

Conversion Funeral Parlour Cemetery, Aalen | D C 18 Architects, Stuttgart | D

Sustainable metamorphosis

OKALUX functional glazing provides for **optimal energy efficiency** with the highest possible **convenience for the user** – in refurbishments as well as in new buildings.

Our insulating glass systems are convincing in their function and aesthetic appeal. No matter whether you prefer expanded metal, precious woods or alabaster! **We get your ideas into the glass.** Just call us.



We take architectural glass a step ahead.



1359 VOLUME CCXXVII WWW.ARPLUS.COM



- 024 Shigeru Ban's new Pompidou Centre in Metz nears completion
- 027 Outrage: Anish Kapoor's Olympics monument is a confused mess
- 031 Birds strike the right note in the Barbican's art installation
- 032 An interview with Daniel Libeskind, master of memorials
- 035 Investigating the relationship between form and social conflict
- 037 A look at the life of Austrian architect Raimund Abraham
- 038 World architects debate the future of smart buildings over lunch

BUILDINGS

041 Map

129

SANAA

Rolex Learning Centre, Lausanne, Switzerland

oso 130

Juan Domingo Santos

Water Museum, Lanjarón, Spain

131

056

David Chipperfield Architects

Museum Folkwang, Essen, Germany

132

Baumschlager Eberle

Diakonie church and nursing home, Düsseldorf, Germany

oes 133

Heikkinen-Komonen Architects

Hämeenlinna Provincial Archive, Hämeenlinna, Finland



074 Thomas Heatherwick Studio's quivering seed-studded pavilion for Expo 2010 Shanghai

Cover Daniele Mattioli

3/13 Difference

082 The relationship between climate, contruction trends and human influence in West African vernacular architecture

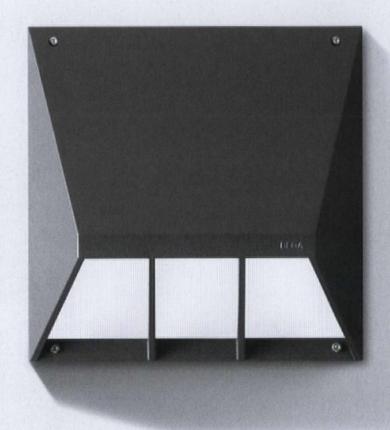
MARGINAL.A

088 Photographic chronicles of the changing urban US landscape; atmospheric art in Beijing; Matteo Thun's installation in Milan; SCI-Arc revives architectural drawing

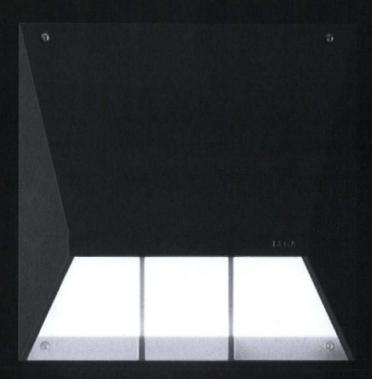


098 Delight

A photographer's rare snapshot of a Long Island power station expresses a love of heroic, industrial architecture



Day after day.

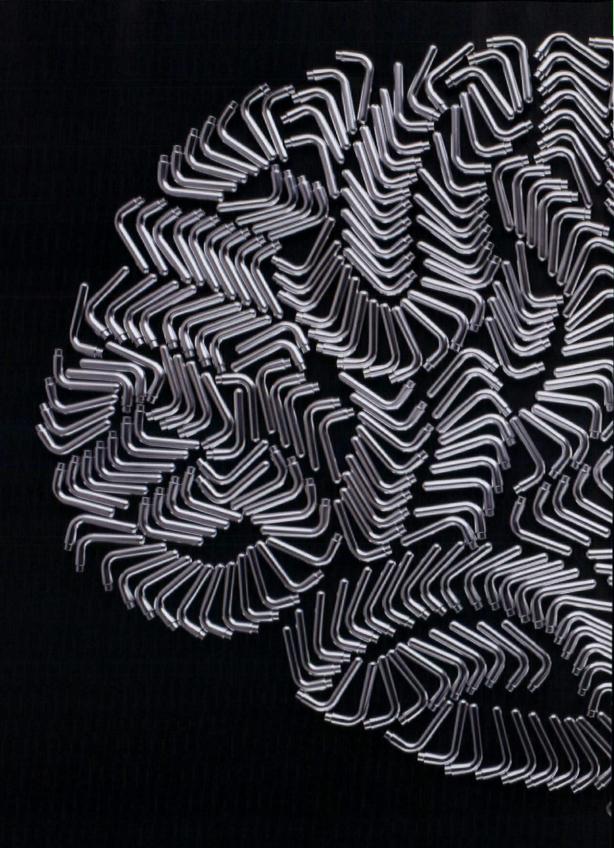


Night after night.

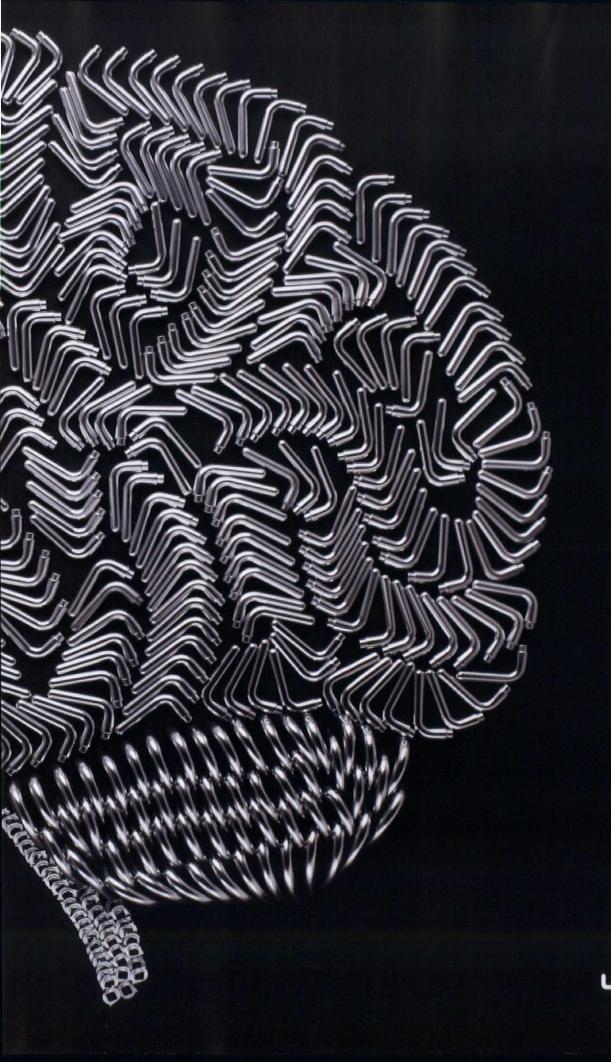
BEGA

BEGA - Light outdoors.

Distribution in the U.K.: ZUMTOBEL Lighting Limited Unit 4 The Argent Centre Pump Lane, Hayes Middlesex, UB3 3BL Tel. 0044 (0) 20 8589 1833 Fax 0044 (0) 20 8756 4833 www.bega.com



Intelligence fosters a species' ability to act under aggravated circumstances.



FSB It's in your hands.



unbroken glass.

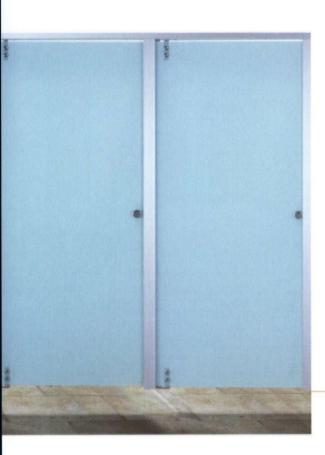
₦ ♦ ð thrislington cubicles

Product: oasis

Scale:

Contact: t +44 (0)1244 520 677

w www.thrislingtoncubicles.com e info@thrislingtoncubicles.com



We've buried some little treasures in Oasis Glass. Specially produced ceramic glass that cannot be seen through. The pivoted doors eliminate large metal patches. Vertical posts are suspended from the headrail which hides our unique patented hydraulic door closer. Feet are set out of sight from front view. So all you do see is glass, glass and more glass.



Stainless steel lock is easy to use for the disabled. Nylon edge cannot scratch receiver.



Top pivoted doors enable minimal stainless steel strips instead of large, unsightly metal patches.



CNC turned stainless steel feet. Bolted into the floor and set out of sight 200mm. back from front of cubicle.



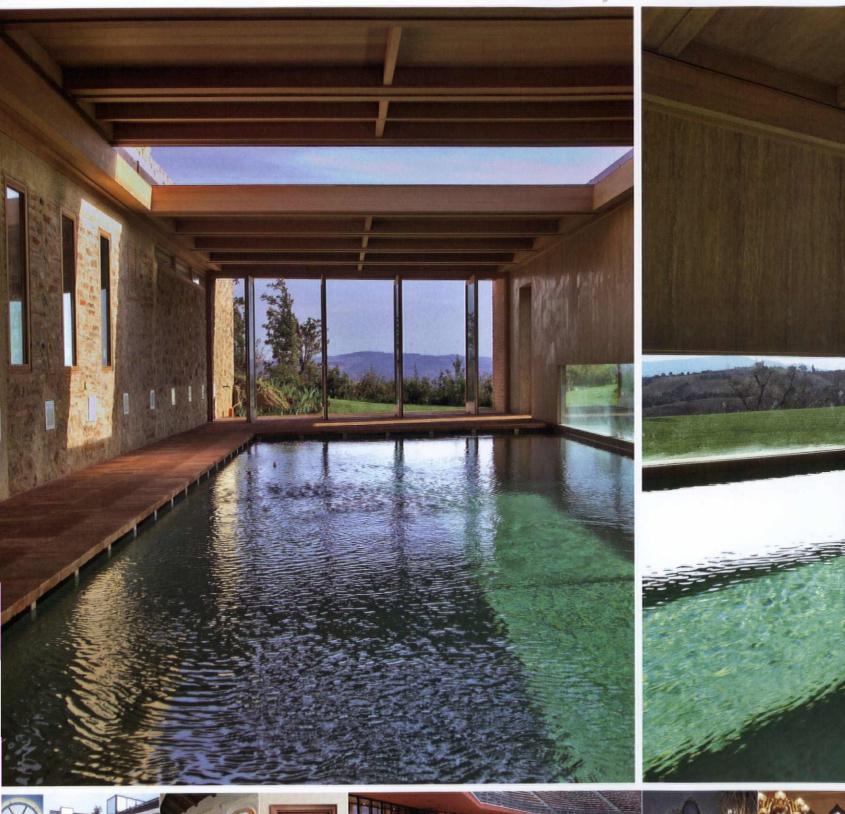
Oxygen

Designed for your creations, inspired by your visions

Cool, sophisticated glass, beautiful real wood veneer and the versatility of laminate. Contemporary materials to match contemporary design.



CUSTOM MADE WINDOWS BY CAPOFERRI Modern by tradition since 1894









+39 035934074 www.capoferri.it info@capoferri.it

À la Mode by Maxwood

Create with confidence.

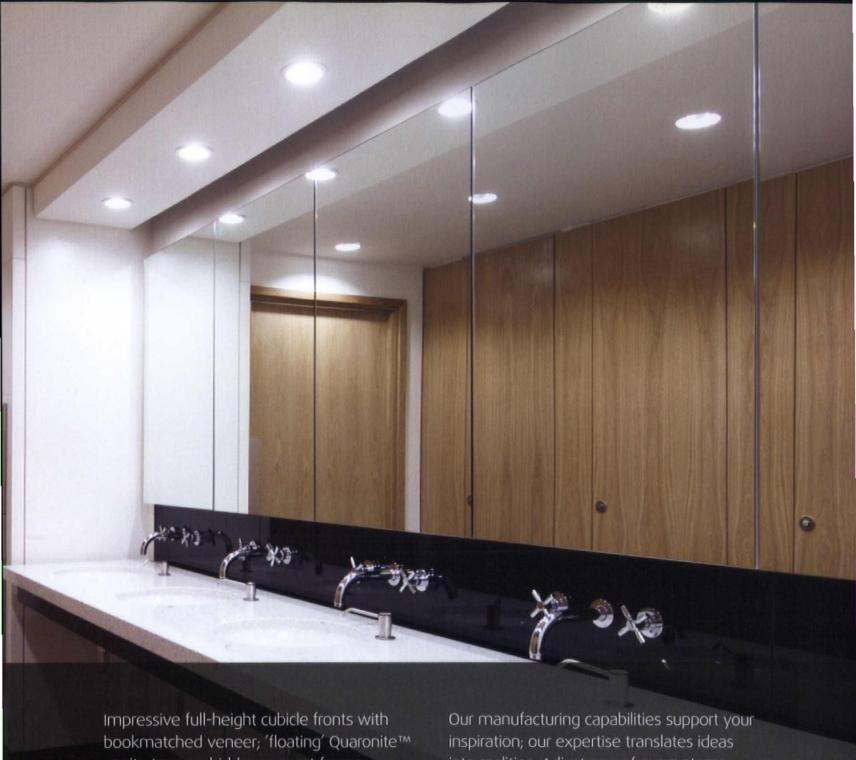








perfecting the washroom environment call 024 7662 1122 www.maxwoodwashrooms.com



Impressive full-height cubicle fronts with bookmatched veneer; 'floating' Quaronite™ vanity tops on hidden support frame; back-painted glass panelling behind urinals. Another unique À la Mode washroom.

Our manufacturing capabilities support your inspiration; our expertise translates ideas into realities. Adjust one of our systems or create something new – we work with you either way.





Chiss by trimo, represents the next generation of modular building envelope solution — a facade system combining total functionality and aesthetics for all architectural and building applications.

©biss by trimo is available using Corus Colorcoat Prisma®. Colorcoat, Confidex and Prisma are registered trademarks of Corus.

Your smart choice for the building envelope. Qbiss by trimo

Qbiss by trimo

The ultimate 5 in 1 building envelope solution:

- · High-tech aesthetic
- Cost-effective
- Self-supporting
- · Fire safe
- Insulated



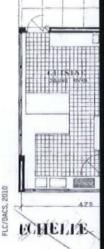


A £10,000 prize for the design of a one-off house

The private house occupies a unique position both in the history of architecture and human imagination. Beyond its core function of shelter, it is an object of fantasy, a source of delight, a talisman and a testing ground. From Corbusier to Koolhaas, the progress of modern architecture can be tracked through a succession of pioneering individual houses. It is the one commission that virtually all architects tackle at some stage in their careers and is still an

important rite of passage for young designers. Regardless of scale, site, programme or budget, the house offers the potential for genuine innovation and it remains critical to the ferment and crystallisation of new architectural ideas.

AR House celebrates this wellspring of creativity with a major new award of £10,000 for the design of the best one-off house. All projects must be built and there is no age limit.



PERBASSE



Entries will be judged by an international jury of Sou Fujimoto (Japan), Alberto Campo Baeza (Spain) and David Chipperfield (UK), chaired by Catherine Slessor, AR editor.

Closing date for entries is 24 May. www.arhouse.co.uk

For more information email leah.stoker@emap.com or call 020 7728 3743. For sponsorship opportunities email james.macleod@emap.com or call 020 7728 4582.

GIRA

a laptop computer or an iPhone. The user can adjust the lighting, blinds or heating from a central point with installation of a house in the simplest possible way - either with the touch display of a Gira Server Client 15, just one finger - and that for the entire building. In addition, personal colour design, background images, e-mail or news services also offer many options for individual use. The Gira Interface has been presented The new user interface of the Gira Home Server 3 controls the intelligent Instabus KNX/EIB electrical the 2008 iF gold award and the 2009 Plus X Award. More information: www.gira.com/interface Gira Interface - control complex house technology with just one finger

Visit us at Light+Building 2010 in Frankfurt/Main from 11. to 16. April: Hall 11.1, Stand B17 and B33.



Can radically abstracted architecture sustain encounter and engagement?

People meet in architecture' is the theme of this year's Venice Biennale, which will be overseen by Japanese architect Kazuyo Sejima (the biennale's first female director), who, with SANAA partner Ryue Nishizawa, was recently awarded the 2010 Pritzker Prize. People meet in architecture' is a characteristically nebulous theme for a biennale, capable of being appropriated in multitude of tangential ways. But in its haiku-like simplicity it contains a simple and undeniable truth. Buildings are places for encounter and engagement, and consciously or not, architecture shapes and structures these encounters.

This truth is borne out and given a new twist by SANAA's latest building, a new learning centre in Lausanne (page 42), which conceives of a new kind of loose, informal, internal landscape of undulating floors and roofs. Like balls in a pinball machine, students and staff spill and ricochet around the spaces, the idea being that the building is essentially one large room, where anyone can meet with anyone.

Some critics have questioned this extreme level of simplification and abstraction, and it might be interesting to return after the excitement of the opening has subsided, to see just how this 'big room' works in practice. Nonetheless, SANAA's determination to try and see things anew encapsulates a questing, pioneering spirit, which seems still undaunted by the challenges of scale and programme. For now, Sejima and Nishizawa should savour what seems to be turning into their annus mirabilis.

CATHERINE SLESSOR, EDITOR

IWAN BAAN
ALAN BALFOUR
O31 CRYSTAL BENNES
O82 JON BESWICK

ROBERT BEVAN
PETER BLUNDELL JONES

TREVOR BODDY

035 RALPH BRAND
TIMOTHY BRITTAIN-CATLIN

LUCY BULLIVANT GLENN COPUS

027 WILLIAM CURTIS
PETER DAVEY

DAYLA DAWSON
PAULA DEITZ
TOM DYCKHOFF
DENNIS GILBERT
FERNANDO GUERRA

024 ROLAND HALBE ADRIAN HORNSBY

064 EDUARD HUEBER
PHYLLIS LAMBERT
098 ERIC P LAVERTY

DUCCIO MALAGAMBA

074 DANIELE MATTIOLI

088 ANDREW MEAD

JEREMY MELVIN

056 ROWAN MOORE
PETER MURRAY
RICHARD MURPHY

038 RORY OLCAYTO
CRISTOBAL PALMA
KESTER RATTENBURY

042/056 CHRISTIAN RICHTERS PHIL ROE

037 RAYMUND RYAN

JOSEPH RYKWERT

050 HISAO SUZUKI

068 JUSSI TIAINEN
CHRIS THURLBOURNE
KAZYS VARNELIS
RASMUS WÆRN

091 MICHAEL WEBB TILL WÖHLER

Correction The subscription card insert in this issue wrongly states that the AR redesign was solely conceived by the AR's former art director Cecilia Lindgren. The AR wishes to make clear that the redesign was a collaboration between Violetta Boxill of Alexander Boxill and Cecilia Lindgren

Ralf Brand is a German urbanist and academic, currently based at the Manchester Architecture Research Centre. He is also an experienced consultant who has worked with communities in Germany to develop and implement local sustainability strategies. In this issue, he considers the effect of social polarisation and conflict on the urban realm

Based in London, Andrew
Mead is a seasoned critic and
writer on architecture, art
and landscape. He is also a
former reviews editor of
The Architects' Journal
and this month reviews New
Topographics: Photographs
of a Man-Altered Landscape

Raymund Ryan is an architectural critic, writer and curator of the Heinz Architectural Center at the Carnegie Museum of Art in Pittsburgh, USA. He looks back at the life of the 'incurable formalist' Raimund Abraham, who was killed in a car crash earlier this year

WINNER OF IBP MONTHLY MAGAZINE OF THE YEAR 2008 CECILIA LINDGREN – ART DIRECTOR OF THE YEAR, BSME AWARDS 2009

FOUNDED 1896

EMAP INFORM, GREATER LONDON HOUSE, HAMPSTEAD ROAD, LONDON NW1 7EJ. UK

EDITORIAL

EDITOR CATHERINE SLESSOR

SENIOR EDITOR ROB GREGORY

DEPUTY EDITOR WILL HUNTER 020 7728 4587

US CONTRIBUTING EDITORS JAFFER KOLB, MICHAEL WEBB

DESIGNER HEATHER BOWEN

PRODUCTION EDITOR ISLA MCMILLAN 020 7728 4577

SUB-EDITOR TANNAZ ALLAWAY

DIGITAL EDITOR SIMON HOGG

WER EDITOR JAMES PALLISTER

EDITORIAL ADMINISTRATOR CRYSTAL BENNES

EDITORIAL DIRECTOR PAUL FINCE

ADVERTISING

UK ACCOUNT MANAGER NICK ROBERTS

+44 (0)20 7728 4608

SENIOR CLASSIFIED SALES EXECUTIVE ASHLEY POWELL

BUSINESS DEVELOPMENT MANAGER SAM HUTCHINSON +44 [0]20 7728 4560, SAM.HUTCHINSON@EMAP.COM

COMMERCIAL MANAGER JAMES MACLEOD +44 [0]20 7728 4582

ITALIAN ADVERTISING SALES, MILAN CARLO FIORUCCI +39 0362 23 22 10, CARLO@FIORUCCI-INTERNATIONAL.COM

US ADVERTISING SALES, NEW YORK KATE BUCKLEY +1 845 266 4980, BUCKLEY@MOVEWORLD.COM

US ADVERTISING SALES, WEST COAST ERICA SPRINGER +1 323 478 9845. ERICABERICASPRINGER COM

MARKETING EXECUTIVE LUCY KEENAN

GROUP MANAGING DIRECTOR NATASHA CHRISTIE-MILLER

DIRECTOR OF ENGINEERING AND ARCHITECTURE JIM WILKINSON +44 (0)20 7728 4452

LIST RENTAL JONATHAN BURSTON

UNI-MARKETING

+44 (0)20 8995 1919, JBURSTON@UNI-MARKETING.COM

SUBSCRIPTIONS AND BACK ISSUES

PLEASE VISIT WWW.SUBSCRIPTION.CO.UK/AR/ARQI OR CALL 0844 848 8858 (OVERSEAS +44(0)1858 438 847) AND QUOTE PRIORITY CODE ARQI

UK £94
UK STUDENT £66
EUROPE £147
AMERICAS \$199
JAPAN £184
REST OF WORLD £136

AMERICAN COPIES ARE AIR SPEEDED TO NEW YORK BACK ISSUES COST £10 IN UK, £16 OVERSEAS UK: 0844 848 8858 OVERSEAS: +44 (011858 438 847

FAX: +44 [0]1858 461 739 EMAIL: ARE@SUBSCRIPTION.CO.UK

NON-DELIVERY OF ISSUES AND CHANGES OF ADDRESS

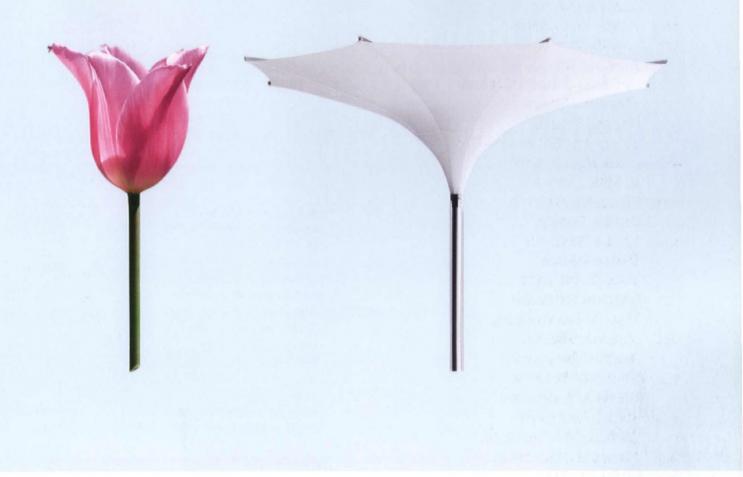
AR SUBSCRIPTIONS, TOWER PUBLISHING, TOWER HOUSE, SOVEREIGN PARK, MARKET HARBOROUGH, LE16 9EF, UK TEL: +44 (0)1858 438 847 FAX: +44 (10)1858 461 739 EMAIL: ARE@SUBSCRIPTION.CO.UK

AMERICAN SUBSCRIBERS CONTACT:
THE ARCHITECTURAL REVIEW, C/O PSMJ RESOURCES INC,
PO BOX 95.120, NEWTON, MA 02495, USA
TEL: +1 617 965 0055
FAX: +1 617 965 5152

The Architectural Review (ISSN 0003-861X) is published monthly for \$199 per year by Emap, Royal Mail International c/o Smartmail, 140 S8th Street, Suite 2B, Brookkyn, NY 11220-2521. Periodicals postage paid at Brookkyn NY and additional mailing offices. Postmaster: send address changes to the Architectural Review, c/o PSMJ Resources Inc., P0 Box 95120, Newton, MA 02495. CIRCULATION 20, 733 (AUDIT ISSUE MAY 2008)

© EMAP INFORM 2010





FORM FOLLOWS FLOWERS.

There's no two ways about it: There's only one original.

But it is available in every colour, in all sizes and in almost every country in the world.

For all weathers and any occasion. The tulip sunshades from MDT-tex: the architects of open space.

Because



METZ, FRANCE

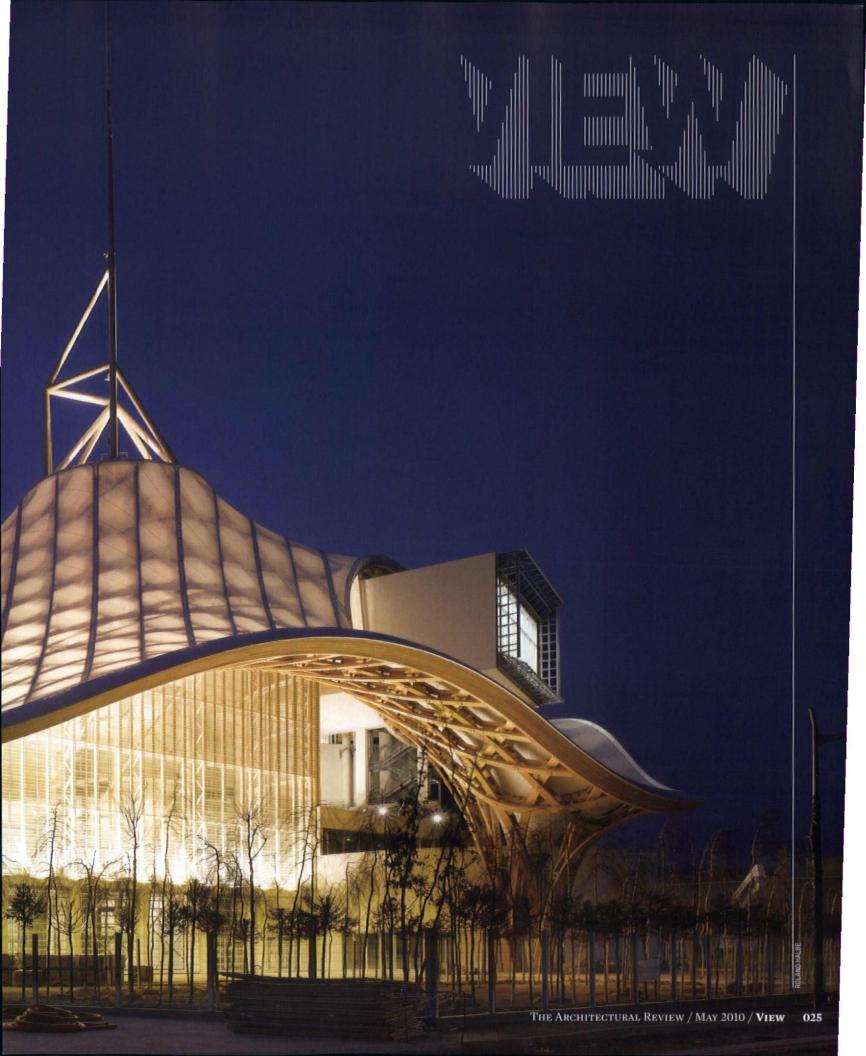
Shigeru Ban's 'Pompidou of the South' prepares to open

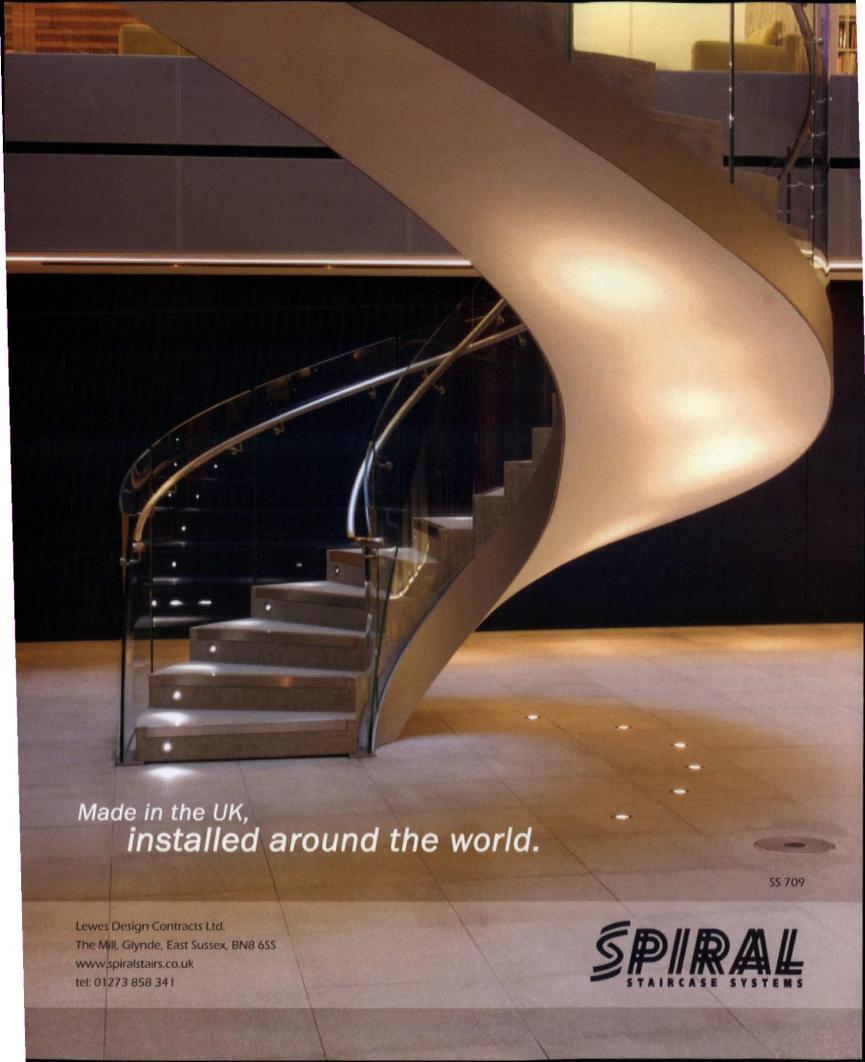
CATHERINE SLESSOR

In 1971, Renzo Piano and Richard Rogers were the surprise winners of a competition for the new Pompidou Centre in Paris; one of those epochal moments in architectural history that effectively gave birth to high-tech and kickstarted two stellar careers. Now, nearly 40 years later, Pompidou is expanding its cultural operations, with a new outpost in Metz. Shigeru Ban's

'Pompidou of the South', also the outcome of a competition, opens to the public in mid May. Dominated by a vast membrane roof that drapes languidly over the building like a giant white manta ray, it marks a pivotal ratcheting up of scale for Ban, whose output hitherto has been confined to a more nuanced and bonsai level of buildings. How will his ideas on structure and materials translate? We'll return soon to find out.









LONDON, UK

Anish Kapoor and Cecil Balmond's towering steel 'icon' for the 2012 Olympics is just a messy, meaningless, plutocrat's plaything

WILLIAM CURTIS

It started in a men's cloakroom at the World Economic Forum apparently, when steel magnate Lakshmi Mittal, the richest man in Britain, happened to bump into Boris Johnson, the Mayor of London, and they had a quick conversation about the 2012 Olympics. Johnson thought it might be a nice idea to construct an 'icon' for the Olympic site in East London, supposedly as a tourist attraction to draw people to this no-man's land of stadia and housing estates after the Games were over. Mittal possibly saw a chance to promote himself and his huge global concern, the steel production firm ArcelorMittal. A competition was launched and a jury of nabobs and pundits from the London art scene was assembled.

The winning scheme was announced on 31 March: an eccentric tower of spiralling red girders 115m tall, designed by the ultra fashionable sculptor Anish Kapoor, in collaboration with the equally fashionable engineer Cecil Balmond. This ungainly object, a sprawling steel gadget a few metres taller than the Statue of Liberty, immediately set off a search for

Below_The
ArcelorMittal
Orbit, a 115mtall structure
to be built in
East London's
Olympic Park
Next page_
The Orbit's
comparative size

comparisons in the public press: a crashed version of the Eiffel Tower, a whirligig or helter skelter from a fun fair, a recycled version of Vladimir Tatlin's unbuilt monument for the Third International (1920) with its spiralling structure and revolving chambers. The

cost was announced as being just over £19 million, of which Mittal would supply £16 million (plus the steel, of course), leaving the London Development Agency to supply the rest. In honour of the patron, it was to be called the ArcelorMittal Orbit. ____



Kapoor established his reputation as a sculptor in the 1990s with work of considerable power and enigmatic presence, and when he was invited in 2002 to do a large sculptural piece for the Turbine Hall of the Tate Modern, he came up with the extraordinary Marsyas, a red trumpet-like membrane of fabric stretched tight over a light frame, a structure designed by Balmond. In addition, Balmond has been involved in several of the Serpentine Pavilions (the most effective being Toyo Ito's, AR September 2002) and in projects designed by starchitects such as Rem Koolhaas. As an engineer, he favours complex geometries over simple ones and has explored algorithmic transformations in his structural designs. This suits those architects who like to make things twist, lean and turn, though the search for 'complexity' sometimes seems gratuitous.

With the ArcelorMittal Orbit, Kapoor and Balmond

have given birth to an unfortunate deviant that cannot claim the status of either sculpture or architecture, and which comes far too close to being a contraption in an industrial theme park to be convincing artistically. The overall form is muddled, its geometries are a mess, and there is no clear relationship between the idea and the structural means of tangled girders. But then what is the idea? The project is without any clear symbolic meaning and risks being seen as a plutocrat's self-indulgent plaything masquerading as public art. Even the notion that the ArcelorMittal Orbit is somehow 'public' may be misleading, for the viewing platform will probably require a ticket, like the wretched London Eye, that huge piece of fairground equipment which continues to treat central London as if it were an amusement park.

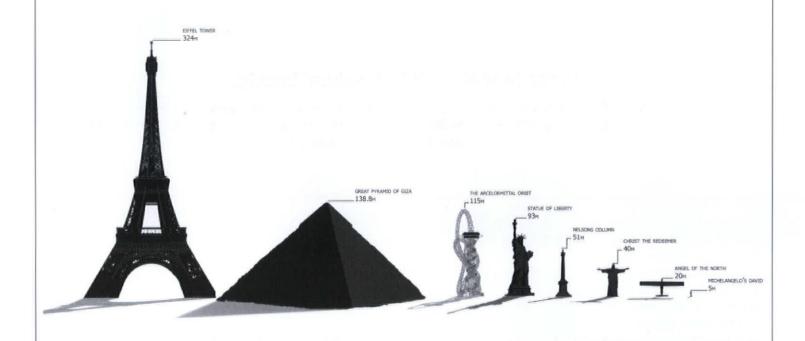
In sculpture, every form has its proper size and if the object

is inflated too much, it turns into a caricature of itself, a tendency alas in several of Kapoor's recent 'monumental' works. Where the engineer could have reined in the design he seems to have done the opposite and let everything hang out, a fatuous exercise in concocting a species of anti-Cartesian tower. Balmond's practical skill is beyond reproach but his visual taste raises doubts. When he designs a bridge on his own, as he did recently in Portugal, he has to put a kink in it (for lateral stability, he claims) but the resulting form, with its illproportioned members, is enough to make great engineers like Robert Maillart or Gustave Eiffel turn in their graves. What one longs for is the quality that Italian Pier Luigi Nervi calls 'the intuitive sense of structure'.

So Mittal will get his monument and Johnson will get his 'icon' (as if London, with all its historical landmarks, had need of such a thing). But what does the icon really represent? Here the ball of harsh social reality risks bouncing back into the middle of the game. In popular opinion, ArcelorMittal is sometimes associated with the closure of steel plants. Voices can already be heard suggesting that such huge sums of money would be better spent on public services and the generation of jobs, than on a colossal folly. This painfully awkward structure, which reflects poorly on both the artist and the engineer, may one day be seen as an unfortunate gesture of plutocratic aggrandisement, marking, through a historical irony, the end of British manufacturing in steel. The 'icon' risks being read unintentionally as a sort of giant collapsing crane made from the very material that once made British industry great.



This tasteless colossus is no Eiffel Tower and reflects badly on all concerned.
It should be scrapped forthwith





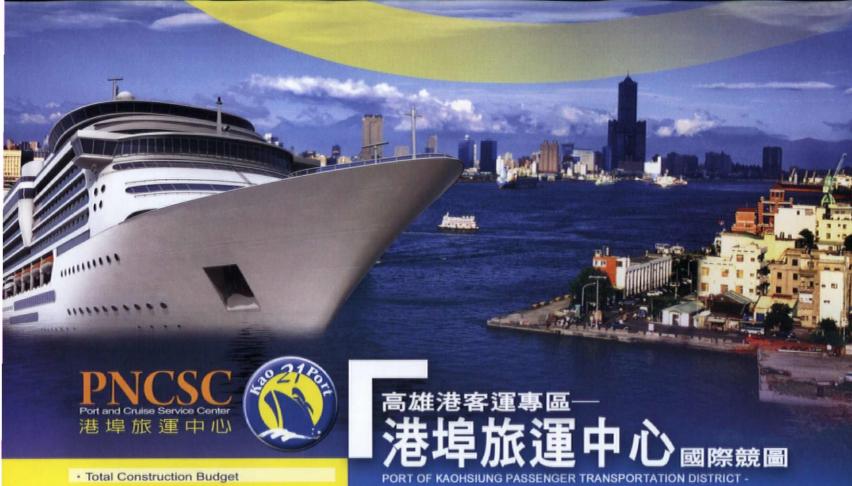
Ceramic Tiles of Italy. A natural beauty.

Choosing Italian tiles is a question of style. Beauty alone is no longer enough, you have to create harmony which is beauty and respect together. The beauty of a product of superior technical quality along with respect for working conditions and the environment.



For more information, please contact: Confindustria Ceramica – Viale Monte Santo, 40 – 41049 Sassuolo (M0) – Italy – tel. +39 0536 818111 – fax +39 0536 807935 Ceramic Tiles of Italy, promoted by Confindustria Ceramica, is a registered trademark of Edi.Cer. Spa, the organizer of CERSAIE, International Exhibition of Ceramic Tile and Bathroom Furnishings – Bologna, Italy, September 28 - October 2, 2010 – www.cersaie.it





About NT\$2,557,000,000. (about US\$80,000,000)

Service Fees

The service fee for this project is a fixed fee in the total amount of NT\$ 230,000,000. (about US\$7,180,000)

Qualifications for Participation(for Stage One)

- (1) Any licensed architect of the R.O.C. (Taiwan) is qualified to tender.
- (2) Any licensed architect (or Firm / Corporation) of foreign country is qualified to tender
- (3) Joint tender is available for licensed architects of the R.O.C. (Taiwan) and licensed architects (or Firms / Corporations) of foreign countries.

For more information, please visit our website or check our tender notice.

Timetable

Stage One Tender Submission Deadline 2010/08/30 Stage One Jury Session 2010/09/02 ~ 2009/09/03 Announcement of the Short-lists 2010/09/03 Stage Two Tender Submission Deadline 2010/12/06 Stage Two Jury Session 2010/12/09 ~ 2010/12/10 Announcement of the Winners 2010/12/10

· For more information, please visit

www.PNCSC.com.tw

(official launch on May 28th, 2010)

· Host Organization



Kaohsiung Harbor Bureau, Ministry of Transportation and Communications, Taiwan, R.O.C http://www.khb.gov.tw

Coordinator

Barry Cheng, Barry Cheng Architect TEL: 886-4-2326-1799 FAX: 886-4-2326-5212

Email: barry-cheng@umail.hinet.net

PORT AND CRUISE SERVICE CENTER INTERNATIONAL COMPETITION

The Invitation

With a view to create a quality environment in which to serve passengers and clients, the Kaohsiung Harbor Bureau, Ministry of Transportation and Communications of Taiwan R.O.C. has formulated a plan for the "Port of Kaohsiung Passenger Transportation District" and the construction of the "Port and Cruise Service Center". Passenger service facilities and the surrounding environment will be improved, visitors will be provided with more convenient and comfortable facilities, and the offices of various port administrative agencies will be integrated within one area to enhance service quality. Furthermore, the plan will help promote international exchange and boost international as well as domestic tourism. The 6.13-hectare district site includes the area occupied by Piers 18-21 and their backyards in the Lingya commercial port district, POK. The Port and Cruise Service Center will be constructed first on the 2.46-hectare area at Piers 19 & 20 and their backyards to serve, upon completion, passenger vessels moored between Berths 18 to 21. The main spaces consist of vessel transportation management center, offices, conference room, boarding ramp, passenger arrival and departure spaces, integrated service counter and other service

Forging the improvement of the quality and efficiency of passenger and commerce services with development of tourism industry, we sincerely invite outstanding architects and design teams from all around the world to tailor-make a specialized National Marine Gateway of Taiwan, R.O.C. and help build facilities that will become the locomotive for the transformation of Port of Kaohsiung. We warmly welcome you to enter in this competition!

LONDON, UK

An art installation that would give Bernard Tschumi nightmares

CRYSTAL BENNES

www.barbican.org.uk



I've strolled down some moonlit boardwalks in my time, but never – at least not in my waking hours – have I found a flock of zebra finches playing electric guitar at the end of one. French artist Céleste Boursier-Mougenot's marvellous installation in London's Barbican Centre shows me what my promenades have been missing.

The sandy boardwalk opens up from a night-time scene to reveal a large makeshift aviary installed in the gallery. Finches perch on guitars with large cymbals, which serve as food and water dishes. Both are fitted with microphones connected to amplifiers, so each movement

of a bird on an instrument is transmitted throughout the space with perfect clarity.

The experience is utterly enchanting. It is remarkable to be able to witness these birds up close, then there's the matter of the soundscape itself, which resembles something an aspiring music producer might create after hours of tinkering with a loop machine in his bedroom. The finches chirp incessantly. Combined with the arresting, minimalist, syncopated rhythms of the guitars and basses - often scratchy, but regularly emitting sustained harmonic tones - it was difficult to believe it was

only the random movement of the birds, claws scratching, beaks sharpening, take-offs and landings, producing the music.

But what can Boursier-Mougenot's installation say about sound, about random interactions within a wellconstructed environment. let alone about space and architecture? Listening to the bird music, I thought about how the installation was the sort of experience that would give Bernard Tschumi nightmares. The architect's edict that 'any relationship between a building and its users is one of violence' is almost the opposite of the dialogue between space and user (even if 'user' here means both man and bird) in Boursier-Mougenot's work. Strip away the artist speak and you're left with the rather profound problem of variability, of how even the most well-structured environment can change, depending on its user.

This installation shows that this is not about the conflict between designer and user, but about theory and practice, intentionality and actuality. It's about engagement as that intangible quality which brings a piece of work into the public consciousness, not as a practical problem to be overcome. The essential point is that we can only control so much. You can construct an exhibition or build a building, but chance and user interaction are the metaphorical cherries on top of a fully realised project. Even outside Boursier-Mougenot's installation, music means nothing when devoid of context - it must be listened to and responded to in order to take its place in society. In this case, though the music is created by the random engagement of zebra finches on guitar strings, it doesn't make the strength of the concept any less important.

Architects can attempt to structure the flow of activity through a space, but cannot control the engagement of each individual with that space. Who really knows how people will interact with a building until they do. Like this installation, the built environment is a complex web of interactions between designers' intentions and the reality of users' actions. Without wanting to lessen the importance of these intentions, sometimes the only thing to do is stand around watching birds play guitar. But there's beauty and inspiration to be found in doing just that.

SA IOLOGIACIAN

OSNABRÜCK, GERMANY

Daniel Libeskind, master of memorials, on the healing power of architecture

LAYLA DAWSON

On 7 March Daniel Libeskind was awarded Christian-Jewish society DKR's Buber Rosenzweig Medal in Augsburg, Germany, for his work in mediating between peoples and cultures. He is the first architect to be awarded the medal. A few days later he visited the Felix Nussbaum Museum in Osnabrück, his first building, completed in 1998 (AR April 1999). The museum is dedicated to the work of the Jewish German Surrealist artist Felix Nussbaum who, with his wife the painter Felka Platek, was murdered in Auschwitz. The building proved so popular that Libeskind has been asked to design a visitor's centre extension. This is now on site and will open in 2011.

The AR The Felix Nussbaum
Museum is dedicated to the life
of just one person. Many of your
other projects, for example
Manchester's Imperial War
Museum North, the Jewish
Museum Berlin, Dresden's
Military History Museum and
even the new office blocks of
Ground Zero are also memorials.
Can architecture heal?

Daniel Libeskind Yes, I believe it can, but to be an architect is the very reverse of being a god – because when architects think [that's what] they are, they produce nightmares. For me, architecture is more than a career, it's an inspiration, it gives orientation. Architecture should set standards. It is not a cold endeavour between architects and engineers. Architecture is a language. It has to do with history, storytelling, humanity.

My buildings do not tell you 'the world is in order'.
My buildings ask questions.
Sometimes these are answered with other questions, which is a Jewish tradition in discussion.
Healing is also related to the Jewish requirement – a mitzvah – to do a good deed without expecting payment, for instance, our involvement in designing housing for Sri Lanka after the tsunami.

AR We first met in 1994, when I interviewed you in your Berlin studio. Germany was going through the birth pains of reunification. On all sides of the political spectrum sensibilities were bruised and battered. At the time it was suspected by some that Jewish architects from all around the world were fulfilling alibi functions, healing the wounds of the last half century with architecture, even though their families had been the victims.

DL When [my wife] Nina and I, with our children, decided to move to Berlin to carry out the detailed design of the Berlin Jewish Museum after having won the competition, many friends and family were shocked that we were going to live in Germany. My work visa allowing me to stay in Germany was not the usual rubber stamp but a handwritten note, explaining that I was being allowed to live and work here expressly to build the Berlin Jewish Museum. I'm reminded of this whenever I see Nussbaum's very strong painting Self Portrait with Jewish Identity Card.

My attitude to Berlin changed over the 12 years we lived and worked there. History moves on. It isn't fixed. Germany has not been afraid of tackling its past and a great deal has been achieved between people, since 1989 when the Wall fell.

It was in Berlin that I first heard of Felix Nussbaum. I saw a plaque on a building saying he had once lived there. I went home and tried to find him in an encyclopedia. At this time he was not even listed, and most of his works had not been rediscovered [the artist had left his work with friends for safekeeping; a campaign was started in the 1970s to recover this collection]. Later, we won the Felix Nussbaum Museum competition and this became my first completed project, before the Berlin Jewish Museum, which had actually started earlier.

You can never say: 'I don't have to think any more about



history'. Berlin opened the Jewish Museum to the public on 11 September 2001, and I had no official functions that day. I remember going into the studio and being happy that I didn't have to appear anywhere and talk about history. At that moment the Twin Towers were attacked. Architecture very often has to deal with trauma.





What we are now building on Ground Zero is a complex of offices – but the open areas and the orientation of the buildings will throw daylight twice a day, like a pointer on a sundial, to mark the time when each of the towers were hit, at 8.46am and 10.28am. This will be a memorial right in the middle of everyone's working life.

AR Nussbaum and Platek hardly knew what a home was. They spent their adult lives painting and living out of a suitcase while in hiding. You and your family have lived and worked in UK, Italy, Germany, and are now based in Manhattan, but you are also building all over the world. Where do you really feel at home?

DL Home is where love and meaning are for you. Nowadays, home is the world because the whole world is much nearer to us than we think.

AR With so much travelling between projects, clients, lectures and presentations, where do you find the peace to reflect and design?

DL I have lived my life back to front. When you are young, you are very active in your career. Later, you are expected to slow down. Before I was 50 I had built no architecture. I had many years to meditate and study what I might later want to design. My work now is really the result of all those thinking years. I have a reservoir of ideas.

Now try something different....

...let the sun shine in



- **Energy free natural lighting**
- Ability for integration with daylight linked control
- Provides soft, soothing, restful, natural light
- No structural alterations necessary in most cases
- No maintenance required inside or out
- No heat loss in winter or solar gain in summer
- All SunPipe systems are guaranteed for 10 years





Sunpipe systems are well established in the building industry, particularly associated with energy savings. Indeed, Sunpipes with their associated products, Suncatchers and Sola-vents, have been very popular for not only piping in natural light but also for removing unwanted heat buildup. By bringing natural light and fresh air to just about every type of building, they have deservedly earned a great reputation for a simple, cost-effective and utterly reliable systems.

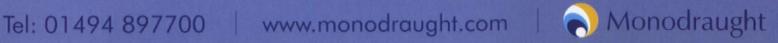
Now available made from more than 90% recycled aluminium same performance as original Sunpipe, guaranteed!







the natural alternative!



BELFAST, NORTHERN IRELAND

Form follows friction: how architecture can both heal and inflame urban trouble spots

RALF BRAND

www.urbanpolarisation.org



Above_Belfast's
'peace walls'
keep rival
nationalist
and loyalist
communities
apart; physical
separation
expressing social
polarisation

How is the urban environment shaped and what effect does it have on cities wrought by conflict and polarisation? A recent research project by Manchester Architecture Research Centre examined the complex relationship between architecture and socio-political conditions in Belfast, Beirut, Berlin and Amsterdam, four cities historically characterised by tension and conflict. The team's findings were made public in a recent exhibition, The Urban Environment -Mirror and Mediator of Radicalisation?, first shown at PLACE. The Architecture and Built Environment Centre for Northern Ireland in Belfast. It is now touring the three other case study cities.

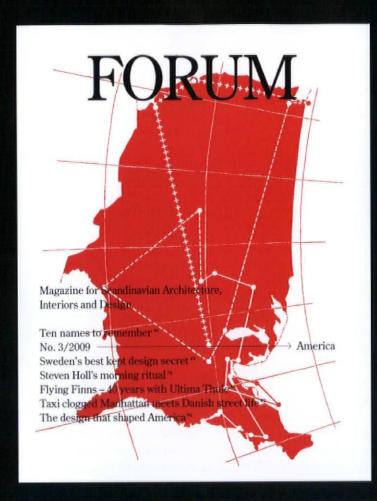
Underpinning the effect that architecture and urban design can have on tensions between ethnic, political or religious groups is the notion that form follows friction. Across all scales, from shops to rubbish bins, innocuous design features can become highly and irrationally charged. When choosing colours to indicate different parking levels in the new Beirut Mall, for instance, the architects took great pains to select colours that were not affiliated with any of the major groups in Lebanon's political struggle. In Belfast, houses tend to have large front yards (the reverse of normal UK practice) in order to spot potential trespassers more easily.

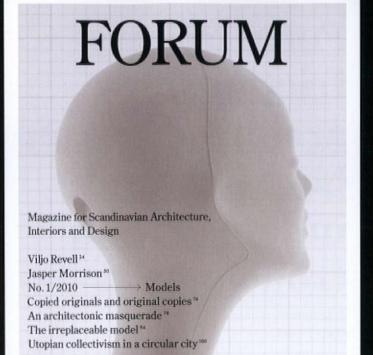
But architecture does not only reflect and react to conflict, it can also directly influence it. A new pedestrian bridge across the Westlink motorway in Belfast, for example, was intended to ease access from the city centre to the Royal Victoria Hospital. It did not take long, however, for sectarian youths to discover that its location and

shape make the bridge a perfect spot from which to launch attacks with stones and paint bombs into 'enemy' territory. Here, friction followed form. Similarly, the fortress-like appearance of a police station in Amsterdam's Slotervaart neighbourhood was construed as a symbol of state control over users of a nearby mosque. Although authorities claimed the design was not motivated by such intentions, it nonetheless triggered conspiracy theories, rumours and unease among the local Muslim community.

A key lesson from these and other examples is that architects should strive to heighten their awareness of the fact that design is never neutral. It almost always has side-effects that could potentially accentuate existing social tensions. But architecture can also do good, as shown by the Stewartstown Road Regeneration Project in Belfast. Located at a formerly violent interface between nationalists/Catholics and lovalists/Protestants, the initiative's centre has dual entries and exits, identical offices for groups from both communities, and neutral colours, all of which help to encourage civil encounters between former warring parties.

This does not, however, indicate that quick design fixes can quell conflict, let alone stimulate peace. Each situation is so specific that any intervention requires a detailed and enlightened understanding of all contextual factors. This highlights the importance of the design process - especially the involvement of future users - as a precondition for success. And though an emphasis on process implies engagement in messy debates and lengthy negotiations, in certain situations there is no alternative.





Slim, intelligent and beautiful, Swedish magazine *Forum* deserves serious readers.

—Jasper Morrison, designer and founder of Jasper Morrison Ltd

The varied content, unexpected portraits and forthright tone make *Forum* an obvious reference for contemporary architecture and design.

-Mia Hägg, architect and founder of Habiter Autrement

Los Angeles, USA

Remembering the 'incurable formalist', Austrian architect Raimund Abraham, 1933-2010

RAYMUND RYAN

Raimund Abraham lived life to the full: pushing architecture towards certain provocative limits; building a few seminal (we might even say 'iconic') buildings; making drawings that were constructions as opposed to mere representations; initiating generations of students in essential qualities of architecture, even as superficial fashion threatened to usurp contemporary culture. Abraham died following a car crash in

Below_Raimund Abraham on the terrace of the Austrian Cultural Forum in New York



Los Angeles on 4 March. A few hours earlier he had delivered his final lecture, 'The Profanation of Solitude', at SCI-Arc, the Southern California Institute of Architecture.

Abraham was not the easiest of individuals and his architecture was never easy to cosy up to, label or glibly categorise. Perhaps it was this streak of independence - his failure to entertain foolish fads gladly and his stubborn pursuit of precision - that limited the number of works he ultimately built. Nevertheless, Abraham was an enormously influential figure, first in his native Austria and then, for over four decades up until his tragic death, in the New York avant-garde.

One of his few realised works is a small bank building at Lienz in the Tyrol, Abraham's birthplace. Inevitably for an Austrian of his generation, memories of war, of the militarisation of land and air, stayed with Abraham from his childhood. Equally current however, no matter how cosmopolitan the young architect became, was an abiding love for primal rural structures, an appreciation, for honest construction and an eye for ritual in everyday life.

Upon graduation from Graz University of Technology in 1958, Abraham collaborated on buildings and exhibitions with Walter Pichler, Hans Hollein, and Friedrich St Florian. In 1963 he published his first book, *Elementare Architektur*. Like St Florian, Abraham moved to the US in the mid-1960s. Although he taught also at Pratt Institute, Yale University and SCI-Arc, Abraham's formidable reputation as pedagogue and critic is bound up with his tenure at New York's Cooper Union, from 1971 to 2002.

During the excesses of postmodernism, it seemed as if Abraham might be known only for such hypothetical projects as Seven Gates to Eden (an autopsy of the suburban house, shown at the Venice Biennale in 1976) and for his bold, exquisite drawings as revealed in a Yale exhibition, Collisions, in 1981. Then, out of the blue, Abraham won a competition to design the Austrian Cultural Forum. This shockingly slender tower (AR September 2002) became the architect's unexpected masterwork in Manhattan.

In later years, Abraham built the JingYa Ocean Entertainment Centre in Beijing as well as a cylindrical music building in Germany, nearing completion. He also realised one particularly intimate project, his own home above the Pacific in Mexico. Shielded by a giant tilting roof, this realm of simple cave-like rooms with terraces suggest that Abraham, as he himself stated at SCI-Arc, remained 'an incurable formalist'.

A WHINDEDED / CDA / PRODIC

AR/PROTEK EVENT

Setting the world to rights at MIPIM with a debate about smarter building

RORY OLCAYTO

'We've entered a different phase,' says developer Roger Zogolovitch (pictured centre, on the right), taking his seat alongside the industry experts gathered to discuss commercial development over lunch in Cannes. It's the second day of MIPIM, the annual real estate trade fair. 'The market may now be truly global but every market condition is local and generates income in completely different ways.' Zogolovitch claims that, without a restructuring of how these projects are funded and pipelined, quality and design innovation will go out the window. 'We have to deliver enduring value,' he adds. 'We've made development too specific. It is absurd that buildings are demolished because they don't offer a loose fit.' And just like that, before the bread has even been scoffed, we have a debate.

Mike Hussey, managing director of property fund Almacantar, says yes, new funding models are a must ('You can forget about the banks this year') and so is the need to 'build smarter, cheaper and more efficiently.' But what, asks CABE chairman Paul Finch (second from bottom), would smarter commercial buildings look like? That depends on

whether a loose-fit or tailormade model holds sway. 'There is excessive supply, so tenants are more demanding,' says Tim Evans of Sheppard Robson. 'If anything, the product is becoming more tightly specified.' Swanke Hayden Connell Architects' Bob Fry agrees. 'Enduring buildings are the ones exposed to a pre-let tenancy. Unless it's pre-let, things get left out during development.'

A mantra is agreed: reduce cost but not the offer. 'We need a raw product: take energy and waste out of the building's cost,' says Simon Allford (bottom) of Allford Hall Monaghan Morris. Alex Tosetti of consultant URS thinks behavioural change will have the biggest impact on the emerging commercial typology. 'Digital communications and social media will totally change the shape of the office.' Fry has seen it already in offices he designed for EC Harris in King's Cross, London. 'We created break-out spaces with kitchen tables where you can set up your laptop and have a coffee workers under 40 prefer it. Traditional workspaces are on their way out.'

Could converging 'building smarter' and the 'mobile' generation's way of doing things











however, work in favour of loose-fit development? 'It could come down to obsolescence and how quickly you can convert a property into something else,' suggests Hussey. 'The "beanbag and laptop" office need be no more than a shell and core plan.'

Alongside this desire for loose-fit is a trend towards the greater densification of space. For Goldman Sachs, says Thomas Kerwin of SOM, which designed the firm's New York interiors, a managing director gets 7m2, while a typical big earner gets four. In Mumbai however, Sanjay Puri explains that 3.6m2 is 'luxury', with the typical call centre worker afforded just 2.4m2. Productivity is the holy grail,' says Londonbased architect Stephan Reinke. 'We're talking slave-ship density.' But as Robert Goodwin of Perkins+Will says, 'If you design a space to be nonhierarchical, you generate higher densities. But that's not going to work for a law office.'

Globally, low-carbon design is working itself into a default position. As Puri, Stefan Antoni of Cape Town practice SAOTA and Sanya Tomic (top) of Sidell Gibson Architects in London all find, 'every developer wants to make their building sustainable - but it's because of market forces, not regulation.' Evans, nevertheless, thinks green infrastructure projects will have a more crucial environmental role to play. On-site renewables are merely 'tokenistic'. Retrofit, on the other hand, is going to be huge. 'We've already got 75 per cent of the buildings we're going to need over the next quarter century,' says Evans. 'We just need to make them more efficient.' Other delegates were Jackie Blanden from WM Protek and Sunand Prasad of Penoyre & Prasad (second from top)



Incredible inside. Outstanding outside.











HI-MACS® is the material of the latest generation: the natural acrylic stone is visually seamless, hygienic, thermoformable, comes in a range of over 90 colours and offers a unique 10 + 5 year guarantee.





Information and samples can be obtained from: Alex Gray, phone 01732 424 240 e-mail ukoffice@himacs.eu

www.himacs.eu/arc

More projects and new stunning colours here.



APTUS

Terence Woodgate

Aptus is a fusion of art and technology, a bold, sculptural, illuminated bollard. Designed by the international award-winning product designer, Terence Woodgate, Aptus uses the aesthetic of a partial cut to bend the light head up and away from the body. Available in Cor-Ten steel, it changes appearance as it weathers. On a dry sunny day, it is brightly oxidised, almost orange and on a wet day, dark and mellow.

Suited to a variety of landscape applications, Aptus will make a striking statement in one environment or merge seamlessly into another.

www.paviom.com

A PHILOSOPHY IN LIGHT

pariom



WATER MUSEUM

LOCATION LANJARÓN, SPAIN

ARCHITECT JUAN DOMINGO

SANTOS

A new Water Museum for an Andalusian spa town captures the physical and experiential qualities of water in a part of Spain where the historic relationship between architecture and water began with the Moors

ROLEX LEARNING CENTRE

LOCATION LAUSANNE, SWITZERLAND

ARCHITECT SANAA

MUSEUM FOLKWANG

LOCATION ESSEN, GERMANY

ARCHITECT DAVID

CHIPPERFIELD ARCHITECTS

HÄMEENLINNA PROVINCIAL ARCHIVE

LOCATION HÄMEENLINNA, FINLAND

ARCHITECT HEIKKINEN-KOMONEN ARCHITECTS

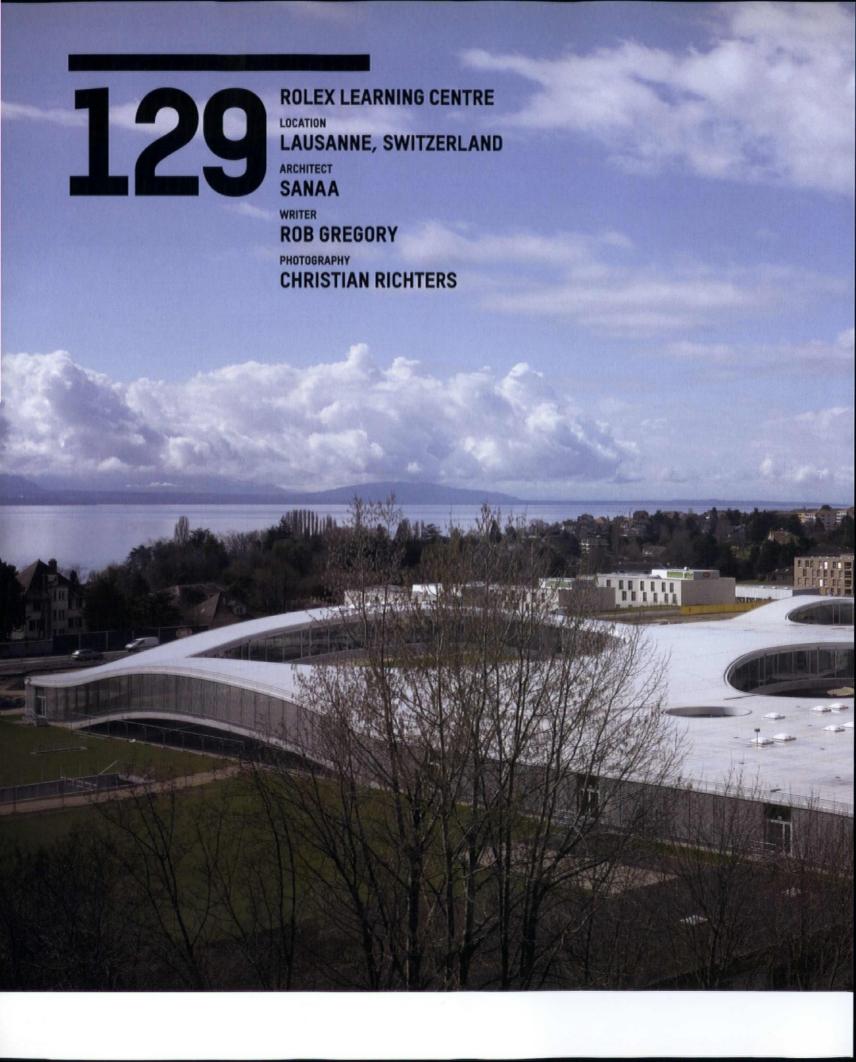
Working with Finnish artist Aimo Katajamäki, Heikkinen-Komonen confounds the stereotype of the archive as a dull, hermetic box, transforming it into a richly decorated casket

DIAKONIE CHURCH AND NURSING HOME

LOCATION DÜSSELDORF, GERMANY

ARCHITECT BAUMSCHLAGER

EBERLE





SEJIMA AND NISHIZAWA ALLOW FLUENCY IN PLAN TO PREVAIL OVER A MORE MUTED LANGUAGE OF CONSTRUCTION









Previous page With Lake Geneva to the south, SANAA's Rolex Learning Centre creates a new terrain in resonance with the distant Swiss Alps Left top Curvaceous forms exist in plan and section, seen here within an hourglassshaped patio Left, middle_At the south-east corner, the restaurant occupies the highest contour, positioned above the largest external patio Left, bottom A fire escape located at the south-east corner disrupts, but does not destroy, the built form

Since Gerrit Rietveld and Frank Lloyd Wright exploded the box, and Hans Scharoun and Le Corbusier orchestrated their architectural routes, there have been few major paradigm shifts in the spatial order of modern architecture. Some have come close. But as the image of buildings has become increasingly commodified, the virtuosity of spaces designed by architects such as Frank Gehry and Zaha Hadid is all too often smothered by disengaged forms that serve their own exuberant ends.

Japanese architectural duo SANAA, however, exercise greater restraint in pursuit of a new spatial order. Adopting a muted architectural language, they consistently focus on how to make people, places and programmes coalesce. Whether achieved individually or jointly, schemes such as Toledo Art Museum's glass pavilion in the US (AR November 2006), the 21st Century Museum of Contemporary Art at Kanazawa, Japan, and the Moriyama House in Tokyo (AR August 2007) demonstrate how Kazuyo Sejima and Ryue Nishizawa derive unique spatial arrangements, allowing fluency in plan to prevail over a more muted language of construction. When straying from this discipline, they too fall foul of formalism, as was the case with the New Museum in New York (AR April 2008) that failed to exhibit anything like the level of spatial sophistication we have come to expect. Fortunately, that building was an isolated low point and in this new work, SANAA has created a mesmerising space for Swiss university École Polytechnique Fédérale de Lausanne (EPFL).

The construction of this building does of course deserve detailed scrutiny, with its 20,000m² footprint defined by an incredible low-slung concrete shell, anchored to a single-storey basement by 70 pre-stressed cables, and poured as a single element in just two days. However, while few other architects would resist celebrating the project's

significant technical achievements, SANAA prefers to discuss the surface of the shell, providing as it does a clear uninterrupted terrain. 'The concept of the building was to make one very big room, where people and programmes can meet together to have better communication,' explains Nishizawa. 'There are no walls to divide, so any programme can meet anywhere. It is more like a park.'

It was the boundless nature of this single volume space that won SANAA the commission, as president of EPFL Patrick Aebischer recalls: 'This new campus hub exemplifies our vision of a university where traditional boundaries between faculties are broken down, and where the public are inspired and made welcome. The SANAA scheme was something that we had never seen before: a building without doors.' However, achieving this vision was a demanding process, as both client and local consultants paid close attention to the technical and financial challenges posed. 'The price of the building did not include any hills,' he continues, 'so we sought sponsors to pay for the curvature, which cost about 50 million Swiss francs (£30.6 million) more.' With this, the £65m Rolex Learning Centre was born, financed by 'curvature' contributions from Rolex, Logitech, Bouygues Construction, Credit Suisse, Nestlé, Novartis and SICPA.

Grounded at all four corners, the building conforms to the regularity of EPFL's bland campus masterplan. With little spatial hierarchy and no communal space to speak of on site, the centre billows to create a new point of arrival for students and visitors. Beneath its shiny concrete underbelly, irregular patios conjoin to form a sheltered landscape, with routes across the site for passers-by and multiple points of entry for building users. The principal entrance lies at the centre of the plan, leading directly into a café and food court that occupy the lowest contour of the internal terrain. From here, two ridges rise up to cut across the

space; one to the west that shields a 600-seat auditorium (which has its own entrance patio when screened off and used in isolation) and one to the east that bifurcates to form two peaks, one for the library to the north, the other for a formal restaurant to the south that occupies the highest point on plan from where the spectacular aspect across Lake Geneva gives views of Mont Blanc on a clear day.

Disconcerting at first, but with time inducing a relaxed and informal attitude to occupation and circulation. it is undeniable that for some people the contours may prove too steep - in places reaching a slip-inducing 30° pitch that cause most to shuffle down tentatively. This necessitated the provision of accessible ramps, steps and platform lifts that on the whole have been well integrated with terraces. These provide level places to study or meet. Other measures, such as the tactile floor track required to help those with impaired vision navigate the interior, also pale into insignificance when actually walking through the space. As intended, the strongest sensation that persists is the mesmerising effect of constantly shifting views, animated as horizons rise and fall in resonance with the mountainous landscape beyond.

EPFL is an extremely serious and competitive scientific institution that would not be easily fooled by architectural showmanship or novelty. Pushing the boundaries of biological and technical research, it recognises the need to attract the very best scientists from around the world, and with the Rolex Learning Centre now complete, it is better equipped to attract potentially paradigm-shifting scientists into their own paradigm-shifting space. SANAA is without doubt a paradigmshifting practice, and with its architects' contribution to this project extending their influence on contemporary architecture even further, Sejima and Nishizawa are extremely deserving and popular recipients of this year's coveted Pritzker Prize.



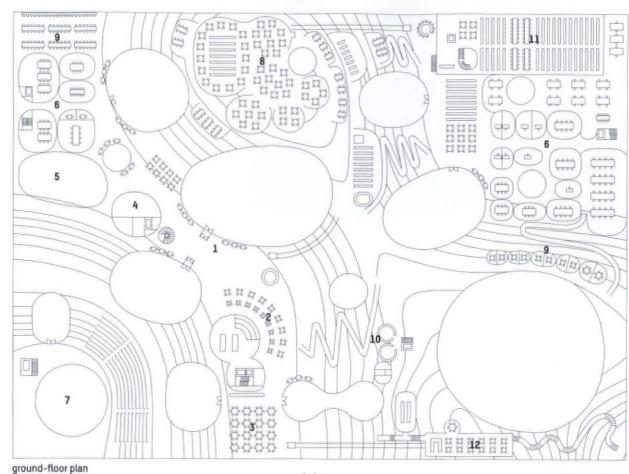
'THE SANAA SCHEME WAS SOMETHING WE HAD NEVER SEEN BEFORE: A BUILDING WITHOUT DOORS'

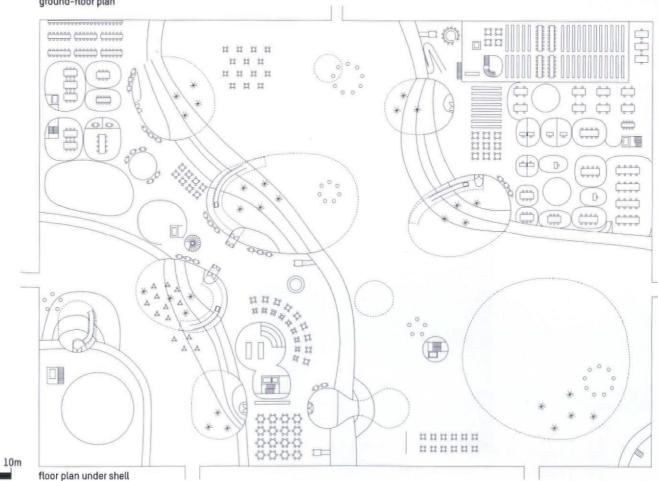
PATRICK AEBISCHER, PRESIDENT, EPFL



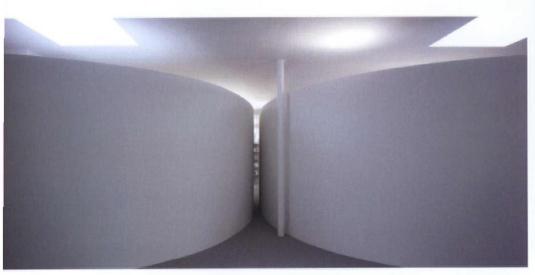


- multipurpose hall
- 8 library
- 9 work area 10 ancient books collection
- 11 research collection
- 12 restaurant



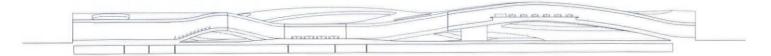


DISCONCERTING AT FIRST, WITH TIME THE CONTOURS INDUCE A RELAXED AND INFORMAL ATTITUDE TO OCCUPATION





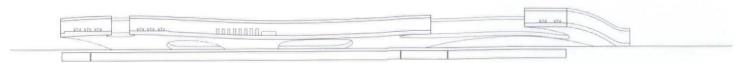
long section looking north showing two ridges through multipurpose hall and restaurant



long section looking north through library and research collection



cross section looking east through library and restaurant





Previous page_ Terraces provide space for more formal study, while patios bring light deep into the plan Far left Where private areas are required for offices, simple enclosures are made within the volume that borrow light from roof lights Left Even the steepest terrain provides space for study, situated here between research collection and library Below_The building's concrete shell and its lighter-weight steel and timber roof follow the same geological profile

ARCHITECT SANAA, Tokyo, Japan PROJECT TEAM Kazuyo Sejima, Ryue Nishizawa, Yumiko Yamada, Rikiya Yamamoto, Osamu Kato, Naoto Noguchi, Mizuko Kaji, Takayuki Hasegawa, Louis-Antoine Grego, Tetsuo Kondo, Matthais Haertel, Catarina Canas STRUCTURAL BASE CONCEPT SAPS/Sasaki and Partners LOCAL ARCHITECT Architram SA



130

WATER MUSEUM

LOCATION

LANJARÓN, SPAIN

ARCHITECT

JUAN DOMINGO SANTOS

WRITER

CATHERINE SLESSOR

PHOTOGRAPHY

HISAO SUZUKI

The town of Lanjarón on the southern flank of the Sierra Nevada, Andalusia's great mountain range, is famous for its local crafts, honey and mineral water. Produced by five natural springs, Lanjarón water is sold throughout Spain and one of the country's most famous spas was established here centuries ago. Visitors are still drawn by the medicinal qualities of the waters and the town's equable climate. When the balneario is open, from March to December, Lanjarón's population is swollen by spa tourists who come from all over Spain to take the waters.

Designed by Granada-based architect Juan Domingo Santos, this project for a water museum recognises the part that water has played (and still plays) in the town's history. But beyond the concept

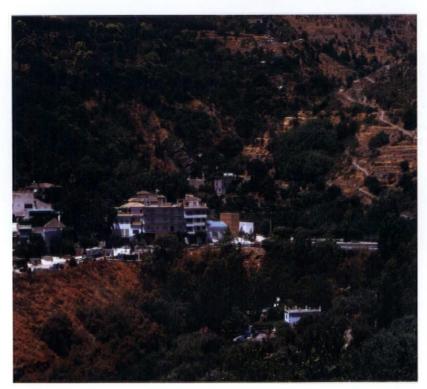




RECIPROCITY BETWEEN OLD AND NEW UNDERSCORES THE ENTIRE PROJECT

site plan





Previous page_ A simple timber pavilion set among remodelled historic structures and new pools acts as a marker for the Water Museum Bottom left The museum site nestles in the valley floor with the Lanjarón river below Right The pavilion, made from narrow panels of Finnish fir, seems to hover over a cooling pool

of water as an industrial, curative or technological resource, it also has a powerful phenomenological dimension. Throughout Andalusia, under the influence of the Moors, water was appropriated not only for irrigation, but also for display and effect. Most famously at the Alhambra palace, fascination with water reached its height with a labyrinth of cooling fountains and pools to reflect light and bring inanimate surfaces to life. For the Moors, architecture was not merely a static object, but something to be sensed and experienced by the whole body. In its more modest way, the new museum also celebrates these elusive experiential qualities.

The project began with a search for a site with water flowing through it, eventually alighting on an area to the north-east of town at the entrance to the Sierra Nevada National Park. The site lies in a steeply sloping gulley next to the Lanjarón river and an irrigation ditch that used to serve the now disused local abattoir. A specially devised pedestrian itinerary connects the new museum with historic examples of water-related building types, such as old watermills and a public laundry.

This reciprocity between old and new underscores the entire project. The plain stone sheds of the former abattoir are refurbished and adapted for museum use. New corrugated metal roofs and white rendered walls enhance the dignity and simplicity of the original vernacular architecture. During the course of remodelling, it was discovered that the buildings were originally used as watermills, giving the project an added archaeological dimension.

Water is both the physical and metaphorical theme of the museum, and its cooling, shimmering presence suffuses the array of buildings and courtyards. From the river and irrigation ditch, water is channelled into a series of interconnecting pools that thread through the museum. A new courtyard made from stacked



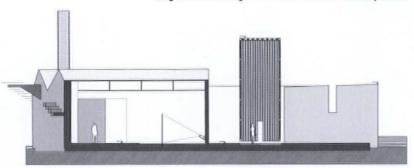
prefabricated concrete blocks and studded with a grid of orange trees contains a shallow reservoir which is flooded by water at different times of the day. The pool is lined with horizontally sliced trunks of eucalyptus. 'The shade and scent of the orange blossom, the sound of the water and the reflections when the courtyard is flooded all create a refreshing atmosphere,' says architect Juan Domingo Santos.

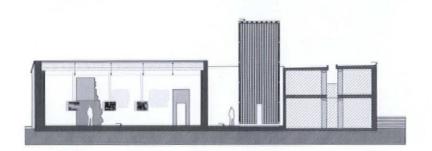
A tall, narrow pavilion hovering over another pool marks the museum's entrance. Domingo Santos describes it as 'a space for the senses'. Two openings draw in the visitor and invite them to experience the effects of light and shade. The shallow film of water intensifies the experience – 'a sensation similar to Islamic bathhouses,' says Domingo Santos. ____



WATER'S COOLING, SHIMMERING PRESENCE SUFFUSES THE ARRAY OF BUILDINGS AND COURTYARDS

long sections through audiovisual room and timber pavilion





Right, top_In one exhibition space, a glass panel set in water is used for audiovisual projections Right, bottom **Exhibition spaces** are housed in the refurbished stone sheds of the town's former abattoir Farright Light percolates into the pavilion. The shallow pool is lined with sliced eucalyptus trunks

The slatted Finnish fir panels recall the simple wooden structure that first enclosed Lanjarón's Capuchina Spring in the 18th century, marking the beginning of the town's development as a spa.

The two main pavilions are used as audiovisual rooms and a third building hosts thematic exhibitions of the museum's contents. In one pavilion, a glass panel is employed for visual projections. The panel is anchored in a pool, and light bounces off the iridescent surfaces of glass and water, sending scintillating reflections around the stone walls. The exhibition literally brings the building to life, but the project itself also has a memorable lyricism in the way that it revives long dormant structures and sensitively reconnects them with the town's history.



Juan Domingo Santos, Granada, Spain

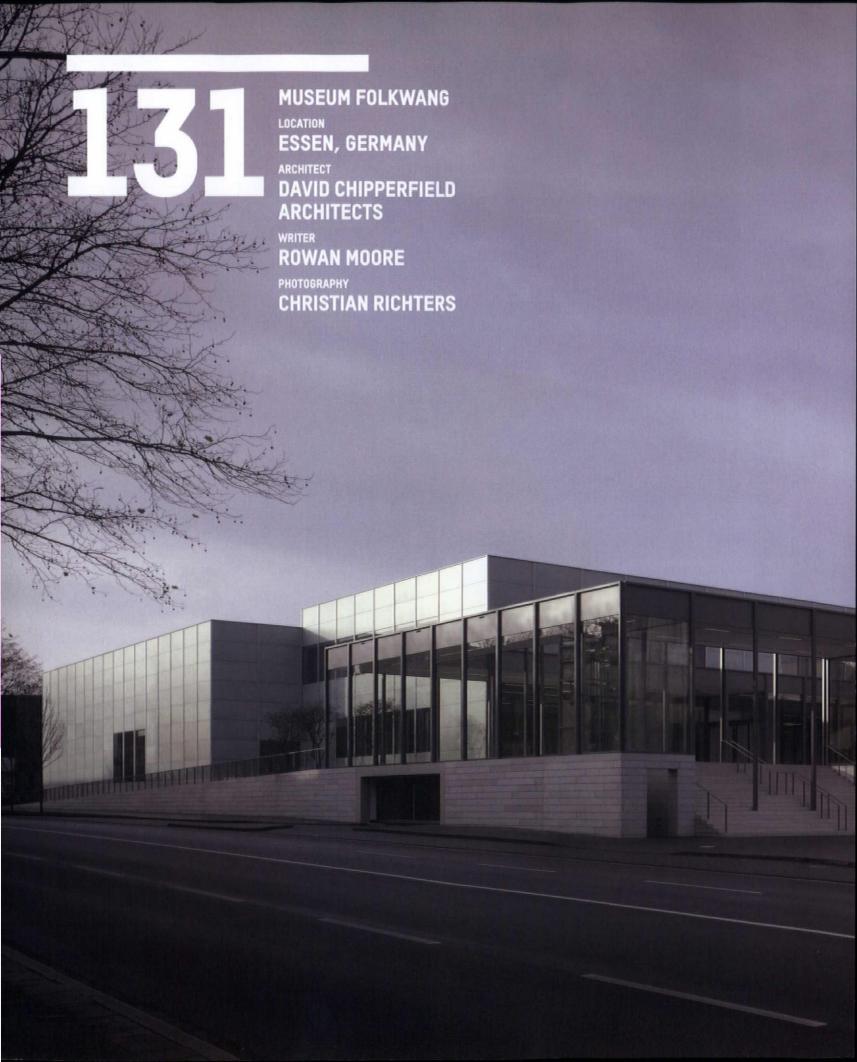
PROJECT TEAM

Juan Domingo Santos, Julien Fajardo, Isabel Díaz Rodríguez, Carmen Moreno Álvarez, Margarita Martínez Barbero







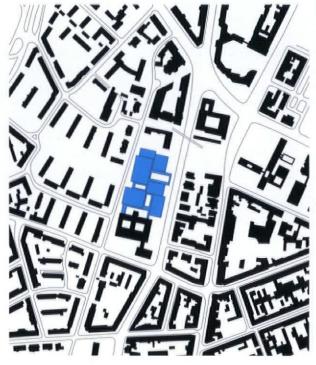




THE BUILDING IS ALMOST
COMPLETELY LACKING IN
DECLAMATORY GESTURES.
IT IS STRIPPED, SPARE, SIMPLE



site plan







Previous page_
Clad in a glacial skin
of recycled glass,
the museum is
impeccably stripped
and sober
Left_ Pavilions and
courtyards structure
gallery spaces
Left, bottom_
Entrance portico
Below_ Detail
of glass facade



The Folkwang is a museum that doesn't have to shout. It has a choice collection of Van Goghs, Gauguins, Cézannes and Rodins, together with ancient curiosities. It has works by Warhol, Rothko, Pollock and other bankable post-war artists, plus strong collections of posters and photography. The medium-sized industrial city of Essen is not famous as a cultural Mecca, but work like this ensures that long queues gather on the approach ramp.

Folkwang's new building was made possible by a single grant from the Alfried Krupp von Bohlen und Halbach Foundation at an early stage in its development, meaning that it didn't have to make much of a noise. There was no need to talk it up, ramp up the excitement or capture front

pages with computer-generated images to attract funding, as museumbuilding projects usually must do.

And so we have a building almost completely lacking in declamatory gestures. It makes no attempt to ingratiate, exaggerate or advertise. It is stripped, spare, simple. Its ancestry is Mies van der Rohe and before him Karl Friedrich Schinkel, but without the fanatical glint you get in Mies. It is more sane and reasonable, like the well-balanced, well-made modernism that West Germany sponsored in the 1950s and '60s, by architects like Egon Eiermann.

Museum Folkwang is based on the collection of Karl Ernst Osthaus who, a century ago, was a leading collector of what was then contemporary art in the nearby town of Hagen. After

his death the museum continued his pioneering spirit until the coming of the Nazis, who denounced half the work as degenerate, and sold it off. After the war a few of the dispersed objects were recovered and the collecting of new art resumed.

This history has created a collection that is eclectic and personal, with Egyptian, Islamic, Japanese and Indonesian artefacts. Yet its Western works, especially those of the post-impressionists, are up there with the very best. It is a collection that might allow you to pick out a linear narrative, from Manet to Warhol and beyond, but which is better experienced in a more diffuse or wandering way.

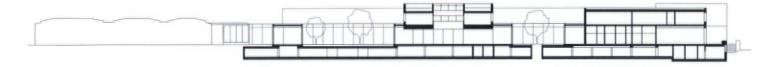
David Chipperfield Architects has responded with a series of ____

A SERIES OF PAVILIONS AND COURTYARDS ALLOW DIFFERENT ROUTES THROUGH THE COLLECTION

long section through painting galleries and temporary exhibitions space



long section through courtyards and administration block



pavilions and courtyards, allowing different routes through the collection. All exhibition space is on one level such that, as they say, you don't have to think about the means by which you are getting about the building. Offices are above, other service spaces below.

The courts, inaccessible to the public, present oblongs of immaculate grass to be seen but not touched. Glass walls open up views to parks and villas in the semi-suburban surroundings, creating a sense of interpenetration between the museum and the neighbourhood. There is also an easy connection with the 1950s gallery, to which the larger new building is technically an extension. The older building, like the new, is spare, with glazed courtyards;

but for some variations in detail and updated technology, their spirit is almost identical.

The interiors are austere, but generous. Wide passageways connect the galleries. Ceilings are high. The lighting is diffuse, with natural and artificial comfortably combined. The detail is crisp, but not to the point of fetishism. The architects say they wanted it to be like certain 19thcentury museums, with 'huge rooms, where anything can happen.' The prevailing atmosphere is calm.

The architects also say they wanted to get 'straight to the art, without any preamble,' so the entry route leads quite directly, with shop and café on either side, to a reception in the centre of a big gallery-like space. Art is on show here, albeit

currently a single Andreas Gursky, and you do indeed feel you are already in the heart of the museum.

All of which prepares the ground for the art itself, some of which is spectacular. It is almost, but not quite, as if the architecture is ideally absent: as if as little barrier as possible is desired between art and city. Not quite, because the building does have its own kind of robustness and presence. The ambition seems rather to be as good as possible at simple-but-difficult things that define an experience: light, height, proportion, placement, movement.

The building does indeed do these things extremely well, the only crashingly awful moments coming with illuminated signs announcing the museum's Vincent & Paul _

- 1 entrance courtyard
- foyer
- cloakroom
- bookstore
- reading and study room
- 6 temporary exhibitions
- painting and sculpture
- old wing
- German Poster Museum

- 10 photography 11 graphic arts
- 12 deliveries
- 13 restaurant
- 14 multi-functional hall
- 15 administration
- 16 depot
- 17 technical area
- 18 storage
- 19 photographic studio
- 20 restoration workshop

first-floor plan



ground-floor plan



INTERIORS ARE AUSTERE, **BUT GENEROUS. THE DETAIL** IS CRISP, BUT NOT TO THE POINT OF FETISHISM





restaurant. These succeed in making the museum seem an adjunct of the restaurant, and shatter the poise of the rest of the building. Whoever is responsible for such stupidity should go and pursue a career in shopping malls, rather than museums.

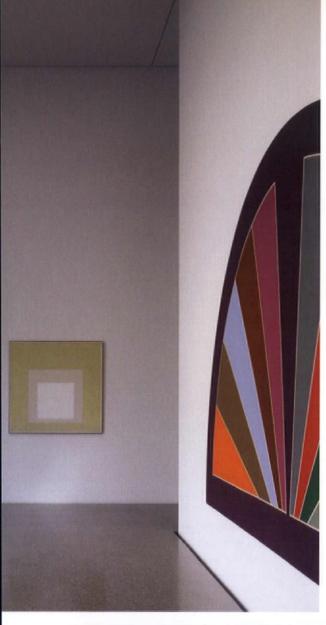
The new Folkwang Museum is most rhetorical in its subdued echoes of an artistic Acropolis: it raises classically proportioned pavilions on a low stone podium, approached up stairs or ramp and through a skinny steel propylaeum. But this raising-up is a matter of a few metres. The pavilions, with their linking glass passages, seem at first sight to belong to a well-bred post-war school or business park.

It is only in their faint classicism, and their cladding, that the pavilions give a hint of their cultural content. The cladding is recycled glass, greenish, slightly rough on the surface, and placed in horizontal panels such that it is faintly reminiscent of marble or stone. The panels are covered at the corners by L-sectioned glass cover strips, which enhance the impression of solidity. It is a murmur of differentiation.

Such plainness brings to mind Charles Jencks' mockery of Mies van der Rohe's Illinois Institute of Technology, in his 1977 book The Language of Post-Modern Architecture. Why, asked Jencks, should the chapel look like a boilerhouse and a boilerhouse look like a chapel? And why did critics, he asked, overlook these obvious questions and focus instead on esoteric interpretations

of corner details? To apply such arguments to the Folkwang, should it not announce itself more explicitly as a museum? And should its role not include a more positive contribution to the surrounding streetscape?

This is similar to a feeling that other recent Chipperfield projects inspire, such as Barcelona City of Justice law complex (AR July 2009): couldn't it have been a bit more charming? Certainly it's possible to imagine a building that would give more externally while still being a wonderful place to see art. But it's also the case that what Chipperfield calls 'rigour' has its uses. The consistent plainness of the architecture creates both a calm atmosphere, and a sense of a place apart, in which the art can shine.



ARCHITECT

David Chipperfield Architects, London, UK

STRUCTURAL ENGINEER

Ingenieurberatung Puehl and Becker VBI, Seroneit and Schneider

SERVICES ENGINEER

Giesen-Gillhoff-Loomans GbR, BBT Engineers LIGHTING ENGINEER

Lionino

Arup

RECYCLED GLASS FACADE

The Greenhouse Effect

Far left_ A painting and sculpture gallery, with courtyard beyond Left_ Glass walls open up views to the surrounding neighbourhood Below_The cavernous space for temporary exhibitions

Bottom_ Entrance foyer and courtyard





132

DIAKONIE CHURCH AND NURSING HOME

DÜSSELDORF, GERMANY
ARCHITECT
BAUMSCHLAGER EBERLE
WRITER
CATHERINE SLESSOR
PHOTOGRAPHY

EDUARD HUEBER

Diakonie is a social welfare arm of the Protestant church in Germany, providing pastoral care for those in physical hardship or mental distress. It also focuses on the causes of suffering, promoting social justice and tolerance. Assistance is offered to all, regardless of faith (or indeed, the existence of faith). On an urban site in Düsseldorf, one of Germany's most affluent cities, architecture practice Baumschlager Eberle was asked to design a new social care campus for the local Diakonie. The Austrian partnership was appointed following a competition in 2004.

Two new buildings comprising a church and nursing home for 90 people replace an existing facility in a residential part of the city. The simple, sober architecture of this project is typical of Baumschlager Eberle's precisely calibrated distillations of form and materials. Characteristic of a now established generation of German-speaking Swiss and Austrian architects, the practice's work is distinguished by an undemonstrative yet tectonically lucid spirit. Though perhaps more familiar for its skill in using timber, in this instance brick - a long, thin, almost Roman brick is brought into play with equal assurance and sensitivity.

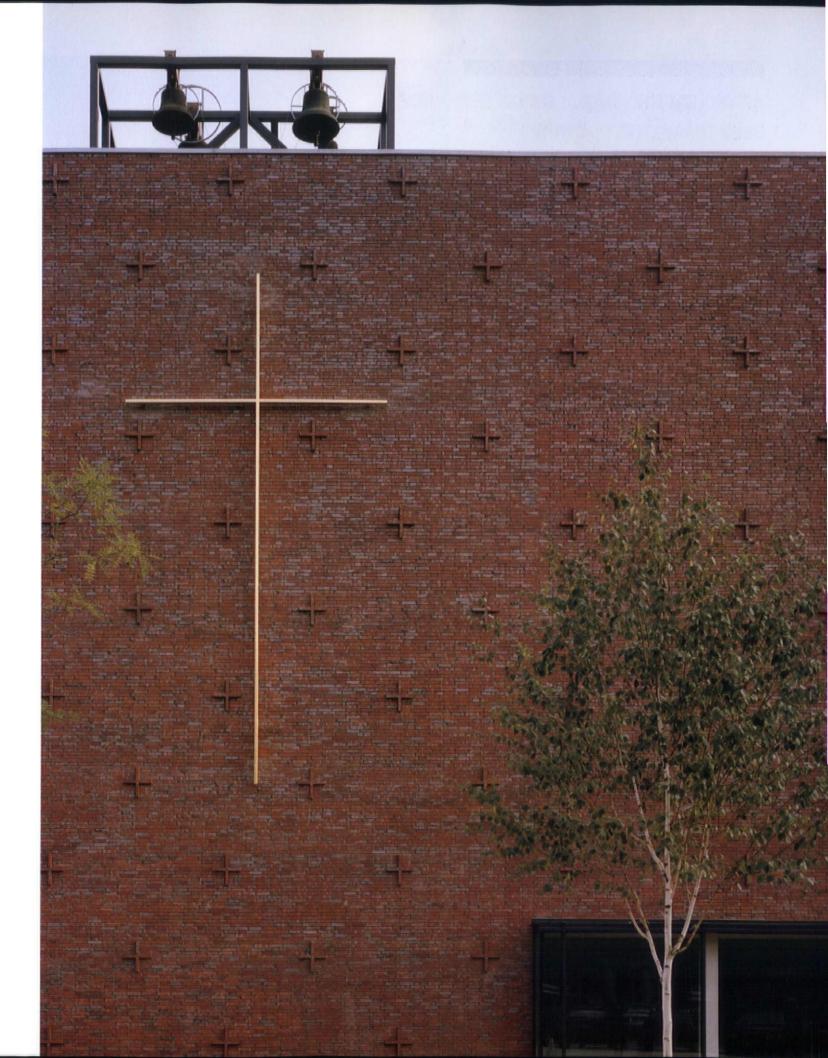
Looking as though they had always been there, the two new buildings slip carefully and unassumingly into Düsseldorf's cityscape. In formal terms, the blocks are obviously siblings, with chiselled facades of rust and violet-hued clinker brick that give them a delicately flecked, almost tweedy countenance. Yet functionally they are quite different, ministering to the competing needs of body and soul. The four-storey nursing home is a U-shaped block set parallel with the surrounding streets. But as if to emphasise its more exalted place in civic life, the five-storey cube of the church is placed at an angle to it, subtly dislocating the orthogonal regularity of the urban grain and creating a wedge-shaped parvis around its entrance.

Wrapped in a hermetic brick skin, the church is essentially a tall, tranquil box, reminiscent of a traditional basilica, its white walls softly washed with light. The deep coffered ceiling admits indirect daylight through clerestory slots and artificial illumination can also be regulated to orchestrate different moods. Adorned with the bare minimum of Christian iconography, this neutral space could be seen as a contemporary interpretation of the spare, functional Protestant churches

of northern Europe. Nonetheless, for both individual contemplation and collective worship, a calm sense of the numinous prevails. To the rear are floors of meeting rooms and offices, reinforcing the church's social and campaigning role in the wider community.

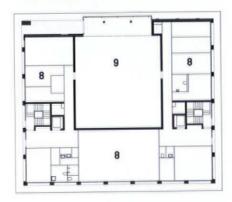
With the nursing home, a key aim was to dissipate the depressingly familiar feeling of being marooned in an anonymous institution. The 90 bedrooms are arranged over three floors and divided into semiautonomous residential units. Each serves 15 people with a communal living room and kitchen. Supported in this way, residents choose how to live their lives. The bedrooms occupy the two wings of the U-shaped plan, with the communal facilities arranged in the linking bar. Rooms are double banked off central spinal corridors; those on the inside overlook a peaceful landscaped courtyard. At ground level, small shop and café units animate the public realm, giving something back to the life of the city.

As with all Baumschlager Eberle's work, the architecture appears deceptively modest, yet it in its thoughtful interaction of the sacred with the social, it dignifies and uplifts both the people it serves and its wider surroundings.

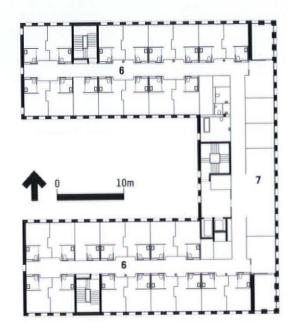


AS THOUGH THEY HAD ALWAYS BEEN THERE, THE TWO NEW **BUILDINGS SLIP UNASSUMINGLY** INTO DÜSSELDORF'S CITYSCAPE

church - typical upper-floor plan

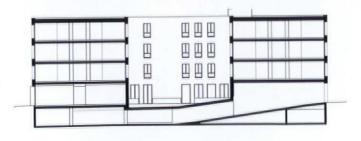


nursing home - typical upper-floor plan



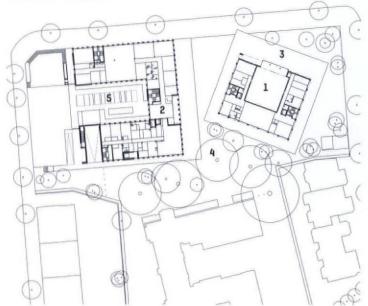
- church
- nursing home
- parvis
- urban square
- courtyard
- bedrooms
- communal
- living area office/meeting room
- void above church hall

nursing home - cross section





site/ground-floor plan



ARCHITECT

Baumschlager Eberle, Lochau, Austria

PROJECT TEAM

Michael Gondert, Roman Österle, Jürgen Stoppel

STRUCTURAL ENGINEER

Weischede, Hermann & Partner

LANDSCAPE ARCHITECT

KuBuS Freiraumplanung LIGHTING

Zumtobel

crosses hint at the church's function Left_The nursing home introduces convivial life at street level

Below left_The church addresses a new parvis

Previous page_

Rust and violet

the facades a

appearance. A

and brickwork

clinker brick gives

subtle, tweed-like

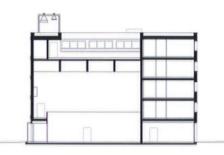
framed campanile

Below_A deep coffered ceiling caps the tall luminous

volume of the church



church - cross section





133

HÄMEENLINNA PROVINCIAL ARCHIVE

LOCATION

HÄMEENLINNA, FINLAND

ARCHITECT

HEIKKINEN-KOMONEN ARCHITECTS

WRITER

CATHERINE SLESSOR

PHOTOGRAPHY

JUSSI TIAINEN





THE BIPARTITE PLAN PITS THE **ARCHIVE AGAINST A NARROWER VOLUME OF OFFICES WRAPPED** IN A MORE DEMURE COPPER SKIN

site plan

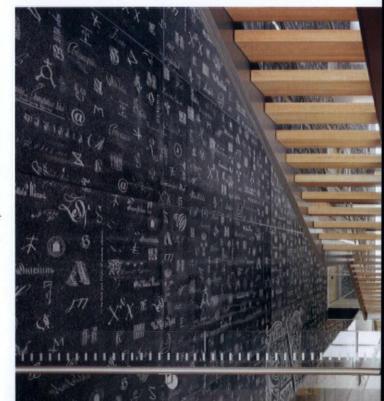
'We wanted to tell a story of the contents of the building,' says Mikko Heikkinen, partner in Heikkinen-Komonen Architects, of the new provincial archives building in Hämeenlinna. But by definition, archives tend to be inward-looking and container-like, their contents stored out of sight in secure, climate-controlled conditions. How do you make this the focus of the architecture?

Heikkinen-Komonen's response is to turn the imperforate container into a richly decorated casket. Acclaimed artist and graphic designer Aimo Katajamäki selected an array of letters, stamps and symbols from material held in the archives and turned them into a kind of runic wallpaper 'imprinted' on to dark, precast concrete panels. The concrete walls enclose and seal that part of the building in which the archives are housed. 'It should not look like an anonymous storage or office building,' says Heikkinen, and through creative collaboration with Katajamäki, coupled with the skills of the concrete fabricator, it certainly doesn't. With a spirit more madcap Superdutch than sober Scandinavia, the blizzard of symbols animates

and ornaments both the facade and the building's interior.

Hämeenlinna lies about 70 miles north of Helsinki. Famous as the birthplace of composer Sibelius, it also boasts the more prosaic distinction of have the oldest provincial archives in Finland, dating back to the 16th century. As befits a repository of five centuries of historical data, sensitive to both natural and human intervention, the building's default setting is that of a brooding fastness, but the decorated box of the archive floats over a vitrine at street level containing a public library, exhibition space and lecture hall, all loosely defined by serpentine glass walls. This is where specialist researchers and the more general public congregate, and their presence gives some sense of the building's inner life.

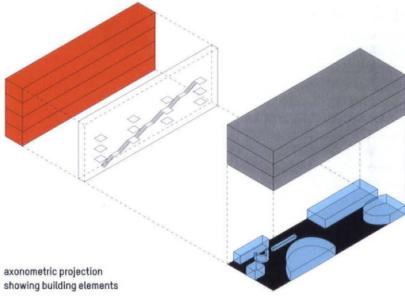
The bipartite plan pits the four-storey archive against a narrower five-storey volume of offices wrapped in a more demure skin of unpatinated copper perforated by horizontal gashes of glazing. A canyon-like zone of circulation separates the two contrasting volumes, and its glass roof brings light down into the depths of the building. It might











Previous page_
Wrapped in an
ornately decorated
concrete skin,
the new archive
makes a virtue out
of its inherently
hermetic nature
Left_ The runic
wall flanks a long
lightwell and

circulation spine separating the archive from the administrative block Above left_The copper-clad administrative block Above_The ground floor contains research and study areas

THE SYMBOLS APPEAR CHISELLED INTO THE DARK SURFACE, BUT IN REALITY IT'S DOWN TO THE CASTING PROCESS

ARCHITECT

Heikkinen-Komonen Architects, Helsinki, Finland

PROJECT TEAM

Mikko Heikkinen, Markku Komonen, Markku Puumala, Karola Sahi

STRUCTURAL ENGINEER Contria

CONCRETE FACADE

Graphic Concrete

ARTIST

Aimo Katajamäki

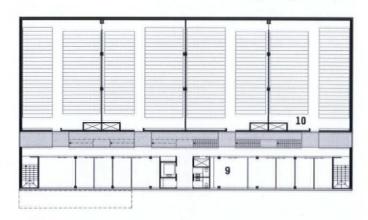
Right_Detail of the 'printed' facade, made up of precast concrete panels. Artist Aimo Katajamäki devised the design, choosing a mixture of symbols and letters from the archive material

seem like an obvious move, but it's deftly executed, and perhaps the best bit is that the runic wall can be clearly read and apprehended as you move around the circulation canyon.

The 'printed' effect on the concrete panels is achieved by applying a surface retarder to a special membrane which was spread on the mould table when the concrete panels were cast. Depending on the specification, the resulting surface can be patterned, smooth or rough (where the aggregate is completely exposed). One-off, customised designs such as Katajamäki's are created by manipulating the contrast between the smooth, fair-faced surface and the exposed aggregate underneath. Varying the colour of the cement and aggregate adds another visual dimension. Here, letters and symbols appear chiselled into the dark surface, but in reality it's all down to the mechanics of the casting process. Finnish firm Graphic Concrete supplied the technology and a local contractor then fabricated the panels under supervision. Smaller sample slabs were initially produced to gauge the effect of Katajamäki's complex design, which translates powerfully and poetically to the full-scale facade.



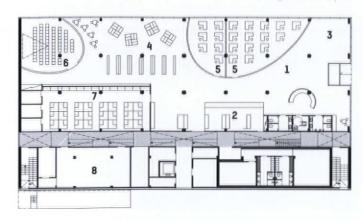
typical upper-floor plan

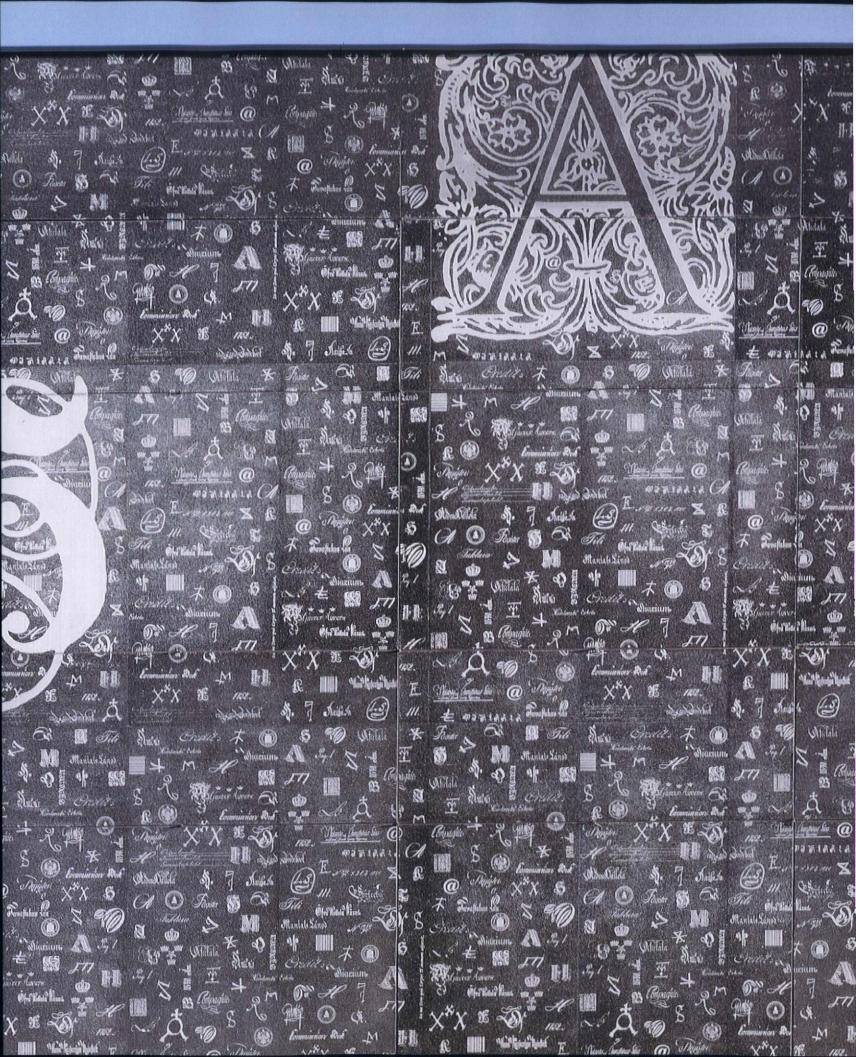


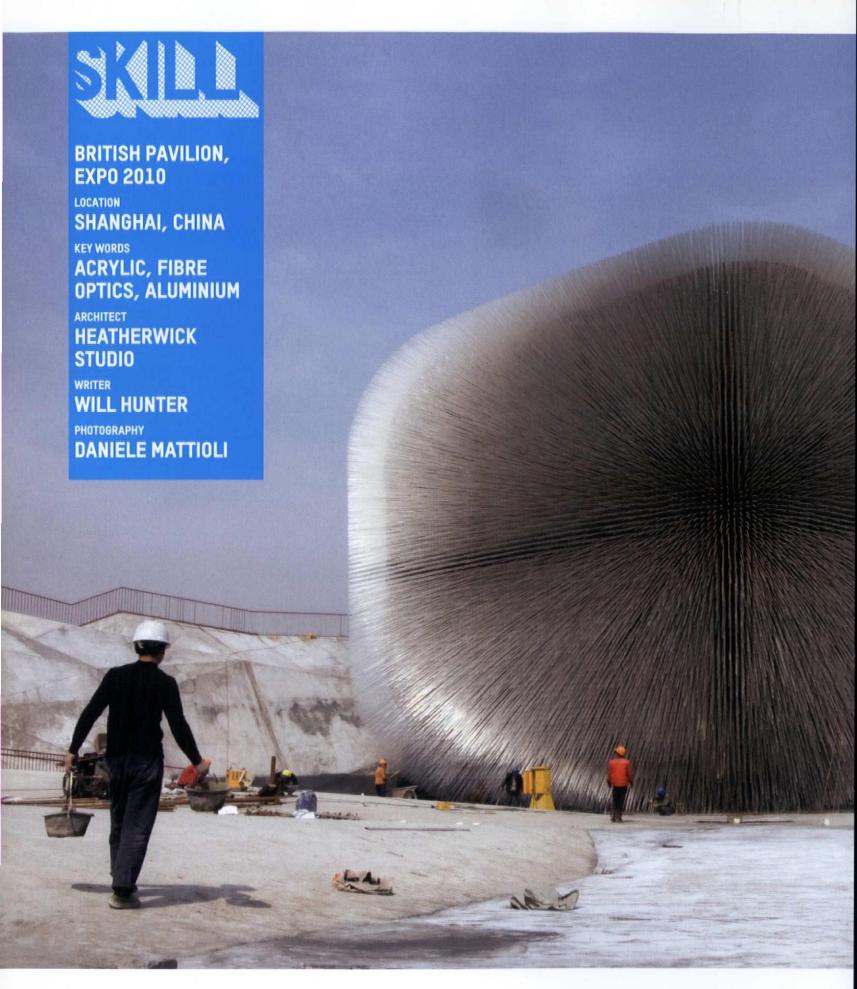
ground-floor plan

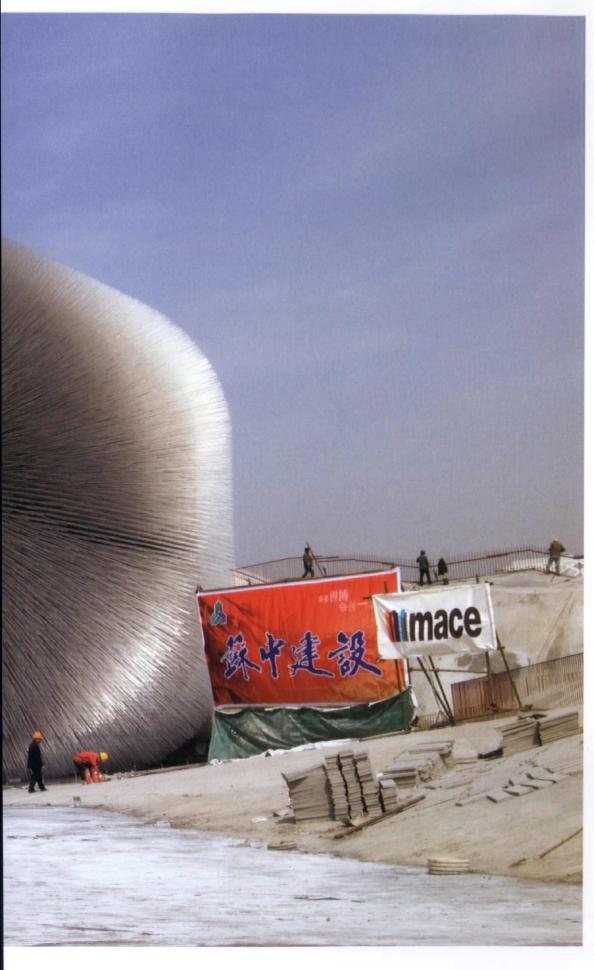
- lobby
- 2 information desk
- 3 exhibition space
- 4 library
- 5 researcher desks
- 6 lecture hall
- 7 microfilms
- 8 workshops
- 9 office
- 10 archive











With the 1851 Great Exhibition staged in London's Crystal Palace, the British like to view themselves as the originators of the grand exposition. And for the UK's presence at the forthcoming Expo 2010 Shanghai - the largest event of its kind yet, with 70 million visitors expected between 1 May and 31 October - there has evidently been pressure to live up to this 250-yearold reputation. As Heatherwick Studio's Katerina Dionysopoulou explains: 'The brief from the Foreign & Commonwealth Office was very simple: be in the top five.'

Competing with over 200 national counterparts, this was no small challenge. However, Heatherwick's simple yet ingenious competition-winning proposal for the UK pavilion looks in with a chance. The designers have given over most of the 6,000m² site to a folded landscape, creating the pavilion as an axial focal point. Crucially, instead of an exhibition that bombards visitors with information about the UK, the scheme integrates structure and content.

Externally, the pavilion is a hairy, somewhat amorphous object, with over 60,000 acrylic rods piercing a $15 \times 15 \times 10$ m box. Those familiar with Heatherwick's work will trace this silhouette to an earlier project, Sitooterie II at Barnards Farms in Essex (AR January 2004) in which the designer punctured a cube with 5,000 aluminium tubes. At Shanghai, this precedent is vastly scaled up and the form exponentially more mesmerising, as the rods quiver in the breeze issuing from the nearby river.

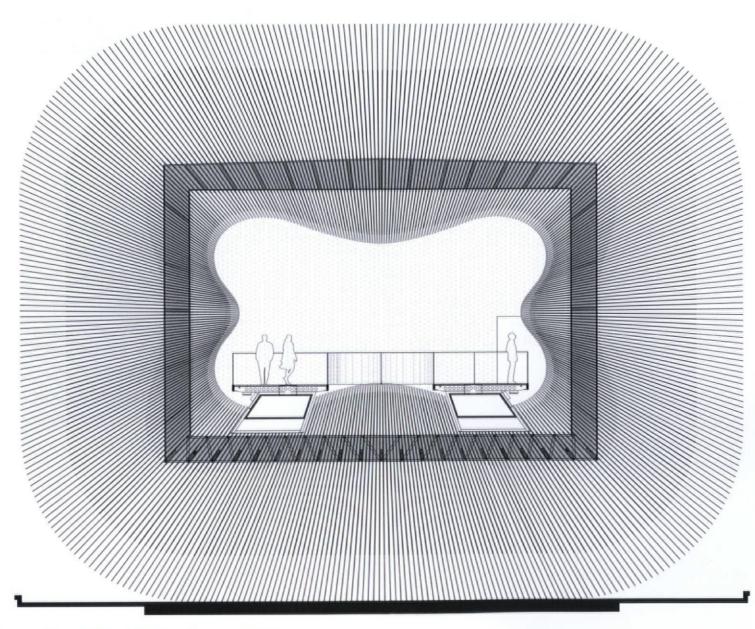
The Expo's theme is Better City, Better Life and the UK explores this through the relationship between nature and cities. Working with the Royal Botanic Gardens at Kew, the internal space has been conceived as a 'seed cathedral'. Over 250,000 different seeds, all arranged randomly, are cast into the ends of the rods. The acrylic acts like fibreoptic filaments, so in the daytime, the tiny exhibits are naturally illuminated. At night, LEDs take over, ____

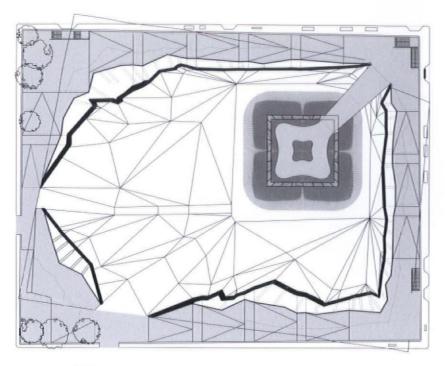
BRITISH PAVILION HEATHERWICK STUDIO

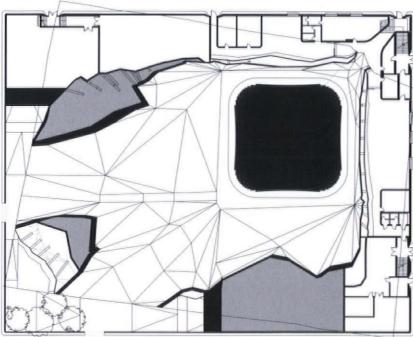
BECAUSE IT'S NOT AN EXACT CUBE, YOU END UP WITH AN UNEXPECTED SILHOUETTE INSIDE

Previous page_ Applying finishing touches to the extraordinary structure, which resembles a dandelion or beached sea urchin, sitting in a sunken plaza like 'an unwrapped gift', according to Heatherwick. The plaza will host performances for the duration of the Expo Below_Cross section showing

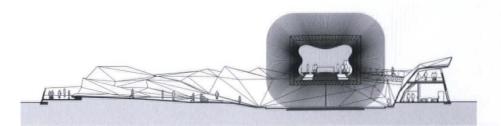
how the thousands of acrylic rods penetrate the box and thus make up the structure of the pavilion Right, top Upper-level plan, showing the main exhibition space Right, centre The lower level is devoted to back-of-house functions Right, bottom_ Cross section through entire site











backlighting the seeds and making the pavilion glow from the outside.

'Very early on we decided that we didn't want to do anything advanced technologically, because we felt China could do that better than anybody, so we wanted to do something low-tech,' says Dionysopoulou, who has worked on the project from competition stage and is now seeing it through to completion. 'Inside it creates an amazing experience: you can see where the sun is because those rods are glowing more.'

Visitors arrive at the site through a corner entrance, and can either filter into the park and simply look at the pavilion, or enter it by ascending a ramp. From the park, there is a moat-like pool that prevents people walking up to the pavilion and touching it. At the top, where a bridge crosses to the interior, the threshold is screened with a curtain to protect the dramatically-lit experience.

The internal floor area is 100m², which allows 100 visitors at any one time. The floor is a steel structure finished with a concrete screed; it has a glass balustrade and a void in the middle, so you can look down onto the seeds. Looking up, the rods are about 5m above your head, so you can only really perceive the seeds properly at the ends closer to eye level. A guide will give a short talk, pointing out interesting examples.

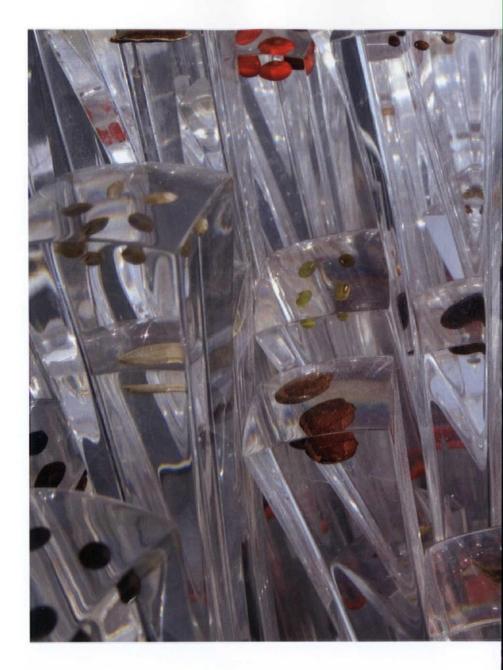
The structure is 20m high – the maximum height for everybody (except the Chinese, whose pavilion reaches 67m). Heatherwick created a gradual 1m indentation in the flat site, into which the British pavilion was sunk. Excavated earth has been stored under the ramp so the plot can easily be returned to how it was found (another condition of the brief). The pavilion sits on a removable cast in-situ concrete raft foundation.

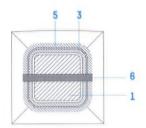
The box is a timber sandwich structure: plywood on the inside and outside, set 900mm apart, supported with laminated veneer lumber (LVL), creating a space-frame structure in between. So as not to interrupt ____

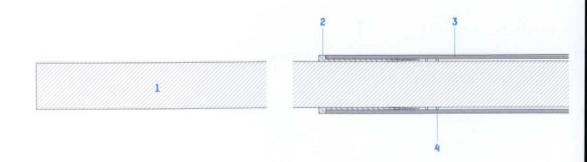
WORKING WITH KEW, THE INTERNAL SPACE HAS BEEN CONCEIVED AS A 'SEED CATHEDRAL'

- 1 20 x 20mm clear extruded acrylic rod
- 2 high-density polyethylene end cap to provide partial waterproof seal
- 3 25 x 25 x 2mm extruded aluminium tube
- 4 silicone seal
 to provide
 waterproofing
- 5 30 x 30 x 2mm extruded aluminium tube
- 5 secondary fixing 3mm steel pin glued in position
- 7 reflective wedge cut into the acrylic rod

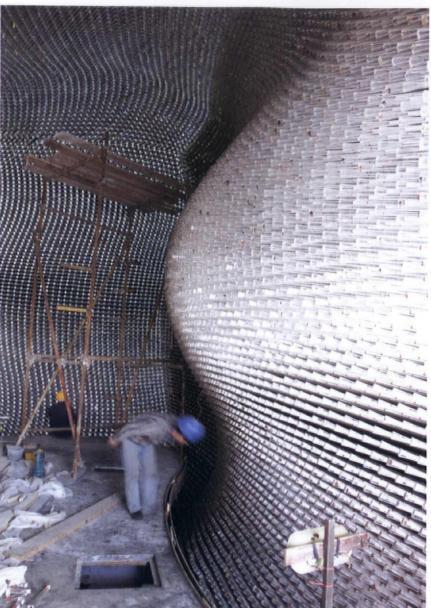
- 8 light cast by LED reflected towards both ends with bias towards external spike tip
- 9 LED
- 10 aluminium LED housing cover
- 11 LED and cover to be silicone sealed
- 12 polymethyl methacrylate bond joint
- 13 clear acrylic bulb with seeds cast inside bonded to extruded acrylic rod
- 14 seeds



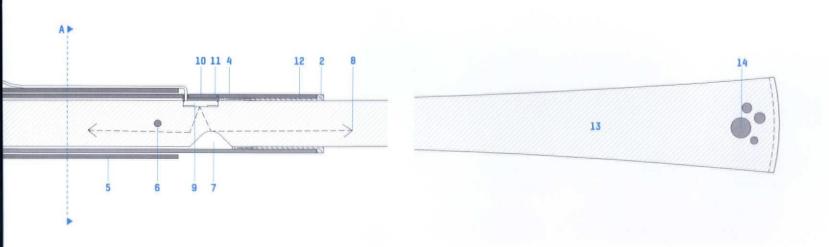








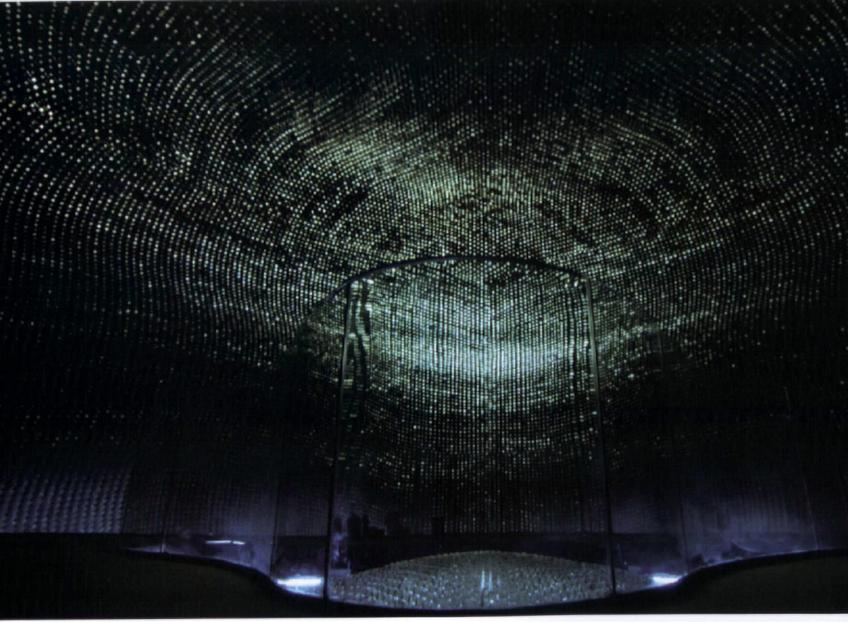
Far left_The seeded ends of the acrylic extrusions - over 250,000 different seeds were used in 60,000 rods, sourced from a local partner to the Royal Botanic Gardens at Kew Left Because the seed element is larger than the extrusion, the rods had to be threaded from the inside. To achieve this required five people per rod: two on the inside, and three outside (a pair holding, and one fixing it). When the rod reached the correct position, the people inside would shout to those outside, who would fix it in place with a Jubilee clip Bottom left Detailed cross section AA through acrylic rod Bottom right Detailed long section through acrylic rod, showing the integral LED light fitting, which reflects light along the rod to illuminate the seed cast into its slightly flared end. Each rod is 7.5m long



BRITISH PAVILION HEATHERWICK STUDIO

THE INTERNAL FLOOR AREA HAS A GLASS BALUSTRADE AND A **VOID IN THE MIDDLE, SO YOU CAN** LOOK DOWN ONTO THE SEEDS

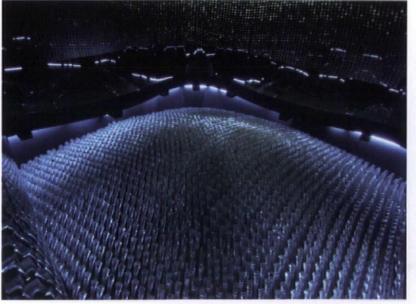




Left Digital rendering showing how the pavilion and site, located by Shanghai's Huangpu river, will look when complete Below Inside the pavilion, its softly curved walls, roof and floor a sea of sparkling rods Right, top Detail of the rods and their micro exhibits. The seeds were sourced from China Right, bottom The rods form a sensuous, glistening carpet







the dispersal of rods, which are 40mm in section and centred 100mm apart, the LVL couldn't be wider than 40mm. Five sides of the box are all plywood, except the bottom plane, which also contains steel to bear the weight.

The holes for the rods have been CNC-routed in the exact required position and angle. All the rods are 7.5m in length and extend about 5m outside the building. Because it's not an exact cube, you end up with an unexpected silhouette inside. 'If it were 15 x 15 x 15m, you would get the same shape inside as out,' explains Dionysopoulou, 'but because the height is 10m – and the rods are all facing a sort of sphere in the middle – you create a much more interesting interior volume.'

Two thirds of the rod's length is encased in aluminium. Externally, 1.5m of acrylic remains exposed, and this material shift is obvious, with the clear acrylic appearing as a glowing halo around the metallic silhouette. There are a series of what appear as red dots where the aluminium meets the acrylic, caused by a red plastic extrusion that lets the two materials move without scratching the acrylic. The aluminium stops the acrylic from drooping or snapping off. 'We did a lot of tests about wind-loading, and typhoon and earthquake conditions,' says Dionysopoulou. In the event of such a disaster the rods wouldn't snap, though they might deform.

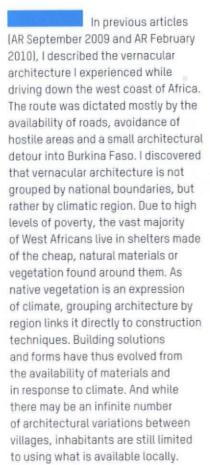
The acrylic rods were made in two sections: for the most part they were extruded, but because some of the seeds were larger than the 40 x 40mm section, the internal ends were all cast separately and glued on. The distance between the tip of the seed to the structure ranged from 350mm to 1.3m, and an accurate 3D computer model was used on site to check the rods were positioned correctly.

More than 75 per cent of the material was sourced from within a 300km radius of Shanghai. The seeds came from one of Kew's local partners in China, and all components were prefabricated off-site, in factories around the city.



IN THE FINAL PART OF THIS SERIES ON WEST AFRICA'S VERNACULAR ARCHITECTURE, THE AR EXAMINES THE LINK BETWEEN CONSTRUCTION METHODS, CLIMATE AND THE HUMAN FACTOR

JON BESWICK



Six major climate regions span Africa's length. Driving south to the equator, these go from Mediterranean to desert, Sahelian, savannah (also known as a tropical climate with dry season), humid tropical to equatorial climates. As I passed the equator, these reversed until culminating in the equable Mediterranean climate of South Africa. Heading south, it was possible to predict (with relative accuracy) climate and therefore vegetation, allowing me to suppose the types of building materials, techniques and architectural forms that might be particular to certain regions. Crossing the equator, I wanted to prove that I had been right in grouping African vernacular architecture by climate, expecting to see the sorts of buildings I had already experienced in corresponding climates north of the equator.

I crossed the equator deep in Gabon. Movement through the equatorial rainforest is slow and dangerous, restrictive to both life and architecture. The predominant building technique across all regions involves a timber lattice or cage, which is then covered in a mud

plaster that expands as it dries, strengthening the structure. Roofs are typically constructed with reeds or grasses and windows left open, exposing the lattice in order to maintain structural integrity. This unusual technique dominates a climatic region covering literally thousands of miles. I first witnessed it in Sierra Leone, again in Liberia, Nigeria, Cameroon, Gabon, the Republic of the Congo and deep in its neighbour, the Democratic Republic of Congo. This begs a difficult question: were these identical construction techniques developed in isolated pockets or dispersed through trade and travel? The spread of knowledge across northern Africa has traditionally been impelled by a number of factors. Small empires such as the Mali empire cultivated and spread knowledge; Islam grew and developed; and the nomadic tribes of Berbers and Bedouins travelled and traded over huge distances, bringing goods and ideas from elsewhere. But life in equatorial Africa has always been very ____









Top left_ A timber lattice and mud house in equatorial Africa. This is the most predominant building technique across all African regions, formed from a cage-like structure plastered with mud, which expands as it sets, strengthening the building Above_A savannah hut with thatched roof, north of the equator. This building type is virtually identical to those found in parts of Angola, on the south-west coast of Africa Left Abarona beach in Angola, constructed entirely from pieces of rubbish. This was one of many examples of inventiveness in methods of construction

ACCESS TO IMPORTED MATERIALS NEGATES THE NEED FOR A MORE IMPROVISED, LOCAL VERNACULAR

different. Communities are small and fragmented – there are over 10,000 tribes in what is now Nigeria alone. Given the difficulties of travel, combined with the danger of animals and tropical disease, how were these construction techniques disseminated? My sense is that, though land travel in the region is difficult, people (and their ideas) moved by rivers and the sea.

As with the equatorial regions, there is a strong correlation between building types of the humid tropical and savannah climates on both sides of the equator. In the Congos I witnessed the same grass-roofed, mud-walled huts typical of Ghana, the Ivory Coast, Togo and Benin. In the drier tropical savannah climate of Angola, these mutated into huts with increased air circulation, enclosed by lightweight walls of reed and timber. However, beyond these regions, the similarities in vernacular architecture diminished. I now understand that things are far more complicated in Africa than they first appear to be. Undoubtedly, climate is a major

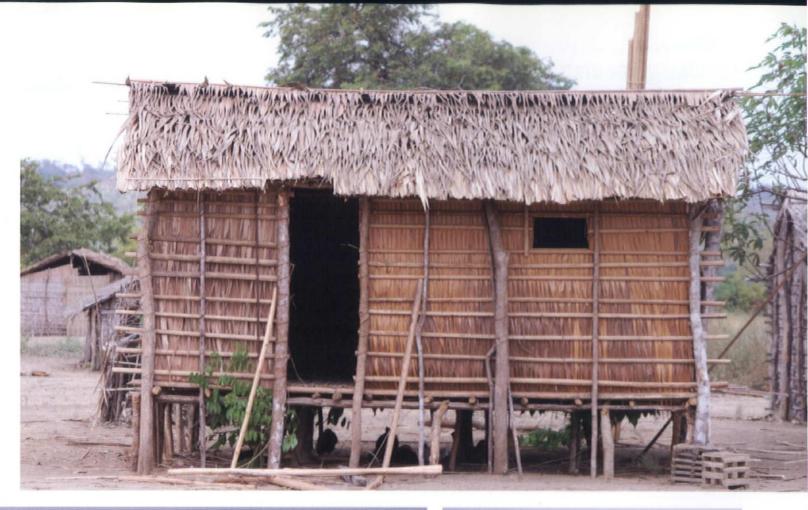
shaping force, but there is also a significant human influence.

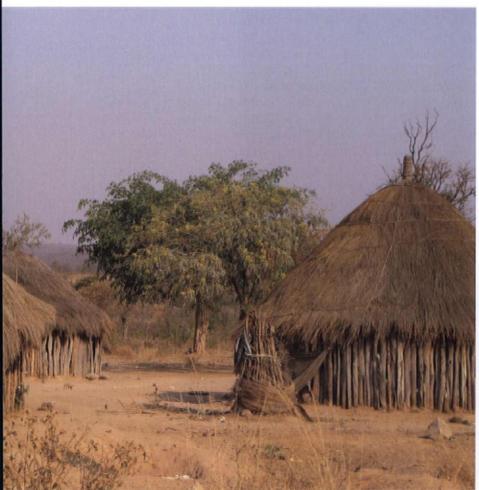
It is also important to acknowledge the differences between northern and southern Africa. To get some sense of this, the journey to the equator took four months, passing through 18 African countries. By contrast, the journey from the equator to Cape Town in South Africa took only one month and passed through six countries. This is mainly due to geography, but it is also to do with infrastructure. Better infrastructure promotes trade and, as in other parts of the world, many African communities develop and thrive along major transport routes. Access to imported materials negates the need for a more improvised, local vernacular. With the exception of the Democratic Republic of Congo, vernacular architecture is less common south of the equator.

Without doubt the most memorable examples of African vernacular were all sited in some of the poorest countries in the world, such as the Democratic Republic of Congo, Liberia and Guinea-Bissau. Conversely, South Africa, Namibia and Angola have a far higher GDP and GDP per capita, so buildings tend to be more 'evolved'. Angola has oil money and substantial credit from China to rebuild public infrastructure. Namibia exports minerals and diamonds and its economy is closely linked with South Africa. South Africa has an abundance of natural resources and well-developed financial sectors. Even the Republic of the Congo has oil money and new roads, thanks in part to its president Denis Sassou Nguesso who has had a tarmac road built to speed his journey from the capital Brazzaville to his home village of Edou in the north of the country. Another human factor is population size and distribution. Namibia, for instance, has the second lowest population density in the world, after Mongolia. In more densely populated Angola, however, nearly 60 per cent of the population live in urban environments; similarly in South Africa this figure is over 60 per cent. These factors all have a profound -

Right Araised hut in a village in the Republic of the Congo. constructed from natural materials found locally Below Savannah huts in Angola. similar to savannah huts found north of the equator Far right, middle Start of the presidential road in the Republic of the Congo, President Denis Sassou Nauesso had this highway constructed in order to speed up the journey time from the capital Brazzaville to his home town in the north of the country Far right, bottom Another bar in Angola, a simple woven structure











THRIVING TRADE ROUTES DID NOT EXIST SOUTH OF THE EQUATOR, SO THERE ARE NO CASBAHS OR MUD MOSQUES



effect on vernacular architecture, traditionally found in rural settings.

To a lesser extent, cultural influences produce variations between north and south. It was noticeable that the Sahel climate and desert regions south of the equator (such as the Namib Desert) are devoid of tent structures associated with the Sahara because there are no Bedouin and Berber tribes in this region. Thriving trade routes did not exist south of the equator and Islam is not prominent, so there are no casbahs or moulded mud mosques. But while south of the equator might be without the influence of nomadic tribes, there are many other ethnic groups in their place. In the Republic of the Congo I stayed with an ethnic group called the Bakongo or Kongo people, whose architecture was very different to anything I had seen before. Structures were rectangular, with pitched roofs made from a structural timber frame completed with woven walls and roofs. In some instances they also had slot windows and sliding doors. Construction was

undertaken in stages, built in equal modules of varying arrangements; some in a U-shape around a small garden, others in a line. Those dwellings arranged in a line had pitched roofs in different directions that produced a very distinctive assemblage. Inside the houses, beds and other furniture were constructed using the same technique. Doors could be locked, windows closed.

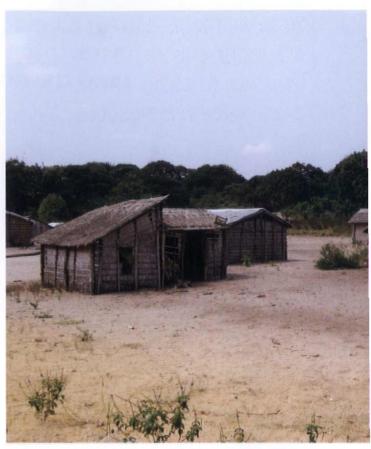
In another Bakongo village I witnessed an individual (the local witch doctor) who had built himself the only two-storey house in a 100mile radius, to literally 'elevate' his status. Mr Delaspe was exceptionally proud of his mixed-use building with its ground-floor surgery and living accommodation above. The entire building was dependant on a tree, the cornerstone of its structural integrity. Every timber member had been tied to it where possible, but despite this, the house still tilted alarmingly. Downstairs, the surgery was subdivided into a treatment room and another full of bottles and jars. These oddly shaped containers were

full of liquids and animal parts characteristic of the traditional Kongo religion. Upstairs was accessed via a ladder (missing several steps) leading to bedrooms and balconies, one covered and one exposed. It was one of the most incredible handmade structures I have ever seen.

This was not an isolated case of inventiveness. West Africans are masters of creating solutions out of whatever is at hand. On a populated coastal region in Angola I spent some time at a local bar created entirely from rubbish. In all my West African travels, these last two buildings made the most powerful impression. Idiosyncratic in nature, both are a response to and an expression of the surrounding community. As with most vernacular dwellings they are constructed and maintained not by the individual but by the community, whose lives are affected by the presence of built form. So ultimately, what I thought would be a 30,000km architectural journey, turned out to be more about the local people and my perceptions of them.

Above A house in the Republic of the Congo, belonging to a local witch doctor. The only two-storey building in a 100-mile radius and therefore a symbol of high status - the building is entirely dependent on a tree, to which all the structural members are tied. The doctor's surgery is on the ground floor, while living accommodation is arranged on the upper level, which features two balconies Top right A village in the Republic of the Congo, belonging to the native Bakongo people Right_A rare example of vernacular architecture in northern Namibia







An elegiac inventory of a vanishing industrial world, and the one supplanting it

BOOK / New Topographics Britt Salvesen Steidl, 2009, £44

In 1975 a show with the unappealing title New Topographics appeared at just three modest venues in the US. Thirty-five years later, a new version of the same exhibition is travelling to eight notable institutions, from the San Francisco Museum of Modern Art to the Nederlands Fotomuseum in Rotterdam, and this weighty book accompanies it. Clearly that first show struck a chord.

Subtitled Photographs of a Man-Altered Landscape, it featured the work of 10 photographers. All are American, apart from German duo Bernd and Hilla Beche. Except for the studied neutrality of their approach, the Bechers weren't truly representative of the work in New Topographics. While they compiled an elegiac inventory of a vanishing industrial world, the other participants looked more at the one supplanting it.

Robert Adams shows us settlements of trailers sprawling across a plain in Colorado. In the distance is a range of mountains that earlier photographers would have turned into a romantic wilderness; Adams, by contrast, ensures we see power cables and tiny patio gardens that refute any sense of grandeur.

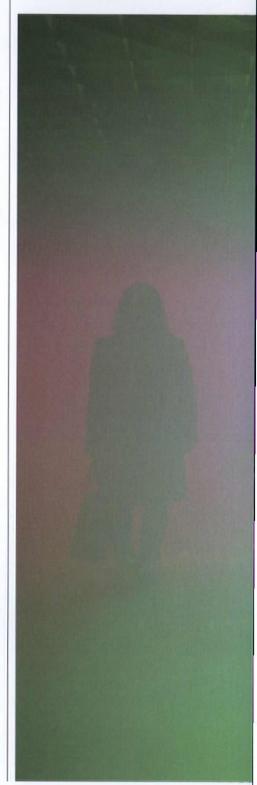
Lewis Baltz studies a typical business park, where the minimalist anonymity of the buildings is offset by the debris of construction. Frank Gohlke focuses on the spread of asphalt, while Joe Deal finds elevated viewpoints to gaze at in the steady annexation of land in Albuquerque. Throughout, the stress is on prosaic everyday scenes, not least in Stephen Shore's colour images of small towns in Montana or Texas; though perhaps these now have a period charm as emblems of a less-developed America.

All 168 photographs in the 1975 show are reproduced in the book, but few visitors to the original exhibition could have guessed how ubiquitous the New Topographics stance would become. For instance, a big show in 2008, Nature as Artifice: New Dutch Landscape in Photography and Video Art, featured artists mostly working in a 'documentary' spirit, while some pupils of the Bechers now command enormous prices.

When the offbeat becomes so orthodox or attracts so many dollars, it can lose its edge. I hope that doesn't happen with work in New Topographics, because it still acts as a mirror to the world we're constructing – and a far from flattering one at that. ANDREW MEAD

- An original perspective that has continued relevance
- Imitators threaten to erode its radical edge

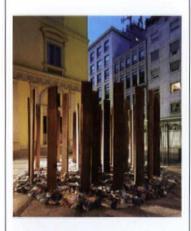
Below_Master of atmosphere Olafur Eliasson joins forces with Chinese artist Ma Yansong to create an installation at the Ullens Centre for Contemporary Art in Beijing. Visitors enter an endless foggy space, with colour emanating from fluorescent tubes of red, green and blue. By moving through the space, the colours blend; viewers create their own swirling, kaleidoscopic pea-soupers. Until 20 June.





Architecture and fashion meet in Milan

'In Britain, we've always been fiddlers. That explains the survival of drawing'



INSTALLATION / The Wooden

Beacons
Marni, Via Senato, Milan
Until 19 April
www.matteothun.com

Along with the usual parade of new chairs, the Milan Furniture Fair throws up installations and happenings that transform the city into a kind of short-lived laboratory for experiment. Here's Italian architect Matteo Thun's offering, The Wooden Beacons, a series of timber structures filled with cloth, developed with fashion house Marni.

The beacons are scattered around the city – pictured above is the courtyard of the Marni boutique in Via Senato. A cluster of American walnut planks forms a rustic-looking assemblage in and around which offcuts of Marni fabrics are scattered. It aims to highlight the lifecycle of a product, from conception and design, to manufacture, use and obsolescence. As Thun opines somewhat gnomically, 'there is nothing that grows old faster than the new'.

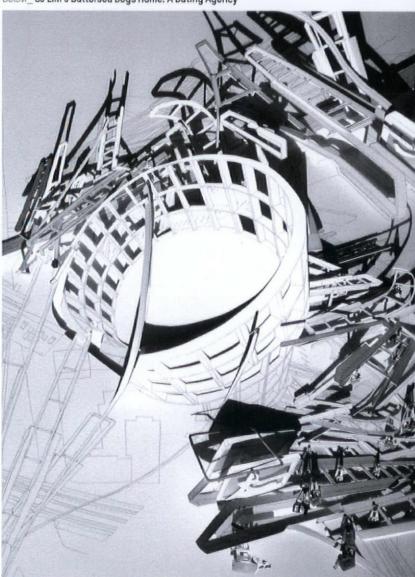
EXHIBITION/

London Eight Until 16 May, SCI-Arc, Los Angeles, USA www.sciarc.edu

London Eight sounds rather threatening, like the Gang of Four doubled up or the latest batch of terrorist suspects. But this octet are provocateurs of the immaterial; graduates and faculty of the Bartlett, selected by Peter Cook to demonstrate the endangered art of architectural drawing for an exhibition at the Southern California Institute of Architecture. It's an apt location, for SCI-Arc was founded in 1972 to challenge conventional teaching, and is currently directed by Eric Owen Moss, the enfant terrible of LA architects.

In his catalogue introduction, Moss likens digital software to a set of regulations that limit creative expression, as MIDI has for music. He claims it has devoured architectural representation and welcomes Cook's eight as artisans exploring fruitful alternatives. Cook concurs, arguing that 'Modernism never took hold in Britain. We've always been fiddlers, craft-oriented, and that explains the survival of drawing... Certain ideas have a boiling point that can be captured in a drawing but may be lost in the building."

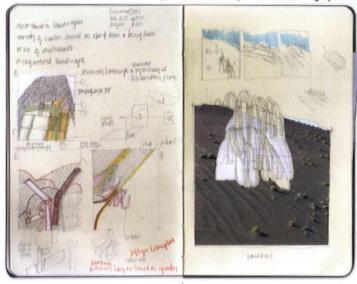
Only two of the eight architects – Laura Allen and Mark Smout – were born in the UK, but all have absorbed the Below_CJ Lim's Battersea Dogs Home: A Dating Agency



English love of whimsy and speculation as a complement, rather than an alternative, to serious building. CJ Lim, a Bartlett professor and head of Studio 8 Architects, exemplifies this duality, veering from inspired fantasy to visionary city plans that might change the face of China. In the newly published Smartcities +

Eco-warriors (Routledge, 2010, £29.99), he addresses urgent environmental issues with rigour and imagination. The London Eight exhibition features drawings from an upcoming book, Short Stories: London in Two-and-a-Half Dimensions (Routledge, 2011, £19.99). Light-hearted but precise, and as graphically accomplished

Below, from left_Smout Allen's exploration of Envirographic Architecture; Pascal Bronner's vision of New Malcovia, a community powered by potatoes



as the early work of Zaha Hadid, they include such fantastical imaginings as Battersea Dogs Home: A Dating Agency, and Sky Transport for London: Redevelopment of the Circle Line.

Pascal Bronner offers his own vision of New Malacovia - a Portable City Blueprint, which looks back to extinct civilisations and forward to sustainable communities of the future. The spirits of writer Italo Calvino and illustrator Heath Robinson hover over these meticulous delineations of a multi-layered megastructure of flattened windows and fibre-optics, resting on a bed of corks, and harvesting renewable energy from potatoes impaled on pins. A similar aesthetic is carried further in the threedimensional drawings of Johan Hybschmann. Inspired by Russian Ark, a film by Alexander Sokurov that telescopes time

as the camera moves
uninterruptedly through the
Winter Palace in St Petersburg,
he explores the perception of
space. Laser-cut constructions
that suggest the intricate
mechanisms of a watch abstract
the rich decor of the palace,
drawing us into a labyrinth of
cogs and connecting rods.

From here it's a leap into the alternative reality of marcosandmarjan, the experimental practice that Marcos Cruz and Marjan Colletti established ten years ago. In that decade they've explored the links between architecture, biology and human emotion, drawing imaginary cities while building pavilions for the Lisbon Book Fair. Their research and seductive imagery feed into competition entries for projects in China and the Middle East. Yousef Al-Mehdari is more explicitly concerned with human anatomy. He re-imagines a



Byzantine church in Istanbul that was gutted to serve as a museum, transformed into a hammam; bodies exploding from a wall of crumbling bricks; and a disturbing hybrid of bone and human features that evokes HR Giger's monster in Alien. Smout Allen's theme is Envirographic Architecture, exploring the relationship of nature and technology in specific locations, from the eroding coastline of Norfolk to the volcanic island of Lanzarote. The duo's drawings have a formal beauty that would

earn them an honoured place in any museum. **MICHAEL WEBB**

- The art of the fiddle, evocatively captured in drawn form
- Hyper speculative

ADVERTISEMENT FEATURE

TILE OF SPAIN



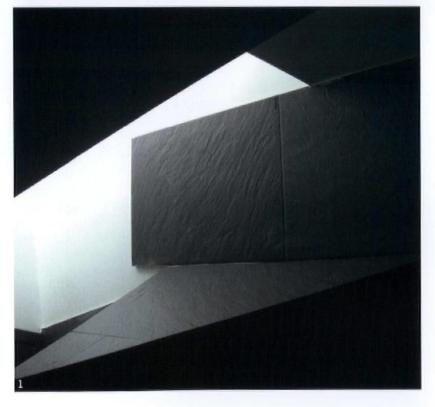
With the Casa 0.96 project, Spanish architecture practice Bailo+Rull has created a remarkable new house on a steeply sloping site. On the outskirts of Barcelona, the house turns the challenges of the topography to its advantage through an ingenious structural composition. The dwelling is designed in the shape of a bent tube, its ends buried in the hillside, while the rest of the building cantilevers out over the landscape.

The house extends from the crest of the road towards a lower wooded area. The generous roof area is also a terrace, providing fantastic vistas of the surroundings. Viewed from the landscape, the building resembles a fractured mirror, with stainless steel panels that reflect the light.

The house is a series of large and light angular spaces. Ceramic tiles are used extensively, complementing Bailo+Rull's architecture. Much of the interior flooring is porcelain stoneware tiles by Tile of Spain member Zirconio. Black tiles create a contrast with the light that floods into the house, while also giving the spaces a unified finish. Taking this coordinated design concept one step further, the architects used the same tiles outside, creating an interplay with the stainless steel. In doing so they demonstrated the versatility of porcelain stoneware, which can be used both for interior and exterior applications and has the capacity to resist severe weather conditions.

One of the key internal spaces is the bathroom. This is dramatically illuminated by a glass ceiling and its walls are clad in vibrant red glass mosaic tiles by Tile of Spain member









1_Black porcelain stoneware is used extensively throughout the house as well as outside, creating a unified finish 2_The building, designed by Bailo+Rull, resembles a fractured mirror from outside 3_The garage makes practical use of non-skid tiles 4_Light floods into the house, which enjoys spectacular vistas of the surrounding

landscape



ADVERTISEMENT FEATURE



5_ Black stoneware floor tiles are counterpointed with white walls and wooden floors 6_ The house has a complex, fractured geometry

7_The roof becomes a generous terrace, with dramatic views over the surrounding landscape



Togama. Light floods into the bathroom from the huge skylight and bounces off mirrored surfaces, enhancing the vibrant sense of colour and creating a shimmering play of surface reflections.

www.spaintiles.info www.zirconio.es www.togama.com

ASCER, the ceramic tile manufacturers' association of Spain, represents over 150 member companies under the collective brand Tile of Spain. This is a joint initiative with the Spanish Institute for Foreign Trade (ICEX).

For information on Tile of Spain members, products and services, email mdarraez@comercio.mityc.es or call 020 7467 2385.



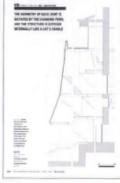




Subscribe to the Architectural Review















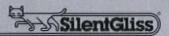
- Inspiration from the best of contemporary architecture from across the world
- Insight from plans, detailed drawings and sketches for all projects
- New sections on interior design, urbanism, product design, history and cutting-edge technical advances
- The best photographers, writers and critics in architecture today

Discover global architecture. Subscribe at www.subscription.co.uk/ar/arri



Flex - the New Panel Glide Generation

Corners are passé with the new curved Panel Glide System Flex from Silent Gliss. Innovative technology allows the panels to glide in curves in front of windows and walls, totally silent and in virtually any radius. So even when used as a visual room divider and design element, there's no limit to your creativity. www.silentgliss.co.uk

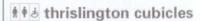


From the UK. To the AIA.



Thrislington Cubicles, the award winning British toilet cubicles manufacturer, is exhibiting at AIA for the first time. But we're not new to America. You'll find us in MoMA, Goldman Sachs (New York HQ), Boston Fine Arts Museum, K&L Gates, Pittsburgh and Center Square Philadelphia.

We'll be displaying Flow, Oasis Glass, Icon Aluminium and Polo cubicles ranges, Glass lockers and Sentry duct system and we hope you'll visit us on stand 549.



Contact: 1 +44 (0)1244 520 677

w www.thrislingtoncubicles.com e info@thrislingtoncubicles.com







Eidgenössische Technische Hochschule Zürich Swiss Federal Institute of Technology Zurich

Assistant Professor (Tenure Track)
of Architecture and Building Construction

Assistant Professor (Tenure Track) of Architecture and Urban Design

Assistant Professor (Tenure Track) of Architecture and Territorial Planning

The Department of Architecture of ETH Zurich invites applications for three Assistant Professorships in the above mentioned fields, to be filled as soon as possible. The Assistant Professors will be part of the research group Future Cities Laboratory with seats in Zurich and Singapore. While part of the ETH Zurich faculty, the Assistant Professors will maintain an active presence in Singapore, with a focus on research in their respective fields of expertise. Teaching responsibilities at ETH Zurich are envisioned in order to maintain a close contact with both students and faculty of the Department of Architecture. Assistant professorships have been established to promote the careers of younger scientists. The initial appointment is for four years with the possibility of renewal for an additional two-year period and promotion to a permanent position.

Subsequent research and teaching will be at ETH Zurich. As part of the tenure procedure, the candidates are expected to spend a substantial research period in Singapore, in the framework of the Future Cities project.

The Future Cities Laboratory — a research platform of the Singapore-ETH Centre for Global Environmental Sustainability (SEC) — will be headed by an interdisciplinary team of researches and designers from ETH Zurich, working in close collaboration with Singapore universities. The Future Cities Laboratory is conceived as think tank dedicated to sustainable development and the advancement of knowledge in the key disciplines relevant to the formation of the built environment. The ambition is to promote future-oriented strategies in building construction, urban design, and territorial planning that implement new aptitudes regarding sustainability.

In addition to a university degree, the successful candidates have to bring forward proof of both theoretical and practical work. Experience in research projects is required as well as a professional performance record in the candidates' area of knowledge. Further qualifications include: language skills, experience in teaching, the ability to manage groups of collaborators, and the willingness to contribute to the development of the Department of Architecture. The new professor will be expected to teach undergraduate level courses (German or English) and graduate level courses (English).

Please submit your application together with a curriculum vitae, a list of publications, and a table of completed projects to the President of ETH Zurich, Prof. Dr. Ralph Eichler, Raemistrasse 101, ETH Zentrum, CH-8092 Zurich, Switzerland (or via e-mail to faculty-recruiting@sl.ethz.ch) no later than June 6, 2010. Please indicate the Assistant Professorship of your preference and, when applying electronically, do only send one PDF file. Please contact Prof. K. Christiaanse (kc@arch.ethz.ch) for more detailed information regarding the Professorship. With a view towards increasing the number of female professors, ETH specifically encourages qualified female candidates to apply.

A rare glimpse inside McKim Mead and White's Pennsylvania Railroad power station in Long Island City, New York. Built in 1906 and obsolete by the 1920s, it remained structurally intact until 2005, when its four 84mhigh smokestacks were dismantled. This relic of a bygone era was recorded by American photographer Eric P Laverty, whose images bear witness to the changing landscapes of heavy industry. Laverty's interest in industrial architecture developed early in life during pilgrimages to the great factories and automotive plants of the American Midwest. His deep regard for heroic, historic structures and the people and processes that transform them gives his work a beautifully tender, elegiac quality.

