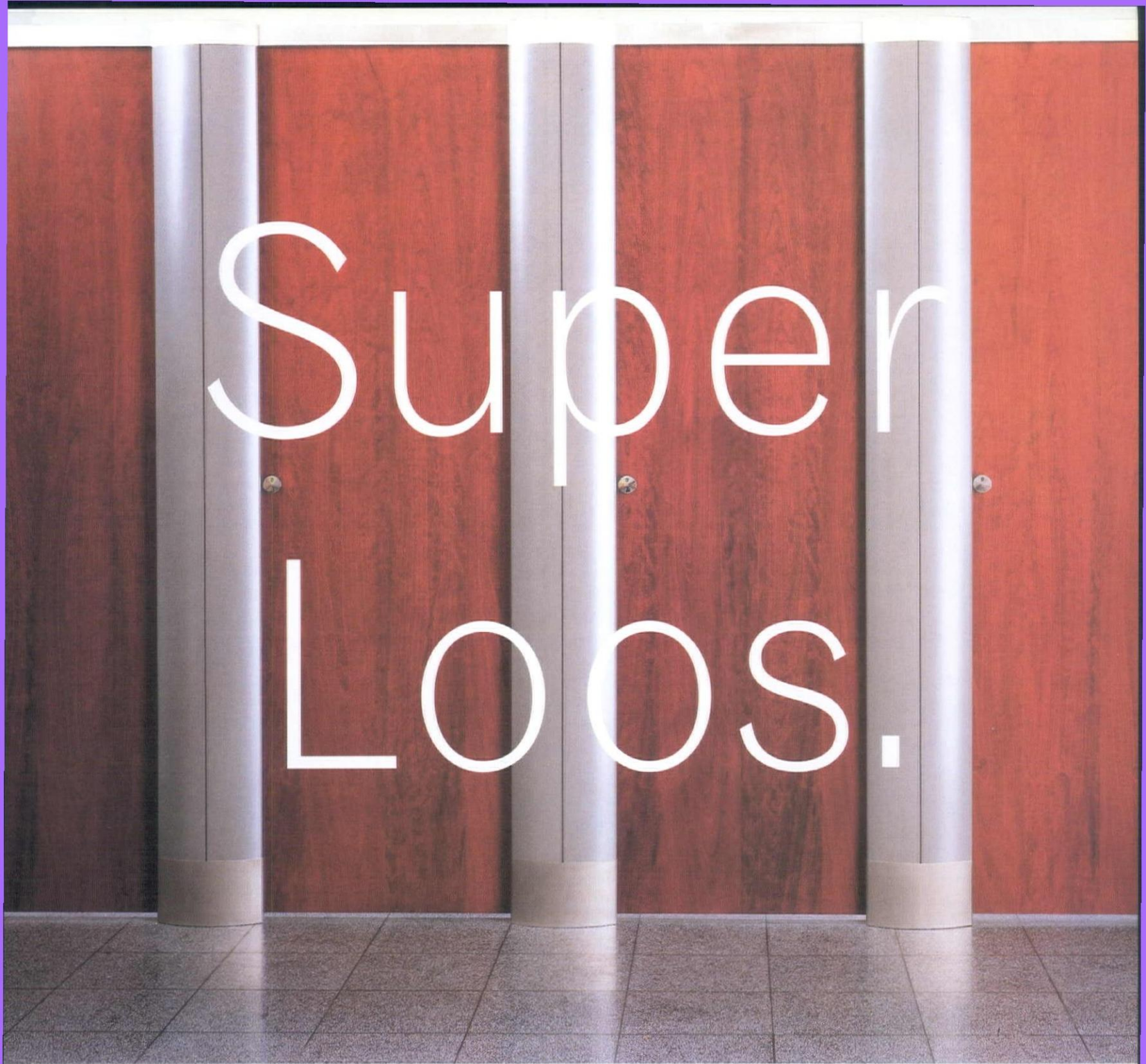
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VIEW

windows – to repositories of history like the fragments of a seventeenth-century bridge and architectural relics, discovered on the site, to the shadow nearby of the vanished synagogue; and to the sinister neighbouring villa which was the local Nazi headquarters. PENNY MCGUIRE

Addendum

Project managers, construction managers and strategic FM consultants for British Airways at Waterside were Mace; Espresso Bar tables and chairs supplied by Garry Monk Contracts; meeting room and visitor chairs Klaessons Möbler (see AR August, pp36-45).

letters

Lifeless ensemble

SIR: Your report on Lisbon's Expo 98 overlooked a crucial point: the ensemble is lifeless.I was there, and while the pavilions are often delightful and inventive inside, outside the level of design is so rarefied it practically defies visitor engagement or enjoyment. One wanders the site thinking 'Can this really be an Expo?'

A case in point is the Pavilion of Portugal, which may be capital-A Architecture but which nonetheless strikes a deadening blow to the ambience of the site, being a mute and almost hostile pair of boxes offering the cold shoulder to passing fairgoers and a gloomy, concrete-lidded plaza that appears to be waiting in despair for some grand purpose or event to cheer it up.

Expo 98 overall shuns colour, whimsy, and gaiety. It seems nearly indifferent to delighting its visitors and delivers instead an environment admirable perhaps for its architectonic rigour but which, bluntly put, is no fun. Perhaps this unfortunate stiffness partly explains the low attendance, and if there's a lesson to be learned here it might be that such enterprises can fail for lack of confetti amid the concrete.

Yours etc
MICHAEL KRESKI
Los Angeles, USA

Uniquely charged

SIR: I seem to be one of a dwindling number of European architects still working in Malaysia. Since the main exodus that began at the start of the year, the industry has been contracting under the tighter monetary policies imposed by the government. Despite the current situation, there remains an optimism among architects that the flip side of the economic turmoil is that the impetus for a resurgent profession will be imbued with a more accomplished maturity for the buildings of tomorrow. The industry attained a level of consciousness that had never been achieved previously, and from this, there can be no turning back. As cities like Kuala Lumpur begin to create their own type of synthesis, they become engines of inspiration that can drive the individual. Many may argue that the vision is not primarily Malaysian and that the precedent for the nation is foreign in origin, but there is now an atmosphere of debate in Kuala Lumpur, heated by the questions of how to realize specific environments in the city and why architectural ideals should be manifest.

The feeling of inspiration that has hopefully gripped the Malaysian psyche in the presence of the cities they are creating, is akin to that which many may feel when they see Siza's Portuguese Pavilion, in Lisbon. Your July article, showing the two main rectangular buildings, with the concrete draped perplexingly between them, represents an architectural vision that stands in defiance of the reasonable laws of nature.

The engineering feat creates a uniquely charged space, to animate the people and events held there. The pavilion also represents one of the more overt gestures I have seen recently and though it distinctly belongs to one end of the architectural spectrum of experience, it remains inspirational, an asset that can drive architects to new achievements.

Yours etc
PAUL BRADY
Kuala Lumpur, Malaysia

Lisbon elucidation

SIR: May I correct your piece on Expo 98, regarding the SOM/Regino Cruz designed Utopia Pavilion (AR July 1998, p31).

Foster and Partners/Sua Kay Architects and Arata Isozaki were invited to participate in the competition but pulled out and so did not submit any proposals for it. (It is rumoured that Isozaki did not consider the panel of judges, all Expo staff, sufficiently qualified for their task.)

Yours etc
MARIO SUA KAY
Lisbon, Portugal

Going bananas

SIR: Can anyone explain why Steven Holl's museum (AR August pp46-52) is supposed to be such a great contribution to Helsinki's townscape? This area of the Finnish capital has always seemed a mess, particularly when compared to the elegant Neo-Classical streets of Engel's plan. The early nineteenth-century produced an integrated city fabric.

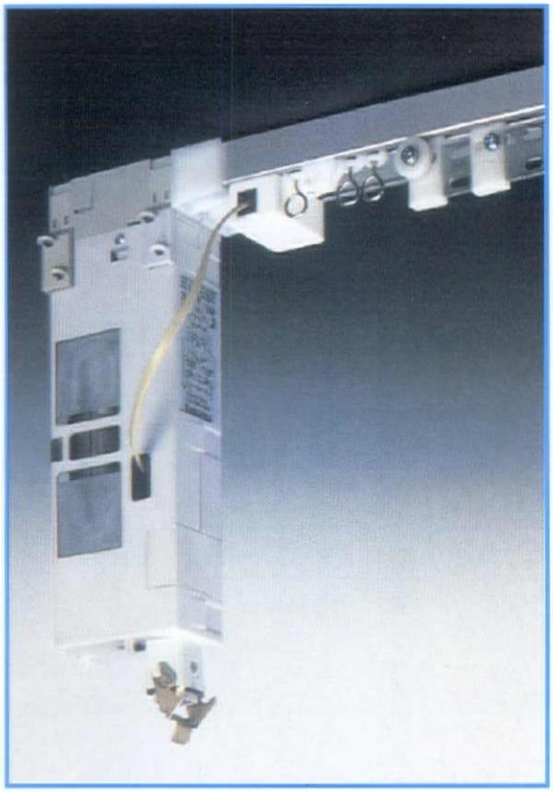
The twentieth century has apparently been capable of generating no more than a disjointed muddle of object buildings, including the Parliament building, the National Museum by Gesellius, Lindgren and Saarinen, and even the Finlandia Hall by the master himself. Holl's banana, dramatic as its interiors may be, seems to make the situation worse.

Yours etc
AUGUST GROSSCHEN
Hamburg, Germany

October



Metal has always been an indispensable ingredient of architecture since humanity discovered how to extract copper and iron from rocks. Now, metals are used with increasing sophistication and innovation in buildings, with architects exploiting their formal, functional and haptic qualities. October's issue considers inventive examples of metal in architecture from around the world. Making sensuous use of steel and aluminium cladding, Jean Nouvel's concert and congress hall in Lucerne is a major civic building occupying a spectacular site on the edge of Lake Lucerne. In Hanover, von Gerkan, Marg + Partners' new exhibition hall has an expressive steel structure. In Paris, Architecture Studio have completed a new church structured around a dramatic three-dimensional metal grid. Drawing on rural archetypes, Will Bruder's centre for white water rafting in Wyoming evokes a rusting barn, while in Japan, Shuhei Endo's new management offices for a business park are an extraordinary fantasy of curved corrugated metal sheeting. Plus the usual mixture of Interiors, Delight and Outrage together with View, our revitalized front section featuring events, news and reviews. Obtain this and 11 other equally stimulating issues by completing the enclosed subscription form.



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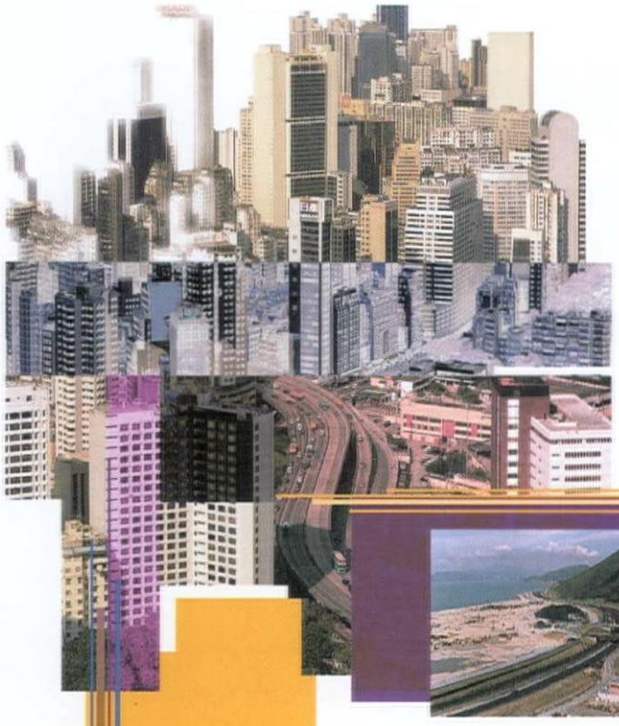
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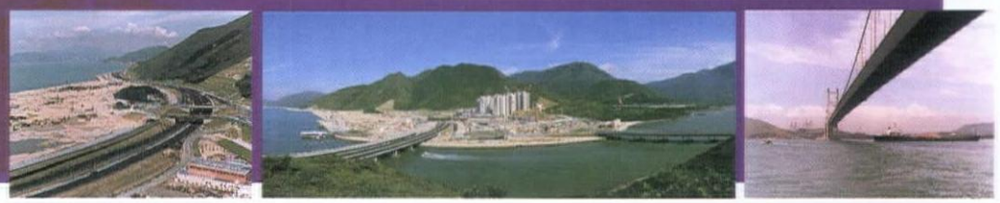
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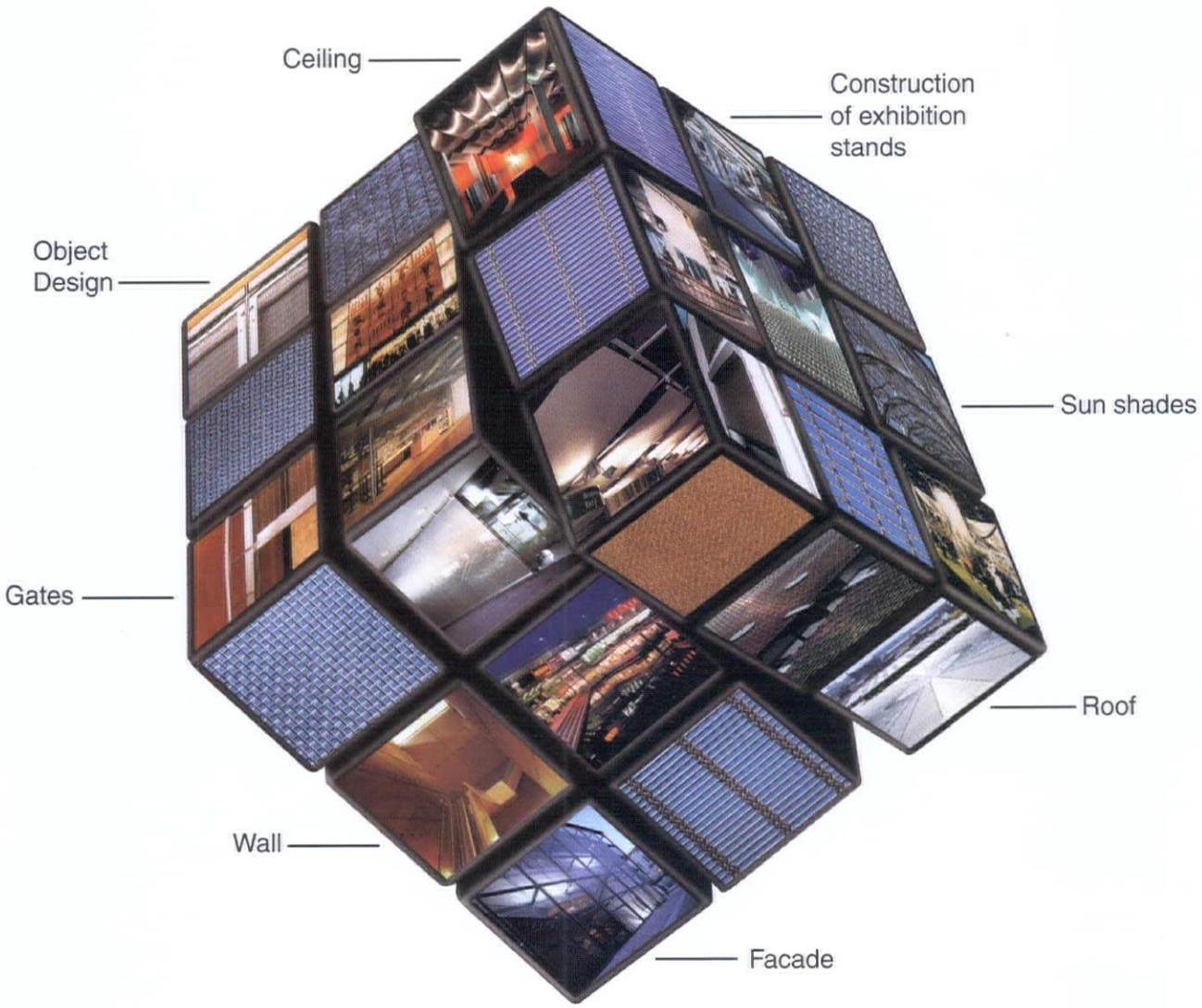
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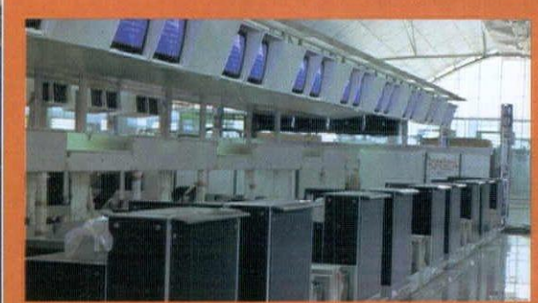
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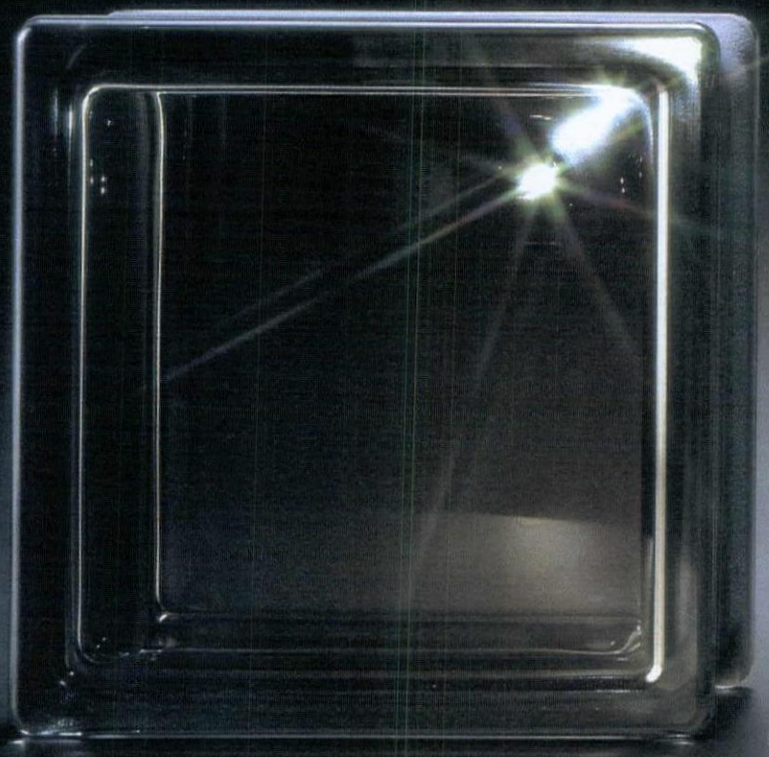
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Airport interiors that make the difference

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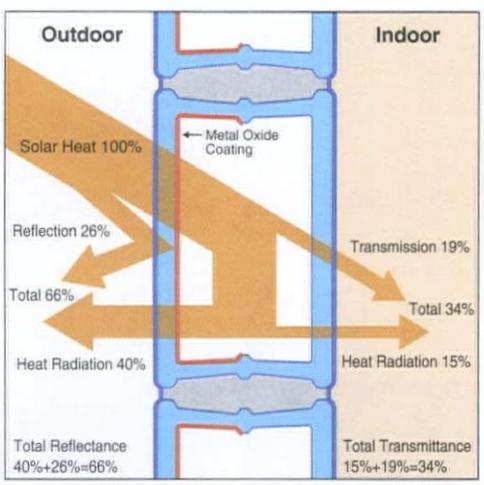
Solar Reflective Glass Block



Clear

GB (Total Reflectance of 66%
Outdoor heat radiation 40%+reflection 26% Incident angle of 30°)

▲See an actual product sample for more details.



Heat Balance of a Solar Reflective Glass Block (Incident angle of 30 °)

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Architecture of Light

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EXPORTERS TO EUROPE AND NORTH AMERICA

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The design was chosen through a staged architectural
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with Ove Arup & Partners as Engineers.

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website: www.fullflow.com

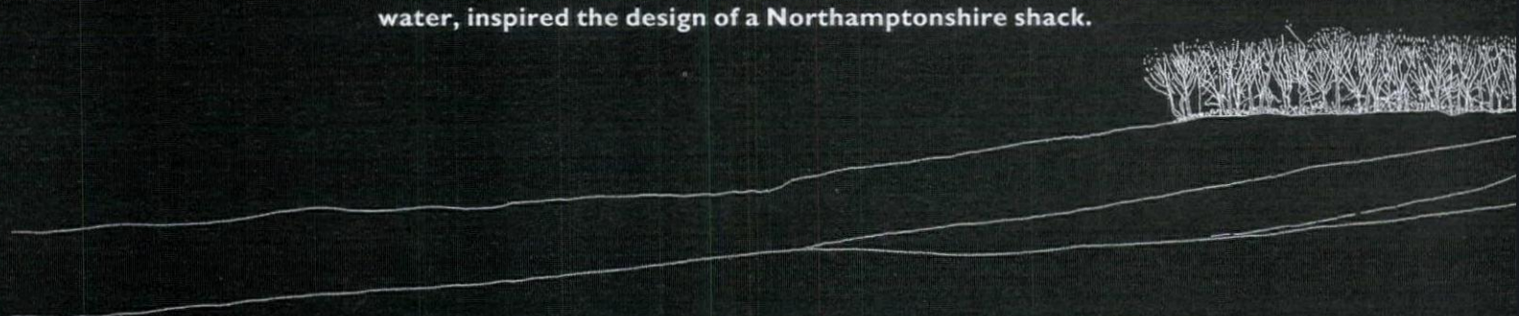
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Wildlife retreat

Local memory, painterly reflections of war, and the poetry of an insect's wing over water, inspired the design of a Northamptonshire shack.



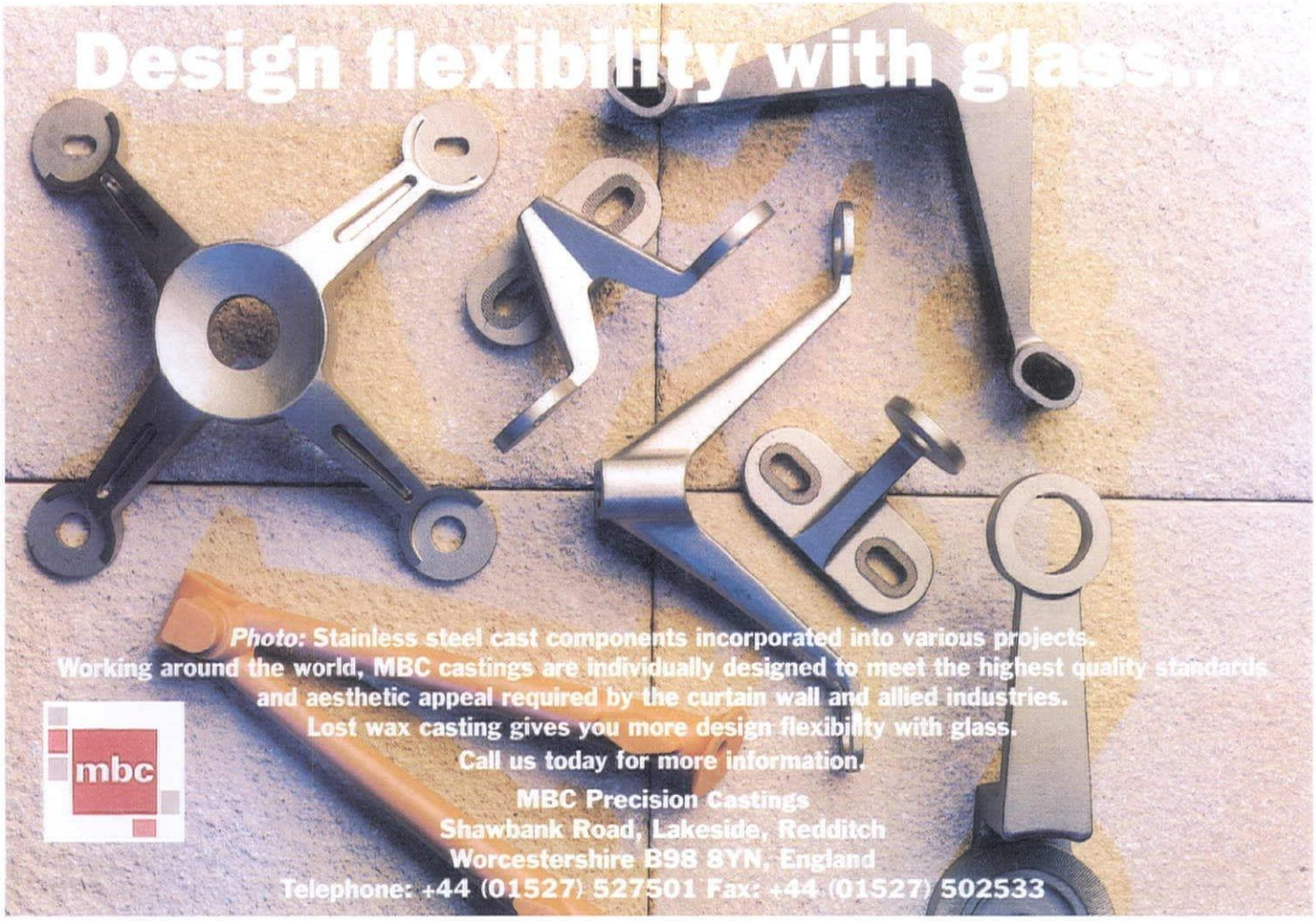
1
Southerly aspect with wooden deck and sauna.
2
South-west face and perforated metal canopies over skylight.
3
South-west wall facing over water to family house has architectural solidity.
4
Lantern, which appeared in an early collage and remains, diffuses light into the interior.
5,6
Rear north-east side set into a fold of land and covered by dark wing.

The winged shack provides a studio and hide for a wildlife photographer, and a family retreat. At the bottom of the garden it hovers over a pond in a fold of Northamptonshire countryside, its form inspired by the client's fragile insect images, and by others drawn from the war-time history of the site.

Surrounding farmland had been used as a US reconnaissance base during the Second World War. Flights of B-24 black carpetbagger bombers flew on clandestine missions, serving the resistance in Holland, Norway and France. After the war the site was developed as a nuclear missile base but was abandoned in the mid-'60s. The land is littered with the debris of military hardware – a dismantled bomber is buried close to the pond – and Niall McLaughlin's design of the shack is threaded by memory of Anselm Kiefer's stark paintings of war-scorched landscape.

The idea of building a studio over the object of study – insect life on water – occurred to the client after McLaughlin showed her his own photograph of objects arranged at different depths in a boghole and she began to imagine ways in which water could modulate light, to alter the depth of field. There was a pond between the garden and open farmland, but it was stagnant and lost in a tangle of briar. To bring it back to life, and to attract dragonflies, the briars were cleared and the water filtered, oxygenated with plants, and filled with fish.

In developing the design, client and architect were fired by



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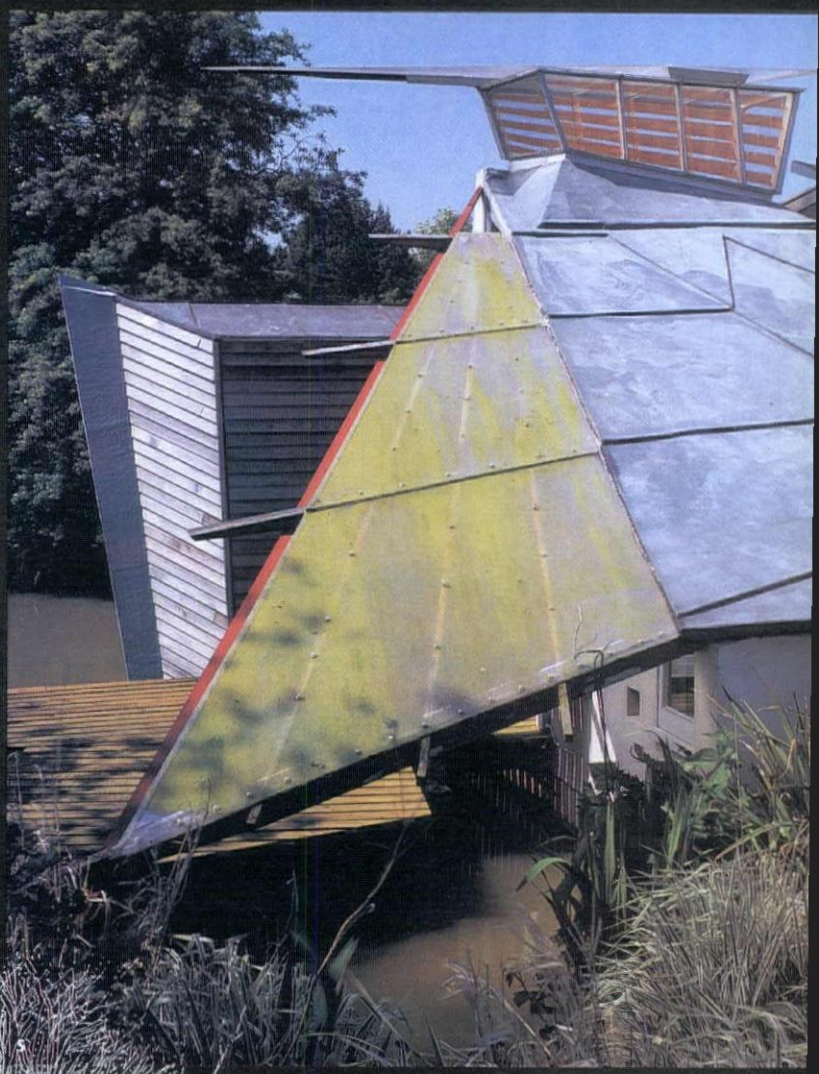
ARMOURCOAT
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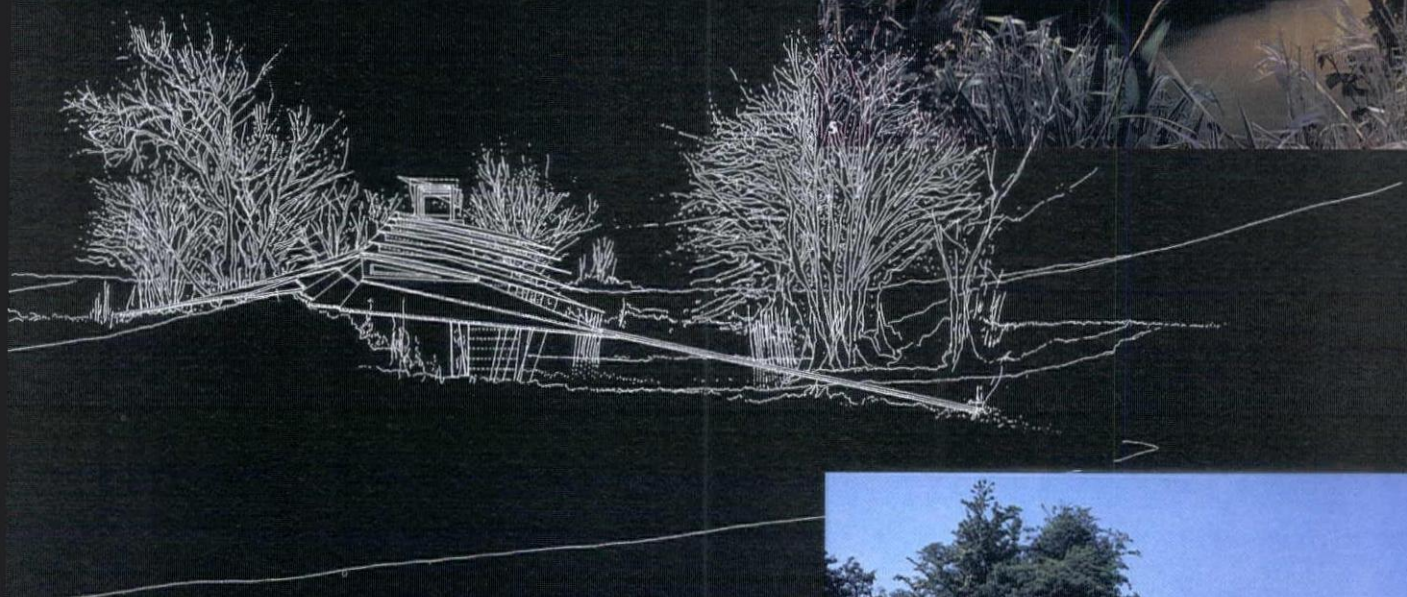
Armourcoat Limited, Morewood Close,
London Road, Sevenoaks, Kent TN13 2HU
Tel: 01732 460668 Fax: 01732 450930

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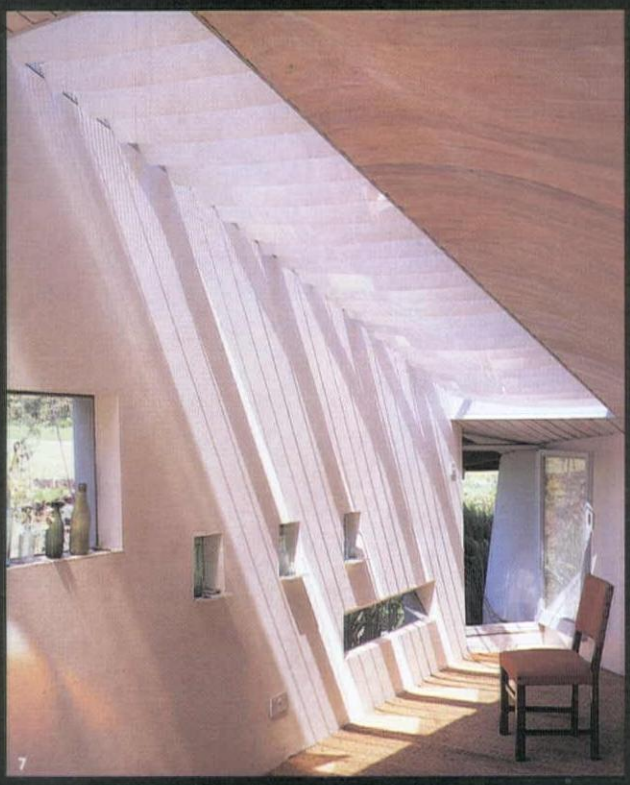


corresponding visions, equally predatory, of a hovering camera lens capturing insect imagery, and of the black B-24s capturing Kieferesque pictures of alien fields.

An early collage made to fix the image of the building is of a dark wing-like form at the edge of the pond. It caught the imagination of the builder, Simon Storey, whose father had been a war-time reconnaissance pilot and who agreed to construct the building on condition there were no working drawings, knowing the arrangement would allow him some latitude. Consequently, rough models and photographs of models were used to design, explain and construct the little building, making development and modification open to all involved. The result is an extraordinary correspondence between the three-dimensional object and its plan.

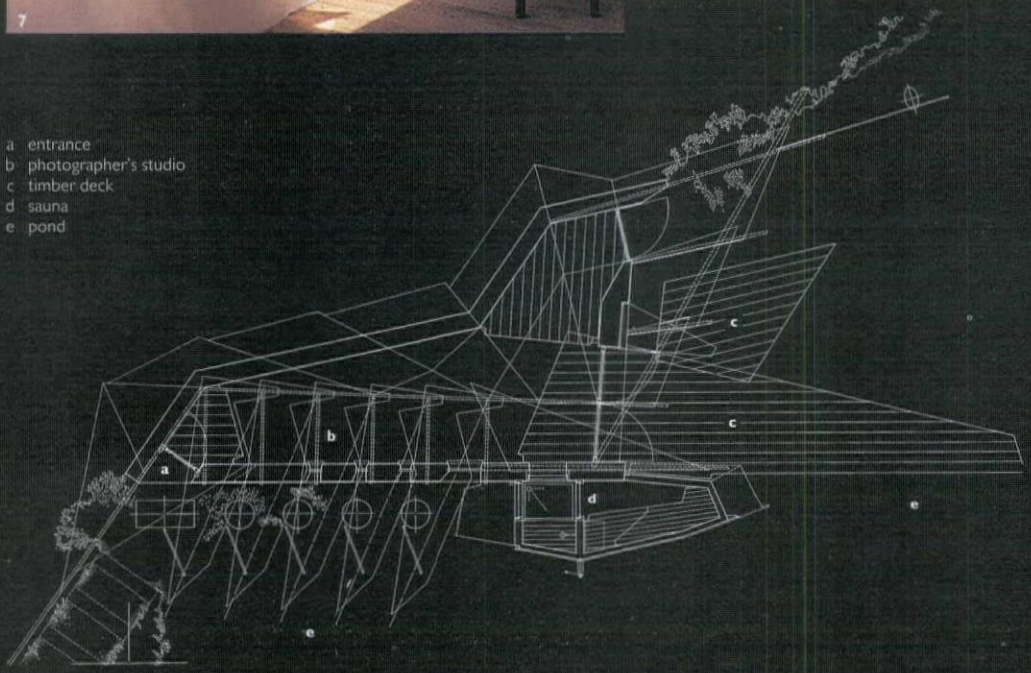
A complex winged roof, tethered by thin metal angles, fans out and flaps, flexes and deflects in the strong winds which buffet this part of the country. The main elements of







a entrance
b photographer's studio
c timber deck
d sauna
e pond



plan (scale approx 1:300)

the structure are the large wing members that sweep down over the rear of the building, and a glazed rooflight over the long axis. Light into the interior is deflected by a delicate lantern, polycarbonate baffles and over-arching canopies, curving petals of perforated metal, tied down by slender rods.

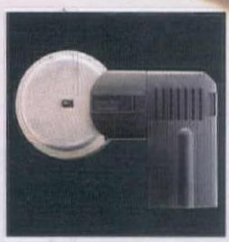
Underneath this airy living roof is a solid base, a concrete raft supporting concrete block walls and with wooden decks extending over the water. The rear north-east wall meanders with the contours, insinuating itself into the landscape; the south-west wall facing over the water towards the house is punctured by small openings and has a solid architectural presence. You enter the building by passing through a small door, like a cave opening tucked under the roof eaves, from stepping stones in the pond. More stepping stones lead off right to the wooden sauna.

The interior, plainly decorated and furnished under the arching roof, is a luminous cavity. Patterns of light, cast by water through windows, and deflected through skylight and lantern, superimpose themselves across the blind rear wall. Each window made at eye level forms a frame for objects collected and held in the light to be photographed.

Architect
Niall McLaughlin Architect
Structural engineer
Anthony Hayes
Builder
Simon Storey
Photographs
All photographs by Nicholas Kane, except no 8 which is by Niall McLaughlin

7
Interior striped and patterned with light.
8
Bedroom retreat giving onto wooden deck over water.
9
Light percolating through skylight and polycarbonate baffles.

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outrage

Photographer Wilfried Dechau



CHANGEFUL, MIXED USE, THIS BUILDING IN THE MIDDLE OF PROSPEROUS GERMANY HAS A GOOD DEAL GOING FOR IT – IN THEORY. BUT IT IS A VISUAL CATASTROPHE. WHY, AND IS IT THE SHAPE OF URBANISM TO COME?

This charmingly horrid photograph was taken by my contemporary Wilfried Dechau, the editor of the excellent German magazine *db* (*Deutsche Bauzeitung*). It is the first in a series about what the architectural texture of German life is really like – as opposed to what we show in the architectural periodicals. It is a mixed-use building in Aalen, a small city to the east of Stuttgart.

This building is not in itself really outrageous – more comically grotesque. What makes me very cross is that it so brilliantly depicts the failures of architectural theory – or at least some of the theories which guide me. Here is an example of the kind of building we all want to encourage in cities, combining café, offices and flats. Here is what Ruskin called 'changefulness': a good building, he believed, 'whenever it finds occasion for change in its form or purpose, submits to it', a recipe for the relation of form to function which has generated many of the best works of architecture from the Gothic cathedrals to the works of the Grazer Schule.

Er, not here. The amazingly kitsch Hundertwasserian cocktail of Heimatstil and High Tech, of tiles and tin and timber and tilted glass, may demonstrate to the awed observer some of the nature of what goes on inside the building, but it scarcely makes good architecture. Perhaps there's something in all that stuff about propriety, taste and proportion after all.

PETER DAVEY



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Hong Kong International Airport

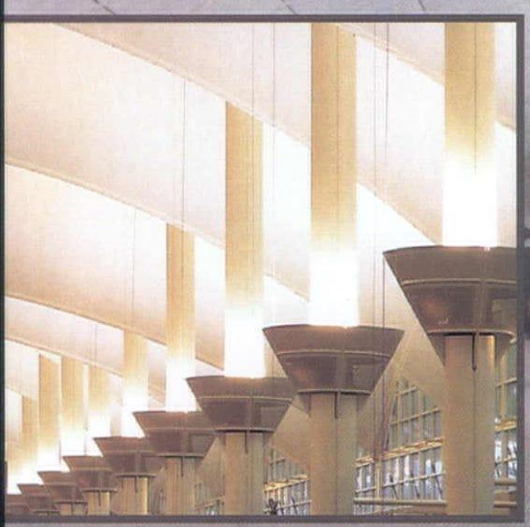
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Stealth Architecture at Heathrow



World Cargo Centre at Heathrow Airport.

EDM Spanwall Limited was formed in 1988 and is part of the EDM CECO Group. Spanwall designs and manufactures a range of architectural wall cladding systems from a purpose built facility in Carryduff. The company's first major project ,which they won against international competition was for Ponds Forge International Sports and Leisure Complex built for the 1991 World Student Games.

Four main systems form the core of Spanwall's product portfolio - System 1000, System 1016, System 2016 and System 2020 - each with different horizontal and vertical joint layouts. All systems are designed to be installed from the base of the building upwards and are either stacking or demountable. As each panel is custom made for its particular application a wide range of panel lengths, heights and finishes is available.

EDM Spanwall Limited is committed to continual improvement and product development. The performance of all systems is regularly reviewed together with the on-going development of new, innovative systems.

One recent development is the worlds first radar absorbing composite panel wall cladding system. The new system, which uses stealth technology, absorbs the radar signal and disperses it within the core material, thus eliminating troublesome radar reflections.

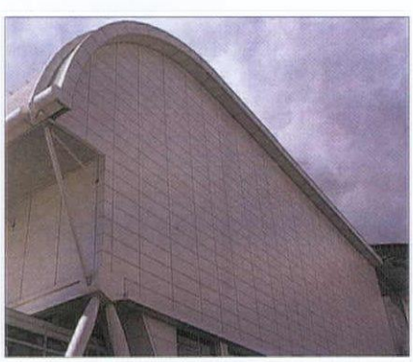
Wing Commander Ramsey Brown , a civil aviation radar reflection consultant well known to and endorsed by the UK Civil Aviation Authority stated. "The radar absorbent cladding system should make airports safer and may well revolutionise their design as it will now be possible to build taller buildings closer to air traffic radar aerials without interfering with them and thus jeopardising safe and expeditious air traffic control". This revolutionary product is called Stealthwall.

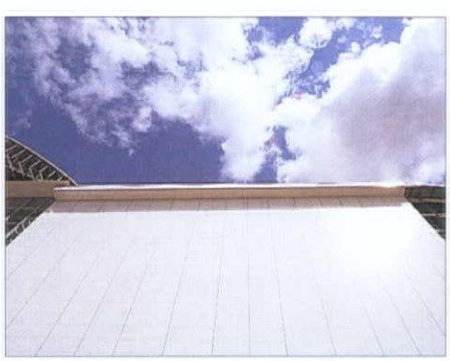
The first building to incorporate this system is the British Airways World Cargo Centre at Heathrow Airport. Spanwall supplied 742 individual composite radar panels as part of the £250 million project. Four storeys high and 300 metres long, thanks to the Stealthwall this facility can be built less than 2,000m from the airports air traffic radars . To achieve this a special QA procedure was set up in-house to control the manufacture and radar testing of each panel, thus verifying their performance with the specification.

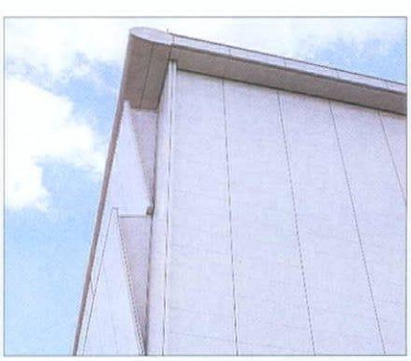
Today EDM Spanwall Limited is recognised as the market leader in the design and manufacture of architectural wall cladding systems having supplied to investment projects undertaken by a number of world-class companies

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The Spanwall Panel System is available throughout a UK-wide dealer network

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Beyond the conventional

ceilings and cladding at Chek Lap Kok Airport

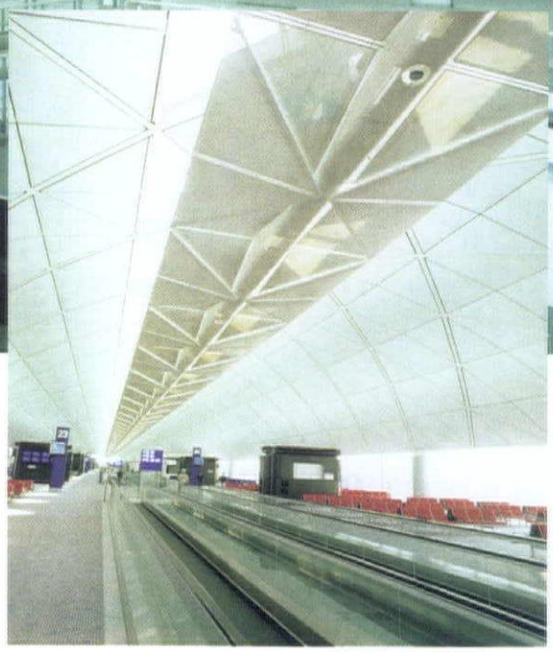
The ceiling and daylight reflector at Chek Lap Kok is without doubt one of the most stunning and memorable design features of the airport terminal building.

The solution to Foster and Partners design concept is both practical and functional, incorporating 78,000 aluminium triangular panels for installation within the vaulted steelwork frame. The complexity of the design required in excess of 3,500 unique special size panels. The exterior panels with a PV2 finish are designed to withstand typhoon weather conditions. Manufactured in joint venture with Lindner AG, Germany, the ceiling at Chek Lap Kok represents the world's largest single installation of its type.

Further interior works on the project included design engineering, manufacturing and installation of the cladding system for the 202 service binnacles and the canopy above the 288 check in desks.

SAS International have now been awarded the contract for the airport's North West concourse extension project.

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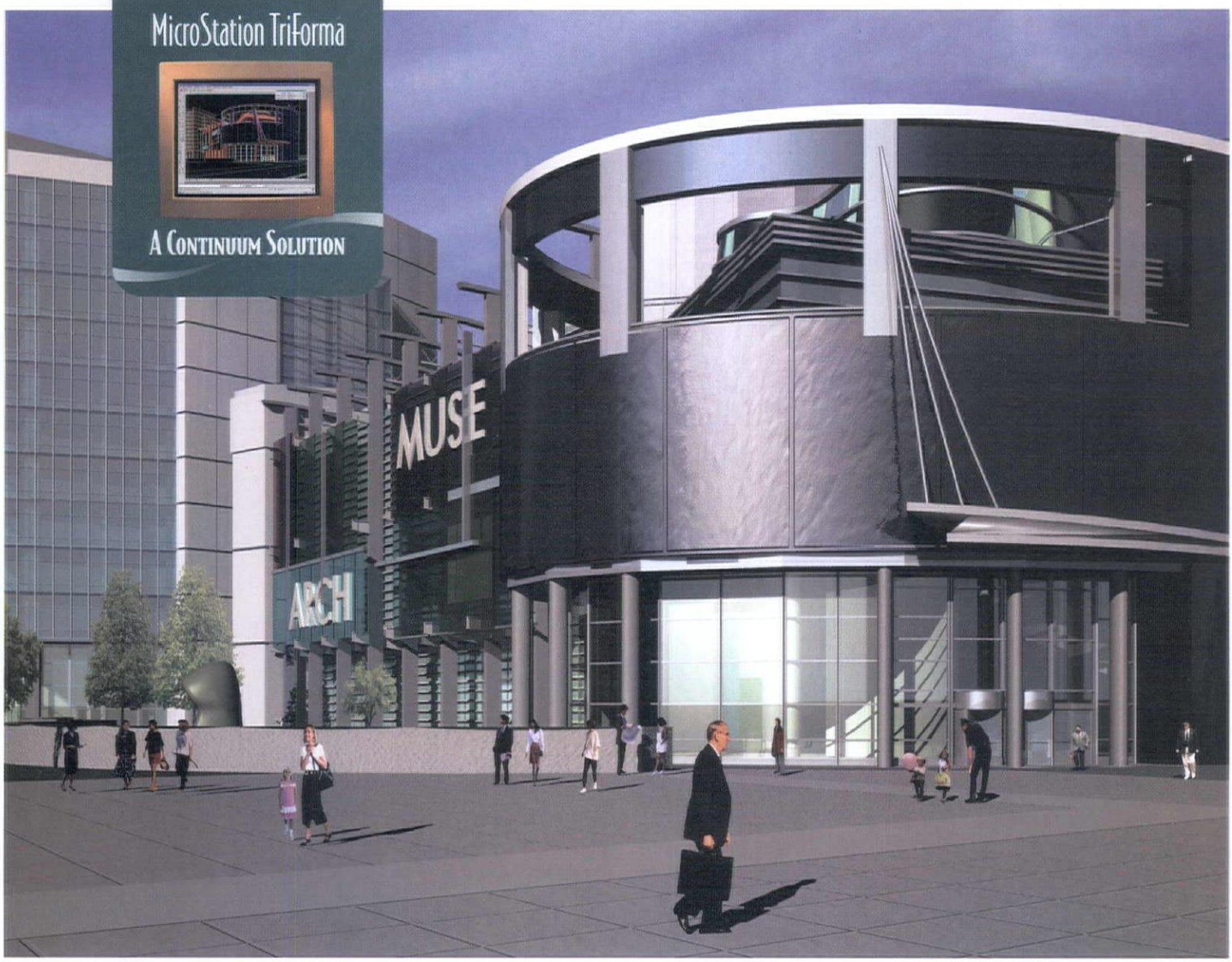
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Corpus bench

Design Johannes Foersom & Peter Hiort-Lorenzen

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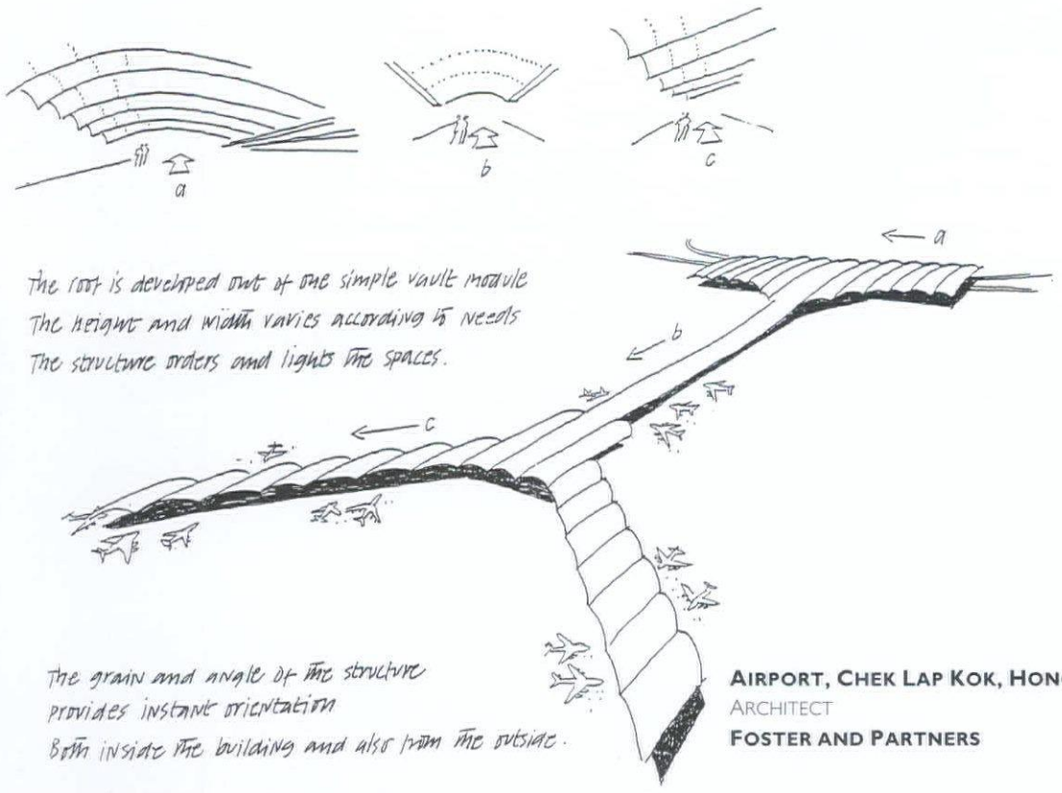
Representative in Great Britain: Mrs Eleanor Darwell-Stone. 8 Pentland Terrace, GB-Edinburgh EH10 6EY. Telephone and fax +44 131 447 2224

TRAVELLING LIGHT

Human mobility has always been celebrated by dramatic architecture. This month, our transports of delight include Kisho Kurokawa's new international terminal at Kuala Lumpur (here and p67), which is rooted in the culture and climate of its context, and Foster and Partner's long awaited Chek Lap Kok airport in Hong Kong (p50), a heroically scaled building for the twenty-first century. Rail travel is also considered through two modest Norwegian stations by Arne Henriksen (p82) and an inventive extension to Zurich's main railway station by Meili Peter Architekten (p79).

Photograph Tomio Ohashi





Foster's sketch of design principles

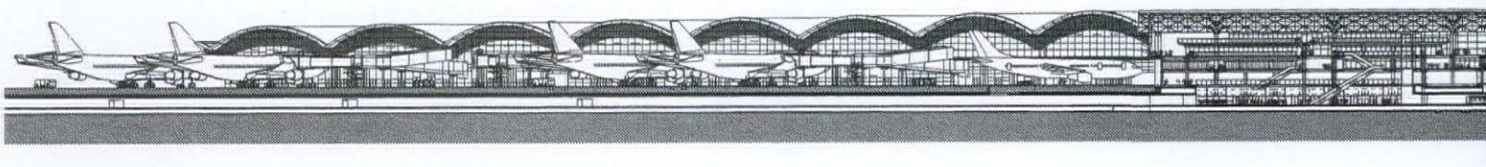
AIRPORT, CHEK LAP KOK, HONG KONG
ARCHITECT
FOSTER AND PARTNERS

PLANE SAILING

Chek Lap Kok is the latest in a new generation of airports designed to be both easy and agreeable to use, and open to their surroundings. This approach to airport design, pioneered perhaps at Foster's Stansted, has been married to an east Asian fascination with size, and with the necessity of building in the sea, because of the very densely populated mountainous terrain, to create a complex as dramatic as it is convenient.

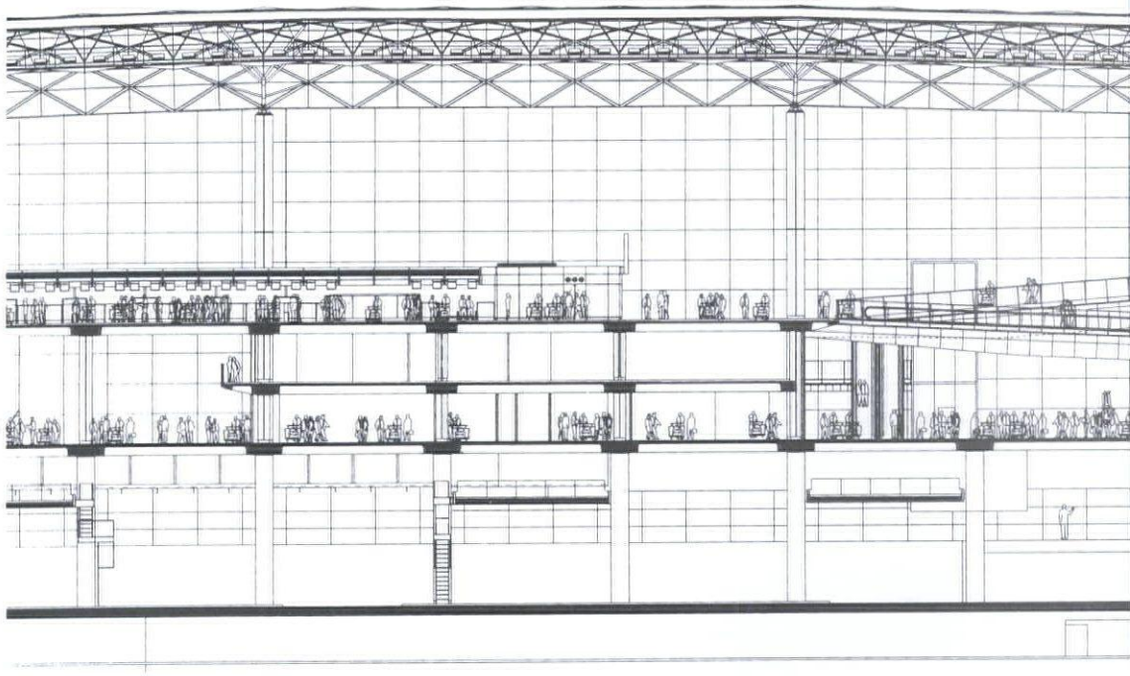
The airport is *the* twentieth-century building type. It may not, as some have claimed,[1] be our equivalent of the traditional city square with all its nuances and variety, but it is undoubtedly a vastly important component of the lives of most people, even in the poorest countries. And it is a measure of prestige. Cities and countries argue about which airport caters for the most flights, which has the best connections, which the most up-to-date facilities.[2] You are no one in east Asia if you haven't demolished a mountain and thrown it into the sea to provide buildings and runways which can be seen from outer space. Renzo Piano and Peter Rice started the fashion in Osaka (AR November 1994). Now, Hong Kong has caught up with Foster's Chek Lap Kok, which was opened on 6 July.[3]

The old Hong Kong airport at Kai Tak was dramatic to land on, with the 747s descending at an alarming angle among the tower blocks to bump onto a runway projecting into the harbour and the South China Sea. Now, a hilly island in the Hong Kong archipelago has been levelled to provide the flat surface for the runways of the new one, an area as big as the whole Kowloon peninsula. It is linked to the city by elaborate new road and rail links, slashing from island to island, which must have cost nearly as much as the airport itself. They ensure that



west-east section through central concourse and arrivals and departures halls

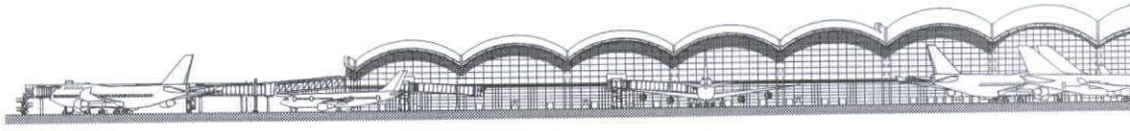




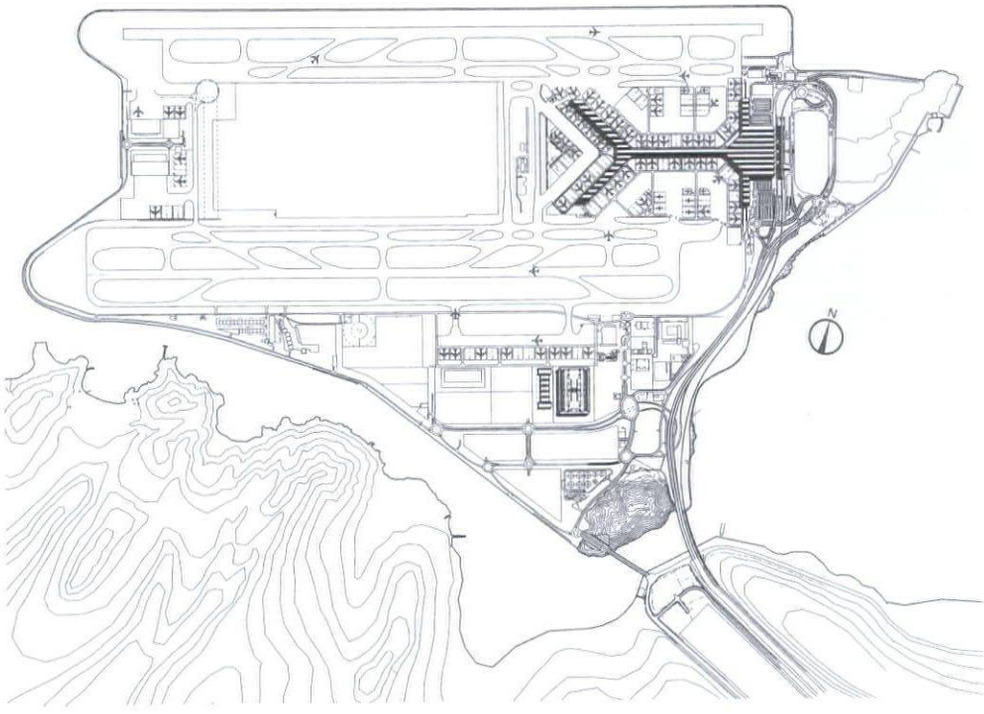
section through road and rail links and arrivals and departures halls looking north



section through neck of main concourse looking east

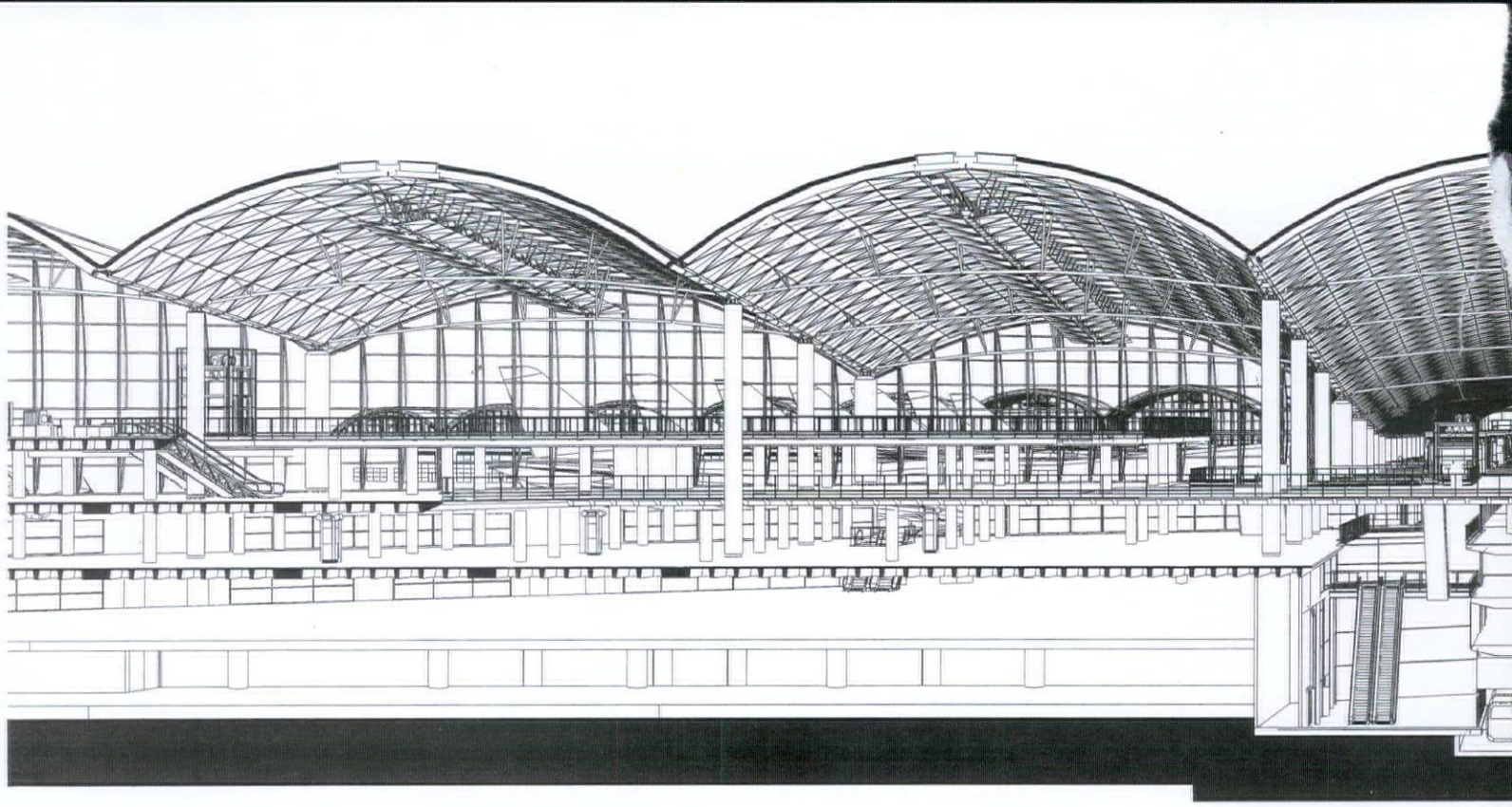


section through spine of main concourse looking east

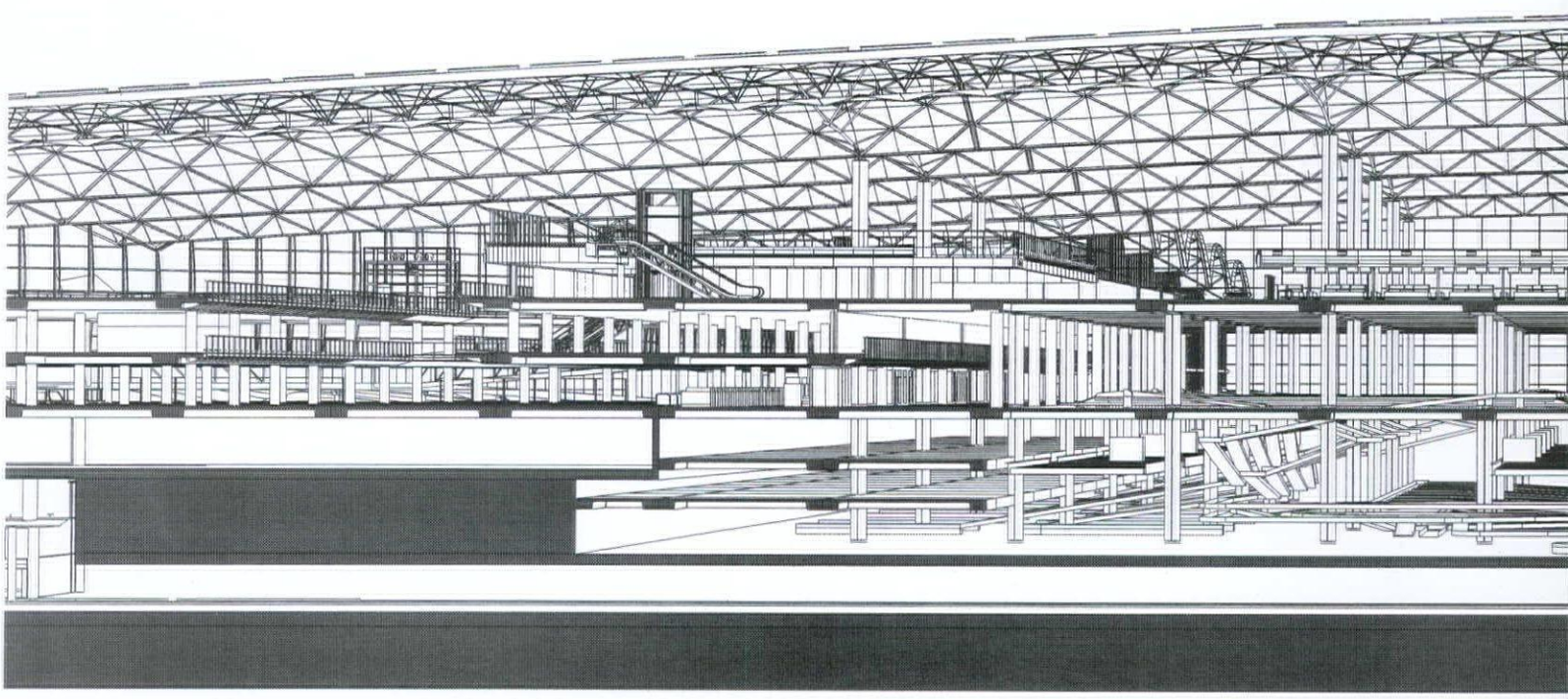


site plan

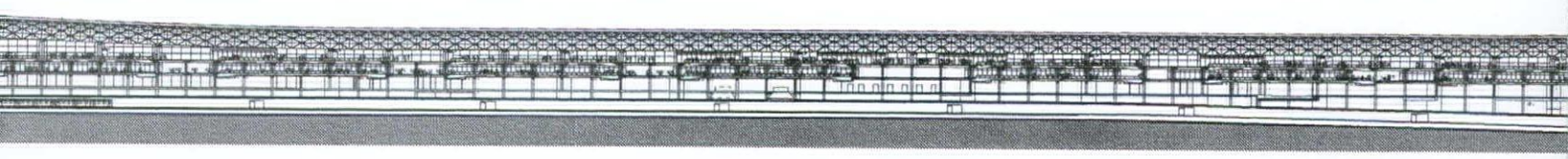
1
East (entrance) front at arrivals level with huge vaults chamfered to form welcoming porches for road travellers. Lantau island behind.



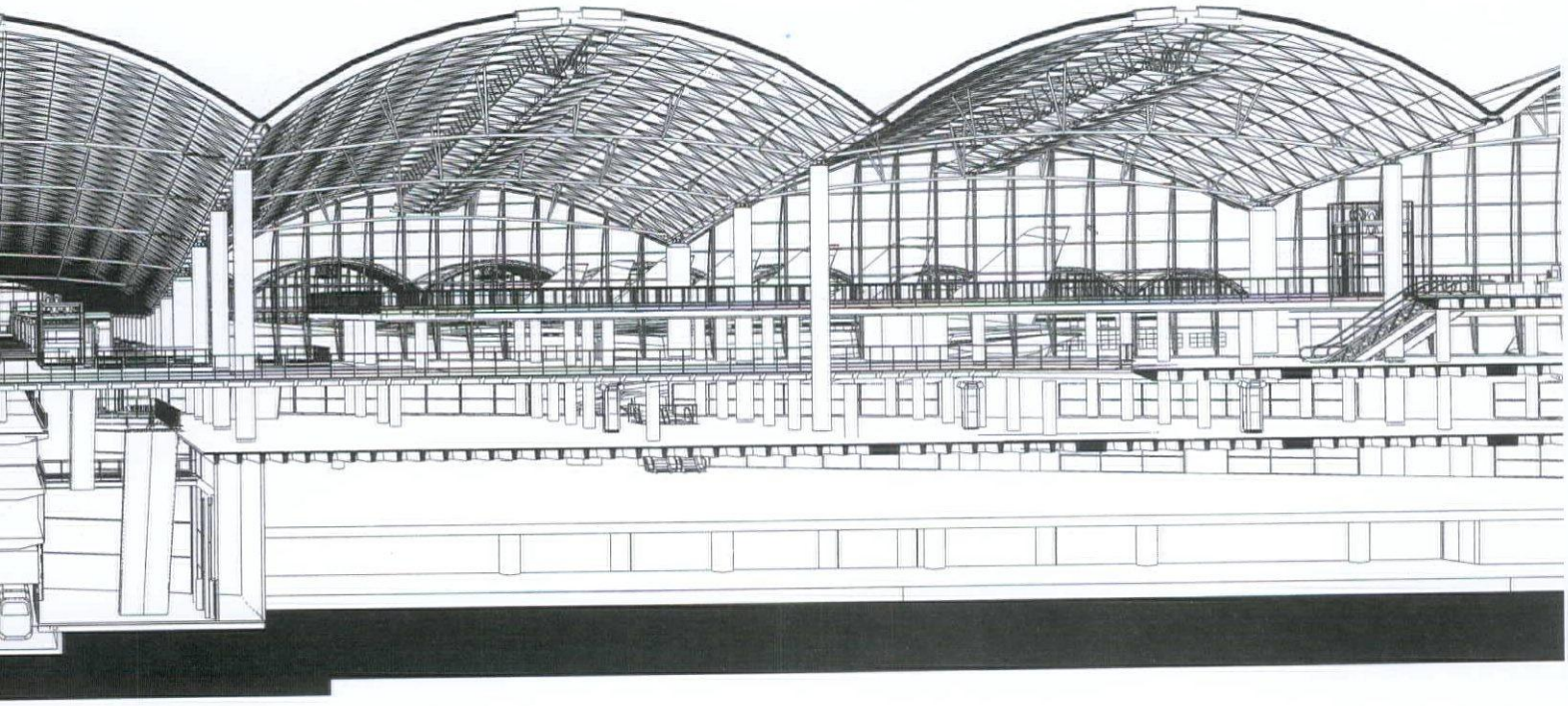
perspective section through arrivals and departures halls looking west (scale approx 1:500)

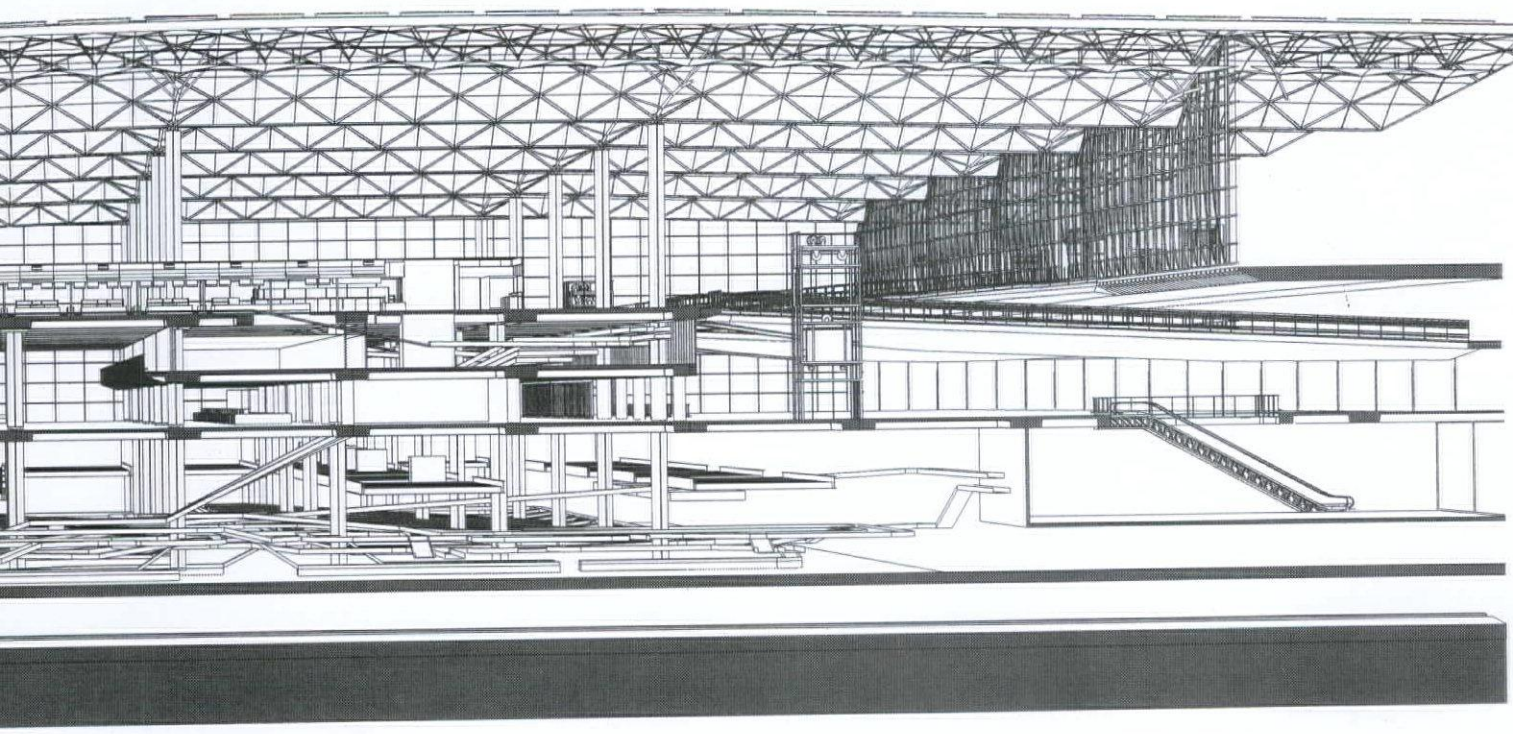


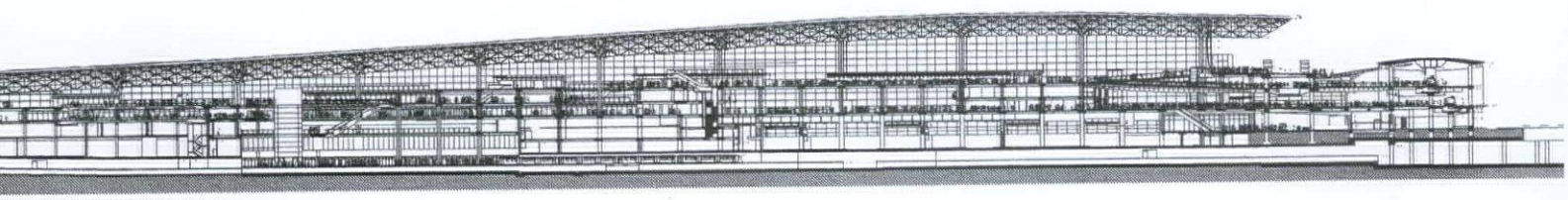
perspective section through arrivals and departures halls looking north

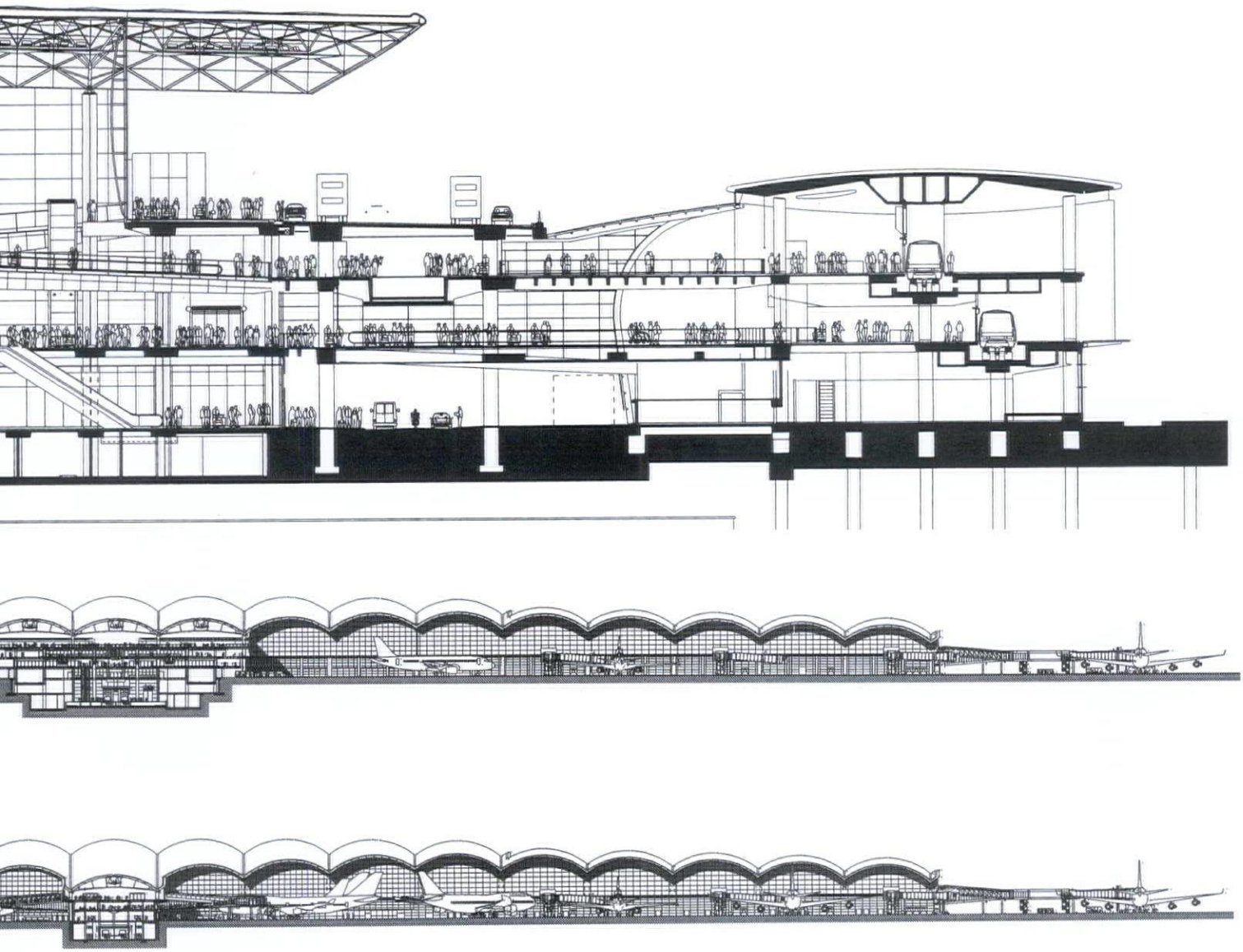



香港國際機場開幕
香港國際機場開幕









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2
From east, showing how rail station links to main building. Tail of Lantau to left.

the journey takes no more than 20 minutes. The whole complex is a tribute to the benign image that twentieth-century Britain (not entirely without reason) has had of the Empire, and is a rather late (and apparently initially unwanted) parting present to China after the Brits so appropriately sailed away on the decaying royal yacht last year.

It will become the biggest airport in the world. Its statistics are extraordinary, and do not need to be rehearsed here, where we are concerned with the building as architecture, function and experience. An airport must first of all work like a machine. It is a mechanism for processing us between land and air, and no matter how fine the spaces, how delicious the food in the restaurants, how dramatic the views, unless this basic function is properly catered for, the place will be a failure. A fundamental, simple plan is needed.

Foster has always held an image of one of the rustic American airports he saw in an Edward Hopper-like moment in his youth: a place where you come in from your car at the front door and see the planes waiting to take you to the heavens, and you walk straight towards them. His airport designs try to capture this immediacy. The effort at Stansted (AR May 1991) was partly successful, but bureaucrats inserted screens to prevent through vision, and there was always the

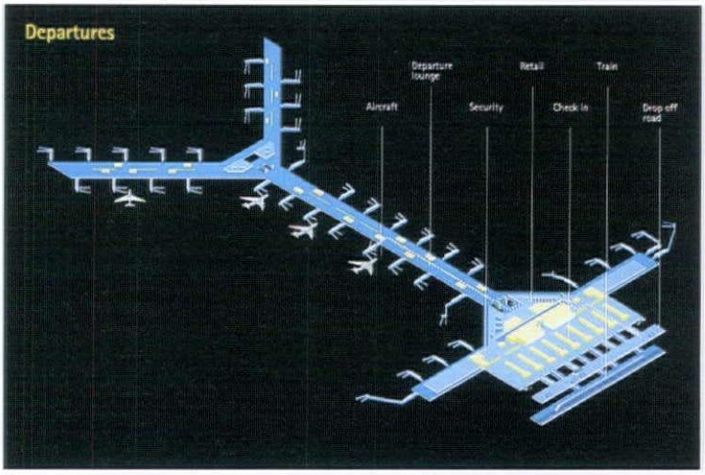


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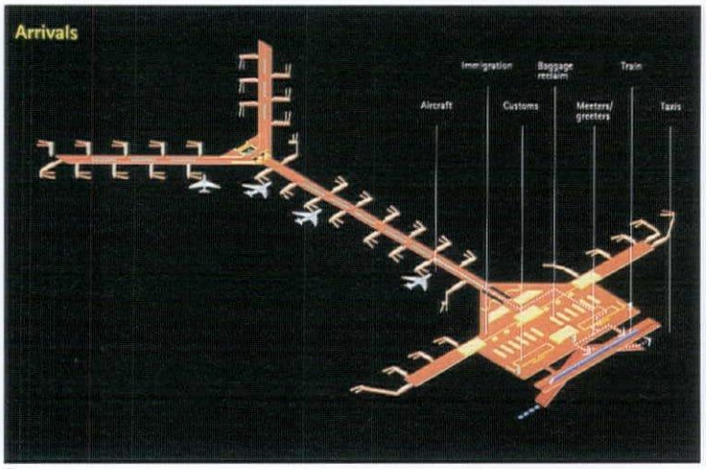
3
Location plan.
4
Departures level: key elements.
5
Arrivals level: key elements.
6
Foster sketch showing key elements of organization of halls and concourse.



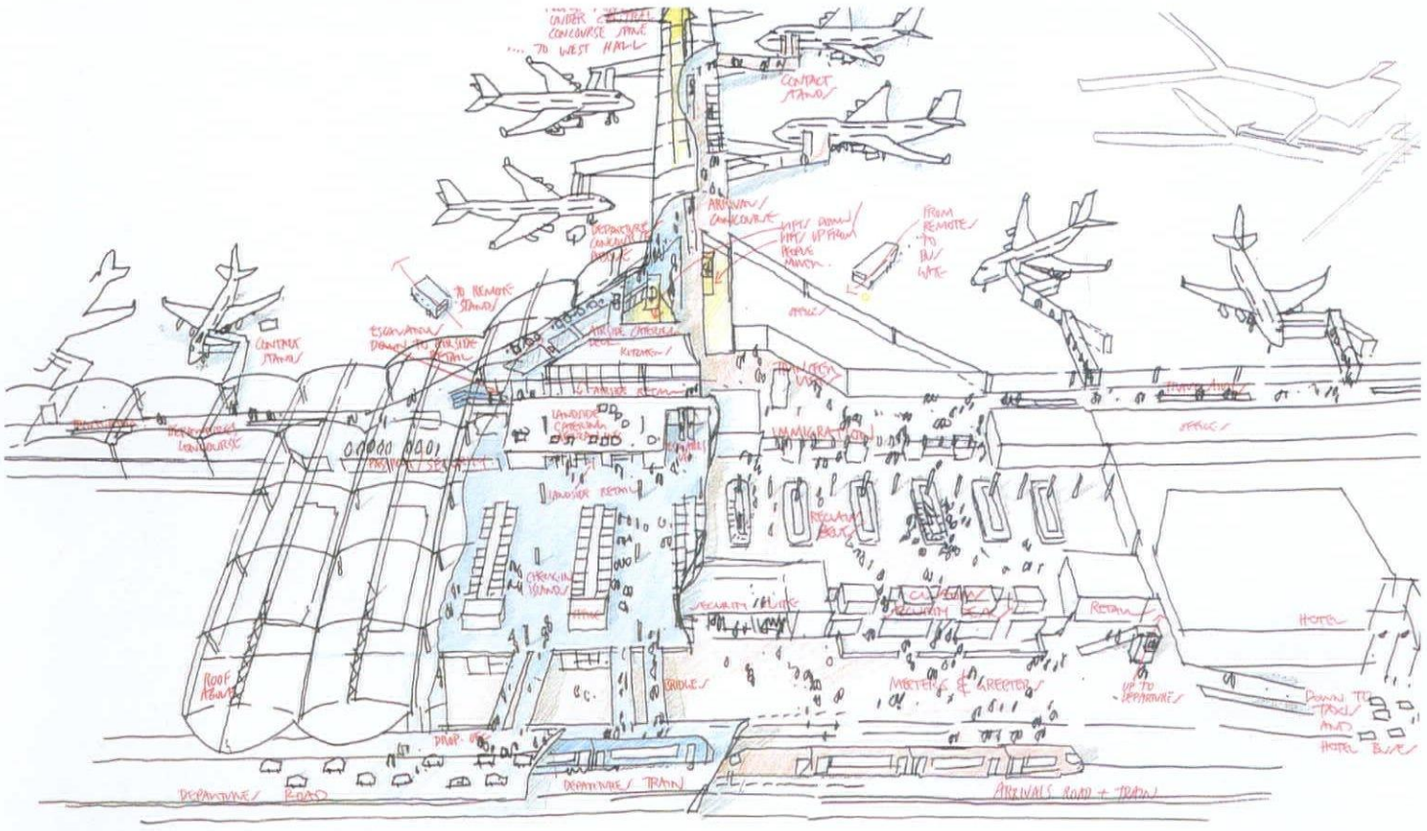
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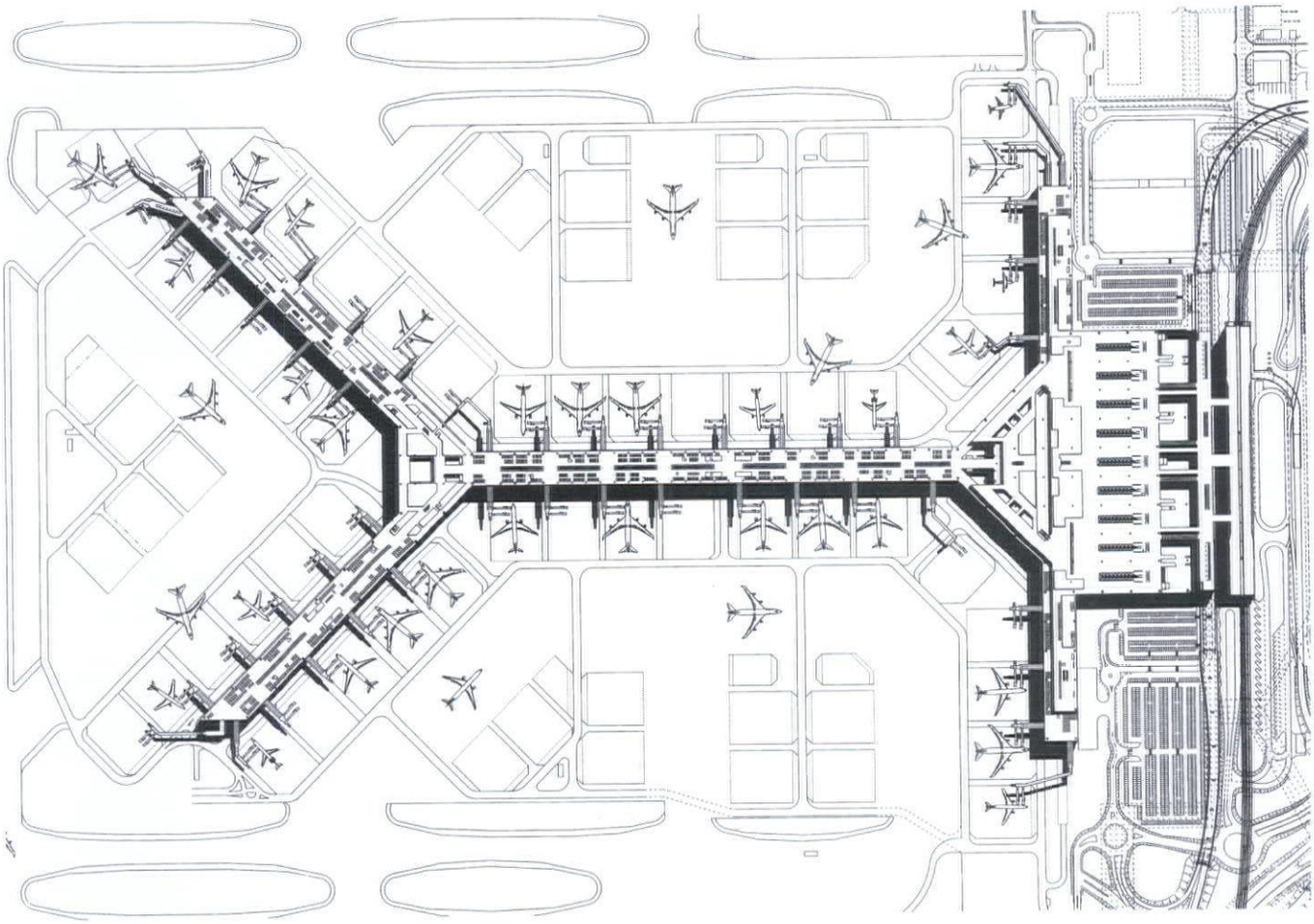
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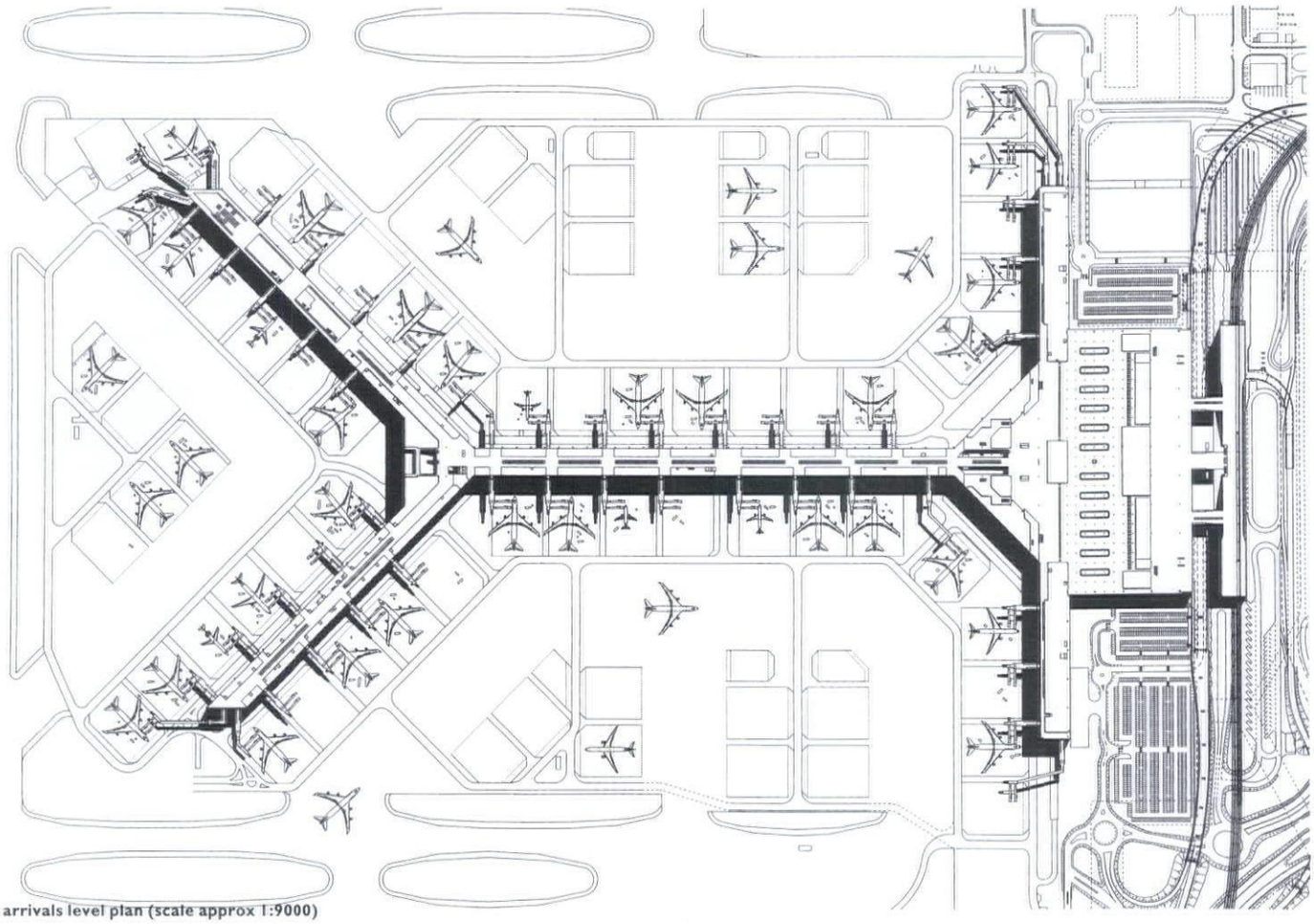
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6



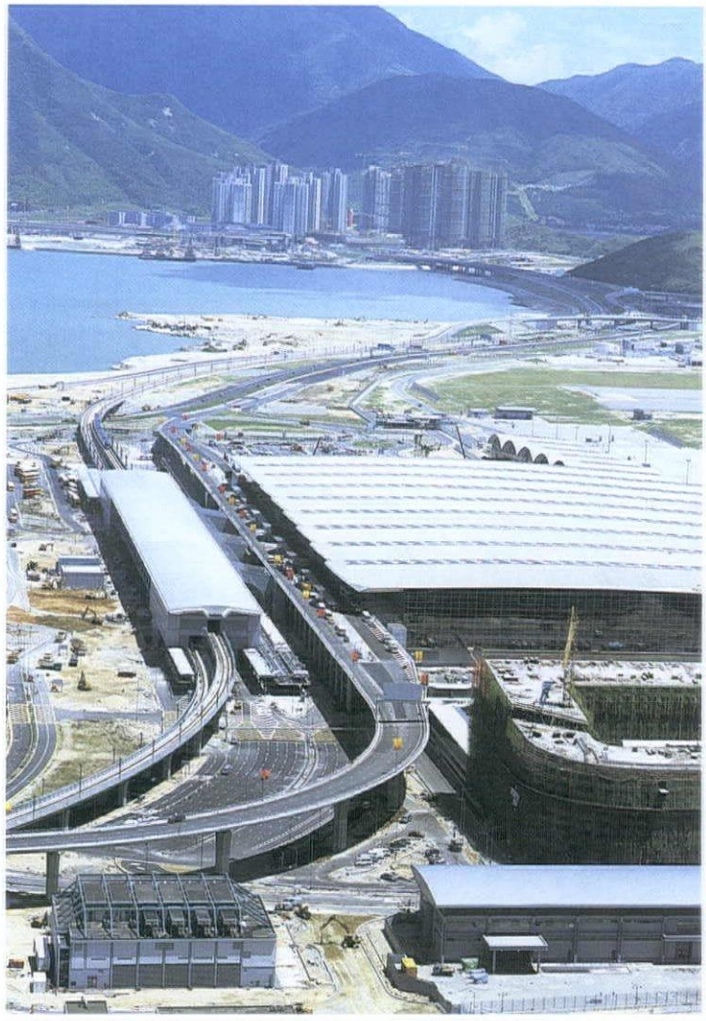
departures level plan



arrivals level plan (scale approx 1:9000)

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7
From north with Lantau behind. Large incomplete building to north of arrivals and departures halls is Hong Kong Air Cargo Terminal.
8
Entering at departures level over bridges that span meeters and greeters area in arrivals hall below.
9
Rail concourse of double height Ground Transportation Centre with departures connected to main hall by bridges and people flowing through at arrivals level below.





problem of having to take the little underground railway between the big building and the satellite, where you actually board your flight.

At Chek Lap Kok, a very much bigger building, Foster's ideal has come closer to realization. The essential movement diagram is very simple. You arrive either by car or train on the east side at the Ground Transportation Centre. Bridges convey you over a void into which you can glance to see the meeters and greeters welcoming arriving passengers. The whole awesome space is covered by parallel roof vaults which swoop slightly upwards west in your direction of travel, so that they constantly draw you forwards. Vaults are made luminous by ingenious continuous lanterns at their apexes which combine artificial and daylight[4] to make that favourite oriental colour, grey, dominate the atmosphere. Even to European eyes, greyness acquires a generous nobility in this building.

Roof vaults are curved steel shells, 36 metres wide. They curve longitudinally to give the forward thrust of movement and rise by some six metres in the middle of this curve. Each shell was assembled on site of components brought in from all over the world and was hoisted into place in one piece to rest on the concrete support structure. Here is the Stansted model resolved on a massive scale. The visual principles of being drawn from ground transport towards the aeroplanes are maintained (and you can here see the tail fins from the departures hall). Here again is the lightweight roof, carefully designed to be elegant and without wartlike cooling towers or other excrescences (it is astonishing how few airport designers think of their buildings as seen from the air).

As at Stansted, services, climate control and baggage handling are kept to an underfloor at the same level as the runways, and here the articulation in level of the Stansted satellite continues throughout the building, with arrivals at the first public level, and departures at the

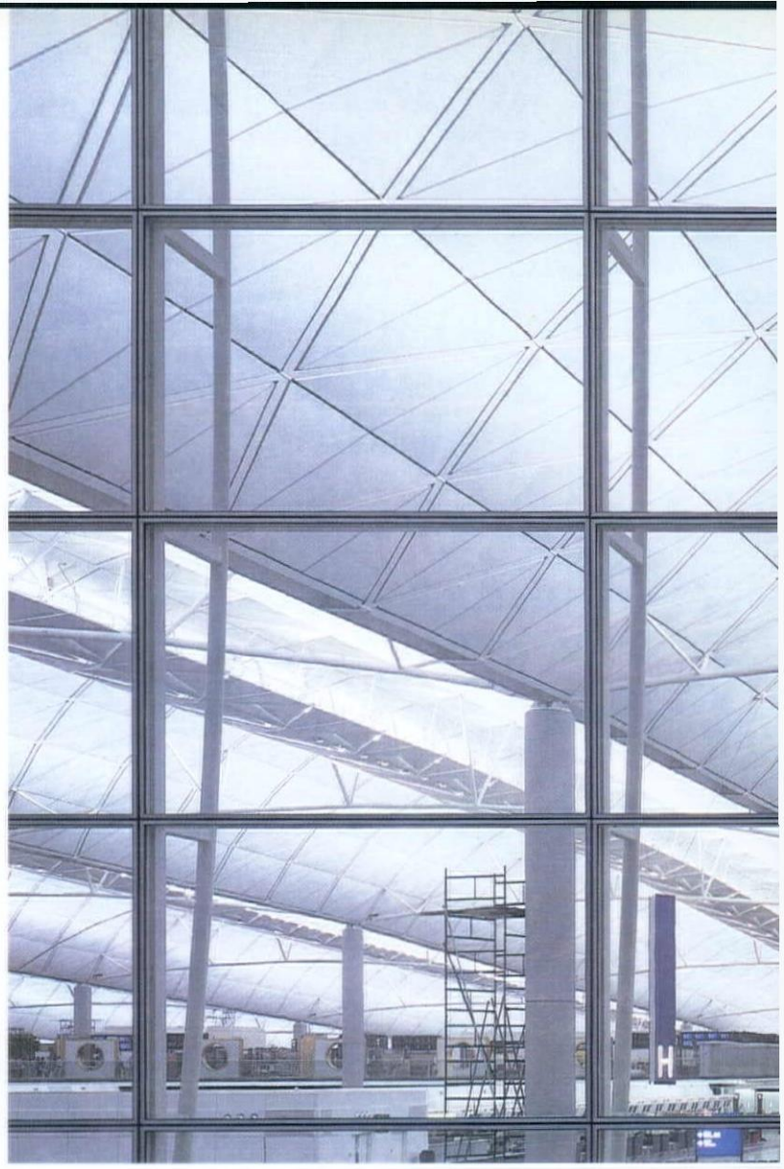


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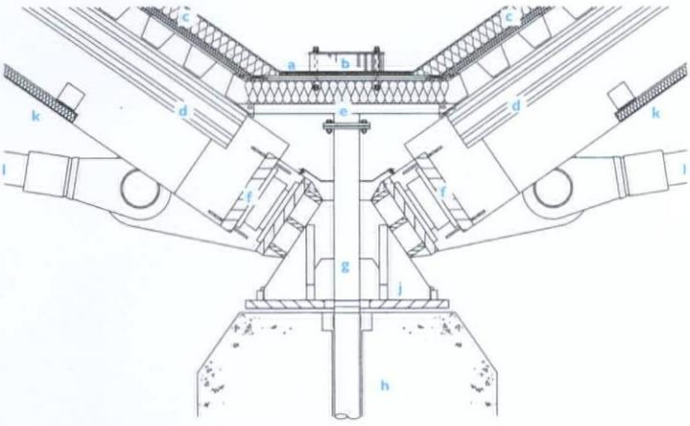
10
The longitudinal swoop of the great vaults draws departing passengers past the check-in desks towards security and passport control screen, and on towards concourse spine.
11
Looking up from arrivals level at the great glass east wall under the vaults, and the bridges connecting land transport with departures level.
12
Bridges sloping down (from road) and up (from station) to departures level.



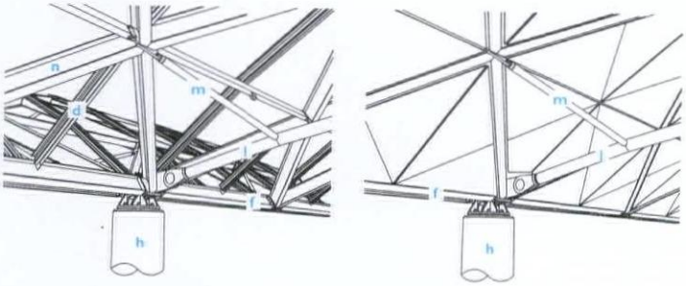


11

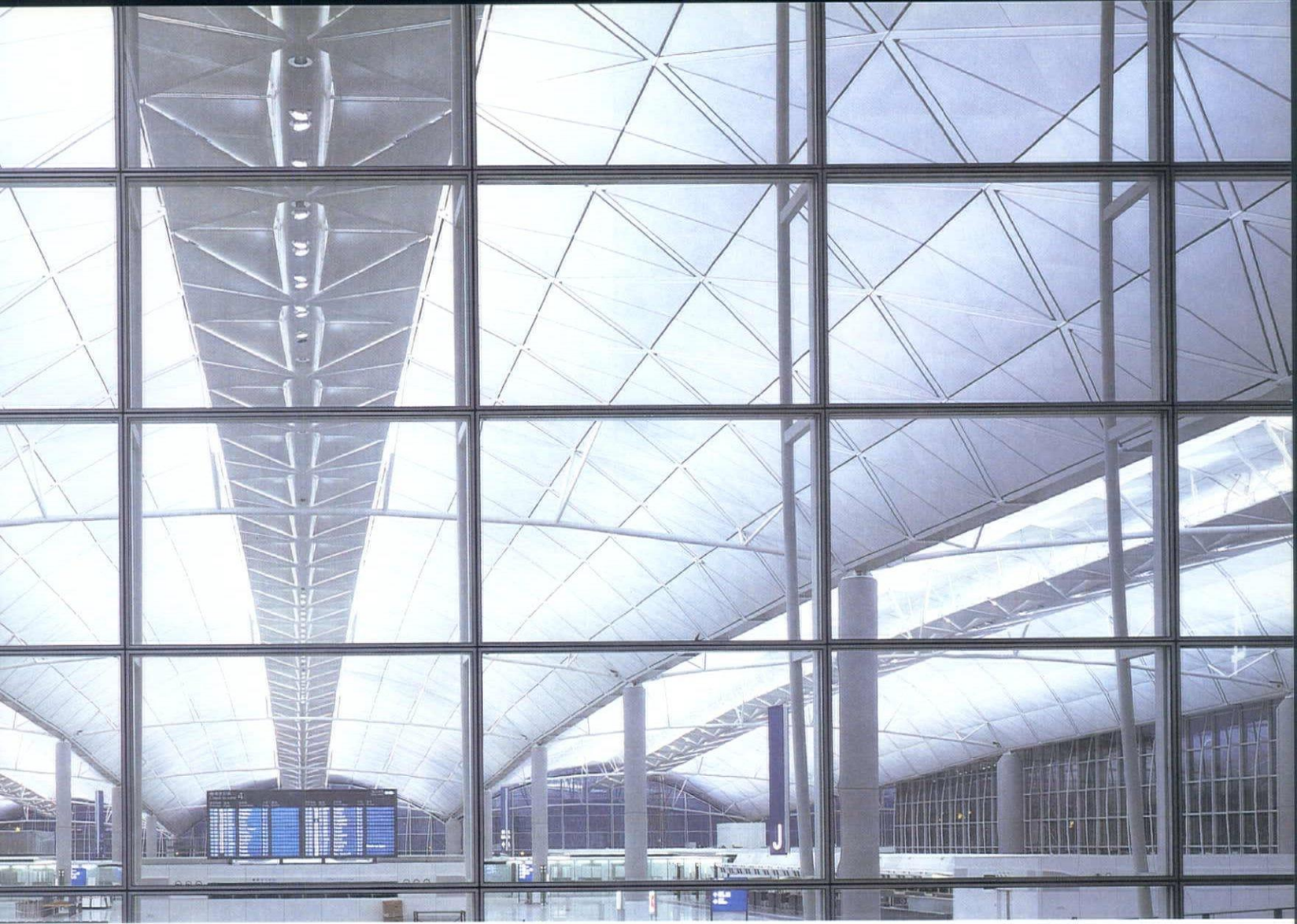
a maintenance walkway
b siphonic rainwater pipe
c built-up roof of:
1.8mm prolastic waterproof membrane with lightning protection tape,
1.8mm prolastic protective membrane, 0.19mm aluminium vapour control layer,
90mm rockwool insulation and 12mm cement board perforated deck
d rolled steel purlin
e gutter support member on sliding shoe
f longitudinal roof support member
g rainwater pipe
h reinforced concrete column
j steel column head
k perforated aluminium soffit panels
l steel tie
m tie restraint
n diagonal member

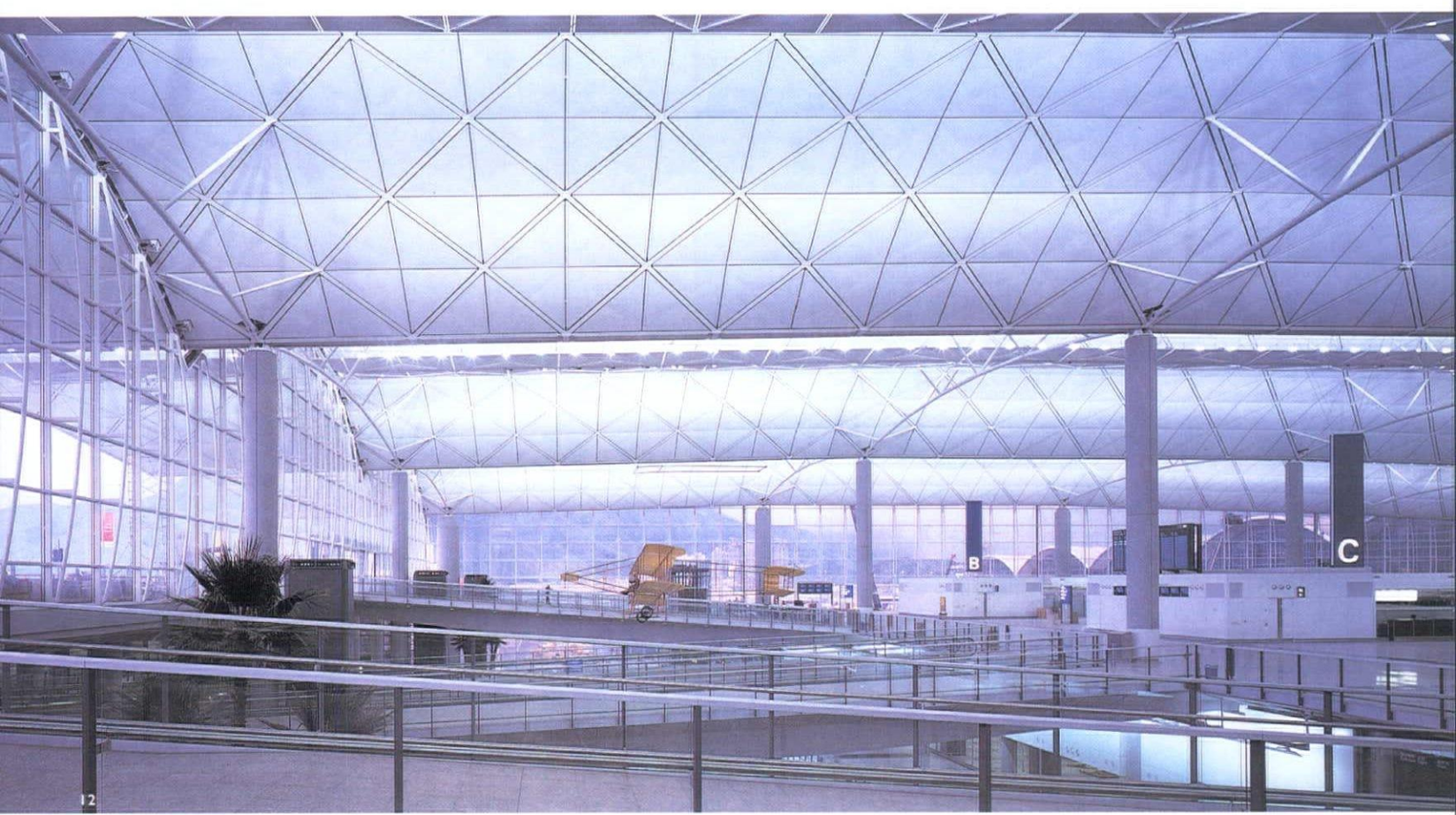


junction of roof vaults and column

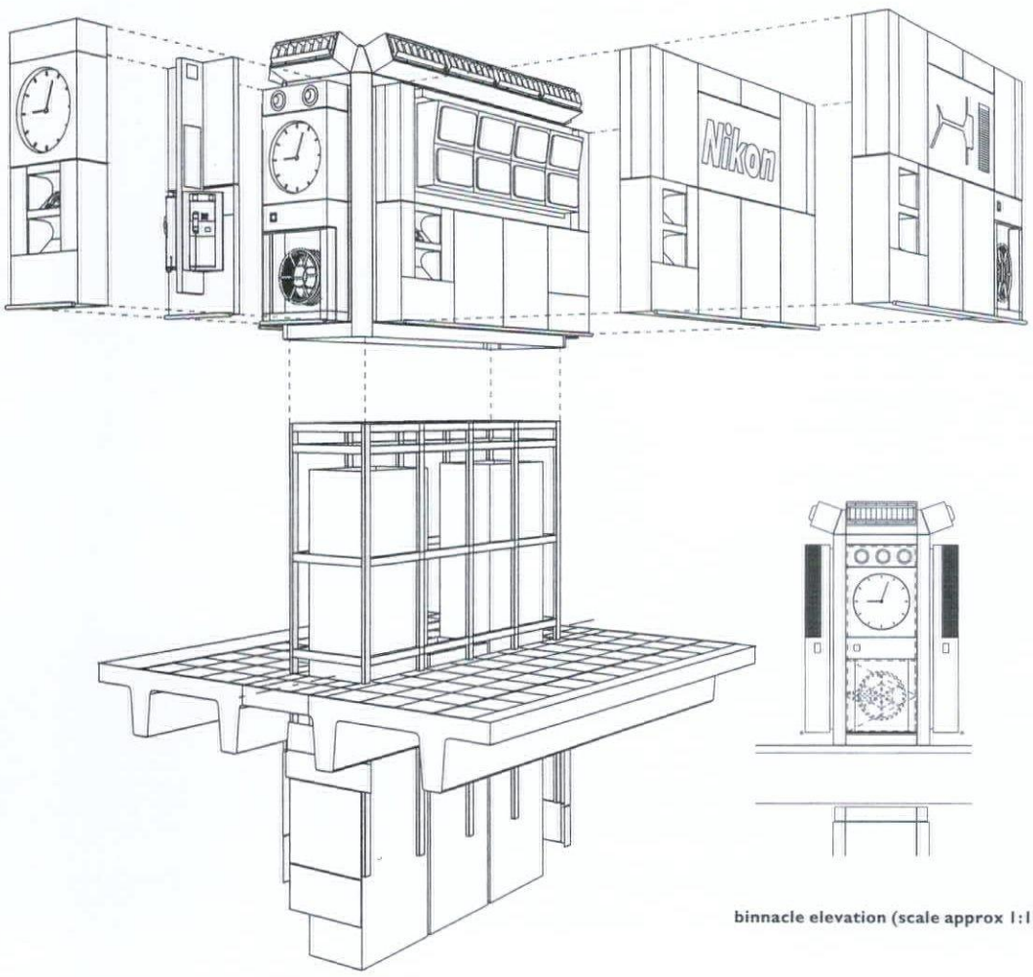


axonometrics of vault to column connections


J

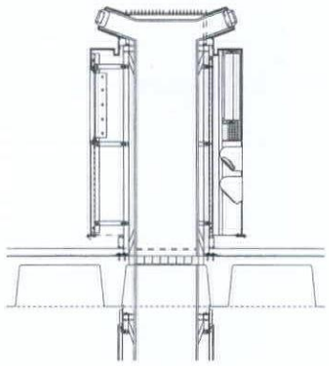

B
C

13
Departures level, with bridges to road and rail transport, right, and ends of check-in desks, left.
14
Departures level, moving from check-in desks, left, towards security and passport control screen, right.



exploded diagram of binnacle for introducing chilled air over head height

binnacle elevation (scale approx 1:100)

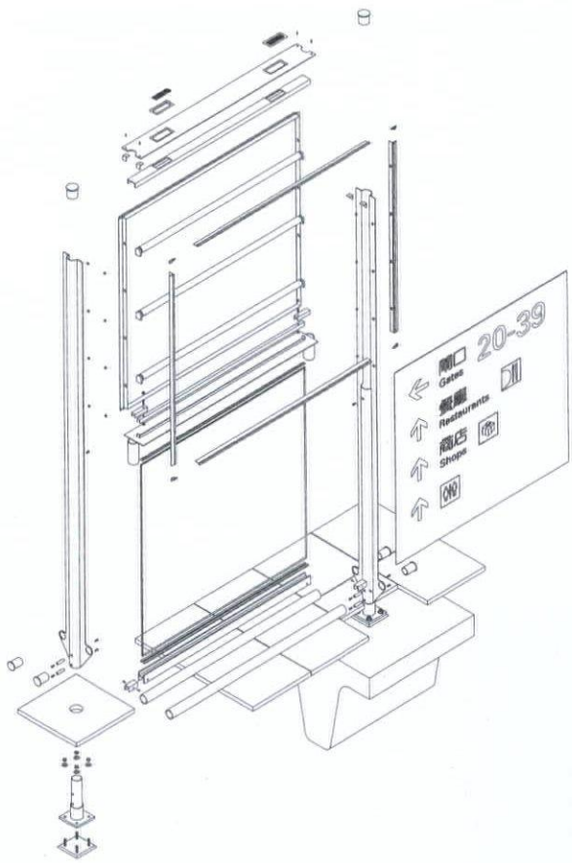


binnacle section

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top under the magnificent welcoming roof. A very solid reinforced concrete base holds the roof down and clever joints between the two prevent the thin steel shells deforming or even taking off under stresses of expansion, typhoons and settlement. Such a thin roof in a tropical climate threatens to fill the spaces with almost steaming heat, as anyone who has stayed in an unreconstructed tin-roofed colonial bungalow can testify. At Chek Lap Kok chilled air is emitted from above the check-in stations and from what Foster's calls 'binnacles', independently standing service units. The heavy cool air forms a layer in which it is agreeable to walk and sit. Above is a layer of warmer air (to which molecules of the cool layer always aspire); the hot layer is supposed to hold the cold one down to some extent.[5] Here is an energy conserving experiment in internal climate control of huge buildings which may be of great importance in future — only carefully monitored measurement of the behaviour of the space will tell whether it works.

As you pass in the cooler air towards the planes, you can see out through huge glass walls with mullions made as bow-string trusses to the jagged blue skyline of the Lantau mountains and to the sparkling



typical floor-mounted direction sign


B
C

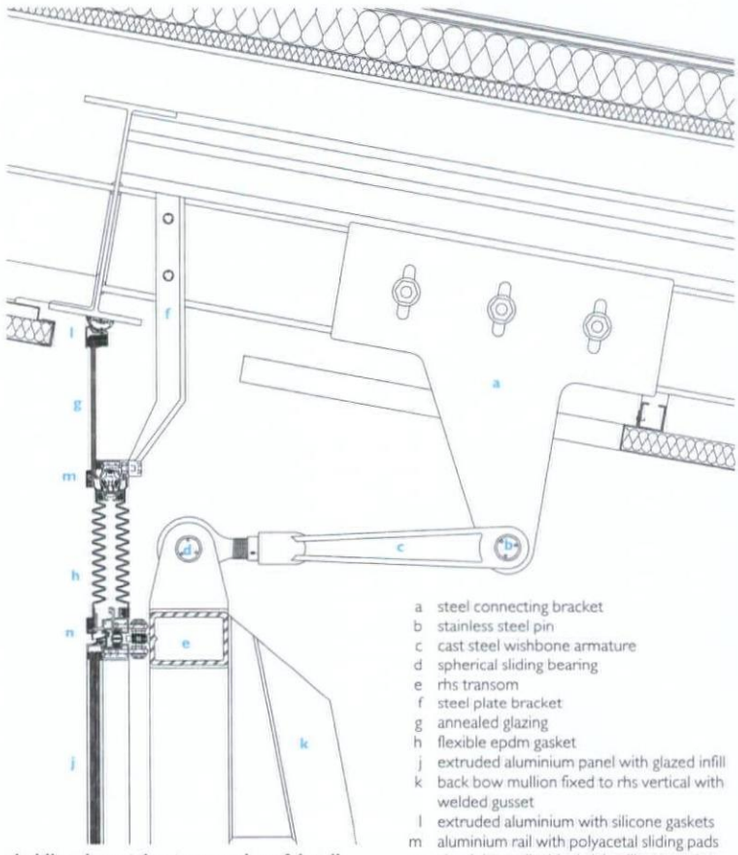

南面
South

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but turbid sea, and glimpse the giant bridges that connect the terminal to the heart of the city. This is a much more open airport than most, in which you scurry around in blind Kafakaesque passages, desperately following badly signposted directions.

At Chek Lap Kok you always know where you are. The swooping curves of the roof shells draw arriving people across the slender bridges over the void and past the check-in islands to the control desks and the east hall, which the designers proudly claim is the 'largest single international retail space in the world. If an airport can be likened to a city,[6] then this is its market square.'[7]

Beyond this area, the route continues towards the planes, under a vault similar to those that cover the departures hall, but now it is a sole vault, the stem of the Y-shaped concourse with its air-bridges to which the planes draw up. The two arms of the Y have vaults arranged in exactly the same direction as those you have already experienced, though here, for the first time, you find yourself moving across the axis, rather than with it. But by maintaining the direction of the vaults, you are always aware of the route and where you are in relation to the planes.



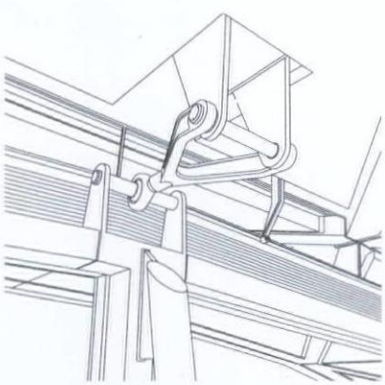
cladding, bowstring truss and roof detail

a steel connecting bracket
b stainless steel pin
c cast steel wishbone armature
d spherical sliding bearing
e rhs transom
f steel plate bracket
g annealed glazing
h flexible epdm gasket
j extruded aluminium panel with glazed infill
k back bow mullion fixed to rhs vertical with welded gusset
l extruded aluminium with silicone gaskets
m aluminium rail with polyacetal sliding pads
n aluminium rail with airtight silicone gasket

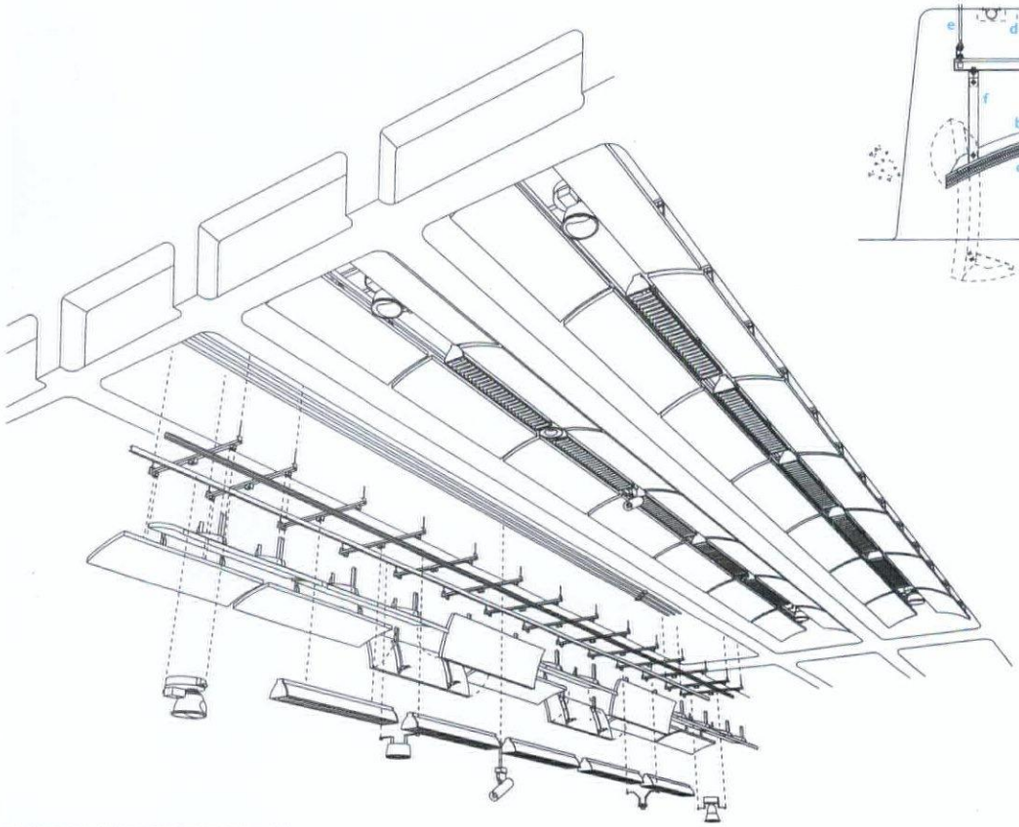


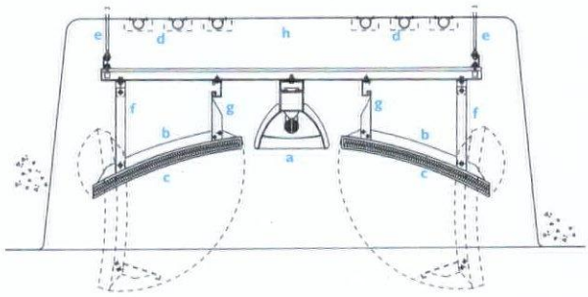


15
West wall at departures level looking towards planes and air-bridges.
16
Baggage hall at arrivals level.



perspective of cladding, bowstring truss and roof detail

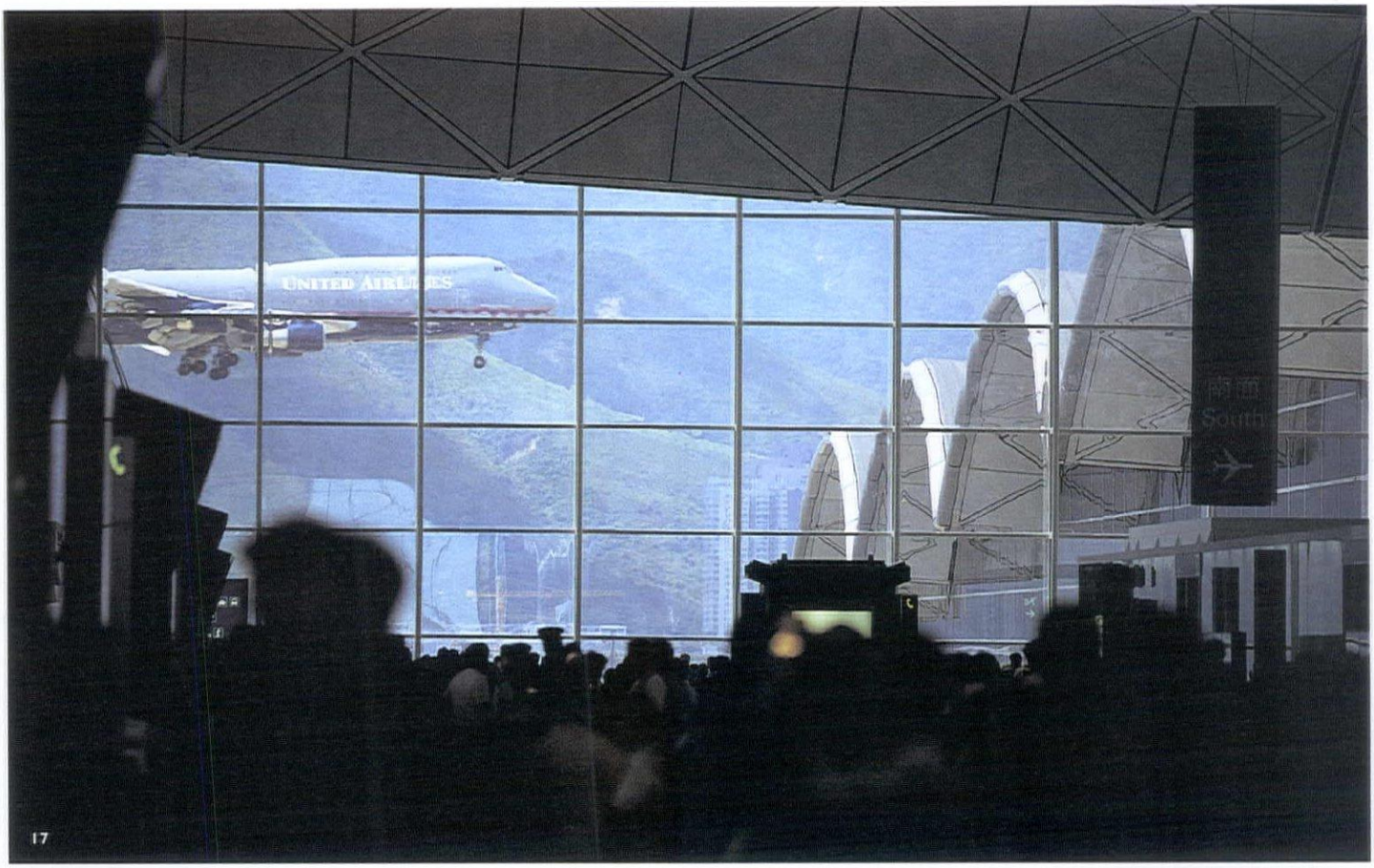




a fluorescent downlight
b metal bridge fixed to upper flange of panel
c perforated metal ceiling panel
d conduits
e threaded rod hanger
f metal channel ceiling hanger
g metal hanging bracket
h services zone

details of lighting at arrivals level





17

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17
Looking south from the concourse towards Lantau and the new settlement, which is largely for airport workers.

Arrivals are in an exact reverse pattern to departures, but a floor below. Just as at the Stansted satellite, arriving and departing people are never allowed to meet, though of course as you entered the complex you looked down from the bridges at arriving people. The travelators of the spine are reinforced by an 'automated people mover' (APM) in a tunnel[8] under the stem of the Y which provides fast connections in two-car trains between the arrivals and departures halls and the gates. The APM is designed to cater for the full traffic flows of 17,500 people an hour when the airport reaches maximum capacity in 2040. (I knew that I wouldn't be able to keep away from the triumphalist statistics for ever.)

But what matters about Chek Lap Kok is not so much the exact numbers of people, or tons of concrete, or acres of ground it covers, but that it provides an efficient, unconfusing and gentle way to move from land to air and vice versa. That it also has grand spaces, marvellous views and offers a sense of reassurance to the individual in the crowds surging to or from the planes make it a distinguished piece of architecture, rather than just a mechanism. It will never be a city, or a substitute for it, but it is a fine building. P. D.

1 Notably Deyan Sudjic in *The Hundred Mile City* (André Deutsch, London, reviewed AR January 1993)
2 Curiously, agreeableness and ease of use seem rarely to be discussed in the publicity.
3 With some teething problems of systems that were not the fault of the architects.
4 See p97 for a more detailed explanation of the lighting system.
5 Hot air is extracted by the binnacles at roughly the same height as the cold air is injected.
6 A most extravagant analogy, for an airport is fundamentally a people processing machine. You have few possibilities for deciding where to go and for making up your own stories – the discipline, quite rightly, drives you forward. There are few of the casual meetings that enhance life in cities – but I find that I bump into more and more acquaintances at airports these days. Such encounters usually lead to exquisite embarrassment, as both of us know that we can't escape from each other because of the nature of the process. You can't say that you are nipping off to see an aged aunt. Only Foster, who drives his own aeroplane, is free from such social catastrophes.
7 From a press release.
8 The baggage handling mechanisms are of course down there too.



1

OLYMPIC VAULT

The graceful new station built in Sydney's Olympic Park and showgrounds is an emblem of celebration and lasting monument to Australia's millennial spirit.

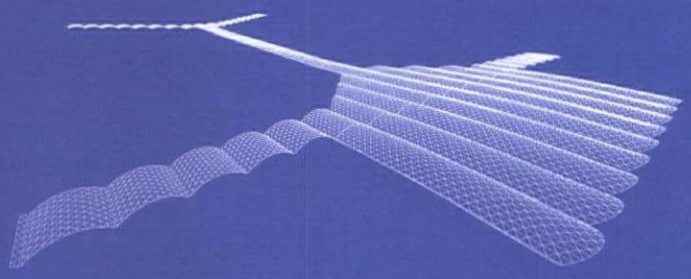
The Olympic Park Railway Station, designed by the Hassell practice, is the main gateway by which people will arrive and leave the grounds. When Sydney won the bid to stage the Olympics 2000 at Homebush Bay, on the western extremity of the city, no real work had been done on transport; but it was clear that neither the road system nor the surrounding suburbs of larger Sydney could support a vast increase in traffic.

What may not be so well known outside Australia is that the park is also the new showground of the Royal Agricultural Society (RAS). Its annual show held at Easter is an important event in Sydney, deeply embedded in the collective unconscious, and a ritual gathering of inhabitants and animals from stations in the remotest outback. Practical sense (and doubtless Australian humour, well-honed on the ironies of democracy) has produced buildings suitable for athletes and animals.

With the expectation of drawing enormous crowds to the single 2000 (and the annual) event, a rail loop was built from the city centre together with a

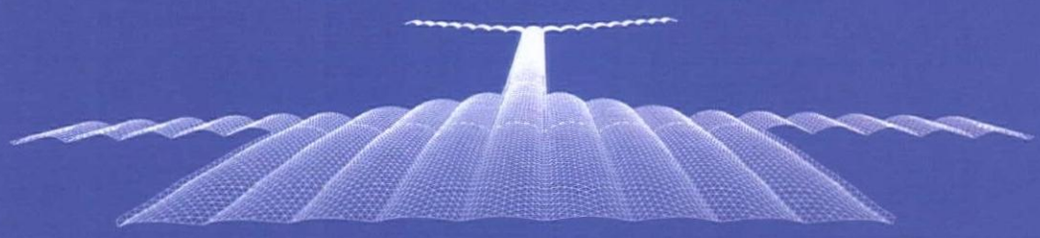


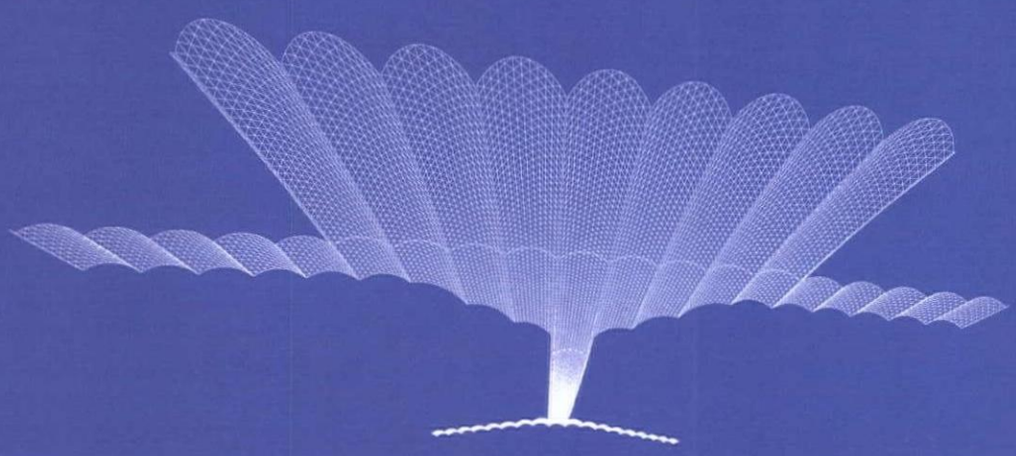
2



HONG KONG INTERNATIONAL AIRPORT

Architect
Foster and Partners (as part of the Mott Consortium, which also includes Mott Connell and BAA plc)
Directors
Norman Foster, Ken Shuttleworth, Graham Phillips, Donald Choi, Grant Brooker, Mouzhan Majidi, Robin Partington, Winston Shu





Project directors
Brian Edes, Brian Timmoney, John Small, Mike Jelliffe, Richard Hawkins
Associates
Jonathan Parr, Ken Wai, Martin Riese, Paul Casey, Stephen Trstenjak
Team members
Alen Nikolovski, Andy Raishbrook, Bernard Suen, Colin Ridley, Derek Power, Jayne Harrison, Jeffrey Kim, Jiang Chun, John Liddiard, Lam Wai Ming, Marco Gamini, Michael Haley, Michael Pryde, Miriam White, Richard Hay, Richard Kulczak, Richard Tan, Robert Mackenzie, Samuel Wong, Sarah Boden, Thomas Tang
Past team members
Alan Chan, Alex Ely, Alex Choi, Alison Drake, Andrew Duncan, Andrew Loiterton, Andrew Mcmullen, Andrew Reid, Andrew Savage, Anthony Lee, Anthony Wang, Axel Ruska, Bocky Wan, Brendan Redican, Calvin Wong, Caroline Brown, Cecilia Mak, Cheng Kwok Wai, Christopher Brown, Christopher Chong, Christopher Seddon, Chris Wan, Colin Ward, Damian Talbot, Daniel Tung, Dara Rigal, David Summerfield, Duncan Sanby, Elizabeth Leong, Eric Leung, Felix Mara, Fleur Hutchings, Frank Filskow, Frank McGoldrick, Gamma Basra, Garo Nercessian, Glenn Iu, Howard Neville, Iain Scott, Ian Macduff, Ian Whitby, Ineke Pitts, James Yu, Jan Landolt, Jason Speechly-Dick, Jeff Leung, Jerome Chambaud, Jessica Ma, Joanna Lewis, Joanne Ronaldson, John Park, Judy Slater, Justin Lamond, Kate Peake, Katharine Campbell, Katie Woolacott, Ken Richardson, Kent Lui, Kim Kwan, Kim Patterson, Kin Choy, Lee Taylor, Louisa Williams, Louise Clayton, Maarten Luiten, Mandy Bates, Mark Treloar, Mary Ackom, Matt Downing, Matthew Seabrook, Matthias Rudolph, Max Connop, Michael Hall, Niall Greenan, Nic Banks, Nicholas Lee, Nick Marks, Patricia McQuaid, Patrick Gilmartin, Pauline Lau, Philip Bowen, Philip Breese, Philip Clarke, Ping Mei, Pusey Chan, Quintin Hinxman, Ray Shiels, Raymond Chan, Raymond Yip, Richard Scott-Wilson, Robert Sun, Robin Brown, Roderick Murray, Rosemary Waters, Ross Milne, Scott Baxter, Simon Lui, Tony Chan, Vasili Tsekrekos, Vivien Fung, Vynsan Wu, William Lee, Wing Lam, Yasser El Gabry, Yvonne Yao
Management and engineering design
Mott Connell
Airport planning operational systems
BAA
Structural engineering
Ove Arup & Partners
Cost consultant
W. T. Partnership
Lighting consultant
Fisher Marantz Renfro Stone
Construction programming
O'Brien Kreitzberg
Traffic planning
Wilbur Smith Associates
SELECTED CONTRACTORS INVOLVED IN THE TERMINAL BUILDING
Main contractor
BCJ Joint Venture
(Amec International Construction Ltd)
(Balfour Beatty)
(China State Construction Engineering Corp)
(Kumagai (HK))
(Maeda Corporation)
Flight information display system
GEC (UK)
Carpet to public areas
Brintons
Public seating
Wilkhahn, Wilkening & Hahne
Passenger terminal building – lifts
Royden Lift & Escalator
Escalators and moving walkways
CNIM Hong Kong
Roof steel, fixed link bridge; glazed liftshaft structural steelwork
Watson Nippon Steel Joint Venture
Terminal building lighting
Thorn Lighting
SPI Lighting
Design Architectural Lighting
Signage and graphics
Cevasa Imagen
Check-in islands, immigration desks, desking systems
NKI
Syphonic drainage
Fullflow systems
Paint
W&J Leigh
Glazed screens and structural glazing
Seele
Glazed balustrades
MBM
Internal cladding systems
Permasteelisa
Binnacles and roof soffit lining panels
SAS International
Granite flooring
Grant Ameristone
Telephone system
Siemens
Ironmongery
Allgood Continental

GROUND TRANSPORTATION CENTRE

Client
Hong Kong Airport Authority and Mass Transit Railway Corporation
Architects
Foster and Partners (Hong Kong)
Anthony Ng Architects
Structural engineer
Ove Arup & Partners (Hong Kong)
Mechanical and electrical engineer
Parsons Brinckerhoff (Asia)
Quantity surveyor
Davis Langdon & Seah (Hong Kong)
Landscape architect
Urbis Travers Morgan
CONTRACTORS
Main contractor
Nishimatsu Construction Company (NCC)
Lift and escalator
CNIM
Mechanical and electrical
Kenworth & GEC Hong Kong
Window/curtain wall
Seele
Cladding
Seele and SAS
Roof cladding
Techwell
Fire services
Kenworth & GEC Hong Kong
Structural steel
Sumikin and UDL Argos
Safety cable systems
Latchway
Platform screen doors
Faively
SUPPLIERS
Wall and ceiling finishes
SAS International
Floor finishes
Triatic
Lighting
Thorn
Ironmongery
Allgood Continental
Photographs
Dennis Gilbert/VIEW, Michel Porro



OLYMPIC PARK RAILWAY STATION, SYDNEY, AUSTRALIA
ARCHITECT
HASSELL PTY

partly submerged station within the Olympic site. It is intended to handle up to 50 000 people an hour safely.

It is a most elegant building responding to the nature of its type, the programme and site, its external form an articulated vault like a silver caterpillar, stretching 200m from east to west. In Hassell's expression of motive power – and if you want to pursue the metaphorical game further, of biomorphic efficiency – it has created an emblem of Sydney's millennial moment which will persist.

Horizontal scale and form sets the station apart in a site dominated by large and/or tall buildings. Essentially it falls into two separate parts: a solid masonry substructure, below ground level, and the delicate elongated vault over it, apparently springing from the ground and terminating in an exuberant partly glazed canopy, an open maw, over the main entrance on the west.

The drama of the roof is in the celebratory tradition of nineteenth-century railway stations, as was Nicholas Grimshaw & Partners' roof at Waterloo (AR September 1993).



3



1
Diaphanous, partially glazed canopy over main entrance on west.
2
Folded vault stretching back from public square on west.
3, 4
Vaulted roof springing from concrete columns encloses two-storey hall.

Olympic Park railway station, Sydney, Australia

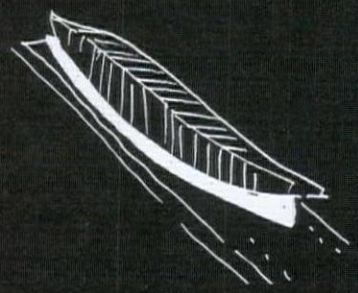
Architect

Hassell Pty

The structure is composed of 18 paired and arched steel trusses set on concrete columns along the perimeter, and together creating a folded vault. This is covered externally with zincalume ribbed cladding and lined internally with perforated aluminium sheet. Thin continuous strips of glass along the ridges admit slivers of light and make the underside of the roof luminous.

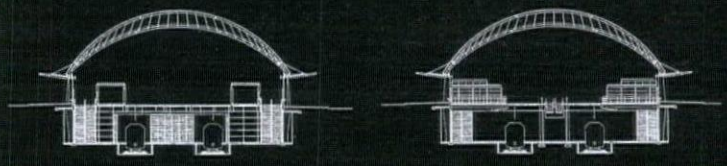
Beneath the ground a linear hall is open to the roof, with platforms and track overlooked at ground level by a glass screened concourse with ticket office. There are three platforms: a central one which serves arrivals and departures under normal conditions, and two side ones for departures when great crowds are expected. A clear system of vertical circulation has been established and stairs, escalators, lifts and ramps are situated so as to distribute crowds evenly. Tested last spring during the first RAS show at Homebush, the station processed nearly 40 000 without any trouble. PENNY MCGUIRE

5
Roof trusses with glazed panels along ridge lines.

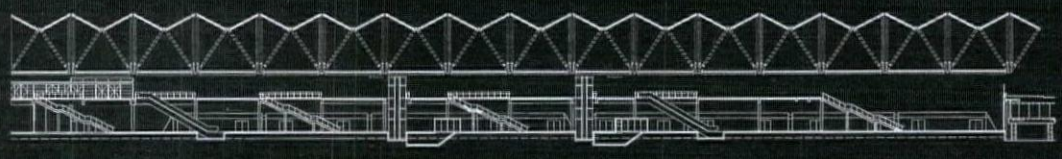




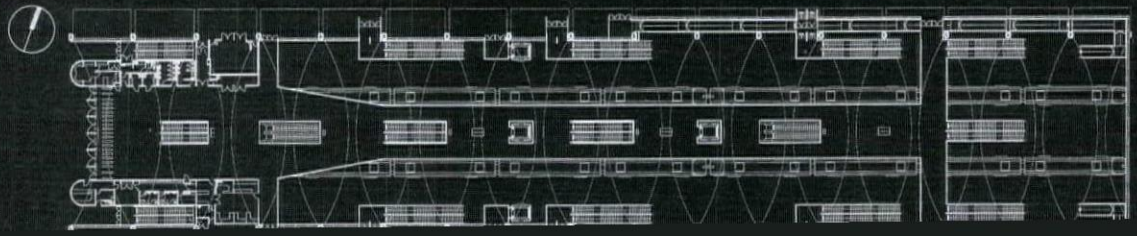
5



cross sections



west-east section



Architect
Hassell Pty
Project architects
Ken Maher, Rodney Uren, with Robin McInnes, Geoff Crowe, William Smart, John Woodman, Adrian Gotlieb, Andrew Cortese, Vanessa Yee, Mano Ponnambalam,

AIRPORT, KUALA LUMPUR, MALAYSIA
ARCHITECT
KISHO KUROKAWA

Kisho Kurokawa's new regional air terminal for Kuala Lumpur re-energizes the moribund typology of the hub airport through diversity, complexity and delight.

TROPICAL UMBRELLA



1

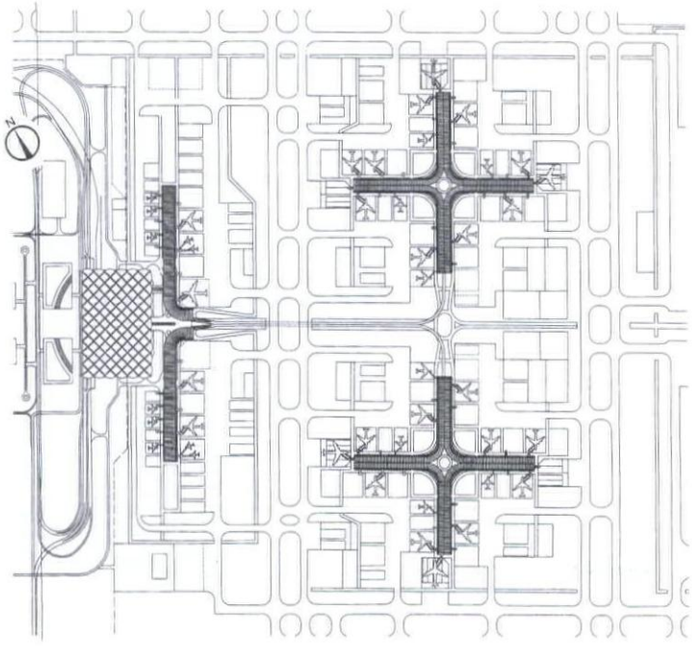
2



First considered in these pages as a project (AR May 1997), the most recent phase of Kuala Lumpur airport is now complete. Reflecting Malaysia's economic and commercial aspirations, the new development will act as a hub for international travel from which local connections will distribute passengers around the region. Although hubs are becoming an increasingly important part of global air travel, they tend to be anodyne and internalized, cut off from any sense of local culture and climate. Situated 31 miles outside the city, Kisho Kurokawa's new airport synthesizes indigenous materials, forms and landscaping in an attempt to introduce diversity and complexity into a moribund typology.

The airport follows the relatively conventional arrangement of a main terminal building and a series of free-standing satellites. On landside, the four-storey terminal connects with road access at first floor (international arrivals) and fourth floor (international departures). Domestic arrivals and departures are on the second floor. The terminal is also served by a railway station on an intermediate mezzanine and from here a new high speed train link unites the airport with the city.

Like Kansai (AR November 1994), Kuala Lumpur's formal and spatial set piece is the international departures hall at upper level.

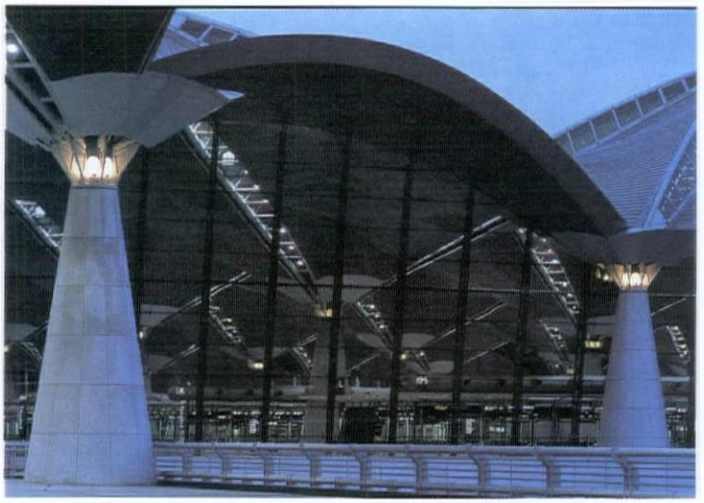


site plan showing main terminal (left) and cruciform satellites

1
The main terminal at Kuala Lumpur's new airport appears as a cluster of undulating, umbrella-like forms in the flat landscape.
2
Entrance to the international departures level located on the upper floor of the main terminal building.



3



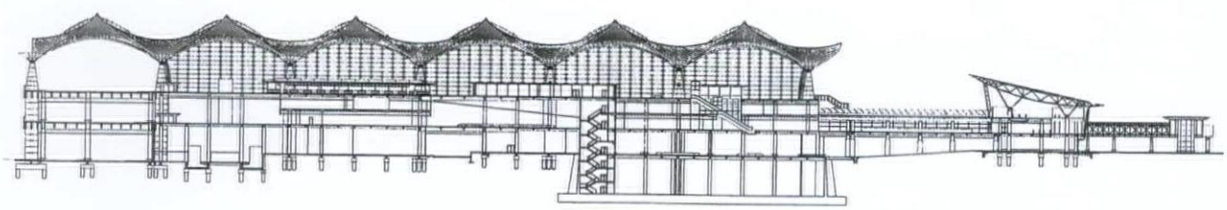
4

Here, the concourse is enclosed by an elaborate roof of linked hyperbolic paraboloids, supported by squat, conical columns which also contain and distribute services. The undulating roof has a peculiarly sensuous quality, like melting domes, a cluster of umbrellas or a billowing Bedouin tent. The underside is clad in narrow strips of wood and vertical slashes of glazing incised along the edges of each paraboloid wash the cavernous space with an ethereal luminance, reflected by the lustrous floor of highly polished marble and terrazzo. The roof form alludes to traditional Islamic domes and vernacular Malaysian timber structures. Oversailing beyond the external wall line, the paraboloids provide protection against the heat and glare of the tropical sun.

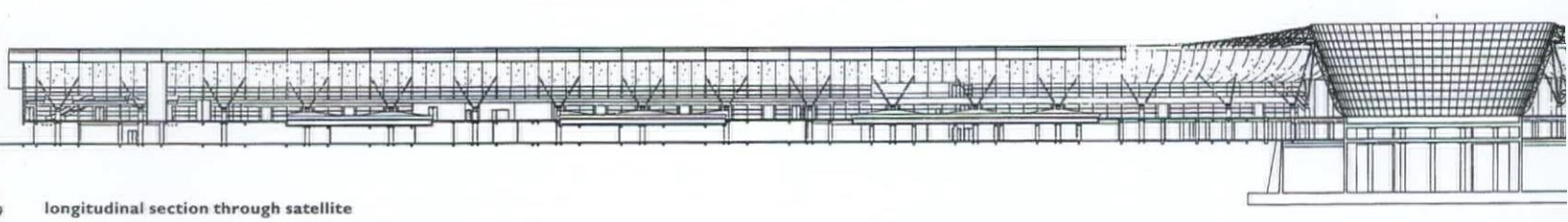
On airside, the terminal is linked to a longitudinal pier. Running along the terminal's south-east edge, the pier has the capacity to serve around a dozen planes. Beyond the pier is a pair of cruciform satellites, reached by shuttle rail links from the terminal complex. Acknowledging that passengers may be obliged to spend long periods in the satellites if flights are delayed, care has evidently been taken with their design. (For most airports, the form of the satellites is usually of secondary or negligible importance.) At Kuala Lumpur, each satellite has a quartet of three-storey arms wrapped around a central circular hub. Services, arrivals and departures occupy separate floors. The central hubs take the form of inverted cones open to the sky, filled with luxuriant greenery, like fragments of rainforest. Although the landscaping is still in its infancy, the effect is nonetheless diverting and the greenery will also filter light through the inclined glazed walls surrounding the hub gardens.

The cruciform plan ingeniously attempts to reduce lengthy trudges to individual gates. Passengers are disgorged in the centre of the satellite and board their planes from gates stationed on both sides of each satellite arm. The satellites employ a similar but simplified architectural language of undulating roofs and tree-like steel structural elements. Timber-clad ceilings are randomly studded with spotlights, like stars blazing through a tented canopy, heightening the shimmering play of light and reflections.

The potential for expansion was a major element of the brief, so the basic arrangement of terminal and two satellites can simply be handed (replicated in mirror image) about the central station and road network. Satellites (or even half satellites) can be added incrementally as necessary, and the longitudinal pier attached to the main terminal can also be extended. Considering the shambolic evolution of most major airports, this sense of ordered development immediately sets Kuala Lumpur apart, but it is also distinguished by the invigorating drama of its public spaces, which endeavours to civilize the drear experience of modern air travel. PHOEBE CHOW



cross section through main terminal and boarding pier



 longitudinal section through satellite



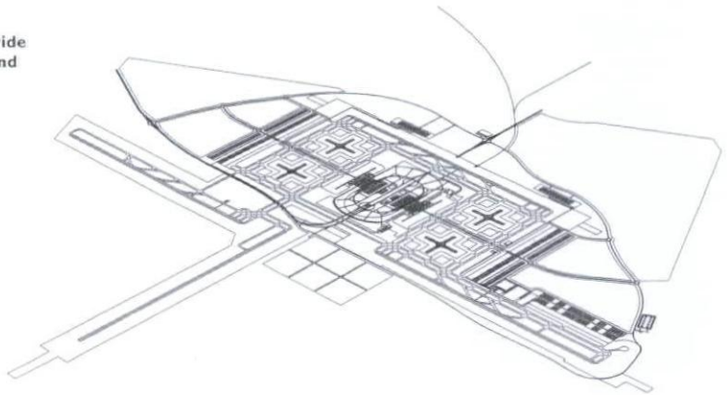
5

3
Squat, conical columns support the terminal roof.
4
The undulating roof canopy over the international departures hall is animated by the rhythm of its robust structure.
5
The terminal roof oversails to provide protection from the intense heat and glare of the tropical sun.

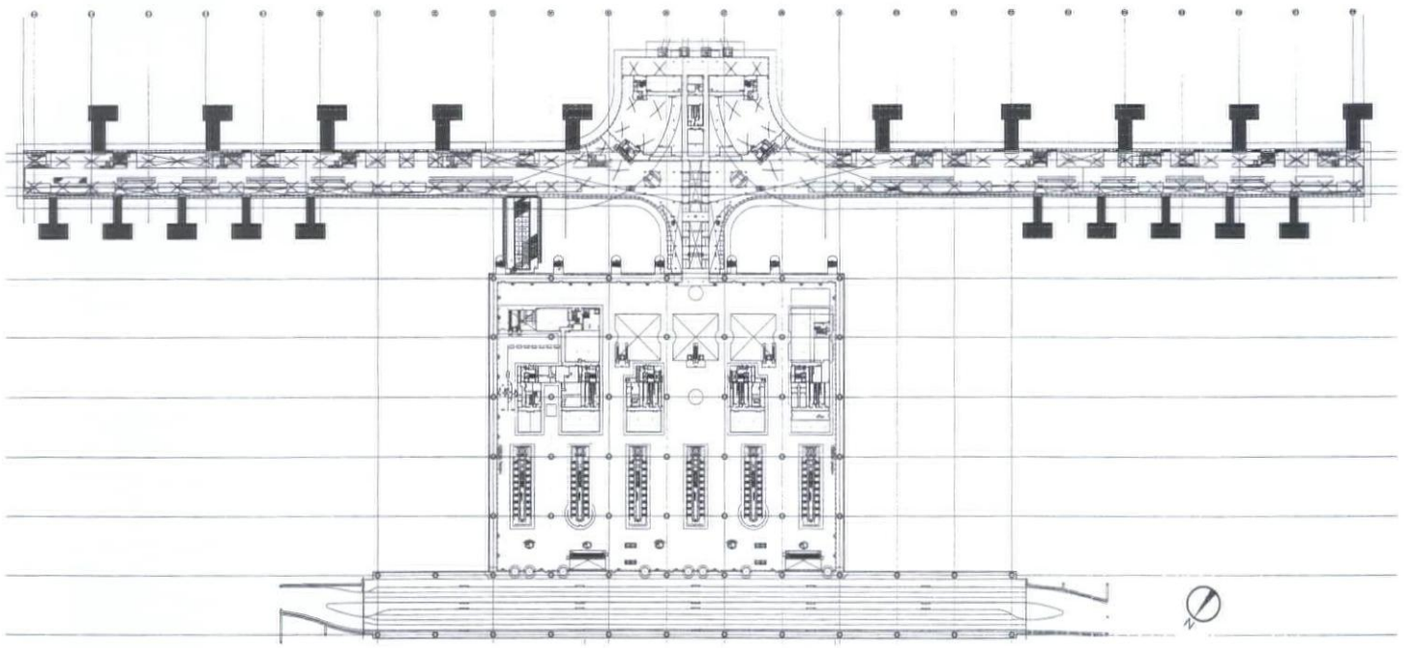
AIRPORT, KUALA LUMPUR, MALAYSIA

ARCHITECT

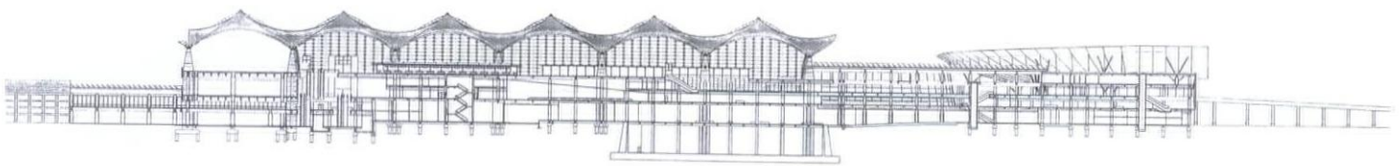
KISHO KUROKAWA



perspective showing proposal for extended development

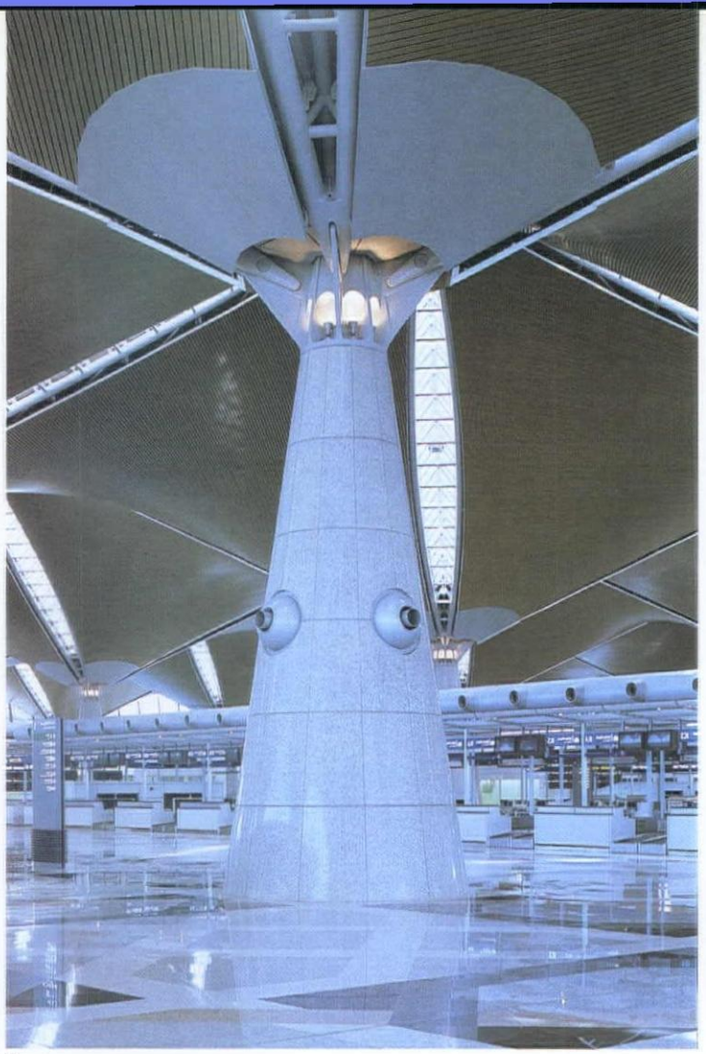


fourth floor plan of main terminal (international departures) and boarding pier (scale approx 1:85 000)



cross section through main terminal



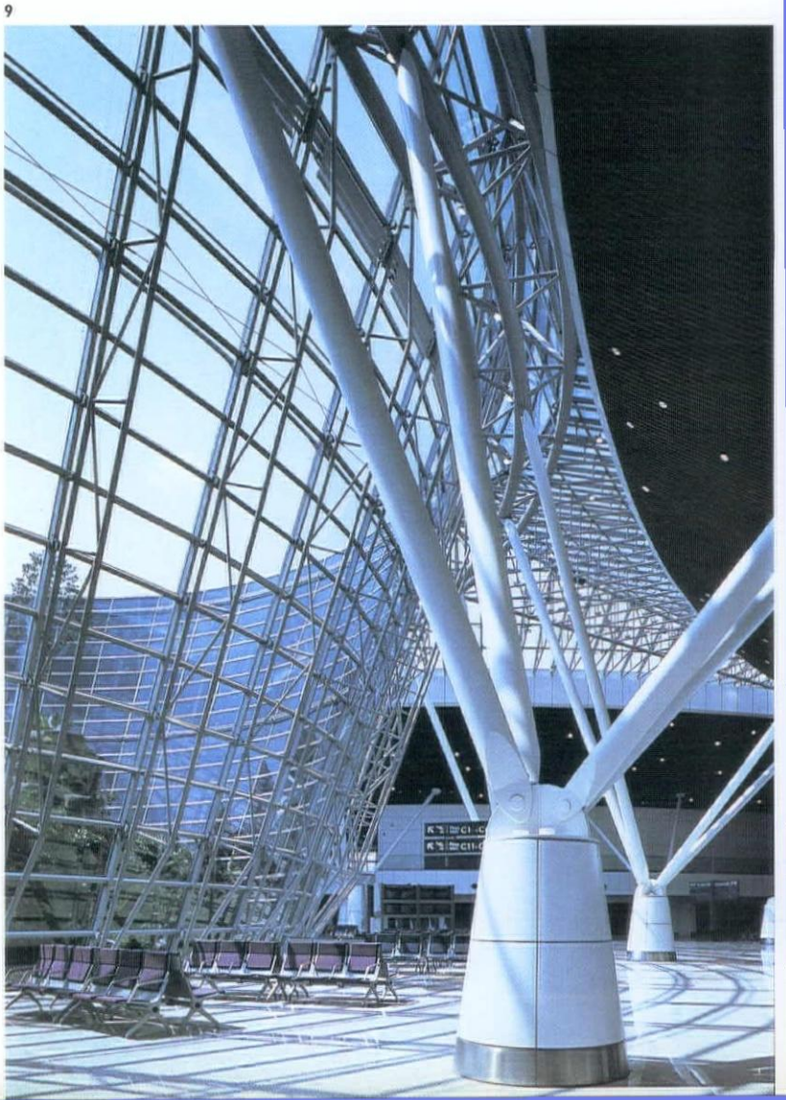


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7

9



AIRPORT, KUALA LUMPUR, MALAYSIA

ARCHITECT

KISHO KUROKAWA

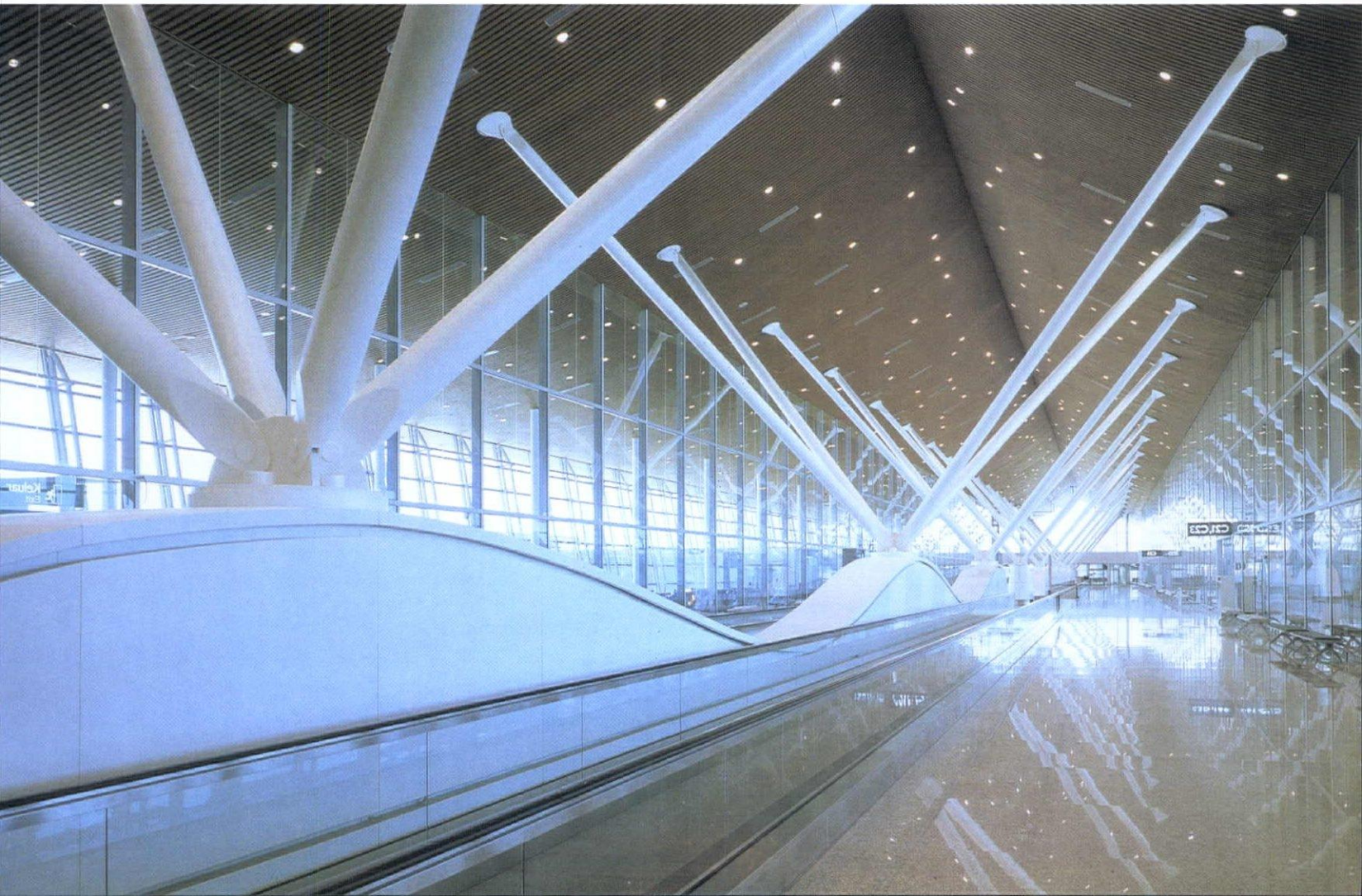
6
Detail of conical column. Columns house and distribute services.
7
A long boarding pier connects with the main terminal.
8
Ethereal play of light in the international departures hall. Composed of linked hyperbolic paraboloids, the roof has a sensuous, almost organic quality.
9
Satellites are organized around central gardens, lushly landscaped to provide soothing green oases.
10
Boarding arm in one of the satellites. The cruciform plan form reduces travelling time to gates.

Architect
Kisho Kurokawa Architect & Associates, Tokyo
Design consortium
Pacific Consultants International, Akitek Jururancang, Ranhill Bersekutu, Sepakat Seita Perunding
Photographs
Tomio Ohashi



8

10



AIRPORT EXTENSION, ROISSY, FRANCE
ARCHITECT
AÉROPORTS DE PARIS

TAKING FLIGHT

Roissy, one of Europe's most functionally exasperating airports, keeps on getting larger, but this new addition actually attempts to celebrate air travel through a series of elegant, luminous volumes housed in an inventively engineered structure.

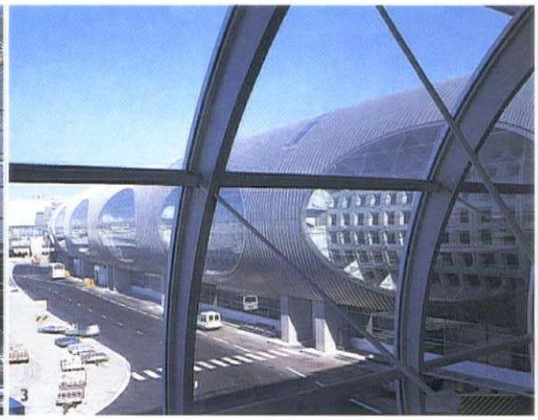
Roissy Charles-de-Gaulle is one of the most exasperating airports to use in the world. Roissy 1 (the terminal in the shape of a drum with escalators in transparent tubes slashing diagonally across its dreary central space) so lacks any notion of directionality because of its circular plan that disorientated travellers wander round muttering to themselves in rage and bewilderment. Roissy 2 overcame lack of orientation by being strung out as a series of disjointed crescent-shaped halls to north and south of an axial road transport spine. But anyone who has tried to sprint from one hall to another to catch a connection, or (in some ways even worse) has had to trundle around in nail-biting slowness on one of the Heath-Robinsonish buses where the floor ponderously moves up and down on gigantic scissor jacks, knows that this is not much better. The chief architect of both buildings was Paul Andreu.

Now, he's had another go – and it looks as if he's learned a good deal from previous experience. Hall F of Terminal 2 is roughly the same shape as the previous halls, but is much bigger than they are. Two *péninsules*, each with a dozen air bridges, project from its curve. Departing passengers enter at the upper level from the road spine (which connects the nearly completed complex to the rest of the airport via the TGV and RER station – AR February 1995). Arrivals are at the lower level and debouch into a triple-height canyon over which bridges connect the road spine to the check-in hall, which follows the curve of the crescent. The idea of the gulch is reminiscent of the huge canyon at Kansai where



1
One of the two sleek *péninsules* (surrounded by air bridges) that protrudes from the main curved volume.



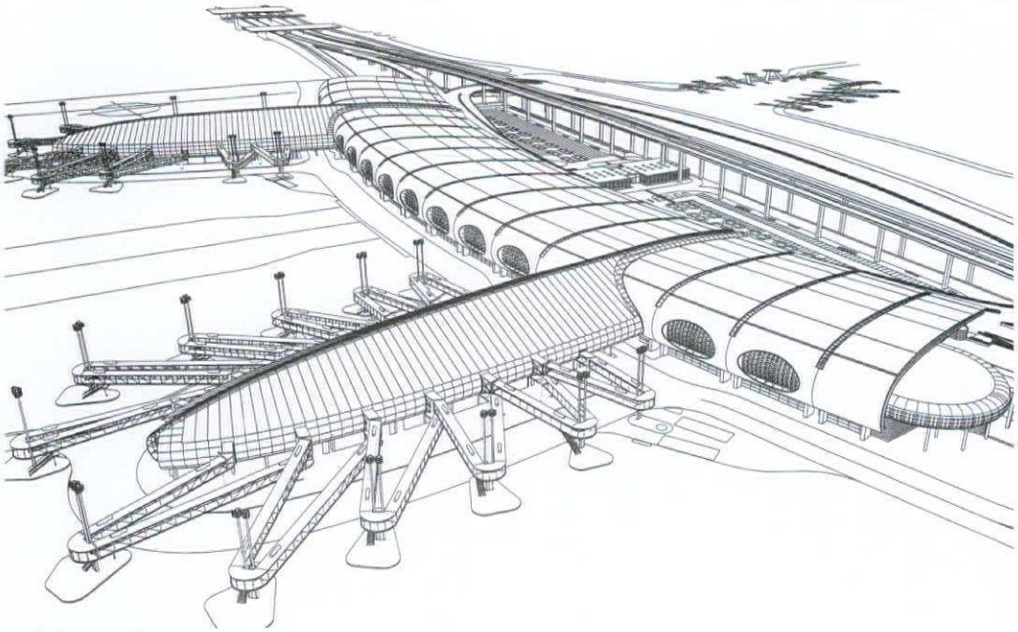




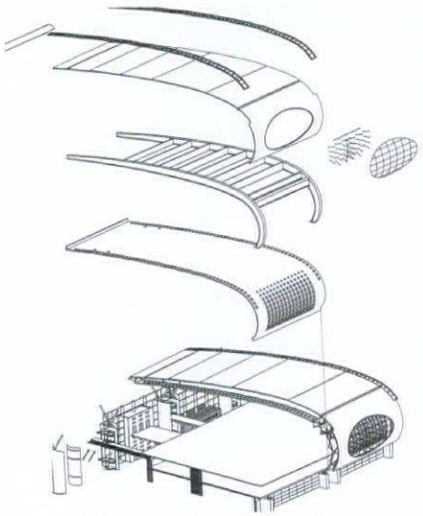
2
The concrete structure oozes out of the main volume.
3
Zinc cladding is cut back to reveal the concrete carapace below.
4
Part of the massive canyon.



5
Intersection of main volume and *péninsule*.



aerial perspective

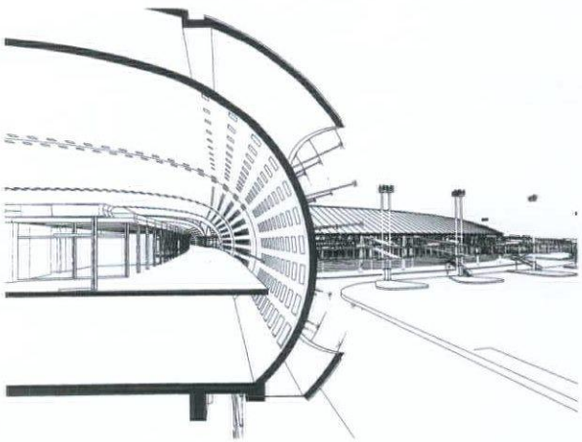


exploded projection of main volume

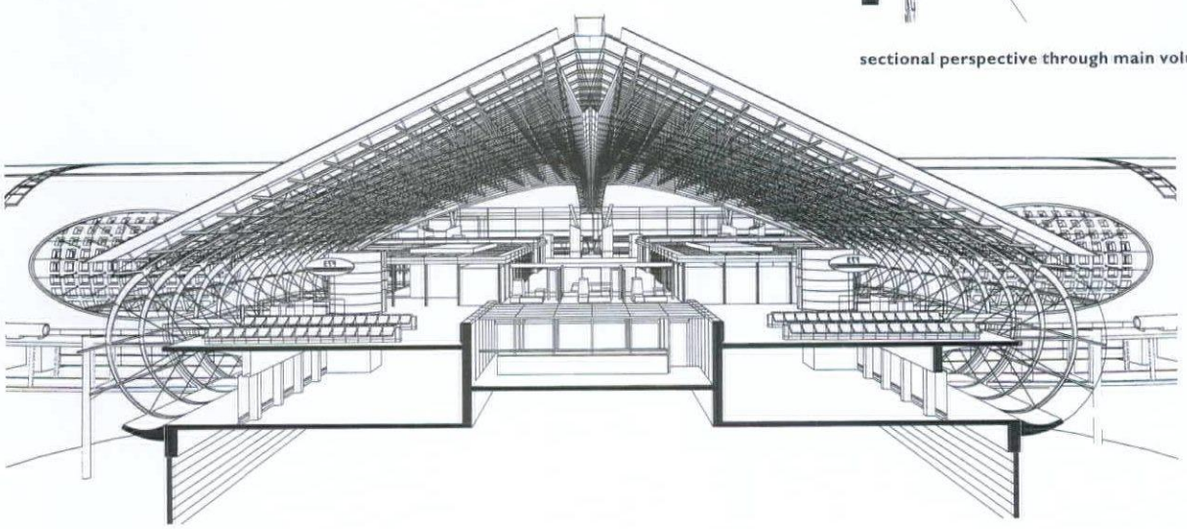
AIRPORT EXTENSION, ROISSY, FRANCE

ARCHITECT

AÉROPORTS DE PARIS



sectional perspective through main volume



sectional perspective through *péninsule*

Andreu and his team were instrumental in organizing flows of people and luggage (AR November 1994).

From the check-in hall, departing passengers have to move out through security checks into one of the two *péninsules*, which are elegant spaces tapering progressively forward in plan and section. Curved glass walls and a sort of space-frame roof make them into luminous and calm spaces. The check-in hall is handled in a quite different way, with the whole space enclosed by a shallow smooth grey concrete vault which has an amazing 74m unsupported span. For comparison, the Pantheon's diameter is less than 45m, and while no one will ever claim that Roissy 2F aspires to the nobility and intensity of the great Roman building, it is a considerable step forward for the Andreu team, which up to now has tended to produce rather dumb spaces, both in Paris and elsewhere like Djakarta (AR November 1995).

The great span is achieved in a a curious way: by hanging a thin concrete membrane from a steel structure of huge curved girders stiffened by longitudinal steel members. The whole is clad in zinc, which is regularly cut back in huge ovals to reveal the concrete inner parts pierced by little square windows. At the ends of the curved hall, the concrete emerges as a sort of pierced tube, as if the building is spilling its guts. But one must not be too critical – Andreu and his people have created at least one memorable space, and a building that is far more simple and easy to use than their previous efforts.

And in doing so, they have been incredibly brave with

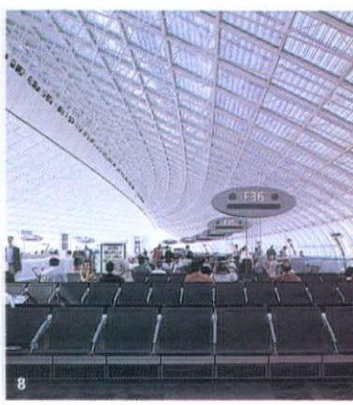
6

6
The light and drama of one of the *péninsules*, elegantly enclosed by an intricate space-frame roof.
7
Generous spaces are provided for those who need to work.
8
Typical boarding gate.

construction. Most of us would be very puzzled about how to create what must (at least to some extent) be a stiff, rather brittle concrete shell within a flexible steel structure. But they have invented the new system and executed it with true Gallic panache. Only sceptical Anglo-Saxons will be looking for cracks as they rush through the fine space to catch the next plane to Djakarta. ERNEST JONES

Architect
Aéroports de Paris: Christian Cléret, Paul Andreu, J-Michel Fourcade
Project team
A. Brison, V. Chavanne, P. Trannoy, N. Roseau, M. Jean-François, P. Hardel, M. Micard, Ph. Gourcerol, N. Marduel, D. Georgandélis, J-M. Boudet
Structural engineer
P. Muller
Reinforced concrete and facades
RFR
Photographs
Michel Denancé/Archipress


7



8

RAILWAY STATION, ST DENIS, FRANCE
ARCHITECT
AREP

CITY IN MOTION

The construction of the 80,000 capacity Stade de France for the recent World Cup (AR July 1998) also initiated a restructuring of the surrounding local railway network. Located at St Denis in the northern suburbs of Paris, the stadium is served by two suburban Regional Express Railway (RER) lines. These connect with the Gare du Nord and Gare du Lyon in Paris and the new RER/TGV interchange at Roissy airport (AR February 1995). As part of an enterprising programme of urban renewal, two new stations have been built to serve both the stadium and surrounding suburbs. Designed by AREP, the architecture and engineering agency of SNCF (French railways), the stations celebrate speed, lightness and transparency through refined material use and structural expressiveness. AREP's chief architect Jean Marie Duthilleul has been involved with numerous French rail projects, including the RER/TGV interchange at Roissy and the extraordinary Lille-Europe station (AR March 1996), where a curved, lightweight roof floats like a canopy of fine lace over the main station concourse.

The Gare de La Plaine, the larger of the two St Denis stations, lies on the RER 'B' line to the south-east of the stadium. Two pairs of railway tracks are elevated on a split-level concrete viaduct, 9m and 5m above the ground. Two 14m wide platforms on the north side are dedicated to arrivals for the Stade de France, while the two

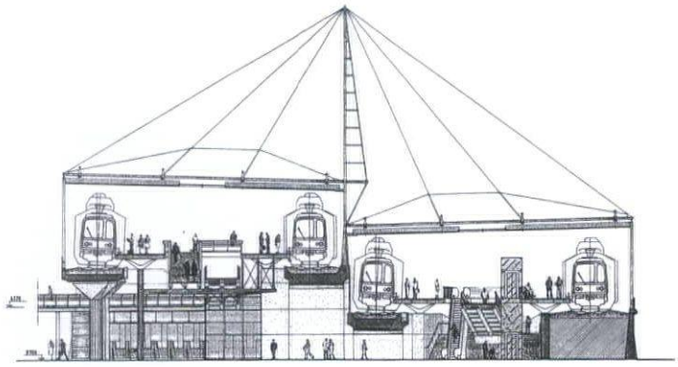
Displaying both structural expressiveness and material refinement, the Gare de La Plaine at St Denis is one of two new stations designed to serve the Stade de France and the surrounding suburbs of northern Paris.

1



2



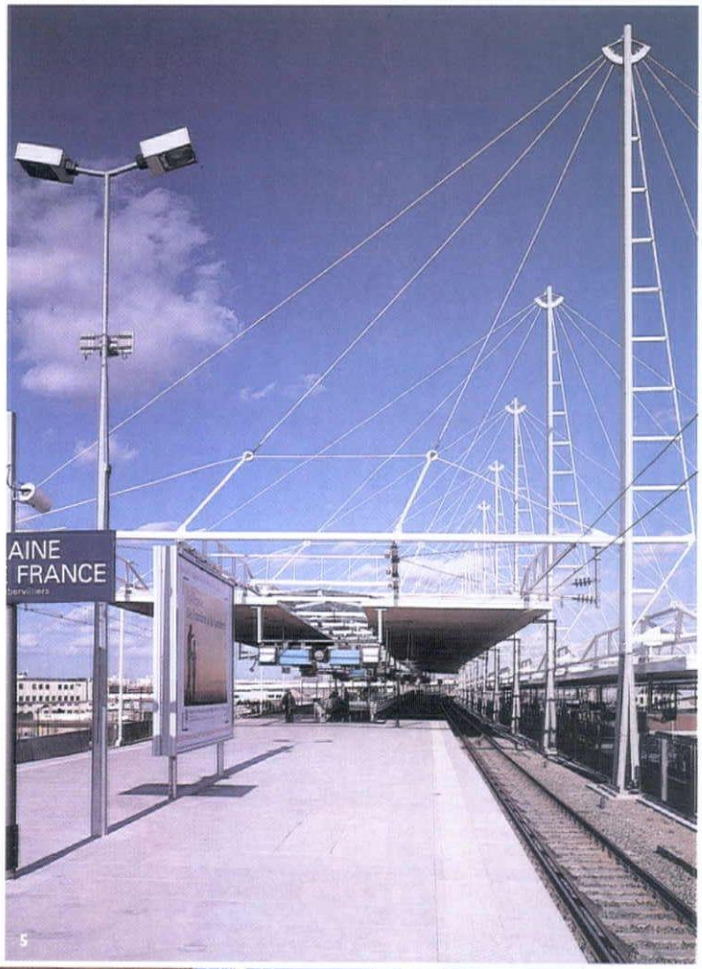


cross section through platforms and roof



3

1
Horizontal slivers of platform canopies are slung from slender steel masts.
2
Platforms are elevated on a concrete viaduct, with a public concourse below.
3
The elevated platforms offer good views of the surrounding city. The new Stade de France dominates the landscape.
4
Long strips of glazing bring daylight into the central parts of the station.
5
The intricate tensile structure of the canopy roofs creates a bold new urban landmark.



5



4

RAILWAY STATION, ST DENIS, FRANCE

ARCHITECT

AREP

Architect
AREP
Project team
Jean Marie Duthilleul,
Etienne Tricaud, Michel Maillard,
Pierre Saboya
Photographs
Paul Raftrey



location plan

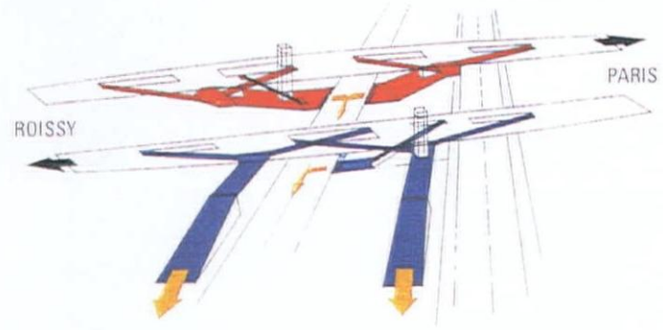


diagram showing peak period operation

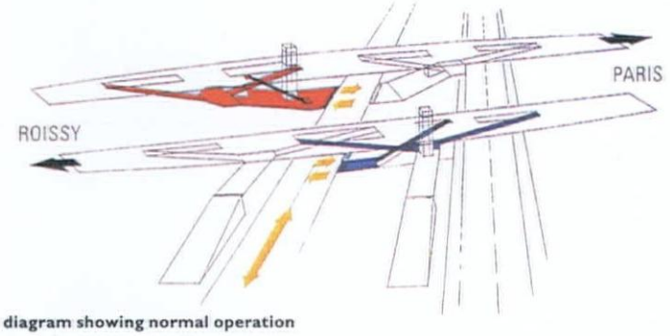
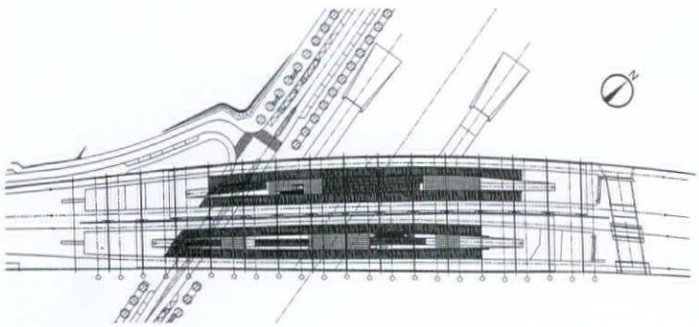


diagram showing normal operation



platform level plan (scale approx 1:2500)

lower-level platforms on the south side handle passengers returning to Paris. Horizontal platform canopies are suspended by a network of tensile cables slung from slender steel masts positioned between the two sets of tracks. The intricate, quasi-nautical composition of the canopy structure is a conspicuous presence in the urban landscape, echoing the monumental cantilevered form of the Stade de France in the distance.

The undersides of the platform canopies are clad in Oregon pine, creating an inviting contrast with the crisp, white painted structure. In places (instead of tiles or concrete) platforms are finished with strips of rugged iroko to resemble the deck of a ship. Broad bands of glazing running down the middle of each canopy bring light down into the central parts of the platforms, where a fluid sequence of wide ramps channels the large crowds expected before and after events. At peak capacity the station can handle 25,000 people per hour and one train every three minutes. Banks of escalators, stairs and elegant glass lifts are also provided.

From the elevated platforms, suspended like observation decks above St Denis, it is easy to feel immersed in the life of the city. Framed by platform and canopy, the surrounding landscape seems to float between earth and sky for the pleasure of passengers as they wait for their trains. C. S.

6
Ramps lead down from the platforms, channelling the huge crowds that will use the station when the Stade de France is in operation.

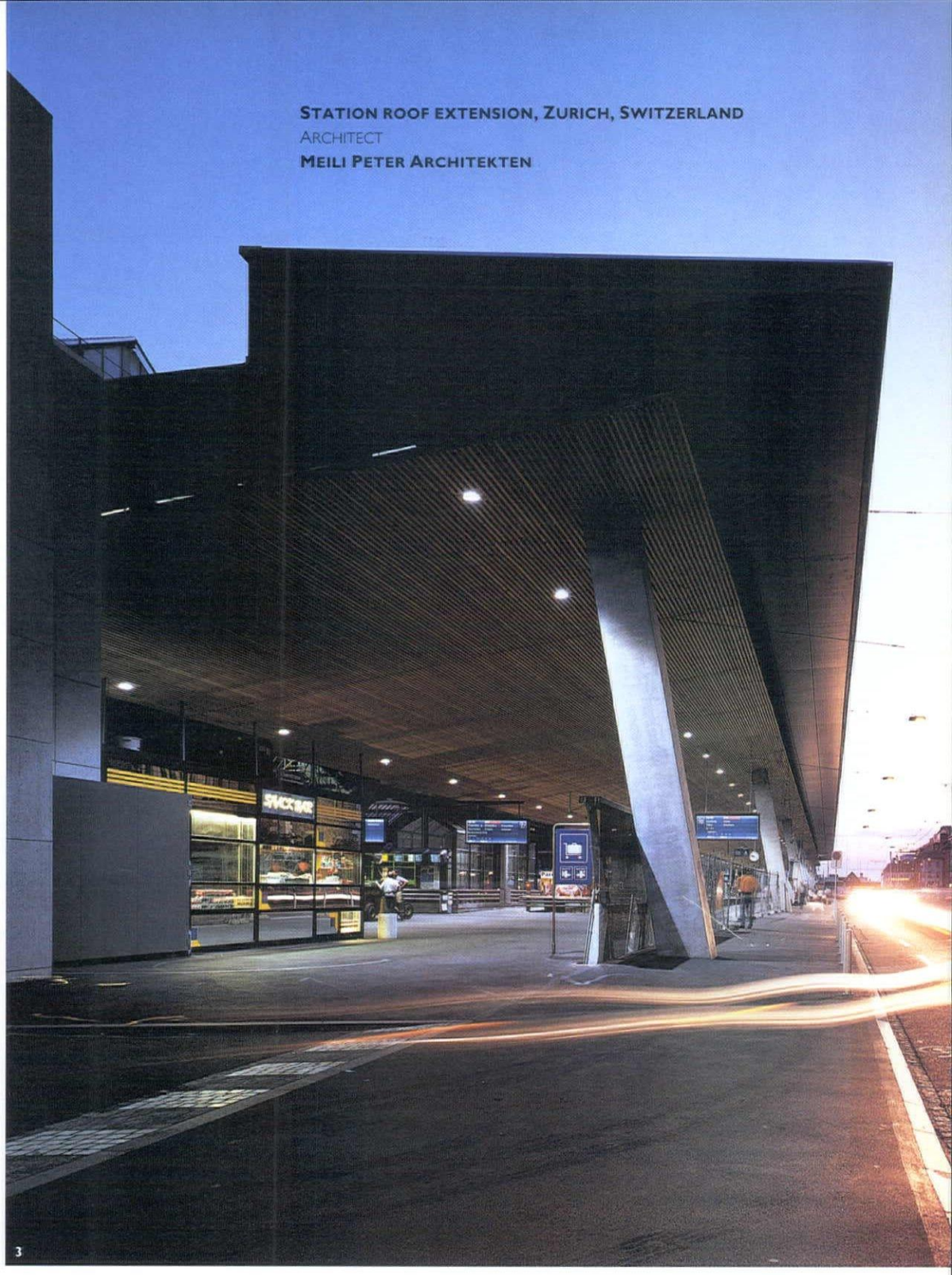


STATION ROOF EXTENSION, ZURICH, SWITZERLAND
ARCHITECT
MEILI PETER ARCHITEKTEN

1
The new roofs give the station presence in the street by enclosing outlying platforms.
2
Extension runs 240m along both sides of the old station.
3
A new urban space – in effect a sort of arcade, which offers shade and shelter, not just to rail passengers.







SWISS TECTONICS

Stations have always offered services beyond their obvious function. The Zurich Hauptbahnhof has been enabled to engage more creatively with the city by an ingenious moving fence.

The extensive Swiss railway system has played a crucial role in the country's development, with stations now assuming a broader function as centres for out-of-hours shopping and services. It is this important relationship with the city that Swiss architects Marcel Meili and Markus Peter (in collaboration with Axel Fickert and Kaschka Knapkiewicz) wanted to strengthen through their competition-winning entry to roof over the outermost tracks of Zurich station. Though readily comprehensible as a monumental gesture, the new addition is also a finely judged analysis of the relationship between form and construction. It is massive yet hollow, gestural yet rigorous, structurally exacting but not expressive.

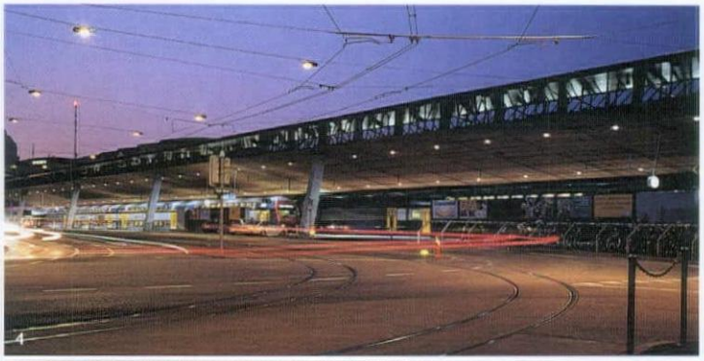
The extension meshes the city with the station, which people approach from all sides and use as a thoroughfare. Extruded in a U-shaped plan, the new roof runs 240m along the north and south sides of the platform and between the tracks and station hall. Night security gates are positioned along the line of the roof edge, so that the extension and outermost trains become

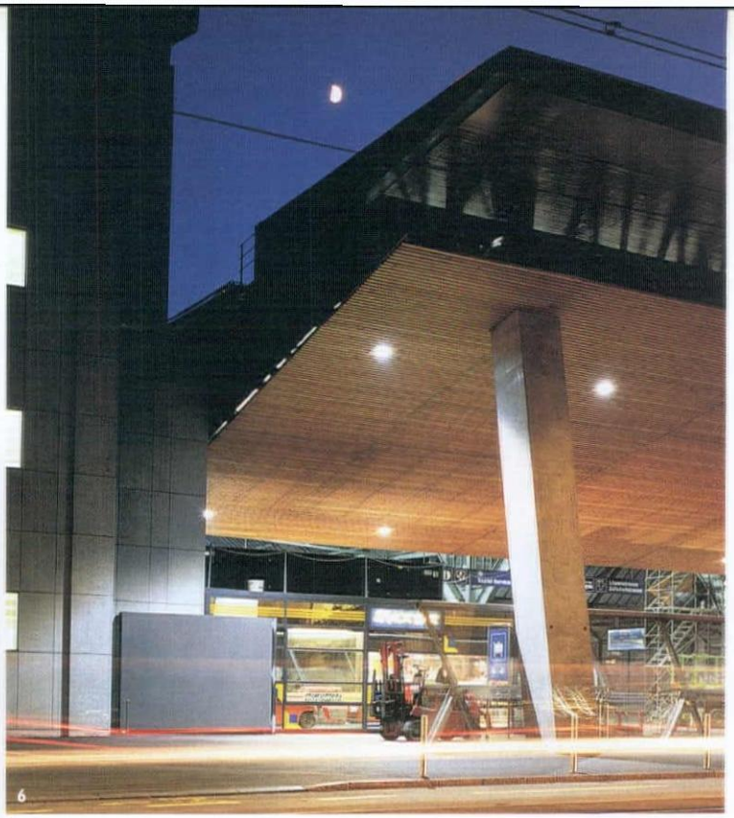
STATION ROOF EXTENSION, ZURICH, SWITZERLAND

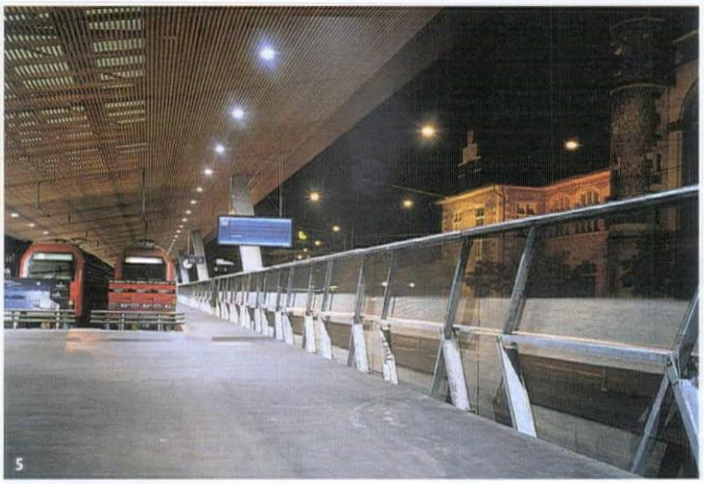
ARCHITECT

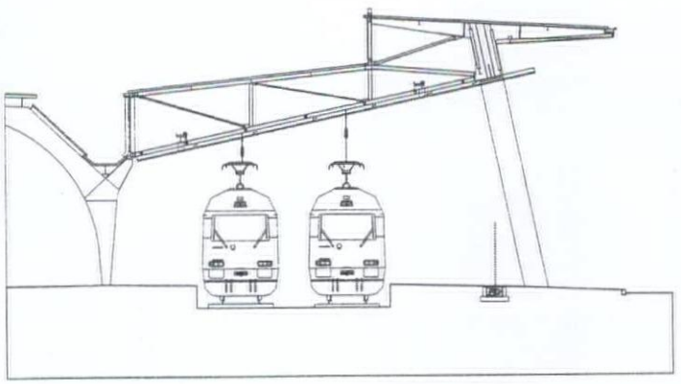
MEILI PETER ARCHITEKTEN

4
A generous, welcoming gesture to the city.
5
At night, security gates unfold out of a slot to protect the inner, closed part of the station.
6
By securing the old, inner part of the station at night, small shops are able to serve the city until late hours.









section through the two roofs (scale approx 1:300)

part of the city. The ingeniously devised gates unfold like an arm, cantilevering out of a covered trough set in the ground.

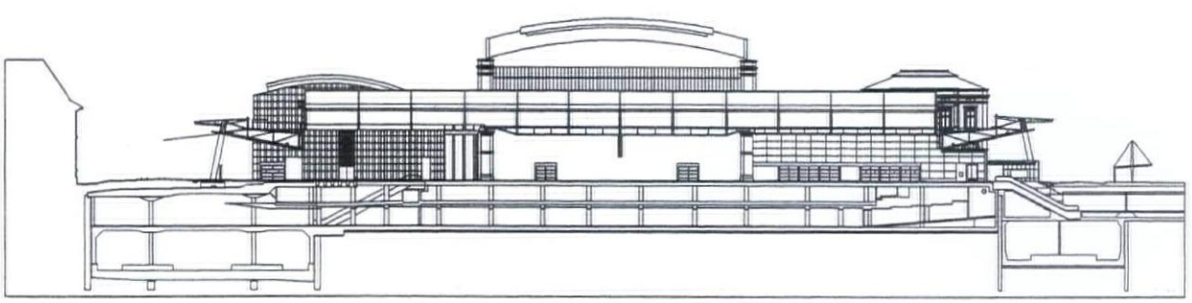
In cross section, the roof is clearly made up of two parts. Thrusting towards the city, the larger part spans 15m and concludes the row of six existing arches. The smaller, upper roof cantilevers beyond the station, terminating the gesture outwards. Materials are contextual, though the architects admit that at present, the timber lattice is especially startling. Laid in the long direction, it reinforces the roof's length and will acquire a patina from the large amount of steel dust produced by the trains. The underside of the upper roof is clad with plywood sheets.

The lattice on the lower roof's underside filters daylight and acts as a veil through which the skeletal construction dimly appears. This glimpse of what lies behind the form, or, more specifically, the play between form and construction, is a recurring proposition. The 900mm square concrete columns, for instance, are approximately four times as large as structurally necessary and are hollow. Their scale and apparent structural clarity are made ambiguous by canting them, and making the lower roof perpendicular to them. In contrast to the existing steel structure, which is riveted and clearly additive, the columns disappear into the roof and touch the ground without any articulation.

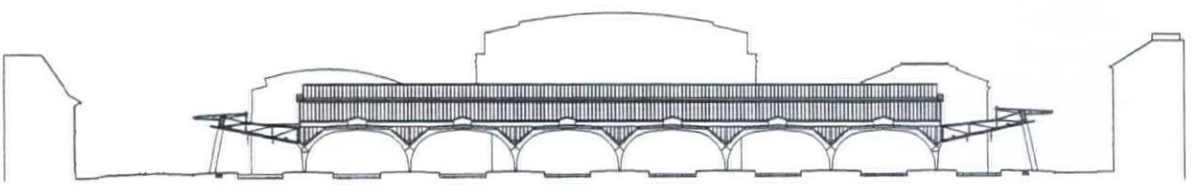
The practical and structural constraints were considerable. For a start, building at a busy train station without interrupting its operations meant that most of the construction had to be prefabricated. Moreover, the points where columns could hit the ground were pre-determined, because a commuter rail station runs under the pavement and part of the platform bridges the river Sihl. The resulting span of approximately 40m means that each column carries a considerable load, so the roof construction had to be as light as possible. Two parallel trusses, which act like a tube, span between these columns, taking up most of the tension and torsion. The upper roof cantilevers off these trusses and the lower roof hangs from them, touching the existing steel columns which are spaced approximately three times as closely as the new ones. Between these columns spans a 2.5m tall Vierendeel truss which facilitates the change in grid between the new and existing columns and avoids diagonal bracing in what is essentially a clerestory.

The extension's monumentality relates both to the scale of the city and the neighbouring Neo-Classical station. It also affords the opportunity of unifying a station complex that had evolved piecemeal. But the architects faced what Meili describes as the 'Semper-like problem' of achieving monumental form with contemporary (i.e. non-massive), building technology. Embodying almost purely structural and tectonic considerations, the new roof elegantly resolves this dilemma. STEVEN SPIER

7
The timber screen on the soffit of the lower roof filters daylight and acts as a veil, allowing the structure to be vaguely perceived.



section through main station building



section through train sheds and platforms

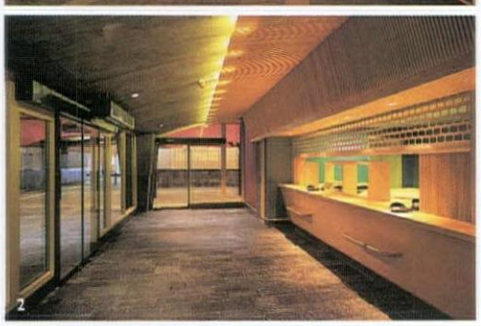
Architects
Marcel Meili, Markus Peter, Axel Fickert, Kaschka Knapkiewicz
Structural engineers
Paul Lüchinger, Daniel Meyer
Photographs
Heinrich Helfenstein, Margareta Spiluttin

RAILWAY STATION, LILLESTRØM, NORWAY
ARCHITECT
ARNE HENRIKSEN

URBAN LINK

A station brings the two halves of a small town together with an elegant underground connection.


1


2

Arne Henriksen has devoted a considerable part of his professional life to the tectonic celebration of expedition and connection. He is the architect of stations at Sandvika and Slependen (AR February 1995), at Frognerseter (AR August 1996) and most recently at Lillestrøm, north of Oslo, and the small country town of Eidsvoll.

The schemes vary in scale and complexity but the ingredients – platform canopies and shelters, bridges, stairways – are rugged, clearly articulated constructions. But Henriksen's work is elevated above the level of the vernacular essay by the abstract flights of imagination with which it is infused. The result often achieves poetic resonance with place or purpose.

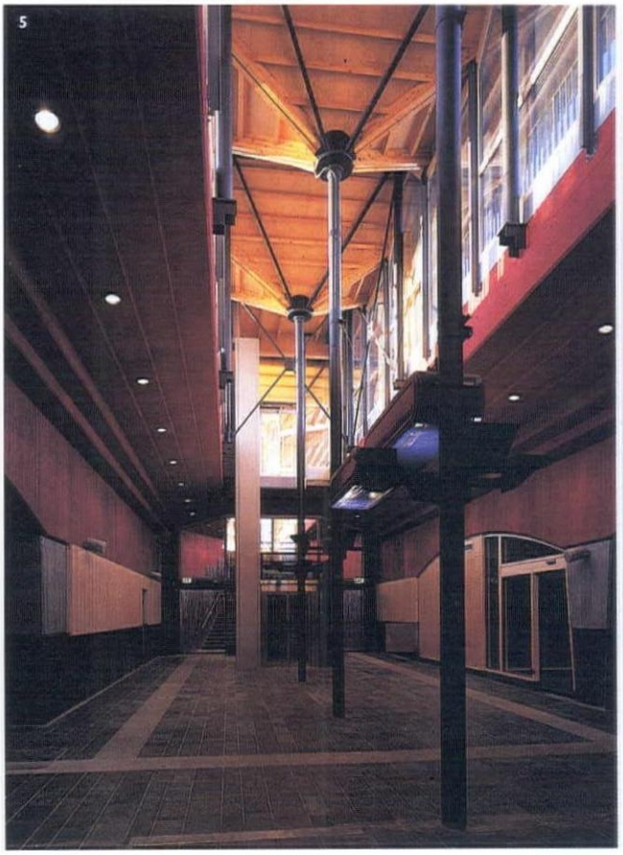
So at the outpost of Frognerseter, on the edge of the Nordmarka wilderness, you find a tectonic flight of winged platform canopies and a spare shelter among trees, a temple to the spirit of expedition. More elaborately, at the commuter halt of Slependen, where the station links the two sides of a deep cutting, Henriksen emphasizes the drama of setting and connection with a faintly medieval assembly of bridge and tower, curving ramp and flowing staircase.

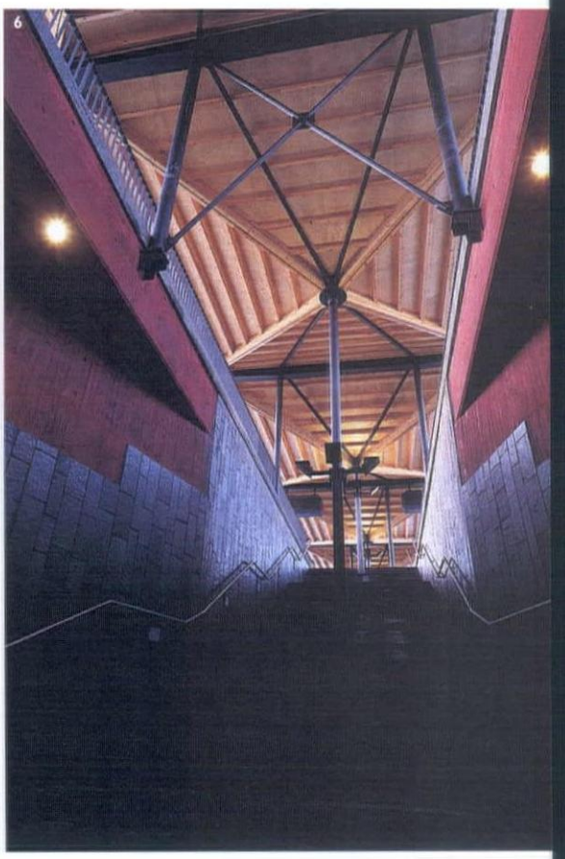
The idea of connection underlies the design of the station at Lillestrøm, a town to the north, and almost a suburb, of Oslo. As at Sandvika, the town was split in two and required uniting. The scheme consisted of restoring the fine Neo-Classical building, put up in the 1920s, on the main south side, designing a new station entrance, hall and platform shelters, and creating a link between the main south side and the north. Here, there is to be a new public square, designed by Henriksen, and not yet finished. The plan of the new station complex is sensibly articulated so that directions are clear. Entering from the south, you are fed through a simple rectangular building containing main ticket office, a fast fooderie


3



1
Tunnel connection joins two halves of town under tracks. Instead of being a dreary subterranean passage, space is transformed with colour and events.
2
Ticket hall has same kind of Norwegian slate floor as underpass.
3
Wood and steel umbrellas shelter platforms and stair approaches to them.
4
Shelters have lighting function at night.
5
Looking along one of the slots which deliver people to the platforms. Each has a lift, stairs are through glass doors beyond lift.
6
The literally uplifting experience of ascending towards platform.



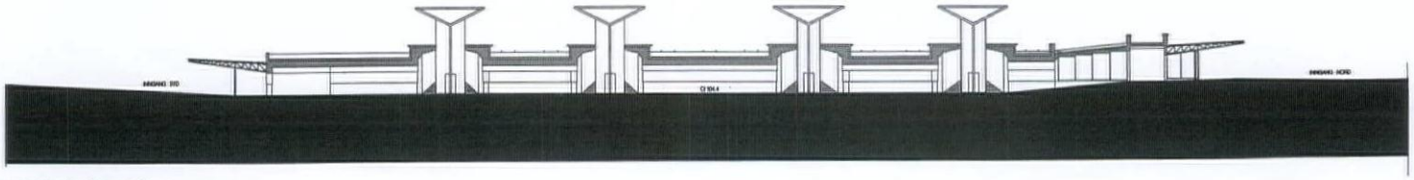


Photographs
Terje Solvang and Jiri Havran

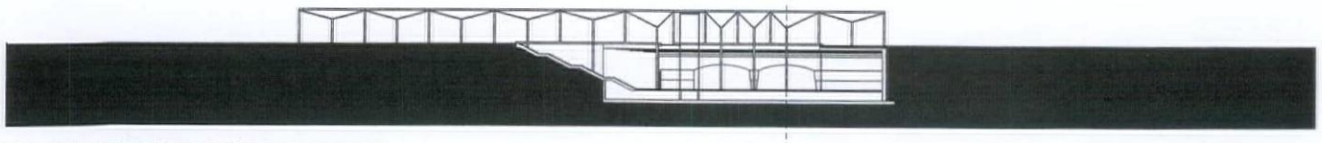
RAILWAY STATION, LILLESTRØM, NORWAY

ARCHITECT

ARNE HENRIKSEN



north–south section



west–east section through platform approach



north elevation



west entrance

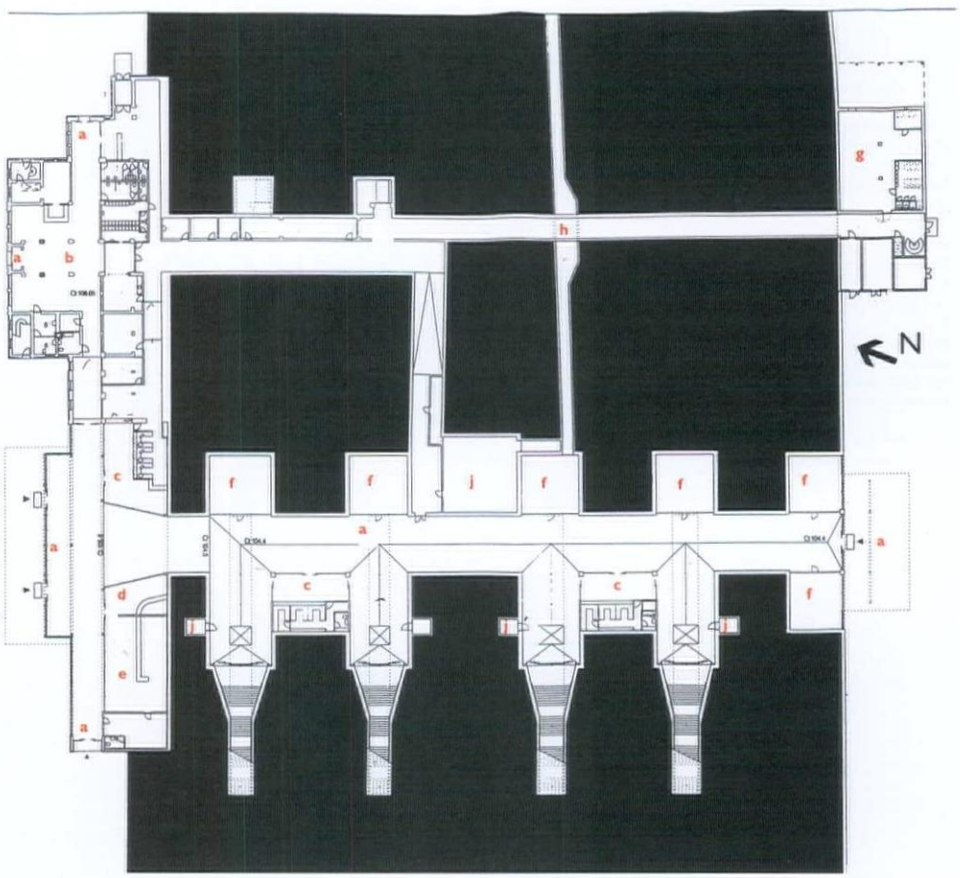


south entrance

a entrance
b old station (offices, staff rooms)
c tickets
d fast food
e shop
f rentable (shops)
g air-raid shelter
h service duct
j plant

and shop, to the rear and so to the four platforms.

Repeating the strategy he used at Sandvika, Henriksen has driven a subterranean passage under the tracks from one side of the town to the other; and in his hands the dreary underpass has been transformed into a civilized street with ticket offices and shops, paved and clad with slate, made colourful by pigmented concrete. It is broached by four light wells, with stairs and lifts to each of the platforms. They are covered by wood and steel umbrellas that rise two storeys high on slim metal columns over the platforms, to be echoed (with some variations) in the forms making up platform canopies and the canopies over entrances on north and south. The rhythm set up by repetition of these umbrellas, the dynamic composition of angled struts, columns, girders, the track-like joists making up the umbrella roof, are all irresistibly eloquent of motion. PENNY McGUIRE

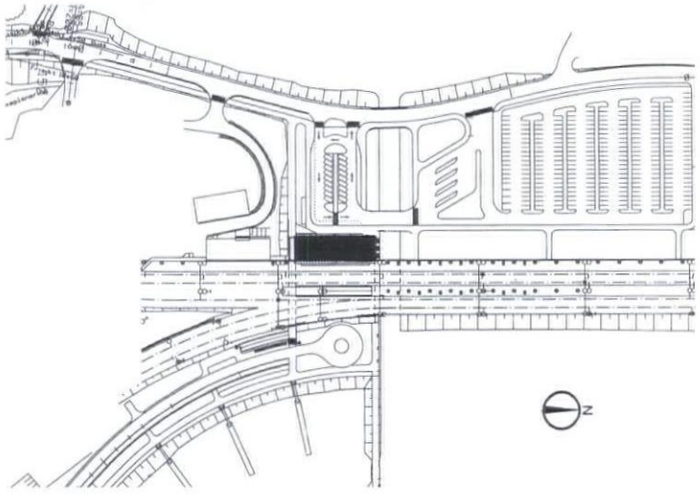


plan at entrance level (scale approx 1:500)

RAILWAY STATION, EIDSVOLL, NORWAY
ARCHITECT
ARNE HENRIKSEN

STATION MASTER

A country station on the new airport line is given a sense of place and ease of use by a clear strategy.



site plan

Eidsvoll is the last stop on the railway going north from Oslo, Lillestrøm and past Gardermoen Airport. It is a pleasant country halt on the banks of the River Vorma flowing south from Lake Mjøsa, Norway's largest lake. With the recent arrival of a fast line to Gardermoen and on to Oslo the place has become a commuter idyll and Arne Henriksen's new station is the consequence. More than this, under Henriksen's civilized direction, the station has become part of a larger park with paths and waterways. Boats have long been part of life here and for years an old paddle-steamer has plied the river, but now pursuit of more sophisticated boating has arrived with construction of a new marina to the south-east.



1
The new station, from east, with island platform shelter in foreground.
2
From west, the face which greets the car-commuter.

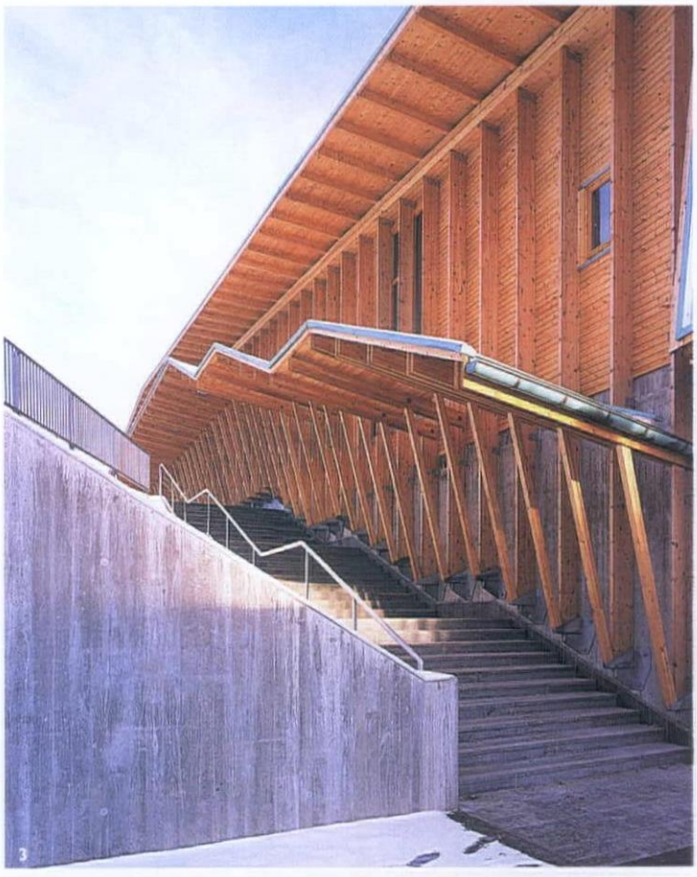
On the north side, a bus station has been created beside a small canal dug underneath the tracks and exposed at this point. Behind the buses, to the north, there is a large car park for commuters.

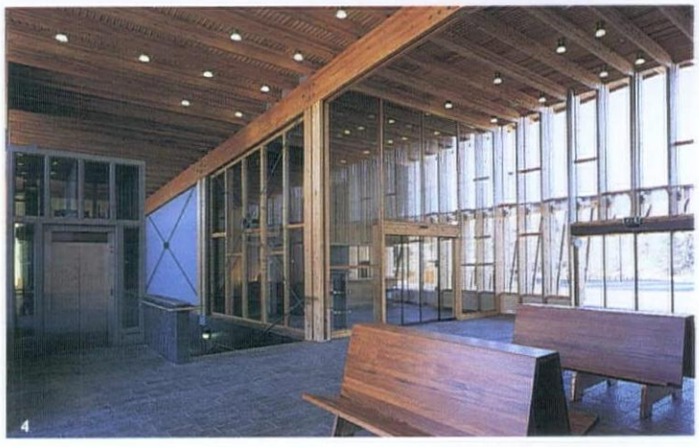
Henriksen's station asserts its presence quietly and with grace. As is customary, he has responded to the spirit of the place and watery landscape. Set overlooking the river to the east, across tracks and under the architect's generous flying canopies, the largely wooden composition has something of the shipyard about it. But mostly in Henriksen's rhythmic articulation of elements, in his emphatic expression of details, it is to do with movement.

A simple rectangle on plan, the building sits long and low on the site, surmounted by a barely inclined gabled roof under the centre of which is an airy ticket hall, with coloured walls and slate floor, and a café to one side. A gleaming slate-clad chasm beside a glass lift tower contains stairs down to a subterranean passage leading to the far platforms and out to the marina and park.

The envelope of the main building consists of slim wooden frames around glass or wooden cladding. Around the head of a platform stairwell, where there is a screen of wooden mullions and slats letting in slivers of light, the effect is decidedly Japanese. Wooden canopies (which seem to be the architect's hallmark) are cantilevered from the exterior on angled struts, stepping up on the east over an external staircase. Platform canopies, on similar struts, shoot out from a sturdy beam and column structure.

PENNY MCGUIRE



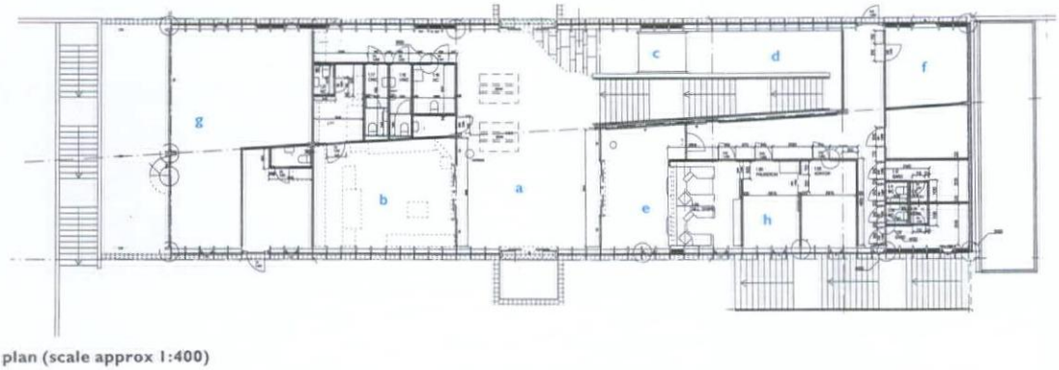


RAILWAY STATION, EIDSVOLL, NORWAY

ARCHITECT

ARNE HENRIKSEN

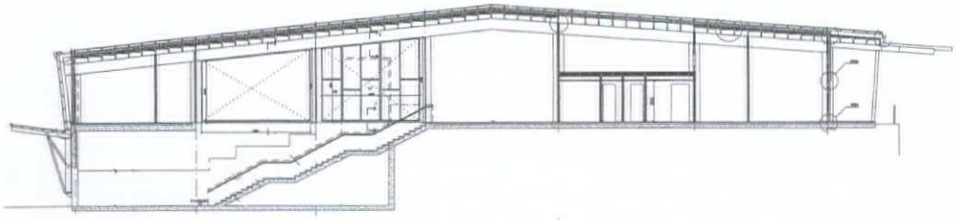
3
Stair from station underpass up to main entrance ...
4
... and the airy hall.
5
Dramatic but convenient link between lower (underpass) level and island platforms.



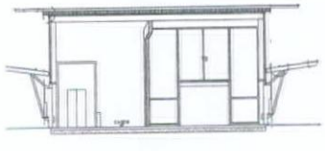
plan (scale approx 1:400)

Photographs
Terje Solvang

a hall
b café
c lift
d void
e tickets
f plant
g lettable space
h staff



south-north section



section through hall

APARTMENT HOTEL, BARTH, GERMANY
ARCHITECT
VOLKER GIENCKE



1



2



5



6

Baltic exchange

1
Upper light-filled living rooms of two-storey apartments at top of building share a balcony.
2
Original structure left visible round edges.
3
Original structure provides impressive ceiling over restaurant. Glass panels round columns reveal structure beneath.
4
Small entry room of two-storey apartments on south side of building, levels 1-4.
5
Main face of the building looking west onto water, subtly transformed.
6
Sitting room and kitchen of upper maisonette.

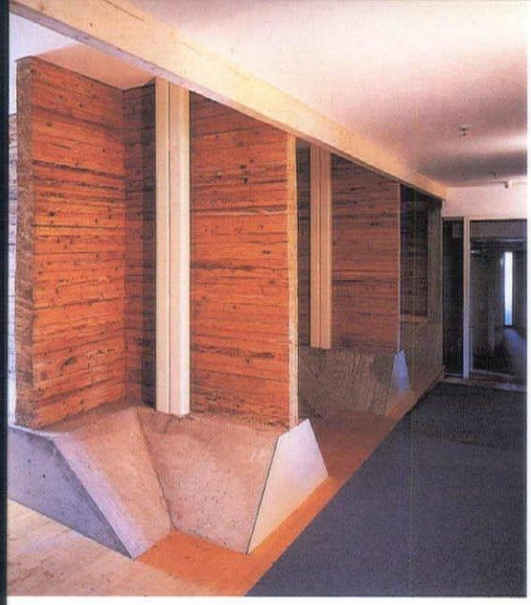
With the reunification of Germany, the port of Barth on the Baltic coast near Rostock has lost its industrial role, with the harbour serving increasingly as a marina. Its industrial buildings – granaries and a fish factory – had become redundant, and developers from Kiel decided to turn one of them into an apartment hotel.

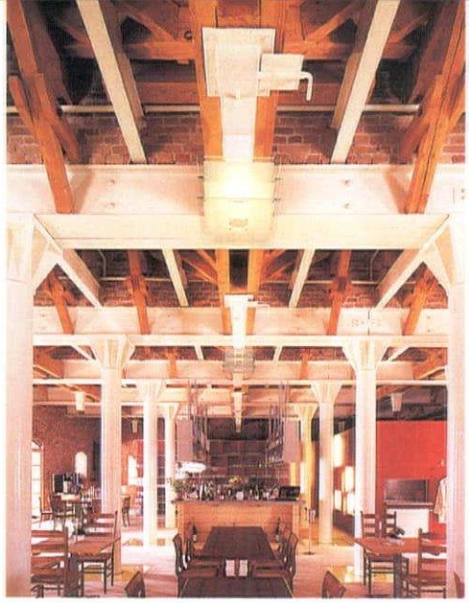
Giencke has transformed the appearance and identity of the building, yet kept the memory of its former function by respecting and preserving the most telling aspects of the structure.

The building, composed of two almost equal parts, stands at the corner of the old harbour facing west across the water. The north end was a series of open storage floors supported by a cast iron column and beam system giving bays approximately four metres square. This was simple to convert, and has become a series of large flats.

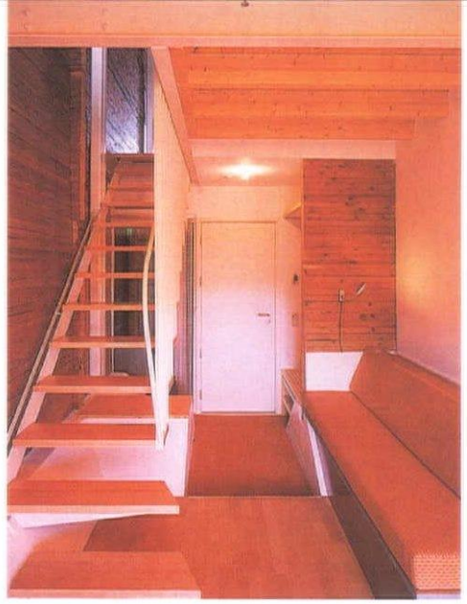
The other end of the building presented more difficulty, for it consisted of a series of 12m-high storage silos only 3m wide. These consisted of timber constructions inside the brick outer casing, descending to the inverted pyramids of hoppers which delivered grain to an open loading floor beneath. Giencke kept the whole arrangement, devising a series of narrow apartment types to fit. There are some single rooms and some paired rooms made by piercing holes from one silo into the next, but most of the space is given to two-storey apartments with a small entry room on one level and the whole width of the



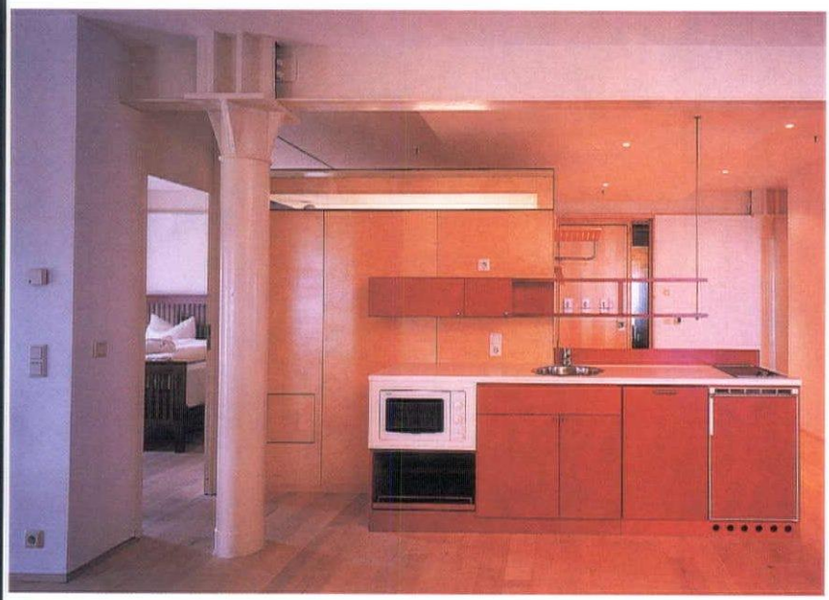




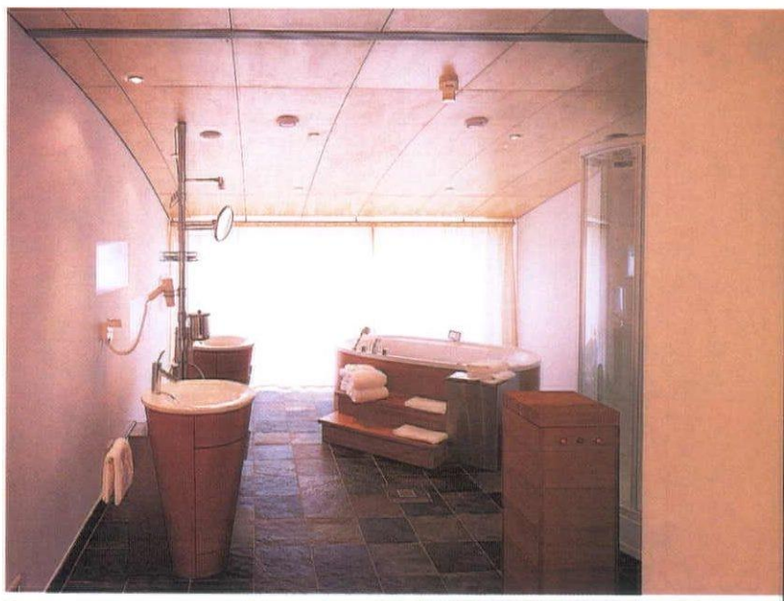
3



4



7



8

7
Cast iron column and beam structure accommodates larger apartments.
8
Elegant bathrooms, panelled and tiled, are complete wet cells.
9
Fifth floor bedroom glazed onto harbour.

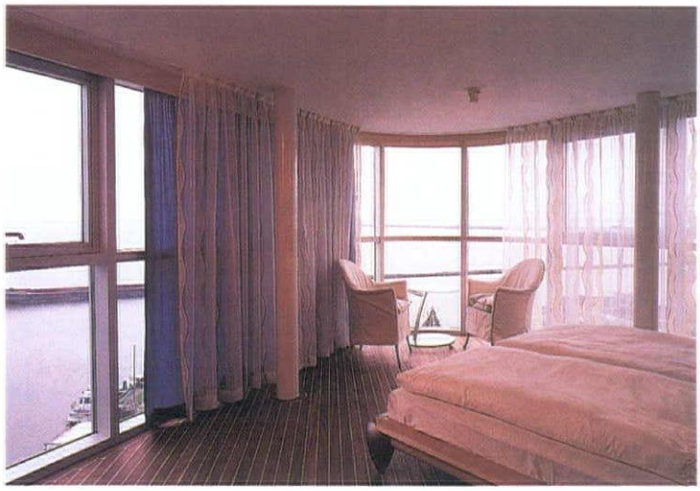
The imaginative conversion of an old granary into an apartment hotel in a Baltic holiday resort preserves memory of the original while infusing a new vitality.

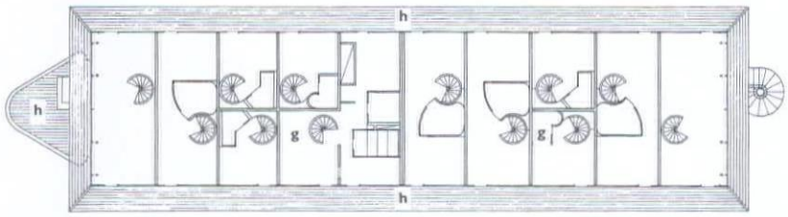
building on the next, rather like the scissor plan of flats in Le Corbusier's Unités. Both in the silo apartments, and in the larger ones occupying the north end of the building, the bathrooms are wet cells: complete boxes, uncompromisingly new.

The old windows were short and narrow under modest brick arches. One set remains, lighting the old stair on the middle of the south side. As they were inadequate, Giencke decided to enlarge them in the least disruptive way: by extending them vertically to the floor.

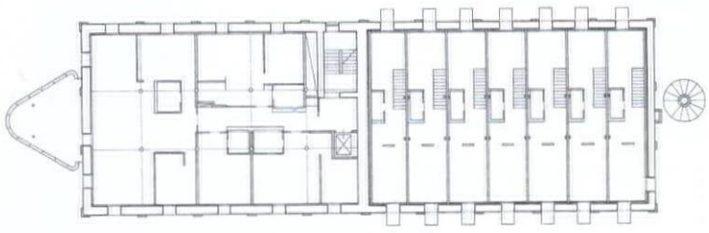
There were no existing windows in the silo part of the building, so new ones had to be cut on both sides and in the south end. These take the same form and dimension as the others, but because of the hoppers and the new floor arrangements, they occur at different levels. Giencke shows that they are new by incorporating steel lintels. Appropriately, the basement contains a visitable wine cellar, sauna and gym as well as service facilities. The ground floor is all

9

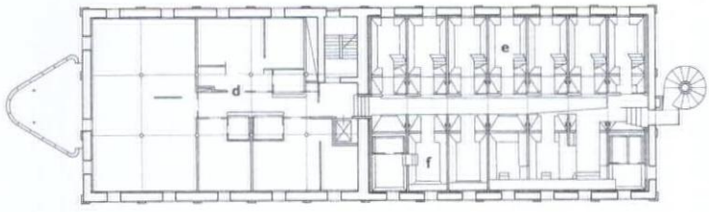




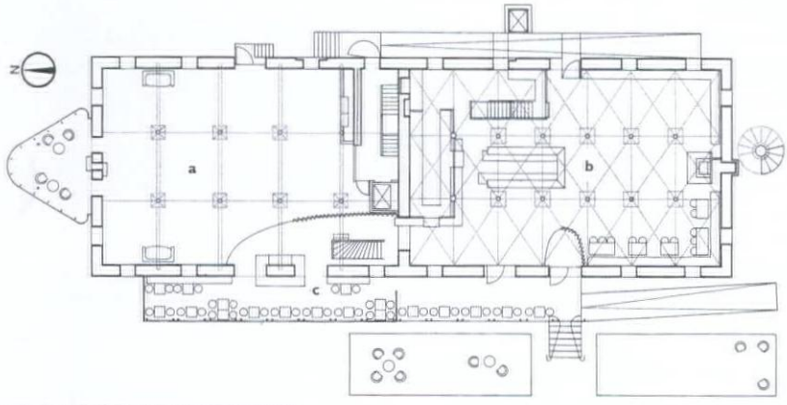
sixth floor plan



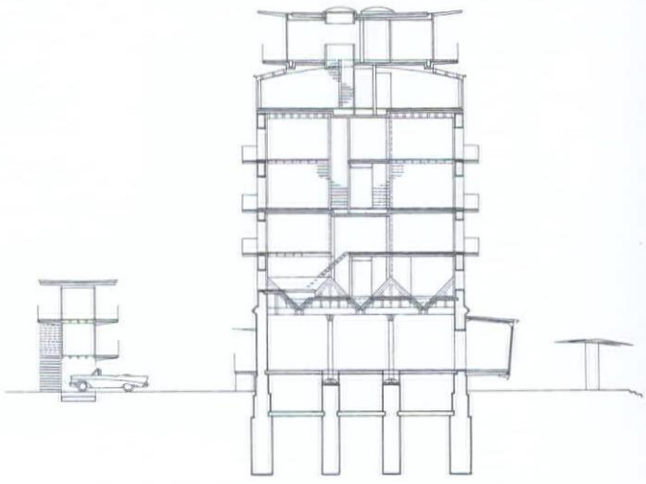
second floor plan



first floor plan



ground floor plan (scale approx 1:350)



east-west cross section

a hotel sitting room
b restaurant
c waterside bar
d large apartments
e lower floor maisonette
f room
g upper floor maisonette
h terrace

APARTMENT HOTEL, BARTH, GERMANY

ARCHITECT

VOLKER GIENCKE

bar and restaurant, the silo hoppers and their structure providing an impressive ceiling in the latter. Glass panels are let into the floor around the cast-iron columns to reveal the continuity of the structure.

On the harbour side, Giencke added a slender extension which starts as entry ramp and ends as a glazed extension for the bar. The canopy is insubstantial plywood and canvas, with a supporting structure of tubular steel. Cleverly, this is not vertical, but takes a self-bracing zigzag form, so its rhythm remains independent of the old work. The existing double-pitched roof was in very poor condition and had acted merely as a hat for industrial functions. Having removed it, Giencke added two flat slabs with balcony and glazing between, leaving a deep shadow gap between the lower slab and the old eaves-line. The brick infill of the old top floor was replaced by glazed panels and the rhythm of the structure stressed by exposing the brick piers.

In planning the topmost floors, it was possible to break with the tighter bay arrangement demanded by the silos. Instead, the promise implied by the brickwork of 10 equal bays across the whole building was finally fulfilled. The top apartments are all maisonettes with spiral stairs, and the shared balcony of the upper level doubles as fire-escape. Compositionally, it was of the utmost importance that the full-height glazing was pulled back from the perimeter, for thereby the top storey is detached visually from the rest of the building and its own flat cap can be read as a roof element. The underside is visible, so it is not just the top surface of a cube. Notionally, the roof is made no less than three times: first by the old eaves, then by the balcony layer and finally by the top slab. This drastic unusual treatment succeeds very well in giving the building an open, festive air as opposed to its former dour and functional appearance.

PETER BLUNDELL JONES

Architect
Volker Giencke
Photographs
Ralph Richter/architekturphoto

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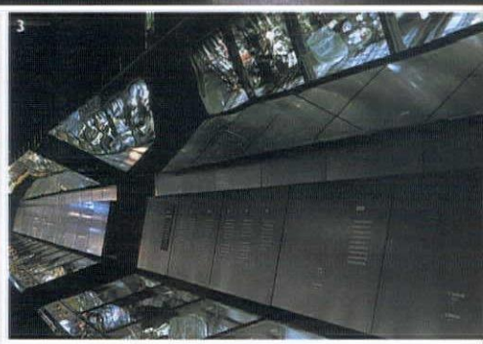
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New release! "Interior and Specifiers Handbook for Communication areas". The complete guide to the planning and specification of communication processes. 160 pages, hardcover. ISBN 0 9533421 0 7. Available through all leading bookshops, or order directly through Wilkhahn at DEM 49,- including VAT and p&p. Please send cheque made payable to Wilkhahn.



1
Dark surfaces and minimalist detailing create an austere background.
2
Entrance with modular panelled wall and severe showcases.
3
Linear showcases with reflections of gems in angled mirror above.





Designer
Bentheim
Project designers
David Bentheim, Thomas Hatchuel, James Norton
Graphics
Rose Innes Associates
Photographs
David Churchill/Arcaid

Set in stone

The adamantine surfaces and minimalist rigour of a new gallery devoted to mineral specimens and gemstones make its contents seem all the more precious.

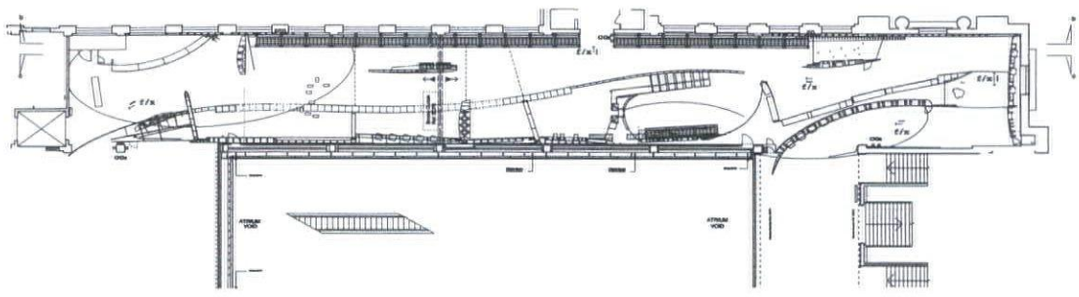
Earth's Treasury is one of four new galleries (collectively known as the Earth Galleries) to have been opened in the Natural History Museum, London.

Designed by the Bentheim practice, it is an exhibition of the museum's extraordinary collection of rock and mineral specimens. The exhibits – great chunks of gold and glittering crystals, rocks embedded with gems or veined with precious ores, myriad rainbow-coloured jewels, brain-like formations of haematite (which the Assyrians considered more precious than gold) – are displayed without fuss in a setting of stark sobriety.

The basic gallery on the fourth floor is 71m long and 9m wide. Within this space Bentheim has contrived a *promenade géologique* down a long dark cave. Every surface, including the sparkling floor, is dark grey or black. Showcases, sometimes embedded in the dark walls, sometimes projecting or free-standing, are severe and plainly detailed, the objects in their pools of fibre optic light seeming to float in space. The exhibition has been democratically conceived so that a diamond is not more dramatically presented than a pile of sand.

Down one side of the gallery is a line of horizontal cases containing precious stones, some of great size and antiquity. Their gleaming reflections in angled mirrors above articulate the gallery's length. On the other side, openings in a meandering wall encourage detours into small chambers and more detailed exhibitions. Exhibits are diverse and within the overall severity the manner of their display subtly varies. The effect of all this is to make you see each thing afresh.

Underlying the apparent simplicity of design is an impressive feat of classification by the designers. Information about the nature, origins and use of exhibits has been reduced to essentials, and is presented clearly, in plain English. P.M.



plan (scale approx 1:200)



Wild bunch

The organically inspired design of a flower shop in west London creates a luminous bower.

Wild at Heart is one of a new breed of florists which has sprung up lately in London. Their sumptuous (and expensive) arrangements of colour and form stir memories of southern flower markets, Fragonard, Gainsborough or Gauguin. Flowers are wrapped in coarse brown paper tied with a twist of raffia with a studied carelessness worthy of Marie Antoinette.

Wild at Heart has always occupied the prow of Piers Gough's green tiled public lavatory in Westbourne Grove (AR August 1993), overflowing with colour on to pavements either side; but success has enabled it to open another shop designed by Future Systems around the corner on Ledbury Road. Of all the small shops that have opened in London recently, this one is a jewel; and given Future Systems' customarily hard-edged visions in glass and steel the delicacy – and outright delight – of the design is unexpected.

The shop is tiny, occupying the ground floor and basement of a small period terraced house in the heart of a conservation area. The clients wanted a shop that would display their work in a modern way, as well as practical naturally lit working space and storage in the basement.

Future Systems has advertised the shop's (and its own) presence on the street with a large glass shield which projects from the front of the building. The greenish rim frames a finely detailed egg-shaped lens, acting as the shop front through which you can see a luminous white cavern and brilliant splashes of colour. You enter by an aluminium ramp, taking you through the lens, over a glass slot cut into the floor and into the centre of the shop.

A detail easily missed on the first visit is the single stem of a flower on each side of the entrance, in a glass tube on a delicate curving rod.

The interior of the shop, fluid in plan and section, makes you feel you are inside a flower trumpet. Undulating terraces on either side converge gently towards the rear and are inset with flowers in concealed pots, the colours vivid against the white. A single splash of yellow resolves itself into a curvy seat.

FLOWER SHOP, LONDON, ENGLAND

ARCHITECT

FUTURE SYSTEMS

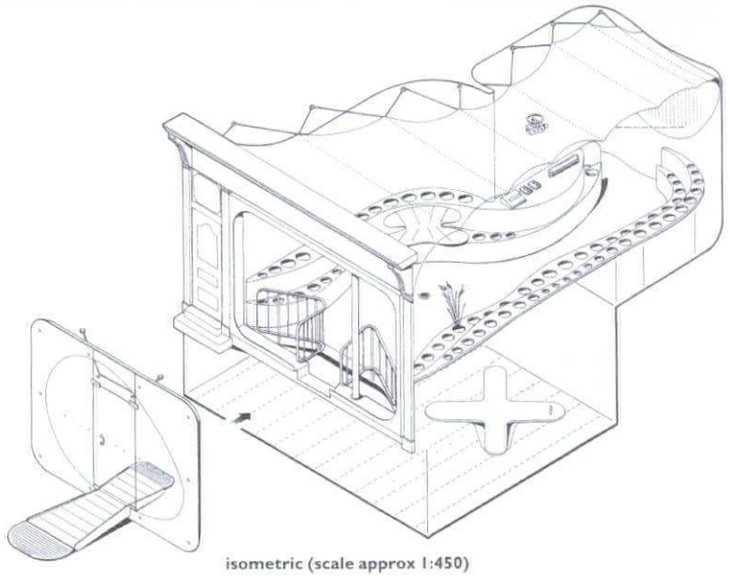
1
A glass lens on to the interior.
2
Against sinuous white surfaces the colours of flowers and curvy seat are vivid.

Overhead, a curved fabric ceiling stretches down over the rear wall to provide a screen for an X-ray image of the structure of a flower.

Workspace downstairs is illuminated by daylight from the glass slot at the entrance. Flowers are stored in ideal cool, damp conditions in newly extended coal vaults, and bouquets prepared on a large cruciform table.

It is no mean feat to reconcile poetry and the practical demands of running a modern business within a space the size of a nutshell, but Future Systems has done it here. PENNY MCGUIRE

Architect
Future Systems, London
Structural engineer
Ove Arup & Partners
Main contractor
Chris Newbold
Glazing
Compass Glass and Glazing
Aluminium ramp
Artecture
Fabric ceiling
Architen
Lighting
Concord Sylvania
Photographs
Richard Davies



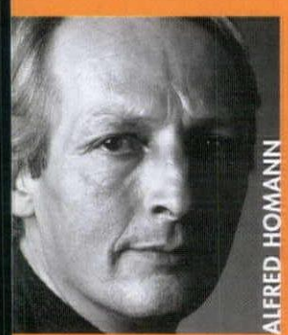
isometric (scale approx 1:450)



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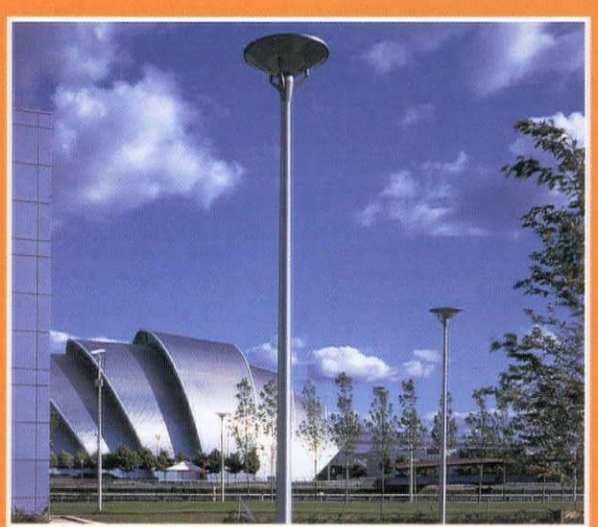
THE DESIGNER:
Alfred Homann – Architect.

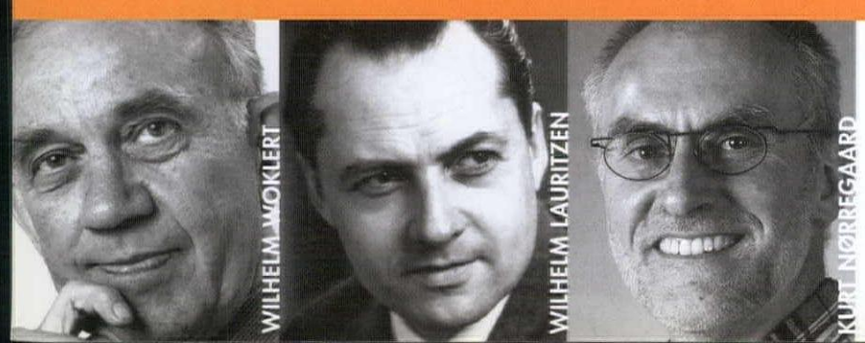
THE PRODUCT:
Kipp Lantern.

THE PROJECT:
Pacific Quay, Glasgow.

LANDSCAPE ARCHITECTS:
Land Use Consultants, Glasgow.

SUPPLY COORDINATOR:
MDS Services, Guildford.



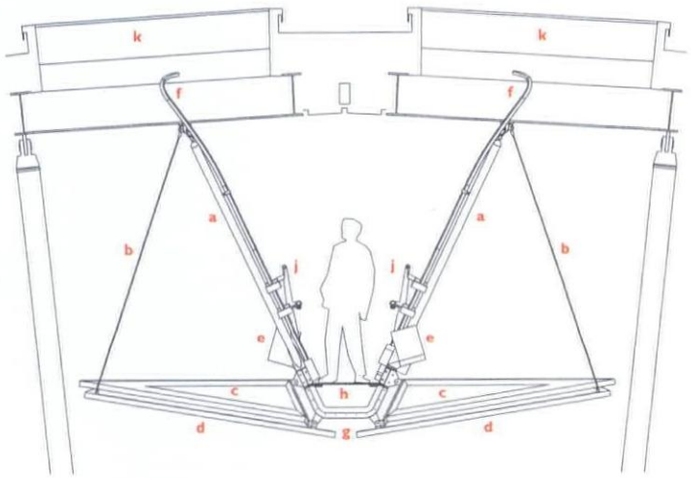


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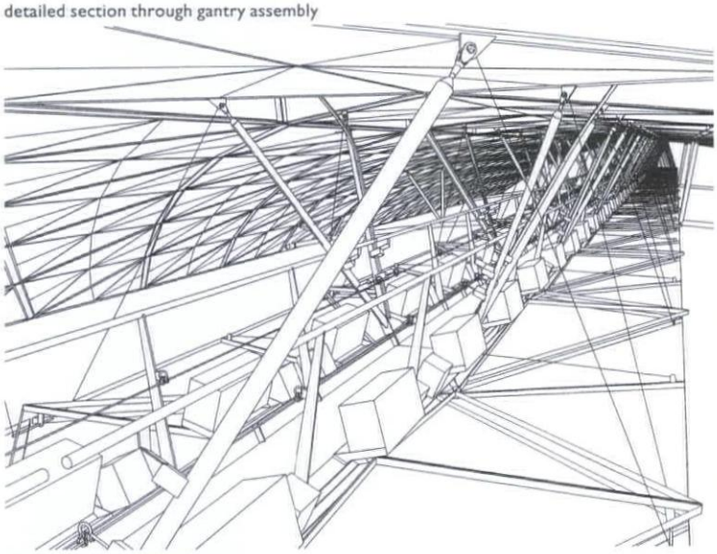
a chs support structure
b support rod
c perforated aluminium reflector: white
d outer reflector as c
e uplight on bracket
f 50 mm dia flexible conduit
g soffit panel as c
h expanded metal floor: white
j handrail on balusters
k rooflight



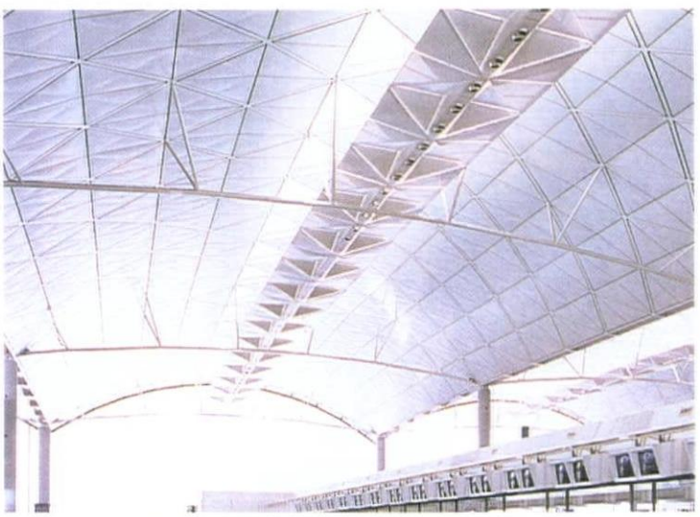
detailed section through gantry assembly



airport runway



perspective of gantry assembly



passenger concourse roof vault and gantry

LIGHTING AT CHEK LAP KOK AIRPORT

Architects: **Foster & Partners** Lighting consultants: **Fisher Marantz Renfro Stone**

In the vast public concourse of Chek Lap Kok (p50) lighting is integrated into the design of the roof. Rather than installing separate fittings in each of the enormous parallel vaults – under which, at the centre, you are a very long way from the glazed perimeter of the building – the vaults themselves act as giant reflectors. A continuous skylight admitting daylight bisects the vault in each bay. Running beneath is a suspended metal gantry, its underside clad in perforated aluminium panels. Made by SAS International, the gantry supports artificial lighting, control gear and walkways for access and cableways, all of which are hidden from view by big triangular reflectors set in different overlapping planes. Fabricated from perforated aluminium sheet fixed to a stiffening frame and designed to a 6m modular system, their sails allow some daylight to filter into the interior but bounce most of it off the roof soffit, which has been treated with a light reflective finish. The result is a particularly soft diffuse light, free from glare, distributed evenly throughout the concourse. This is no mean achievement considering the constant variation in the relationship of the roof to the floor (unlike in the Stansted terminal), and to the glazed perimeter of the building.

Artificial illumination of the concourse also uses the vaulted roof as a giant reflector, with general lighting achieved by indirect up-lighting from metal halides manufactured by SPI Lighting. Thorn Lighting, which supplied most of the lighting fittings, worked with Fosters and Fisher Marantz Renfro Stone, the New York consultants. A mixture of indirect and direct light reproduces at night the soft ambient illumination of daytime.

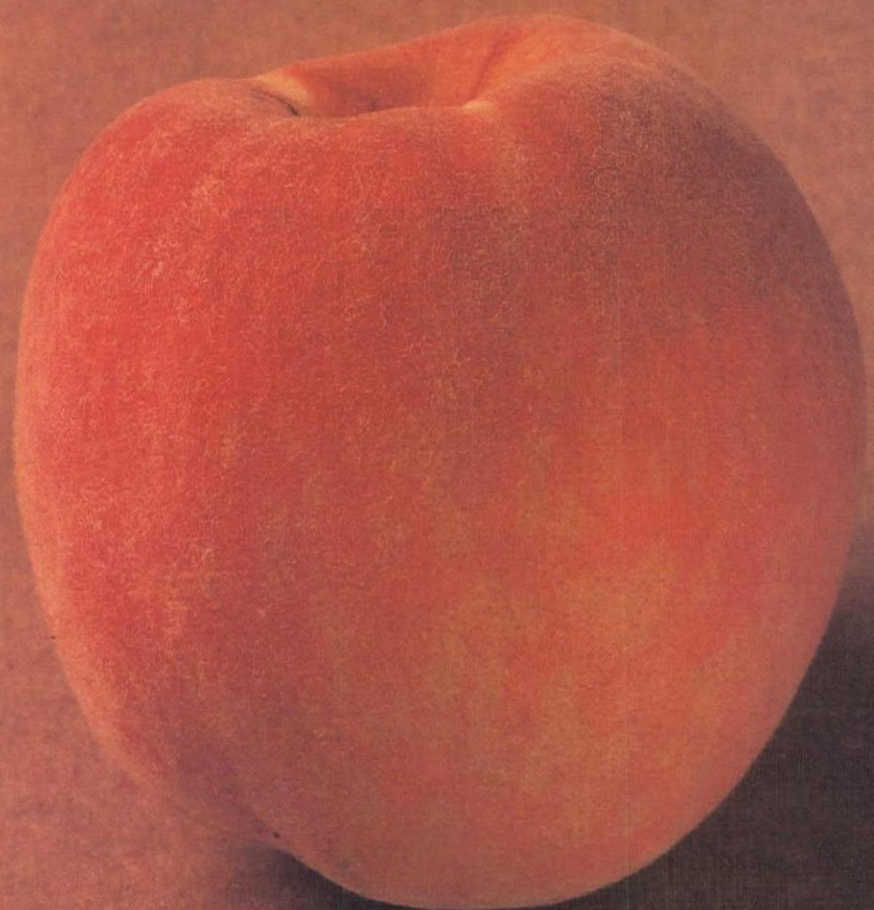
Thorn was also responsible for lighting and control systems for the two runways, the cargo terminal and for illuminating many elements of the airport's infrastructure including tunnels, roads and boundaries.

501 Thorn Lighting
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Fax: +44 17 08 73 94 41

502 SAS International
Tel: +44 11 89 49 10 92
Fax: +44 11 89 26 88 31

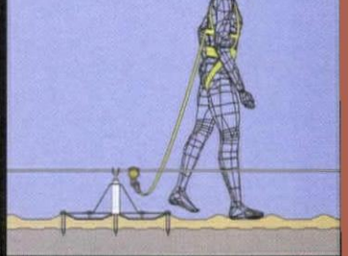
531 SPI Lighting
Tel: +1 41 42 42 14 20
Fax: +1 41 42 42 64 14

DAMAGE THE SKIN AND THE ROT SETS IN



Composite roof panels use a single pre-fabricated layer to provide weatherproofing, retain heat, and protect the internal environment. Damage to that layer reduces its durability and effectiveness.

Unfortunately, traditional Fall Arrest safety systems employ rigid supports attached to the main roof beams. The installer must cut a hole through the roofing and insert a solid steel support weighing several kilos. Below, a colleague with a cherrypicker or scissor lift attaches the post to the main steel roofing structure.



So Latchways, as leader in Fall Arrest system design, has developed a new top-fixing solution specifically for composite roofs.

- A unique bracket design absorbs load so the system can attach to the purlins.
- The new Latchways system preserves roofing insulation and weather-proofing properties.
- Installation is carried out rapidly from above.
- Made of marine grade 316 stainless steel and complies with CE standards.

With the new Latchways bracket there are no large holes through the roof — no work at height within the building — no damage to the cladding performance of composite panels.

The engineering expertise of Latchways has created a Fall Arrest solution to preserve the integrity of modern roofing.

LATCHWAYS
FALL ARREST SYSTEMS

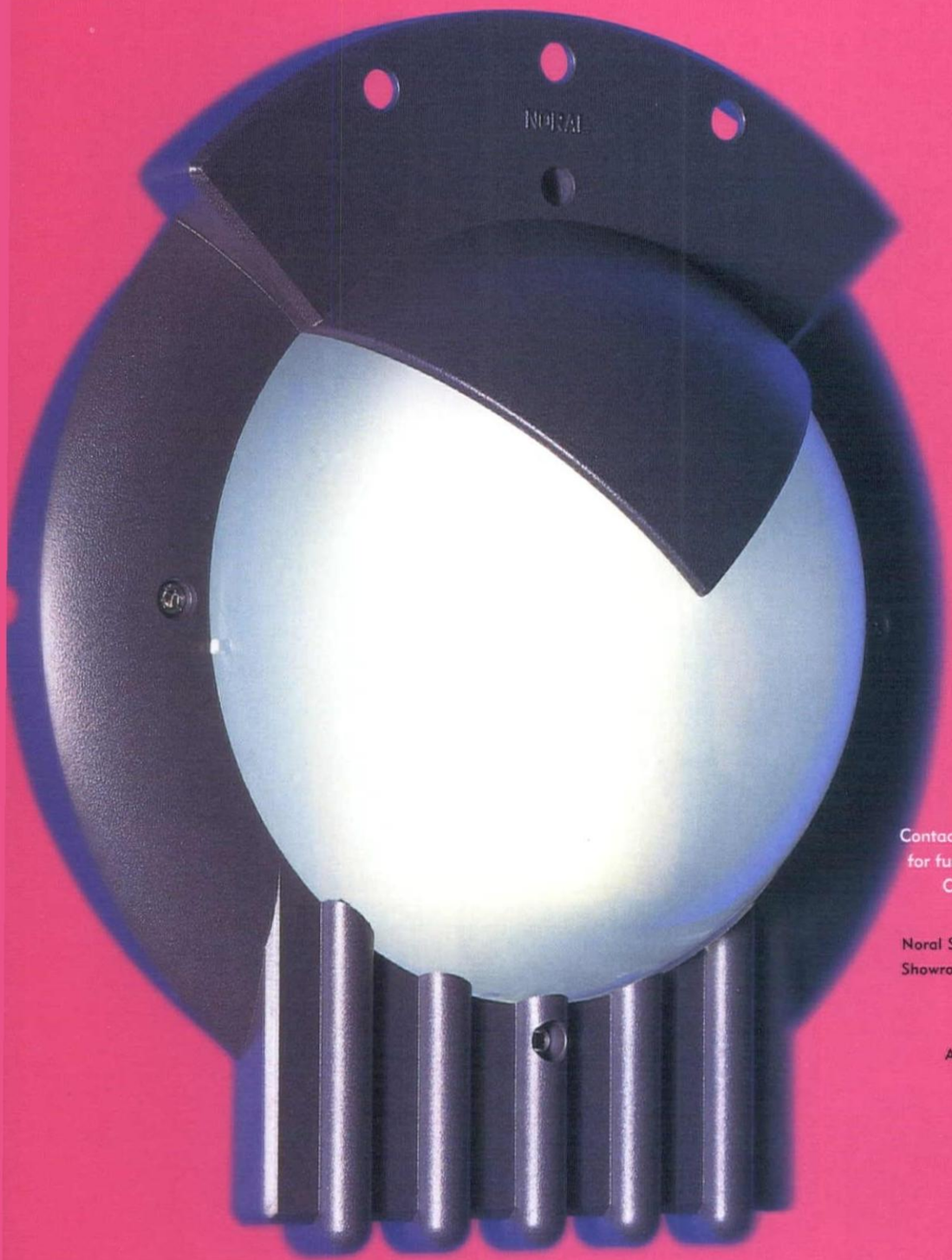
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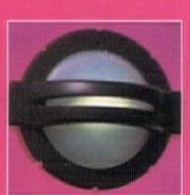
THE WORLD'S LEADING TOP FIXING FALL ARREST SYSTEM

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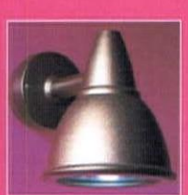
compact line



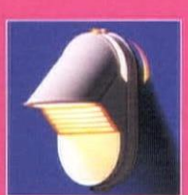
Main picture shows
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Designed by Hamilton & Hempel



Othello



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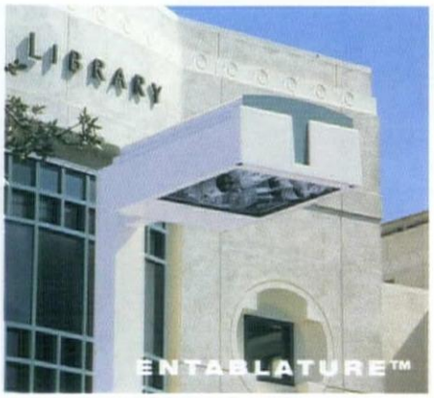
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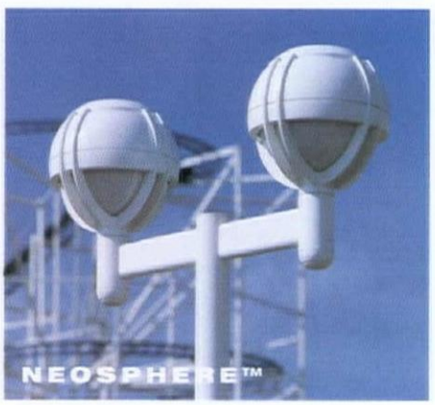
RELATIVITY

RELEVANT DESIGN APPROACH

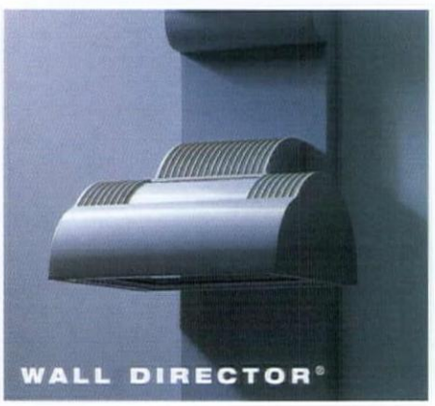
Architectural Relevance + Appropriate Detail
+ Proper Scale + Performance = Robust Design Solutions









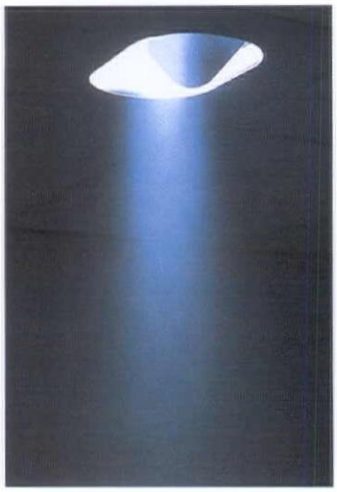


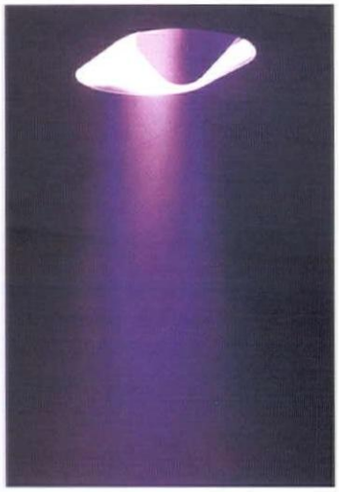


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503 RECESSED LUMINAIRES

AR6 and AR7: two new recessed luminaires from the American firm Irideon which made its name producing computer-controlled lighting systems. Using its systems, designers can choreograph light in buildings, manipulating beam intensity, direction, colour and pattern. The new luminaires are unobtrusive and can incorporate motorized wheels for colours or patterns, and mechanisms for varying beams and focus.

Tel: +1 214 819 3208
Fax: +1 214 630 5867

504 GLASS CHANDELIER

Morocco: suspended glass and chromed brass lamp by Vico Magistretti for Fontana Arte. A tribute to the famous New York bar of the same name, the lamp sheds direct light, and indirect light through a maximum of 36 wine glasses.

Tel: +39 2 45 12 1
Fax: +39 2 45 12 66 0





505 HANGING LUMINAIRE

Berlin System hanging luminaire in three sizes designed by Piano Design Workshop and made by iGuzzini. Reflectors can be aluminium, glass and glass/aluminium. The upper section, made of glass, casts indirect light.

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Fax: +39 71 75 88 295
UK tel: +44 181 646 4141
UK fax: +44 181 640 6910

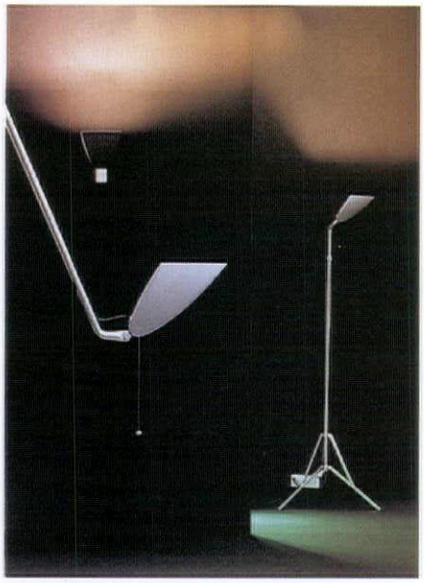
506 FLOODLIGHT

Atti: floodlight designed by Michel Tortel for Artemide Architectural. The luminaire can be fitted to ceiling or track and is suitable for lighting exhibitions and shops. Made of painted die-cast aluminium, it can rotate vertically and horizontally and accept a wide variety of light sources and accessories.

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PRODUCT REVIEW

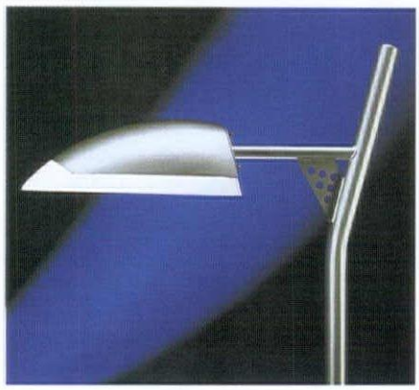


507 VERSATILE LAMP

Swing: wall-mounted, ceiling-mounted and standard luminaire by Design Titoff for Ansorg.

Tel: +49 208 48 46 0
Fax: +49 208 48 46 200





508 STREET LAMP

The 114/115 street lamp, by Albrecht Ecke for Hellux Leuchten, won a 1998 Industrie Forum Design Award at Hanover. Mounted on a 5-8m pole, the luminaire housing is of non-corrosive cast aluminium, acrylic glass diffuser and integral electrical equipment.

Tel: +49 511 820 10 0
Fax: +49 511 820 10 38

509 AIR-HANDLING LUMINAIRES

WILA's new air-handling luminaires consist of a housing with separate connections to duct and air-control systems and light source.

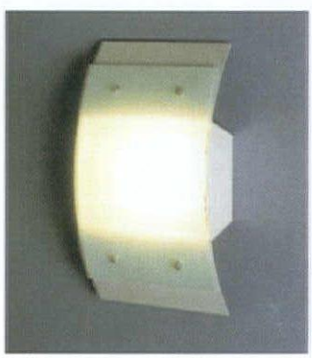
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Fax: +49 23 71 823 202

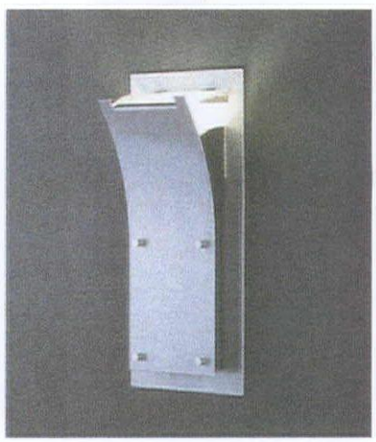


510 WALL LUMINAIRES

Fresco: a range of wall-mounted luminaires from Multiline. Housing of steel with polyester epoxy coating, symmetrical reflector of matt anodized aluminium.

Tel: +32 11 43 21 11
Fax: +32 11 42 00 83



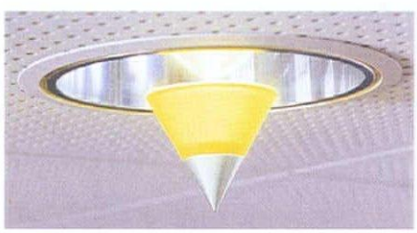




511 TABLE LAMP

Hoi: adjustable table lamp by Isao Hosoe with Peter Salomon for Luxo. It consists of a tubular anodized aluminium support and an arm balanced by an internal spring that keeps the head of the lamp parallel to the work surface. Head and arm in green, blue or red.

Tel: +39 35 464622
Fax: +39 35 464817





512 DOWNLIGHT

Pleiad: one of a new family of energy-efficient downlights with coloured attachments from the Swedish lighting firm Fagerhult. The range includes housings for metal halide lamps and wallwashers.

Tel: +46 36 10 85 00
Fax: +46 36 10 86 99
UK Tel: +44 171 403 4123
UK Fax: +44 171 378 0906



599···

The product: 599··· series suspended luminaires

The introduction of the new T5-lamps with a diameter of 16 mm has led TRILUX development engineers to the design of the 599··· luminaire series. Direct-indirect suspended luminaires shine out thanks to a height of only 62 mm, excellent photometrics and characteristic design, thus offering the perfect solution for efficient and elegant illumination of offices, banks, showrooms and sales areas. Specially designed accessories such as continuous-line couplings and node adapters allow creation of geometrical figures and decorative patterns enhancing the room's architecture. Special louvre versions using new aluminium make a logical addition to the range.

The company: TRILUX-LENZE

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

TRILUX – See. Perceive. Experience.

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TRILUX HOUSE, Winsford Way
Boreham Interchange
Essex CM2 5PD
Telephone 01245 463463
Facsimile 01245 462646

TRILUX-LENZE GmbH+Co KG
Heidestraße · D-59759 Arnsberg
Telephone +49 2932/301726
Facsimile +49 2932/301507
EMail tx-world@trilux.de
Internet http://www.trilux.de

TRILUX

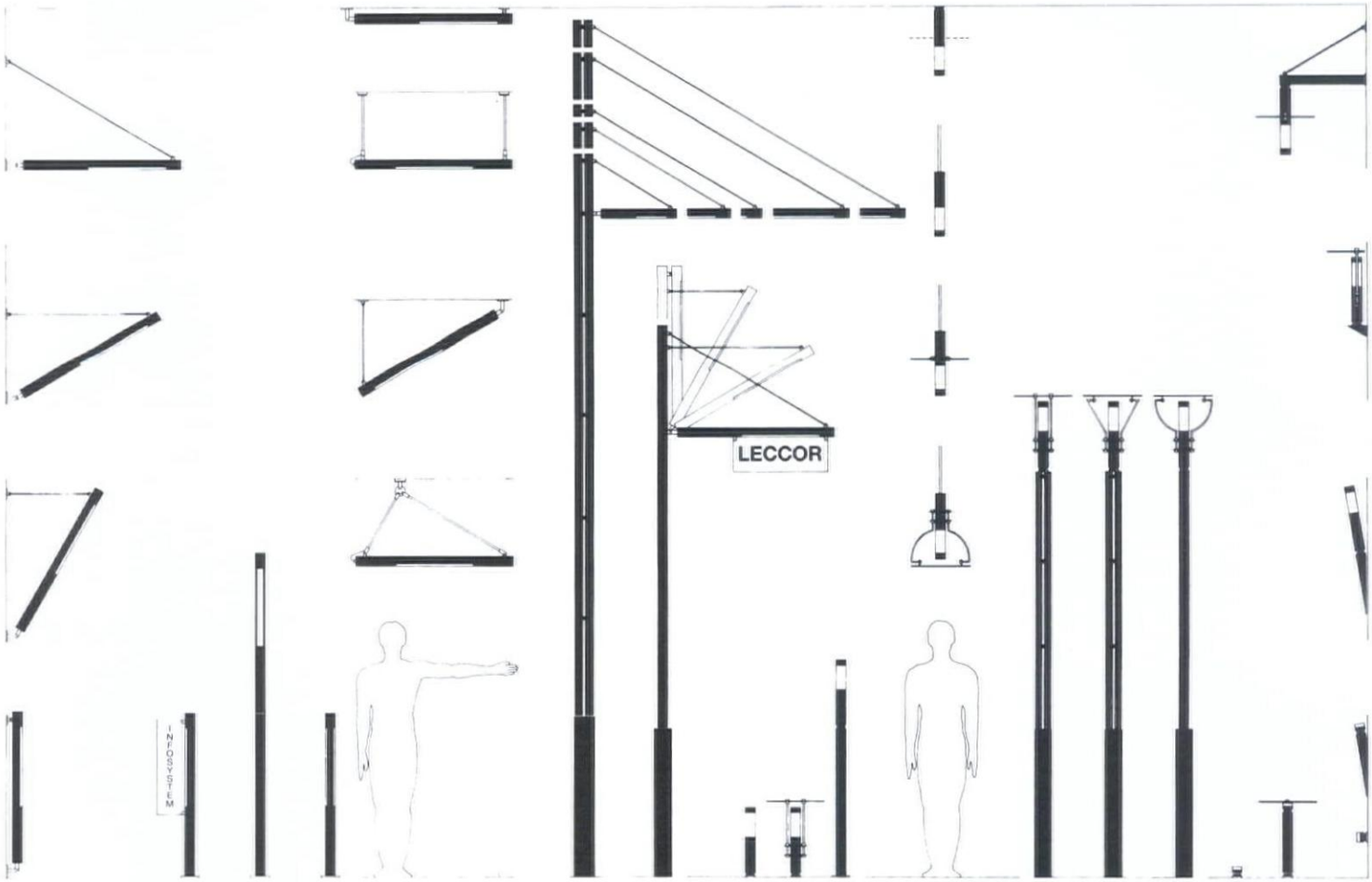
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GB-AR09

LECCOR®

LECCOR · STAINLESS STEEL · LAMPS · DESIGN · PRODUCTION · DISTRIBUTION

Outdoor/Indoor lights in stainless steel, model FIACCOLA/FIACCO/FIA. Lamp in 3-pipe system. In the core the "light pipe", secured by the transparent "protective pipe", covered by the "design pipe "diameter 68 mm, made of stainless steel, surface glass-bead blasted. Poles and brackets: 1 round pipe-, 4 angular pipes-, 4 square pipes-professional design infosystems.



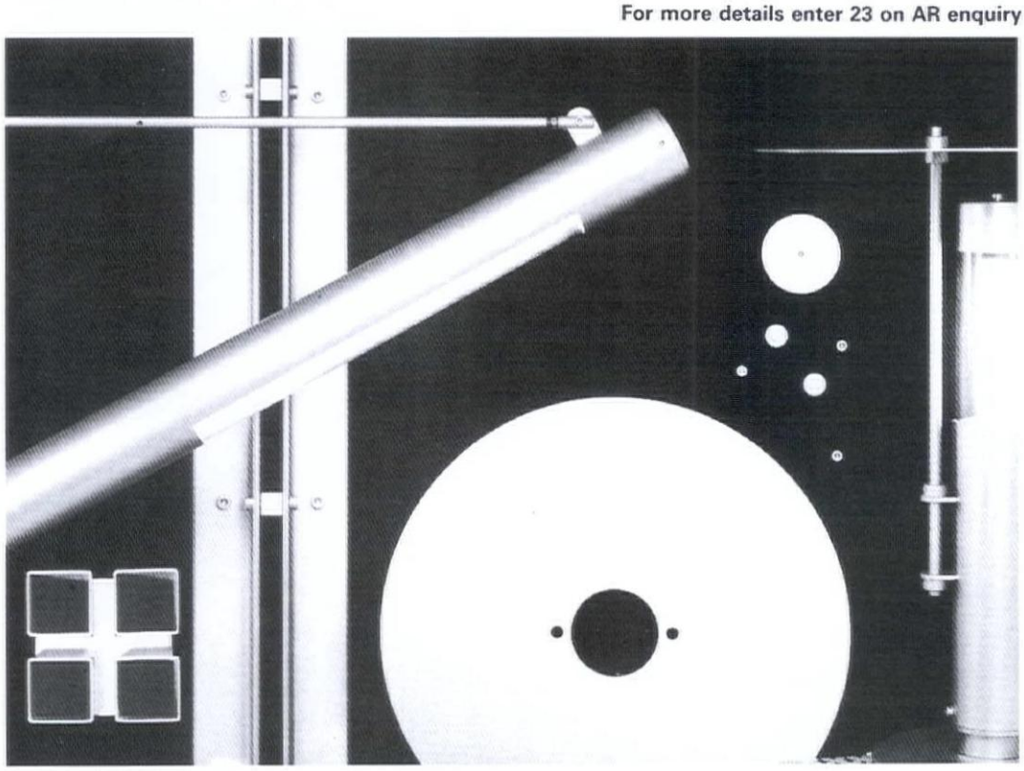
FIACCOLA Wall lamps | FIACCOLA Bollard-Standpipe lamps | FIACCOLA Ceiling lamps | FIACCOLA Pole lamps | FIACCO Bollard-Standpipe lamps | FIACCO Ceiling lamps suspended lamps | FIACCO Pole lamps | FIACCO Wall lamps FIA-serie of lamps

design:
Rolf Kronmüller

Models protected by law

LECCOR Leuchten GmbH · Hessentaler Straße 1 · Postfach 10 01 21 · D-74523 Schwäbisch Hall · Telefon (07 91) 4 70 77 · Fax (07 91) 4 75 55

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company

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fax

We move: new address from october 1998: Daimlerstraße 73, 74545 Michelfeld b. Schwäbisch Hall

PRODUCT REVIEW

513 FOOTLIGHT



Fred Very-Low: part of a range of low-energy exterior lighting from Modular Lighting Instruments. The sturdy fitting has an opalized acrylic cylinder and cylindrical pre-anodized housing. It incorporates an electronic transformer, is dimmable, and can be fixed into the ground or wall.

Tel: +32 51 26 56 56
Fax: +32 51 22 80 04

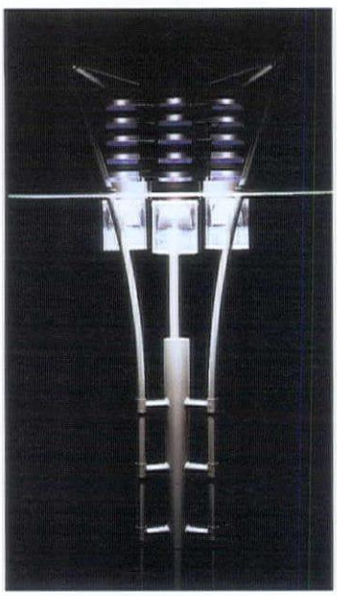
514 RECESSED EXTERIOR FLOOD

Hydrel's new M9000 modular series of external fittings are almost invisible once installed. Designed to be cool to the touch, they are constructed of high grade stainless steel with lenses of tempered borosilicate glass for toughness and clarity and support rings making the fitting capable of resisting high loads. The M9810 can illuminate buildings up to 15 storeys.

Tel: +1 818 362 9465
Fax: +1 818 362 6548







515 EXTERIOR STANDARD LAMP

The Winkels Collection from the German architectural lighting company .hess is a range of exterior fixtures designed by Karsten Winkels. There are various models in the range, with different capacities, but all are mounted on a pole, have bodies consisting of reflector, cylinder and shining metallic rings illuminated by diffuse blue light, are robust and easily maintained. Shown here is the big Sombra, capable of illuminating squares and other large spaces.

Tel: +49 7721 920 0
Fax: +49 7721 920 250



516 GARDEN LAMP

Bromus: blue glass luminaire for gardens, part of the Grass range designed by Jan van Lierde and jewellery designer Siegfried de Buck, (the names of the various fittings were inspired by varieties of grass).

Tel: +32 3 231 24 22
Fax: +32 3 231 88 96



517 PROJECTOR

Air: a range of adjustable die-cast aluminium projectors for various sites and light sources. The range, designed by F.A. Porsche for Antares Illuminación, includes three models in different sizes available with track adaptor or baseplate. Models for low voltage lamps are provided with an electronic transformer; and for metal halide or sodium vapour lamps with ignition equipment.

Tel: +34 96 397 6031
Fax: +34 36 397 6082

518 LIGHTING BOLLARD

Exterior bollard designed by Peter Zegers for DZ Licht, housing one low-voltage halogen lamp and one metal halide lamp, separately controlled. Made of aluminium and stainless steel with blue acrylic glass cone and clear plastic tube.

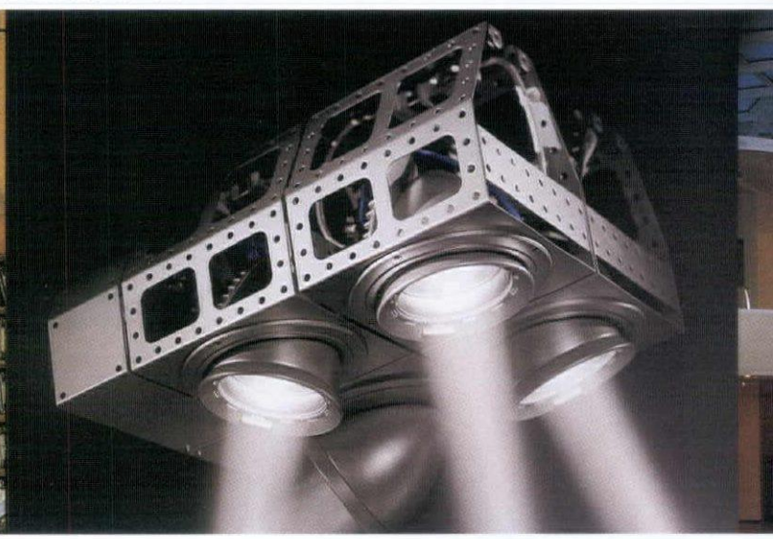
Tel: +49 23 73 975 0
Fax: +49 23 73 975 209

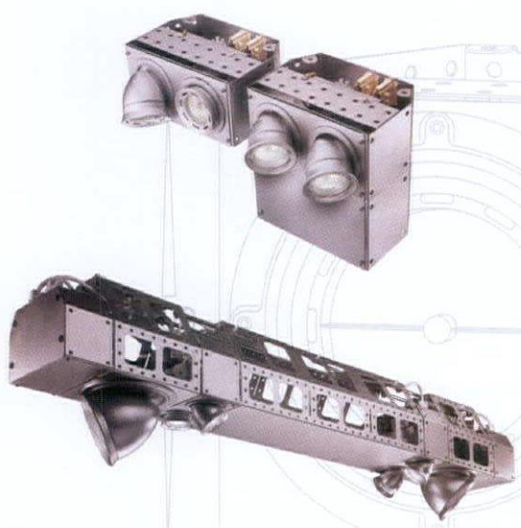


flexibility w

TARGETTI MONDIAL F1







modular A lighting system, very easy to assemble; with its extraordinary flexibility allows endless combinations in space to design "custom-made" products. Capable of illuminating and decorating any environment.

versatile Many light sources with light beams from 4° up to 54° for a wide range of directional extractable projectors (also available in a motorised version with remote control). Targetti has also created different modules for specific requirements: low luminance, asymmetric, ambience lighting, emergency, with motorised video camera.

innovative New energy saving light sources and sophisticated optics with the most advanced technologies for excellent light control. Many available accessories: low luminance louvres, frame projectors and a wide range of multilayered dielectric filters: corrective, chromatic and anti-U.V.

design In 1998 the modular lighting system Mondial F1 was awarded the "Compasso d'Oro". This prize, in its 18th year, represents the most prestigious Italian acknowledgment for industrial design.

COMPASSO D'ORO 1998

GREAT BRITAIN - TARGETTI U.K.
6 Stanton Gate, Mawney Rd. - Romford, Essex RM7 7HL - Tel. (1708) 74.12.86 Fax (1708) 74.20.60 E-mail: uk.office@targetti.uk.btinternet.com

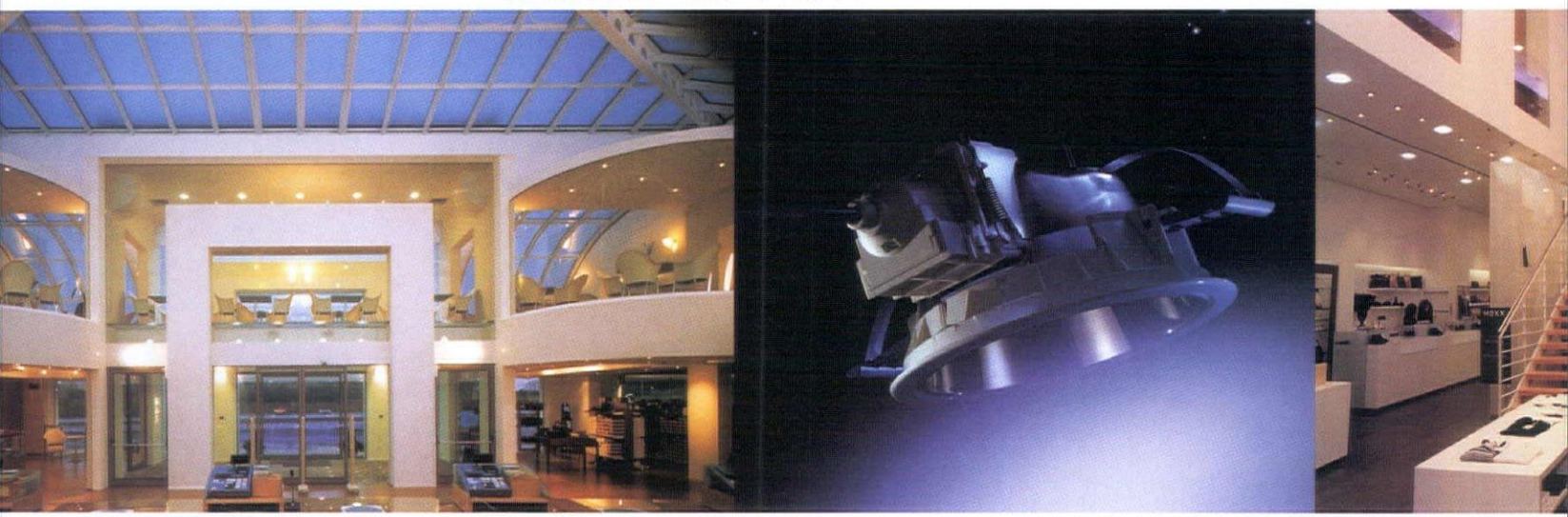
U.S.A. - TARGETTI USA
1513 East St. Gertrude Pl. - Santa Ana, Ca. 92705 - Tel. (714) 708.87.65 Fax (714) 545.99.24 E-mail: bobb@targettiusa.com

ITALY '- TARGETTI SANKEY S.p.A.
Via Pratese, 164 - 50145 Florence, Italy - Tel. 055 37.91.1 Fax 055 37.91.266 E-mail: targetti@targetti.it

For more details enter 41 on AR enquiry card

ithout limits

TARGETTI CCT FLASH





compact Targetti has designed the most compact downlight in the market. Up to 42W with a diameter of only 15 cm and a depth of 10 cm. Remarkable visual comfort is obtained by the special geometry of the reflector.

versatile A complete range of downlights, equipped with the newest energy saving compact fluorescent TC-T lamps. Two families of reflectors are available: very low luminance and visual comfort versions, both created in Targetti Research and Development laboratories in co-operation with the University of Florence and the Italian National Institute of Optics. CCT-Flash downlights are available with one or two lamp versions and in wattages from 18W up to 42W, all with a wide choice of ballasts: magnetic, electronic, dimmable electronic and electronic with maintained emergency.

handy These downlights can be installed tool free in only 10 seconds, thanks to the "One-Touch" spring system. They feature a hinged lampholder for easy and quick relamping and above all performance decay no longer is a problem. This is thanks to the revolutionary reflectors treated with the exclusive "Scratch Proof Formula" system (patented by Targetti) which can be easily cleaned without scratching. A wide range of accessories are also available: decorative bezels, low luminance louvres, decorative and safety glass accessories.

www.targetti.com

targetti

Light without limits

PRODUCT REVIEW ROUND-UP



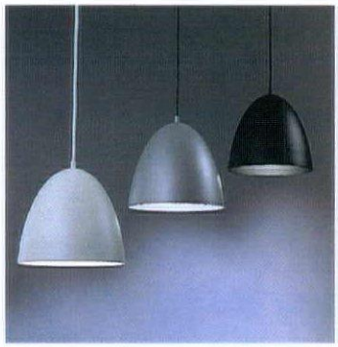
519

Exterior ground luminaire
HOFFMEISTER
Tel: +49 23 51 159 0
Fax: +49 23 51 15 93 28



520

Recessed spotlight
REGGIANI
Tel: +39 39 491021
Fax: +39 39 492714



521

Eos luminaire by Olle Anderson
BORÉNS
Tel: +46 33 29 70 00
Fax: +46 33 29 70 50



522

Tubular track system
TRILUX-LENZE
Tel: +49 29 32 301 0
Fax: +49 29 32 30 13 75



523

System Pull: linear halogen lighting
CRONOLUX
Tel: +39 39 609 55 74
Fax: +39 39 609 55 76



524

Kasko: series of exterior luminaires
GOCCIA ILLUMINAZIONE
Tel: +39 30 2640761
Fax: +39 30 2640271



525

Aero: luminaire for computer screens
ZUMTOBEL STAFF
Tel: +43 55 72 390
Fax: +43 55 72 390 610



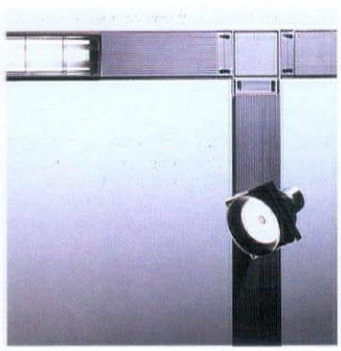
526

A900: display lighting and flat track
IDL
Tel: +49 89 489 50 310
Fax: +49 89 489 50 311



527

City-Light Plus: street light
SITECO
Tel: +49 86 69 33 1
Fax: +49 86 69 33 5 09



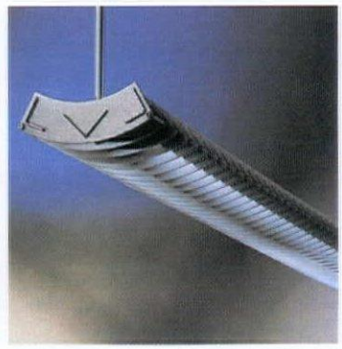
528

T 16 light structure from unobtrusive
T-Line range
ERCO LIGHTING
Tel: +49 23 51 55 10
Fax: +49 23 51 55 13 00
UK Tel: +44 171 344 4907
UK Fax: +44 171 344 4969



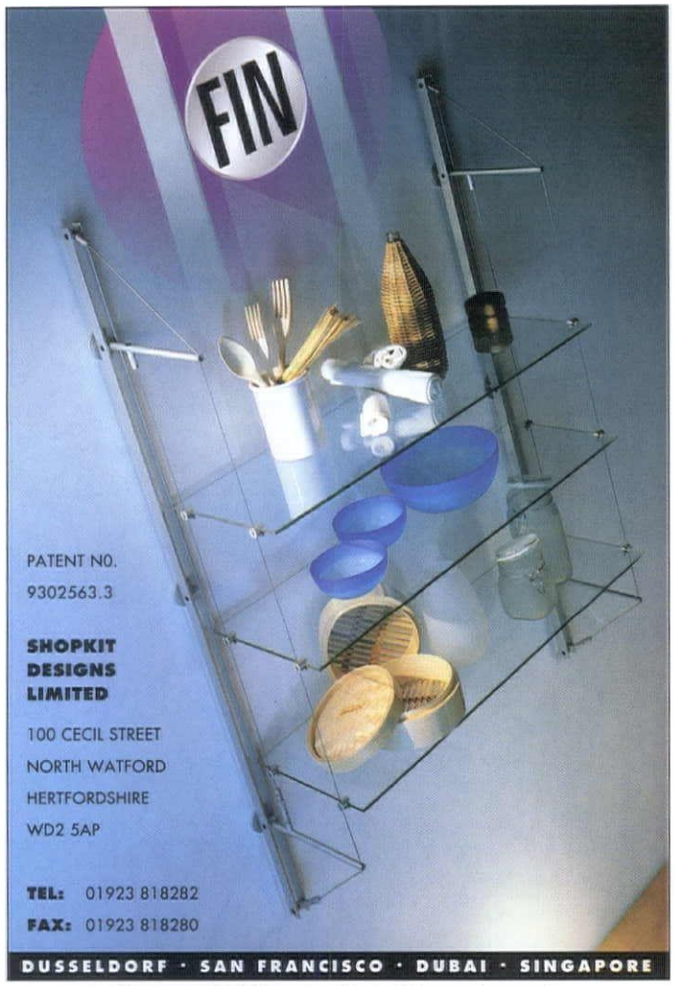
529

Illuminated bollard
VULKAN AIR
Tel: +49 221 5407 0
Fax: +49 221 5407 201



530

Suspended luminaire: 1998 IF Product
Design Award
SPECTRAL
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Fax: +49 7 61 4 52 42 52



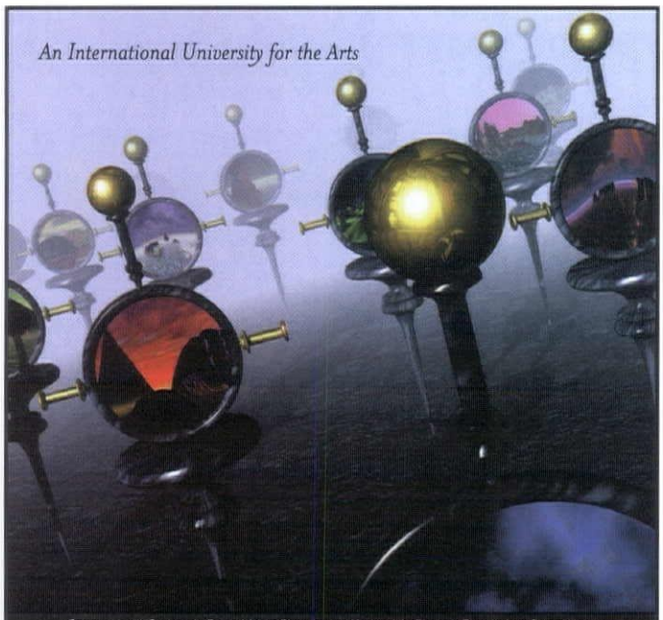
For more details enter 6 on AR enquiry card

Randi-Line®
design: C.F. Möller

Danish design furniture for doors, windows and bathrooms - made by Danish designers in satin finished steel and brass. RANDI A/S, Ingersoll-Rand Company, Mirabellevej 3, DK-8900 Randers, Tel.: +45 86 42 75 22.



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Gateway (detail). Stratastudio Pro and Adobe Photoshop® on Macintosh by Benjamin Radcliffe from Quincy, Mass.

Bachelor of Fine Arts • Master of Arts • Master of Fine Arts
Bachelor of Architecture • Master of Architecture

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Grant Ameristone

PASSENGER TERMINAL BUILDING
NEW AIRPORT, CHEK LAP KOK, HONG KONG

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- Granite Flooring (125,000 m2)
- Granite Stairs and Wall Cladding (43 No)
- Floor Expansion Joints and Screed Angles (28,000LM)
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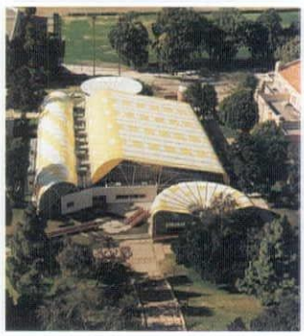
For all your Stone and Terrazzo requirements contact us at:-

The Weltech Centre
Ridgeway
Welwyn Garden City
Hertfordshire
AL7 2AA
United Kingdom

Telephone: +44 (0)1707 391494 Fax: +44 (0)1707 391495
E-Mail: GA@gal-uk.demon.co.uk

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Specifier's information



Tensile fabric structures

Rubb Buildings Ltd offers a full turnkey facility for the design, production and erection of tensile fabric structures. An international company with production facilities in the UK, USA and Norway, and ISO 9001 certified, Rubb's expertise includes in-house design and a large engineering department. Rubb also manufacture structures with engineered frames in galvanized steel with high tenacity PVC coated polyester fabric; alternative types of fabric are also available.
For further information, contact: Rubb Buildings Ltd, Team Valley Trading Estate, Gateshead, Tyne & Wear NE11 0QE.
Tel: +44 (0)191 482 2211
Fax: +44 (0)191 482 2516
website: http://www.rubb.com

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Vola UK

Vola was designed by the Danish architect Arne Jacobsen, recognized worldwide for his outstanding architecture and design.
Pictured here is the T6 toothbrush and tumbler holder which is a part of the stylish and exclusive range of accessories from Vola.
Specifically designed to complement Vola's kitchen and bathroom hardware, this superb collection is the perfect solution to complete your design ideas. The full Vola range is available in polished or brushed chrome, natural brass or a choice of 18 colours.
For further details and a colour brochure
Tel: +44 (0)1525 841155
Fax:+44 (0)1525 841177

901 on AR enquiry card



Ventilation louvres

McKenzie-Martin Ltd, designers and manufacturers of ventilation equipment and rooflights, have recently supplied ventilation louvres for the new Stoke City Football Club at their Britannia Stadium. The louvres provide ventilation to concourse areas circulating the whole stadium and to plant rooms within the main stadium. The continuous fixed louvres incorporate concealed mullions which provide large louvred areas free of vertical lines and are available with a choice of blade pitch and finish. Further information regarding the full range of louvres and other products can be obtained from McKenzie-Martin.
Tel: +44 (0)161 723 2234
Fax: +44 (0)161 725 9531

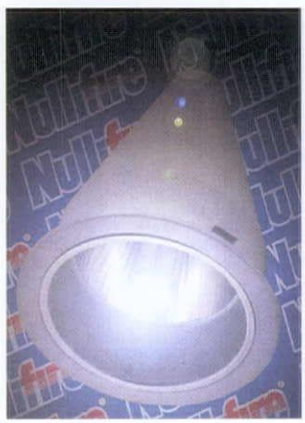
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Hot dip galvanizing

The Engineers & Architects' Guide to Hot Dip Galvanizing is published by the Galvanizers' Association and contains the essential information needed by architects in selecting a corrosion protection system. The guide details the protection given by hot dip galvanizing, where and how to use it and how to specify it. There is also information on the process itself and the economic advantages of galvanizing. Hot dip galvanizing has many benefits as a method of corrosion protection. A telephone service line gives an immediate answer to all your queries about galvanizing. For more information
Tel: +44 (0)121 355 8838
Fax: +44 (0)121 35 8727
email ga@hdg.org.uk

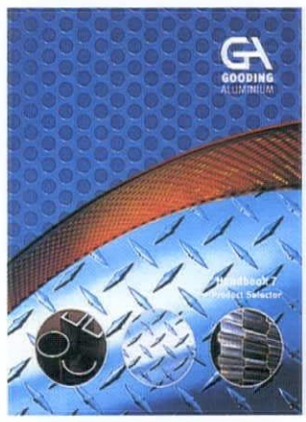
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Fire protected downlights

Nullifire has launched a new range of electrical downlights which incorporate integral means of fire protection. Believed to be the first products of their type in the industry, they are designed for use in both plasterboard and suspended ceilings.
Nullifire downlights are manufactured in a range of designs and decorative rims, to suit differing applications.
Manufactured to BS EN 60598, the product satisfies building regulations and is easy to install by means of snap-lock fittings. Nullifire light fittings are available in a range of fixed downlight and adjustable eye-ball formats with outputs ranging from 10 to 42 watts. Rim facings are in white, chrome or brass.
Tel: +44 (0)1203 855000

904 on AR enquiry card



Gooding Aluminium

This superbly illustrated 150-page handbook covers the whole aluminium specification process from concept to international on-site supply. Outstanding design solutions are provided by the comprehensive range of 'off the rack' perforated and patterned sheets, accessory trims and other extruded profiles. This informative publication features a broad range of photographic case studies which demonstrate many exciting examples of innovative design. Processing and fabrication, surface finishing and technical information sections complete this essential and valuable aid to working with aluminium. A free copy of Handbook 7 is available by faxing the brochure line.
Fax: +44 (0)181 694 2004

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Careers in Construction

the recruitment site for architects

APPLY for jobs using the online application form

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REGISTER your CV on our database that is accessed by top recruiters

FIND help and advice on career development

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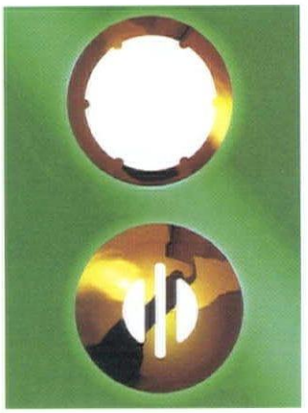
http://www.CareersInConstruction.com



Kingfisher lights retail park

Kingfisher Lighting, the UK's leading exterior lighting manufacturers, have recently lit the Fort Retail Park in Birmingham. The company won the specification due to its fast delivery times and previous reliability. No less than 54 Sloane amenity luminaires on six metre columns were used. These are not only extremely efficient but have the ability to reduce light pollution. Also supplied were 70 Highway 2 street lanterns providing roadway lighting, and 2 Vulcan floodlights. Kingfisher's in-house lighting design team provided all the lighting plots and design for the scheme.
Tel: +44 (0)1623 748090
Fax: +44 (0)1623 746532

906 on AR enquiry card



Beta Lighting

LIGHT & SHADE from Beta Lighting, is a unique range of slim wall and ceiling luminaires with subtle angles and curves, utilizing low energy compact fluorescent light sources with emergency options. **Ferito** (top) is one of seven LIGHT designs featuring a high ratio of forward light with a subtle halo effect. **Trio** (bottom) is a striking luminaire with a gentle halo of back light, one of five luminaires in the SHADE range. Ceiling, wall & pendant luminaires in gold, chrome, black or white feature quick-release front covers for ease of maintenance. Luxury interiors, hotels, restaurants and commercial buildings are all suitable applications.
Catalogue hotline: 0800 0182112

907 on AR enquiry card



Notifier

BBC Fire Protection Ltd, an authorised Notifier Engineered Systems distributor, has recently completed a full turnkey fire detection systems application at Argos Distribution Centre where reliability and ease of installation were key considerations. The Notifier AFP4000 advanced analogue intelligent detection system was chosen, comprising a 16-loop AFP4016 control panel operating over 1000 Notifier smoke detectors, 100 heat detectors and 100 call points to give full L1 protection. The Notifier system gave Argos the state-of-the-art protection it was looking for. For more information on the full Notifier range:
Tel: +44 (0)1444 230300
Fax +44 (0)1444 230888

908 on AR enquiry card



BLE at Chek Lap Kok

Fire detection and emergency lighting specialists Bradley Lomas Electrolok have supplied more than 200 smoke curtain systems at the new Hong Kong airport. The equipment is designed to prevent smoke spreading in the event of a fire to enable safe evacuation to take place.The installation comprises 220 smoke curtain systems, all of which are the new SD3 unit. Each BLE smoke curtain system features a roller mechanism, flush mounted into the ceiling area, around which the protective curtain is wound. In the event of fire, the curtain unfurls to contain and channel smoke.
Tel: +44 (0)1246 436361
Fax: +44 (0)1246 436726
(See pps 50-63)

909 on AR enquiry card



Navtec Norseman Gibb

The proximity of high rise buildings can often cause hazardous high winds. A complex architectural design has been constructed to slow down and redirect the airflow between buildings. Two aluminium masts of more than 19 metres supported by spreader arms are held in place with Navtec's Nitronic rod rigging system. Transverse booms are secured by smaller tie bars and the connection uses Navtec's Turnbuckles and tip cup system. This is just one of the many varied and prestigious projects around the world that use the Navtec Norseman Gibb specialized rigging systems. A comprehensive architectural brochure detailing product range and applications is available.
Tel: +44 (0)1777 706465

910 on AR enquiry card



Reynaers Curtain Walling

The versatility of Reynaers' new CW50 curtain walling system means that it is just as much at home on slopes and roofs as it is in the traditional vertical curtain walling application. Because of this feature it is possible to construct every facet of a complex glazed construction using the system which easily accommodates hips and valleys. The aluminium profiles have a visible width of just 50mm and depth is determined by the position of supports. On finishes, the system allows four different styles of capping – standard, rounded, ellipse and clips with visible screws. A range of finishes is also available.
Tel: +44 (0)121 789 9191
Fax: +44 (0)121 789 9500
Website: http://www.reynaers.com

911 on AR enquiry card



Sill Lighting

Sill Lighting has recently won an award for its Mini Power Projector range. The high-power exterior spot floodlights are built to a high specification. Classified IP55, they have powder coated diecast aluminium bodies and reflectors made from purified anodized aluminium. The result is an exceptional performance of up to 4000 lumens output, the narrow symmetrical beam being ideal for picking out specific architectural features. The Mini Power Projectors come in three sizes: 160mm, 250mm and 300mm. They are designed to accept various halogen, mercury, SON and metal halide lamps in the range 35W to 250W.
Tel: +44 (0)1844 260006

912 on AR enquiry card



C/S Group at Hong Kong

The world's largest passenger terminal, Hong Kong International Airport was built using 30.5 linear kilometres of C/S Group's structural expansion joint covers and screed angles. Foster & Partners, architects of the Mott Consortium, specified a special variation of the firm's AL-2HDC model for the terminal at Chek Lap Kok (see pp50-66).
The joint was developed to accommodate all the movement criteria laid down while at the same time satisfying the aesthetic requirements of the terminal's design. It allows the structural joints to open from 35mm to 95mm and close down to 3mm while maintaining a minimal change in floor level.
Tel: +44(0)1296 399700

913 on AR enquiry card

Seeing the light

THE ARCHITECTURE OF GLASS: SHAPING LIGHT

By Francisco Asensio Cerver. New York: Arco for Hearst Books International. 1997. £35

I was delighted to see this book. During the completion of my own book on glass two things became clear: first, the explosion of innovative and beautiful projects made their description in a compendium impossible without the book declining into a catalogue; second, there was a need for a book which explored the expressive and aesthetic potential of glass. Architects in the last decade have expanded enormously the palette of glass initiated in the 1980s, and magazines are regularly displaying the results.

This short collection of essays, whose Spanish contributors are generally well served by their translators, cannot claim to be the canon of a new aesthetic, but it provides a welcome glimpse into the future of glass by describing 18 buildings which form a glass response to the Corbusian principle of architecture being 'the masterly, correct and magnificent play of masses brought together in light'. Over half of them originate in Japan and the Netherlands, and all of them are either Japanese or European, but this does not diminish the value of their presentation to us as exemplars.

The buildings shown, with excellent photographs, demonstrate the huge range which glass now offers, from the pointillistic brilliance of Ibos & Vitart's work at Le Palais des Beaux Arts de Lille to the extraordinary beauty of Bayon's Electrical Grid Building in Seville, in which glass actually plays a secondary role to translucent marble.

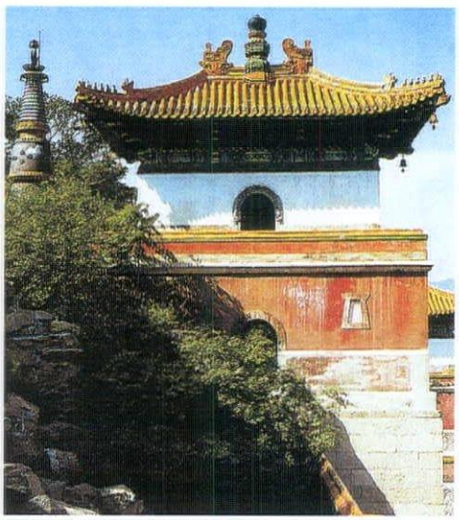
Given the book's presumed intention to set out the new possible orchestrations of architectural music which glass offers, it is a pity that there is not more technical explanation on occasion. Not surprisingly, given the intent, there is no comment on environmental performance, and the brevity of the captions, and the disjunction between the text and photographs, make investigation of the 'how' something of a chore. However, as a glimpse into aesthetic potential, the book forms a valuable addition to the bibliography. MICHAEL WIGGINTON

Professional polemic

THE ILLEGAL ARCHITECT

By Jonathan Hill. London: Black Dog Publishing. 1998. £11.95

'It is impossible to serve architecture and Mammon', wrote T. G. Jackson. 'If architecture is ever to live again...the professional idea must disappear.' In 1892 he and Norman Shaw published *Architecture a Profession or an Art?*, a response to the 1891 parliamentary bill to make architecture a closed profession. Their arguments against 'registrationism' included the claim that what the architect had that tradesmen like builders, engineers and surveyors had not, was 'art'. But they also threw in the apparently contradictory claim, that everyone is potentially both artist and architect: 'The certainty with which natural unarchitected building has in all ages developed the characteristics of good art, suggests that there is in mankind...an instinctive capacity for good architecture'.



Nanshanbuzhou Tower in the garden of the Summer Palace, Beijing from Imperial Gardens, which with its companion volume Palace Architecture, is the start of a ten-volume set on Ancient Chinese architecture (Springer, Vienna and New York, £85 each, or £68.50, if you subscribe to the whole set). The books comprise a ravishing pictorial survey in colour, essays written by authorities, measured or reconstructed drawings, picture captions and chronological guides. The sections are a bit disjunct, but the complete volumes are comprehensive, scholarly and beautiful.

Over a century later my colleague at the Bartlett, Jonathan Hill, tries to reconcile the contradiction in this elegantly produced book. He asserts that the legal registration of architects has made them object fetishists, 'parochial and conservative', fearful of the user. He promises that the abolition of legal protection would encourage more interdisciplinary, speculative and sensuous practice which, while resembling that of 'artist-architects' like Donald Judd and Jannis Kounellis, would apparently emerge from a new breed, the 'user-architect', reflecting the universality and identity of architectural creativity and experience.

Hill presents his essay, dashingly, as polemic. He alleges rather than offers evidence, scorns to define his key term 'architecture', and makes no attempt to be fair: collectivities (architects, 'the profession', historians) are conjured up to be summarily convicted of knavery and folly. For his method is not reasoned argument but allegory – or, rather, a Dadaistic fantasy project, illustrated here by plans and an exquisite abstract model, for an 'Institute of Illegal Architects', an anti-RIBA, to be sited in the street outside the RIBA's London headquarters.

The prototype is clearly Duchamp's *Large Glass*. Hill's IIA comprises surreally-named assemblies of elements ('The Production Space for Smell' for example), many of them readymades (a 1956 pink Chevrolet Corvette, a 1960s TV) which, according to the gnomic captions, playfully interact with each other and the villainous RIBA. The project is less a building than an emblematic mechanism which, as has been said of the *Large Glass*, 'only works when oiled by humour'. For though the project seems initially to arise from the essay, it gradually reveals itself to take on a perverse life of its own and undermine the text's gravity and assumed primacy. Eventually, like Duchamp's *Green Box and Large Glass*, Hill's text and project achieve an uneasy truce, each denying dominance to the other, together resisting analysis.

This is a weird, witty and mischievous little book. Jonathan Hill RIBA is a registered architect. PHILIP TABOR

Norwegian master

SVERRE FEHN: WORKS, PROJECTS, WRITINGS 1949-1996

By Christian Norberg-Schulz and Gennaro Postiglione. Introduction by Francesco Dal Co. New York: The Monacelli Press. 1998. £50

The year 1997 was a good one for Sverre Fehn. In March he won the competition for the Royal Theatre in Copenhagen. In April he received the Pritzker Prize in Bilbao and later in the year the Heinrich Tessenow gold medal in Dresden. On 1 April a major Fehn exhibition, produced by the Norwegian Museum of Architecture, opened at the Basilica Palladiana in Vicenza, later travelling to Hairiburg, Dresden and Oslo and now on its way to North America. This most recent book on Fehn's *oeuvre* came out in Italian, Norwegian and English versions.

Fehn was early recognized as the leading talent of his generation of architects in Norway. In 1949, only 25 years old, he won, with his friend Geir Grung, the Lillehammer museum competition. In 1958 he received acclaim for the Norwegian pavilion for the World Fair in Brussels and his reputation grew with the opening in 1962 of the Nordic pavilion in the Biennale Park in Venice. The Hedmark museum at Hamar, Norway from the end of the 1960s is an archaeological museum fitted into an old barn containing concrete bridges over medieval ruins. It stands out as Fehn's major work and a masterpiece of twentieth-century

architecture. Later museums such as The Glacier (1991) and The Aukrust centre (1996) have confirmed his reputation as an architect with an innovative formal vocabulary based on his tectonic knowledge and empathy with the demands of the Norwegian landscape.

This book contains nearly all his built works, projects and written words. (For more on Fehn's ideas see Per Olaf Field: *Sverre Fehn The Thought of Construction*, Rizzoli, 1983). The material is compiled by the Italian architect Gennaro Postiglione who has also written a very useful essay. Further insights are offered by Christian Norberg-Schulz and Francesco Dal Co, but Dal Co overstretches his ship metaphor and Norberg-Schulz burdens his brilliant essay with a diatribe against dead socialist architects from the 1930s. Still the book is a must for anyone who wants to study a master who until recently has not received the international recognition he deserves. Today we need Fehn's sense and sensibility more than ever.

ULF GRØNVOLD

Thrill, Comrades, thrill!

THE SITUATIONIST CITY

By Simon Sadler. London: MIT Press. 1998. £24.95

You think idly of Superstudio, of *Oz* editor Richard Neville's book *PlayPower*, of Habraken's *Supports*, of Yona Friedman's notion of the Flatwriter. You might, with less justification, raise the names of the Independent Group and Cedric Price and Archigram. The common basic text for most of the above is Huizinga's 1938 classic *Homo Ludens*, but the lurking influence for the former is the Situationist International which flourished during the '50s and '60s, primarily in Paris. Its political apotheosis was the student rebellion of 1968 but even by then its members had turned out to be more interested in who they could denounce and expel than in their wonderfully intriguing ideas about society, art, architecture and the city: 'Architecture must become *thrilling*,' wrote Guy Debord and Jacques Fillon in 1954. Who had spoken in such terms before? But, as in Marxist theory, this would all happen *after* the revolution, and there was a sort of inevitability in these grim clowns expelling Situationist architectural guru Constant Nieuwenhuys in 1960 just as he had got really steaming on his designs for New Babylon – 'an exemplar of the modern city, technological, universal and playful,' as Simon Sadler tells us in this gripping new book.

Halfway through you start making favourable comparisons with Reyner Banham's writing in *Theory and Design* – difficult subject, some of the protagonists still alive and baleful, painstaking research, dense but lucid writing, scholarship *and* excitement. It is very good: we seem to have a new star here.

SUTHERLAND LYALL

MARS attacks

EXPERIENCE OF MODERNISM: MODERN ARCHITECTS AND THE FUTURE CITY: 1928-1953

By J. R. Gold. London: E & F N Spon. 1997. £24.95

There has been no comprehensive account of how the Modern Movement came to be established in Britain. John Gold's book helps fill this lacuna. It is based for the most part on original materials, including more than 120,000 words of interview transcripts. Its originality is to develop a narrative out of the many actions of small organizations, including the MARS group, which led to the establishment of Modernism in Britain.

The history of the 1942 Master Plan for London makes fascinating reading, and you cannot help but be surprised to learn that it exercised no influence on Abercrombie's County of London Plan. This assessment might be different, were you to envisage British Modernism being shaped by European ideas as well as American ones (often originating from Britain). Arguably, the most original aspects of British avant-garde planning during this period were the continuing influence of the Garden City movement, of Lewis Mumford and of Clarence Perry's concept of the neighbourhood unit, all of which are acknowledged but not developed by Gold.

What is missing in this otherwise excellent book is a sense of the opposition to Modernism among individuals, institutions and traditions. This alone could explain why it took so long to take root in Britain, which remained by and large parochial between the wars, and why British Modernism remained dependent upon CIAM instead of becoming influential within it and beyond.

IRÉNÉE SCALBERT

Bridging the gap

ROBERT MAILLART: BUILDER, DESIGNER AND ARTIST

By David P. Billington. Cambridge: Cambridge University Press. 1998. £50

This book is a serious work of scholarship, painstakingly researched over a number of years. David Billington has had access to family papers which has enabled him to write a biography in the true sense.

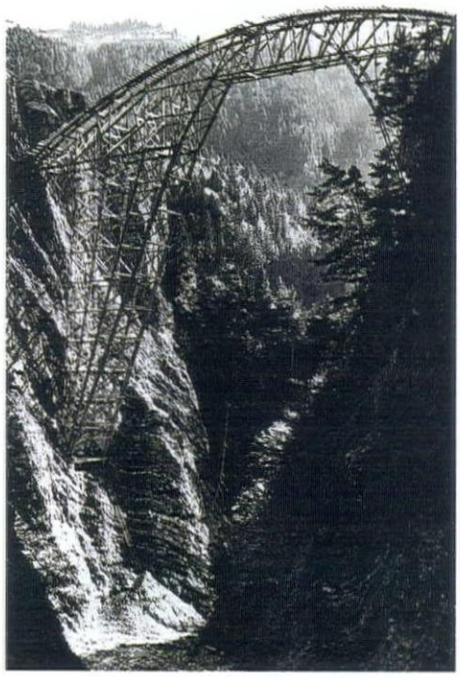
Robert Maillart was born in 1872 and you would expect him to have been very much of the 'old school' of engineers, as were most of his contemporaries in Switzerland at that time. This was definitely not the case. He spent a large part of his life countering the narrow analytical approach of fellow engineers with his own feelings about structure based on experiment and intuitive design. He was inquisitive and always looked for a more elegant solution to what often started off as a pedestrian design by others. His speciality was exclusively design and construction in reinforced concrete and in this he was an artist. This artistry was backed up by a knowledge of construction methods for he was a constructor as well as designer.

My knowledge of him until now has been as a bridge designer, at which he was an undoubted master. He was also a designer of thin shells, as in the gas tanks at St Gallen, built in 1902. These, I think, were a first of their type and very clever. He was also one of the inventors of the flat slab/mushroom column head form, eliminating any downstand beams.

But to the great bridges and their innovative ideas. Zuoz 1901 – the beginning of his hollow box girder design. Tavanasa, 1905, which refined the earlier bridge. Salginatobel (below) – the development of the deck-stiffened thin arch (1929) and then the masterpiece which is the 1933 Schwandbach bridge, a refinement with the whole deck on a graceful curve.

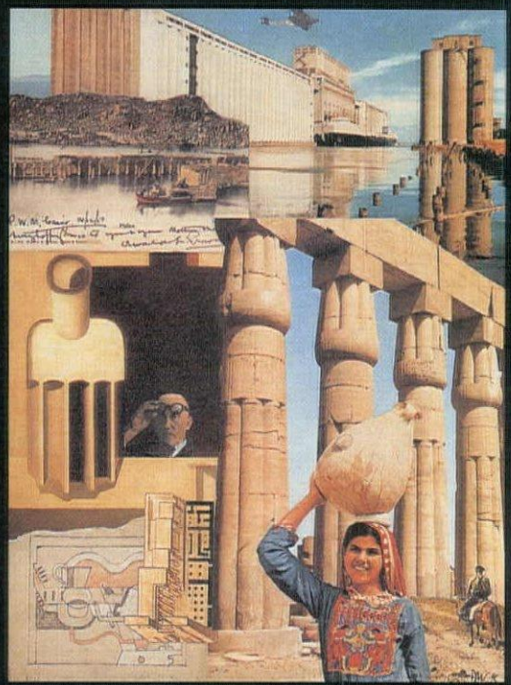
The book concludes with a complete list of all Maillart's built works and also a list of his bridges in Switzerland with a location map. This is really a book for engineers interested in engineering history and inspirational design and reinforces this reviewer's view that engineering is both art and science.

TONY HUNT



1929 Salginatobel bridge under construction: typical of Maillart's daring structure

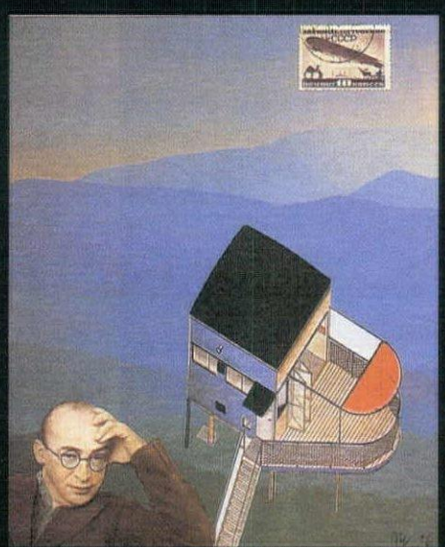
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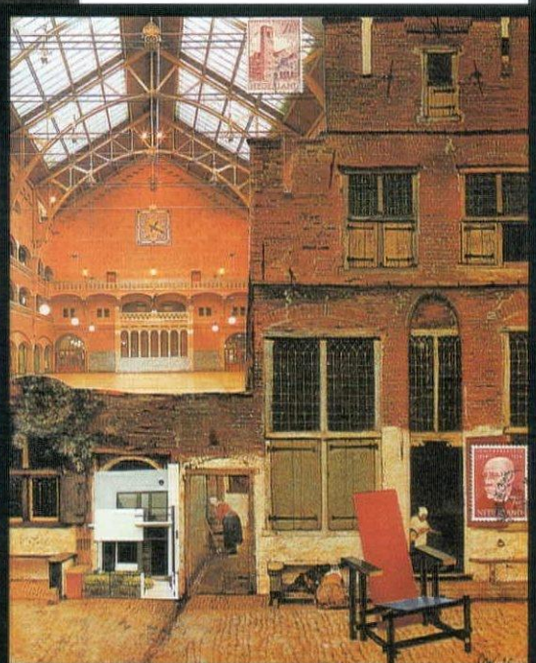






Richard Bryant/Arcaid





EVOKING THE MONUMENTS, VISIONS AND POLITICAL REALITIES OF THE MODERN MOVEMENT, THESE WITTY COLLAGES BY DAVID WILD LOVINGLY CELEBRATE THE CONTRADICTIONS OF MODERN ARCHITECTURE.

With his extraordinary self-build house in north London (far left), David Wild demonstrated his deep understanding of the Modern Movement. Sophisticated in its planning and knowing in its details, it stands among the best British buildings of its time, making it hard to believe the architect had spent most of his career teaching.

Now Wild has produced an exemplary work in another medium: a book of collages accompanied by short essays. He discovered and fell in love with the Modern Movement in the 1960s when it was still credible in its own terms, eagerly exploring its monuments and consuming its propaganda. He has since spent half a lifetime ruminating on the brave scale of its aspirations, regretting the collapse of so many of its promises, and coming to a painful understanding of the gap between architects' visions and political reality. The love is still there, even if the contradictions remain digestible only with a heavy dose of irony. *Fragments of Utopia* is a moving, amusing, and sometimes savagely ironic sideways look at the Modern Movement, skilfully composed and beautifully produced. The collages nicely complement the short texts, cheeky in their juxtaposition of people and places, and with apt use of postage stamps as temporal icons.

Among the examples shown here is Le Corbusier's double house at the Weissenhofsiedlung (top right). The naked woman on the roof terrace is a reminder of the obsession with fitness and hygiene. Stamps of Graf Zeppelin and Hindenburg show the gathering political storm, and a menacing German eagle lurks in the undergrowth. Hitler leads the camel because in their bid to discredit the Weissenhof, the Nazis published a postcard – in fact, ironically, a collage – peopling it with Arabs, camels and even a couple of lions, 'the child of other blood and other skies' as propagandist Schultze-Naumburg put it.

PETER BLUNDELL JONES

Fragments of Utopia is published by the Hyphen Press, London 1998. Tel/fax +44 171 485 9726