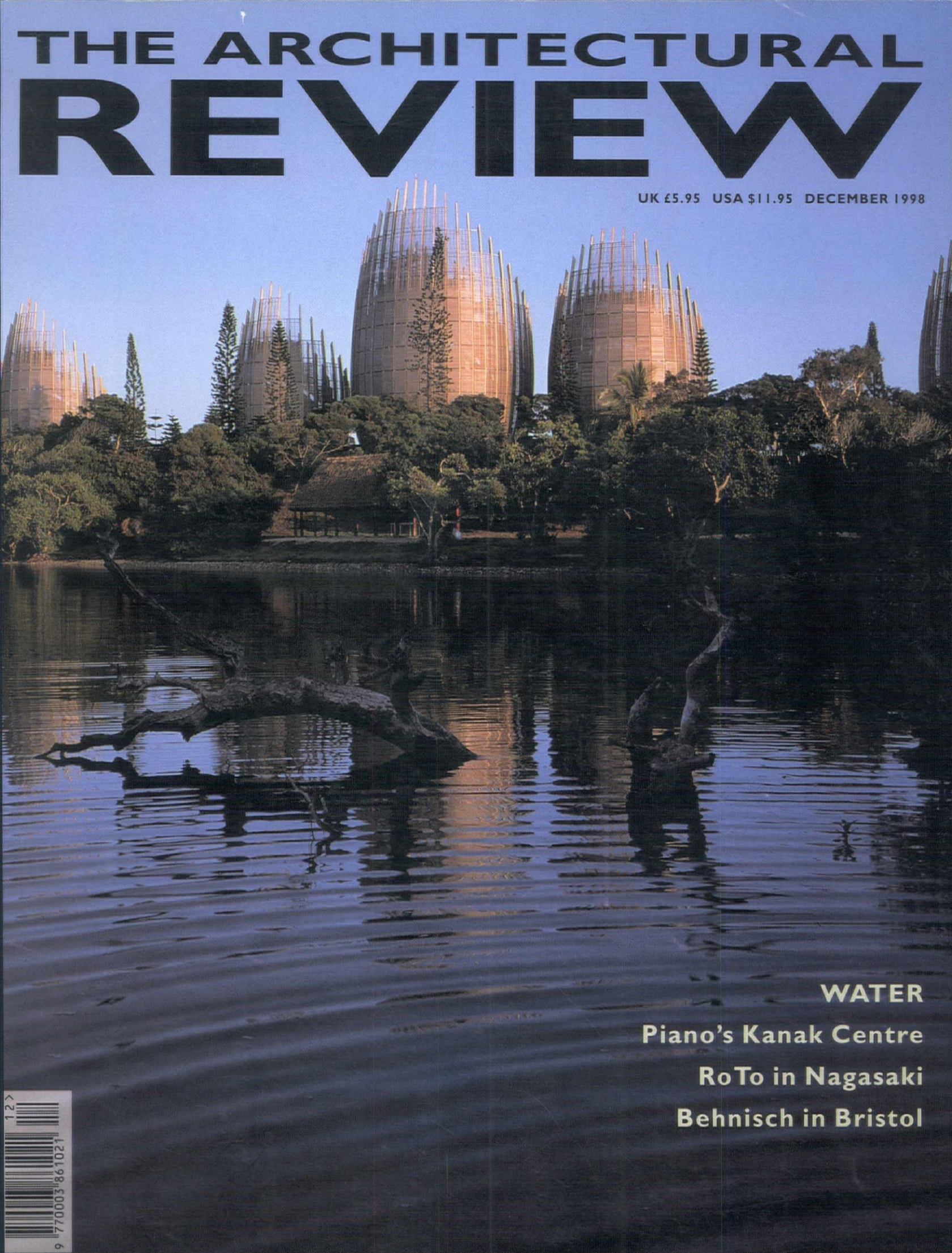
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WATER

Piano's Kanak Centre

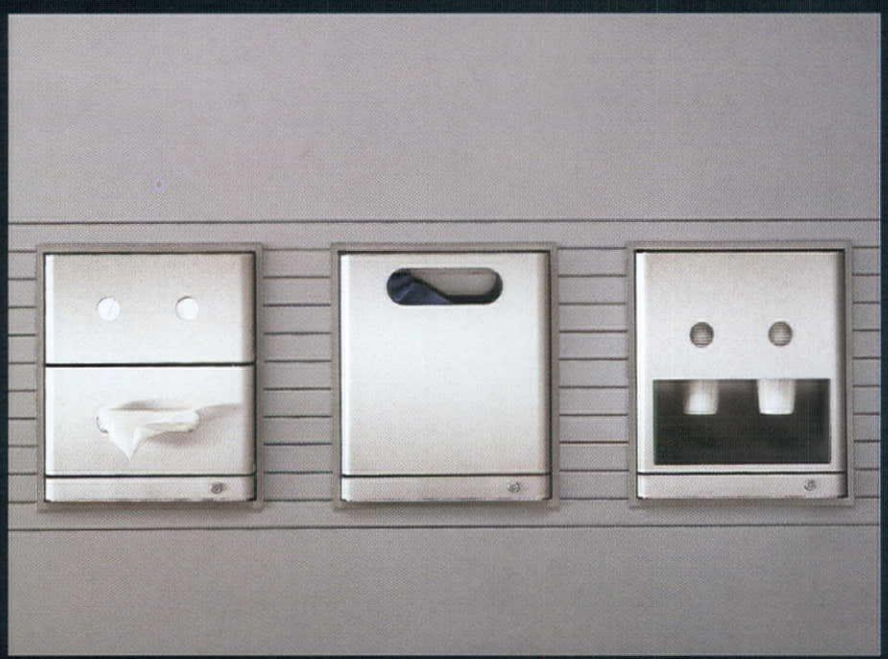
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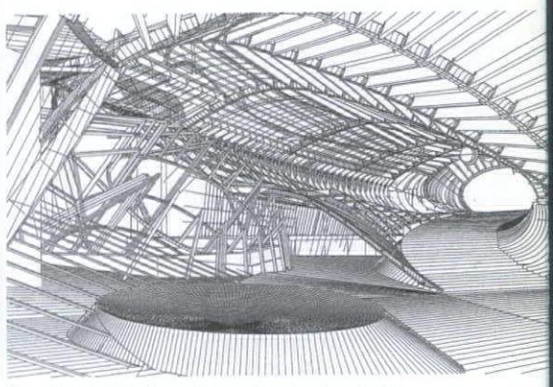
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Photo Mario Carrieri

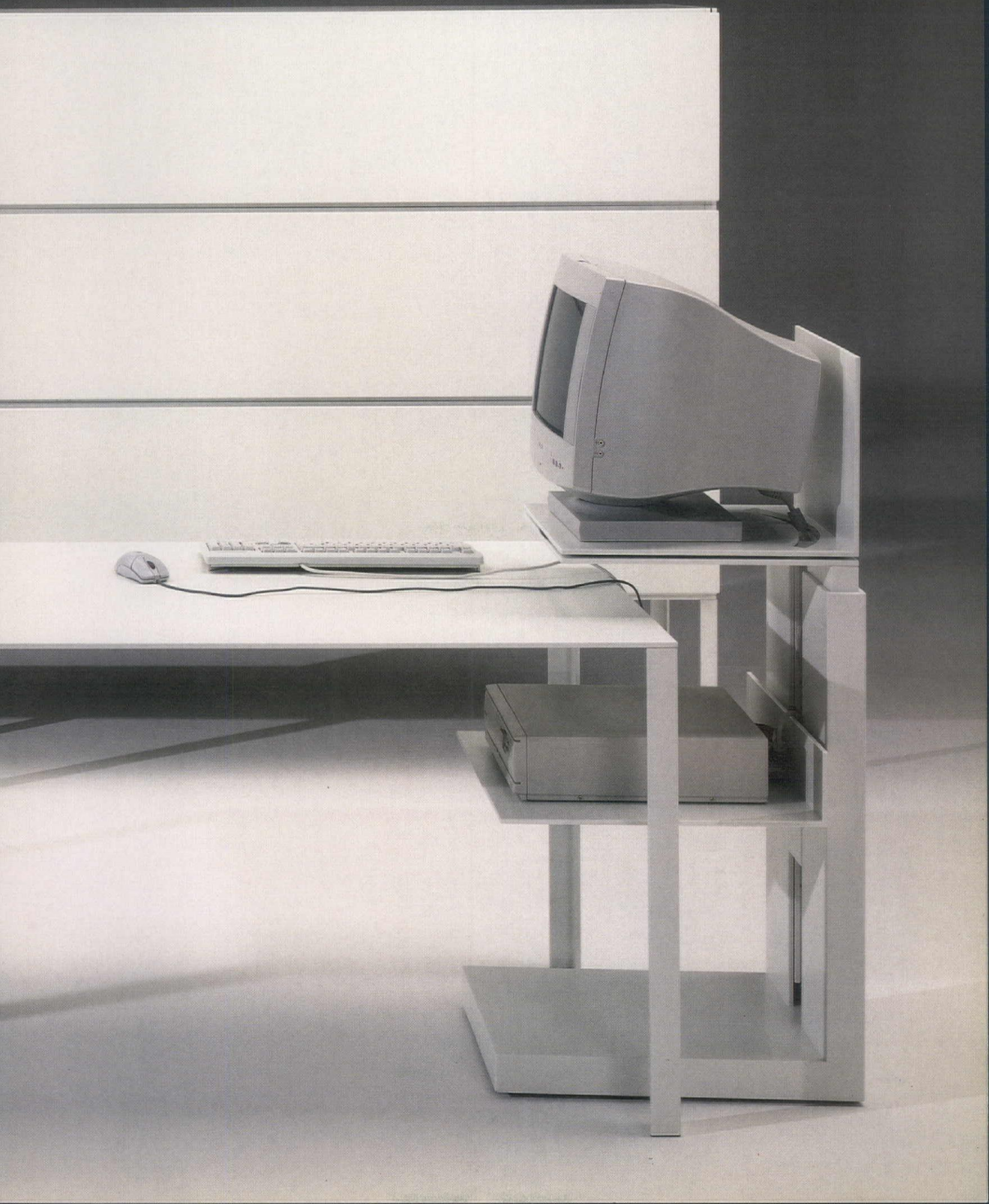


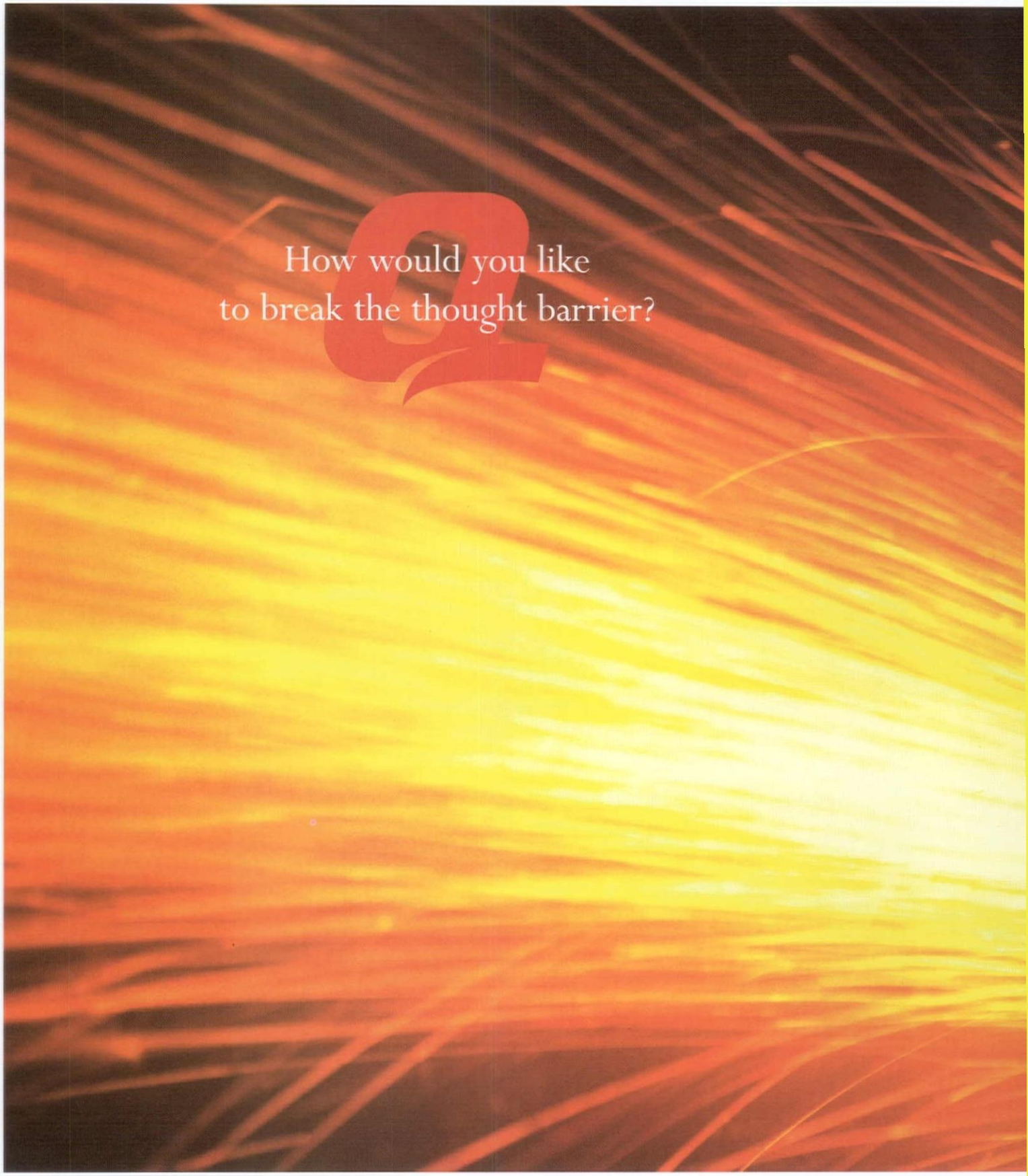
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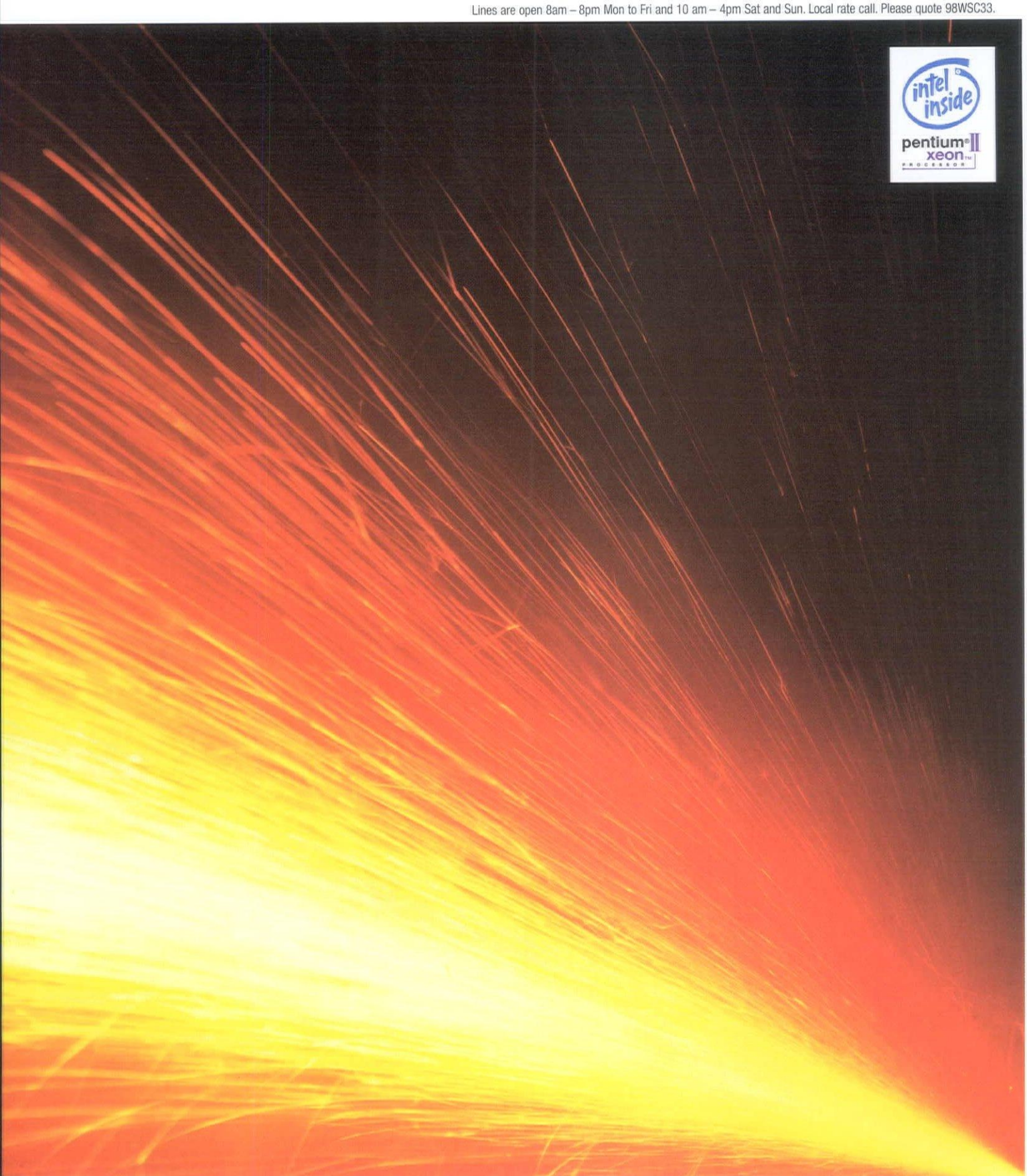


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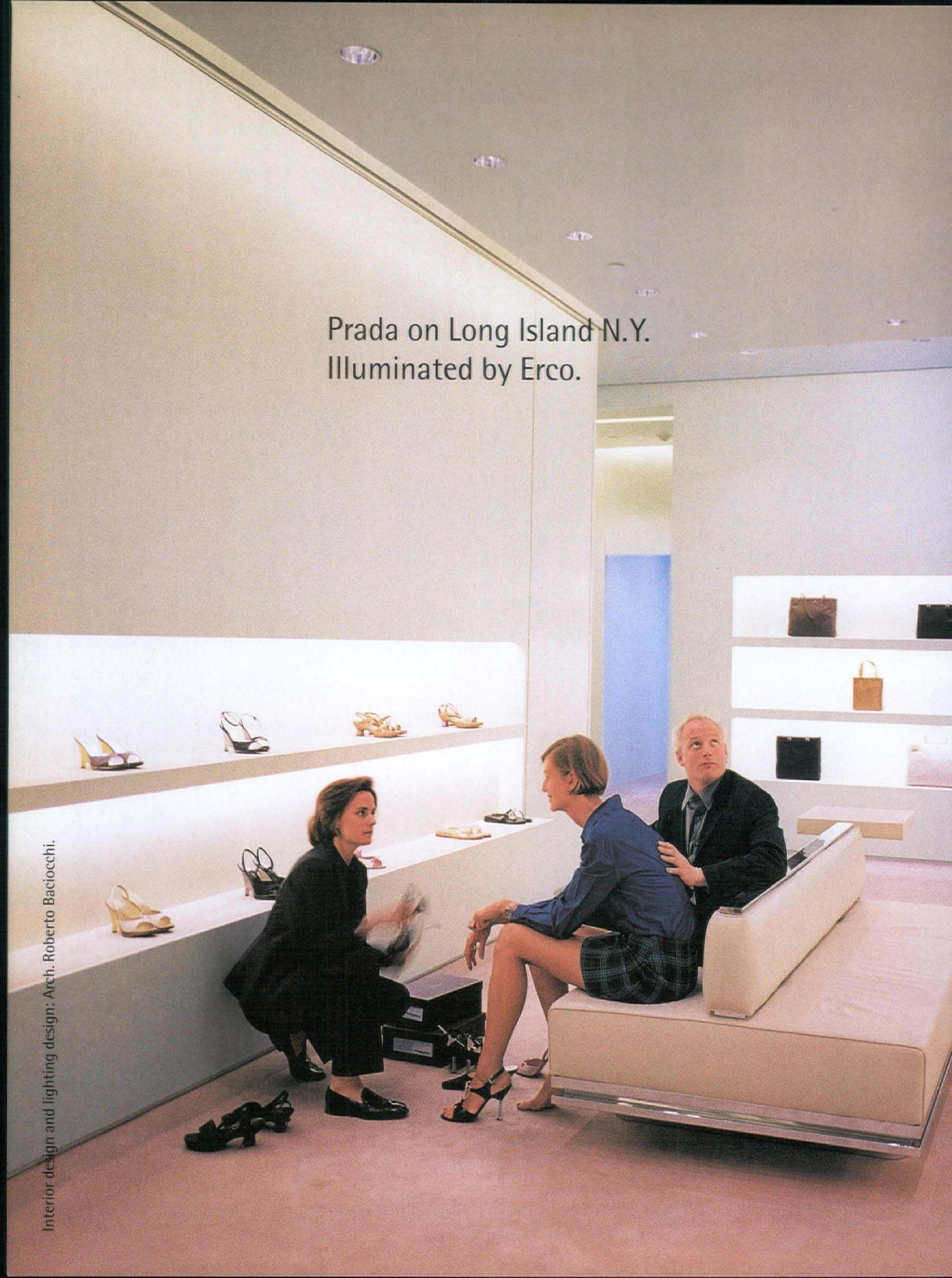
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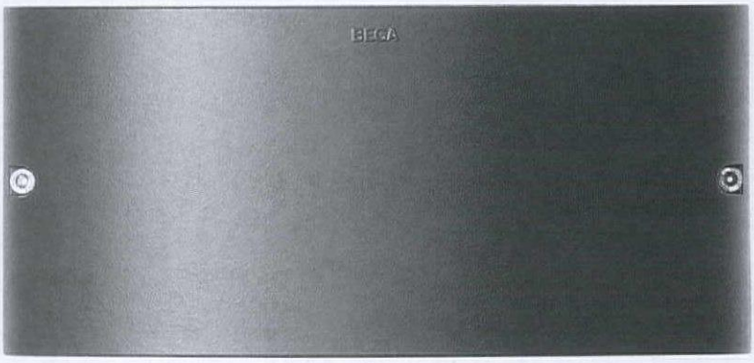


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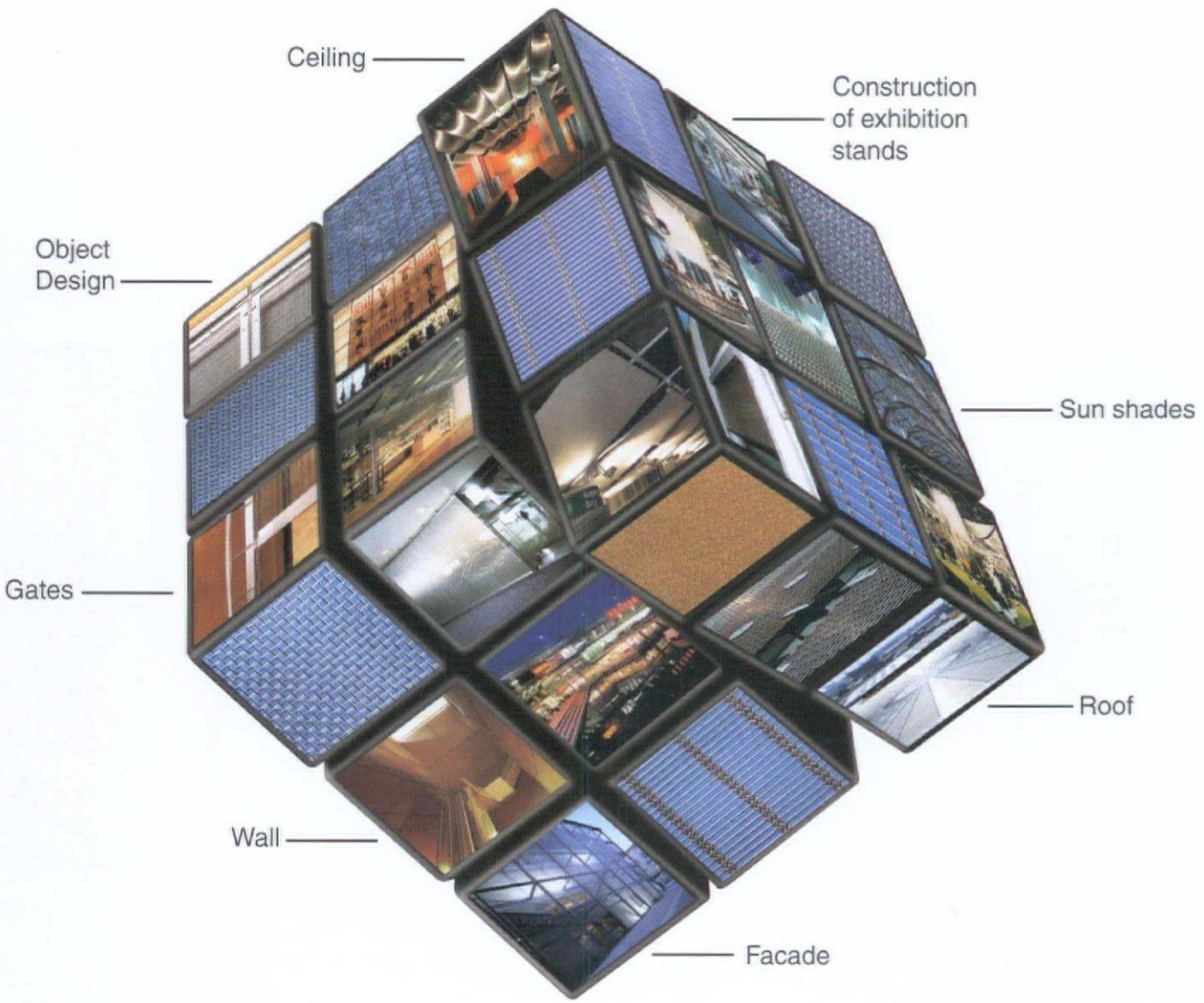
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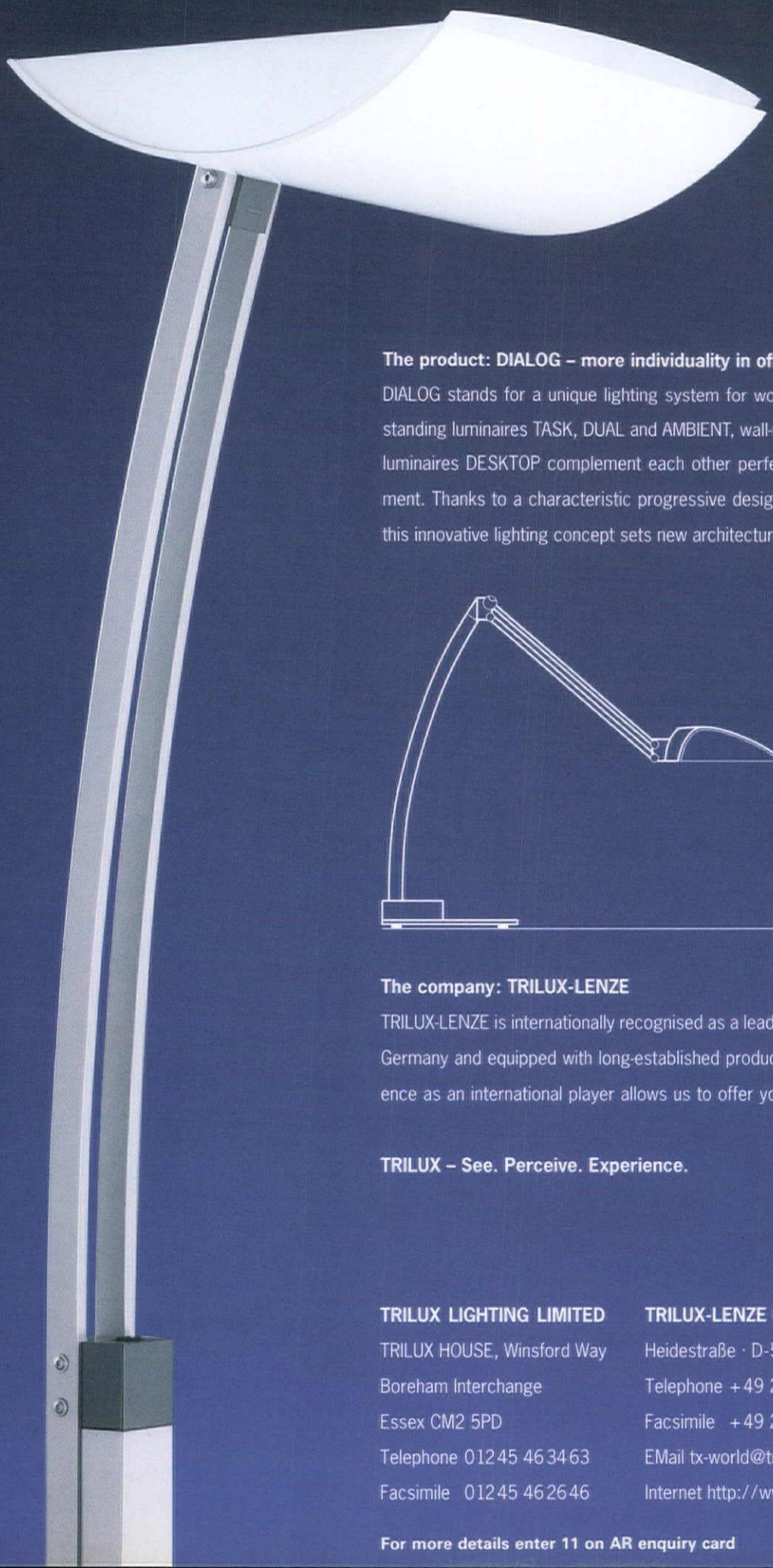
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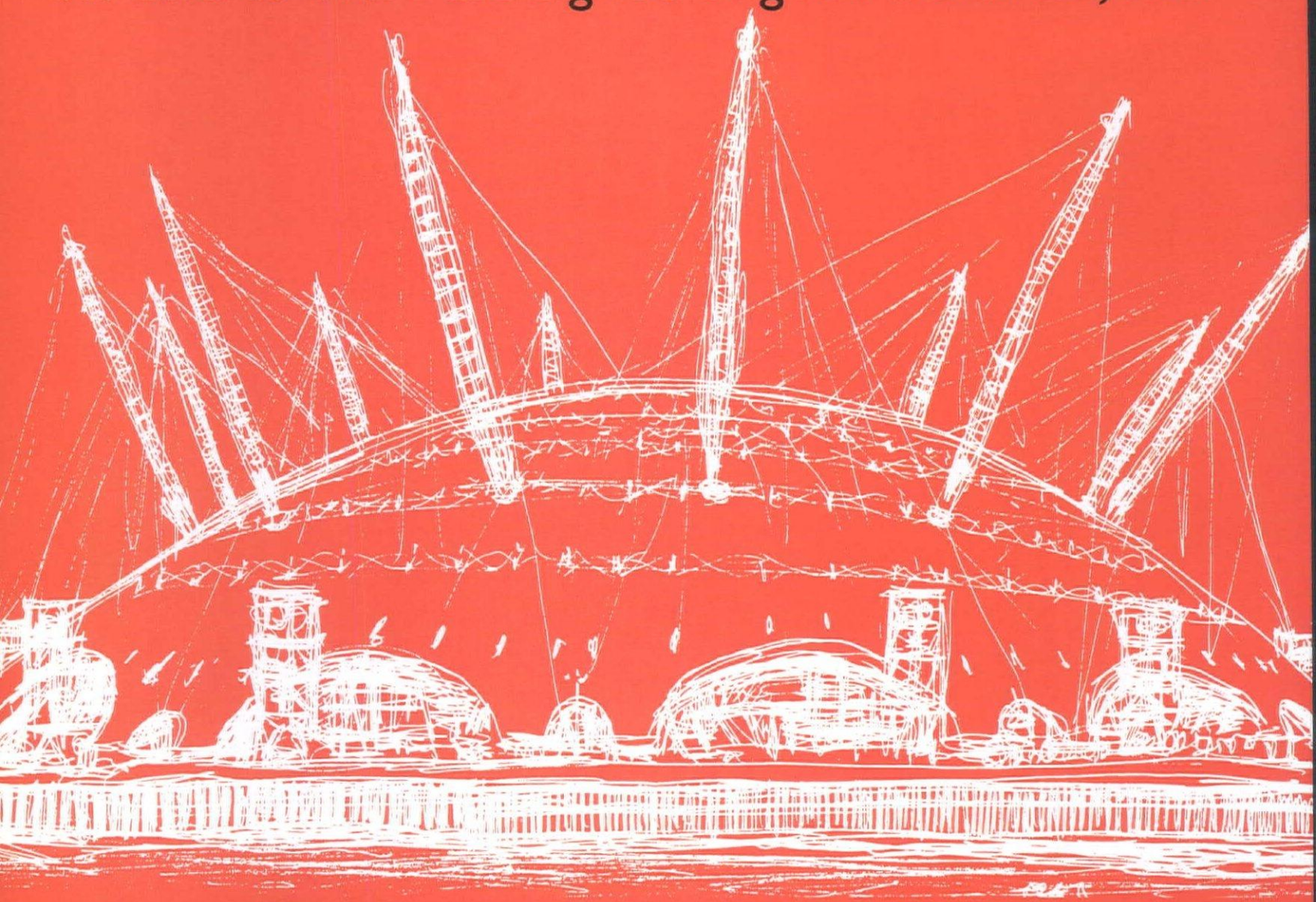
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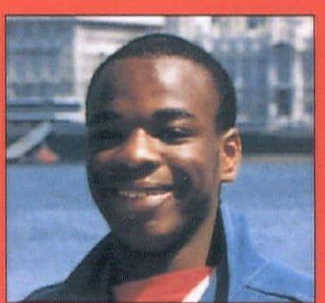
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Stephen Wiltshire the autistic boy who amazed art critics with his ability to draw buildings after only a glance has long been a favourite with architects and designers. His talents have been showcased on television, books and exhibitions throughout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

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Plate – a light philosophy



DESIGNERS: VESA HONKONEN AND JULLE OKSANEN

The idea was to create a light fixture without any disturbing glare surface. The material is aluminium and glass. The Plate of glass lets through about 20% of the light and reflects about 80%. The result is a soft comfortable light which is especially suited for offices and meeting rooms.

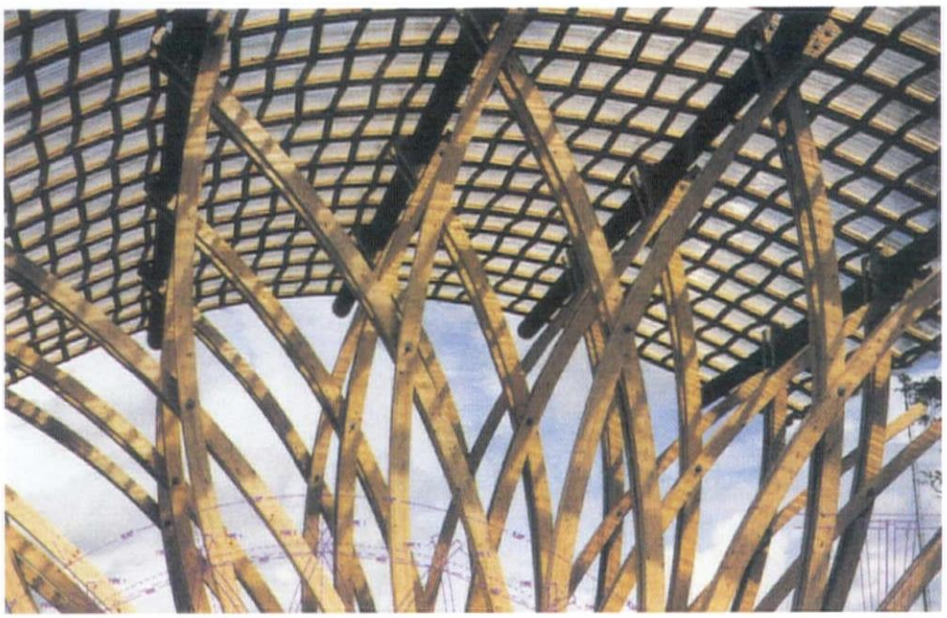
Material: Powder coated aluminium. Laminated glassplate, sandblasted and teflon coated for easy maintenance. Light source: Flourescent tube T5/16.

louis poulsen

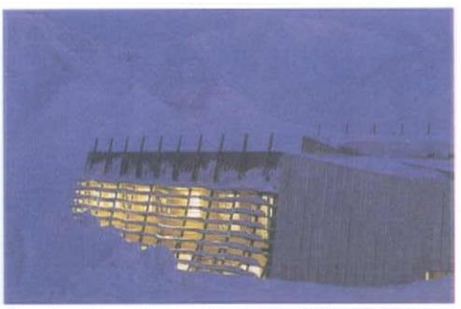
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VIEW



Parking structure, Oslo airport, Jensen & Skodvin, 1998.



County offices, Svalbard by Jarmund/Vigsnæs, 1998.



Dagur Eggertson: 'Stations' installation, Finland, 1997.

20 under 40 in Norway

The exhibition '20 under 40', which was on show at the Norwegian Museum of Architecture in Oslo until the end of November, aimed to show the future at the end of the 1990s reflected in the work of 20 young Norwegian designers.

The exhibition is unique in that the exhibitors have chosen themselves; rather than holding a party for debutantes chosen by an older generation, the museum issued an open invitation for young architects to send their built and unbuilt projects, from which a jury then selected the final 20. It is 10 years since the last such presentation of young talent in Norway, and much has changed. The many variations of Post-Modernism which were still alive in 1988 perhaps allowed for greater stylistic variation, but surprisingly few of those directions have prevailed.

Deconstructivism never really took root in Norway. Now it is only visible in a few acute angles, mostly in landscaping features, where climatic demands on detailing are less severe. The facade images, the self-justifying geometries and graphic shapes and colours of the late '80s have also been weeded out. There are no such clowns any more.

There is something earnest about the sense of professional responsibility which is honing ambitions of the new generation of Norwegian architects, as well as the forms they produce. Future projects are abstract, long and slim, with narrow corridors and generous orthogonal rooms, large planes of glass and silvery wood. A building is no longer seen as image representing life; it is the result of a long process of negotiation, with clients, authorities, materials.



mmw's container dwelling, 1998.

The older generation imagines that control of this process is a practical possibility. But as there is no longer a definitive map of the terrain in which architects work, the ignorance of young architects paradoxically becomes their chief source of strength. Even the limits of the profession itself are stretched: new practices such as Code, Illustrated future and Griff kommunikasjon are as much at home in concept development and graphic design as they are in architecture. To approach each project fresh, with the changing aesthetic responses that the future demands, professional insecurity is as much of a necessity as experience.

The exhibition was beautifully designed for travel by architect Silvie Haugen. After finishing at the Norwegian Museum of Architecture it will be on show in Harstad, Tromsø, Bodø, Hamar, Trondheim, Arendal and Bergen during the first half of 1999.

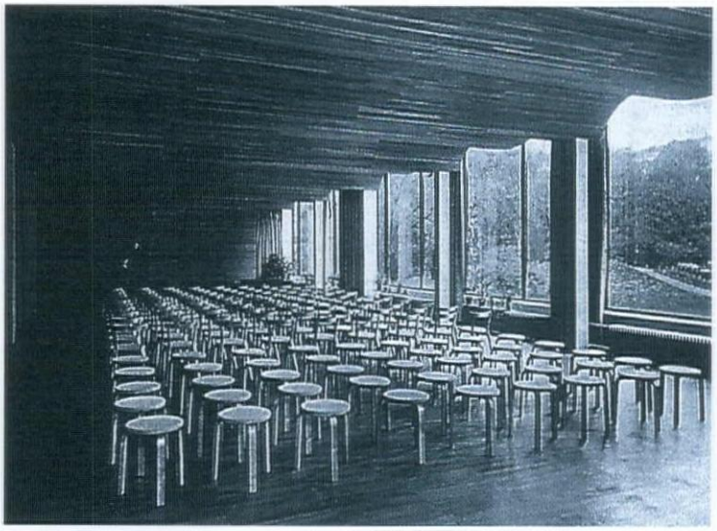
INGERID HELSING ALMAAS

Aalto comes to London

In a belated appreciation of Aalto in the master's centenary year, two exhibitions opened in London last month.

At the RIBA's Heinz Gallery (until 19 December) is an exposition of the Culture House, that rather mysterious post-war adventure for the Communist party which combines a free-form auditorium with a rectilinear office block, both solemnly clad in brick and copper. One of his first urban buildings in the Finnish capital, the place is difficult at first sight, even when seen in reality. Hélène Binet's grave photographs give some notion of the forms and spaces, and original drawings and sketches from the office, the best on crinkled detail paper giving an understanding of the struggles

VIEW



Aalto's Viipuri Library in its heyday ...



... and now, inappropriately and cheaply restored.

to perfect form and materiality.

The other show, at the Aram Gallery in Kean Street (sadly already closed), was the travelling exhibition on the Viipuri Library, so strangely washed up on the western borders of Russia, where for all the good will of its present occupants, it is in a pretty dreadful state, desperately needing much more thorough restoration than the Russians can afford. The Finns have assembled an international rescue committee, pledged to try to raise expertise, cash and publicity (AR May 1993).

Anyone interested in the campaign to save the building to its former glory as one of the first Modern Movement public buildings should get in touch with the Friends of the Viipuri Library, c/o Alvar Aalto Foundation, Tiilimäki 20, FIN–003300 Helsinki, Finland. Help of many kinds is welcomed.

Piano instrumental

Renzo Piano's Tjibaou centre in New Caledonia (p30) has been instrumental in ensuring a 70 per cent support vote for autonomy by the Kanak islanders in a referendum on 8 November.

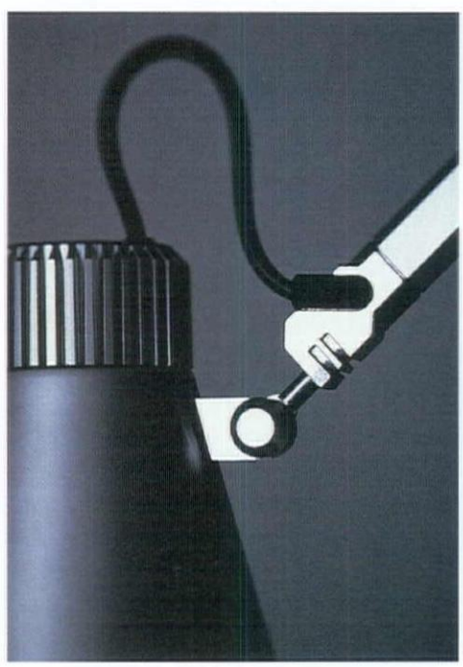
Built near the capital Nouméa, it was commissioned by the French in 1990 as Mitterrand's last Grand Projet, and is the only one outside France.

But Octave Tonga, director of the agency that runs it explained that 'It is not a gift that we inherited. It is the result of a struggle'. And, according to *The Guardian* newspaper (on the 10th of last month), he claimed that it had helped give the much divided Kanaks a sense of their own identity, signifying the unfinished struggle for independence. Agreement has now been reached that the island should progress by stages to 'shared sovereignty'. Tonga believes that 'We built this centre as a tool to allow people to understand each other. We signed the accord of Nouméa for all the children who are the future of this country. This tool will give them the means to understand.'

Lucy lucky winners

More than 3000 readers from all over the world responded to our opinion survey of the magazine earlier this year.

We are very grateful to all those who were kind enough to reply to the questionnaire and are pleased to announce that the winners of our prize draw for Erco's Lucy lamps were Louise Barnett, architect with the Richard Rogers Partnership, London; Mogens Clausen, partner in Skaarup & Jespersen, Hellerup, Denmark and Jim Wilson, associate in the SRG Partnership, Portland, Oregon. The lamps are on their way.



Erco's Lucy lamp

We learned much from the survey, including the fact that an astonishing 97 per cent liked our themed approach, though some would like a greater geographical spread. We are taking steps to extend the coverage, and to respond to other ideas and suggestions, many of which have been extremely helpful.

Readers who did not take part, or who have further ideas about what the AR might do should get in touch with Peter Davey, The Editor, by e-mail: peterd@construct.emap.co.uk, or by post.

Omission

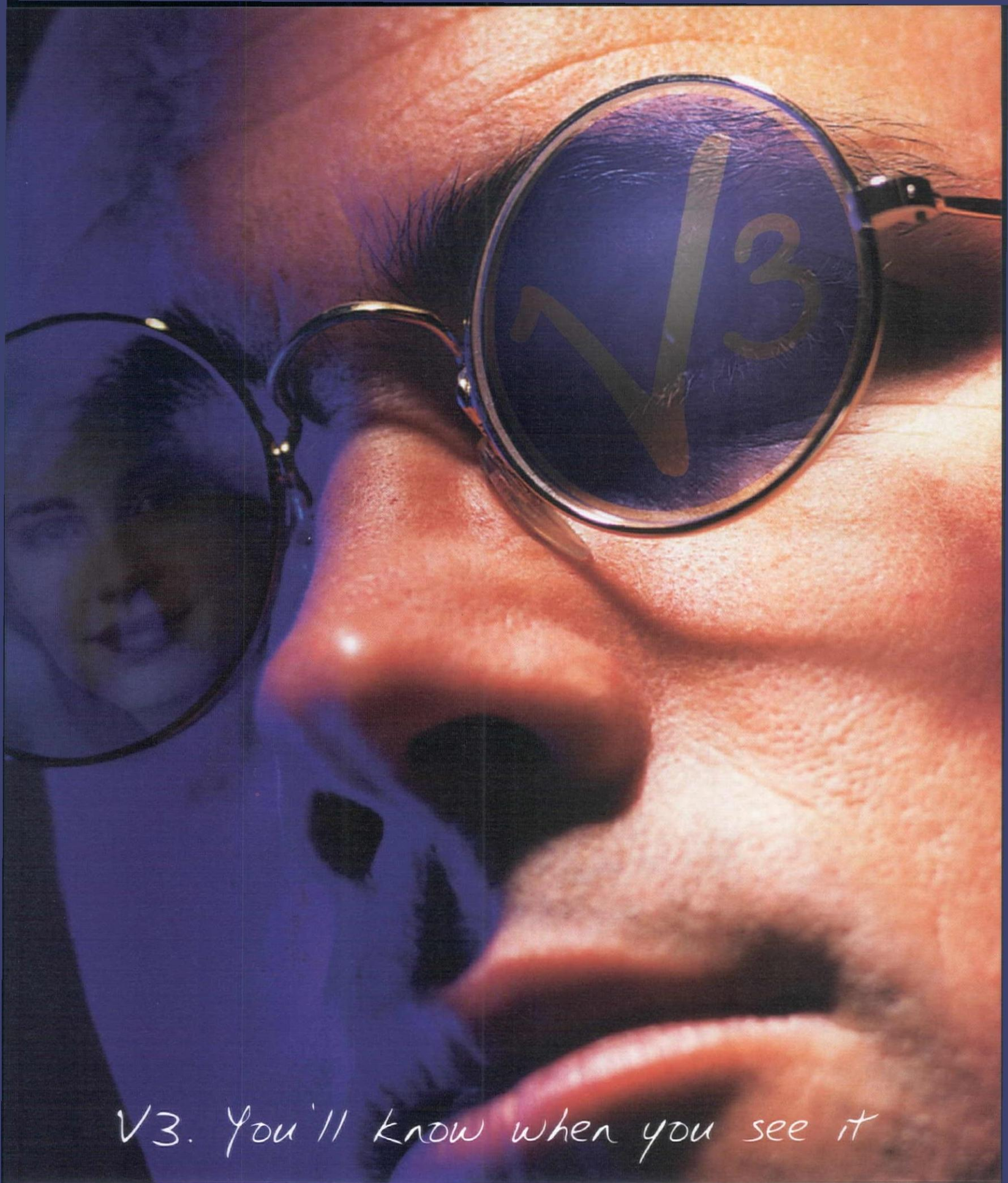
The AR November cover and photographs of the studios, Tucson, Arizona pp47-49, were taken by Bill Timmerman.

letters

Showing his mettle

SIR: What a wow Shuhei Endo is with corrugated metal (AR November). In both his latest park building and those bicycle sheds you showed some time ago (AR April 1997) he shows new possibilities in a much neglected material.

During the War corrugated metals were used with great invention and effect in structures as



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For more details enter 6 on AR enquiry card

VIEW

different as boats, airplanes and buildings, and after 1945, there was a fashion for a time for things like prefabricated concrete panels. But all that disappeared in the '70s when the day was won either by the feeling that the stuff is over utilitarian, or that everything should be smooth (possibly both). Endo shows how silly we all were to forget corrugated potential.
Yours etc
BILL BANGOR
Los Angeles, USA

Sense of community

SIR: Having just been to see the Aga Khan's Awards exhibition when I read your article in the September magazine (p17), I concur with your comments about the effectiveness of the awards in raising awareness of a much wider range of building types than normally features in awards. It was also very humbling to see what could be achieved with traditional methods of construction, in many cases more suitable than modern costly high-tech solutions. I think we could also all learn a lesson about waiting to see how buildings function before passing judgement.

The community projects, and the example you gave of the Grameen Bank, could be replicated in this country and could help to revitalize many of our run-down areas and empower local communities to take more charge of their own environments. As the Glasgow 1999 brochure says, 'Architecture is the most visible and most universal art, and directly touches everyone's lives. Yet it is also one of the least understood of all artforms, and one from which the wider public is usually excluded'. I would therefore urge you to try to remedy this exclusion of many of the users of buildings, especially public housing, and to publish more articles on work that is being done in this area in other parts of the world.
Yours etc
NIGEL MULLAN
London SE5, England

Off colour

SIR: Your November theme seems completely reactionary – a desperate effort to follow fashion or an attempt to attract advertisements from paint and powder coating manufacturers?

Surely one of the marks of civilization is that it abandons colour and applied decoration, and lets form, space and materials speak for themselves. Adolf Loos pointed all this out nearly 100 years ago, and his ideals were embraced most successfully by generations of architects, gradually aiming for refinement. But you seem happy to return us to more primitive ages in which decoration dominated and truth was masked by deception. Bad luck to your enterprise.
Yours etc
PHILIP LESTER
Sydney, Australia

The importance of being Ernst

SIR: While it may be one of the tasks of an architectural magazine to follow some of the antics of the superstars, or even on occasion to help create them, I think that you went too far in October. Am I alone in being rather shocked by the seven page (68ff) outpouring of dripping (drippy?) laudatory prose on Peter Zumthor? And accompanying it with Hélène Binet's impassive abstract pictures which have not a hint of people in them. And no drawings.

While I can accept that the chapel and the baths must have powerful atmosphere, I am puzzled by your praise of the Bregenz galleries, which even you found overwhelmed their contents. And why build a glass tower between a lake and a square from which it is completely difficult to look out?

I for one am much puzzled by the recent adulation of Zumthor, and your part in it.
Yours etc
FRITZ ERNST
Hamburg

We did not publish drawings because they had been in the AR before at different times. Binet says of her photographs that they do contain people, but they are invisible because of very long exposures. Zumthor's work is extremely difficult to publish because it is concerned with precisely the properties of architecture that are difficult or impossible to express on paper. Mr Ernst should go and see the buildings for himself. P.D.

In the frame

SIR: Thank you for a splendid edition of Architectural Review (October 1998) with its special reference to the use of metal in architecture.

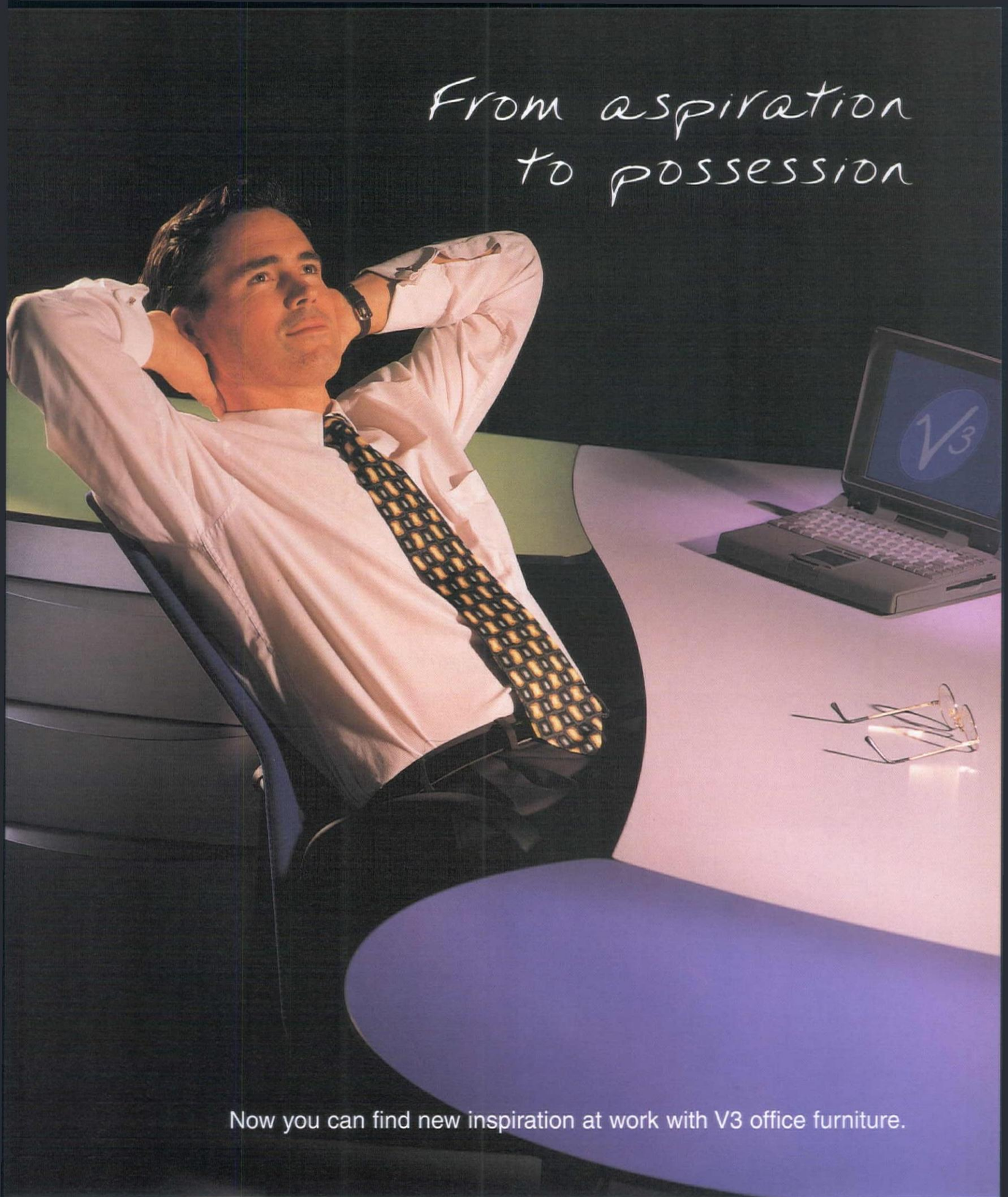
Catherine Slessor's 'Comment' Alchemy and Invention was a fine introductory overview to the historical context of the subsequent coverage, but I wish she could have also mentioned that here in Shropshire we can boast of not only the world's first iron bridge, but of the world's first iron framed building. I refer to the Flaxmill at Shrewsbury (recently noted by National Heritage as one of the 10 most endangered buildings in Britain).

As a member of the Shropshire Visual Arts Trust Working Party, we are desperately seeking political and financial aid to help restore this derelict building and turn it into the focal point of Arts and Crafts activity in the region.
Yours etc
JEFF SALTER
School of Art & Design, Shrewsbury College of Arts & Technology, England

January



Berlin starts the year: Berlin may not be the political or financial capital of Europe, but it is certainly the focus of its building and architecture, as the Federal Government moves its activities from Bonn, business and industry boom, and the once divided city is gradually sewn together. In the January issue we look at some of the developments that are healing the wounds and providing the city with an infrastructure appropriate for the twenty-first century.
The mighty Potsdamer Platz development (built on the dead area neutralized by the Wall) is largely finished to a master plan by Renzo Piano, with contributions from a spectrum of distinguished architects: we review progress on Europe's biggest public and commercial development. Nicholas Grimshaw's Ludwig Erhard Haus is a major ingredient of the new business life of the city: we review it and look at several projects by local architects now reaching completion. This is not the last AR on the city (for instance the Reichstag is not yet finished), but the January issue will keep you in touch with progress in the most lively architecture and urbanism of the awesome project.
Why not buy a subscription to the AR as a present for the festive season? We are making a special offer of a year's subscription, with the addition of the memorable Centenary Issue, which traces the history of the magazine in a brilliant collage of words and pictures. Use the special order form to be found loose in this issue.

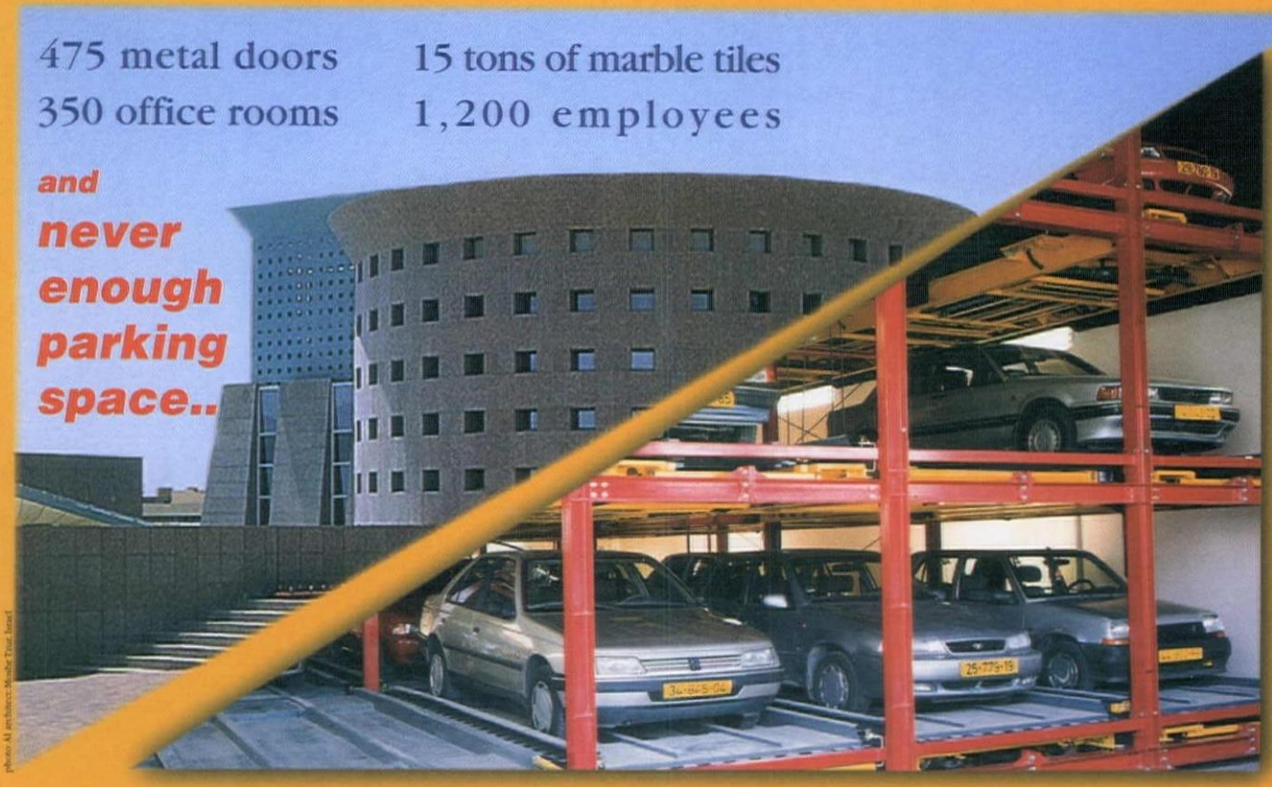


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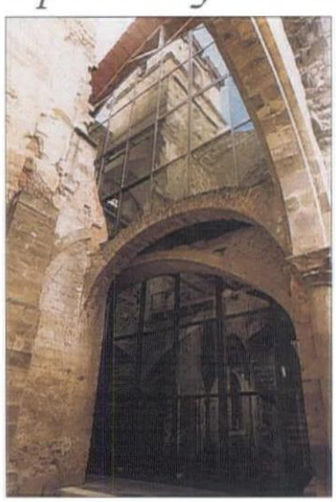
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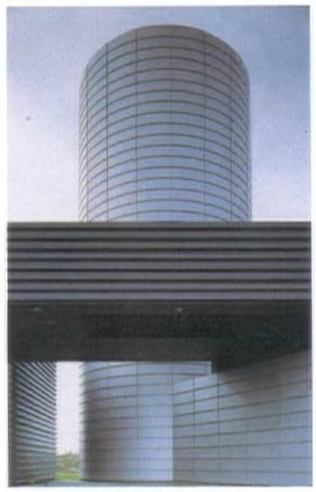
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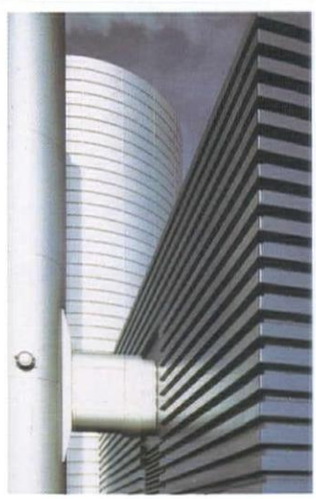
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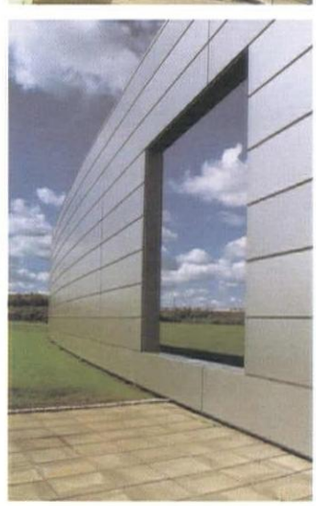
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ETHEREAL PAVILION

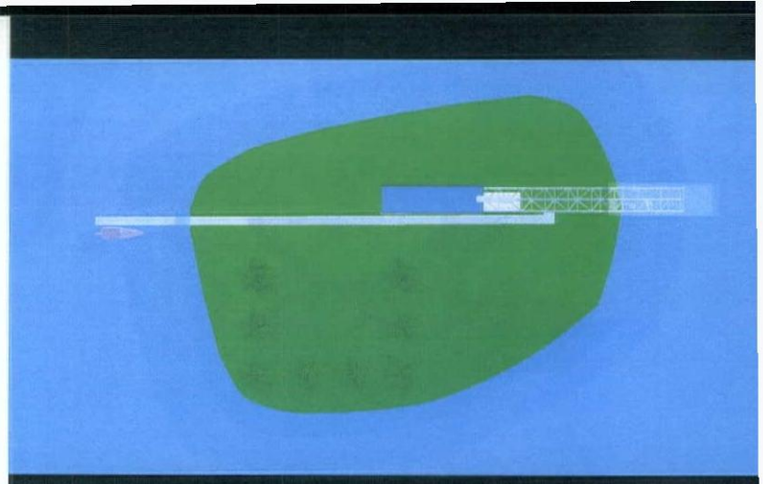
In this striking proposal for an island retreat, Makoto Sei Watanabe experiments with the interaction of light and water, challenging perceptions of space and form.

The Japanese architect Makoto Sei Watanabe is fascinated by water and light. Through a series of three projects, whimsically named 'Jelly Fish', Watanabe has sought to experiment with the effects of these elemental forces, infusing material substance with the invisible power of buoyancy. As he lyrically expresses it 'Water gives things wings. To experience what it is like to defy gravity, one need not go into outer space, but simply know the feeling of being buoyed up by a body of water. Only in water can we truly grasp the three-dimensionality of space'.

The first Jelly Fish project was for a seaside holiday home; the second was for a museum facing the sea. A proposal for a third project is shown here, a retreat pavilion set on a tiny island in a Chinese lake. Just 70m long, the island lies in shallow water 750m offshore, and although services such as electricity are supplied from land, the only access is by boat. Throughout the three projects Watanabe has progressively elaborated on the concept of translucent volumes finely balanced on a longitudinal platform-like structure (a theme that also occurs in his performance hall for a small Japanese village, AR July 1996).

Here, a rectangular glass living pavilion is balanced by an equivalent volume of water enclosed by glass walls, which functions as an elevated swimming pool. The twin volumes of light and water are poised at either end of a steel space deck, which in turn is cantilevered off a concrete service plinth. A long ramp promenades up to the deck from a jetty set on the opposite side of the island. Watanabe relishes the ethereal, mutable nature of the composition. The water in the pool and the surrounding lake is constantly animated and transformed by the effects of light and climate from sensuous jade green to an opaque silver sheet. Frozen in a fluid, weightless embrace where sea and sky meet, Watanabe's delicate follies gently challenge perceptions of space, form and materiality. C. S.

Architect
Makoto Sei Watanabe



site plan

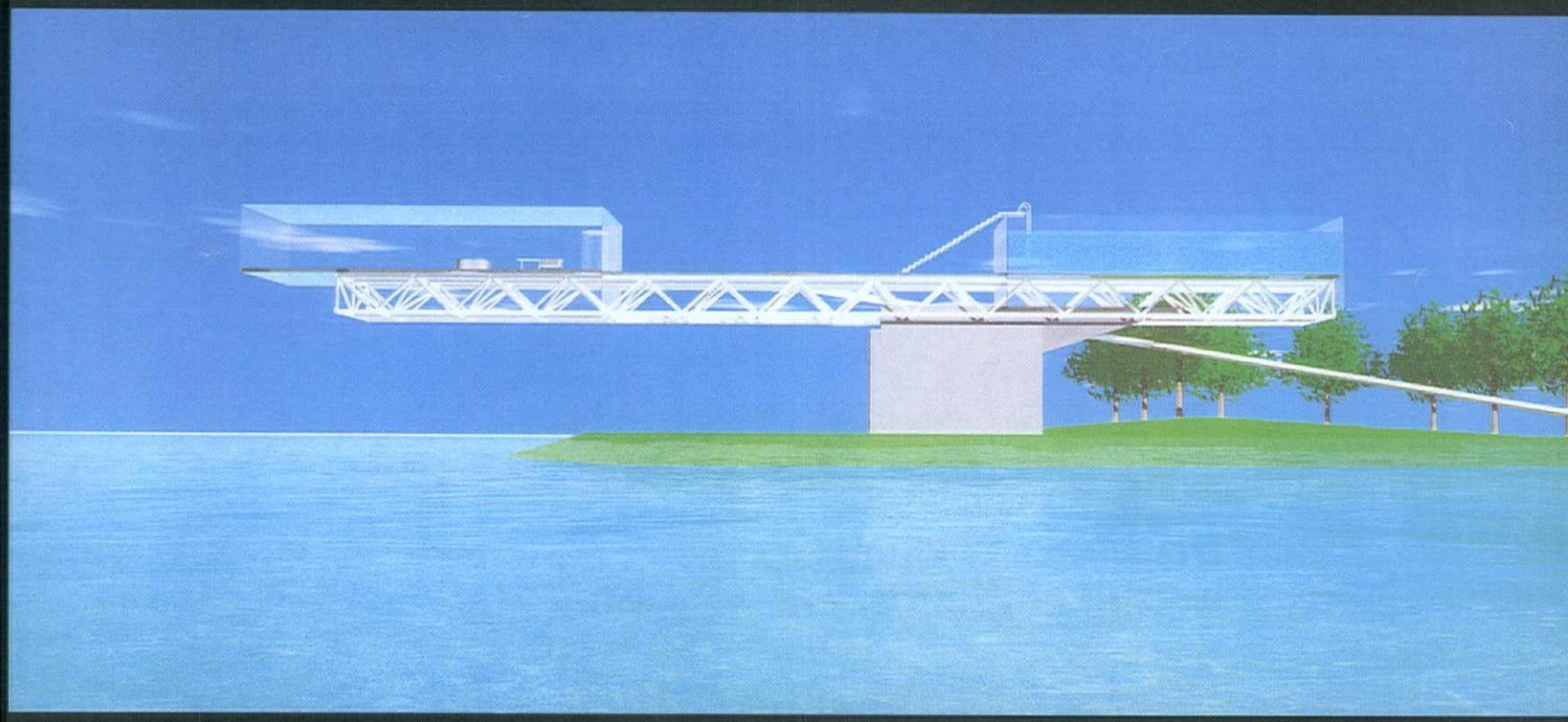


Jelly Fish 2: a museum overlooking the sea



Watanabe's first project in the Jelly Fish series: a seaside holiday house

1
Computer-generated image of the proposed house. Twin translucent volumes of light (living pavilion) and water (swimming pool) are held in taut equilibrium on a longitudinal platform.
2
Light and water dematerialize the structure, which appears to float above the surface of the lake.



1



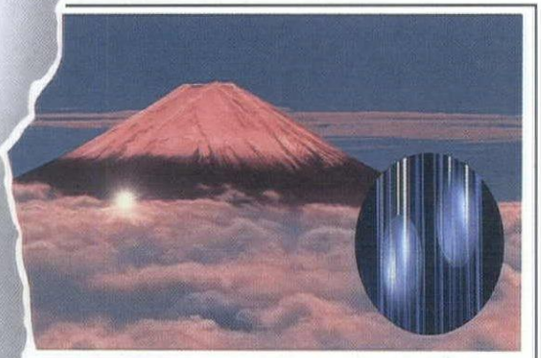
2

vator Times

Wednesday, April 1, 200X — No. 8888

Mitsubishi Electric installs elevator on Mt. Fuji

Sacred mountain now accessible to the elderly and infirm



The world-famous Mt.Fuji and the traveling Mitsubishi elevators

Like followers of Islam and their once-in-a-lifetime pilgrimage to Mecca, nearly all Japanese want to climb Mt. Fuji, the nation's sacred peak, at least once in their lives. But climbing the almost perfectly cone-shaped dormant volcano's 3776-meter height has been an unattainable dream for the elderly and those not sound of wind and limb — until now. Mitsubishi Elevator has now completed work on a superhigh-speed elevator to whisk passengers near to the summit of Mt. Fuji at the rated speed of 1000 meters per minute, cutting a journey that previously took an hour by bus to the fifth way station followed by a good five hours' hard slog on foot, to just about three and half minutes.

Construction of this project was a vast undertaking, made more complicated by Mt. Fuji's severe weather conditions. Winter's high winds, snow and low temperatures forced Mitsubishi Conglomerate to drill a shaft to contain the elevator, stretching existing engineering and construction technology to the limits.

An additional complicating factor was Mt. Fuji's situation in a National Park. Strict environmental regulations required the building of an underground access tunnel for the transportation of the heavy construction machinery and parts. The elevator also features special boxes for the conveyance of refreshments for passengers, as well as disposal of garbage, helping to maintain Mt. Fuji's unspoiled natural beauty.

The elevator's lower entrance is close to the newly-built subway station, offering easy access to visitors. The elevator car features specially-designed air-pressure adjustment to eliminate ear-popping caused by changes in air pressure during the travel.

With the opening of the new elevator, the footpath will be much less congested, offering those who want to make the entire trek on foot more opportunity to enjoy the scenery and mountain flora.

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Mitsubishi Electric does it again

In 1993, Mitsubishi Electric installed the world's fastest passenger elevator — running at 750 meters per minute — in the Landmark Tower Yokohama, then Japan's tallest building at 296 meters. This earned a place in the Guinness Book of Records, as well as setting a number of other records.

But as time went by, competition became steeper as other manufacturers developed their own high speed elevators.

Now Mitsubishi Electric is back claiming both the longest elevator (about 3300 meters) and the fastest (1000 meters per minute) with its new installation at Mt. Fuji.

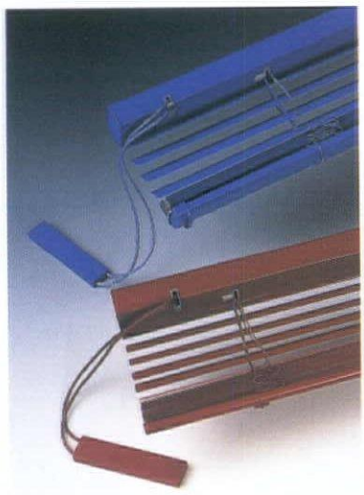
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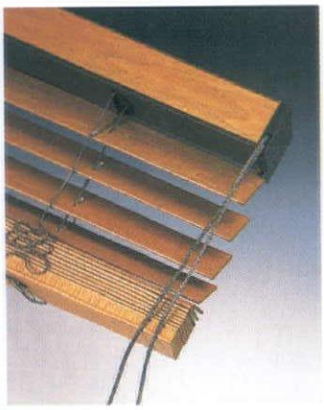
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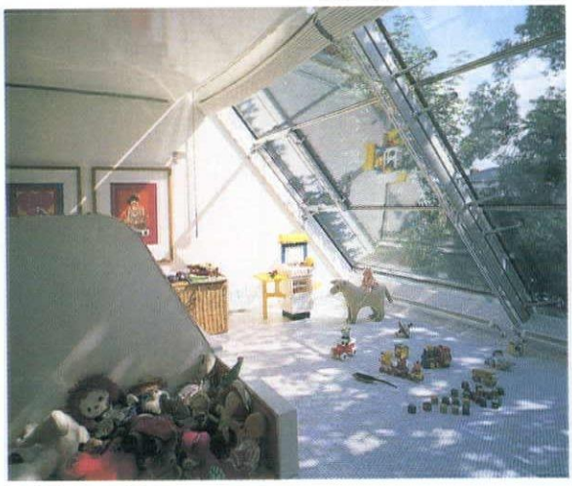
Blinds and curtain tracks for a contemporary environment

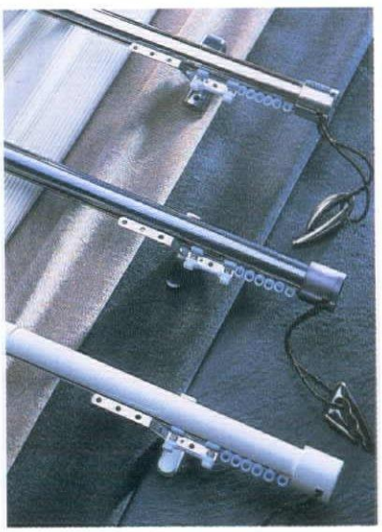


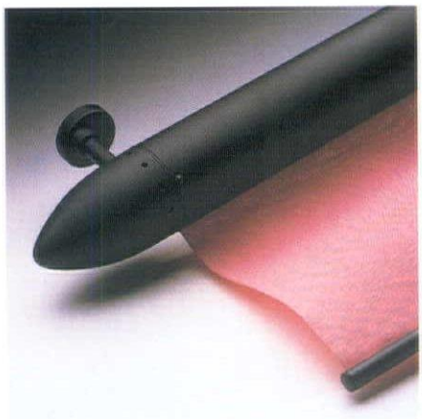
















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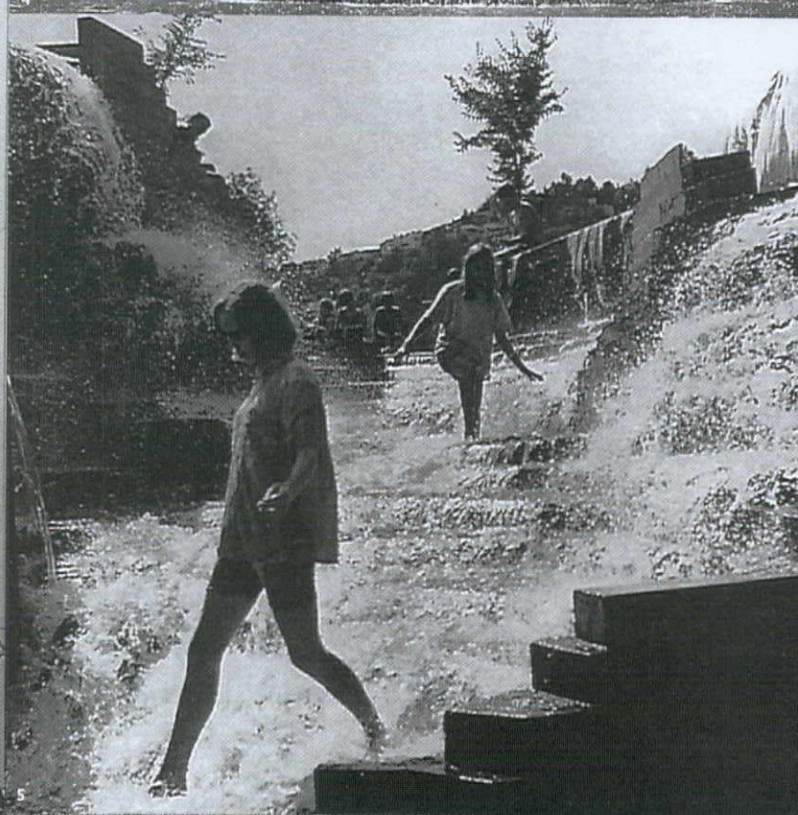
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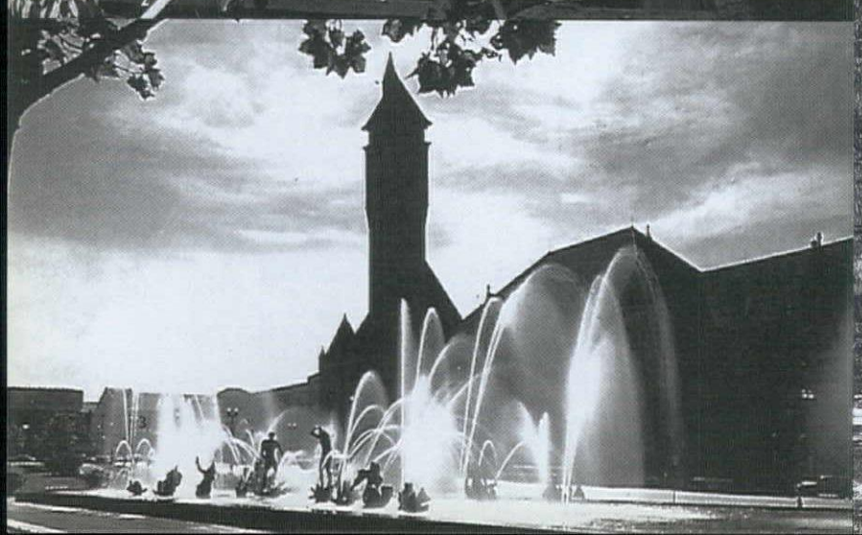
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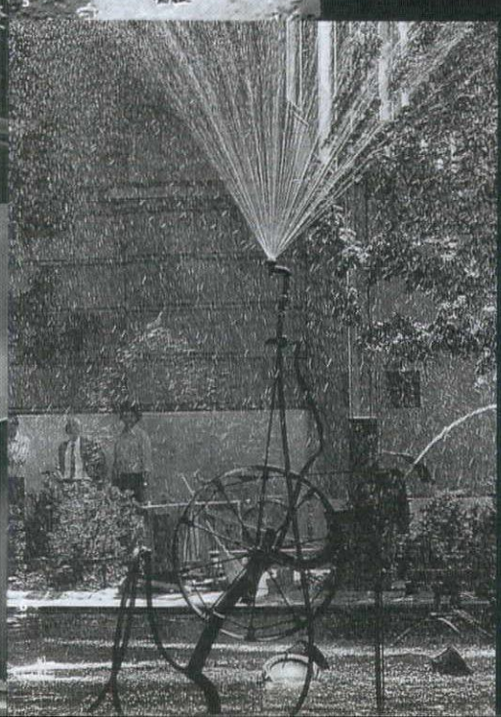












1
Fountain Place, Dallas, Texas by WET Design, 1986.
2
Case Study House 23, La Jolla, California, by Edward Killingsworth, 1960. Photograph by Julius Shulman from *Architecture and its Photography*.
3
The Meeting of the Waters, St Louis Missouri, by Carl Miles, 1940.
4
Water organ, Villa d'Este, Tivoli, by Pirro Ligorio, 1568.
5
Lovejoy Fountain, Portland, Oregon, by Lawrence Halprin and Charles Moore, 1966.
6
Carnival fountain, Basel, by Jean Tinguely, 1977.

WATER WATER...

Since Roman times, water has been a life-enhancing adjunct to buildings intensifying their meaning and impact.

The emperor Nero was one of the first to relate water to architecture on a large scale, and he did not make himself popular by doing so. Suetonius described the gardens of the Golden House as having 'an enormous pool, more like a sea than a pool, which was surrounded by buildings made to resemble cities'.[1] The lake was clearly regarded as the most extravagant feature of the Domus Aurea, built almost in the middle of Rome after the great fire. The whole enterprise was so much disliked that after Nero's suicide, his successors quickly destroyed obvious signs of his odious reign, and the pool is reputed to have formed the site (and shape) of the Colosseum.

As well as the reflecting and reflective lake, Nero's garden almost certainly contained rills and streams, for much of it was given over to 'faked rusticity – woods here, open spaces and views there'. Tacitus was cutting about the 'cunning impudent artificialities [of] Nero's architects and engineers, Severus and Celer, [who] did not balk at effects which Nature herself had ruled out as impossible'.[2] The Romans invented the landscaped garden, and relished the relationship of ordered architecture to real or contrived nature. Grand Roman buildings were associated with water, still or rushing – unlike the work of the Classical Greeks, who lacked the engineering skills to command the element as an adjunct to architecture.[3]

Water and engineering were integral to Roman culture: the chief priest[4] was called Pontifex Maximus, greatest bridge builder, the man who made links over water. Roman aqueducts brought water to the cities, where its arrival was celebrated in ceremonial fountains. The baths with their huge volumes of water were a focus of public life. A wealthy Roman almost always included a nymphaeum in his villa: a fountain and basins dedicated to the gods of water and springs (nymphs). In even relatively modest Roman houses, water played an integral part, for the atrium, with its central impluvium (rain-water pool), was the first space to be encountered on entering. Under the compluvium (the opening that let the rain in), the impluvium was more than just a cistern, for the image of the sky was caught in it, and light was reflected upwards to the roof and surrounding rooms, as well as reaching them from above.[5] Water, luminosity, volume and structure were all intimately related.

Power of the earth and the monarch

They were not to be so again in Europe for a thousand years after the collapse of the Western Empire, though the sensibility continued in the Muslim world where Roman aquatic engineering skills were developed and enhanced to make splendid gardens from the Alhambra to the Taj Mahal. The Italian Renaissance re-invented the aqueduct and, with it, the wonders of water related to buildings. Re-awakened understanding burst out with astonishing power and imagination in the middle of the sixteenth century at the Villa d'Este[6] where water jets, sprays, squirts, chatters and cascades in innumerable ways, both apparently natural and clearly artificial.

At the bottom of the great gushing hillside which so poetically demonstrates newly-rediscovered command over hydraulics, there is a tranquil passage, where large rectangular fish-ponds reflect the sky. They are the precursors of a new and different sensibility, and a new relationship of humanity to nature, brilliantly analyzed by Vincent Scully who argues that 'In the Italian garden, water is the awesome gift of the earth; in the French garden, water becomes primarily the optical medium by means of which the sky is reflected'.[7] Scully describes the great canal at Versailles where 'our gaze moves rapidly down the *tapis vert*, but when it hits the water it literally takes off. It no longer adheres but slides – slides across the water to the sky reflected in it ... the human brain, led on by the human two-eyed vision that Descartes analyzed so well, shapes every inch of space to the horizon, and by implication, far beyond it. A human absolutism rules the world at last'.[8]

In total contrast to water as the demonstration of the cosmic power of the Sun King is the age-old celebration of the element as fun. Even Pliny (not a man to offer a joke if a solemn aphorism could be used instead) enjoyed playfulness sometimes, for instance in a curved marble bench in his Tuscan garden from which 'water gushes out from under the seat as if pressed out by the weight of people sitting there, [it] is caught in a stone cistern then held in a polished marble basin which is regulated by a hidden device so as to remain full without overflowing ... A fountain opposite plays and catches its water, throwing it high in the air so that it falls back into the basin, where it is played again at once'.[9] Pliny and his guests reclined on the marble couch with their lighter supper dishes floating about on the basin 'in vessels shaped like birds or little boats'.

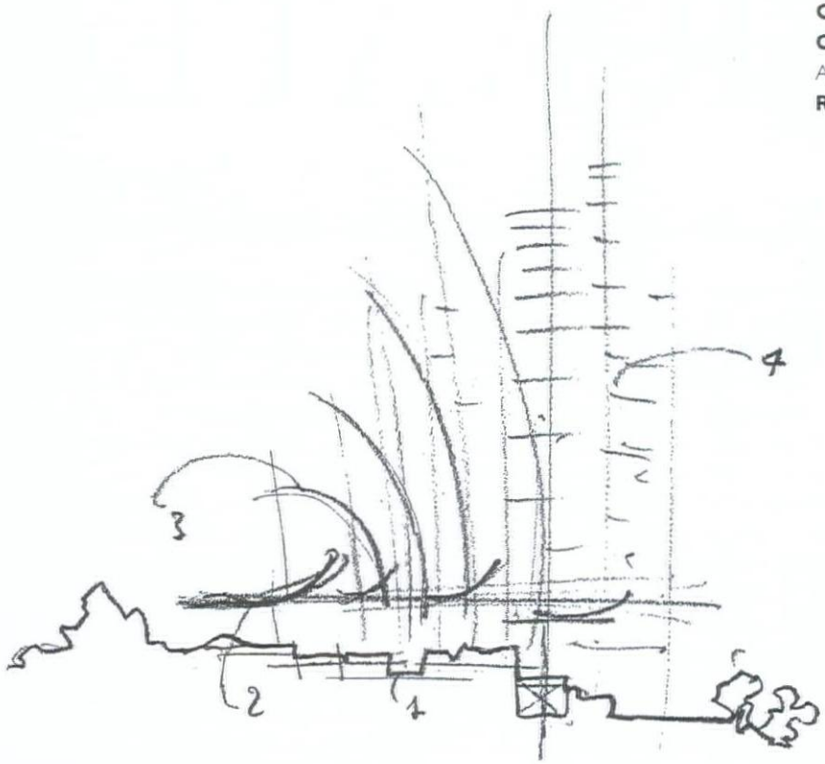
Renaissance jokes

The more robust sense of fun of the Renaissance produced the *scherzi* and *giuochi d'aqua*. These water amusements varied from the heavy-handed fifteenth-century japes of the Neapolitan Duke Alfonso II, in whose courtyard at Poggioreale diners could suddenly find themselves two or three feet deep in water, to the sudden delicate jets and sprays which unexpectedly cooled visitors to gardens designed 100 years later.[10] Today, some of the cheerful delight of such devices is echoed in the changeful fountains of the US[11] and Singapore, in which children caper amid unpredictable squirtings.

Water can be caused to echo and intensify any human emotion from awe (of wild nature, or of Cartesian command of it) to the light-hearted pleasures of folly and the comforts of domesticity. We have lost much of the virtuosity in its use which Roman and Renaissance designers commanded so comprehensively. It is time to rediscover it. P.D.

1 Suetonius quoted by Masson, Georgina in *Italian Gardens*, Thames & Hudson, London, 1966, p38.
2 Tacitus, Publius Cornelius, *The Annals of Imperial Rome*, translated by Michael Grant, Penguin, Harmondsworth, 1996, p364. In fact, even Tacitus had to admit that Nero (who may or may not have ordered the fire to be started) was ostentatiously generous to the victims. He rebuilt much of the city at his own expense, with planning regulations intended to promote health and reduce fire hazards. The Domus Aurea and its parks may have been demolished by Nero's successors because they saw a chance to make a fortune in real estate.
3 Though of course, some Classical Greek temples have marvellous relationships to water, for instance the temple of Poseidon at Sounion, dramatic above the sea on its cape. The Hellenistic civilizations had engineering technologies which prefigured the Roman.
4 Later the emperor in his capacity of chief priest. The title is now used by the Pope.
5 Difficult to appreciate now, for the impluvia of Pompeii and Herculaneum are dry.
6 Originally designed for Cardinal Ippolito d'Este by Pirro Ligorio in the 1550s.
7 Scully, Vincent, *Architecture: The Natural and the Man Made*, St Martin's Press, New York, 1993, p248.
8 *Ibid* p228.
9 Gaius Plinius Luci *The Letters of the Younger Pliny* (Book V, 6). Translated by Betty Radice, Penguin, Harmondsworth, 1969, p143.
10 See for instance Lazzaro, Claudia, *The Italian Renaissance Garden*, Yale, New Haven and London, 1990, pp65-68. Other Renaissance inventions included fountains with the moving and singing birds mentioned by the Ancients, and even the dreaded water organ (there is an example at the Villa d'Este) of which Vitruvius gives a virtually incomprehensible description (Book V, 7).
11 For instance AR August 1988 (and see opposite).

CULTURAL CENTRE, NOUMÉA, NEW CALEDONIA
ARCHITECT
RENZO PIANO BUILDING WORKSHOP

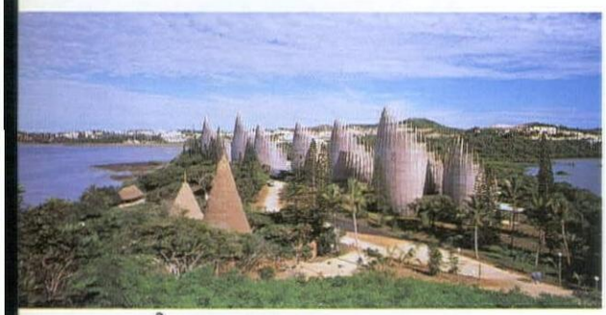


SEA AND SKY

Inspired by tradition, formed by modern technology, this centre celebrates and explains the Melanesian culture of the Kanaks. Responses to sea and site have generated a heraldic dance reflected in the waves.



1



2

1,2
The *cases*, abstracted huts, rise beckoningly along the peninsula that projects into the lagoon near Nouméa, the capital city of New Caledonia.
3
***Cases* are grouped into three villages to make a heraldic dance against the sky, partnered by reflections rippling in the lagoon.**
4
Individual *cases* are almost botannical in form, gigantic buds contrasting with the stiff symmetrical forms of the transplanted Norfolk Island pines (bottom left).

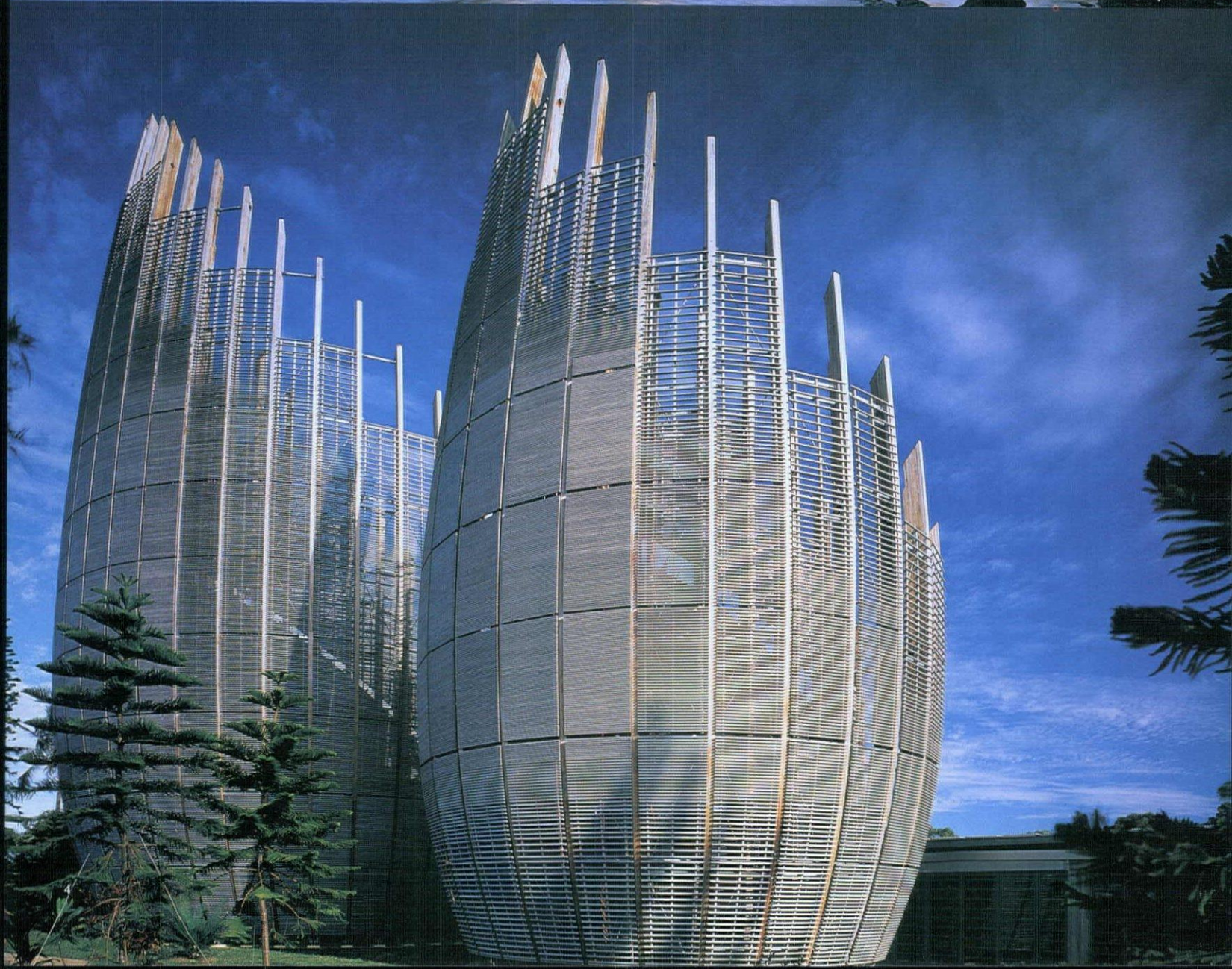
'The return to tradition is a myth ... No people has ever achieved that. The search for identity, for a model, I believe it lies before us ... Our identity is before us': Jean-Marie Tjibaou's vision informs the new cultural centre at Nouméa in New Caledonia. Tjibaou, sometime priest and doctorial student at the Sorbonne, was leader of the New Caledonian independence movement and, though he wanted his people to fully take part in the modern world, he was keenly aware of the need for his people to come to terms with their past and make a balance between traditional and world culture. 'Although I can share with a non-Kanak what I possess of French culture, it is impossible for him to share the universal element within my culture'.[1]

Tjibaou died in 1989,[2] but already it had been decided to build a centre for the Agence de Développement de la Culture Kanak (ADCK), and an international competition was held in 1991. Renzo Piano won, and began to refine his design for the Centre Culturel Tjibaou with the help of local people including the leader's widow, Marie Claude. The site which was given to the ADCK by the municipality of Nouméa, is a thin peninsula which sticks out south into the blue lagoon. (It was here that Tjibaou had held the Melanesia 2000 festival in 1975, one of the key moments in the struggle for cultural and political recognition by France.) Early on in the programme for the centre, the indigenous bush was supplemented with transplanted Norfolk Island pines, those wonderful, stiff architectural trees which so gracefully articulate the sky-lines of the islands of the south-western Pacific.

From the first, Piano was concerned to learn from local culture, buildings and nature, but he was determined not to end up with a kitsch replication of Kanak huts. He took from them the ideas of the village cluster and the ribbed hut structure in which tall thin curved timber members cluster together at the top and carry the cladding. In the original vernacular, the ribs are of palm saplings; in Piano's (much larger) reinterpretation of the forms, thay are made of laminated iroko, structurally linked by horizontal tubes and diagonal rod ties of stainless steel. The happy and carefully crafted conjunction of stainless steel and laminated timber is reminiscent of the IBM pavilion which travelled Europe so



3



4

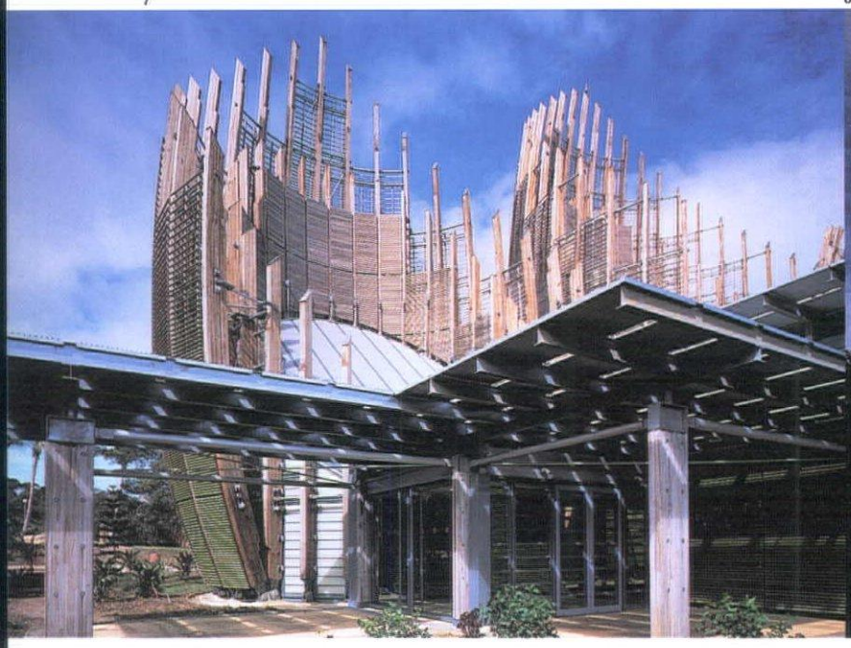
5

Cultural Centre, Nouméa, New Caledonia

Architect

Renzo Piano Building Workshop

7



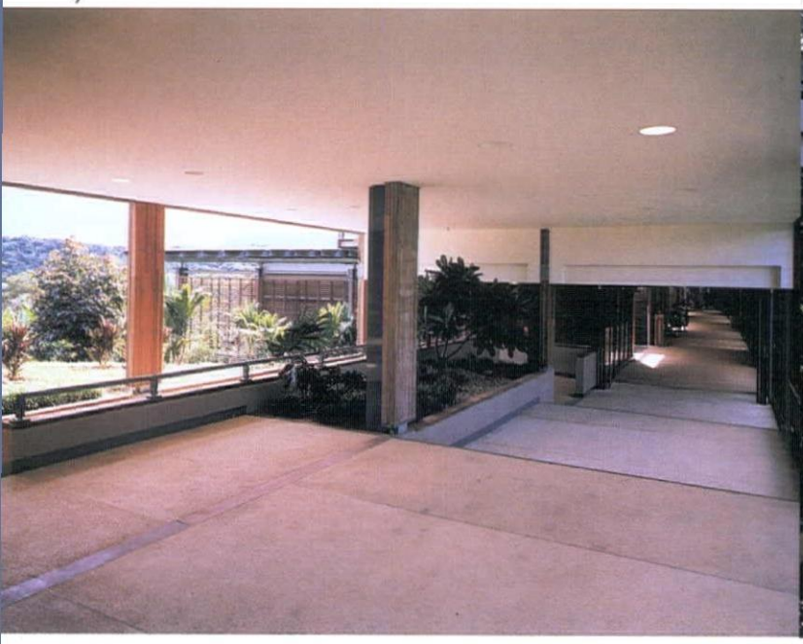
8



6

5,6
The iroko and aluminium louvres modify the prevailing trade winds from the ocean and offer a magic filigree against the sky.
7
Marriage between two basic forms, *cases* and more conventional flat roofed elements, is eased by use of common materials: for instance iroko ribs in the *cases* and flitched iroko columns in the lower parts.
8
Entrance with auditorium to right.
9
Long arcing route which connects all elements of complex ...
10
... is enlivened by open and semi-enclosed courts.

9



10



CULTURAL CENTRE, NOUMÉA, NEW CALEDONIA

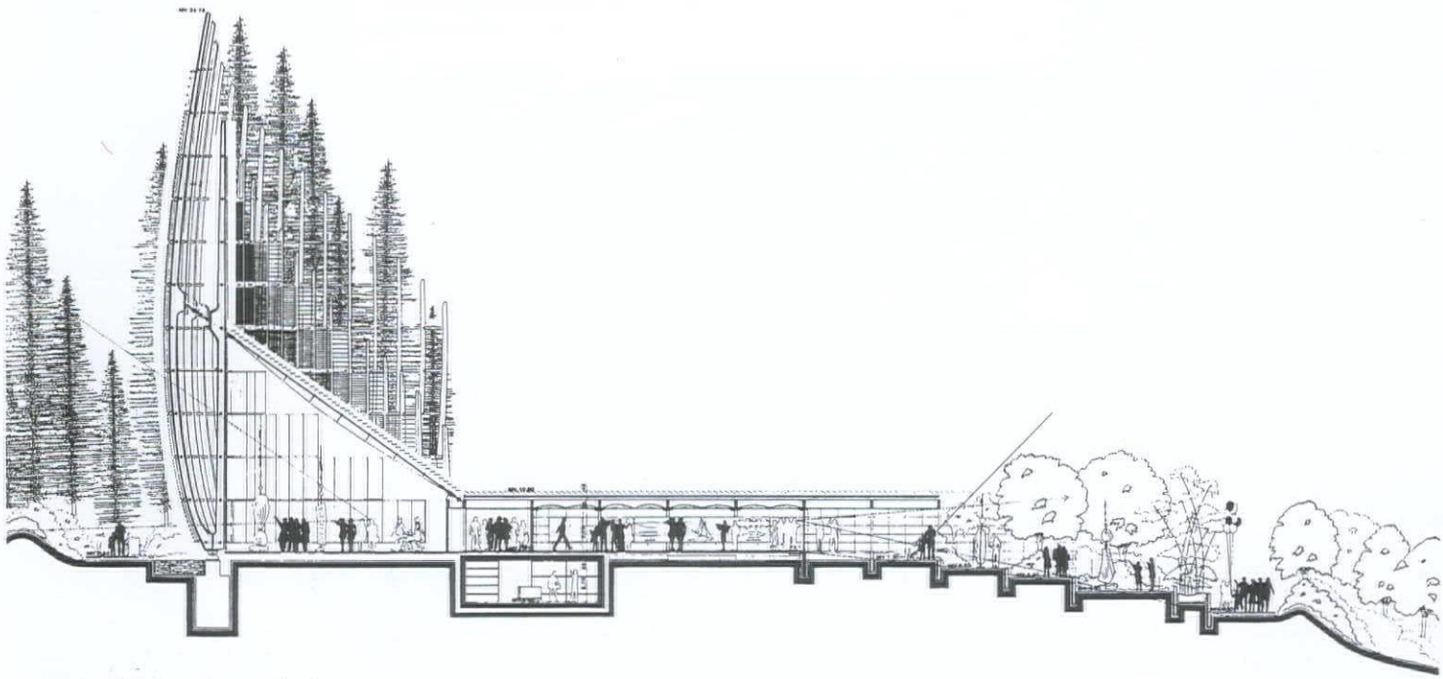
ARCHITECT

RENZO PIANO BUILDING WORKSHOP

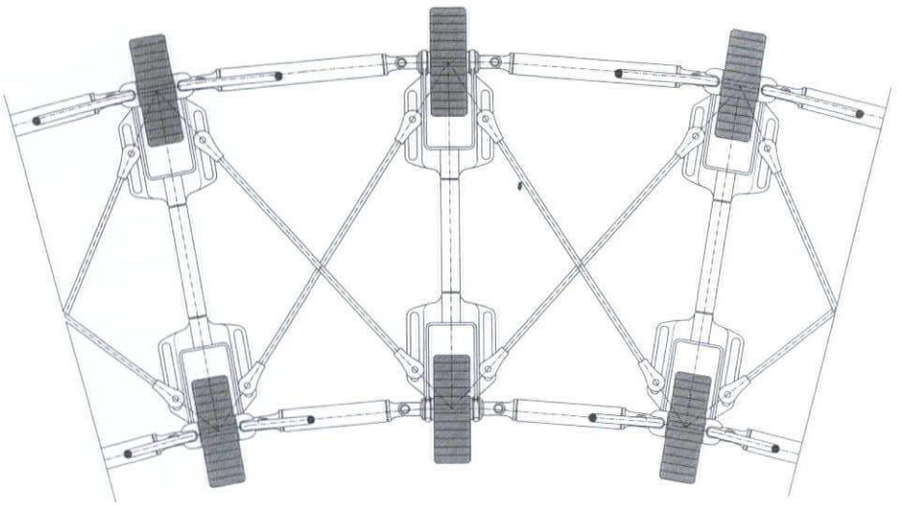


plan (scale approx 1:3500)

1 village 1 (interpretation: galleries, performance spaces)
2 village 2 (resource centre: libraries, multimedia)
3 village 3 (youth centre, school resources)
a auditorium
b outdoor theatre (1000 seats)
c outdoor theatre (2000 seats)
d restaurant
e car park
f road to Nouméa
g custodian
h coaches
j traditional houses



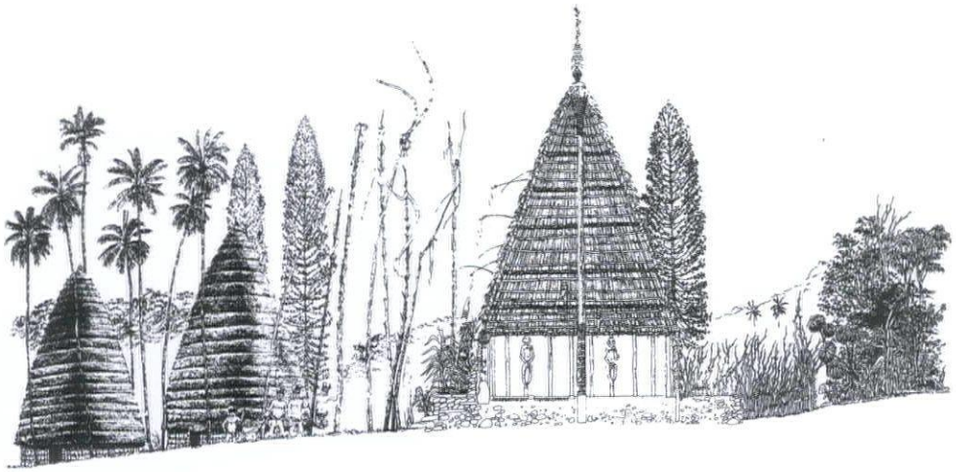
east-west section through *case* and gallery



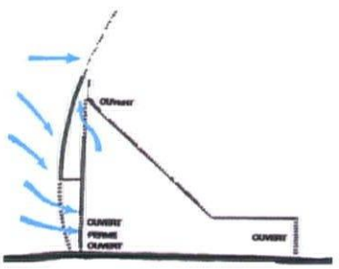
detailed plan of paired ribs



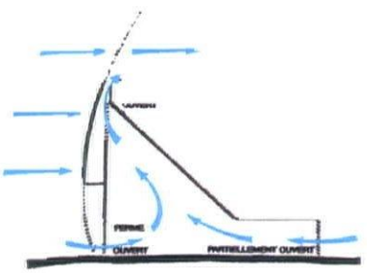
axonometric of joint to curved rib



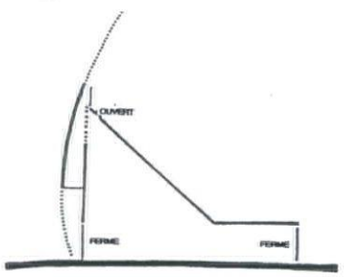
Piano sketch of traditional huts



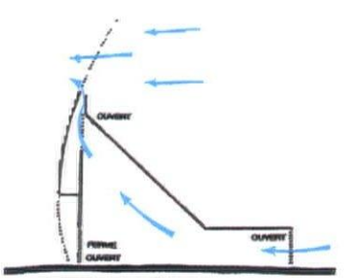
passive ventilation: light breezes



strong winds



cyclone



reverse winds

successfully over a decade ago,[3] but here the long wooden pieces are not so finely pared, partly because they are much bigger to achieve resistance to cyclones and earthquakes, and partly because they have to be tall to make a celebratory figure.

What Piano calls the '*cases*', pavilions or abstracted huts, are of three heights, the tallest 28m, as high as an eight- or nine-storey urban building. They are arranged in three groups, the villages, in a very gently curving line that follows the axis of the peninsula. The *cases* are fundamentally circular in plan, but they open off a long connecting corridor, so the inner edge of each circle is honed off, allowing individual *cases* to lock into the connecting space, then beyond that into more conventional rectilinear volumes (sometimes but not always part of the spatial flow). Here, planted courts penetrate the building, the flat stainless steel and glass roofs are supported on laminated flitched iroko columns; volumes are largely defined by timber and glass louvres, which form part of the passive cooling system. To the north-west, there is a strip between the irregular edge of the building and the sea, densely planted and carved into with terraces and clearings for public extensions of the building as open-air exhibition and performance spaces. And for the pedestrian route round the peninsula's perimeter which introduces visitors to the flora of the place and its mythic meanings, which are very powerful in Kanak culture.

Externally, the *cases* stretch their curves among and over the tall verticals and horizontals of the pines and eucalypts, making a heraldic dance against the sky which is partnered by reflections rippling in the lagoon. Piano hopes that the rot-proof iroko ribs will weather to the same pale silvery grey as the trunks of the indigenous palm trees. As well as being an abstracted hut, each *case* is a sort of forest. Each curved outer rib is linked to a straight vertical one which forms part of the structure of the perimeter of the enclosed space. The curved ribs carry horizontal slats, which have some effect on modifying the effects of the often high winds, and internal conditions are controlled by a passive system which uses louvres at the base of the perimeter wall and on the opposite face of the complex. They are opened and closed according to wind



11

Cultural Centre, Nouméa, New Caledonia
ARCHITECT
Renzo Piano Building Workshop

direction and intensity, encouraging breezes through the spaces from which air is expelled along the highest points of the roofs.

It has to be admitted that the curved ribs have a largely symbolic role, but they do have a climate balancing function: 'I decided to tone down the resemblance between "my" huts and reducing the length of the vertical elements and giving the shells more open form ... the staves no longer meet at the top, as had initially been planned. The wind tunnel [showed] that this produced a greater effect of dynamic ventilation.'[4] Yet they have deeper resonances, some literal: the wind surging through the slats of the open outer carapace gives 'the huts a "voice": ... it is that of the Kanak villages and their forests'.[5]

Marie Claude Tjibaou, who is the president of the ADKC, understands the mediatory role of the building: 'Today, everyone is coming to see the architecture. Little by little, we will bring people to ask: why these arcs, why these vaults'. They will be instrumental in helping the Kanaks achieve her husband's ambition of telling 'the world that we are neither escapees from prehistory nor archaeological remains, but men of flesh and blood'.[6] SHEILA MCINSTRY

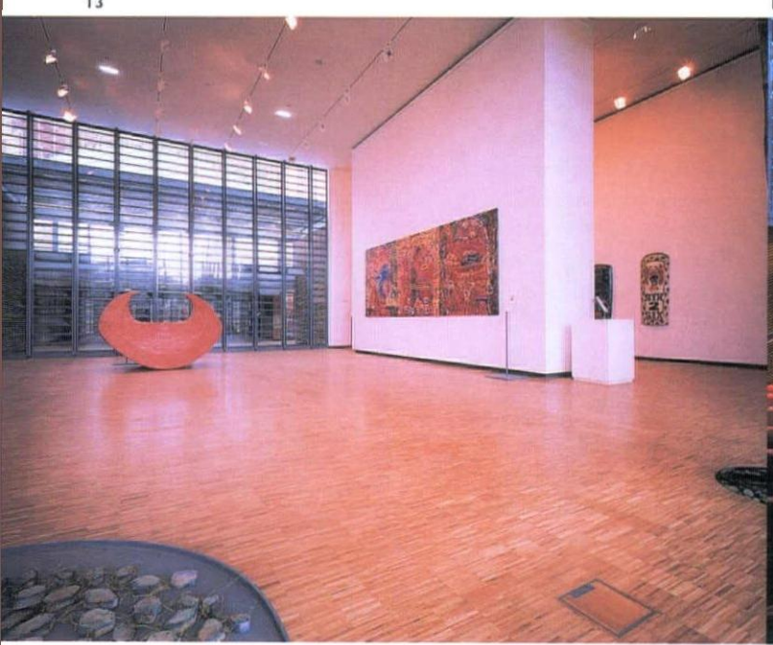
1 These quotations were provided by Renzo Piano. Kanak culture (which is varied between different tribes and islands) is part of the Melanesian group. The New Caledonian archipelago is north of New Zealand and east of Australia. Norfolk Island is to the south.
2 He was killed by Kanak extremists who opposed the agreement he had forged with the French for a referendum on independence.
3 AR March 1987.
4 Piano, Renzo *The Renzo Piano Notebook*, Thames and Hudson, London, 1997, p180.
5 *Ibid*, p178.
6 From Piano.

Architect
Renzo Piano Building Workshop, Genoa
Project team
P. Vincent (associate in charge), D. Rat, W. Vassal, A. Chaaya, C. Jacckman, A. H. Téménidès, J. B. Mothes, M. Henry, G. Modolo, A. El Jerari, A. Gallissian
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Ove Arup & Partners; Agibat
Climate-control feasibility
CSTB
General coordination
GEC
Acoustics
Peutz
Ethnologist
A. Bensa
Landscaping
Végétude
Models
O. Doizy
Photographs
Hans Schlupp/architekturphoto

12

11
Louvred walls of lower elements allow cross ventilation.
12
Inside one of the *cases*. They are of three types: for display (as here), performance and study.
13
Exhibition area in village 1.
14
Auditorium in village 1 in which traditional and modern Kanak music and dance are performed.

13

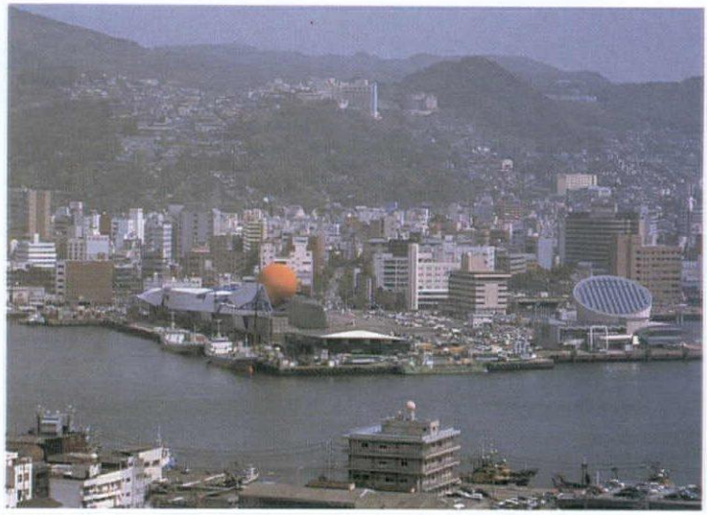


14



WAREHOUSE, NAGASAKI, JAPAN
ARCHITECT
ROTO ARCHITECTS

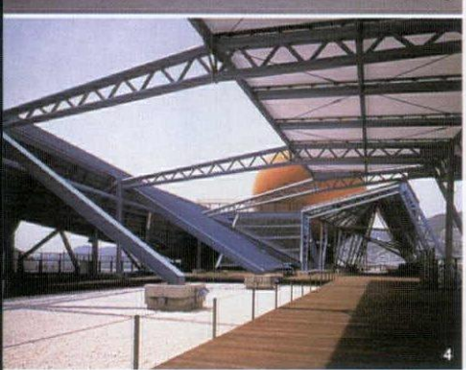
Fusing local industrial skills and folk myths, this new warehouse in Nagasaki's harbour forms part of a bold development plan to revitalize the city's waterfront.



DRAGON PROMENADE







Set on the western tip of Kyushu, Nagasaki is the oldest sea port in Japan. It has always had great economic and cultural significance, because it was the only port open to foreign sea traffic during Japan's era of self-imposed isolation, from 1634 to the middle of the nineteenth century. Today, Nagasaki prefecture is engaged in a major urban redevelopment plan overseen by Hideto Hori'ike, a local architect and co-ordinator of public works. Hori'ike has set about revitalizing the city's waterfront through a policy of inventive commissioning; to date Atsushi Kitagawa, Shin Takamatsu and the American practice RoTo Architects have been involved in the ambitious redevelopment programme. Takamatsu's new ferry terminal (AR May 1997) is already in operation and has recently been joined by Dragon Promenade, a huge warehouse building designed by RoTo.

Projecting into the harbour, the site is an exposed tract of reclaimed land, surrounded by water, mountains and the extraordinary jumble of Nagasaki's cityscape. The massive warehouse runs along the north side of the site; to the south lies the compressed cigar-like volume of Takamatsu's ferry terminal. Measuring some 700 feet long by 80 feet wide, the new structure is heroically scaled, and in both form and materiality draws on Nagasaki's historic shipbuilding traditions.

RoTo's original brief was to embellish the exterior of this dockside behemoth (the initial design was completed by the developer's architect), but the practice proposed that some public space should also be introduced. The outcome is an animated exoskeleton that folds and bends around the concrete warehouse structure like some mutant excrescence. On the dockside, the extrusion cranks over the warehouse volume to create an elegantly fractured canopy made from nautical canvas and ribbed steel sheeting stretched over blue steel trusses. This encloses a promenading route through the building that winds up to roof level, offering spectacular views across the harbour. Slatted timber decking reinforces the notion of an elevated boardwalk and the route expands and contracts to create a series of terraces and viewpoints. On the southern side, the dark green painted steel plate cladding resembles a distorted ship's hull; the strong geometrical forms recall naval engineering. In fact, local shipbuilders were employed in its construction, drawing on the metal fabrication skills of Nagasaki's main industry.

1
The warehouse structure forms a new landmark in Nagasaki's harbour. To the right is Takamatsu's ferry terminal.
2
The muscular, hull-like flanks of the south elevation are clad in steel sheets.
3
At the building's east end, the lightweight structure of canvas and steel trusses extends to form a canopy.
4
Roof garden level. The public promenade through the warehouse expands and compresses to form terraces and viewing points.
5
A huge, vivid orange sphere (which will eventually house an exhibition space) crowns the west end of the warehouse.
6, 7
At night, light fractures out from the fissures between the steel panels and softly diffuses through the translucent canvas awnings.



5



6

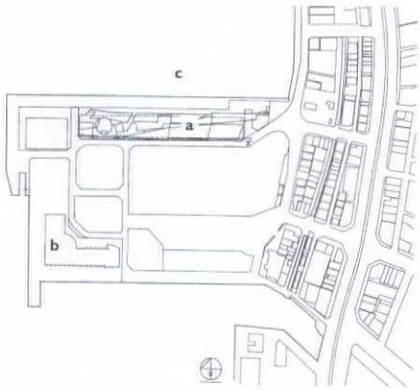


7

WAREHOUSE, NAGASAKI, JAPAN

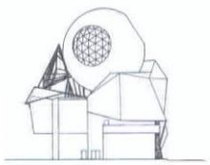
ARCHITECT

ROTO ARCHITECTS

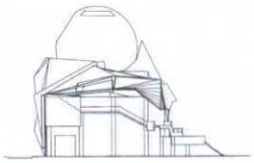


a warehouse
b ferry terminal
c harbour

site plan



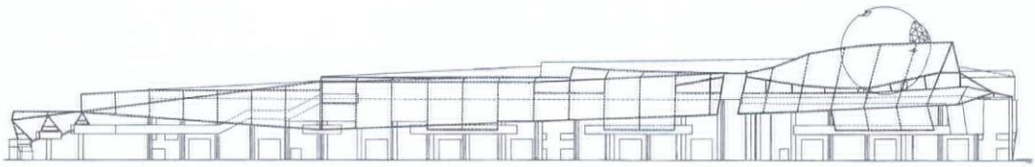
east elevation



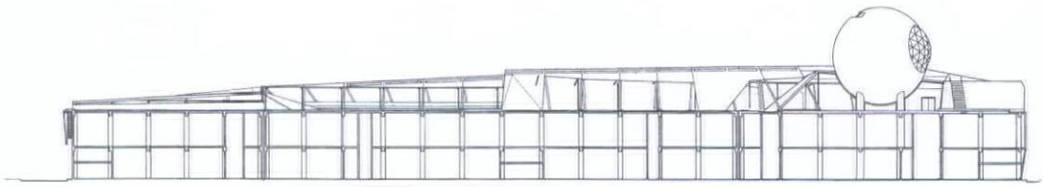
west elevation

Supported by steel ribs, the muscular south elevation shields the aerial promenade from the strong winds that accompany Nagasaki's frequent monsoons.

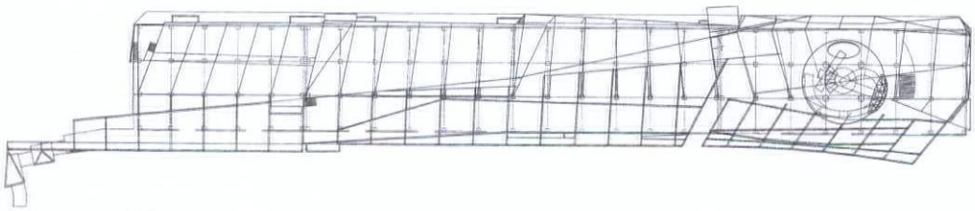
At its east end, the long, undulating structure is crowned by an oversized sphere clad in steel panels painted a coruscating orange. (This was originally intended to house an exhibition hall, but so far has remained uncolonized.) Surreally poised above the harbour, the sphere is an extraordinary, dominating presence and an overt symbol of the dockside regeneration. The 'head and tail' configuration recalls the serpentine dragons that are paraded through the city during the traditional Dragon Festival and helped to suggest the name for the complex. (After public consultation, 'Dragon Promenade' superseded the original prosaic appellation of Warehouse C.) Synthesizing Nagasaki's industrial skills and folk traditions, Dragon Promenade is both a vigorous and conspicuous embodiment of the port's revival. PHOEBE CHOW



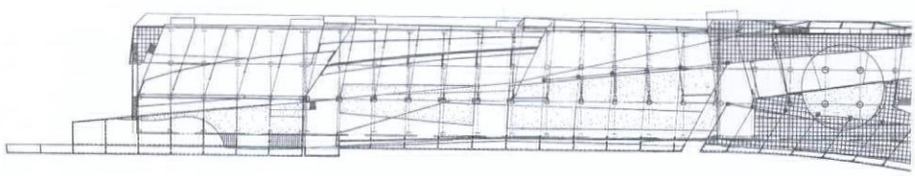
south elevation



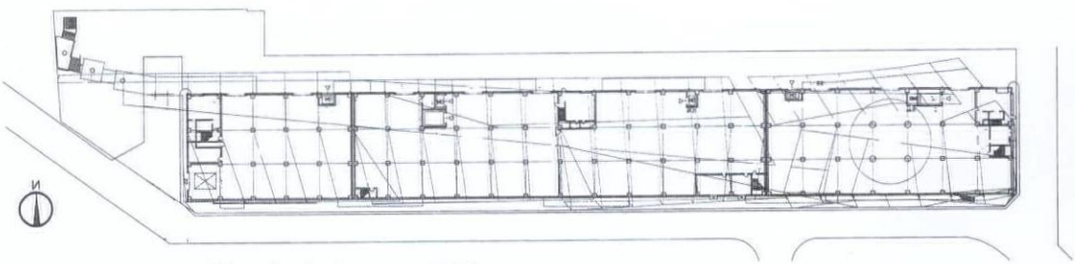
longitudinal section



roof plan

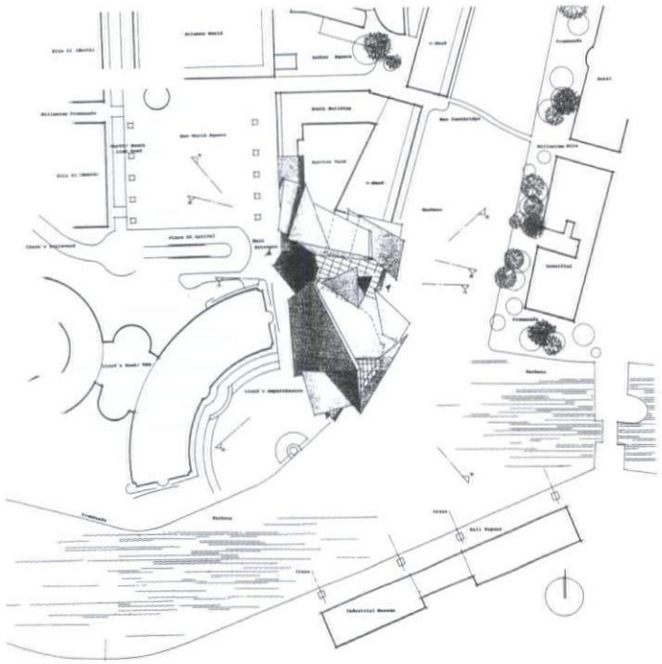


garden level plan



ground floor plan (scale approx 1:1500)

Architect
RoTo Architects, Los Angeles
Project team
Michael Rotondi, Clark Stevens, Brian Reiff, Anthony Caldwell, Max Massie, Michael Reck, James Keyhani, David Lazaroff, Jeannette Licari, James Malloch Taylor
Associate architect
Arai Architects
Executive architect
Mitsubishi Estate Company
Design consultant
April Greiman
Photographs
1, 4, 5 Katsuhisa Kida
2, 3, 6 Shinkenchiku-Sha
7 SS Kyusyu Co Ltd



site plan

CONCERT HALL, BRISTOL, ENGLAND
ARCHITECT
BEHNISCH, BEHNISCH & PARTNER

This proposal for a concert hall on a waterfront site in Bristol is a very particular response to place and programme; sadly it seems destined to remain unbuilt.

HARBOUR MASTER

Although architectural competitions are a frequent stimulus to architectural quality and new ideas, the competition process stops clients having a dialogue with their architect. Hence the competitive interview, with architects chosen not for a specific design but for their approach and past record. Even with this method, architects often produce designs and even elaborate models, but for this project for a concert hall in Bristol, Stefan Behnisch and his collaborators 'submitted relatively little material'.[1] Instead they talked about their approach, their attitude to collaboration, the qualities of the site as they saw it, and their way of doing buildings. Their very openness impressed the jury and made others' concepts look 'rather finite'.[2]

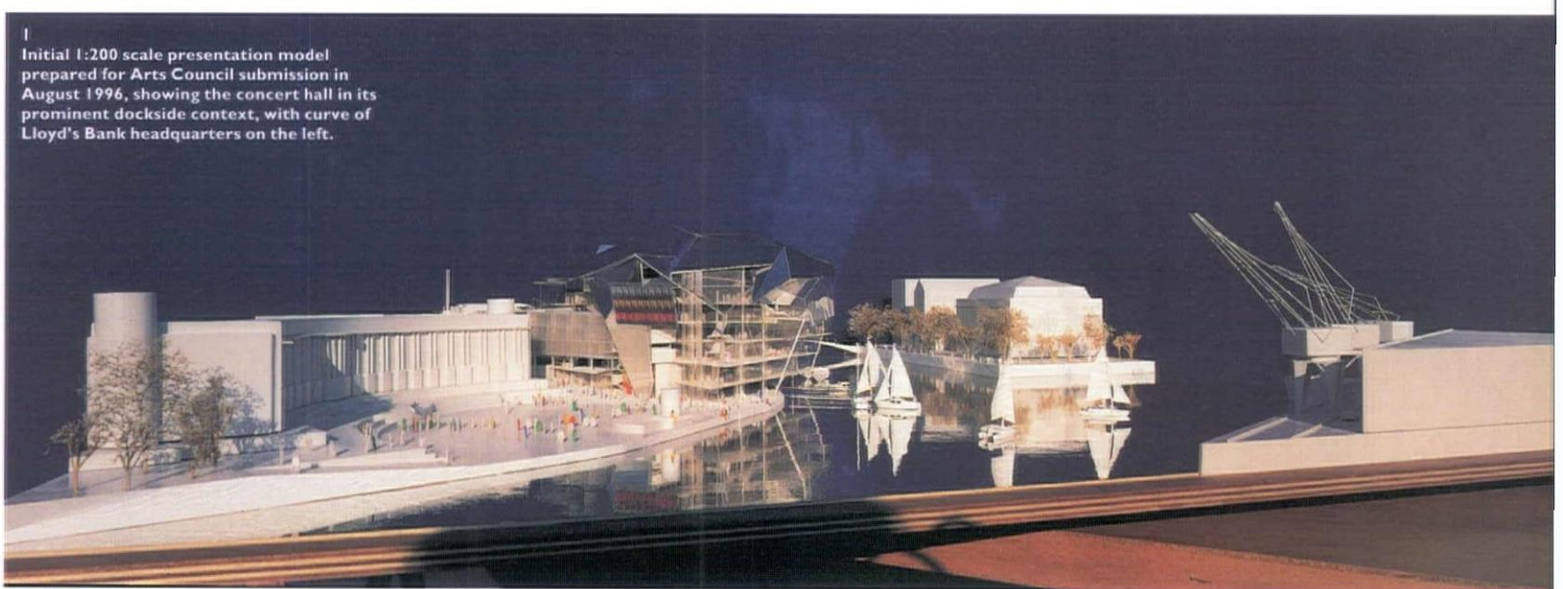
The Behnisch office in its various guises[3] has long believed in *Situationsarchitektur*, architecture derived from and inspired by a particular place and need. Not for them the one-liner, the simple and finite solution. Rather, they expect to develop their understanding of the situation allowing a design to evolve, reflecting in its complexity the intricate conditions which it serves.

The concert hall project was lottery-funded, and the idea passed easily through the first two hurdles of the lottery process. The site lay at the centre of old Bristol, close to the Cathedral on the south-east facing corner of the old harbour, a part of the Avon's course that was cut off by locks in the early nineteenth century to provide a tide-free dock. With dramatic views to and from many directions, it is twice a corner: on the river front because of the bend, and behind because of its diagonal relationship with New World Square, the main approach. Particularly awkward are the unresolved geometrical alignments left by the huge and recent Lloyd's Bank headquarters (Arups, not at their best) which not only refused to complete New World Square, but introduced its own rather selfish geometry of a series of broken circles.

Behnisch's early contextual study models are revealing both of method and attitude. While the treatment of the building as a sphere gives it an appropriately jewel-like status, it leaves all else unresolved. The version with two diagonally-placed auditoria works for the



sketch of urban skyline



1
Initial 1:200 scale presentation model prepared for Arts Council submission in August 1996, showing the concert hall in its prominent dockside context, with curve of Lloyd's Bank headquarters on the left.

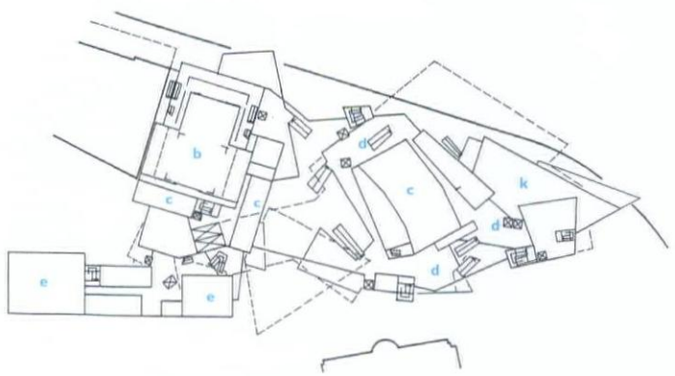
square and the harbour edge, but not for Lloyd's incomplete crescent. The more fragmented forms permit a greater wealth and ambiguity of reference, allowing a notional completion of Lloyd's crescent without submitting to its rules. The existence of various fragmented versions suggests an open-ended exploration of the effects, but also assumes a highly articulated building. As the design evolved, it was developed as much from the inside out as from the outside in.

The main spaces were a large concert hall seating around 2000, a more intimate hall for dance and ballet seating around 500, a rehearsal hall, the public foyers and restaurants, and the necessary offices and changing rooms. From the start, the main halls were articulated as the shaping landmarks within the whole, but equally important was the spatial progression from New World Square through the building to the harbour front and its views. Parts would even hang out dramatically over the water's edge, supported by a set of columns in the water.

The plan was organized around three main axes. Two, marked on the plans with dotted lines, locate the two public auditoria. The Dance Theatre occupies the north end of the site, parked up against the neighbouring dock building, its axis perpendicular to the harbour wall. For the main hall, a new diagonal axis was introduced linking the harbour corner with New World Square. Although none of the routes through the building actually follows this axis, it would be felt as an organizational device through the bulk and symmetry of the hall. The third axis, implied but undrawn, is that of the rectangular wing to north-west, which follows the alignment of New World Square. The wing contains offices and rehearsal hall, with independent shops and

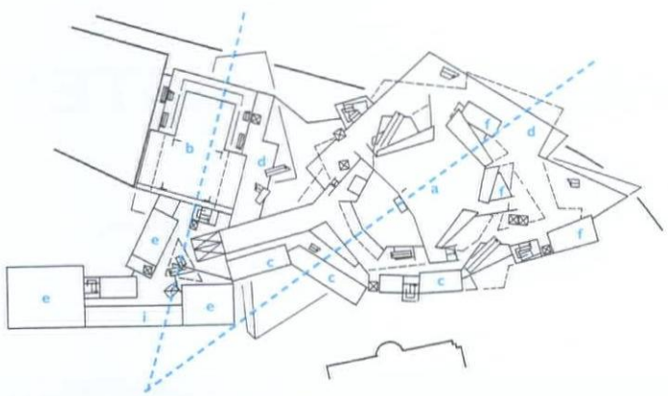


ground floor concourse (scale approx 1:1250)

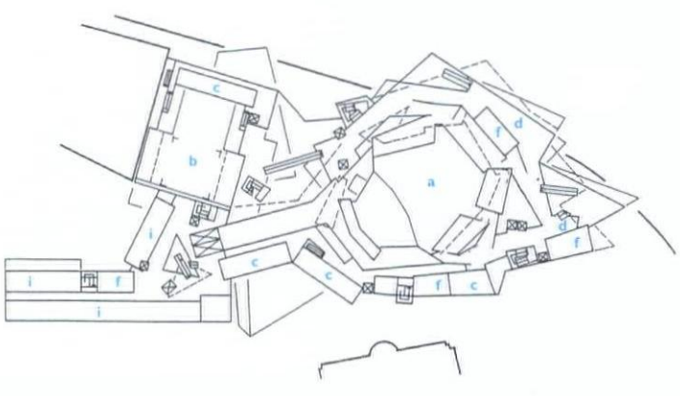


restaurant/rehearsal (first floor)

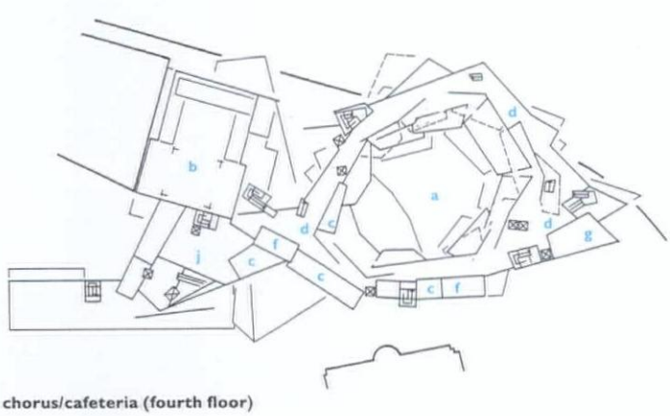
a main auditorium
b dance theatre
c backstage support
d foyers
e community space
f front of house
g VIP suites
h retail
i offices
j staff canteen
k café
l Lloyd's headquarters
m docks
n waterfront



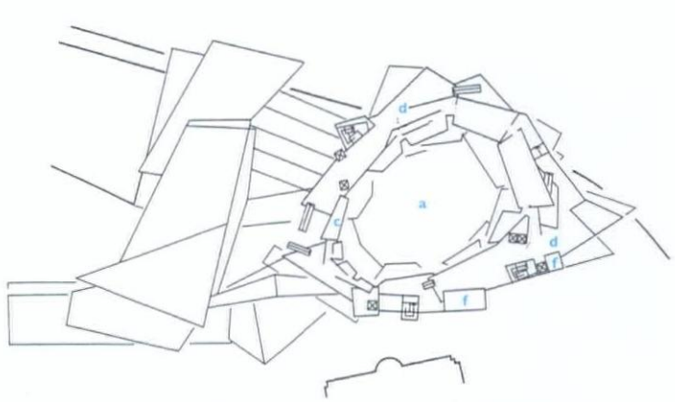
stage/education department (second floor)



administration/orchestra (third floor)



chorus/cafeteria (fourth floor)

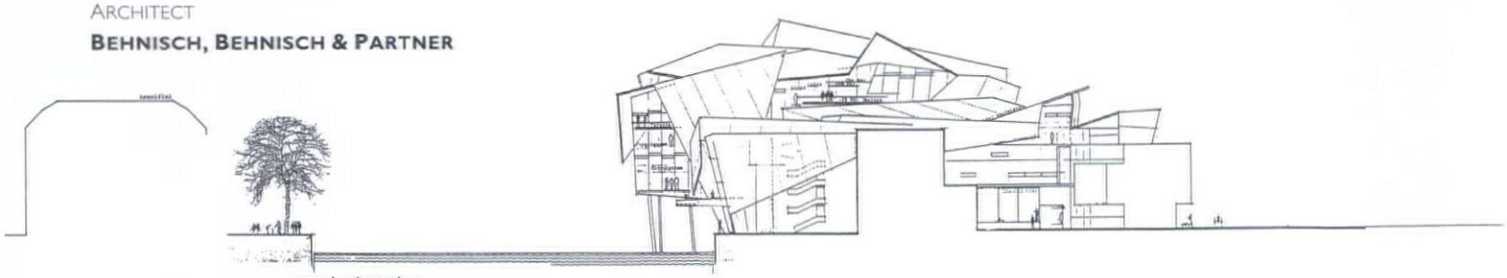


foyer (fifth floor)

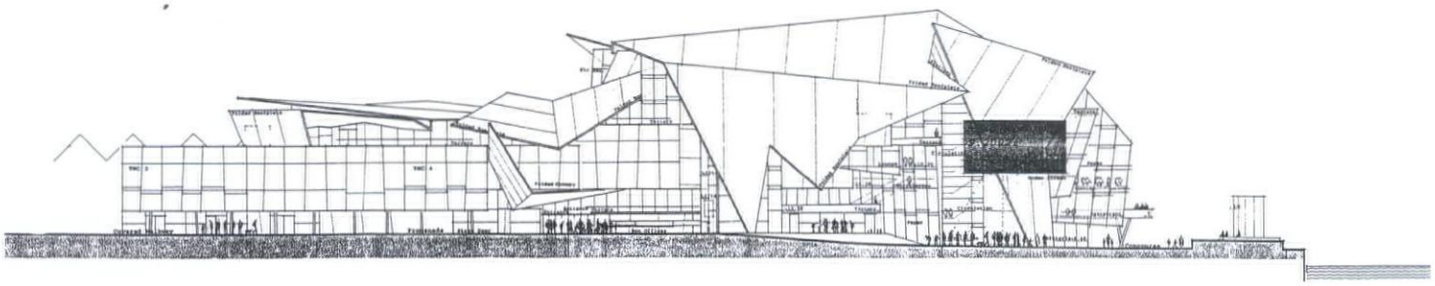
CONCERT HALL, BRISTOL, ENGLAND

ARCHITECT

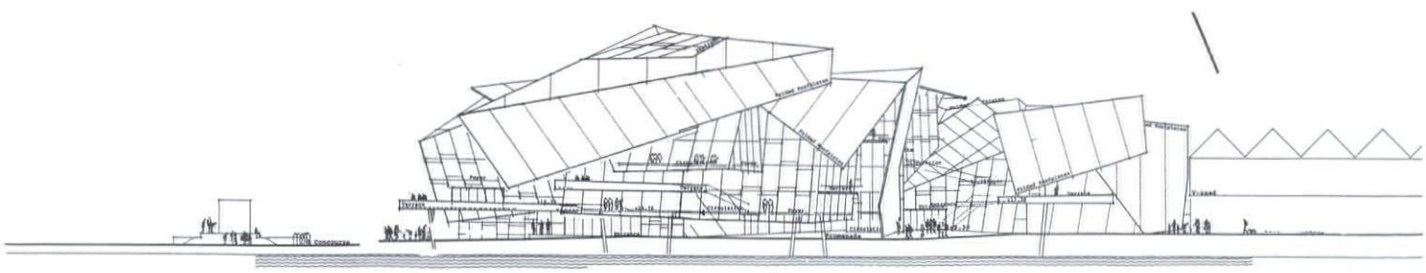
BEHNISCH, BEHNISCH & PARTNER



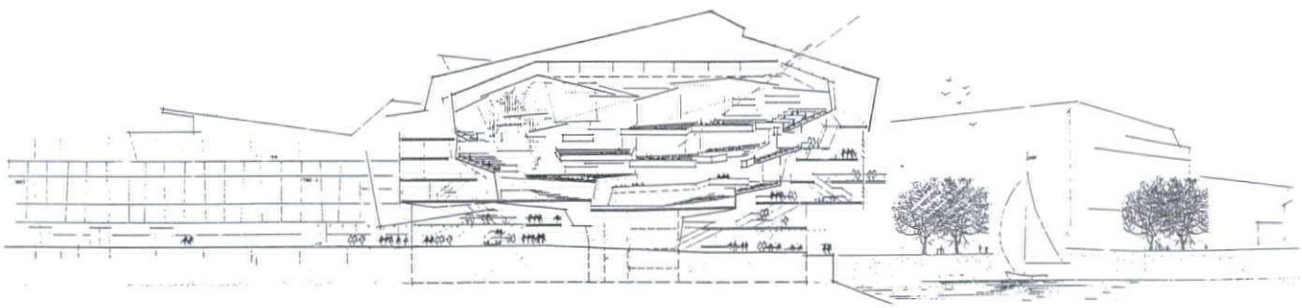
north elevation



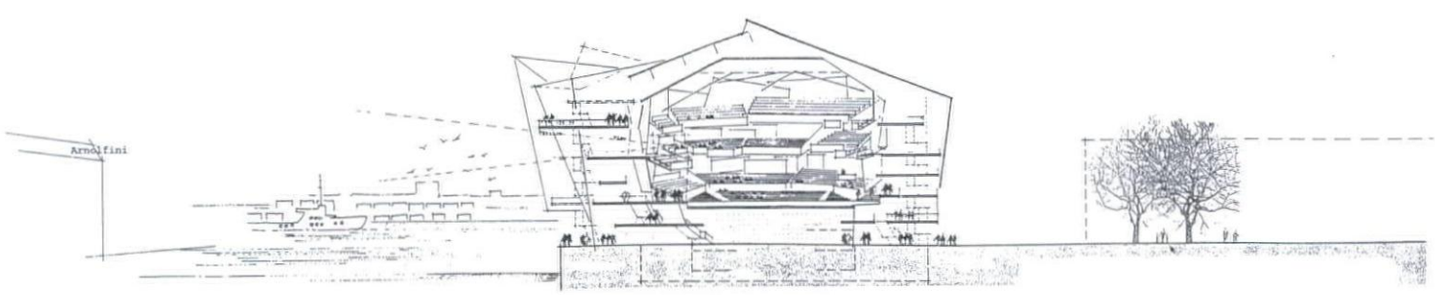
west elevation



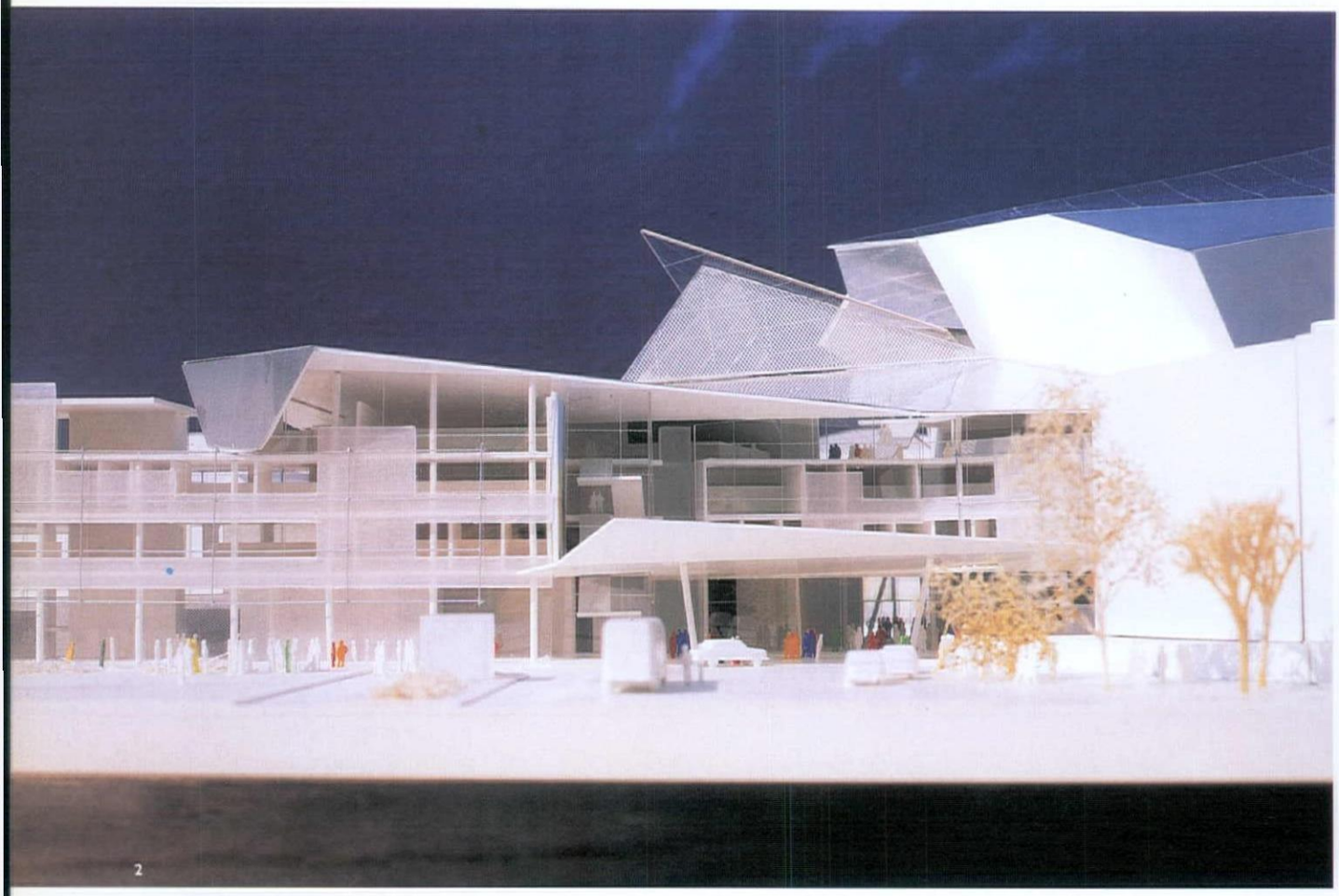
east elevation



longitudinal section through main auditorium



cross section through main auditorium





CONCERT HALL, BRISTOL, ENGLAND
ARCHITECT
BEHNISCH, BEHNISCH & PARTNER

2
Scheme design working model at 1:200, May 1998, showing main entrance from New World Square.
3, 4
Earlier development models explore the notion of the building as a giant, prismatic glowing jewel. Light reflecting off the surrounding water enhances its ethereal, translucent quality.

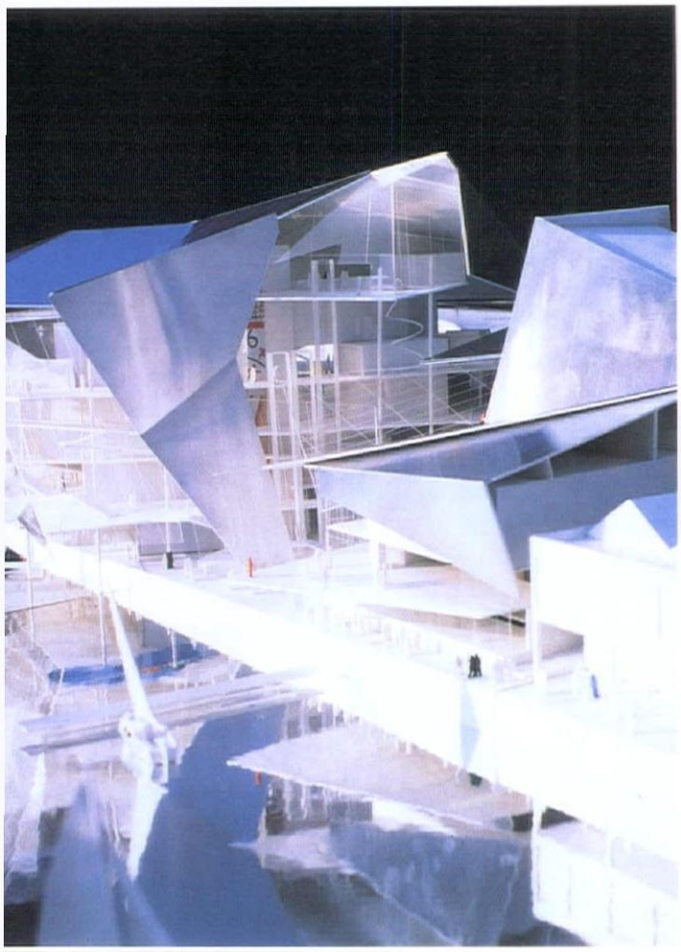
the entrance for performers on the ground floor.

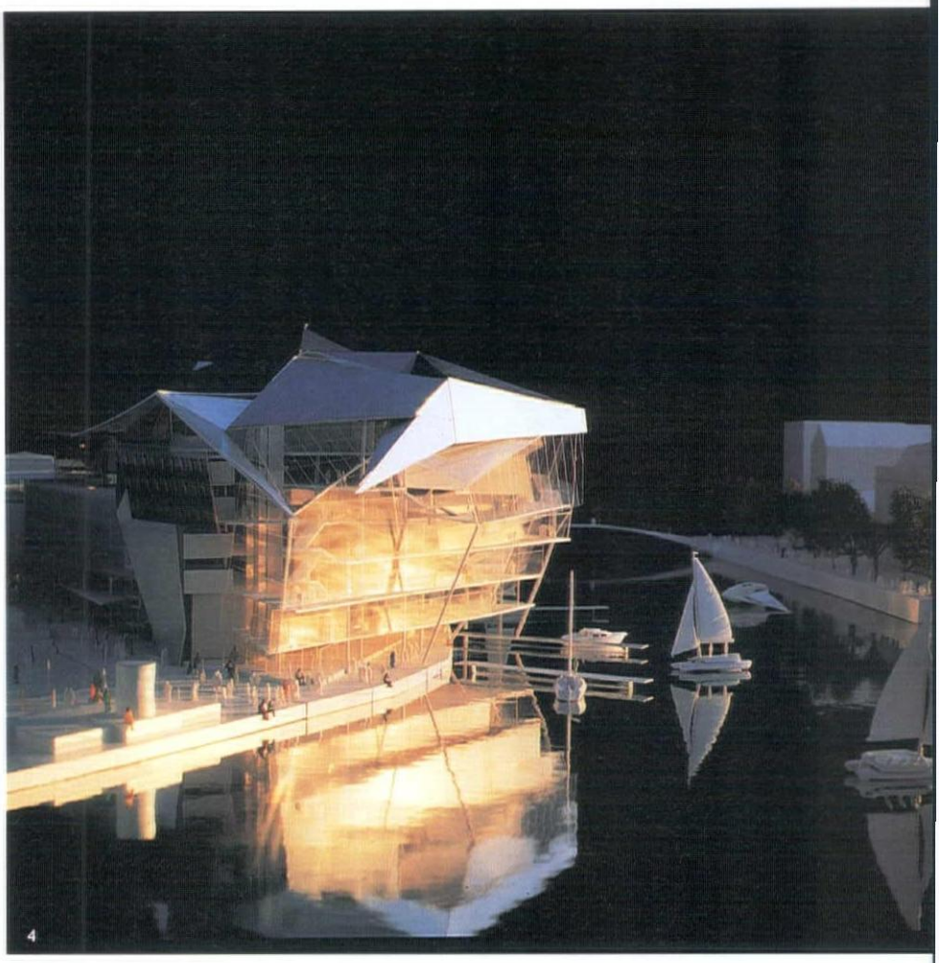
Between the two halls and their axes develops a complex and transparent foyer space. At ground floor level, this links the major entrance from New World Square with the minor one off the harbourside walk. Laced with stairs placed as directional elements to lead you through, traversed by bridges and galleries and topped by a great sloping glass roof, this would be a suitably festive space for promenading crowds in the interval. Beyond the main hall, placed at the prow of the complex to take advantage of the best views over the water, is a series of cafés and restaurants, again open on the ground floor to the harbourside walk.

The concert hall proper was frankly modelled on Scharoun's Berlin Philharmonie, the twentieth-century model for a democratic concert hall (and the main alternative to the traditional shoe-box type) favoured by musicians and audience for its intimacy, coherence and good acoustics.[4] As there, the audience at Bristol was to have been divided into a series of irregular seating terraces, using the fronts as acoustic reflectors. Exploratory work with layouts led to a more vertical design than the Berlin original, and since it was to be used for many different kinds of concert including pop, also a much greater flexibility of stage and stalls seating. The smaller dance hall was planned as a rectangular volume, but again offered a high degree of flexibility of staging.

While earlier this century buildings of this kind routinely articulated their auditoria to create a 'functional' external form, such as Melnikov's Rusakov Club or the egg-in-a-box Royal Festival Hall, the mere presentation of these large 'dead' volumes is often not enough.[5] Utzon's Sydney Opera House or Gehry's more recent museum at Bilbao have taught us how major cultural buildings can have as crucial a role externally as landmarks as they have internally as institutions. Open to a wide angle of water, the Bristol building would have been visible not only from many directions but also from surrounding hills, and the architects saw it as a glowing jewel in the city, helped with a profusion of contrasting transparent and reflective surfaces. Working with models, they devised an external form that followed the interior only approximately, relying on a series of folded roof and wall plates, not differentiating between the two. This let the building respond chameleon-like to different directions changing in scale and transparency.

Through a succession of drawings and models, the Harbourside concert hall grew increasingly exciting, convincing and seductive. The clients were satisfied, the city enthusiastic, and the advising architect called the design 'a masterpiece',[6] but last July, after a year of hard work by the client, the architect's specially assembled project team, and leading technical specialists, the Arts Council panel turned down the £58 million lottery application. Reasons given related largely to the business plan, though it had been accepted apparently without a qualm at the earlier stages, and to the economic viability of the proposed institution. More specifically there was supposed to be a 'lack of senior level executive expertise', whatever that may mean.[7]





The design was not criticized, though the brief was said to be 'incomplete'. If so, could it not be completed? After spending all that time and energy, let alone money, such a summary dismissal at the last hurdle without a chance to amend and readjust seems to say the least brusque. And to turn down the first major design in the United Kingdom by one of the foremost German architects while British architects build all over Germany will neither help European relations nor dispel the notion that the UK is provincial and protectionist. The kind of building was new to these shores and belonged to an architectural tradition from which much could be learned. That it was also an exceptional Behnisch work and pushing out the frontier of the building type makes its loss doubly unfortunate. It cannot be transposed elsewhere, for the whole point of *Situationsarchitektur* is that it be unique to the place. PETER BLUNDELL JONES

1 From an official statement by Richard Burton of ABK dated September 1998. As architectural adviser to Harbourside, Burton was a leading organizer of the competition.
2 *Ibid.*
3 Günter Behnisch, now 76, first set up an office in his name in 1952. It has had various partners at different times and a high turnover of relatively young staff. With a large workload in the 1980s, a second office was set up which is now run by Günter's son, Stefan Behnisch, and called Behnisch, Behnisch & Partner. Günter Behnisch maintains a significant advisory role, but his presence is sporadic.
4 No space here for the background theory, see Chapter 10 of my *Hans Scharoun*, Phaidon 1995.
5 Dead because a concert hall is necessarily an isolated container allowing no visual or aural connection between inside and out. Only the life in the foyer can be shown off.
6 Statement provided by Richard Burton, see note 1.
7 Arts Council statement dated 30 July 1998, supplied by Arts Council Press Office.

Architect
Behnisch, Behnisch & Partner, Stuttgart, Germany
Project team
Günter Behnisch, Stefan Behnisch, Günther Schaller, David Cook, Martin Arvidsson, Volker Biermann, Andreas Ditschuneit, Martin Gremmel, Jill Hauck-Spaeh, Malte Hofmeister, Diana Michael, Frank Ockert, Klaus Schwägerl, Ian Waters
Structural engineer
Buro Happold
Environmental engineer
Max Fordham & Partners
Acoustic consultants
Müller BBM
Theatre consultant
Theatre Project Consultants
Model photographs
Christian Kandzia

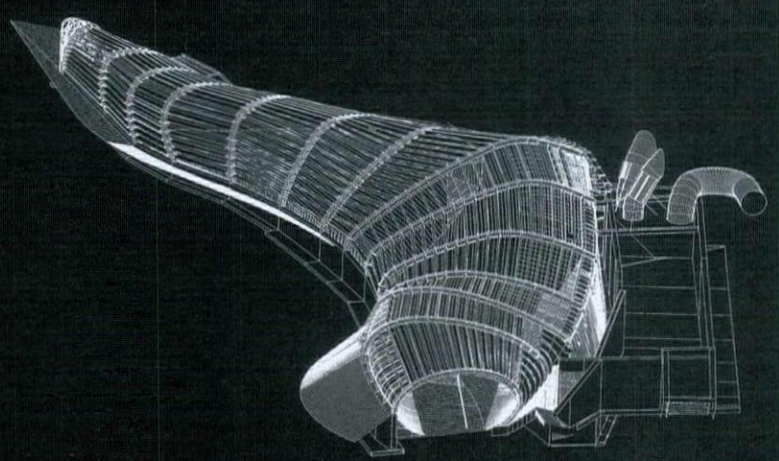
EXHIBITION PAVILION, NEELTJE JANS, THE NETHERLANDS
ARCHITECTS
NOX, OOSTERHUIS ASSOCIATES



WATER WORLDS

Set on the edge of the North Sea, this surreal pavilion provides information about Dutch water management advances as well as celebrating water's sensuous aspects.





perspective of freshwater pavilion

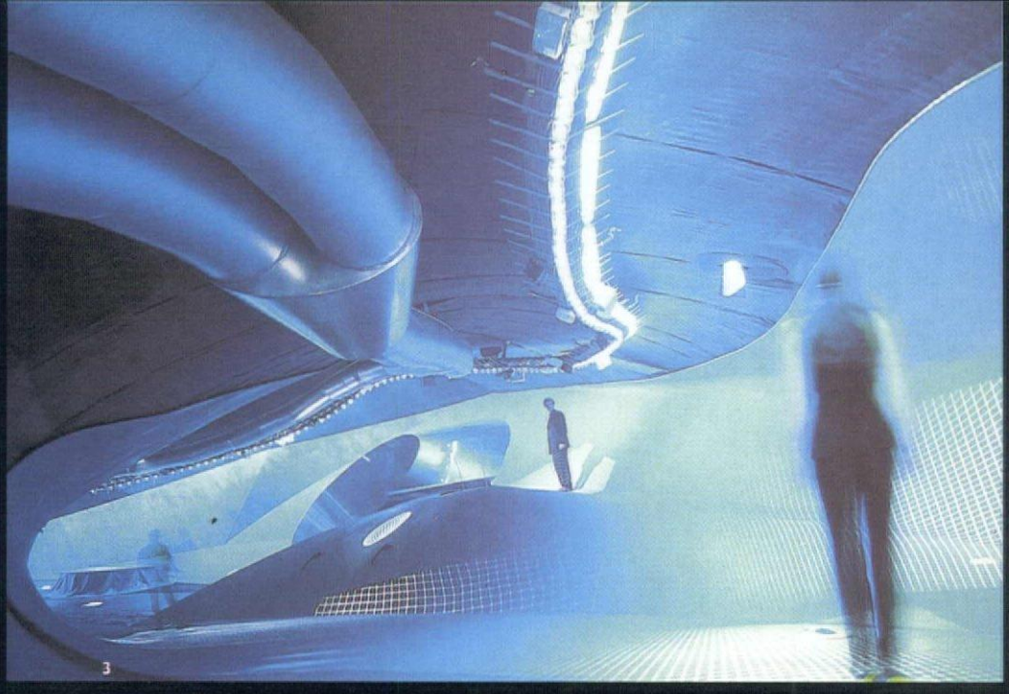
1
The two parts of the water pavilion are clearly discernible in this aerial view. The dark hull-like volume houses the salt water exhibition and the sleek, shimmering slug the freshwater display.
2
The brooding mass of the salt water pavilion faces out over the Oosterschelde tidal basin.
3, 4
In the curved spine of the freshwater pavilion, 200 cobalt blue lights induce a surreal, dreamlike underwater atmosphere.

Historically, the Dutch have enjoyed a very particular and intense relationship with water. Much of the Netherlands' low lying terrain is below sea level and, over time, a complex network of dykes and embankments has been engineered to keep the sea at bay. Without these man-made barrages, there would be catastrophic flooding. Water management is therefore a subject of national importance and this curious hybrid pavilion designed jointly by NOX and Oosterhuis Associates aims to educate and inform the public about the latest technical advances, as well as to celebrate water's more sensuous properties. It forms part of a larger project to upgrade the recreational and educational facilities on Neeltje Jans, a former construction island for the partially complete Oosterschelde dam. Located in the far south-western province of Zeeland, the tiny, remote island lies at the mouth of the Oosterschelde tidal basin, which will eventually be bridged by the huge dam.

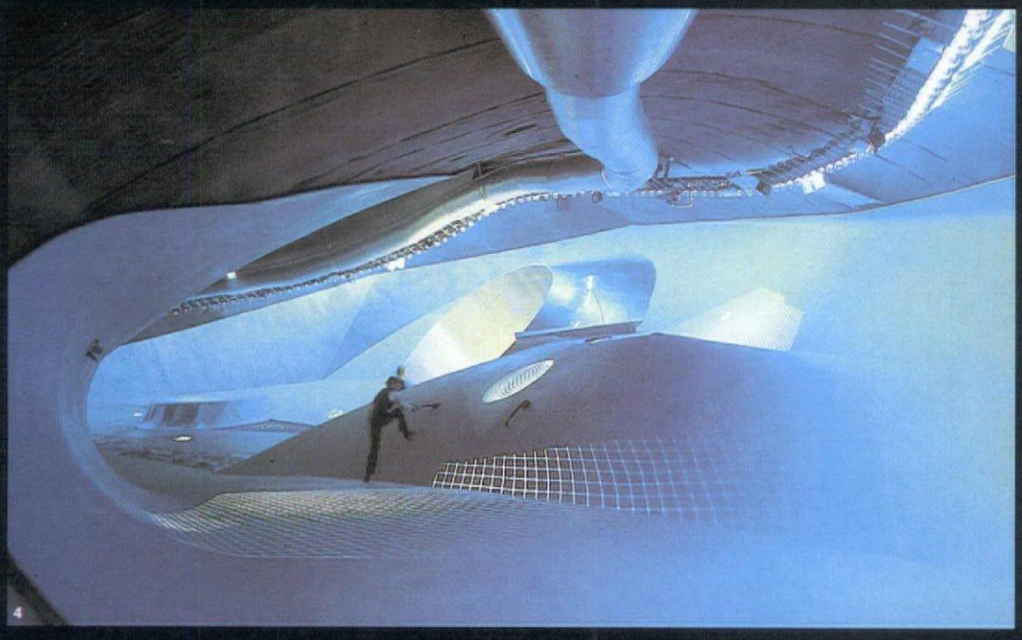
The pavilion is divided into two sections, housing salt and freshwater exhibition zones. Surrounded by an undulating landscape of sand dunes, the amorphous, impenetrable form resembles a strange, beached sea creature. The two volumes are clearly articulated. The salt water pavilion (designed by Kas Oosterhuis) is a brooding mass, like a deformed hull, while NOX's freshwater pavilion is a sleek, silvery structure that contorts energetically among the dunes. The two parts merge into each other, like a giant, mutating organism, the shimmering metal cladding of the freshwater element forming a lightweight foil to the dark, opaque bulk of the salt water pavilion.

The fashionable 'cyber-baroque' of NOX and Oosterhuis' computer-generated forms is the antithesis of the Netherlands' ordered, gridded polder landscape. Geometry is deliberately warped and fractured to surreal effect, an impression enhanced by the remoteness and bleakness of the site on the edge of the North Sea.

The fluidity of the architecture extends to internal exhibition spaces. Visitors enter the tapering north end of the freshwater pavilion into an interior realm articulated by series of canted and deformed planes. Nothing is horizontal, everything is convulsed and with no windows to orientate you, the experience is akin to promenading through the innards of a giant slug. However the exhibits of real and virtual water are both ingenious and diverting. In the freshwater pavilion, the real water takes many forms – spraying mist, a frozen glacier tunnel, a sheer pool that continually drains across the floor surface, a rain basin with stroboscopically-lit showers and a well containing 120 000 litres of water. Virtual water is experienced through a

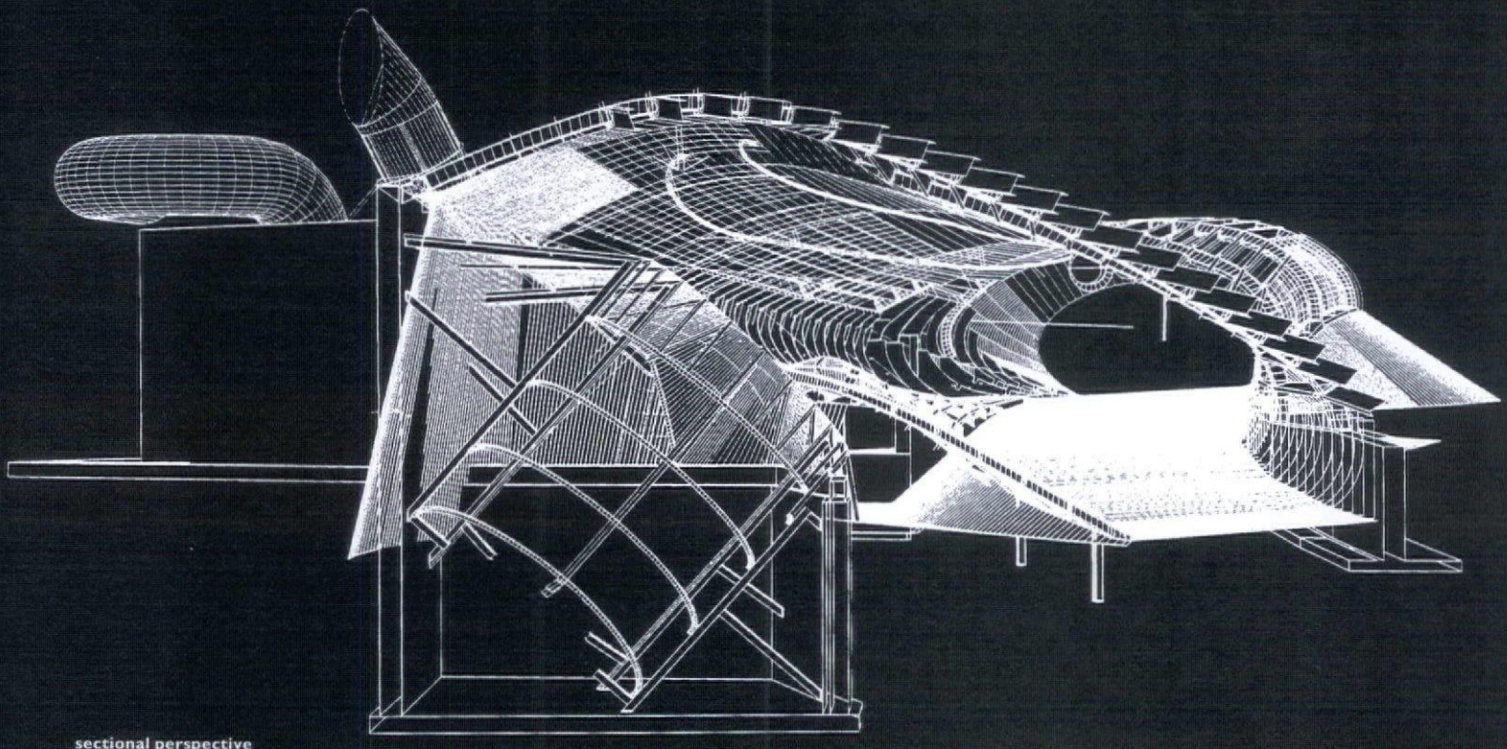


3



4

sectional perspective

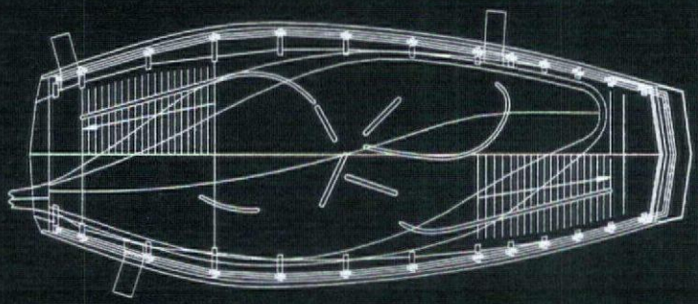


sectional perspective

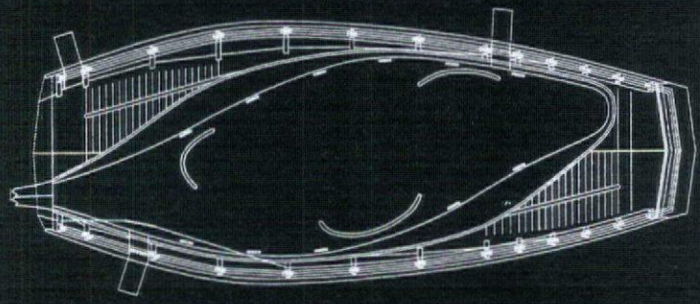
Exhibition pavilion, Neeltje Jans, The Netherlands

Architects

NOX, Oosterhuis Associates



lower level plan of saltwater pavilion

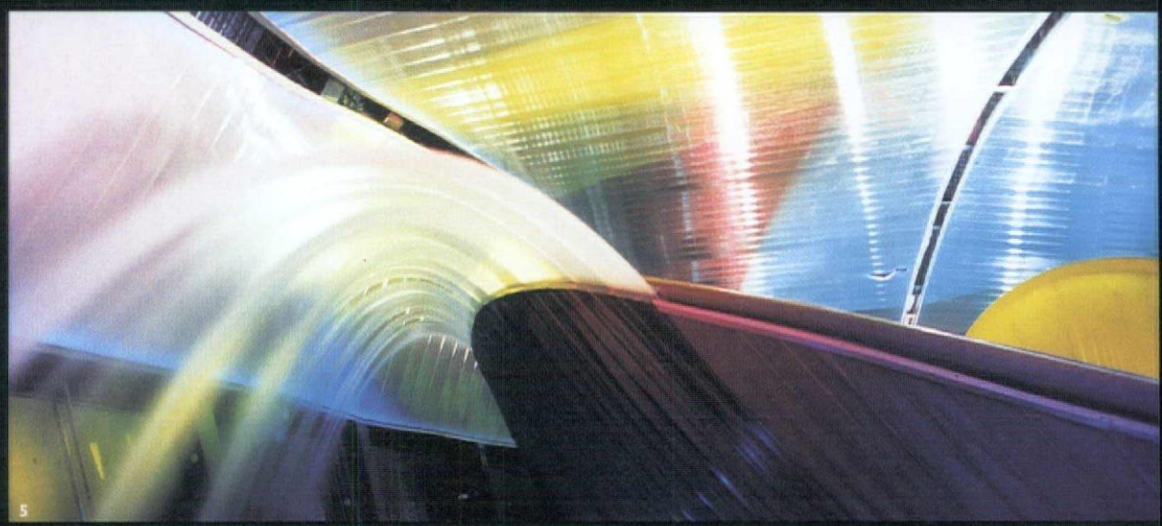


upper level plan

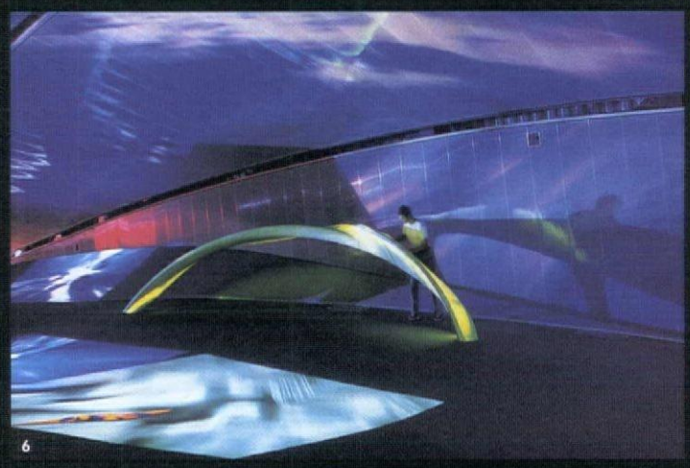
series of interactive systems controlled by sensors distributed throughout the pavilion. Visitors can manipulate the sensors to transform their environment through light, colour, projection and sound. In the freshwater pavilion's curved spine, 200 blue lights generate a saturated, dreamlike, underwater atmosphere.

The route through the adjoining salt water pavilion describes a huge figure of eight over two levels. Visitors enter under a (real) wave of water at lower level that washes over the 'Wetlab' exhibition area. From here, you ascend a panoramic platform with views over the Oosterschelde, making a brief connection with the external environment. The final part of the tour immerses visitors in the 'Sensorium', a specially devised light and soundscape controlled by multi-coloured fibre-optic cables set behind the pavilion's inner skin. This enables projections of virtual water on the floors and walls to be perceived as direct extensions of the building. Visitors navigate through slow-moving ice, shoals of water molecules, a whirlpool and changing cloud formations. Informed by potential of computers and fibre-optics, the pavilions are a contemporary manifestation of the same Dutch ingenuity that over centuries has tenaciously reclaimed and protected precious land from the clutches of the sea.

CONNIE VAN CLEEF

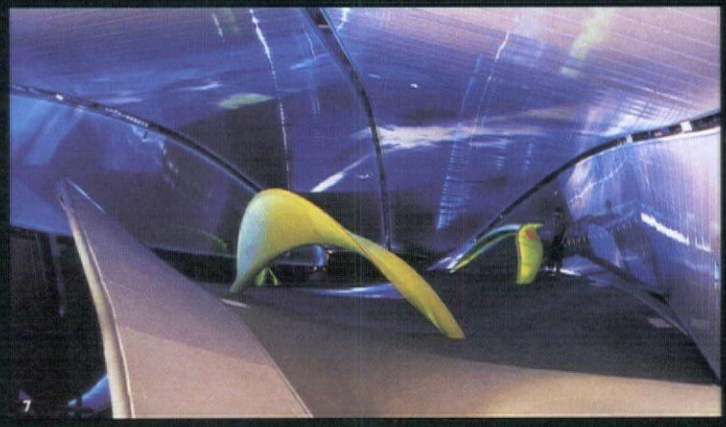


5



6

5
The interior of the salt water pavilion combines sound, light and colour in a cornucopia of the senses. A wave of water greets visitors.
6, 7
Projections of virtual water on the pavilion's interior are controlled by fibre optics. The sensuousness of the pavilion interiors contrasts with bleak remoteness of the building's setting.

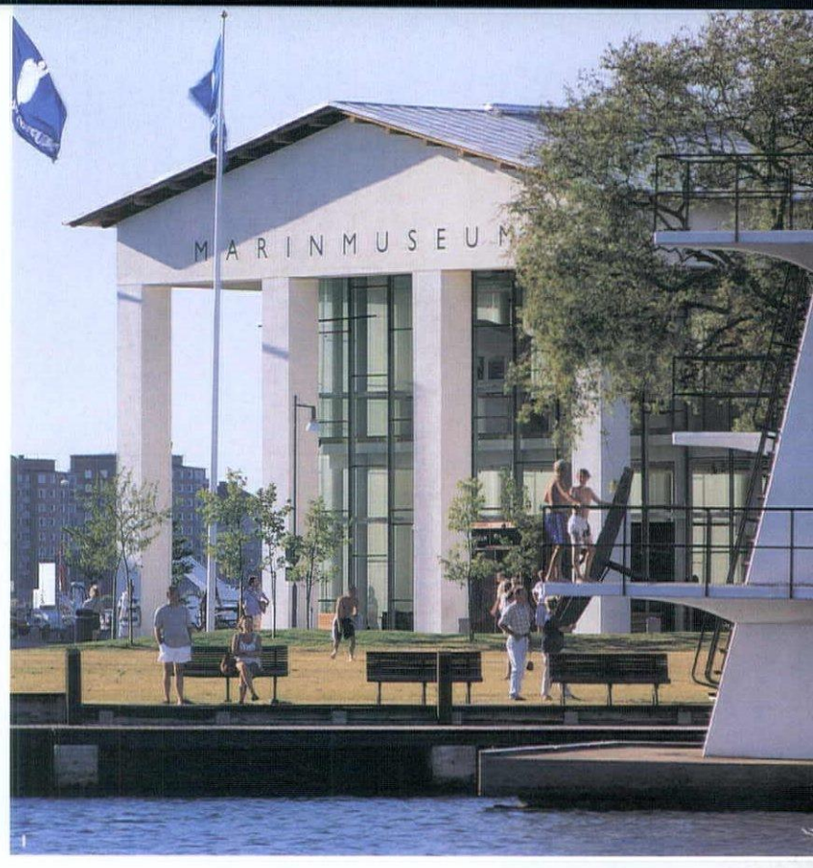


7

Architects
NOX, Oosterhuis Associates, both Rotterdam, the Netherlands
Project teams
NOX: Lars Spuybroek, Joan Almekinders, Maurice Nio, Pieter Heymans, William Veerbeek
Oosterhuis Associates: Kas Oosterhuis, Menno Rubbens, Ilona Lénárd, Adrian Fisher, Marjo Kekkonen, Marino Gouwens, Eline Wieland, Károly Tóth
Structural engineer
Zonneveld
Photographs
Peter Buteijn 1, 2; Lars Spuybroek 3, 4; Kas Oosterhuis 5, 6, 7

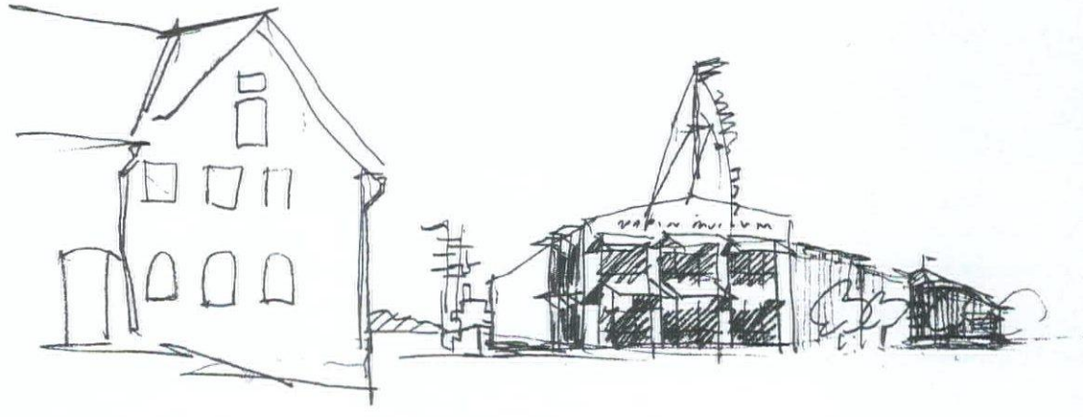
MARITIME MUSEUM, KARLSKRONA, SWEDEN
ARCHITECT
HEDERUS MALMSTRÖM ARKITEKTER

1
The austere concrete structure is exposed as an abstracted Doric order at the end of the long waterside volume of the maritime museum.
2
Painted a traditional Swedish Falu-red, the east side of the musuem evokes the rustic informality of a boat yard.



Evocative of eighteenth-century naval warehouses and ropewalks, this maritime museum in Karlskrona forms a dignified addition to a historically resonant setting.

NAVAL POWER



For 400 years, Karlskrona has been the main base of the Swedish navy. A fortified port on the south-east coast of the country, it commands the southern Baltic from a series of interlocked islands and basins blasted out of the granite. The naval museum originated in the model collection established by the master shipwright Fredric Henric af Chapman in the middle of the eighteenth century, and even though part of his collection was moved to Stockholm in 1907, enough remains to merit a special exhibition building, particularly now that the models are supplemented by a collection of figureheads and by some real vessels including a minesweeper and a torpedo boat.

A competition was held when the local authority took over Stumholm (one of the islands of the group) and the winning scheme by Hederus Malmström took its tone from the austere eighteenth-century military warehouses and ropewalks of C. A. Ehrensvärd. The island is dominated by the 1787 Sloop and Launch Shed which is still in use as a workshop for the creation of replica historical ships which are tested in the Baltic. The new building is on a 145m pier which juts out north-east into the sea towards the central island of Trossö next to the dock of the Sloop and Launch Shed. By using the pier, the small island could be preserved more or less intact, and the new museum could be brought into more intimate contact with the harbour and the whole naval complex.

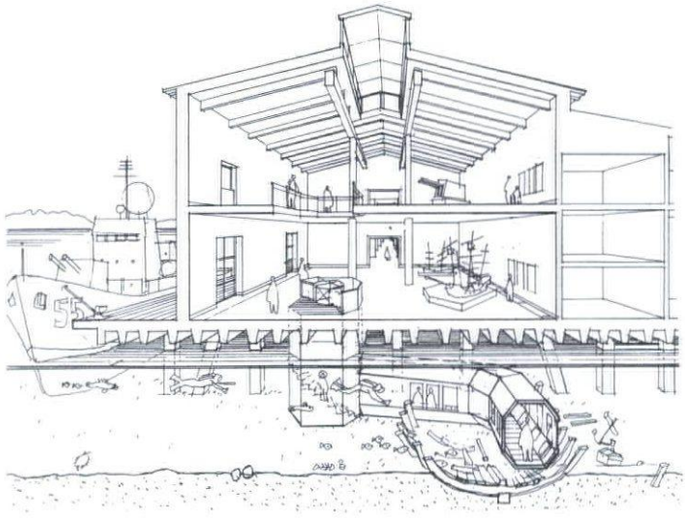




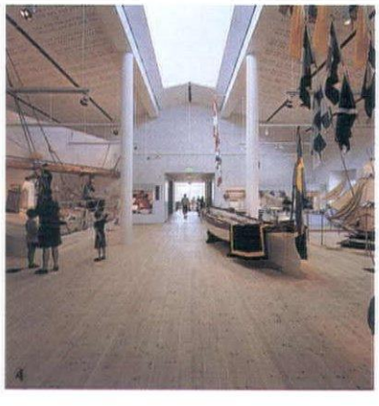
MARITIME MUSEUM, KARLSKRONA, SWEDEN
ARCHITECT
HEDERUS MALMSTRÖM ARKITEKTER

To the west, the long building is hard up against the sea, with a wooden quay separating it from the boats moored alongside. Here the long white rendered elevation is pierced only by small square windows, except at the ends where the concrete structure is exposed as an abstracted order round the two double-height glass volumes of the entrance hall (to the south) and the figurehead exhibition hall at the end of the pier. To the east, the building presents a very different appearance, breaking down into a series of irregular volumes clad in wood painted in tar and traditional Falu-red (the rich, red of Swedish country buildings made from by-products of the copper industry). In the east side's higgledy-piggledy picturesqueness the architects intended to evoke 'something Swedish and friendly, like an old wooden boatyard or a backyard workshop in a small town'.

Internally, the two storeys are formed into a series of exhibition galleries arranged in enfilade. The upper ones are largely top-lit while those on the lower floor have much more restricted daylight to preserve delicate objects. The sequence culminates in the extraordinary Baroque figureheads by the sculptor Johan Törnström which writhe toward the light and the



cross section

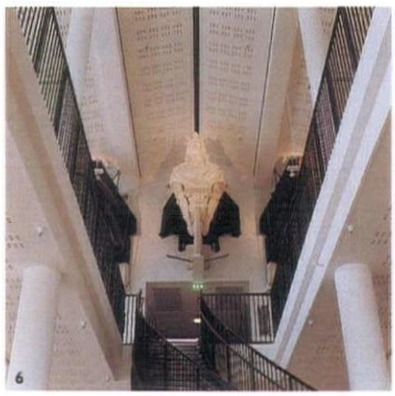


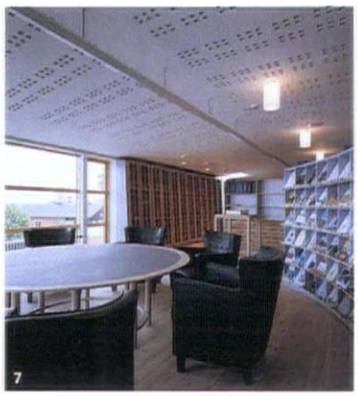


3
Hard on the edge of the sea, the elongated volume of the museum takes its cues from the simple functionalism of Karlskrona's eighteenth-century warehouses and ropewalks.
4, 5
Toplit galleries at upper level form part of an enfilade of exhibition spaces.
6
A gently curving staircase unites the two exhibition floors.
7
The museum's library.
8
Detail of one of the collection of extraordinary Baroque ship's figureheads.
9, 10
The figureheads are displayed in a tall, luminous hall at the end of the pier.


9


10

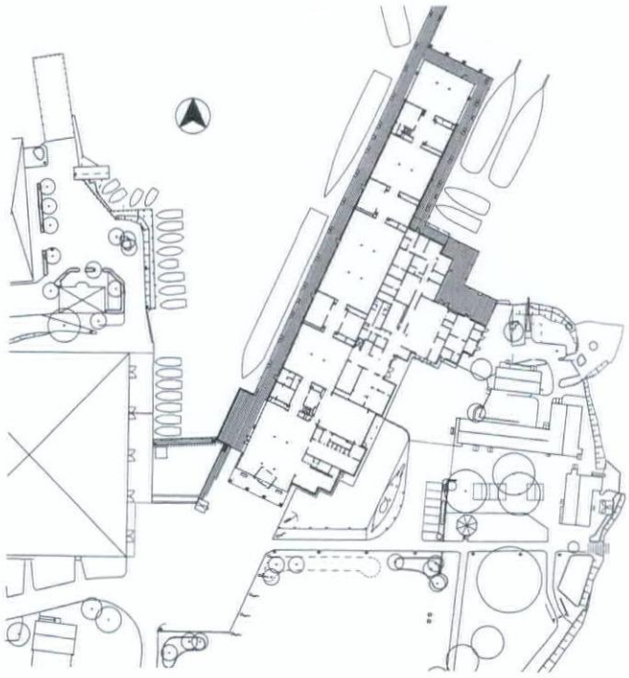

6


7

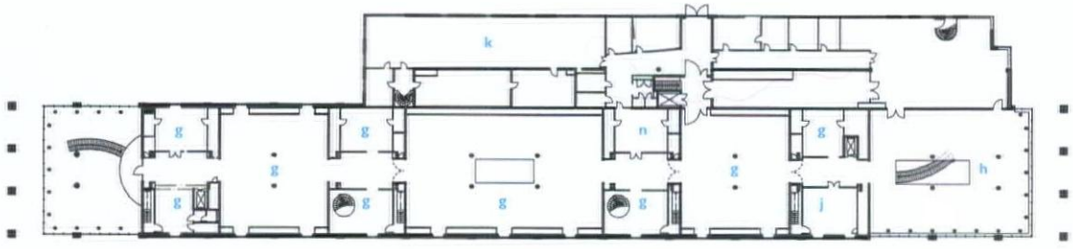

8

heart of the military complex (at night their glass box becomes a beacon for the whole harbour). One extraordinary feature of the building (illustrated in the sections on p50 and p52) is the underwater gallery. In the course of building the new museum, the wreck of the early eighteenth-century battleship Göta Leijon (Gothic Lion) was discovered on the sea bed and, being a national treasure, it was not allowed to be disturbed. The architects devised a transparent waterproof tube which is suspended above the mud from the new structure. Reached by lifts and stairs, the gallery of glass reinforced plastic (made in the same yard as the Göta Leijon) allows visitors to see the old ship as it has lain for centuries. The super aquatic galleries are very simple and workmanlike, with white walls and plank floors like a ropewalk. They are appropriate spaces in which to exhibit the naval artefacts, and though one may have a few reservations about the abstracted Doricism of the ends (and occasionally rather basic detailing like the balustrades), the whole building is an excellent addition to its historically resonant setting.

HENRY MILES

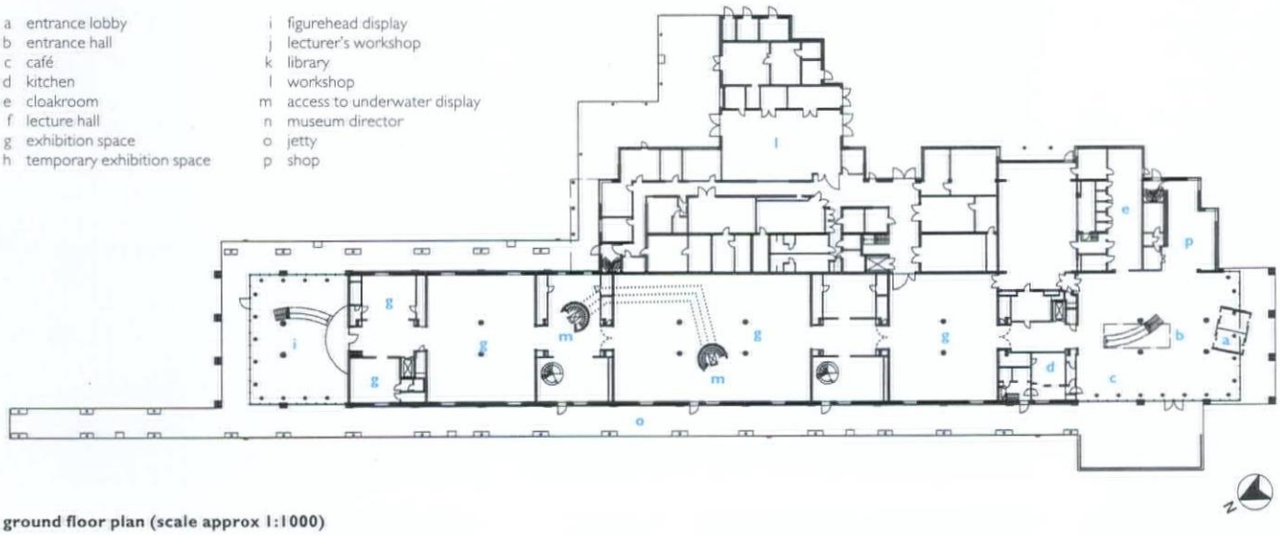


site plan

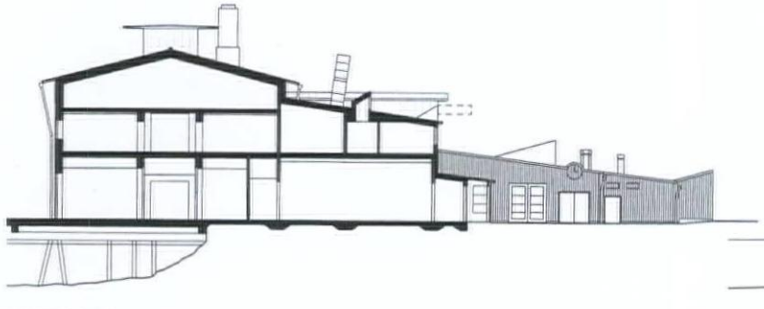


first floor plan

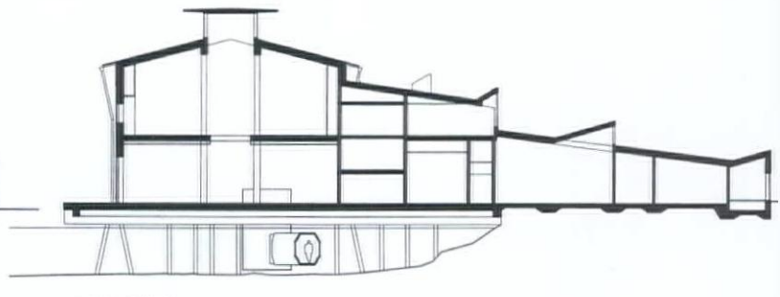
a entrance lobby
b entrance hall
c café
d kitchen
e cloakroom
f lecture hall
g exhibition space
h temporary exhibition space
i figurehead display
j lecturer's workshop
k library
l workshop
m access to underwater display
n museum director
o jetty
p shop



ground floor plan (scale approx 1:1000)



cross section



cross section



12

Architect
Hederus Malmström arkitekter, Stockholm
Project team
Per Hederus, Björn Malmström, Åsa Conradsson, Peter Grödinger, Palle Widegren, Sanna Hederus, Ebba Högström, Andreas Jonasson, Olle Juréen, Åke Axelsson
Landscape
Landskapslaget AB: Tomas Saxgård
Structural engineer
J & W: Tyréns
Services
Scandiaconsult

Lighting
Per Sundstedt
Acoustics
Tunemalm Akustik
Photographs
Jens Lindhe

11
Set against the filtered landscape of sea, sky and ships, the weathered, sculptural figureheads make an arresting display.

MARITIME MUSEUM, KARLSKRONA, SWEDEN

ARCHITECT

HEDERUS MALMSTRÖM ARKITEKTER

THAMES VIEW

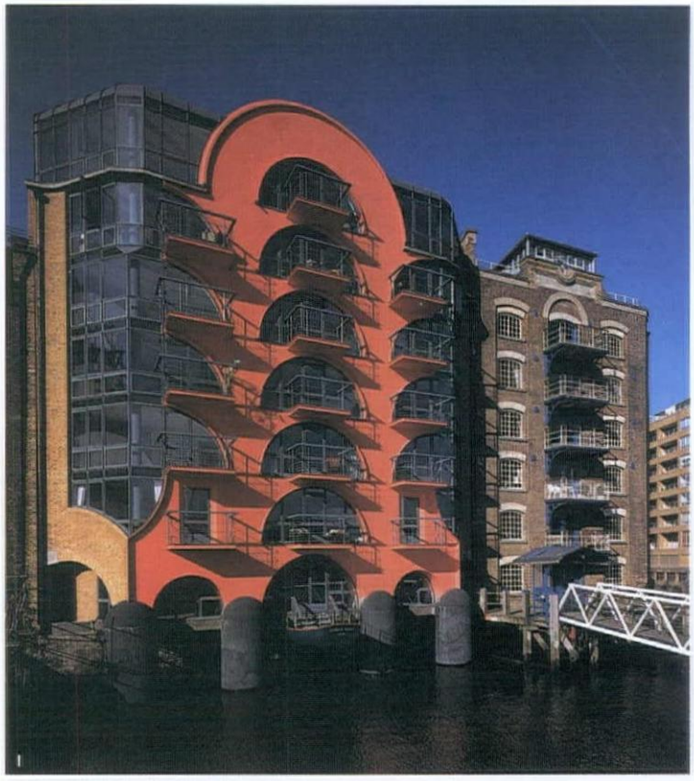
After long years of muddle, argument and indecision on the part of various authorities and politicians, London Docklands is being gradually redeveloped. Yet only a few architects and developers have had the courage to respond to the scale and traditions of the Thames.

Gustave Doré's nineteenth-century engravings of London Docklands depict the extraordinary activity of the Thames at the time, together with all the accompaniment of trade, the hoists and signs of warehouses, the bristling masts and rigging of ships that crowded the river and obscured the buildings. Life was harsh but the river was alive. Seeing the engravings, you feel the melancholy and abandonment that afflicts much of the Thames today. Travelling east down the river from Tower Bridge to Greenwich you find that even the old warehouses, which these days provide expensive and sought-after flats, are apt to have a forlorn air, handsome though they are. Most forlorn of all however are, at one extreme, the montrosities of Canary Wharf; at the other, genteel housing estates that, built over the last decade or so, line the river in too many places. Out of scale with the surrounding flatlands and with the river, which is surprisingly wide at Limehouse Reach, exuding in their different ways the dreaded good taste of the timid developer and planner, they are eloquent of missed opportunities.

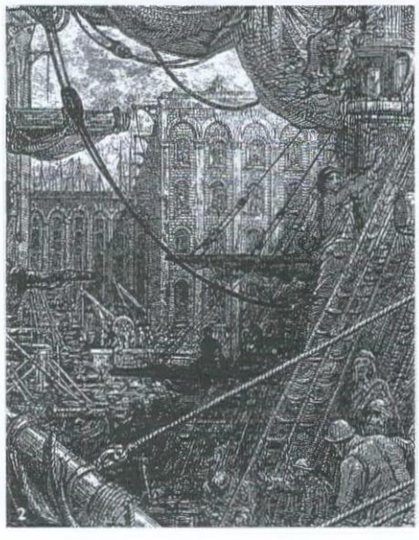
As the big commercial developers have realized, riverside dwellings are bound to be popular because living by water exerts a powerful and universal appeal. But the drama and traditions of the Thames, like other important city waterways, demand more complex and sophisticated responses than either extreme provides.

CZWG have now designed a number of housing schemes in Docklands. To the two schemes built in the '80s – China Wharf near Tower Bridge, and Cascades east of Canary Wharf[1] – they have added Dundee, at Limehouse, west of Canary Wharf, and another under construction at Batson's and Regent's Wharves south of Cascades. It is the biggest so far, providing 240 flats of various sizes. Away from the river front, the yellow-framed silhouette of Bankside Lofts, completed earlier this year, towers over the Tate Bankside Gallery (due to be finished in May 2000); and at Atlas Works in Millwall an extraordinary collection of decagonal towers containing 150 flats has been given planning permission. Two further schemes for a small block of flats at Rotherhithe and a private house at Bermondsey near China Wharf are under way.

The practice's ubiquity is deserved. Piers Gough and Rex Wilkinson are well known for their flamboyance, if not provocation. Here in Docklands, with space, air and water around them, they appear to have come into their own and travelling downstream from Tower Bridge



1



2

54 12 **Dundee Wharf**

proposed Canary Wharf riverside development

1
Housing, China Wharf.
2
Detail of Gustave Doré's nineteenth-century engraving of 'The Docks', London (1872).
3
Cascades: housing, Isle of Dogs.
4
Bankside Lofts: housing, Blackfriars.
5
Details: Bankside Lofts.
6
Blackfriars Bridge with silhouette of Bankside Lofts, and left, Tate Bankside Gallery under construction.

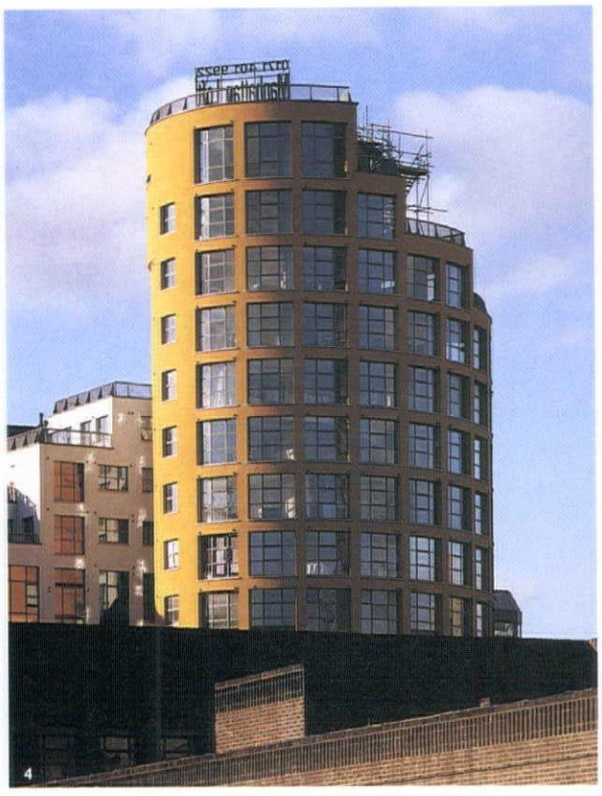
HOUSING, DOCKLANDS, LONDON

ARCHITECT

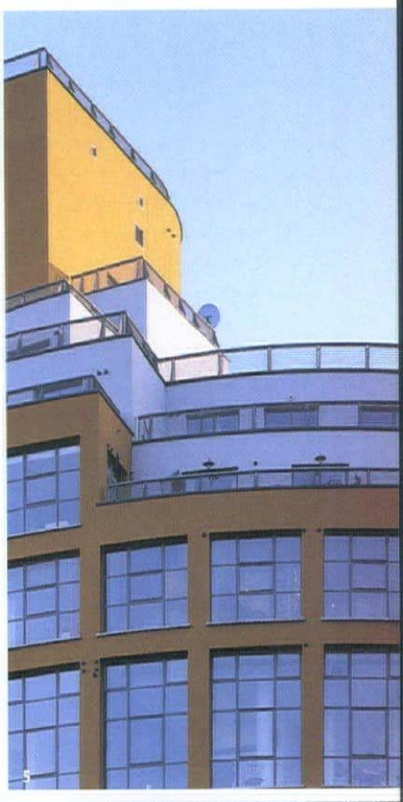
CZWG



3



4



5



6

Cascades Sufferance Wharf Batson's and Regent's Wharves

you find yourself delighted and amused by the buildings. These architects and their brave developers are some of the few[2] to have responded to the scale and drama of the river, and without their contributions to the riverscape the trip would be dispiriting indeed.

From the outrageous scarlet-wreathed pagoda at China Wharf onwards the buildings are big, bold and exuberant, their forms echoing the heroic scale and mass of traditional warehouses and grain silos. Other resonances of an industrial past are present in the architects' treatment of surfaces, creating texture and grain through the abstract patterns of windows, projecting balconies, bristling metalwork and other protuberances reminiscent of dockside landscapes. Close to, the mass turns into an organic honeycomb of dwellings.

All the schemes so far have been for private housing and the flats have been sold almost before being put on the market. CZWG's quixotic image is apt to obscure the ingenuity of their planning. Most sites have one aspect better than another; but because of the romance of water, riverside sites are apt to have front- and back-sides. The usual plan is to put more expensive dwellings along the waterfront, pushing the rest to the rear.

CZWG's efforts to break down the hierarchy while at the same time providing a riverside landmark is apparent in shape of plans and clustering of buildings. Dundee, for example, provides 160 flats and is on the outer bend of the river. The drama of the site is expressed by the building, an irregular horseshoe that embraces an inner court, rising at the apex to form an 11-storey tower. In front of it straddling the riverside wharf is a steel structure; inspired by a travelling dockside crane, it is made up of balcony decks linked by bridges to the tower apartments and held within a vertical frame of V-shaped members. The tower is flanked by two wings facing up and down stream and decreasing in height from seven to three storeys as they reach inland, along Lime Kiln Dock on the west and the site boundary on the east. Flats look onto water on one side, the inner court on the other. The V-shape is a recurring theme, appearing in the base of the steel tower, and in the vertical struts that support balconies and animate the surface of the building. Such an abstract evocation of the dockside landscape – the network of steel projecting from the solid mass of the building – has been achieved without resort to pastiche.

We must wait until summer 1999 for completion of Batson's and Regent's Wharves. The plan responds to the need to give each flat a river view, and to the existing urban grain. The scheme stepped back from the waterfront has been split into seven separate units arranged in two rows. Waterfront buildings have been folded back into butterfly wings, the fold creating apertures in the row and giving the radially curving units at the back a view of the river. Echoes of proscenium arches and emphatic perspectives suggest the maritime theme has given way to drama.

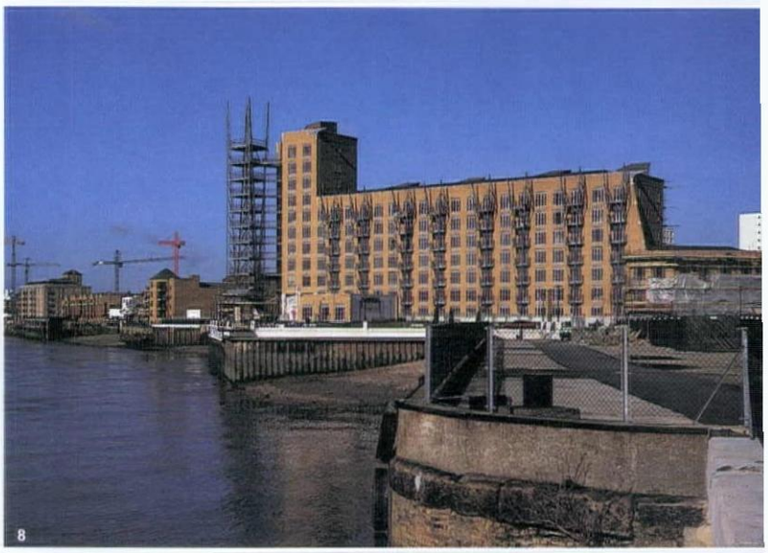
CZWG has done much to restore a measure of self-respect to housing, a branch of architectural activity that has been clawing its way back from the pit. With time Wilkinson and Gough seem to have become more severe, less overtly outrageous, but you feel this is less from conviction and more from inclination and an immediate response to the site. As architects they are unpredictable and it should be remembered that Dundee was originally designed to be bright red. Curiously, though the sources of these buildings' designs are industrial, you cannot help thinking of Venetian palazzos competing for attention on the Grand Canal. P. M.

1 AR April 1989, pp28-37.

2 Not forgetting the Conran Empire at Butler's Wharf, John Outram's pumping station, the Financial Times building by Nicholas Grimshaw & Partners, and the Reuters building by the Richard Rogers Partnership.



7



8



9

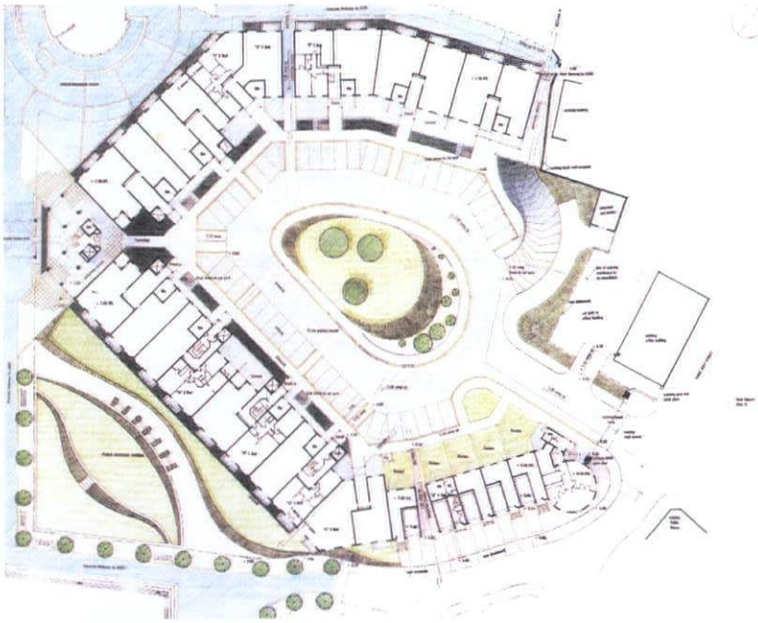
Architect
CZWG
Project architects (for Dundee and Batson's and Regent's Wharves) Rex Wilkinson, Paul Jeffreys
Client for Dundee, Batson's/Regent's Wharves
Ballymore Properties
Photographs
China Wharf, Cascades: Jo Reid and John Peck
Bankside: Chris Gascoigne/VIEW
Dundee: Philip Bier Photography and Morley von Sternberg

HOUSING, DOCKLANDS, LONDON

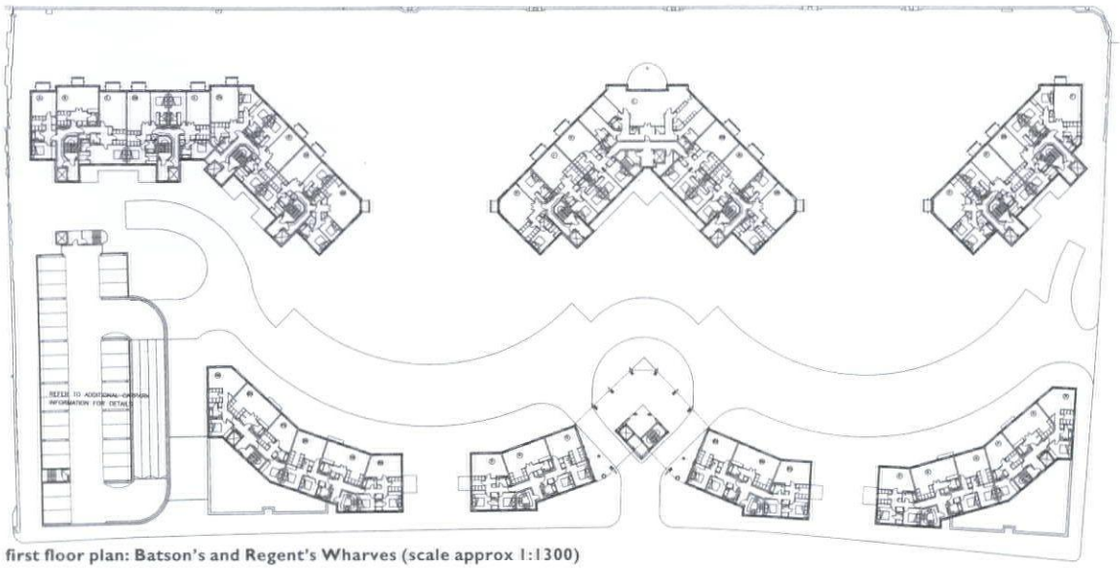
ARCHITECT

CZWG

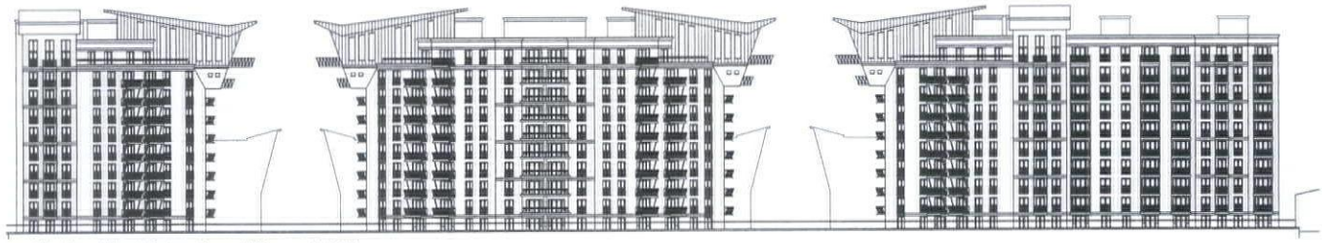
7
West face of Dundee Wharf: housing, Limehouse.
8
East face of Dundee Wharf.
9
Housing at Batson's and Regent's Wharves, under construction. Echoes of proscenium arches and emphatic perspectives.



ground floor plan: Dundee Wharf housing, Limehouse (scale approx 1:2300)



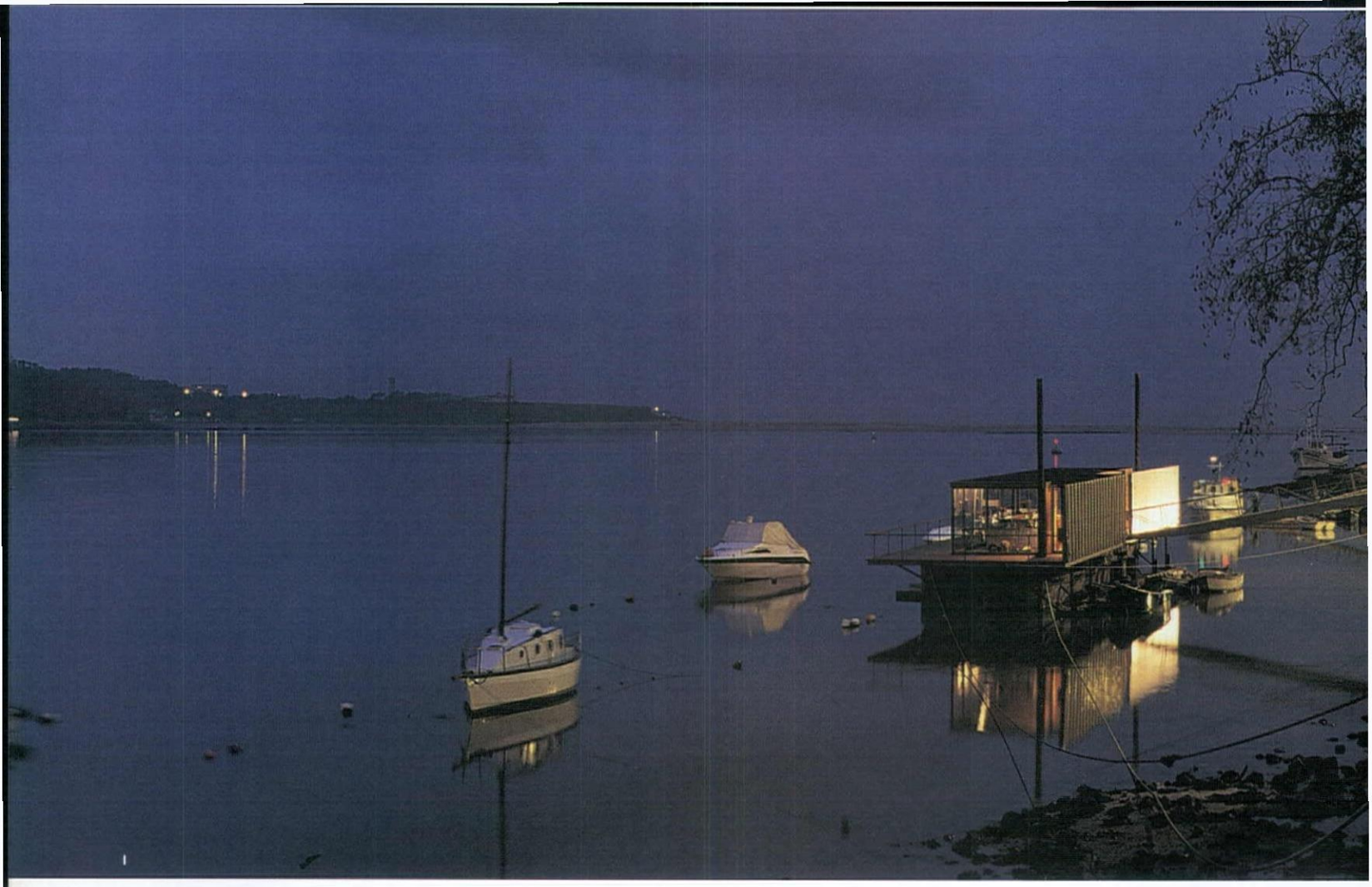
first floor plan: Batson's and Regent's Wharves (scale approx 1:1300)



south elevation: Batson's and Regent's Wharves



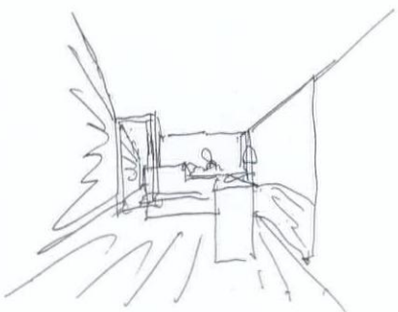
south elevation of housing at Atlas Wharf



RESTAURANT, OPORTO, PORTUGAL
ARCHITECT
GUILHERME PARIS COUTO

RIVER PAVILION

Making ingenious use of a redundant barge, this little floating restaurant draws on the austere and robust traditions of maritime engineering and dockside structures.



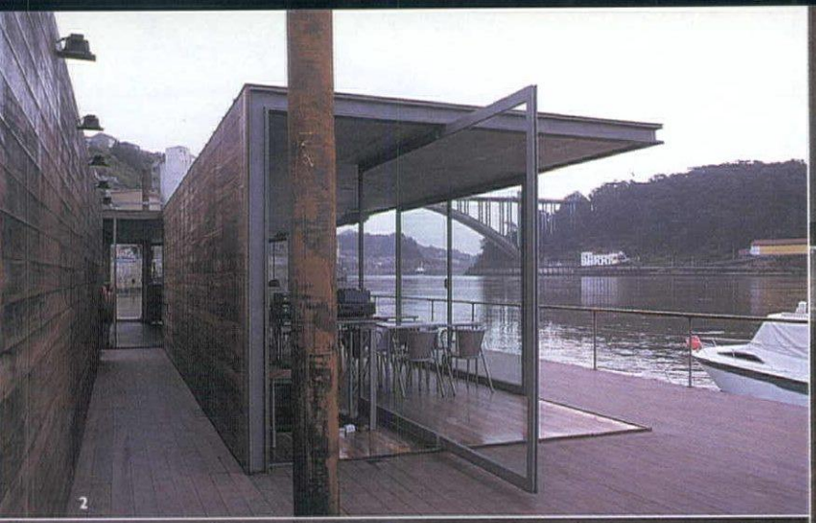
1
The new restaurant rests on top of a cannibalized barge.
2
The dining area is housed in a crisply detailed steel and glass box.
3
A copper-clad wall screens the restaurant from the waterfront.
4
Materials and forms recall ship's cabins. A section of the glass wall pivots to extend the dining space.
5
Functional zones such as kitchens and lavatories are arranged below deck.

Cleft into the gorge of the River Douro, Oporto's waterfront is one of the most spectacular in Europe. The city tumbles down the steep slopes to the river's edge where it coalesces into a raffish assortment of bars, cafés and restaurants housed in tottering waterfront terraces. The strip has a strong folkloric presence, which tends either to discourage or overwhelm contemporary interventions.

Local architect Guilherme Páris Couto was asked to make a new restaurant out of a redundant floating barge moored on the waterfront. There was little raw material to work with, just a simple pontoon-like structure that had had its engine removed. From this Couto has conjured a compact yet elegant stage set for dining and drinking, with splendid views over the Douro. The pontoon acts as a floating platform for the restaurant, which is housed in a Miesian steel and glass box set on a timber deck. Clad in strips of rich, dark kambala, the deck operates as an open air terrace in warm weather. A section of the restaurant's full-height glass wall can be easily pivoted open to extend the dining space.

Supported by a grey-painted steel structure, the elegant, transparent box is very much the public stage. Ancillary functions such as kitchens and lavatories are stowed below in the bowels of the pontoon. A long flank wall clad in copper runs along the dockside edge of the pontoon, tactfully screening off the restaurant box from the scrum of the waterfront. Internal walls and floors are finished in the same dark kambala wood, with sturdy metal furniture. More functional areas below deck are lined with grey fibre-cement panels. Detailing is austere and robust, drawing on the immemorial traditions of ship's cabins and dockside structures. Access is by means of a nautical gangplank. Despite its modest scale, this floating pavilion displays both ingenuity and material refinement. Bobbing lightly on the Douro, it makes poetic and welcome addition to the city's waterfront. C. S.

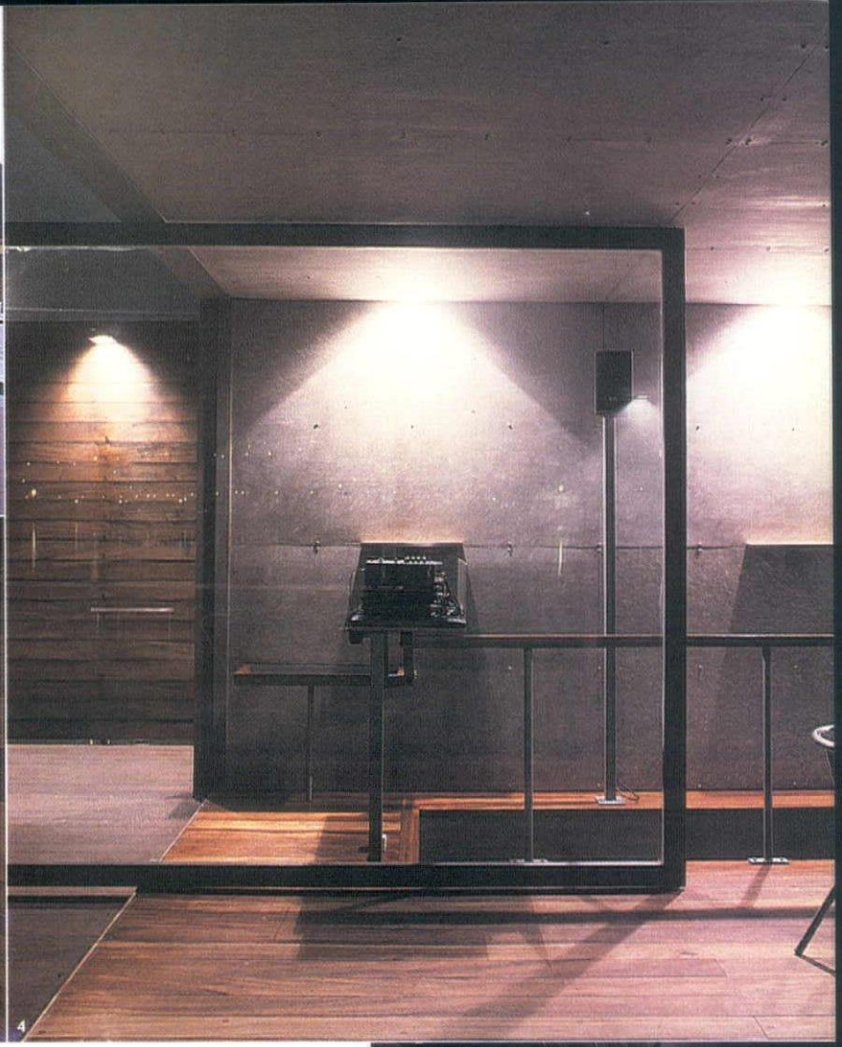
Architect
Guilherme Páris Couto, Oporto, Portugal
Photographs
Nuno Borges de Araujo



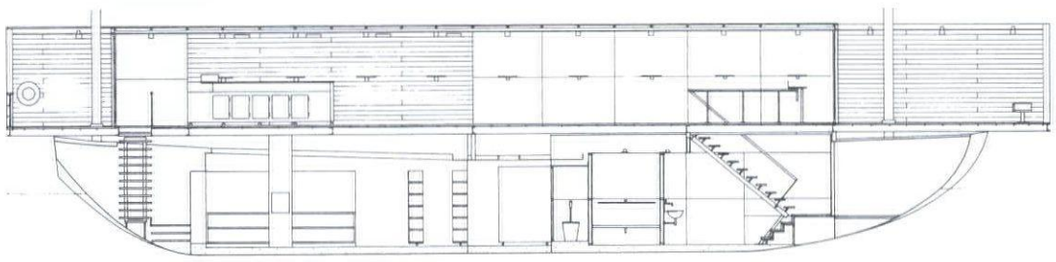
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3

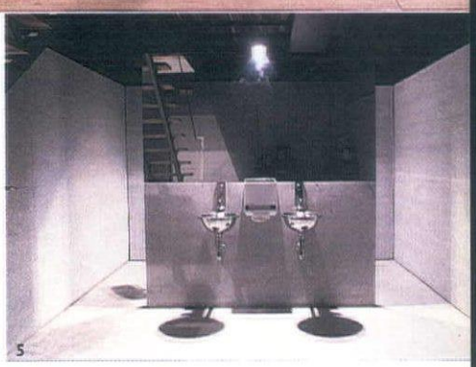


4

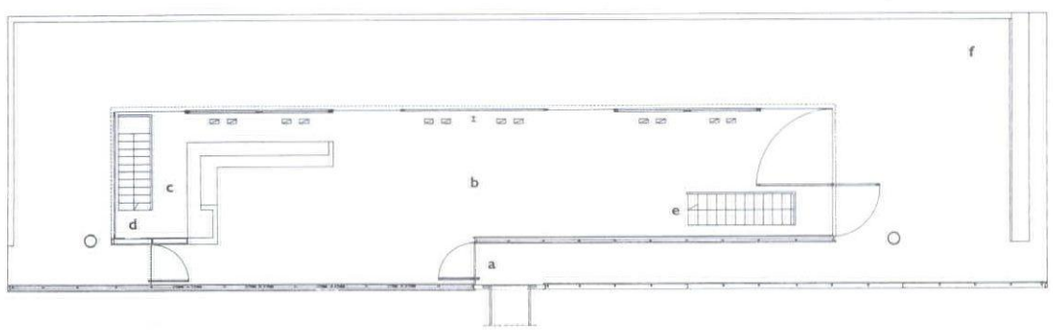


longitudinal section

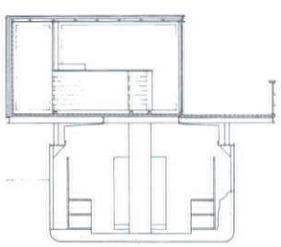
a entrance
b dining space
c bar
d stairs to kitchen
e stairs to wcs
f terrace
g kitchen
h servery
i lobby
j wcs
k cabin
l bottle store



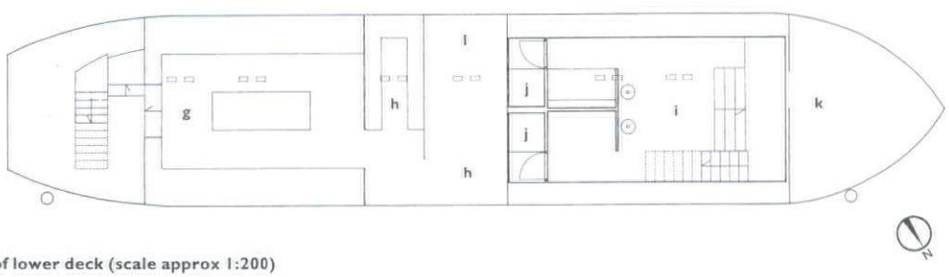
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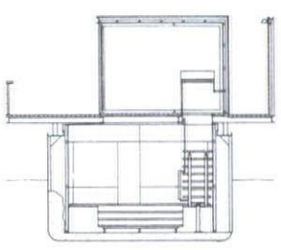
plan of upper deck



cross section through kitchen



plan of lower deck (scale approx 1:200)



cross section

QUAYSIDE STRUCTURES, ROTTERDAM, THE NETHERLANDS
ARCHITECT
BOLLES-WILSON & PARTNERS

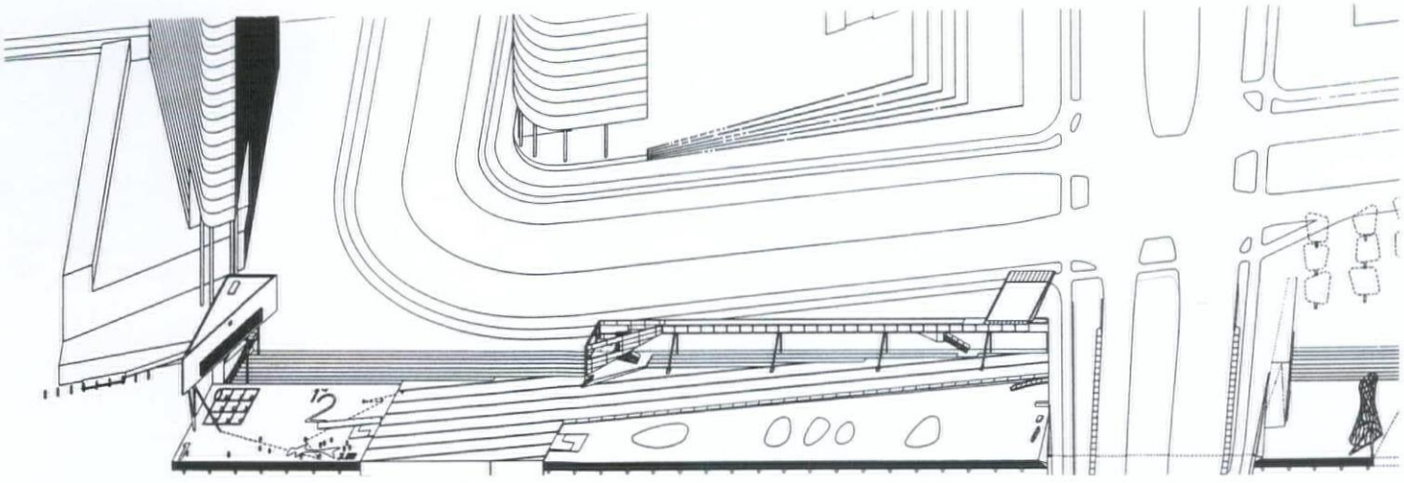
QUAY VIEW

This Rotterdam quayside is enlivened by a series of urban structures and incidents that reinterpret the port's tough maritime forms and materials.

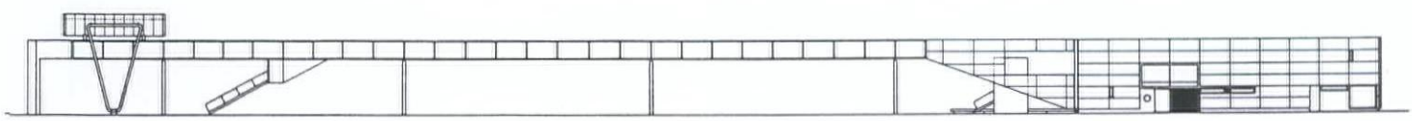
The development of Rotterdam's Kop van Zuid district on the south bank of the river Meuse forms part of an ambitious regeneration of the former port area. The most obvious physical and symbolic manifestation of this regeneration is the monumental Erasmus Bridge, which reconnects Kop van Zuid with the city centre. Designed by van Berkel and Bos, the dramatic cable-stayed structure opened at the end of 1996. The construction of the bridge has initiated a programme of improvements and landscaping along the adjacent quays, orchestrated by Bolles-Wilson & Partners.

On the south-east side of the river, Bolles-Wilson have introduced a series of quayside incidents that take their cue from the port's tough, traditional maritime structures. A section of the bridge can be raised to permit the busy flow of river traffic, so an operations and lookout point was required for the bridgekeeper and his staff. This is positioned at the north-east end of the quay and takes the form of a triangular volume elevated on angular, spindly pilotis. Hoisted two storeys above the quay, the operations centre commands unimpeded views of the bridge. The hypotenuse of the triangle is incised by a wide horizontal slit, like a visor, which is slightly extruded from the wall plane and shaded by louvres. The remaining elevations are articulated by random openings, like a punched card. Access to the operations eyrie is by means of an external steel stair that winds around a lift core. The dour, industrial palette of black and grey is enlivened by vibrant bursts of lemon yellow.

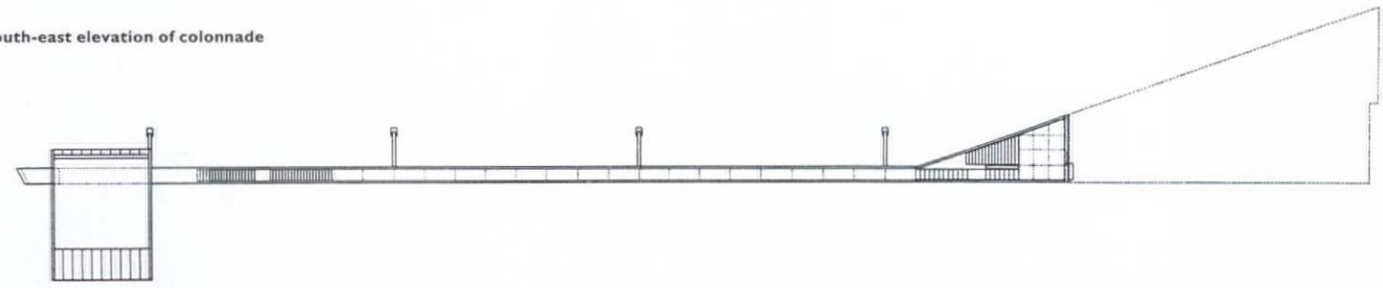
1
The quayside is articulated by a series of incidents. At the far end of the quay, the bridgekeeper's control centre oversees shipping operations.
2
The elongated colonnade-like structure is also a traversable walkway, affording views over the harbour and the new Erasmus Bridge.
3
At the end of the colonnade, an aerofoil-shaped canopy provides public shelter.
4
The intricate tensile structure and flashing electronic displays of the Tower of Numbers terminates the quayside composition.



axonometric projection of quayside



south-east elevation of colonnade



ground floor plan of colonnade

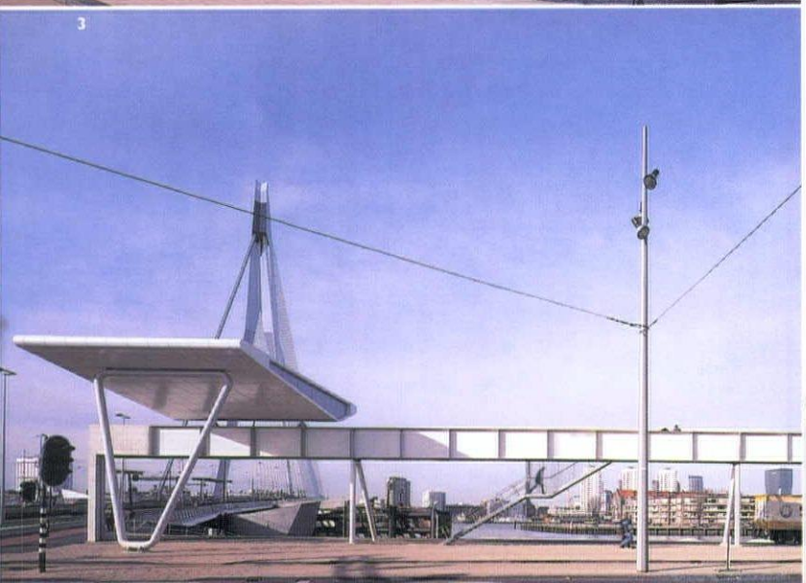


1



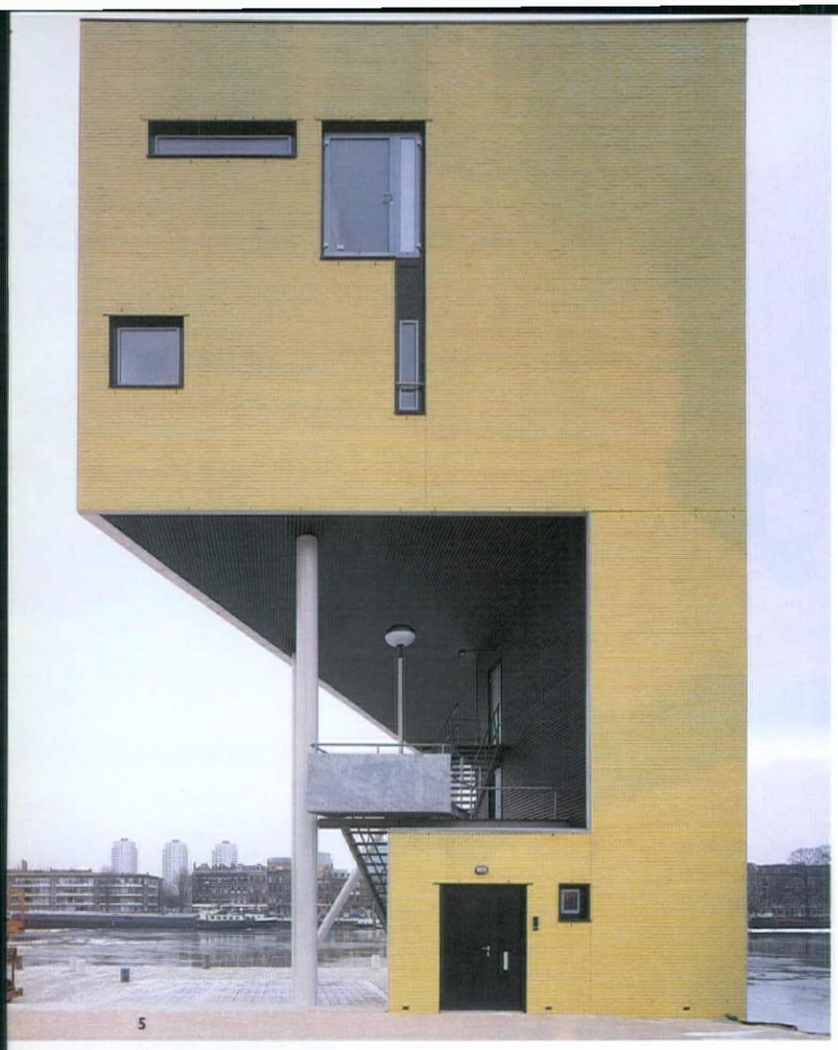
2

3





4



5

5
Detail of the bridgekeeper's control centre. Yellow is used to enliven the industrial palette of grey and black.

Architect
Bolles-Wilson & Partners
Project team
Peter Wilson, James Yohe
Structural engineer
ABT Structural
Photographs
Christian Richters

QUAYSIDE STRUCTURES, ROTTERDAM, THE NETHERLANDS

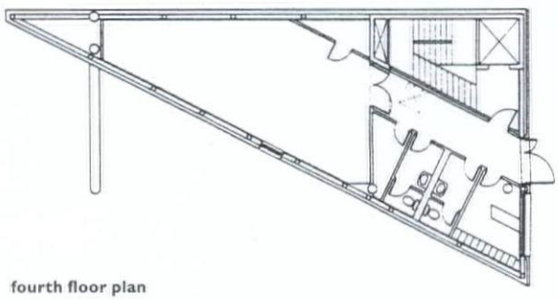
ARCHITECT

BOLLES-WILSON & PARTNERS

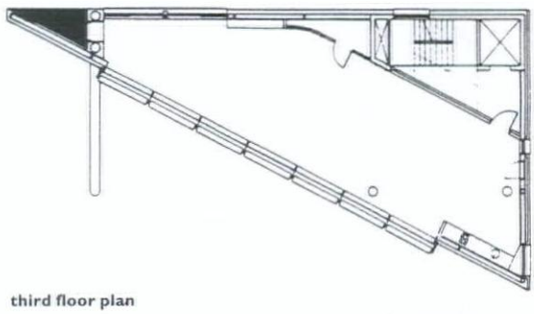
Stretching along the edge of the quay from the bridgekeeper's control centre is an elongated, colonnade-like structure. This demarcates the street from the quayside and also functions as an elevated promenade, with views of the bridge and port beyond. A long steel beam, resembling a gantry crane, is supported by similar pilotis. At the bridgekeeper's end of the quay, the colonnade terminates in a staircase that flares out to form a Y-shape in plan. Sections of the walls enclosing the stair are cut out to frame and define views across the harbour. At the Erasmus Bridge end, the colonnade is connected to an aerodynamic roof that marks the beginning of the quayside promenade and provides a welcome measure of public shelter.

The composition is terminated at the south-west end by a modern folly, whimsically entitled the 'Tower of Electric Numbers'. A tall steel pole supports a series of electronic digital displays, that broadcast changing information to passers-by. The tower's most arresting aspect, however, is the lattice of cables that stabilize and enclose the pole in a splayed tubular network. The tensile structure has a curious delicacy and intricacy and makes an eye-catching quayside landmark. Through an inventive reworking of traditional dockside materials and forms, Bolles-Wilson invigorate the public realm in a way that connects with and evokes Rotterdam's rich maritime history.

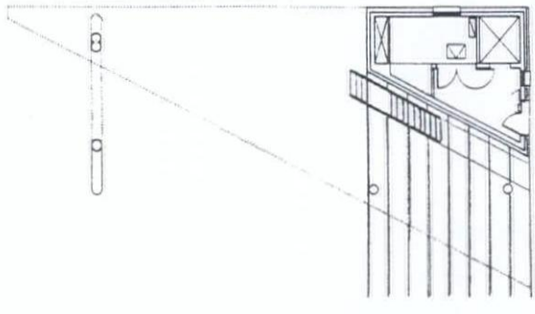
CONNIE VAN CLEEF



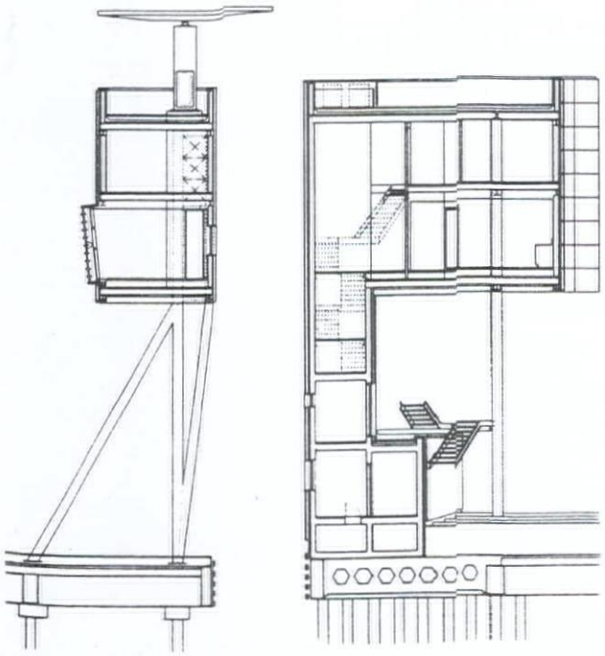
fourth floor plan



third floor plan



ground floor plan (scale approx 1:500)



cross sections through bridgekeeper's control centre

SWIMMING POOL, LONDON
ARCHITECT
LIFSCHUTZ DAVIDSON

LONDON LIDO

Lifschutz Davidson's proposal for a floating lido on the River Thames reinterprets the British lido tradition and creates a bold new river landmark on London's South Bank.

Of all the projects shown in this issue, Lifschutz Davidson's proposal for a floating swimming pool on the River Thames perhaps makes the most explicit connection with water. London has its share of austere Victorian baths and modern pools and although the city's distinctly temperate climate tends to discourage bathing *en plein air*, a handful of venues caters for hardy souls and summer swimmers; for instance Hampstead Heath's brooding lakes and the cheerily nautical Tooting Lido. The Thames' lethal tidal currents and dubious hygiene levels have historically made it unsuitable for bathing, but it remains London's most conspicuous and important stretch of water.

Currently in development, Lifschutz Davidson's Thames Lido will both celebrate and exploit the river's recreational potential. Moored off the South Bank, near Oxo Tower Wharf (also designed by Lifschutz Davidson, AR February 1997) the elegant, floating structure will provide year-round public facilities for swimming and associated activities. Although the pool will be enclosed by a glass roof and walls, its floating setting sustains the impression of bathing in the Thames and reinterprets the energetic British lido tradition.

The need for a public swimming pool in the area has long been identified by all sections of the community. The local residential population is swelled by office workers and visitors drawn by the many attractions of the South Bank. Formerly lined with muscular warehouses, the South Bank has



1
Moored off London's South Bank, the new lido will make a positive contribution to the recreational and social life of the city. Its elegant, crystalline structure will form a new river landmark.

SWIMMING POOL, LONDON

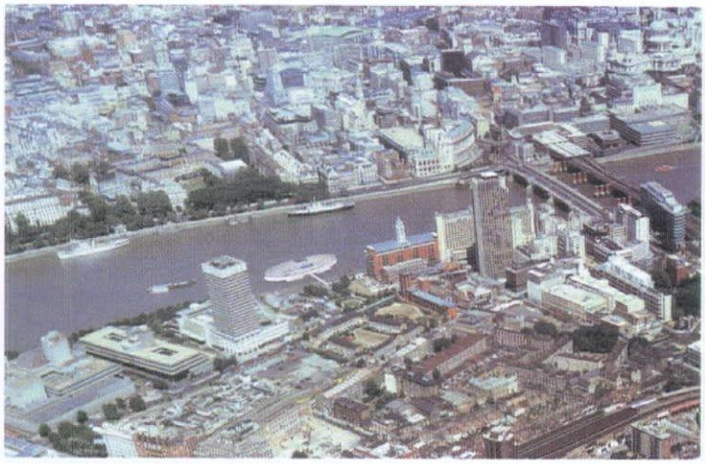
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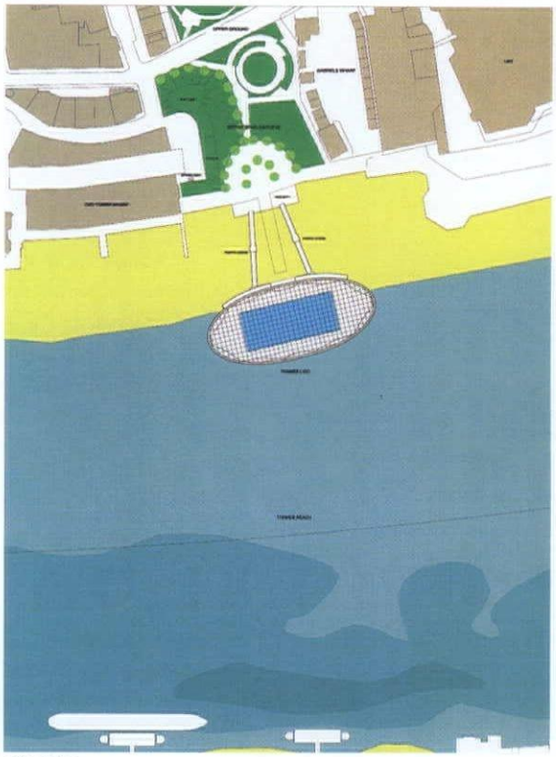
LIFSCHUTZ DAVIDSON

Architect
Lifschutz Davidson, London
Client
Coin Street Community Builders
Structural engineer
Techniker
Marine and services engineer
Allott & Lomax
Cost consultant
Davis Langdon and Everest

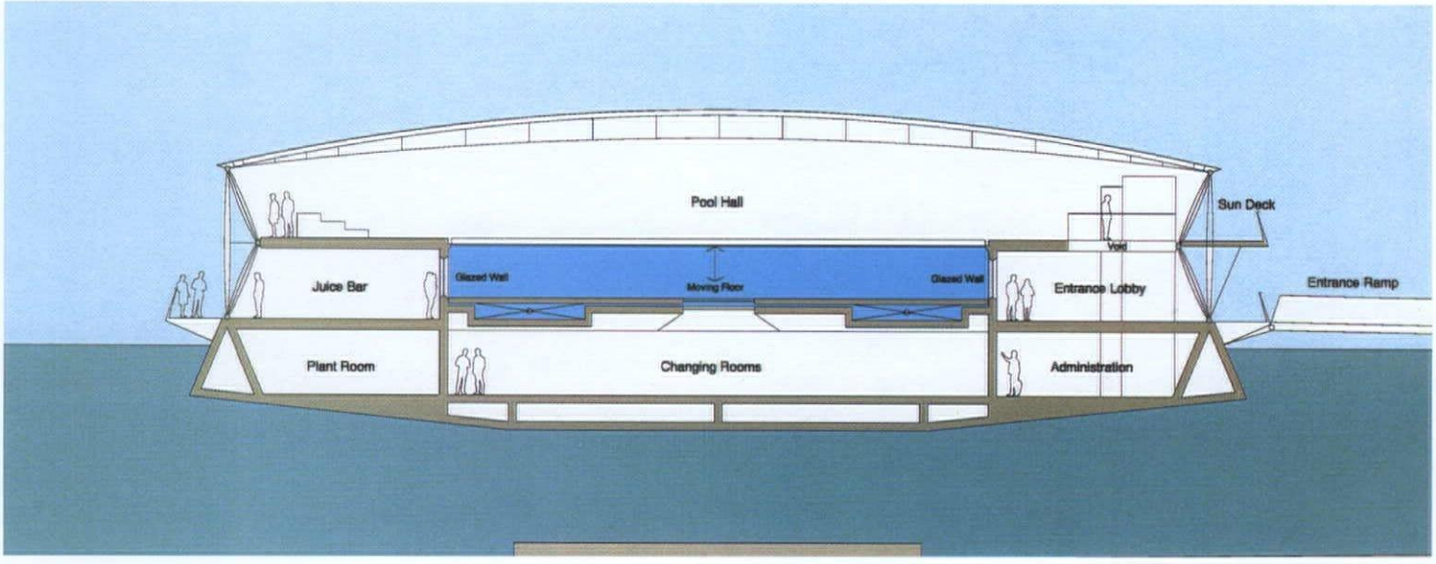
2
Computer generated aerial montage of the South Bank showing the diaphanous volume of the lido.

2





site plan



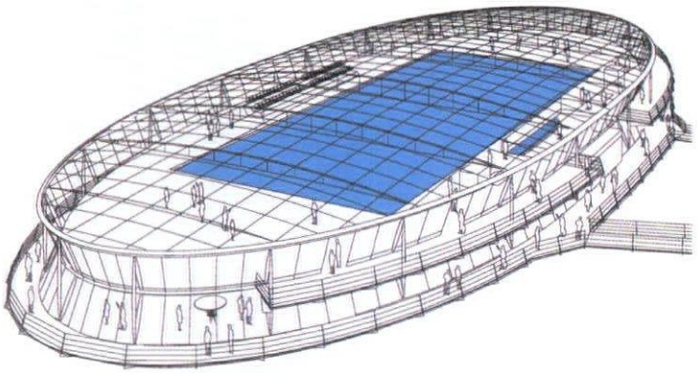
cross section

evolved into a modern cultural and commercial riverside strip. Connected to the riverbank walk by a pair of access jetties, the lido will be moored 40m beyond the shoreline, in a shallow part of the river which is only navigable at high tide.

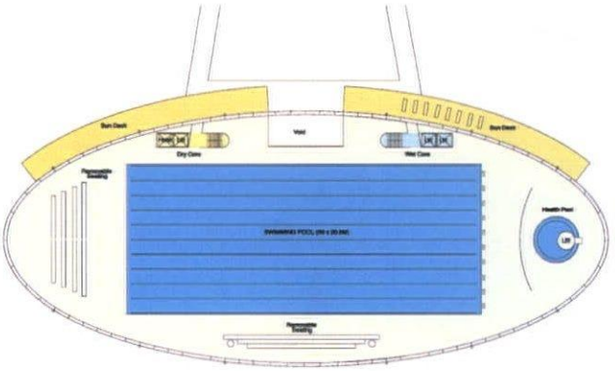
The three-storey elliptical structure measures 75m x 38m and extends 8m above the water level when fully buoyant. The low profile minimizes obstruction of views from the bank or river. The sleek, crystalline glass roof encloses a rectangular swimming pool on the main upper deck. The dimensions of the pool (50m x 16m) allow training to Olympic standard. Below, on the intermediate deck, a bar, restaurant and fitness centre are arranged in a racetrack configuration around the pool. The pool's glass sides offer direct and tantalizing views of the swimmers and divers. On the south side, a pair of generous sundecks encourage bathers to spill out in the summer and provide additional space for other events. The lowest deck houses changing rooms, fitness club facilities, kitchens and plant.

The moveable pool floor can be raised to provide shallow swimming for people with disabilities, for children and for training. It can also be easily converted to a dry floor or sports deck, so that the space can be used for a range of different activities with minimal labour costs. Retractable bleacher seating can be installed for public events, such as swimming galas, sports competitions and concerts.

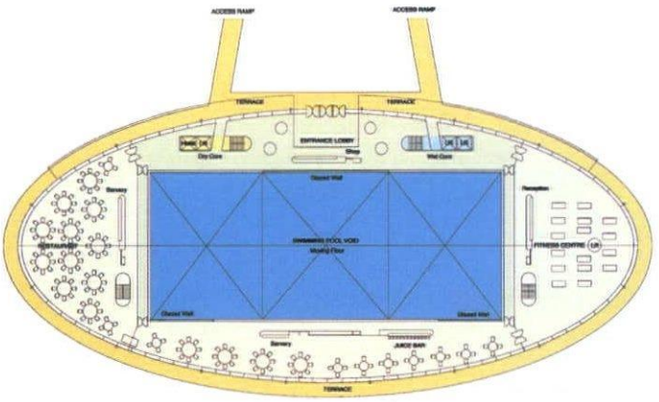
The lido's internal environment responds to climate and season. The design exploits the exposed, south-facing location and the facilities are intended for use 14 hours each day, all year round. Glass walls are protected by full-height sliding screens which reduce solar radiation on the structure's south side. In very hot weather, the glass roof is protected from glare and heat gain by external blinds. Surplus energy will be collected by solar panels to provide free heating for the pool water. Floating lightly on the Thames, displaying both ingenuity and refinement, the diaphanous structure will doubtless greatly enhance the social and recreational life of the South Bank. C. S.



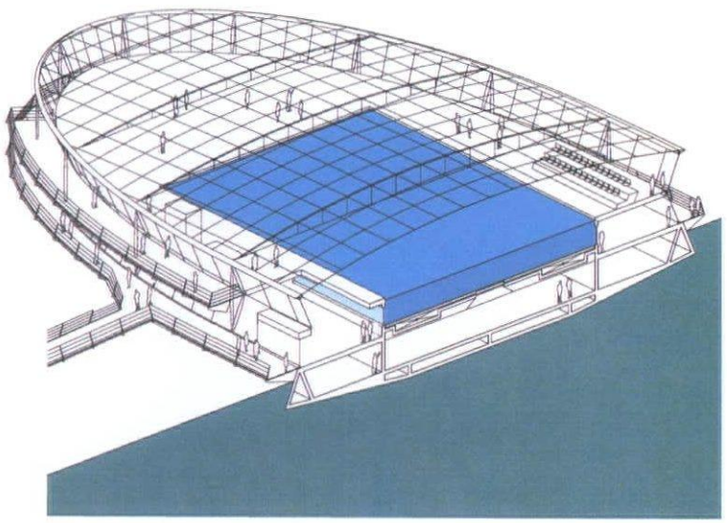
perspective



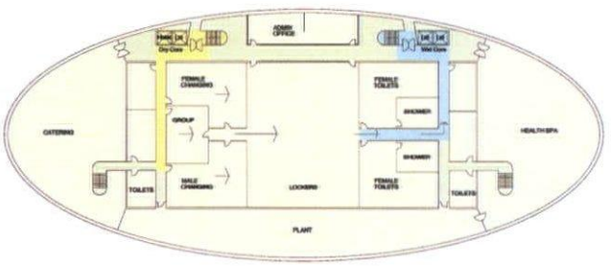
plan of upper deck



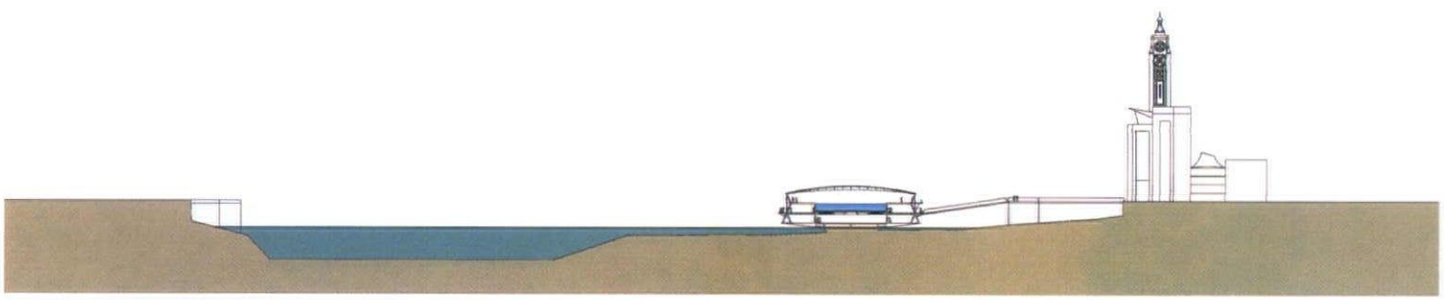
plan of middle deck



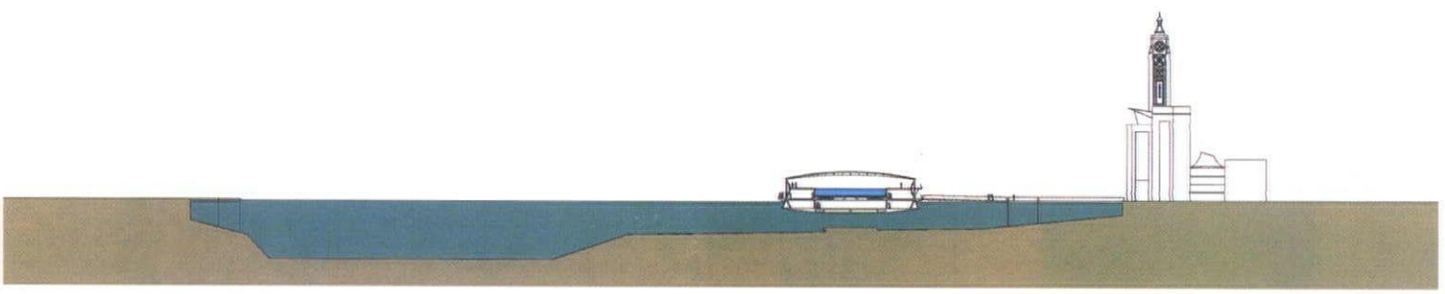
sectional isometric



plan of lower deck (scale approx 1:800)



cross section through River Thames at low tide



cross section through River Thames at high tide

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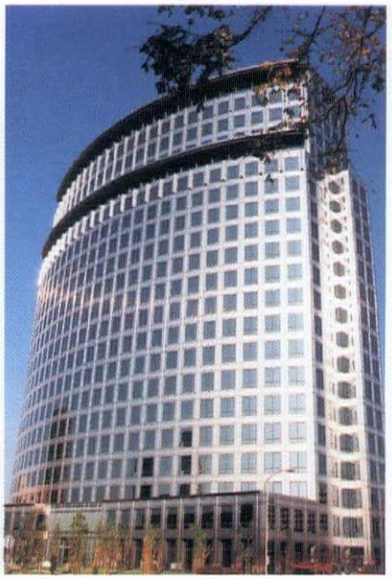
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Architectural Services Department Hong Kong Government



Plaza Tower, Costa Mesa, USA
Architect: Cesar Pelli

Airport Reference List

Germany
- Airport Düsseldorf
- Airport Frankfurt/Main
- Airport Munich

Great Britain
- Heathrow Airport

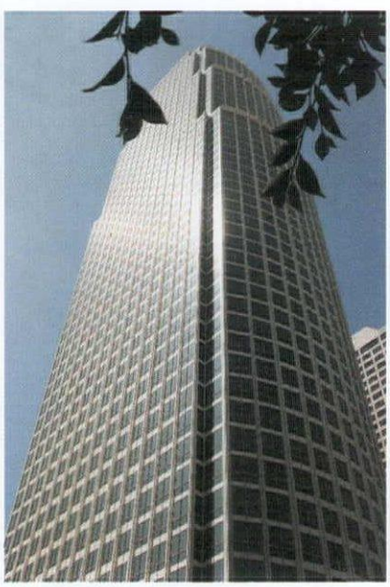
Netherlands
- Schiphol Airport, Amsterdam

USA
- Los Angeles Airport

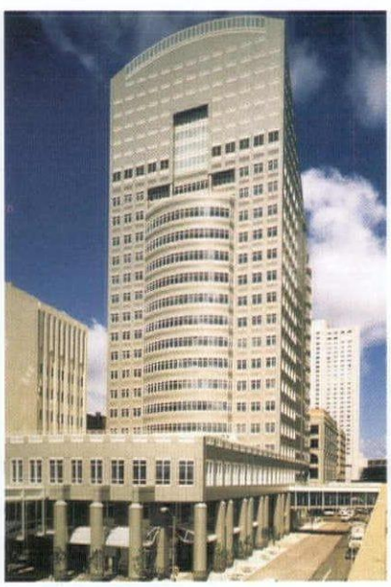
Asien
- Macau International Airport



Macau International Airport
Architect: AIM Associates



777 Tower, Los Angeles, USA
Architect: Cesar Pelli



EMC, Des Moines, USA
Architects: Brooks, Borg, Skiles

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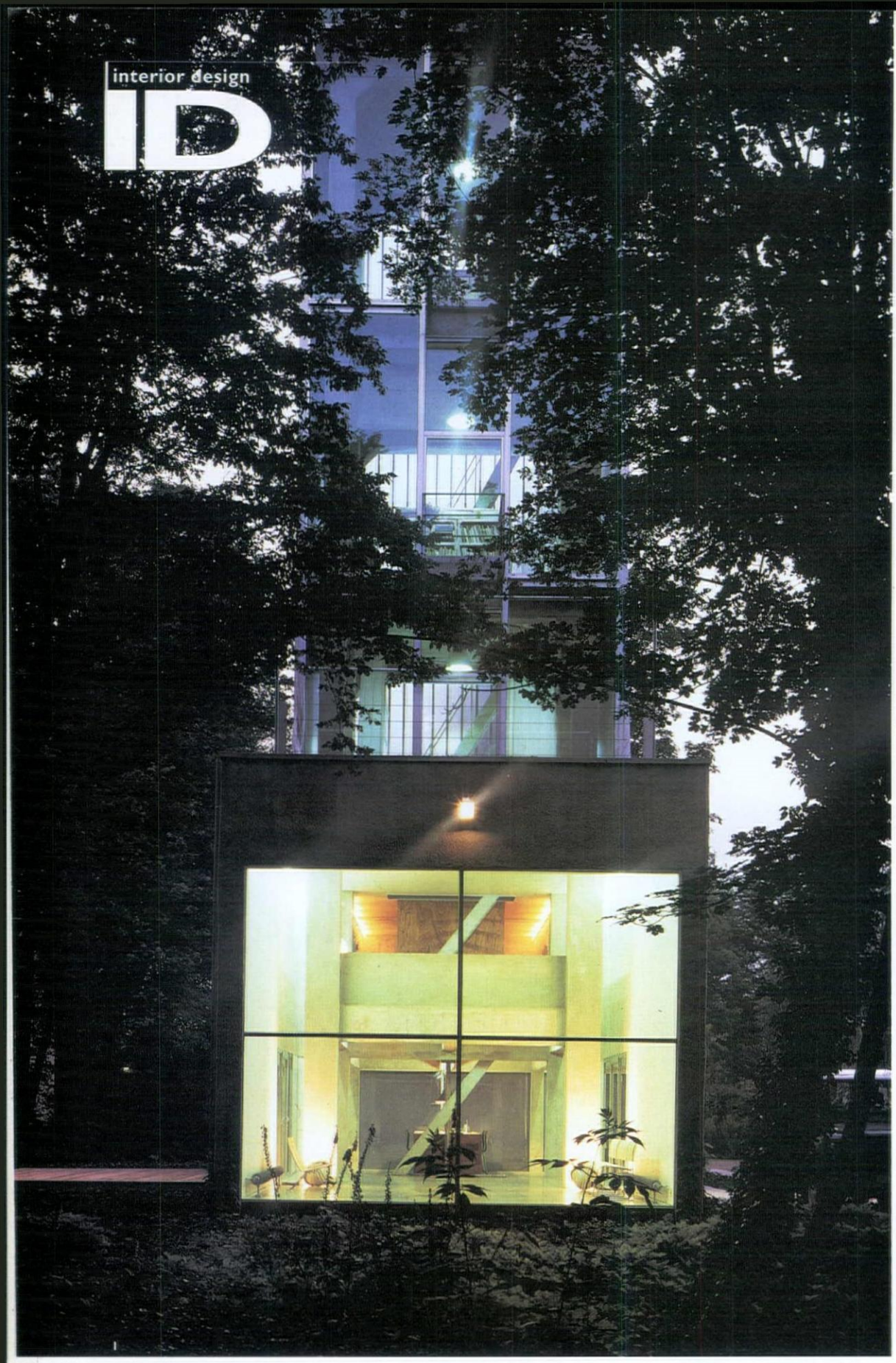
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interior design
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RESERVOIR REBIRTH

This former water building, an early twentieth-century reservoir on the outskirts of Antwerp, has been ingeniously converted into a potent tower house.

The water tower was once part of the manor of Brasschaat, on the outskirts of Antwerp, erected to provide the estate with running water. An early example of a concrete structure, it continued in use until 1937 when four new water towers were built within Brasschaat commune and a new water supply system installed for the district. In 1950, the municipality acquired the manor house and grounds; and long neglected, the tower fell into ruin.

When acquired by landscape architect Jan Moereels, the tower had a cylindrical reservoir supported by four huge concrete columns, 23m high, and an underground filtering basin and reservoir. Between the columns were horizontal platforms about four metres square. The tower was set in woods, the site defined on the south and west by a meandering stream and on the north-east by a street. On the south-east was a house screened by Lombardy poplars. Moereels had long been struck by the melancholy romance of the place, by the tower rising from its watery crypt, as skeletal as the surrounding trees, and he commissioned architect Jo Crepain to create a house out of the redundant structure.

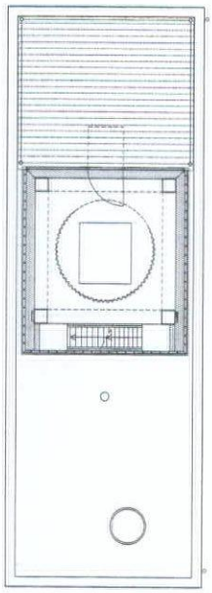
In transforming the tower into a one-person dwelling, Crepain has responded to the industrial character of the structure and enhanced it, using a few tough gutsy materials – principally concrete, galvanized metal and industrial glass. He has manipulated and freed up the conventional domestic plan, adapting it to vertical living, and established a subtle spatial hierarchy so that in ascending the building you move from open fluidity to greater seclusion until near the top you find yourself surrounded by sky in a glass-walled winter garden above the treetops. By cool rationality Crepain has exploited limited space to the maximum; and clearly alluding to the early Modernists, he has created spaces that are both austere and lyrical, transfigured by light and constant connection with the exterior.

At the foot of the tower there is an emphatic base, a rectangular

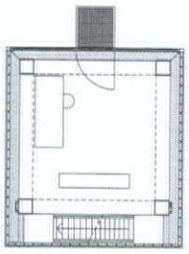


House, Brasschaat, Belgium
Architect
Jo Crepain

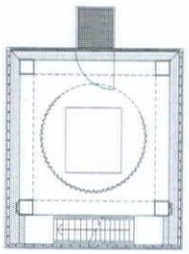
1
The double-height living room projects from the original tower, with its roof forming a deck for the main bedroom.
2
Massive original structure orders all spaces.



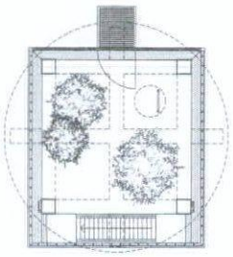
second level



third level



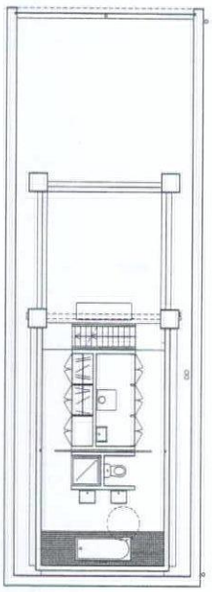
fourth level



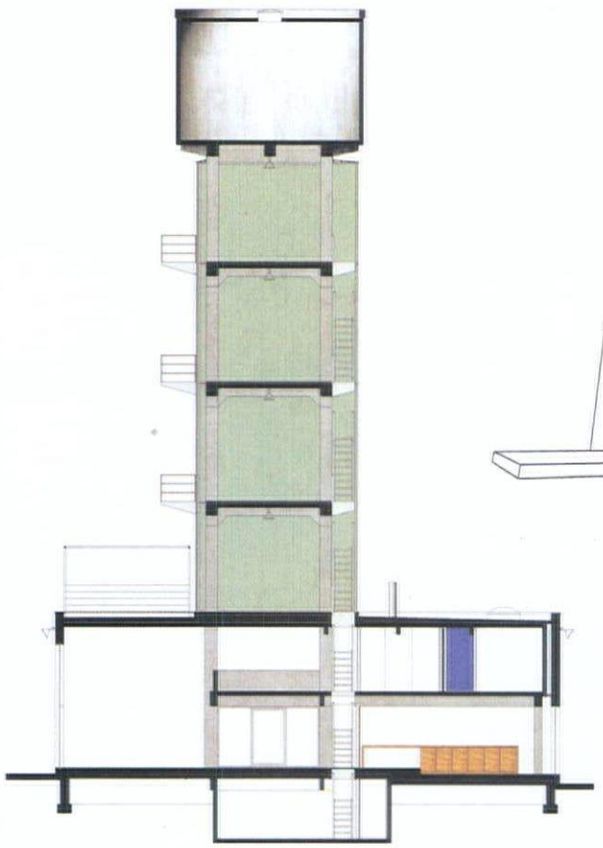
fifth level (winter garden)



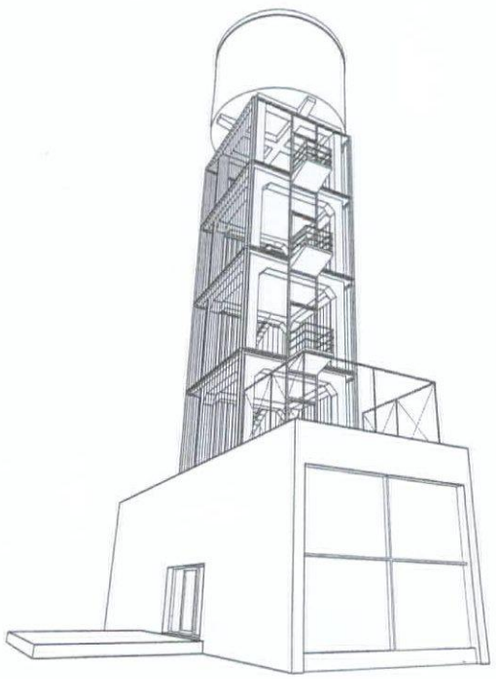
top



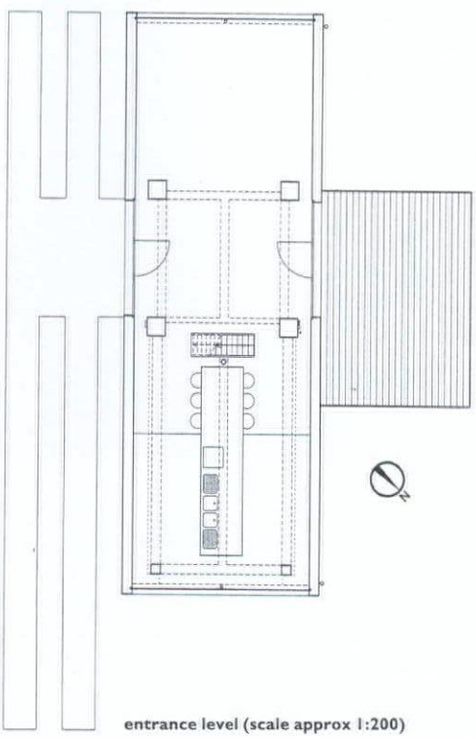
first level



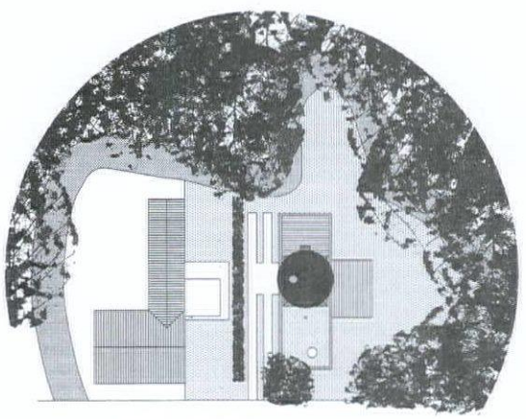
section



perspective from south



entrance level (scale approx 1:200)



site plan



volume of massive insulating blocks projecting each side of the tower. Glazed at each end, it has two levels. Inside, the four big columns have been left visible. Floors are of polished concrete, doors and window frames of matt anodized aluminium.

Entering the house through glazed doors on each side – from the access road on the south-east, a terrace on the north-west – you find yourself in a central hall. This leads to the kitchen and dining area at the front street-side, screened from public view by a translucent wall of sand-blasted glass, and to a double-height sitting room at the back. Sparsely furnished with a white sofa and Kjærholm chairs, this space flows out into the wood through a big glass wall five metres high. A gallery overlooking the sitting room has a comfortable television space, and behind it, over the kitchen is a rectangular pod with washing, dressing and storage facilities.

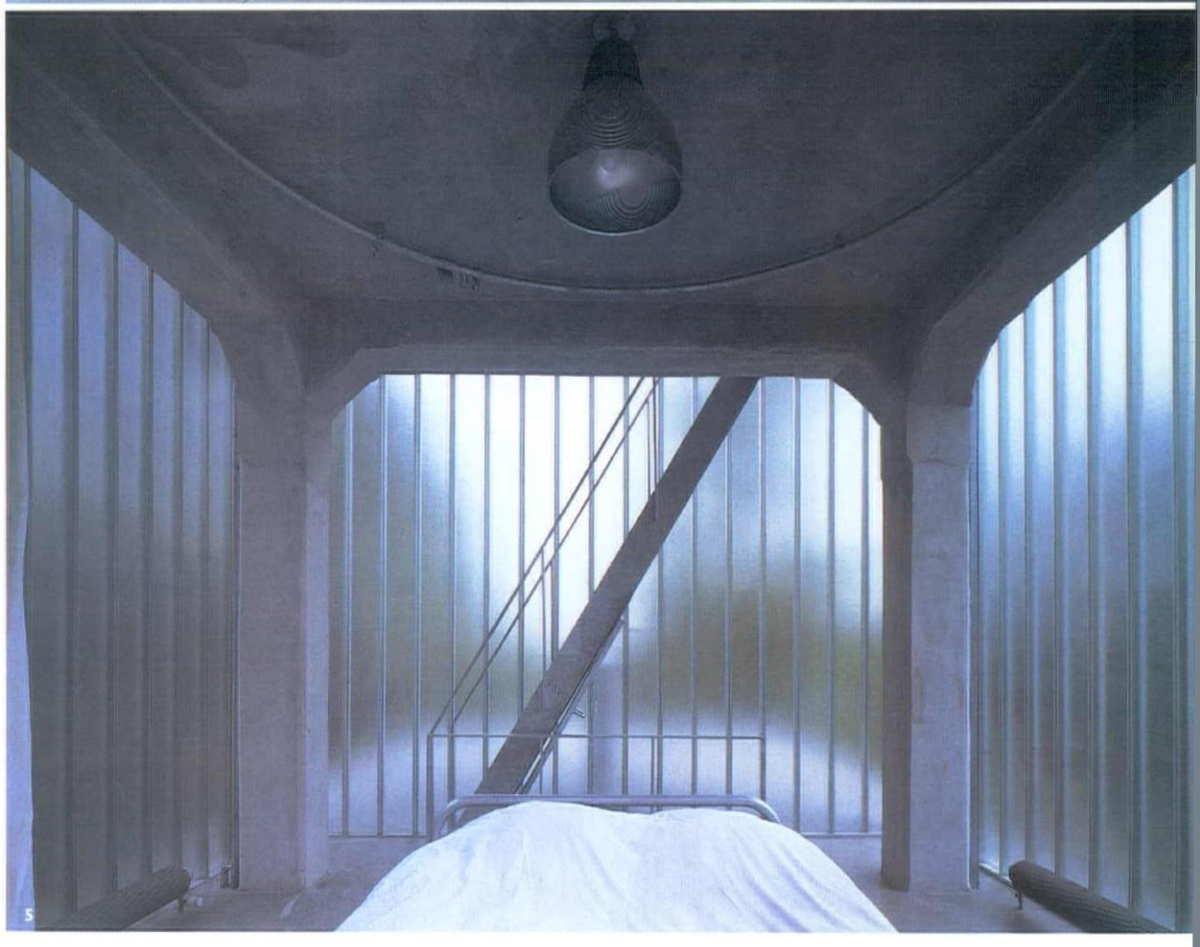
Above the base, the tower rises four storeys in diaphanous splendour to the big cylinder which has been retained. Crepain has clad the structure with translucent sheeting for privacy on the three sides visible from the street, and used clear glazing on the south face. Each level, corresponding to the old platforms, is identical in size and connected by galvanized metal stairs. The first is the bedroom furnished with a free-standing bed and bookshelf in a central curtained recess. It gives onto a roof terrace above the sitting room. Over it is an office, and above, a guest-room and the winter garden. At the very top, the reservoir is used for parties.

Nowadays the concrete base of the building is covered in ivy so the tower appears to grow out of the ground. Fitted with neon tube, lighting can be made to glow in different colours like a beacon in the dark, its presence signalling the rebirth and new purpose of an old landmark.

PENNY MCGUIRE

Architect
Jo Crepain, Antwerp, Belgium
Project architect
Dirk Engelen
Photographs
Sven Everaert





HOUSE, BRASSCHAAT, BELGIUM
ARCHITECT
JO CREPAIN

3
From road, glazing is translucent.
4
Living room looks point-blank into wood.
5
Individual upper floors are created from the original platforms of the tower.



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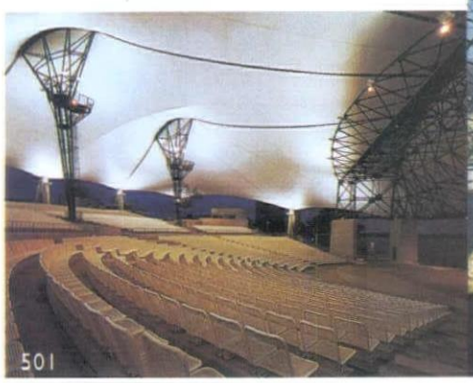
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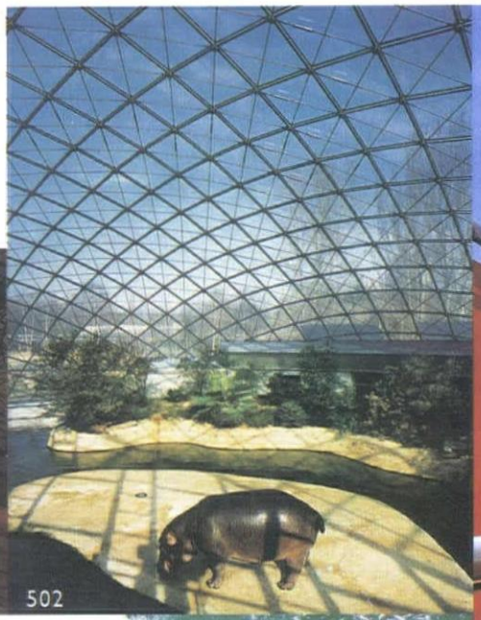
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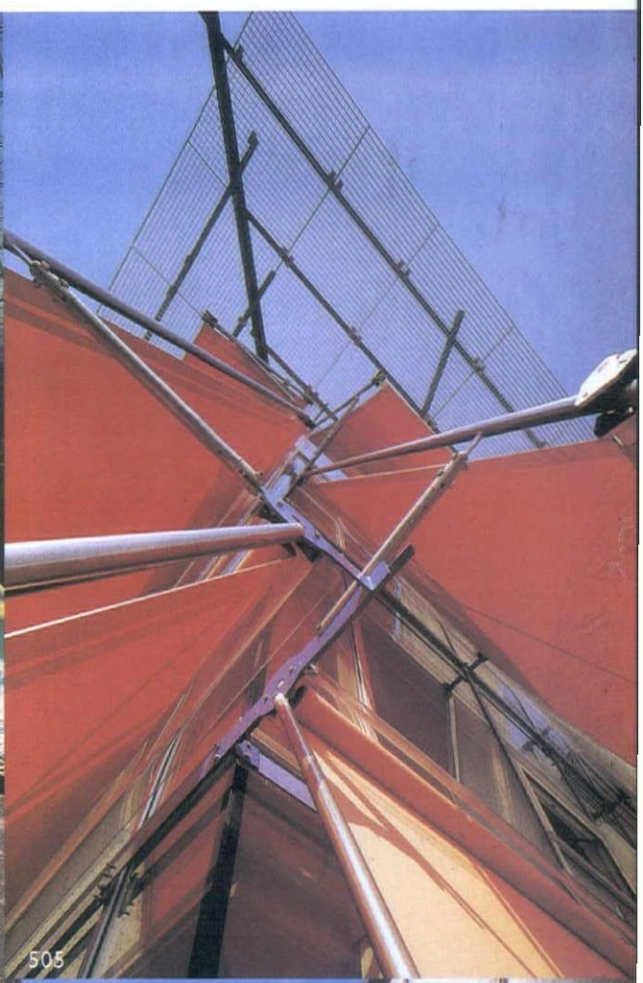
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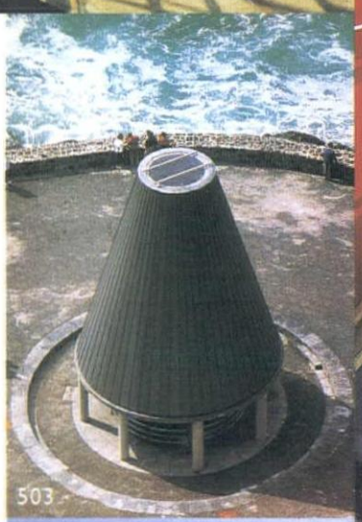
PRODUCT REVIEW

CLADDING

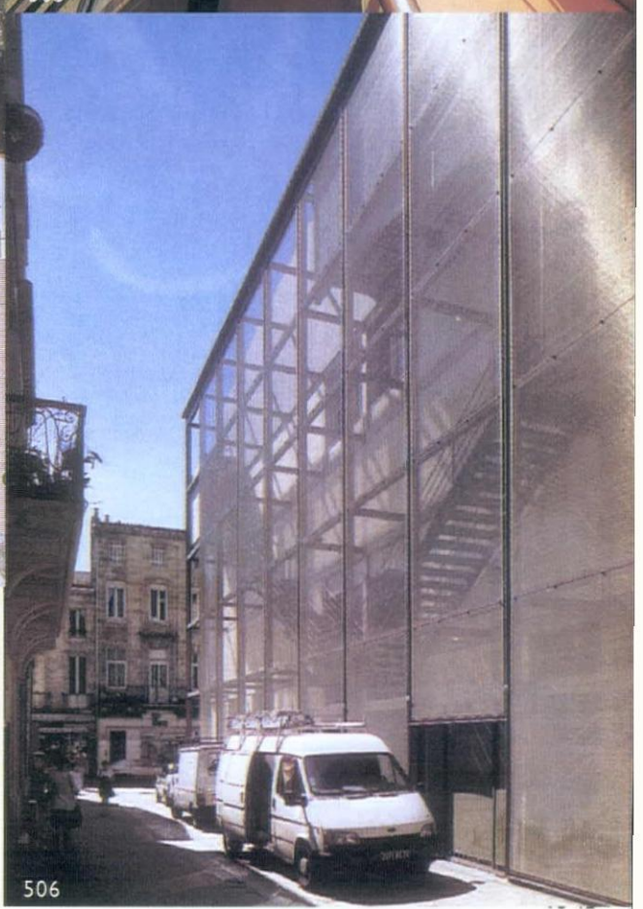

501


502


505


503


504


506

501 BIRDAIR

Tensioned membrane structures, Chene Park Amphitheatre, Detroit, Michigan. Architect: Schervish, Vogel, Merz. Fabric architect: Kent Hubbell Architects.

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502 DOW CORNING

Structural silicone sealants. In designing the new insulated and self-supporting glass roof sheltering hippos in Berlin Zoo, the Munich-based architect, Gribel, specified the firm's Insulated Glazing and Weatherseal silicone sealants.

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503 NEDZINK

Profiled zinc titanium, for roofing and cladding, provides the exterior of the Tholos monument to Sebastian Elcano, Magellan's lieutenant, by Jose Carlos Anasagasti, at Guetaria, Spain.

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504 ASG

Mobile maintenance units in corrosion resistant light aluminium alloy by ASG Aluminium-Systeme GmbH, matched to the exterior of the building.

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505 KRÜLLAND ANDREAS KRÜLL

Facade screening against sun and glare, including louvres and awning systems.

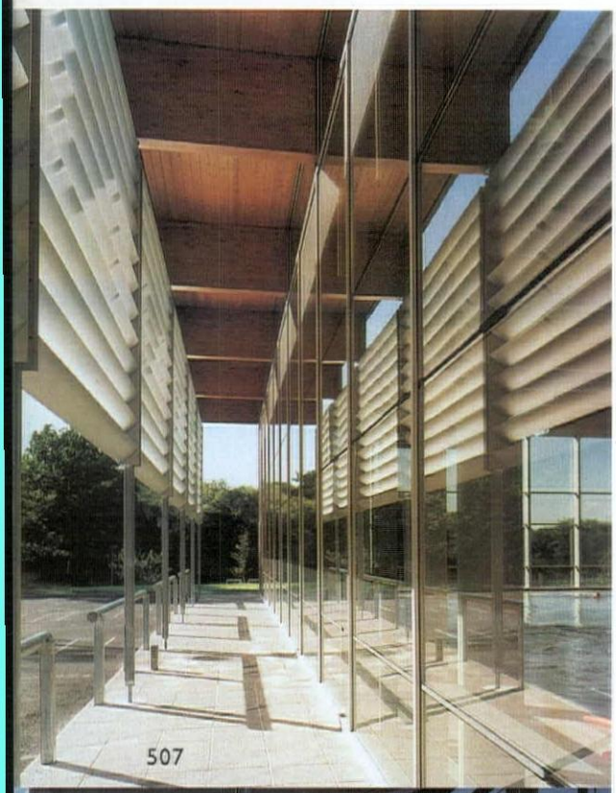
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Fax: +49 2131 60 07 25

506 GKD

Architectural mesh. The UGC Cinema, Bordeaux, by Alberto Cattani, has a transparent skin of silvery mesh wrapped around the exterior of the building.

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Fax: +49 2421 803 211

PRODUCT REVIEW


507

507 TECHNAL

Curtainwalling systems from Technal. The firm's MC curtain walling system was specially adapted for the ASPIRE National Training Centre at Stanmore, Middlesex, designed by Foster and Partners.The adaptation led to Technal's new MC Trame Verticale curtain wall.

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508 GLAVERBEL

Glass for solar control, high light transmission, low light reflection and thermal insulation. Shown here, Artlite silkscreened glass in the glazed facade of the Trésorie Générale, Tarbes, France.

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509 SOLAGLAS

Andy Gollifer Associates specified Saint-Gobain Solaglas' curtain walling and Solaglas Parsol toughened tinted glass in design of the recently completed National Glass Centre in Sunderland.

Solaglas Glassfacts
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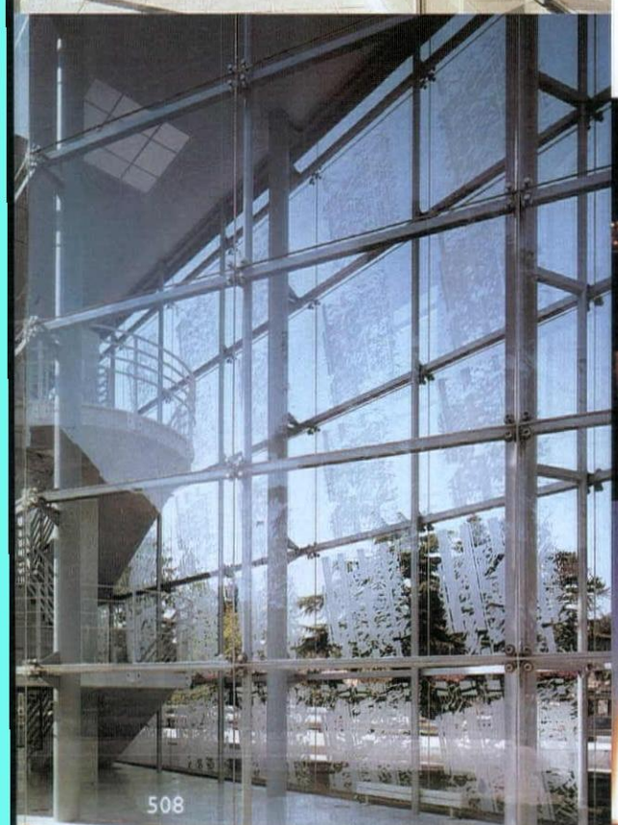
Cladding systems, used here for the exterior of the Absolut building in Åhus, Sweden, and including Paroc Fire Proof and Structural wool panels.

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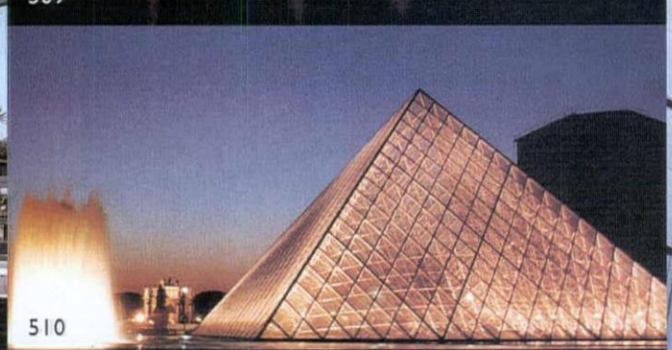
512 KAWNEER

Architectural aluminium systems. HMA Architects specified Kawneer for the butterfly wing roof of the Oasis Lakeland Holiday Village in Cumbria. Working with CAP Aluminium the firm provided a specially developed version of K Series 1200 slope glazing system.

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508


509


510


511


512



The Center, Queens Road, Central, Hong Kong

Macalloy High Tensile Stainless Steel Bars and Fittings
were used to support the glass facade.

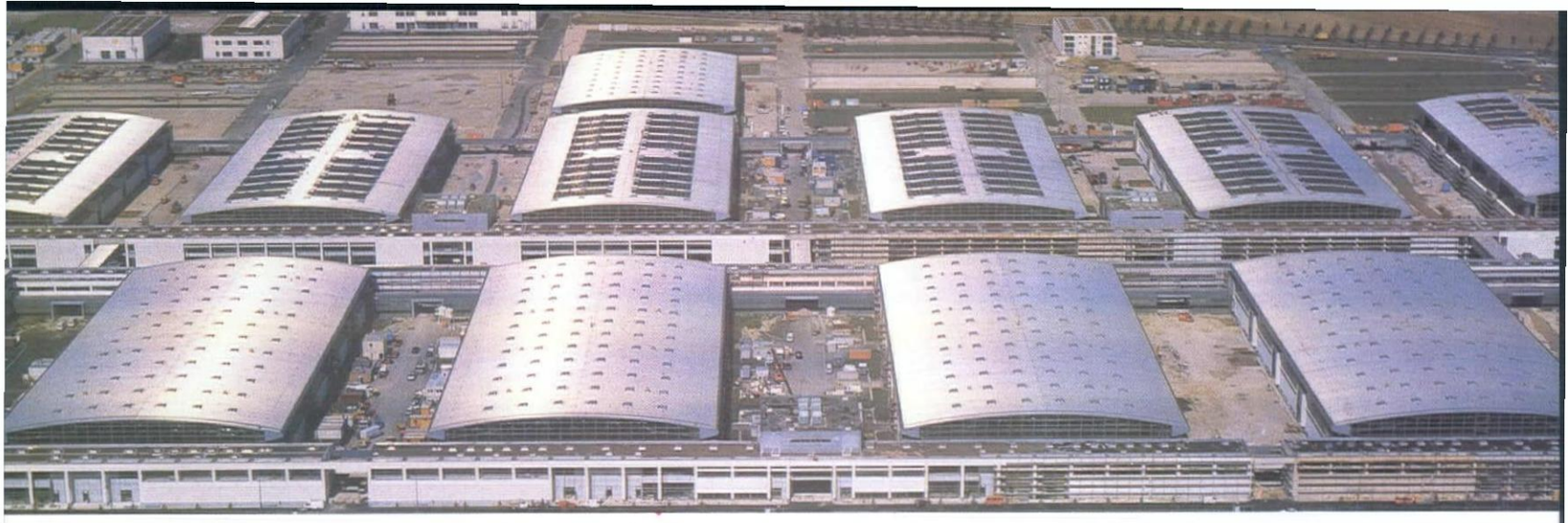
Architect: Dennis Lau & Ng Chun Man Architects & Engineers
Contractor: United Reliance Corporation Ltd
Photograph: Courtesy of Linda Mathers

Macalloy
Bar Systems

McCalls Special Products Ltd

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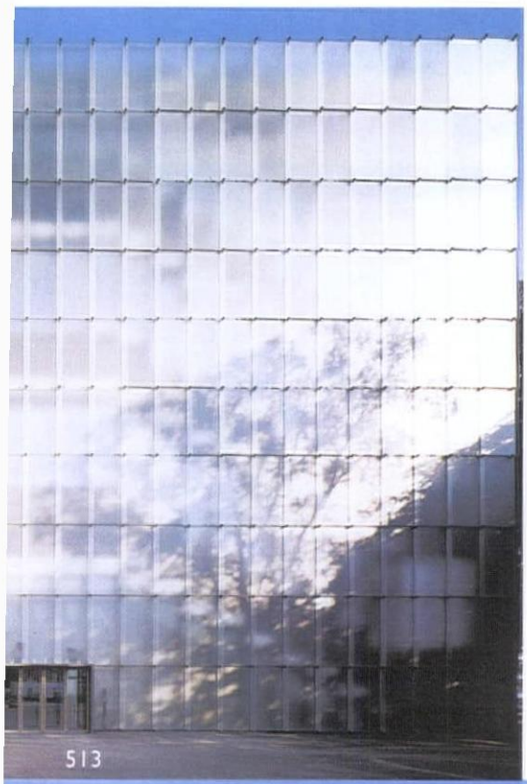
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PRODUCT REVIEW


513

513 FALLANDERGLAS

Acid-etched glass for interior and exterior of buildings. Shown here, this facade of the Kunsthaus Bregenz by Peter Zumthor.

Tel: +41 1 806 40 40
Fax: +41 1 806 40 44

514 FOCCHI

Curtain wall specialists, specified by Vincenso-Giuseppe Berti in the design of the Cassa di Risparmio, at Rovereta, San Marino.

Tel: +39 541 740055
Fax: +39 541 742167

515 ALUSUISSE SINGEN

Alucobond composite panel system, specified for cladding the platform canopy at the ICE station at Kassel, designed by Peter Schuck.

Tel: +49 77 31 80 0
Fax: +49 77 31 80 2222

516 BELLAPART

Specialists in designing and manufacturing systems for fixing panes of glass in curtain walls, skylights and geodesic domes. The firm's curtain walling was specified by Esteve and Robert Terrades in their design of the Barcelona aquarium in Port Vell Harbour.

Tel: +34 9 72 264766
Fax: +34 9 72 267666

517 SEELE

Glass envelope, specified by Adrien Fainsilber for the exterior of the Musée d'Art Moderne et Contemporain, Strasbourg.

Tel: +49 821 24 94 0
Fax: +49 821 24 94 100

518 MN

Welltec corrugated, trapezoidal and textured metal sheets from Metallwarenfabrik Neustadt, fabricated to order.

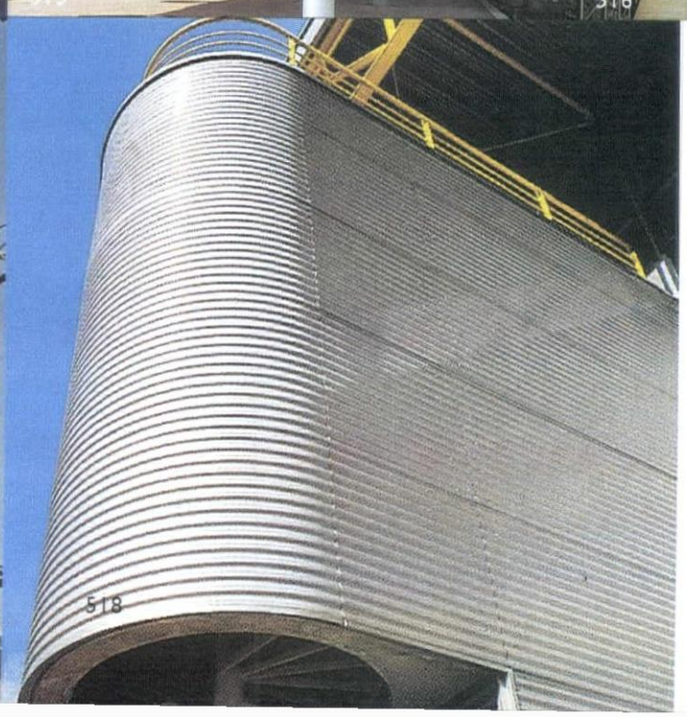
Tel: +49 4561 5 17 90
Fax: +49 4561 51 79 70


514


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Specifier's information



Sovereign

Sovereign Stainless Fabrications have recently completed a challenging project at the retail development, Kings Walk Mall, off Kings Road, London by architect Damond Lock Grabowski & Partners. The project involved three staircases with balustrading in the Virgin Megastore. Sovereign designed the curved staircases, undertook structural calculations and installation. The design incorporates curved and spiralled channel stringers which are finished with an opaque opal metallic polyester powder coat, as is the support structure. Treads are folded stainless plate with a diamond raised pattern. Tel: +44 (0)114 276 9192: fax: +44 (0)114 276 3700; email ian-e@sovereign-stainless.co.uk

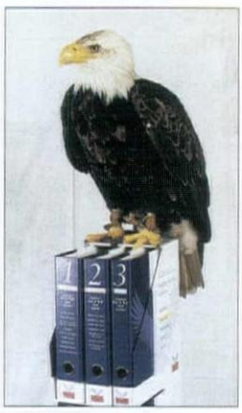
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Rigidal

Rigidal Industries' aluminium cladding profiles were chosen for the roof and walls of the Bromley Indoor Bowls Centre in Kent which was designed with the Sports Council as a benchmark for similar projects throughout the country. The Lottery-funded project uses Seamline Ziplok 400 standing seam profile on the roof, which was rolled and curved on site using Rigidal's mobile roll former, and Classic 20/100/1000 on the inside and outside walls. The Ziplok is embossed mill finished aluminium, while the walls are PVF2 finished in dark and light green on the outside and white on the inside.
Tel: +44 (0)1905 754030
Fax: +44 (0)1905 750555

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Ward Building Components

Ward Building Components, the UK's leading manufacturer of roofing and cladding systems has launched a three-volume, full colour compendium to help specifiers and architects understand today's building performance issues. The book equips the specifier with the information required to provide clients with complete building envelope solutions. It deals with all the relevant contemporary issues: air leakage, thermal performance, life of product, fire safety, moisture resistance and health and safety issues. The compendium complements the extensive service Ward already provides.
For further information tel: +44 (0)1944 712000; fax +44 (0)1944 710555.

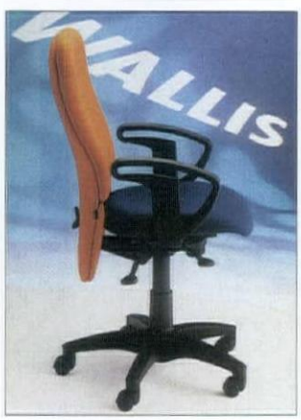
902 on AR enquiry card



White Partridge guide

Bolton-based louvre and solar shading specialist, White Partridge, has published a new 12-page guide to its products and services. With over 30 colour photographs of completed installations, the brochure shows how architects and contractors in the UK have used the company's products to striking effect on a complete range of building types and styles. Also, many of the pictures feature previously unpublished louvre and solar shading systems developed by White Partridge over the past year. A copy of the new brochure can be obtained direct from the company on +44 (0)1204 709419. Details of the entire product range are on the company's web site: http://www.whitepartridge.co.uk

903 on AR enquiry card



Wallis Office Furniture

Wallis Office Furniture has exhibited for the first time in Europe at Orgatec, their latest range of operator chairs – the '9000' – that provides an unrivalled level of comfort and versatility. Modern materials and technology combine with superb build quality to ensure elegant simplicity and beautifully-balanced proportions. The '9000', with its variety of adjustment features, 'tailor fits' the chair to the user. Three back heights, two seat sizes, two sophisticated mechanisms and optional seat depth adjustments, together with retro-fitted gently-curved arm rests and advanced adjustable arms, add to the comfort of the eight models in the '9000 Collection'. Tel: +44 (0)181 500 9991; fax: +44 (0)181 500 1949.

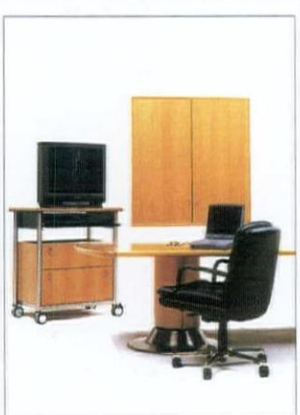
904 on AR enquiry card



Koncorde

Curved glazed walls are just one feature of the Unity partitioning system installed by Margolis Office Environments, the interior contractors, to construct cellular offices and a staff rest area for Micro Warehouse at their new high-tech office facility at Borehamwood. Specifically designed for fast-track installation, 'Unity' is a fully relocatable, dry construction office partitioning system manufactured by Koncorde Unity – the specialist partitioning supplier. Further information on 'Unity' and other partitioning systems supplied by the company is available from Koncorde Unity Partitioning Systems Ltd. Tel: +44 (0)181 665 6997; fax: +44 (0)181 665 6873.

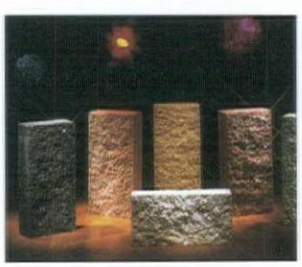
905 on AR enquiry card



Geiger Brickel

Following the successful launch of its 'Broadcast' range of video conferencing furniture earlier this year, Geiger Brickel, the leading US manufacturer of high quality wood furniture and seating, is extending the system with the introduction of further components including media trolleys in varying heights, which can be fitted with storage as required, wall mounted panels for visual display material such as flipcharts and a mobile easel specially designed for presentations. The system has been developed to be technology friendly and includes tables in nine different shapes. An extensive range of complementary seating is also available. Tel: +44 (0)171 250 1707; fax: +44 (0)171 253 4062.

906 on AR enquiry card



Forticrete

Five new colours have been launched in Forticrete's Hallmark range, the innovative splitface masonry with the exceptionally bright appearance. Hallmark blocks include fine, random, bright aggregates which catch and reflect light to create a vivid natural sparkle. Six colours – Diamond, Jet, Ruby, Gold, Jade and Pearl – now make up the Hallmark range which offers an extremely prestigious appearance to any building. Blocks come in a variety of sizes: nominally 95mm thick, in face coordinating sizes of 450x225mm and 400x200mm. Manufactured to BS6073:Part 1:1981, this dense material has high compressive strength capability. Tel: +44 (0)1749 880441; fax: +44 (0)1749 880551. Website: http://www.forticrete.co.uk

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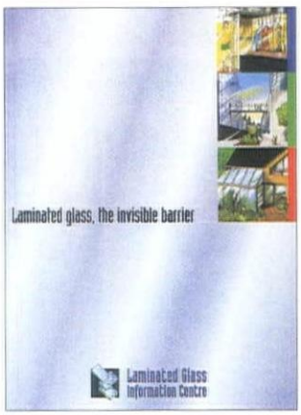
Specifier's information



Forticrete

Forticrete has supplied its Regency range of masonry in three shades, three course heights and three course lengths on a Middlesbrough supermarket. Cleveland sandstone, historically used extensively in the area, has a large amount of iron but in varying proportions, giving it a random shade effect. Forticrete's Regency is a fine reconstructed stone product with a natural look. Used in three shades, it has successfully replicated the appearance of stone at a far more affordable price. Three colours – Yorkstone, Bathstone and Straw – were used in course heights of 140, 215 and 290mm, each of which had 215, 328 and 440mm course lengths.Tel: +44 (0)1429 838001; fax: +44 (0)1429 836206. Website: http://www.forticrete.co.uk

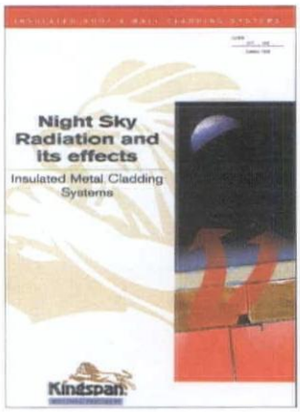
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Laminated Glass Information

Hot off the press from the Laminated Glass Information Centre (LGIC) is a colourful new set of literature. Available free, they are packed full of useful information on the properties and benefits of laminated glass in various application situations. There are four leaflets in the set, targeted at both the domestic and commercial sectors. The areas covered are shops, banks and building societies; public buildings and offices and homes. A general leaflet also gives details about laminated glass and its qualities. If you would like to receive copies of these free leaflets please contact the LGIC. Tel: +44 (0)171 499 1720; fax: +44 (0)171 495 1106. Email: 6921165@mcimail.com

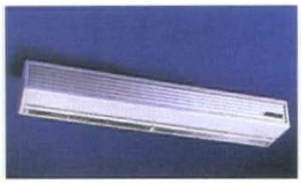
909 on AR enquiry card



Kingspan

Exhaustive independent research on Night Sky Radiation (NSR) commissioned by Kingspan could sound the death knell for built-up roofing systems, concluding that NSR significantly impacts upon the performance of metal built up cladding as the thermal insulation requirements are increased to comply with the building regulations. Kingspan concluded that cooling occurs to an extent which dramatically increases interstitial condensation on the underside of weathering sheets. If the moisture soaks into the insulant, thermal performance can be dramatically affected. Contact Alan Murtagh, tel: +44 (0)1352 716110; fax: +44 (0)1352 716161.

910 on AR enquiry card



Thermoscreens

Thermoscreens have always been at the forefront of air curtain design, with the introduction of concepts and continual design updates maintaining the company's position as world leader in air curtain manufacture. The development of the Compact range is a good example of Thermoscreens commitment to extending the capabilities of the air curtain system. Thermoscreens have focused on achieving optimum performance for their air curtain products, the new Compact takes their Premier concept to its limit, offering the advantage of high speed linear air flow developed using high-power fan motors coupled with the smallest case size in its class. Tel: +44 (0)1703 254731; fax: +44 (0)1703 266563.

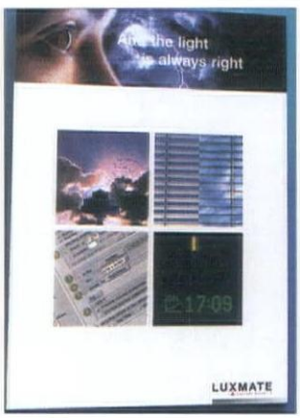
911 on AR enquiry card



Hansen Windows

A new development of executive apartments in St John's Wood, London, designed by Michael Squire & Partners has recently been completed. Hansen Windows Ltd has been responsible for the design and supply of over 200 Scandinavian Redwood windows and a number of external doors for the project. Double vacuum impregnated, Scandinavian Redwood frames and casements with hardwood sills, incorporating Titon ironmongery and multi-point locking devices, have been supplied by the company's Danish craftsmen. Timber used by Hansen is from all sustainable sources and includes American Oak, Mahogany and Scandinavian Pine. Tel: +44 (0)1234 713151; fax: +44 (0)1234 240148.

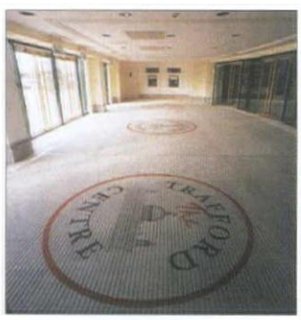
912 on AR enquiry card



Luxmate

Luxmate Ltd has released a new brochure detailing the features and benefits of the company's dynamic Lighting Management Systems. The new brochure concentrates on all the most important facets of lighting management, including the human aspect, presentation, performance, economy and user-friendliness. Focusing on the acknowledged connection between poor artificial light and stress, Luxmate has adopted a modern approach towards lighting management, promoting light that is dynamic and healthy. The system offers perfect glare control and ensures the right amount of daylight is obtained at any given time for the correct lighting mood. Tel. +44 (0)171 903 5035; fax: +44 (0)171 903 5036.

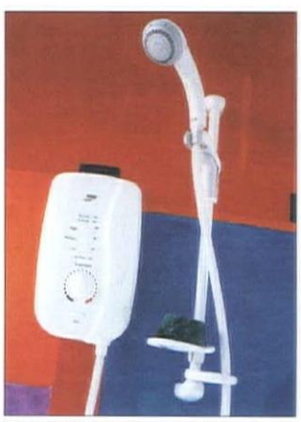
913 on AR enquiry card



C/S Group

The Trafford Centre in Manchester is one of the last huge out-of-town shopping centres and amenity complexes of the 1990s and a fitting monument to the redevelopment of one of Britain's greatest cities. The centre opened this year to a flood of visitors – several thousand per day – and the wear and tear on the building will be immense. Guarding against this onslaught will be C/S Group's Pediluxe entrance matting system, installed at all main entrances plus the two revolving door entrances into the Orient Food Court and in the entrance of the Peel Suite of offices. It comprises a series of extruded aluminium profiles fitted with a tread material to suit the application. Tel: +44 (0)1296 399700; fax: +44 (0)1296 399444.

914 on AR enquiry card



Mira Sport from Caradon

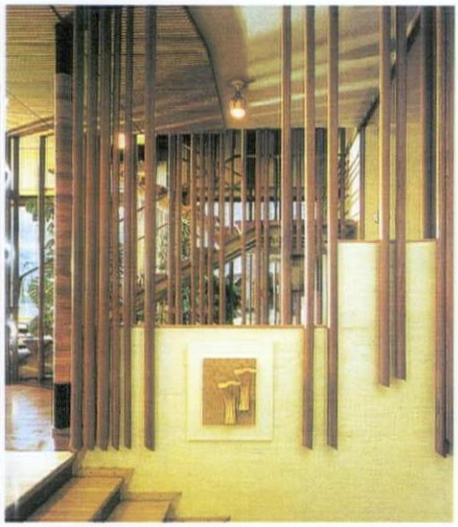
Mira Showers, UK market leaders and a key Caradon Plumbing Solutions brand, is delighted to introduce the best all year round performance electric shower – the new Mira Sport. Each pack contains an installation template with a brass inlet connector for strong connections and a removable access tunnel enabling easy installation for cable and pipe connections. The electric shower is available in three power ratings: 7.5kW, 9.0kW and a high performance 10.8kW and has a gradual delayed turn off to protect the user. In a choice of colours: white, white/chrome, white/gold, it is supplied with adjustable spray handsets designed to resist limescale. For further details please call 0870 840 0035.

915 on AR enquiry card

Finnish finesse

ALVAR AALTO: VILLA MAIREA

Edited by Juhani Pallasmaa. Helsinki: Alvar Aalto Foundation, Mairea Foundation. 1998. FM 350 hardbound, FM 250 soft



The famous balustrade of the Villa Mairea: an abstraction of forest rhythms.

The Villa Mairea at Noormarkku in the west of Finland is one of Aalto's great pre-War masterpieces which has come down to us virtually in its original state (it was finished in 1939, just before the succession of conflicts which were to tear Finland apart). It was designed as a family house for the young Marie Ahlström and her husband, Harry Gullichsen, who became head of the Ahlström business, one of those nineteenth-century Scandinavian concerns which married forestry and industry in idyllic country settings. It stands in the forest on a ridge above the picturesque wooden workshops on the flat land near the river.

Though because of the wars, it was never used exactly as the architect and owners intended (hence perhaps its state of preservation). As Christian Gullichsen (son of Marie and Harry) says in the preface to the sumptuous new book on the house, it 'is a sensual work infused with empathy. The rational dimension is subordinate here'. All the essays in the book help to reveal an extraordinarily complex work: Göran Schildt writes about the family history; Aalto himself is present with an essay on the development of the design; Juhani Pallasmaa contributes a most perceptive essay on the image and meaning of the place, and Renja Suominen-Kokkonen analyzes the marvellous details that have influenced generations of architecture students. The words are supplemented with Aalto sketches, new measured drawings and absolutely stunning photographs by Rauno Träskelin.

Aalto emphasized that he sought to apply 'a special concept of form connected to modern painting ... [which] may be on the way to developing a set of forms with the capacity to evoke personal experiences in connection with architecture, superseding historicist ornamentation'. And working extremely closely with the Gullichsens, he proceeded to evolve a series of volumes which would have special meaning to the family, especially Marie (who was incidentally a distinguished collector of modern pictorial art). Pallasmaa analyzes the Braque-like collage of images, old and new, with which Aalto created his wonderful interlocking places. Both Pallasmaa and Suominen-Kokkonen explain how the forms painstakingly and daringly evolved after huge efforts on the architect's part.

The house is one of the half dozen of the century that you must visit. If you can't, this book is the next best thing. PETER DAVEY

Barometer of the times

CLIMATE CONSIDERATIONS IN BUILDING AND URBAN DESIGN

By Barach Givoni. London: John Wiley. 1998. £50

Written by an international authority, this book gives global coverage of the subject. It traces the relationship of climate and building design through to urban design and provides a climatic classification with related design issues.

Designers of the built environment take a brief and present their conclusions as a project. There is not usually much time for analyzing the brief and, once started, a project needs to be pushed along. Architects are enablers, and this book is written for them.

Engineering is slightly different: a project not only has to be built, it has to work. Engineers expect to analyze a project and produce a mathematical model of its behaviour. This book is almost written for them. It gives a comprehensive survey of important factors to be considered, but does not always help with the analysis. Isolated issues are dealt with in a mathematical way, but the treatment does not always help with drawing design conclusions.

When discussing factors affecting comfort, authorities tend to emphasize particular parameters, but Givoni gives proper attention to all: air temperature, humidity, air movement, and radiation. However, as each factor is treated separately, essential points are lost: for example that strong sunlight from one side can compensate for a low air temperature all round and a strong breeze can make a high air temperature perfectly comfortable. It is important that these links are understood, even by the EEC.

The book has many useful features. Various comfort indices are compared, providing a handy reference. There is a good comparison of the performance of types of glass, without confusing trade names.

Measured results are given for a variety of design ideas: for ventilation, wet construction, temperature reduction in an orchard. It only remains for mathematical engineering models to be developed so that the ideas can contribute to new designs. There is a thorough analysis of buildings for different climates, including topics like the drifting of snow in parks, tree belts, wind breaks, and sound isolation.

This book does achieve its ambitious aim, even if it doesn't offer all the engineering answers. At least there is something left over for me to do. MAX FORDHAM

Taking the chair

THE CHAIR: RETHINKING CULTURE, BODY AND DESIGN

By Galen Cranz. London: Norton Books. 1998. £19.95

This is an interesting book charting the influences, historical, social and ergonomic, on the design and evolution of the chair, from its primitive beginnings to the current day.

Chapter by chapter, the author analyzes the effect of each of these influences, combining facts and figures to support her theories. Her observations relating to the public perception of comfort, versus ergonomics and the influence of status in chair selection, are illuminating and she uses them to great effect demystifying such design classics as the Barcelona chair.

Despite the analytical nature of the book, Cranz has managed to create a fascinating read: sadly the text is let down by the poor quality of the illustrations. Nevertheless, this is a must for any aspiring or indeed practising furniture designer, although it might be put to better use by first insisting it is read by all potential clients, as the problems she identifies relate to misunderstanding of the subject by professionals and users alike.

RODNEY KINSMAN

Structures in time

STRUCTURAL ANALYSIS: A HISTORICAL APPROACH

By Jacques Heyman. Cambridge: Cambridge University Press. 1998. £35

We live and work in an age when the closest most of us involved in the design of structures get to structural analysis is the selection of the appropriate software package and the manipu-

lation of the data to model the problem as effectively as possible. Jacques Heyman's little book is a timely reminder that we divorce ourselves from the foundations of our profession at our peril.

As Jacques Heyman points out the business of the structural designer is formulation of the problem to determine how the structure carries the loads. When these forces are known, the next stage is to find out whether they can be carried by the member selected. The difficulty is that the latter is needed to determine the former so that design becomes a matter of trial and error until a satisfactory answer is reached. Much of this process involves the designer in the exercising of his 'intuition', in short cutting what is frequently a very long winded process. What is clear from this book is that what we regard as 'intuition' today is based on the historical developments of structural analysis of the past three centuries. This is a demanding book but one which yields the rewards of a firmer theoretical basis for the student and practising structural designer alike.

In recounting the beginnings of a rational approach to the science of building, the author tells the story of the construction of Milan Cathedral where work was totally stopped in 1399. One of the French experts consulted drew up a long list of points in which the work was defective. Having no reasoned reply, the Italians retorted: '*scientia est unum et ars est aliud*' – theory is one thing, art is something else. The French master's response was: '*ars sine scientia nihil est*'... Architects take note.

BJÖRN WATSON

The book of many tongues

THE MULTILINGUAL DICTIONARY OF ARCHITECTURE AND BUILDING TERMS

Edited by Chris Grech. London and New York: E. & F. N. Spon. 1998. £55

As Europe becomes more unified, this volume should do well in the building and architecture market. The dictionary enables us to flit from construction terminology in English to the other major European languages. It lists alphabetically 2500 English headwords with their equivalents alongside in French, German, Italian and Spanish. Thesaurus-like, words and terminology in French, German, Italian and Spanish can be found in the index where a number refers the user back to the English headword in the main body of the book.

Although this is a useful book for superficial translation, often one English word will have various alternatives in another language – especially in German – and the different nuances are not explained in English (although they sometimes are in German). Could make for some interesting detailing. JULIA DAWSON

Building and user

OCCUPYING ARCHITECTURE

Edited by Jonathan Hill. London: Routledge. 1998. £17.99

This collection of essays is supposed to deal with the interface between building and user, not necessarily at a theoretical level alone. Philip Tabor and Jeremy Till make elegant, thoughtful, properly argued contributions: in Till's case, a convincing attack on the naive suppositions that lent credibility to what is called 'community architecture'. Unfortunately, too much of the rest, some of it irrelevant, and silly, fails to rise above the level of a moderately interesting dinner party conversation. TIMOTHY BRITTAIN-CATLIN

Packed in

THE ARCHITECTURE PACK

By Ron van der Meer and Deyan Sudjic. Datchet, Berkshire: Van der Meer. 1997. £29.99

The Architecture Pack is a new approach to getting kids interested in architecture: a big format publication book-like thing in hard covers stuffed with things to do. On virtually every spread, there are cardboard pop-ups of famous buildings produced to Ron van der Meer's design by toiling Chinese factory workers; there is a model to make (of the Schröder House), a tape by Deyan Sudjic and lots of gadgets intended to show things as different as the geometry of a Gothic arch, how timber-framed houses were built, and how Baron Haussmann drove his boulevards through Paris.

The pack gives a quick trip through the elements of architecture, from building to proportion, with a sort of history interwoven. Though something that jumps from the tepee to Falling Water across a spread might be called a bit abrupt. There are profiles of famous architects idiosyncratically selected by Sudjic (Richard Meier, Palladio, Corb, Gaudí and, curiously [for the Glasgow vote?], Greek Thomson get parts: Aalto, Bramante and Michelangelo are among the many omitted).

Still it's easy to grumble. This is not like some other superficial quick trips through architecture, there is a great deal of thought and ingenuity in most of it. And it's great fun. P.D.

The twentieth century at a Glancey

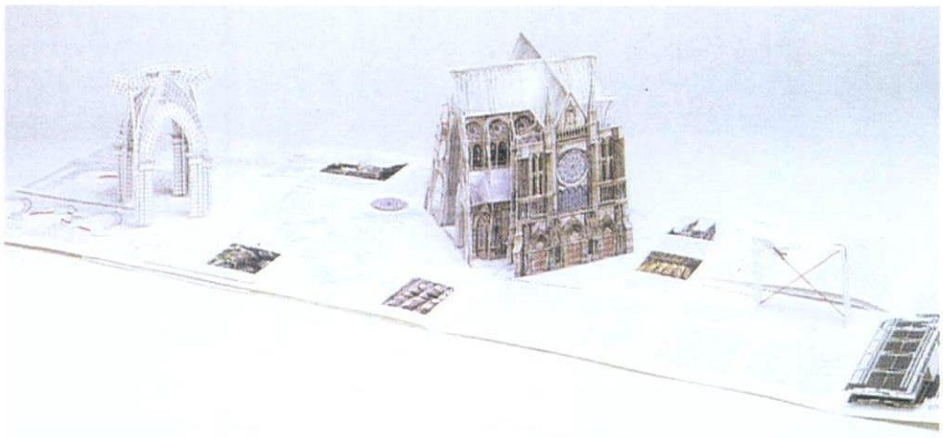
C20TH ARCHITECTURE. THE STRUCTURES THAT SHAPED THE CENTURY

By Jonathan Glancey. London: Carlton Books. 1998. £29.95

If you like history reduced to soundbites, Jonathan Glancey is your man. His *C20th Architecture*, which ranges from Voysey's Orchard (in the Arts and Crafts section) to Foster's Chep (*sic*) Lap Kok (in Robotics), has one pretty picture a page accompanied by a short, punchy and glib text. Some of the juxtapositions are extremely well chosen, for instance, Ando's austerely elegant Church of the Light faces the vulgarities of Hundertwasser's pop housing in Vienna, the frothy Hindu temple in Neasden is opposite Zumthor's elemental thermal baths at Vals.

Glancey remarks of the Vals building that it is unusual to find an architect of such quality working in 'a century of hurriedly consumed images'. How true, and how helpful of Glancey to assemble nearly 400 of them, almost completely without the vexing distractions of drawings, interiors, or notes about where he found his ideas and quotations. In the recent armada of books on twentieth-century architecture, Glancey's vessel is perhaps the fattest in beam but the thinnest in content.

An old boy of this magazine, Glancey can do better than this: marks 3/10. P.D.



Typical spread from *The Architecture Pack* folded out.

DELIGHT



Photograph: John Back

Synthesizing French topiary and Japanese Zen influences, this splendidly imaginative landscape installation in a New York square brings colour and illumination to the darkest of winter days.

Designed by landscape architect Ken Smith and lighting designer Jim Conti, this glowing environmental art installation temporarily transformed and enlivened a site in New York's financial district last winter. Located in Liberty Plaza, a public square between Broadway and Trinity Place, the project was installed in time for last year's winter solstice and ran through the holiday season, imparting a sense of light, mystery and pleasure to the shortest days of the year.

Through a limited palette of materials and minimalist geometry, the project synthesized French topiary and Japanese Zen garden influences. A series of conical topiary lanterns 16 feet high were used to define a garden space within the crowded urban setting. A single large cone 24 feet high anchored the overall composition. Constructed from vinyl awning fabric, the cones were placed over existing light fittings. Special fluorescent lighting within each cone created changing effects of light and colour, and some of the cones were equipped with electronic sound emitting devices. In addition, 250 wind chimes were placed in the surrounding trees. The combination of sculptural forms, soothing sounds and changing light created a curious yet entrancing, otherworldly landscape, intended to induce feelings of calm and contemplation. The busy square was transformed into an ephemeral winter garden full of sensuous colour and mellifluous sound, dissolving conventional notions of space and time. C. S.