

RICHARD MEIER

On his museum & hospitality work

The unique stadium project healing wounds in Rwanda

Urban planner JAN GEHL

Working to create people-friendly active cities

BIOPHILIC GYM DESIGN

Biofit evaluates the health impact

“I want to make buildings which have the capacity to be loved”

PETER ZUMTHOR



GOCO RETREAT UBUD
Bali, Indonesia



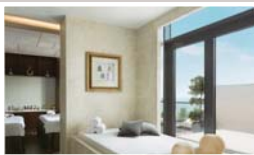
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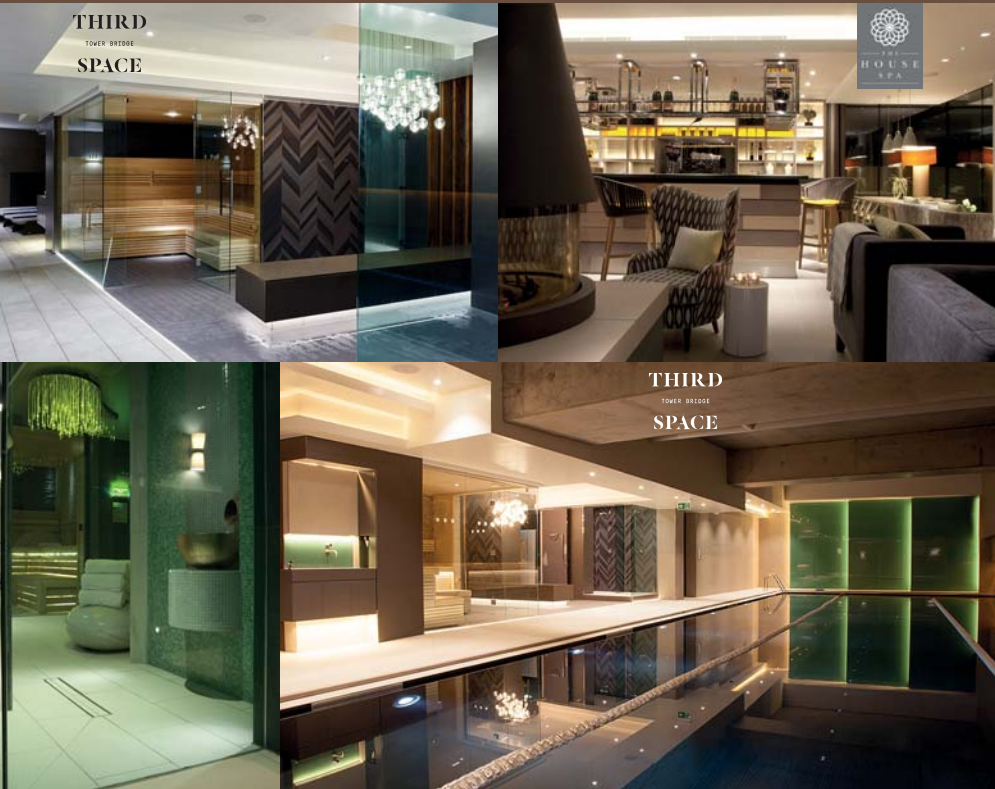
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Barrier-free design creates
places where all are welcome



Tearing down barriers, building understanding

As the world grapples with division driven by suspicion and fear, architects are finding solutions which harness barrier-free design to create public spaces and facilities where we can find common ground and build stronger communities

Although you're not likely to be in the frontline of the tumultuous political and sociological events taking place in the world today, as architects and designers, you're better placed than most to make a difference to the way people live and interact.

Every day, thousands of new public leisure buildings and spaces are planned, built, refurbished and opened, creating the environments in which we spend significant parts of our lives.

The qualities of these spaces define how we interact with each other and the opportunities which are available to us. They also change our behaviour in a thousand subtle ways.

We're seeing an increase in division and loss of understanding between generations, social groups and nations and these divisions are creating mistrust and conflict. As a result, it's never been more important for our leisure buildings and spaces to be safe, secure, inclusive places where people of all ages and interests can spend time together with purpose.

This need is driving an interest in barrier-free design – an approach which promotes inclusivity for a diverse range of groups.

Perkins + Will's Toronto office has just completed a new building which perfectly illustrates the power of this design approach.

Their Meadowvale Community Centre and Library in Mississauga, Canada was designed to 'unite learning with wellness'. Facilities have been provided for all ages for social, fitness, research and creative pursuits, while accessibility and inclusivity have inspired the architectural vision, with each space designed to observe, be sensitive to and open effortlessly into the next.

"From the layout of the amenities to the amalgamation of the library, there's truly something here everyone can use,"



Perkins + Will's – "barrier-free design fosters inclusivity"

**It has never been
more important
for our leisure
buildings and spaces
to be safe, secure,
inclusive places**

Perkins + Will's Andrew Frontini told CLAD. "Design plays a vital role in fostering inclusivity and accessibility for a diverse community. Shedding our preconceived notions of accessibility allowed us to frame the centre as a gateway for the whole community."

If the buildings we make are conceived and designed to enable peaceful, purposeful co-existence, we'll be making an invaluable contribution to a world which is showing signs of stress on so many fronts.

And as war zones and blighted cities are rebuilt, we'll have the opportunity to inspire those commissioning them to build barrier-free buildings to create resilient, healthy communities.

Liz Terry, editor, CLAD @elizterry



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Community of Leisure Architects & Designers

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CLADglobal, the organisation behind CLAD, is a media business creating magazines, books, websites and digital feeds to enable CLAD professionals to share news, opinions and best practice. Find out more about the CLAD portfolio at CLADglobal.com

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It's the biggest area of consumer expenditure in the developed world and the biggest driver of growth in the developing world.

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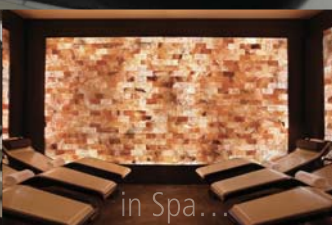
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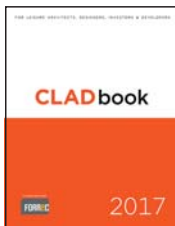
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Many buildings nowadays look interesting, but when you analyse deeper, there's nothing more than the form

Robert Konieczny Principal KWK

Robert Konieczny, the principal of Polish architecture studio KWK Promes, has described how he won the World Architecture Festival's 2016 Building of the Year prize by creating a museum that doubles as a "city-forming" public space for the people of Szczecin, Poland.

The National Museum and Dialogue Centre Przelomy – which explores the city's history of Nazi occupation, resistance against post-war Soviet communist authority, and eventual transition to democracy – sits largely underground, with its roof forming part of the city's Solidarity Square. The concept was hailed by the festival's competition jury, led by David Chipperfield, as "a piece of topography as well as a museum" that addresses the city's past



Konieczny studied at the Silesian University of Technology in Gliwice. He launched KWK Promes in 1999

"in an optimistic, poetic and imaginative way"

"We broke the rules for the project's design competition," Konieczny told CLAD. "The site was originally smaller, but after we got to know the history of the place, we thought the whole square and the building should be treated as one entity."

"Pre-war the location was an urban quarter and post-war it became a memorial square to remember 16 [anti-regime protesters] who were killed there in fights with militia in December 1970. Our idea was to bring together these two contradictory traditions. We created a hybrid which encloses the site like a quarter, while keeping the values of an open public space."

A PLACE TO GATHER

KWK Promes decided to eliminate any barriers in the square, enhancing its potential as a meeting space. Smooth uplifts in the site were created to house the museum underneath, while enclosing the square from traffic and busy surrounding neighbourhoods. The concrete floor of the square, which is covered with rectangular tiles, was replicated on the slopes and the façade of the museum, creating the illusion of one continuous monolithic structure.

"There are many buildings nowadays that look interesting, but when you analyse deeper, there's nothing more than the form," said Konieczny.

"Our projects are always the consequence of a logical process, and the form is in a way secondary. This project connects various times and traditions and gives a lot of new possibilities to the city, thanks to the generous public space."

"When the museum is closed, life on the square still goes on, due to the topography. It encourages people to ride a bike, skate



ALL PHOTOS: KWK PROMES



Minimalist design was used for the interiors, allowing the exhibits to take centre stage



or even sledge – because when it snows, it's the only one hill in the city. Sometimes kids turn the whole square into one big blackboard, covering it with drawings until it becomes a kind of colourful ornament!"

The studio had to fight with city officials to create a space that could be used in such a myriad of ways, as sport and recreational uses were previously banned on the sensitive remembrance site. This issue was eventually resolved, but other scandals hit the project. The rising slopes – which have created a type of urban amphitheatre – provoked anger from some quarters, as they prevent the army from marching through as they once did, and place politicians and military leaders below members of the public during ceremonies.

"We believed that the square shouldn't divide people, it should connect them," said Konieczny. "It's built to serve everyone. After long discussions with veterans and city officials we came to an agreement on how to use the space. Now it can host various occasions, such as concerts, cinema screenings and events for thousands of people. Equally, the citizens of Szczecin have learned that this is their place. Now they gather there to express and manifest their opinions."

The museum is largely underground, with the roof forming a new public space



“A cheeky interpretation of luxury hospitality”

Lenny Kravitz musician & interior designer

Philippe Starck designer



PROJECT

W Las Vegas
Las Vegas, US

Kravitz (above) and
Starck (right) worked
on the project



Designer Philippe Starck, music icon Lenny Kravitz and architecture studio Gensler have come together to design a new hotel in Las Vegas.

The W Las Vegas is the first W Hotels Worldwide property in the city. The company, a subsidiary of Marriott International, has taken over the 289 guest rooms of the SLS Las Vegas tower, bringing in a star team of designers to refresh the interiors in a way that celebrates the unique and famous location.

The lobby and signature W Hotels Living Room have been designed by Gensler in collaboration with AvroKO Hospitality Group. A drinking area is inspired by the city's famous casinos, and a neon art “desert garden” by artist Keith Lemley sits behind the bar.

Gensler have collaborated with French design icon Starck for the guest rooms, described as “a cheeky interpretation of luxury hospitality.” Meanwhile, Kravitz has continued his passion for hospitality design by creating the hotel's flamboyant 2,382sq ft (221sqm) Extreme WOW Suite, which is highlighted by a spacious balcony with mountain views.

Other hotel facilities include a rooftop WET Deck with private cabanas and a destination bar; three floors of meeting and event space; a 24-hour fitness centre; and a Vegas-style steakhouse also designed by Starck.

The signature W Hotels Away Spa is located on the hotel's second floor and is designed in pure white, with playful elements such as large faux-pearl key rings, lockers featuring bright pink interiors and artful hand sculptures.

“If there are two things in this world that were truly made for each other, it's W Hotels and Las Vegas,” said Anthony Ingham, global brand leader for W Hotels Worldwide.



One of Starck's guestrooms
(above); Kravitz' Extreme
WOW Suite (this pic)

“I don't want to work for nothing. It's a diminishing of the value of our thinking”

Wolf Prix CEO Coop Himmelb(l)au



Wolf Prix, the CEO of Coop Himmelb(l)au, has criticised design competitions

Wolf Prix, the design principal and CEO of Austrian architecture studio Coop Himmelb(l)au has slammed design competitions, arguing they “diminish the value of our thinking.”

In a frank talk about the state of the industry and the challenges of tomorrow, made at the World Architecture Festival in Berlin, Prix claimed that “to make a competition is a very stupid thing.”

“I repeat myself a thousand times, but can you imagine 100 or 200 surgeons having to prove they can perform heart surgery, without getting any money?” he said. “Only the stupid architects are doing it. I read in the newspaper recently an investor said ‘I’m happy to have competitions because I get 100 ideas for free.’”

Expanding on the point later in the talk, Prix continued: “I don’t want to work for nothing. It is a diminishing of the value of our thinking. And anonymous competition contributions are making architects slaves to money.”

“One of my former students won

a competition, and I calculated with him what he will gain after five years. It turns out he will make a loss of E200,000. That means he has to do everything a client wants to pay this back.”

Prix also used the platform to talk about the role of architects more widely.

“As architects, we think we save the client and that we can walk on water. But I haven’t seen an architect who could walk on water. Or we think we’re supporting the whole world on our shoulders. No way. We are really like Chaplin, because the invisible aspects of architecture are suppressing our ideas.”

Prix, and Coop Himmelb(l)au, are known for their boundary-pushing projects featuring structural, abstract forms, such as the Museum of Contemporary Art and Planning Exhibition (MOCAPÉ) in Shenzhen, China, which opened in October 2016. The House of Bread, a museum and events centre for Austrian bread company Backaldrin, is due to open in Asten, northern Austria, this year.



The museum of Contemporary Art and Planning Exhibition houses an art gallery and meeting and exhibition space



ray hole architects - Practice Profile

ray hole architects is a specialist international, award winning architectural practice with over 25 years' experience gained through delivering a broad portfolio of visitor attractions and experiences - *wildlife (animal and botanic), cultural, science, industrial, educational, man-made heritage and natural history, sports, brandlands, museums, themed environments, hotels and restaurants* – across a range of locations and a rich diversity of cultures.

Our belief is that creating 'architecture' is a very important criterion of a much broader responsibility, providing the means by which greater value can be created for our clients, stakeholders, end users, society in general and the environment. We strive to achieve this through realising achievable, yet technically innovative and sustainable design solutions. Our projects are informed by active exploration of as many influences as possible which allows us to develop a design attitude which differentiates our approach to completed work. This combination of attitude and understanding has provided us with opportunities to play an influential role of redefining the UK and International visitor attraction sector.

We have a proven track record of working on projects ranging from; the multi-billion pound London Paramount themed resort at Ebbsfleet to the Volkswagen AG Brandland – Autostadt, Wolfsburg; from the first UK based Kidzania at Westfield, White City to the Rainforest House for the Herrenhauser Garten in Hannover; from the Gold Medal and RIBA Award winning *Snowdon Summit Building – Hafod Eryri* - to the Heritage amusement park at *Dreamland, Margate* and the re-masterplanning of *ZSL London Zoo*.

Equally, maintaining an understanding of cultures and trends within the visitor attraction sector itself is fundamental to our ability to deliver relevant, engaging, commercially sound, operationally efficient and enhanced revenue generating facilities.

Our membership of client trade bodies (private, public and institutional) and regular attendance and active participation at attraction industry conferences, UK Government sponsored International trade missions and keynote talks is crucial in developing our inclusive knowledge base, as is our highly specialised in-house and Chartered RIBA Practice CDP program.

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RIBA Award Hafod Eryri – Snowdon Summit
Gold Medal for Architecture T Alwyn Lloyd Memorial Medal



BHSTS Master Plan
Brighton



Fashion Hotel
Dubai



Rainforest House
Hannover



Int. Sports Village
Cardiff



**Ripleys BION
Museum**
London



VW Brandland
Autostadt



Bentley Pavilion
Autostadt



**Marwell Wildlife
Cafe Graze**
Hampshire



London Paramount
London



Grand Pier
Weston-Super-Mare



Restless Planet
Dubai



Railway Station
Castellon



Kidzania London
Westfield, White City



Dreamland
Margate



Sports Campus
Newcastle



VW Pavilion
Autostadt



**Master Plan
ZSL London Zoo**
Land of Lions



**Balloon
Apartments**
London



Gorilla Enclosure
Durrell Wildlife



**Lingfield
Racecourse**
Surrey



**Snowdon Summit
Visitor Centre**
Wales

rayhole architects

...museums brandlands cultural attractions botanic gardens
zoos safari parks visitor centres themed attractions mixed
development heritage centres science centres hotels restaurants...

Spas and fitness spaces have been totally neglected

Inge Moore interior designer and co-founder MUSE



Inge Moore has called on hospitality designers to incorporate fun, interactivity and individuality into spa and gym design.

The interior designer – who is in the process of launching bespoke hospitality design studio MUSE after leaving Hirsch Bedner Associates (HBA) – told CLAD that spa and fitness spaces have been “totally neglected” in the past, but are now coming to be seen as essential parts of the hotel experience.

“The whole way we’re thinking about our travel experience is changing,” she said. “These days when we stay at a nice place we expect there to be great spa, gym, fitness facilities and yoga. The better you can deliver those spaces, the more special you make people’s experience.”

“For too long spas and gyms were the last space on everyone’s programme, with the few rooms left at the end turned into the gym. Now the demand is for them to be more than just rows and rows of exercise machines. They should be super fun areas to socialise and learn.

“This can be achieved through the lighting, textures and materials you use and by bringing in the narrative of the resort into

these spaces. There are lots of opportunities to really push the design of these areas further.”

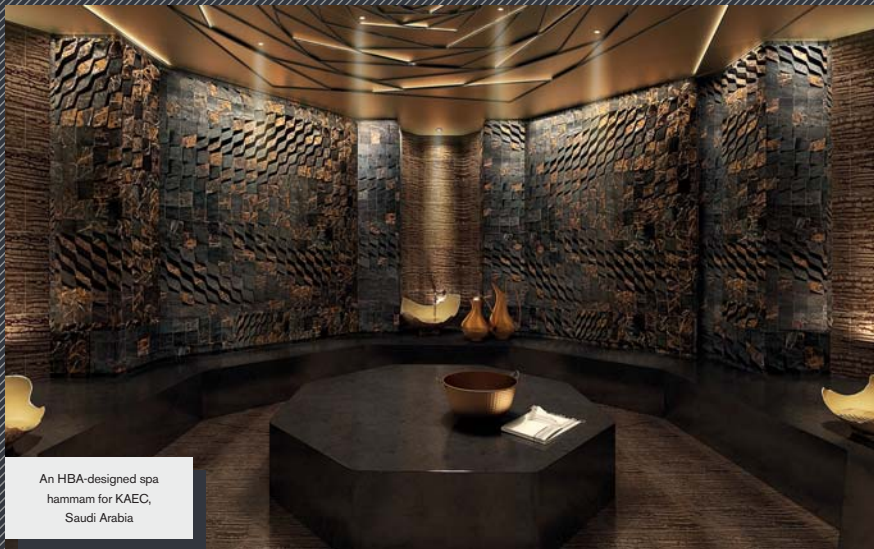
Moore has previously designed a host of hospitality projects with HBA – who will invest in MUSE, despite it being a standalone company – including the renovation of London’s Grosvenor House for JW Marriott, a luxury sleeper train for Belmond in Ireland and the Belmond Eagle Island Safari Lodge in Botswana. With the new studio, Moore, co-founder Nathan Hutchins and their team of 15 are working on a spa resort in Goa, a new hotel in Ibiza and another luxury train for Belmond, this time in Peru.

STANDING OUT

Individuality is the feature that unifies all of these projects, Moore told CLAD.

“The design standard in hotels has gone way beyond what it was 10 years ago,” she said. “There’s so much competition within the hospitality space that everyone wants a unique project, whether it’s a Hyatt, a Four Seasons or a Marriott.

“It’s so important to stand out. Everywhere you go, there are good hotels and countless Airbnbs, so yours needs to be special. People choose to stay at the more



An HBA-designed spa
hammam for KAEC,
Saudi Arabia

interesting spaces, especially now the world's become much more visual, with social media and everyone sending selfies of the places they visit. That creates a huge opportunity for designers to make beautiful spaces that also make people feel good."

Asked how MUSE will create uniqueness in spas and gyms, Moore said the key is delivering a story, as well as allowing guests to receive a fun lesson or experience. "People increasingly want to learn about health and wellbeing through spaces where you do some interactive things together," she said.

"For example, you can learn why it's good to eat certain foods or to exercise in a certain way. Our idea is you go to a hotel and learn or experience something new. By presenting this in a fun, interactive way that includes spaces for people across the age spectrum you can create really interesting, memorable experiences."



Inge Moore designed the ESPA spa at Istanbul's EDITION hotel while with HBA

“Why don’t architects promote temporary sporting facilities?”

Ruben Reddy founder Ruben Reddy Architects



A render of the table tennis facilities for the 2022 Commonwealth Games, Durban (below)

Stadia and arenas built for events such as the FIFA World Cup and Olympic Games should all be temporary, according to South African architect Ruben Reddy.

Talking to *CLAD*, Reddy argued that most football stadiums are unsustainable, and that, if possible, sports clubs playing in the same city should attempt to share a venue, while all sporting infrastructure for major events should be temporary.

His firm – Ruben Reddy Architects – is behind the plan for the 2022 Commonwealth Games in Durban, and by using existing and temporary facilities he said the cost of hosting the whole event would be £57m (US\$73.8m, 65.6m), or as he described it, half of the transfer fee paid by Manchester United for Paul Pogba.

“We’re not going to be burdening the taxpayers of Durban Province and the country to upkeep the maintenance of

capital projects,” he said. “We’ve learnt a hard lesson in South Africa because of the 2010 World Cup. We gave, gave, gave, and didn’t get a lot back in return.”

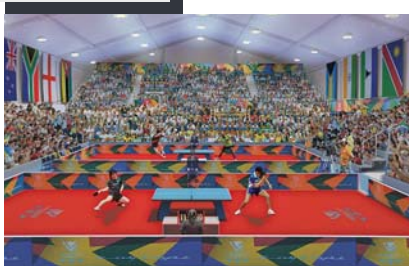
He highlighted the Durban-based Moses Mabhida Stadium, which cost US\$450m to construct, as an example of a venue which hasn’t been sustainable for the South African government. While the original outlay was significant enough, Reddy was keen to demonstrate that sustainability becomes an issue when considering the ongoing maintenance of the building.

THE BIGGER PICTURE

“Building the stadium is only 25 per cent of its life cycle,” said Reddy. “Keeping the thing to a world-class standard is a constant drain on the budget. Every year it sits there that money could be used for something else.”

To create the right conditions for these countries to bid and host these events – without stretching themselves financially – Reddy is an evangelical advocate of temporary venues.

All of the venues he has designed for the Durban Games are temporary. Facilities for weightlifting, volleyball, hockey, squash and table tennis have been designed by his firm, using materials that will be reused following the Games. All of the permanent structures earmarked for the Commonwealth Games have been built already.





Reddy is leading Durban's bid for the 2022 Commonwealth Games

Reddy lauded examples of good practice with temporary facilities, such as the handball court constructed for the Rio Olympic Games. Following the event the venue was deconstructed and used to build four schools, but Reddy revealed Durban's plans are slightly more modest.

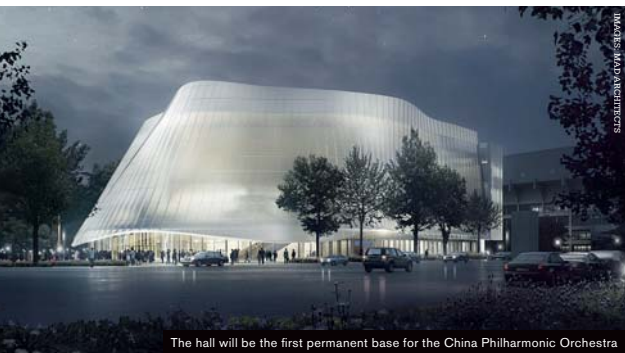
"The total infrastructure spend of a Commonwealth Games is around eight per cent of the Olympic Games," he said. "The temporary facilities we'll look at will be standard stock and not on the same level as Rio."

But the principle remains the same, said Reddy, and stressed that it should be implemented at every major event.

Government, said Reddy, should not view the hosting of an event as a "big megalomaniac ribbon-cutting opportunity." ●



All of the facilities designed by Reddy for the 2022 Commonwealth Games are temporary



The hall will be the first permanent base for the China Philharmonic Orchestra



“We want to create the experience of taking people to a different world through the architecture and the music”
Ma Yansong

MAD design Beijing concert hall as a journey through time and space

Ma Yansong and MAD Architects have unveiled their design for the brand new China Philharmonic Hall in Beijing.

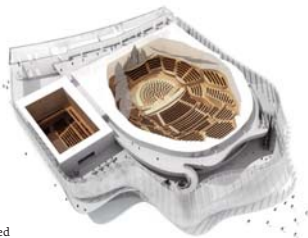
Located in the bustling business district of Sanlitun, the building will take the form of a curving 11,600sq m (125,000sq ft) structure covered by a translucent curtain façade. Lush trees, foliage and lotus

ponds will be installed around the south side of the site in order to make the concert hall seem as though it emerges from a jungle or “holy garden”. In the daytime, natural light will travel through the semi-transparent white walls, while in the evenings the venue will glow in the dark. The design concept is that concert-goers can “escape” from busy city life.

“There are a lot of people in this district, which is good for the circulation, but we want to create the experience of taking people to a different world through the architecture and the music,” Ma told CLAD. “To do that we’ve created this translucent feeling, so you’ll be aware of where you are but also isolated from the context.”

MAD are working with celebrated acoustician Yasuhisa Toyota – who collaborated on the new Hamburg Elbphilharmonie – to create a world class musical venue.

The hall will be the first permanent base for the China Philharmonic Orchestra and will also host performances from touring musicians from all around the world. The main 1,600-seat auditorium will be laid out in a vineyard style, with the seating surrounding the stage and rising up in rows in the manner of sloping terraces. White sound reflection



The venue will be enclosed within a ‘translucent curtain’



The ceiling elements are inspired by a lotus flower

petals will feature on the ceiling, resembling the segments of a lotus flower. Lighting and visualisations can be projected onto these petals and choreographed to match the musical performances.

The building will also include a professional recording studio, a library, rehearsal spaces, offices and other auxiliary function spaces.

Construction is expected to be completed in 2019.



Eden Soestdijk is designed to promote sustainable living



The attraction would spread from the palace grounds into the building



IMAGE: MECANOO



“The Royal Family has always cherished the relationship with the surrounding landscape. The plan for Eden Soestdijk responds to this in a beautiful manner”

Francine Houben

Mecanoo unveil concept for Dutch palace eco-attraction

Dutch architects Mecanoo have taken inspiration from the UK's Eden Project to propose an expansive experimental garden in the grounds of the Netherlands' Soestdijk Palace. The Dutch government recently launched a competition to redevelop the royal residence and estate, located in the town of Baarn. In response, Mecanoo have partnered with exhibition designers Kossmann.dejong and engineering consultancy Royal HaskoningDHV to develop their vision for an eco-attraction, called Eden Soestdijk.

An architectural greenhouse winding through the forest behind the palace gardens is the centrepiece of the masterplan. Visitors would be taken on an interactive expedition through different green landscapes – including a tropical rainforest and a subterranean world – highlighting topics of circularity, ecological balance, food production and the social aspects of sustainability.

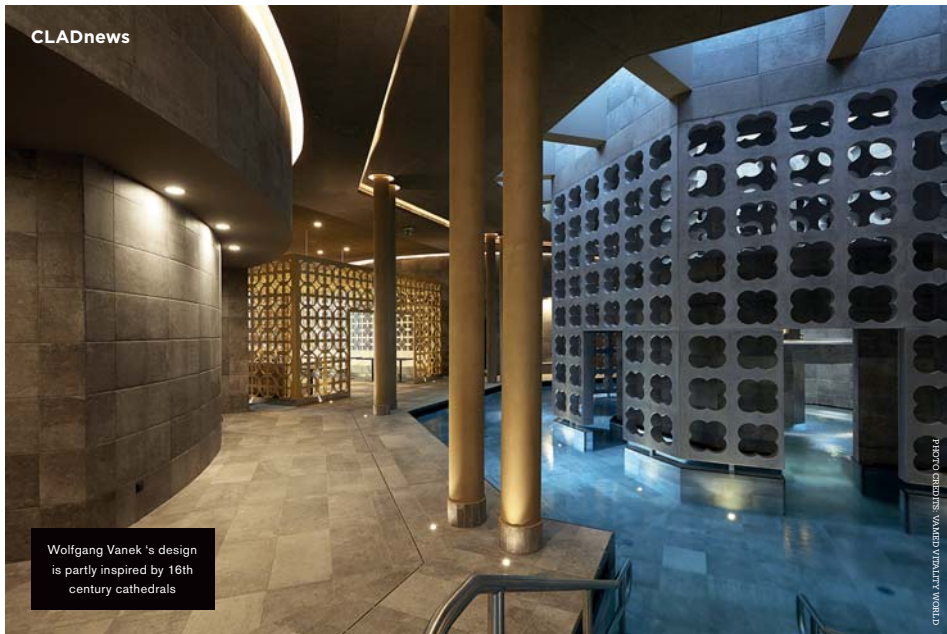
The results of climate change would become visible in an icy arctic landscape and a recreation of the Martian landscape would highlight the fragility of the earth from a cosmic perspective.

In addition, the existing Royal gardens would be fully restored

to form “unique and beautiful” individual sections linked to the theme of sustainability. Meanwhile, the chambers within the palace would be restored and turned into exhibition galleries and cultural spaces showcasing the history of the estate and its residents.

The wings of the building are planned to house interactive exhibition spaces “that display the beauty of nature from a cultural, historical and scientific perspective” in a bid to “motivate visitors to interact with the world in a more sustainable manner.”

“The Palace Soestdijk Estate is one of the most fairytale-like surroundings of the Netherlands, making it the ideal canvas for Eden Soestdijk,” said Francine Houben, creative director of Mecanoo. Anton Valk, chairman of the Eden Soestdijk Foundation – which is leading the plan – highlighted the international appeal and economic, educative and cultural benefits the project would bring to the Netherlands, and said it would “stimulate and inspire visitors to change their behaviour in a positive way.” According to the foundation, more than half a million yearly visitors would come to Eden Soestdijk from 2020 onwards.



Wolfgang Vanek's design is partly inspired by 16th century cathedrals

PHOTO: ENDREIS, VAMED VITALITY WORLD

Shhh! Vamed opens 3,600sq m silent spa designed for contemplation

Thermal wellness resort operator Vamed Vitality World has added a €14m (US\$14.7m, £12m) stand-alone silent spa to its Therme Laa location in the Weinviertel region of northern Austria.

The 3,600sq m (38,750sq ft) spa – which has a 160-guest capacity – will be completely silent, and was inspired by the two things people are asking for in an increasingly hectic world: space and time for contemplation.

Vamed conceptualised the space and worked with architect Wolfgang Vanek of Holzbauer & Partner to realise the project. He drew on elements of sacred architecture, such as 16th century cathedrals,

to create an inspirational space.

"If you go into a church, all of a sudden, something happens to you – you get calmer," explained Vamed Vitality World's COO Tom Bauer. "Architecture has an influence on that. We asked: 'What would be the right interpretation of that building translated into the 21st century?'"

Constructed in a pattern of four ellipses, the spa gravitates around a central tower and three-storey cascade fountain, from which the thermal water flows. The spa includes a 500sq m (5,382sq ft) walk-in water landscape filled with the natural mineral waters, including reflecting pools.

Each ellipse has different facilities, offering relaxation

loungers, a saltwater pool, salt chamber, spa suites and steam bath. The building also has an exercise room, restaurant and bar, and several treatment areas.

Vanek used the natural geometric principles of the Golden Ratio for the interior details, and windows have been carefully placed to encourage the reflection of sunlight on the water, which then reflects on to the stone walls, creating an atmosphere of tranquility.

"There are no golden chandeliers – just marble, stone, wood, glass and water – it's very minimalistic," said Bauer. "We don't want to force contemplation on people, we only want to create a platform where they can experience it."



“We’re not forcing contemplation on people, we’re creating a platform where they can experience it”

Tom Bauer

The stadium will be built largely from wood to reduce its carbon content



IMAGES: ZAHA HADID ARCHITECTS



“This project will demonstrate that sustainable architecture can be dynamic and beautiful”

Jim Heverin, ZHA director

Zaha Hadid Architects win competition to design ‘greenest stadium in the world’

Following a long-running international competition, English football club Forest Green Rovers has selected Zaha Hadid Architects (ZHA) to design its new football stadium.

The studio will build the ground completely out of wood, with the aim of making it “the greenest football stadium in the world.”

The stadium will be the centrepiece of the £100m (US\$121.2m, €115.3m) Eco Park development in

Gloucestershire – a 100 acre sports and green technology business park owned by clean energy group Ecocity. It will sit alongside grass and all-weather training pitches, multi-disciplinary public facilities and a sports science hub.

“Zaha Hadid have built some fantastic sport stadia around the world, including one at the Olympic Park in London and one of the five stadiums for the next World Cup in Qatar,” said Dale Vince, Ecotricity founder and Forest Green Rovers chair. “Now they’ve designed one for Forest Green.”

Vince said the comprehensive use of wood to build the “iconic and original” new stadium “is the first time that will have been done anywhere in the world.” He added that the material was chosen for being both naturally occurring and for having very low carbon content.

“If you bear in mind that around three quarters of the lifetime carbon impact of any stadium comes from its building materials, you can see why this is so important,” he said.

Forest Green announced the

competition in March 2016 and received over 50 entries from around the world. ZHA made the final shortlist of two, along with Glenn Howells Architects. Despite ultimately missing out, Vince revealed that the latter studio will collaborate with the club and Ecocity on future projects.

Commenting on ZHA’s winning proposal, studio director Jim Heverin claimed the stadium will prove that “sustainable architecture can be dynamic and beautiful.”

“The club’s heritage, ambition and vision reflect our own, combining the latest material research and construction techniques with new design approaches to build a more ecologically sustainable and inclusive architecture,” he said.

“With the team’s community and supporters at its core, fans will be as close as five meters from the pitch and every seat has been calculated to provide unrestricted sight lines to the entire field of play. The stadium’s continuous spectator bowl surrounding the pitch will maximise match day atmosphere.”



ZHA’s design was selected ahead of 50 rival proposals



The park will reference the diverse landscapes of South Korea



Army base to become public park as West 8 convert Seoul's 'forbidden land'

A US Army base in the centre of Seoul will be repurposed as a vast public park by Dutch landscape architects West 8.

After four years of development, the studio has publicly presented their masterplan for Yongsan Park, which is currently a walled, prohibited area completely cut off from the surrounding city. The US military has agreed to withdraw this year, vacating 1,200 buildings.

The municipal government wants to preserve the "culturally, historically and ecologically unique" park in order to turn it into a cultural landmark for the city's residents.

West 8 – who are collaborating on the project with local firms IROJE Architects & Planners and DONG

IL Engineering Consultants – will incorporate the park into the urban fabric of Seoul, while referencing the diverse topographies and landscapes of South Korea.

They propose to create a series of biotopes along a restored ridgeline, ranging from open meadows to deep forests, rocky cascades and wetlands that provide visitors with "an ever-changing landscape experience for all seasons." Hidden within the different landscapes will be traces of the site's contentious military history. The foundations of old army buildings will be repurposed and embellished to provide flexible platforms for social activity; an idea inspired by the ancient concept of 'Madang', in which stone platforms were created

in the courtyards of traditional Korean homes and palaces.

"South Korea has a long history, which we see from its food culture, the spirit of its people, its poetry and its art," said West 8 director Adriaan Geuze. "All these cultural assets are accumulated and reflected in the most cosmopolitan and modern part of today's Seoul."

"We want to create a park where these various concepts and values can come together."

Local heritage experts will now assess the vacant buildings for their historical and cultural value.

IROJE founder Seung Hyo Sang said: "The park currently appears as an isolated forbidden land, but in the future it shall respond to the surrounding urban context."



“We want to create a park where the concepts and values of South Korea can come together”

Adriaan Geuze

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Human-powered gym boat on River Seine harnesses energy from passenger workouts

Parisian gym-goers could soon be powering scenic boat trips along the River Seine on a fitness vessel that harnesses energy from passengers' workouts.

The Paris Navigating Gym is the latest innovation from architects and researchers Carlo Ratti Associati. They have partnered with non-profit design group Terreform ONE, urban regeneration institute URBEM and fitness firm Technogym to develop the project.

The boat – which has been designed in response to a public call for forward-thinking fitness and wellness projects in the French capital – is 20-metres long and can host up to 45 people. In summer it will have an open top, while in the colder months it can be encased in transparent glass.

The vessel's fitness area features Technogym's ARTIS machines – a special type of sports equipment that harnesses human energy and

makes it available for further use. By doing exercise on the bikes and cross trainers, guests can power the boat. Human-powered energy will be supplemented by renewables, such as rooftop photovoltaic cells.

The vessel will make several stops along the river, picking up passengers wanting to join the workout, and can be used for evening parties. Augmented-reality screens installed inside will show guests both the quantity of energy sourced from the workout, and data about the Seine's environmental conditions, tracked in real time by sensors.

The design pays tribute to the symbolic Bateaux Mouches, the traditional ferry-boats that have been carrying tourists on the Seine since the early 20th century.

According to initial studies, the project can be implemented in less than 18 months, including design, construction, and testing, before starting its cruises.



Hard-working passengers power the boat through exercise



“It gives people a tangible experience of what lies behind the often abstract notion of ‘electric power’”

Carlo Ratti



The boat will make several stops along the river to collect passengers

IMAGES CARLO RATTI ASSOCIATI

Ian Schrager opens first Chinese hotel with its own man-made 'private ocean'



The Sanya Edition was conceived for the China of today and the China of tomorrow

Ian Schrager

Ian Schrager – considered by many to be the founder of the boutique hotel category – has opened his first hotel in China, the Sanya Edition.

Located on Hainan Island, just off the coast of Southern China, the hotel is the latest addition to Edition hotels – the brand Schrager conceived in a partnership with Marriott International.

With buildings designed by SCDA Architects and set within 50 acres of landscaped tropical greenery, the 512-bedroom Sanya Edition features landscapes by Madison Cox

IMAGES: THE SANYA EDITION

and interiors by Schrager's design studio and CAP Atelier, and was inspired by the sea. It also includes an additional 17 hotel villas nestled into a terraced hillside.

"The Sanya Edition was conceived for the China of today

and the China of tomorrow," said Schrager. "The resort is a unique sophisticated vision and embodiment of a cosmopolitan China for all the world to see."

A 20,000sq m (215,278sq ft) 'private ocean' framed by the series of teak pavilions overlooks the South China Sea and is the property's focal point. To maintain the private ocean, 10 million gallons of sea water is pumped in throughout the day, recycling once every 32 hours.

A 2,000sq m (21,528sq ft), two-storey spa with extensive gardens also features.

The hotel also includes a meditation forest, climbing rock wall, Mahjong rooms, private bumper car rink, waterslides and a treehouse.



Karl Lagerfeld rolls out hotel brand centred on his 'unique aesthetic'

German fashion designer Karl Lagerfeld is moving into the world of hospitality design with the launch of his own hotel, restaurant and nightclub brand.

Fashion company The Karl Lagerfeld Group has signed a deal with hotel operator Brandmark Collective BV to establish Karl Lagerfeld Hotels; a new entity that will open properties in "key cities and resort destinations" around the world.

The German designer has previously declared his love of living in hotels, and in the past he has provided designs for the Hotel Metropole in Monte Carlo, the Sofitel So Singapore and a planned 270-room hotel in Macau.

Now he's promised to bring his "unique aesthetic" to the new venture.

"Expanding our brand into the hospitality sector reflects our greater vision to broaden Karl Lagerfeld's comprehensive lifestyle experience," said Lagerfeld Group CEO Pier Paolo Righi.

Other famous fashion designers who've turned their attention to interior hotel design include Donatella Versace, who oversaw the creation of the Palazzo Versace Dubai Hotel, and Kenzo Takada, who's designed the interiors of a private wellbeing retreat in Cambodia.



Designs unveiled for vast National Museum Complex and gardens in South Korea's Sejong City

Canadian architects Office OU have been announced as winners of South Korea's international competition to masterplan a National Museum Complex (NMC) in the new administrative city Sejong.

Choongjae Lee, the city's administrator, has vowed to build "the world's most beautiful and liveable city" through investment in architecture, technology, urban planning and design and environmental sustainability.

The design contest was held to select a vision for a complex containing five museums: a National Design Museum, National Architecture and City Museum, National Archives Museum, National Digital Heritage Museum and National Children Museum.

A number of smaller cultural institutions, which have yet to be decided, will be spread throughout the complex at a later date.

Office OU were selected to design the project ahead of 80 rival entries – four of which joined them on the shortlist – from 26 countries around the world. Their concept, called 'Sejong Museum Gardens', was developed in collaboration with local firm Junglim Architecture.

The masterplan for the 190,000sq m (2 million sq ft) site uses the palace architecture of Korea's Joseon Dynasty as a template, merging this with a diverse natural landscape of rice paddies, wetlands, forests and riverbanks. The museums will be differentiated using changes of scale and varied responses to the natural topography.



The masterplan includes five museums and expansive landscaping

In a statement, the studio said: "The architecture does not strive to be iconic in itself, but instead acts as a frame or vessel for landscape, drawing it into a set of courtyards and forecourts. Each museum's identity is reinforced by thematic links to an associated landscape.

"For example, the productive orchard landscape that characterises the Children's Museum invites kids to play and explore the space."

The NMC – which will be largely completed by 2023 – will reflect Sejong's growing political importance as a home to 36 government agencies and over 300,000 residents.



“The museums’ identities emerge through their relationship with diverse local ecologies”

Nicolas Koff, Office OU principal



IMAGES: OFFICE OU

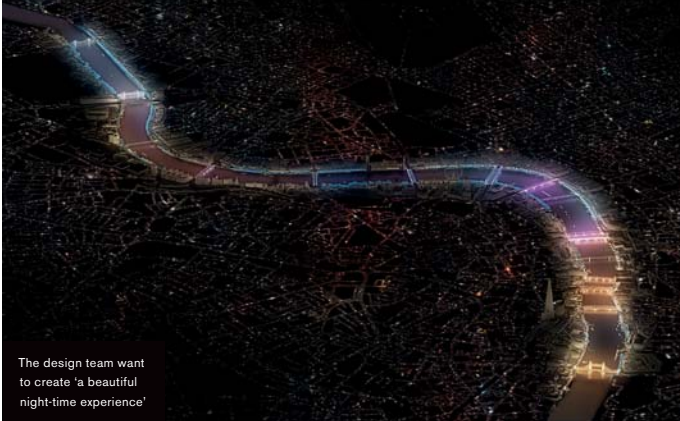


The five museums will be differentiated using changes of scale and different responses to the surrounding natural landscape

“The whole team shares a belief in the power of large-scale public culture”

Leo Villareal

The design team want to create 'a beautiful night-time experience'



(L-R) Leo Villareal, Hannah Rothschild, Sadiq Khan and Alex Lifschutz

Leo Villareal to light up 17 London bridges for Illuminated River scheme

American light artist Leo Villareal and British architects Lifschutz Davidson Sandilands have won a hotly-contested competition to light up 17 central London bridges along the River Thames with a free, permanent installation.

The winning proposal, named *Current*, imagines a gradual and colour-changing lighting scheme synchronised across all the bridges to create a spectacular display.

"I'm delighted and humbled by the fact the jury went with an artistically-driven vision for the Illuminated River," said Villareal. "The whole team shares a belief in the power of large-scale public culture and art to enrich our cities."

"In order to nuance the concept design and create presence and legibility, we intend to take time to study the river in all its manifestations. We want to listen to Londoners in developing the scheme to deliver at all levels of art and light, urban design and architecture, the environment and sustainability."

Villareal has been working with light and computer code for more

than a decade and is best known his popular project *The Bay Lights*, which lit San Francisco Bay Bridge for two years before citizens pushed for it to become a permanent installation.

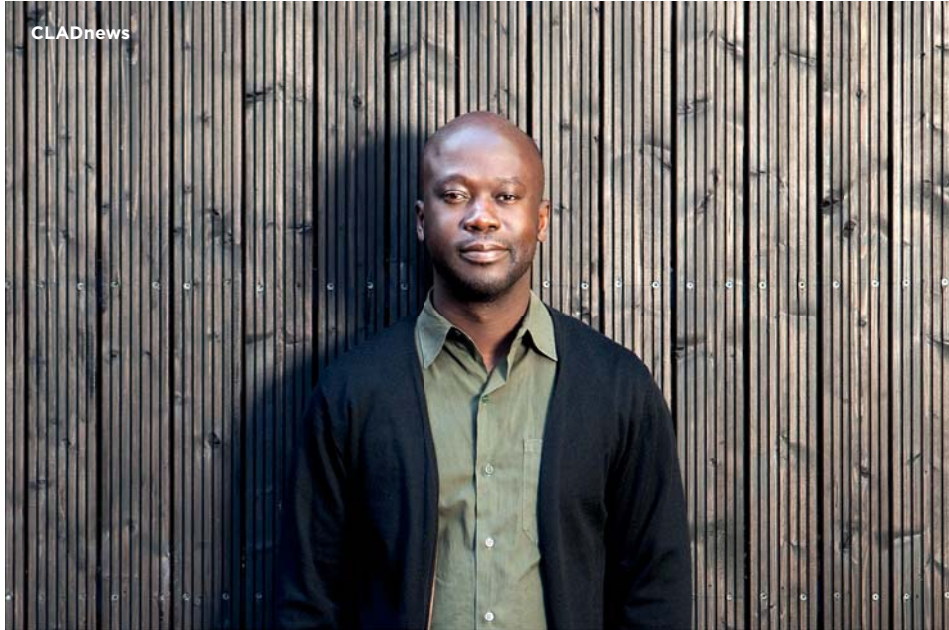
The artist pledged his team would develop a lighting masterplan for the Thames that "reduces pollution and wasted energy, is sensitive to history and ecology and subtly rebalances the ambient lighting on the river to provide a beautiful night time experience".

Lifschutz Davidson Sandilands have worked on several major projects across London, including the Golden Jubilee footbridges, and helped develop the urban planning of the city's South Bank.

Hannah Rothschild, chair of the Illuminated River Foundation, which organised the competition, described the partnership between the artist and architects as "an irresistible and inspirational combination," and described their winning lighting scheme as "beautiful, ambitious and realisable but always considerate to the environment, lighting levels and energy conservation."



A synchronised lighting scheme has been designed for 17 bridges



David Adjaye receives knighthood for services to architecture

British architect David Adjaye has declared himself “truly honoured and humbled” after receiving a knighthood in the 2017 New Year’s Honours List for his services to architecture.

Sir David – whose leisure projects include The Nobel Peace Center in Oslo, the Sugar Hill mixed-use complex in New York and the recently-opened National Museum of African American History and Culture in Washington DC – pledged to be a “global cultural ambassador for the UK” on a mission to improve people’s lives through the built environment.

He said: “I see this not as a personal celebration, but as a celebration of the vast potential

– and responsibility – for architecture to effect positive social change, that we as architects have to bring something positive to the world.”

The 50-year-old – who was previously named an Officer of the Order of the British Empire (OBE) in 2007 – was one of CLAD’s cover stars last year, and in an exclusive interview he expanded on his belief in the power of architecture as a force for good.

“My ideal is to be able to explore new typologies, experiment with different materials and establish a meaningful connection to contemporary culture while exploring a social discourse,” he said.

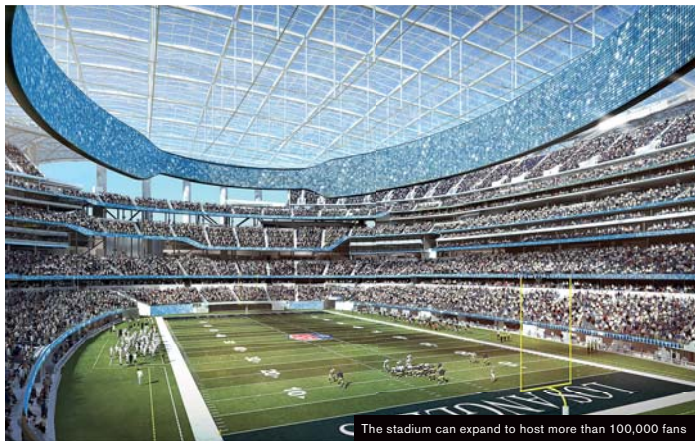
“The simple act of building forces engagement – you can’t

ignore it. Things always happen from that and the question is how we celebrate it or deny it. It is important not to be hampered or intimidated by the idea of difference – but rather to seek to be open and even speculative about the possibilities it offers.”

The architect’s studio, Adjaye Associates, are currently working on a host of high-profile projects, including the Latvian Museum of Contemporary Art, the San Francisco Shipyard leisure district and a 30ft high community ‘Art Wall’ in the US city of Newark. They are also shortlisted, with Ron Arad, in the competition to design the new National Memorial to the Holocaust in London.

“I see this as a celebration of the potential for architecture to effect positive social change”

David Adjaye



IMAGINE HKS ARCHITECTS



“We believe this project represents a very important piece of architecture for Southern California.”

Mark A. Williams

HKS Architects promise ‘a venue unlike any other’ as construction begins on NFL’s largest ever stadium

The Kroenke Sports and Entertainment company has broken ground on the HKS-designed Los Angeles Stadium at Hollywood Park in Inglewood, which will be the new home of National Football League (NFL) franchise the LA Rams.

Sized at nearly 3 million sq ft (278,700sq m), the multipurpose

venue is set to be the largest in the NFL when it opens in 2019. It will include 70,000 fixed seats, with the flexibility to expand to host more than 100,000 fans, and has already been named as the host stadium for Super Bowl LV in 2021.

The cost of the stadium has previously been estimated at US\$1.86bn (€1.7bn, £1.5bn).

A perforated, permeable metal ‘skin’ will wrap the venue to create an open-air canopy. This curving roof will cover more than the stadium itself, including outdoor ‘rooms’ and plaza spaces designed to blur the distinction between indoor and outdoor environments. A lightweight, transparent Ethylene tetrafluoroethylene (ETFE)

membrane will be used on part of the roof to add to the feeling of being in an open-air environment.

“The regional climate and cultural DNA of Southern California and Los Angeles are the foundation of our design,” said HKS principal Mark A. Williams. “We have crafted a design that is responsive to its site, the community and the global stage of sports and entertainment. We believe this project represents a very important piece of architecture for Southern California and will broaden the fan experience in sports and entertainment venues.”

The LA Stadium – located close to the city’s international airport – will feature a hotel, retail zone, a possible branch of the NFL Hall of Fame and a man-made lake, meaning it can be used extensively on non-game days.

In January 2016 the NFL franchise – formerly known as the St Louis Rams – and its owner Stan Kroenke were granted NFL permission to relocate from Missouri to LA, the team’s home before 1995, prompting the Inglewood plans. ●



The design blurs the distinction between indoor and outdoor environments

TOP LEISURE BUILDINGS TO LOOK OUT FOR IN 2017



New life for the former grain silos

IMAGE: HEATHERWICK STUDIO

Zeitz MOCAA

Architect: Heatherwick Studio

Location: Cape Town, South Africa

Opening: September 2017

Designer Thomas Heatherwick's studio is transforming the historic Grain Silo Complex in Cape Town, South Africa. The design teams have converted the structure into a home for the Zeitz Museum of Contemporary Art Africa (MOCAA) and a 28-bedroom five-star hotel.

Mercedes-Benz Stadium

Architect: HOK

Location: Atlanta, USA

Opening: June 2017

With a capacity of 83,000 people, this US\$1.4bn stadium for the Atlanta Falcons will be the largest in the National Football League (NFL). According to architects HOK, it "will set a new standard in stadium design and fan experience." Innovative features include the world's first eight-petal polymer retractable roof, an enormous 360 degree HD video screen and a surrounding edible garden created by Atlanta-based urban designers HGOR. The stadium has already been selected as the host venue for the 2019 Super Bowl.

The stadium will open this summer



IMAGE: MERCEDES-BENZ STADIUM



IMAGE: MVRDV

Seoul Skygarden

Architect: MVRDV

Location: Seoul, South Korea

Opening: August 2017

A 45-year old overpass in the heart of the South Korean capital is being transformed into a verdant garden in the sky. The project will provide the city with a 938m long (3,077ft) public park, featuring cafés, flower shops, markets, libraries and greenhouses. In total, 254 different types of trees, shrubs and flowers will be planted. MVRDV have said their vision is to create a green, attractive and accessible neighbourhood for Seoul's citizens.

The project was inspired by New York's High Line



The towers look like they are dancing

American Copper Buildings

Architect: **SHoP Architects**

Location: **New York, USA**

Opening: **Early 2017**

Two bold residential towers are taking shape on New York's East River. Clad in copper that will eventually turn green, they reach 41 and 48 storeys in height and are connected by a skybridge that houses a swimming pool 300ft above the ground. The upper halves of both structures lean outwards, creating the impression they are dancing. Leisure amenities include a fitness centre, climbing wall, spa, rooftop deck and infinity pool.

IMAGE: MARCHI

LEGO House

Architect: **Bjarke Ingels Group**

Location: **Billund, Denmark**

Opening: **Second half of 2017**

Bjarke Ingels Group (BIG) have designed this celebration of all things LEGO as a three-dimensional village of interlocking buildings and spaces. The structure will consist of 21 huge LEGO-style bricks, built on top of one another. Non-paying members of the public will be able to enter a 2,000sq m (21,000sq ft) covered square containing a café, a restaurant and a LEGO store.



Visitors can walk over the museum



An infinity pool will overlook the lake

Bürgenstock Resort

Designer: **MKV Design**

Location: **Bürgenstock Mountain, Switzerland**

Opening: **Throughout 2017**

Perched high on a mountain-top in Lucerne, this huge, newly-renovated resort promises to be extremely atmospheric when fully open. The project includes over 30 buildings, including three hotels, 12 restaurants and bars and the 10,000sq m Alpine Spa. Architects including Matteo Thun have created new facilities for the resort.

IMAGE: JACQUES-ERNEST/ARND BRONKHORST



IMAGE: SNOHETTA

Snohetta's biggest project to date



King Abdulaziz Center for World Culture

Architect: **Snohetta**

Location: **Dhahab, Saudi Arabia**

Opening: **Early 2017**

Fresh off the back of 2016's opening of the San Francisco Museum of Modern Art, Snohetta will celebrate the completion of this, their biggest ever project. The complex will house Saudi Arabia's first public cinemas plus a library, concert hall, exhibition hall and lifelong learning centre.

IMAGE: DHC AND ATELIER JEAN NOUVEL



The project has been delayed several times

Louvre Abu Dhabi

Architect: **Atelier Jean Nouvel**

Location: **Saadiyat Cultural District, Abu Dhabi**

Opening: **Mid to late 2017**

This much-anticipated and much-delayed project – intended as a new cultural landmark for Abu Dhabi – is set to finally open this year on Saadiyat Island, which is being comprehensively developed as a new arts district for the emirate. The Louvre's architect, Jean Nouvel, recently explained how the museum's intricately-patterned dome will allow "a rain of light" to enter, with spots of light appearing "at different rhythms depending on the geometry" of the structure's skin.

Natural materials are used throughout

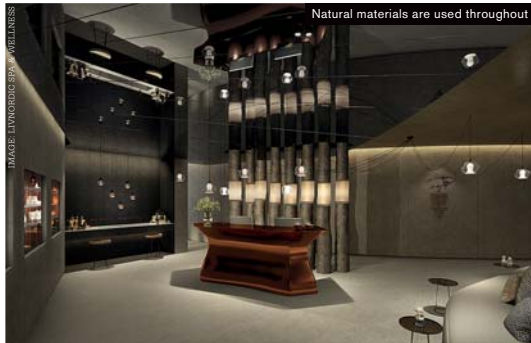


IMAGE: LIVNORDIC SPA & WELLNESS

LivNordic Spa at the Katara Beach Club

Designer: **Studio HBA**

Location: **Doha, Qatar**

Opening: **Early 2017**

LivNordic Spa & Wellness is preparing to open its new two-storey, 4,600sq m (49,514sq ft) spa in the Katara Cultural Village in Doha, Qatar. The facility will cover two club floors, with the ground floor for men and the first floor for women. Designed by Studio HBA's Gillian Docherty, the spa makes use of natural materials including stone, and timber features throughout its design.



The project showcases alternative energy

Astana Expo City

Architect: Adrian Smith + Gordon Gill Architecture (AS+GG)

Location: Astana, Kazakhstan

Opening: June 2017

This year an international exposition will take place in Astana, Kazakhstan. In preparation, architecture studio AS+GG were commissioned to design a masterplan for the city, reflecting the Expo theme of 'Future Energy'. The 174 ha project features pavilions; shopping, socio-cultural, civic facilities; and new public parks, all showcasing alternative forms of energy.

Design Society

Architect: Maki and Associates

Location: Shenzhen, China

Opening: October 2017

The studio of Japanese architect Fumihiko Maki have designed this groundbreaking design museum, which was initiated by Chinese cultural organisation Design Society in collaboration with the V&A.

Maki's design centres around three cantilevered volumes on a deconstructed plinth. A green public roof will allow visitors to look towards the surrounding mountains, sea and urban landscape.



The museum is due to open in October



The renovation will create new public realm

Victoria and Albert Museum - Exhibition Road

Architect: Amanda Levete Architects (AL_A)

Location: London, UK

Opening: March 2017

London's Victoria and Albert Museum (V&A) museum will soon boast a new entrance, courtyard and underground gallery designed by architecture studio AL_A. The Exhibition Road Building Project is the V&A's largest architectural scheme in the last 100 years. In reference to the decorative ceramics in the museum's collection, 14,500 porcelain tiles created in 13 different patterns are being laid to create the "world's first" porcelain courtyard. ●



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Above: Dax Polé Commercial



Den Haag Zuiderpark



Lyon Carre de Sole



Derby Arena



Omnisportcentrum Apeldoorn

I like to take my time

PETER ZUMTHOR

In a rare interview, the Swiss architect talks to Magali Robathan about LACMA, the Fondation Beyeler museum and the role of emotions in his work

I am waiting to meet Peter Zumthor in the Club Lounge at London's Langham Hotel. He is late, and I am a little apprehensive.

Zumthor is something of a cult figure within architecture. His body of work may be relatively small, but his influence is huge. He is known for his uncompromising approach to his work, for his craftsmanship and his careful use of materials and light, which can be seen in his best known projects, including the Therme Vals thermal baths in Switzerland, the Kunsthau Bregenz art gallery in Austria and the Kolumba Diocesan Museum in Cologne, Germany. He has been awarded most of the top architectural prizes, including the Pritzker Prize and the RIBA Gold Medal, and is widely admired by his fellow architects, perhaps because he seems to have achieved what so many dream of – completing a small number of carefully-selected projects to his own high standards, with no apparent compromises.

He also operates a little differently to most architects of his stature. He doesn't have a global company with offices in London, New York or Zurich; instead he keeps his practice deliberately small, employing around 30 people, who work from a Zumthor-designed studio in the small town of Haldenstein in Switzerland. He doesn't have a website, he doesn't send press releases and he gives very few interviews.

When Zumthor finally arrives, he apologises, telling me that he has come straight from a meeting with his client, the director

of the Los Angeles County Museum of Art (LACMA). "We have been working intensively. That's why I'm late," he says.

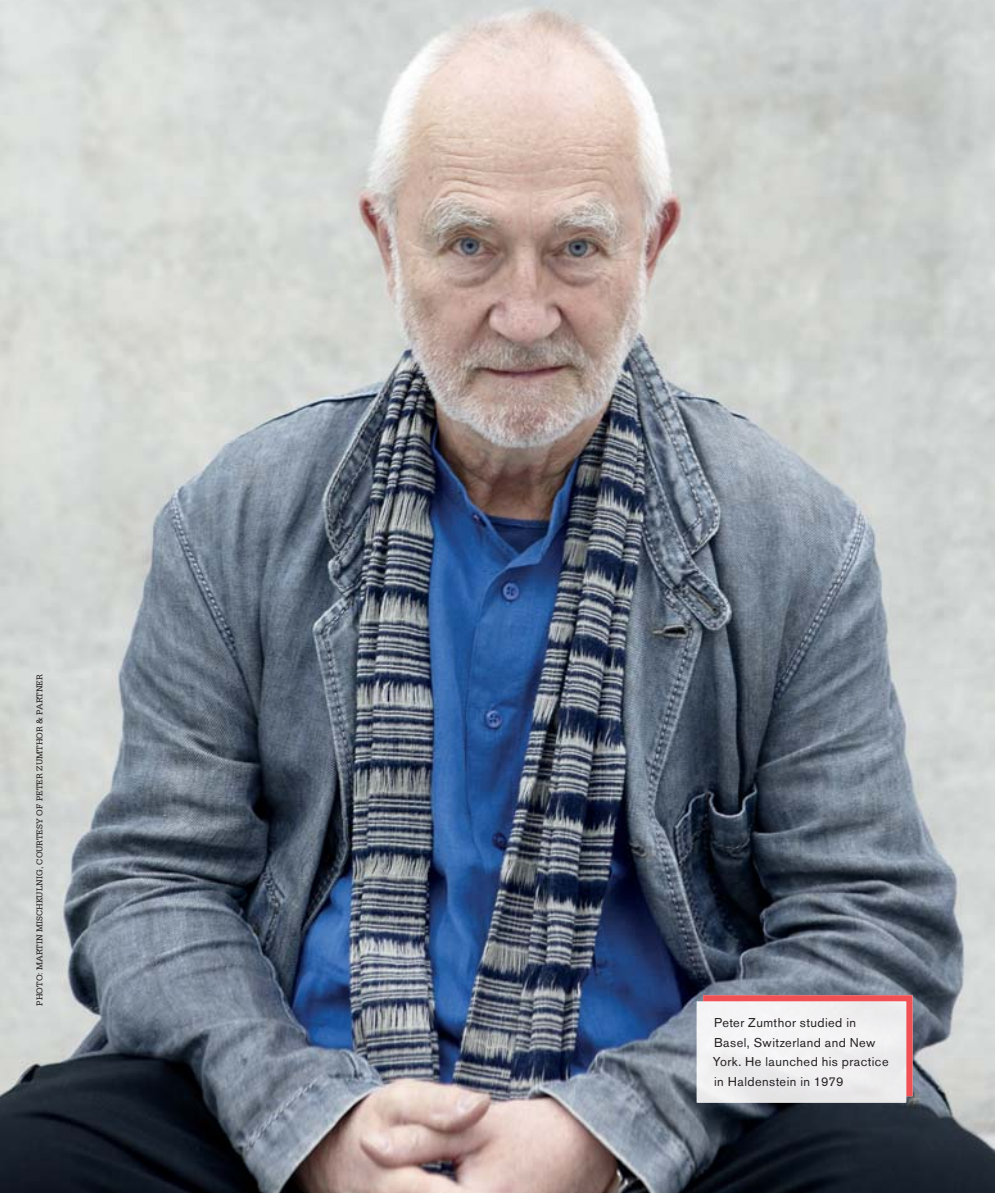
Zumthor is working on a \$600m redevelopment of LACMA, which will see its ageing structures replaced by one large, organically-shaped building, designed to improve visitor flow, functionality and sustainability. It's Zumthor's first major project in the US, and arguably his largest to date.

I start by asking Zumthor how 2016 was for him. "Busy," he says. "Full of work. It was a very successful year. I could do what I wanted to do; achieve, expand. Actually, for my health it was almost too much work. For at least half the year I was working seven days a week. Soon I will take a vacation."

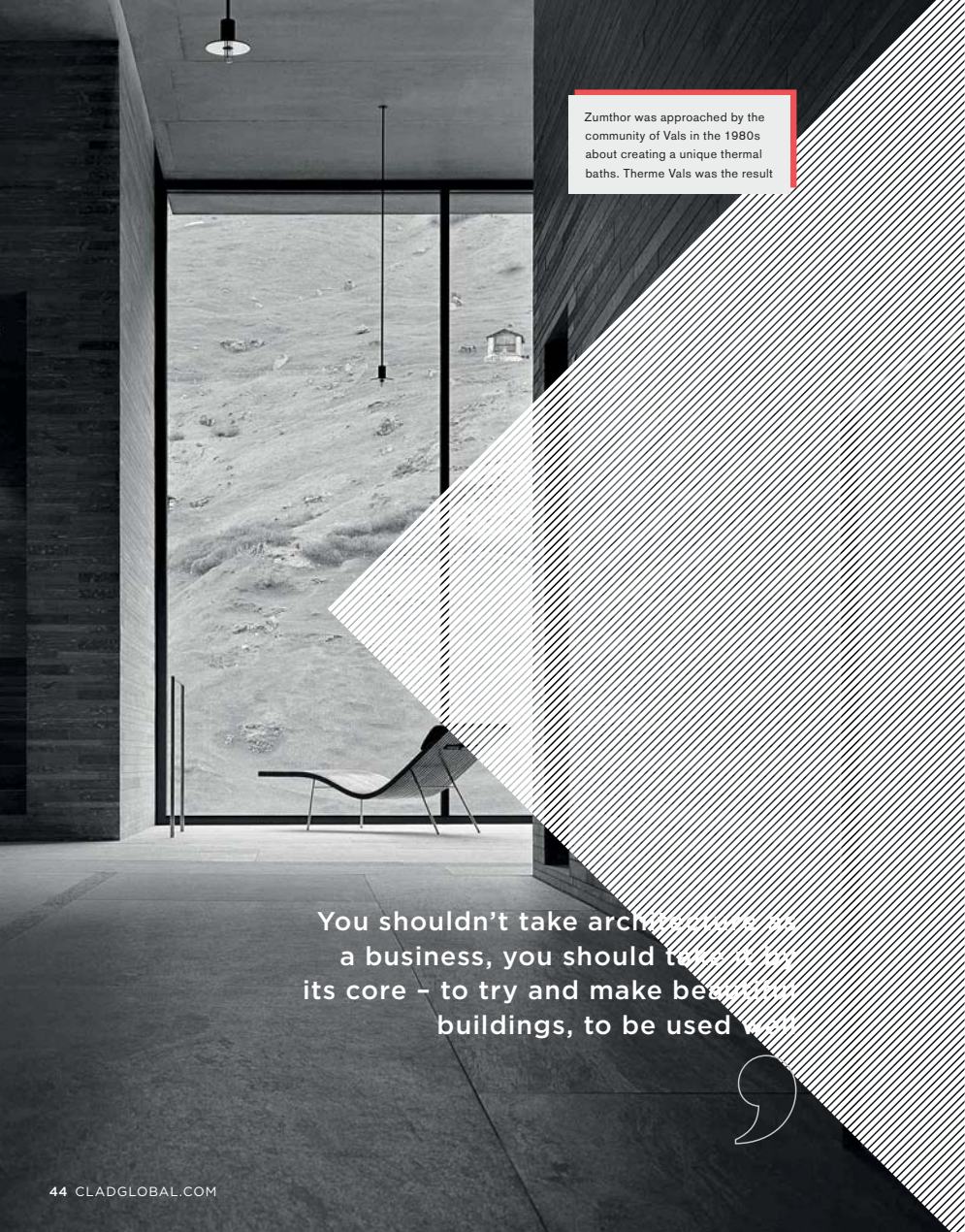
As well as the ongoing LACMA project, Zumthor completed the Allmannjuvet zinc mine museum in Sauda, Norway, in September, and was chosen to design an extension to Renzo Piano's Fondation Beyeler Art Museum extension in his home town of Basel. "This is beautiful," he says. "It warms my heart to be designing in the town I come from." He is also, he tells me, in the early stages of working on two projects in Korea – a small tea house and a large library, archive and exhibition centre – as well as a large scale park project near Munich.

TAKING IT SLOW

Early in the interview, I ask Zumthor a question. He pauses for a long time, and I make the mistake of interrupting him. He holds up his hand and gives me a stern look.



Peter Zumthor studied in Basel, Switzerland and New York. He launched his practice in Haldenstein in 1979

A black and white photograph of a modern interior space. On the left, a dark, textured wall (possibly stone or brick) runs vertically. A large, floor-to-ceiling window is set into this wall, offering a view of a steep, rocky mountain slope. A modern, low-profile lounge chair with a curved metal frame and a dark, slatted back is positioned in front of the window. A thin, vertical rod hangs from the ceiling in front of the chair. To the right of the window, a dark, textured wall continues, featuring a narrow, vertical opening. The floor is a smooth, light-colored surface. The overall atmosphere is minimalist and architectural.

Zumthor was approached by the community of Vals in the 1980s about creating a unique thermal baths. Therme Vals was the result

You shouldn't take architecture as
a business, you should take it by
its core - to try and make beautiful
buildings, to be used well



PHOTOS THIS SPREAD: HELENE BINET



Locally quarried stone contrasts with concrete in the Therme Vals interior spaces. Light and shadow are key to the atmosphere

"Don't say anything!" he says. "I'm thinking! I like to take my time." He pauses, and looks at me to check I've understood. I nod.

"Okay," he says, before continuing. This time, I keep quiet, and from this point on, the interview goes smoothly. He measures his words carefully, pausing after my questions to formulate his responses. I slow down to his pace, and I find it helps me to think about his answers, to tune into what he is really saying.

Zumthor is famous for his refusal to be rushed in his work, and has said that he doesn't want to make mistakes by building under a time pressure. I ask him later when a particular project will be finished. "It will take as long as it takes," he says, simply.

Zumthor's list of completed projects is quite small in part because he takes his time over them, but also because he is very choosy about what he takes on. He is not, he tells me, driven by commercial opportunity. But we all need money, I counter. He shrugs. "We've had times with little money, but I never suffered from that. I never had any serious money problems in my whole life, I've been lucky in that respect. Personally, I don't need a lot of money. Maybe for good wine." He laughs.

"You shouldn't take architecture as a business," Zumthor continues. "You should take it by its core – to try and make beautiful buildings, to be used well."

THE EARLY DAYS

Peter Zumthor was born in 1943 in Basel, Switzerland, the son of a cabinet maker, Oscar Zumthor. The first buildings that really had an impact on him, he tells me, were the buildings of his youth. "My father's house, the first movie theatre I went to, churches, railway stations," he says. "I was experiencing architecture before I knew it was architecture. I think it's so important where we grow up. It shapes our relationship to the world."

Zumthor initially trained as a cabinet maker, working alongside his father. "When I started in my father's shop at the age of 20, I wouldn't have dreamed of being an architect," he says. "This was far away from my thinking, and the thinking of my family. My father once confessed to me that he would have liked to have been an architect, but his mother told him no, we have no money. You have to work."

In 1963, Zumthor attended the Kunstgewerbeschule school for applied arts in Basel, before studying industrial design at the Pratt Institute in New York. He then returned to Switzerland, and got a job as building and planning consultant and architectural analyst with the Department for the Preservation of Monuments in Graubünden. In 1978, he set up his own practice in Haldenstein, where he was living with his wife.

PHOTOS THIS SPREAD: HELENE BINET



Kunsthaus Bregenz acts as a light box that absorbs and filters light throughout the building and glows at night

His first buildings were all in Switzerland and included several housing projects, a chapel, a small art museum and shelters for a Roman archaeological site. His first high profile project was the Therme Vals spa, built over naturally occurring thermal springs in Graubünden, Switzerland. The thermal baths opened in 1996, and remain one of Zumthor's best loved projects.

It's a beautiful structure, partly submerged into the mountain, built from layers of locally quarried quartzite stone. The combination of light, stone and water creates a quiet but powerful building that was designated as a national monument just two years after opening.

A year later, his Kunsthaus Bregenz project opened, overlooking Lake Constance in Austria. The glass, steel and cast concrete four storey museum has no visible windows; instead etched glass shingles allow diffused light to illuminate the artworks.

More projects followed, including the Kolumba Museum in Cologne, Germany. The building, which houses the art collection of the Catholic Archdiocese of Cologne, rises from the ruins of an old Gothic church destroyed during the Second World War.

"This was a beautiful opportunity for me to prove to myself that you can embrace the past and do something which grows out of it, as opposed to making a contrasting building which modern architects sometimes do," says Zumthor.



Etched glass shingles allow diffused light to illuminate the artworks



The Kunsthau Bregenz stands on the shore of Lake Constance in Austria. It is made from glass, steel and cast concrete

PETER ZUMTHOR PRINCIPAL WORKS

1986

Zumthor Studio
Haldenstein, Switzerland

Protective Housing for
Roman Archaeological
Excavations
Chur, Switzerland

1988

Sogn Benedetg Chapel
Sumvitg, Switzerland

1993

Homes for Senior Citizens
Chur, Masans, Switzerland

1994

Gugalun House
Versam, Switzerland

1996

Spittelhof Estate
Biel-Benken, Switzerland

Therme Vals
Switzerland

1997

Kunsthau Bregenz
Austria

2000

Swiss Sound Box, Swiss
Pavilion, Expo 2000
Hanover, Germany

2002

House Luzi
Jenaz, Switzerland

2005

House Zumthor
Haldenstein, Switzerland

2007

Kolumba Art Museum
Cologne, Germany

Bruder Klaus Field Chapel
Wachendorf, Germany

2009

Log houses for Annalisa
and Peter Zumthor,
Unterhus and Oberhus
Vals, Leis, Switzerland

2011

Steilneset, Memorial
for the Victims of the
Witch Trials in Vardø
Finnmark, Norway

Serpentine Gallery Pavilion
London, England

2013

Werkraumhaus
Andelsbuch, Austria

2016

Zinc Mine Museum
Allmannajuvet
Norway

I'm interested in the feeling
of history, in the fact that
generations of people before me
have made beautiful objects and
now they have come to me



Zumthor says he "embraced the past" with his design for the Kolumba Museum, built on the ruins of an old Gothic Church



PHOTO THIS SPREAD: HELENE JINET

The Kolumba Museum showcases a wide range of exhibits, from religious icons and statues to contemporary art installations

Other projects have included a monument to 91 witches murdered during the 17th century on the island of Vardo in Norway, the 2011 Serpentine Gallery Pavilion in London, and an ongoing project to design a secular retreat in Devon, UK, as part of Alain de Botton's Living Architecture project.

It hasn't all been plain sailing, however. In 1993, Zumthor won a competition to design a museum and documentation centre of the Holocaust in the former Gestapo and SS headquarters in Berlin. Construction was stopped shortly afterwards due to funding problems, and Zumthor has cited this as one of the biggest disappointments of his career.

LA COUNTY MUSEUM OF ART

In 2013, Peter Zumthor unveiled his designs for a new home for the LA County Museum of Art (LACMA). His design sees the existing LACMA buildings being demolished and replaced by an elevated, black, organically-shaped structure, inspired by the nearby La Brea tar pits.

A year later, Zumthor and LACMA revealed a revised design, following criticisms by local groups that the original proposals would put the tar pits at risk. The new plan keeps the original structure, but sees the museum straddling Wilshire Boulevard instead of encroaching on the pits.

"In a few years, if you look at the building, I would hope you would say, 'ah, this building knows about the tar pits,'" says Zumthor. "Maybe because it's black, maybe because of its organic form. I would like people to look at it and think that it is much older than the other buildings there; that it belongs more to the ancient earth than to the other LA buildings."

The starting point for the design, says Zumthor, were the objects displayed within the museum.

"The Los Angeles County Museum of Art is basically an encyclopedic museum of art," he says. "This means it has a web of objects and paintings. Many of these things were not made for the museum. They have lost their contacts, these objects; you could say they are homeless. I am creating a new home for the homeless objects where they can feel good in their new surroundings."

When designing the museum, it was important for Zumthor to tune into the objects themselves, he says. "I trust the beauty of the object; I trust that they are telling me something. I'm interested in the feeling of history; the fact that there have been generations of people before me and they have made these beautiful objects, and now they have come to me. I hear the curators talking about them, but I trust the beauty of the objects first because explanations change."



PHOTO COURTESY OF PETER ZUMTHOR & PARTNER



I want to make buildings that have the capacity to be loved, that's all

Zumthor works from his studio in Haldenstein, which he designed in 1986. The Allmannajuvet zinc mine museum opened last year (below)



Zumthor's proposals incorporate eight, semi-transparent pavilions, which support the main exhibition level, with access points to the surrounding gardens. The design will also create two and half acres of new public outdoor space, including sculpture gardens, educational spaces and areas for flora and fauna that integrate with the surrounding parkland.

"The museum is not organised in timelines, periods or geographical regions," he explains. "It's organised like a forest with clearings inside, where we have free choice to go to this clearing, or to the next. I would like to allow an experience of art where people can go and look at the art without didactics, without premature explanations, and make their own experience."

"The museum is open to the outside; this is very important," he continues. "You'll have this almost sacred, sublime kind of experience, but I would also like to accommodate the profane, the dirty, the normal, the everyday."

"You start off down on the ground – this is normal city life – then as you go up you are received in a beautiful big palace for the people. From there you can go to the museum clearings, and that's where you have the most intimate and maybe more private experiences of art."

In August 2016, new renderings of Zumthor's planned LACMA redesign were released. The renders were criticised in some quarters, and Zumthor tells me he wasn't happy with them.

"These images were created for an environmental review. These are conventional, commercial-looking renderings, which I personally don't like so much," he says, adding that his studio is currently working on photos taken from models prepared especially for the purpose. "The models allow us to take pictures with natural daylight, the light of the sun, which makes a lot of difference," he said. "These will explain the building better."

CREATING EMOTIONAL SPACES

Zumthor has said in the past that his ultimate goal is to "create emotional space" I ask him how he goes about doing this.

"I love buildings," he says. "When I look back on my life I love the buildings that speak to me by means of their atmospheric qualities, by means of a feeling of history, of being complete."

"This is something basic in life. I look at a person and it's nice if I could like or love them. It's a beautiful feeling when I discover that this is a nice relationship. It's how I experience buildings. In that I'm not alone – everyone shares this idea. I



Zumthor has said he was inspired by the "drudgery of the miner's lives" when designing the Allmannajuvet zinc mine museum

want to make buildings which have the capacity to be loved, that's all. Nothing special." But how does he go about making those buildings, I ask. That's the special part.

"There are many levels," he says. "As an architect you have to follow the technical levels, the urbanistic levels and so on, but the most important is probably a beautiful unity of use, atmosphere, space. So that the kitchen of my mother looks like the kitchen of my mother and not like something strange. It's about the real thing. That's what I go for.

"I don't treat the profession of architecture as a profession of arranging and inventing forms," he continues. "These things I want to do need a form, and so I give them this form. I'm extremely sensitive to things which don't work."

At this point, Zumthor gestures at the space behind me where the banquet seating meets the wall. "If I look over there and I don't blur my eyes I can see 'this meets this, this goes onto this...' I hate everything!" he says. "It's so bad. Nobody ever cared about this space. Everything is bad...no taste, no talent, pure commerce.

"Many people see what's ugly and doesn't work in the world. I have skills and I have talent [to design things that do work]. That's a gift. Like Roger Federer can play tennis, that's a gift."

The next year should also be a busy one for Zumthor. As well as the LACMA project, he is working on designs for a multi million euro extension to the Fondation Beyeler art museum in Basel, Switzerland, which will add new exhibition and educational facilities to the existing Renzo Piano-designed building.

Other projects include a tea house in Korea, and a building housing a library, exhibition facilities and archives for the Korean poet Ko Un, also in Korea. Zumthor is also working on a large-scale project near Munich called Nantesbuch which he describes as a "new form of landscape park. We will invite artists to show their art there, to make site-specific works. We might ask some of them, including myself, to create gardens. We are now in the conceptual stage for that project."

I have been with Zumthor for around an hour, and he tells me that he has to go straight from our meeting to the airport, to fly back to Switzerland, to his studio in the mountains. Just before he leaves, I ask what his dream future commission would be.

"I would like to build on the seashore," he says. "I think the relationship to the sea is beautiful. I have done things with the relationship with the mountains, but not the long horizon of the sea...I like the water, the expanse. It makes me quiet." ●



(Left to right) Jacques Herzog, Pierre de Meuron, Ascan Mergenthaler

“A concert hall that will wow the world”

Herzog & de Meuron’s shimmering
Elbphilharmonie opens at last

The glass structure is made from more than 1,100 window panels. It sits on top of an old warehouse





Sometimes you almost feel it's a dead end, but you have to believe there's a way out and you have to fight for it. That belief saved us



Ascan Mergenthaler

One of Europe's most significant new cultural buildings

opened to the public on 11 January with a special concert for 1,000 ticket winners.

The Hamburg Elbphilharmonie, by Swiss architecture studio Herzog & de Meuron, is formed of a shimmering glass-covered volume – consisting of 1,100 individual panes – built on top of the original brick structure of an industrial warehouse on the city's harbourside.

The structure is home to a Westin Hotel, two small music venues and a 37m- (121.4ft-) high public plaza and observation deck, but the main draw is the new world-class concert hall which seats 2,100 spectators across its interwoven tiers.

THE TECHNICAL SPECS

The 12,500-tonne venue, which is housed in the heart of the glass volume, rests on 362 giant spring assemblies to decouple it from the rest of the building. It rises 50m (164 ft) and includes a vast organ built into the walls. To ensure acoustic excellence, 11,000 uniquely-textured sound-modulating gypsum panels, conceived with Japanese

acoustician Yasuhisa Toyota, have been painstakingly assembled.

Speaking late last year, city mayor Olaf Scholz said: "Hamburg is a city of music, and you could call this its parliament. It is a concert hall that will wow the world."

Over the years of construction, the building has become a landmark on the Hamburg skyline, inspiring a wide range of merchandise in

the city based on the silhouette of the instantly recognisable 7,000sq m (75,347sq ft) roof, which consists of eight spherical, concavely bent sections.

The opening nights featured performances by the hall's resident NDR Elbphilharmonie Orchestra and a selection of classical singers, including bass baritone Sir Bryn Terfel.

Spectators enter via the building's elegantly curving elevator, which rises towards the elevated public plaza over the course of two minutes. The architects' idea was to make sure there are no doors blocking people at any point from their journey from the outside of the building all the way into the concert hall.

"It's a stunning experience to be in this building," senior partner Ascan Mergenthaler told CLAD. "It's like a little city. You literally flow into the building, and the

outside world is part of that journey until the very last moment."

KEEPING THE FAITH

Summarising the experience of working on the project, which took over a decade to complete, Mergenthaler said: "Sometimes you almost feel it's a dead end. But you have to believe there's a way out, and you have to fight for it. That saved us. We had faith we'd have a happy ending and survived by finding a solution together."

"It's tough building. I don't think it will go out of fashion, because it was never in fashion. It is what it is. It's there in the unique location of the harbour and it fulfils the promise of being a house for everybody."

The cost of the project was reportedly €860m – over 10 times the original budget of €77m, which the architects have conceded was never realistic given the scale of the project. ●



The 12,500 tonne concert hall is completely detached from the rest of the building



Light from the foyers and staircases shines through the façade

CO-CREATE: THE DESIGN MUSEUM

A NEW HOME

Allies & Morrison, OMA, John Pawson, West 8 and Deyan Sudjic worked together to create a new home for London's Design Museum. They tell Kim Megson how this unique project took shape





The Design Museum's galleries, café and event and learning spaces are arranged around the large oak-lined atrium

London's Design Museum opened in its new £85m home on Kensington High Street in November, after the culmination of a highly innovative architectural collaboration.

The museum is located inside the former Commonwealth Institute, a Grade II* Listed building designed by architecture studio RHWL in the late 1950s, which had lain empty for years.

Developers Chelsfield LLP and Ilchester Estates wanted to create residential blocks that would fund the restoration of this modernist icon.

Architects OMA won a competition to conceive a plan for the site, developing three new residential cubes with 54 apartments that respond to the geometry and grid of the original building. Working alongside Allies & Morrison, they also found a way to revitalise the Institute's structure, while retaining its distinctive copper roof and parabolic form.

In 2008, the Design Museum expressed interest in occupying the revamped building. John Pawson was brought in to finalise the interior spaces, Dutch

landscape architects West 8 were commissioned to create the surrounding green space, planting and topography and Arup and Mace provided engineering services – including supporting the structure's iconic roof, while intensive renovations took place to the building's shell and envelope beneath.

The subsequent wholesale reconfiguration of the structure and a basement excavation has increased floor area to 10,000sq m. For the Design Museum, this means they have triple the space of their previous home in a former banana warehouse at Shad Thames, near Tower Bridge. New facilities include two major temporary gallery spaces, a free permanent collection display, a restaurant overlooking Holland Park, an auditorium, studios, a library, an archive and learning facilities.

The buildings façades have been completely replaced to meet current technical building standards, the glazing was redesigned and replaced, while a number of original stained glass panels were removed, refurbished and reinstated.

To discover how this unique project came to fruition, CLAD sat down with the key players involved in realising the development to talk about their input and collaboration and what they learned.

PHOTO: GRAVITY ROAD

The original copper-covered hyperbolic paraboloid roof was restored and used as the focal point for the design



REBUILDING A LANDMARK



REINIER DE GRAAF

OMA partner in charge of the project

PHOTO: BEATRIKHA IZABESTEVA

How did you become involved in the project?

In March 2008 we took part in a competition, which we won.

It had a very interesting brief – to bring back to life a site that was dead: the Commonwealth Institute was in a bad state and it was a huge burden for the council to maintain it.

It was built as a temporary structure, and had become listed in a way that had – weirdly – created a permanent state for something which had been intended to only have a limited life.

The exhibition hall had a service wing that even the original designers referred to as a train crash, but in spite of this, all the buildings were Grade II* listed.

Also, the grounds were registered, because Dame Sylvia Crowe had designed a garden that was never executed, so there was a bizarre situation where there was a modern ruin on a derelict parking lot, and both were listed.

The only option was refurbish the whole thing. With the competition, the developers wanted to know how various architects would go about this impossible task.

How did you come up with your concept?

We decided some parts are more listed than others. In the design we took away the service wing, kept the main exhibition hall – really the prize of the architecture because of the parabolic roof – and decided a derelict car park deserved a re-landscape. Our concept was to have Holland Park engulf the whole terrain, and in the residual triangles that emerged as a result of demolishing the service wing we added three residential cube blocks of a different size. It was a way of getting a fairly large development quantum in a fairly small site and making it look small.

The whole point was to start an opening negotiating position for discussions with English Heritage, the council and other parties.

What do you think of Pawson's interiors?

I think his interiors are suitably tasteful. It's a different interior to the one we would have done; I think we'd have done something rougher. Most of our work is a little more ambiguous about



PHOTO: BILLYVUE



Had OMA been the sole architect, things would have been done differently, but in a way I prefer this

what's new and what's old. We tend to wrongfoot people a little more. But on the whole I think he's done a very good job. The museum is buzzing, and in the end any minimalist architecture is always eventually overrun by its users – I tend to think that's a good thing. It's a very nice place, and it's there, ultimately.

What part of this project are you proudest of?

In an age where there are precious few public subsidies, we managed to save a listed building, have a major cultural institution open to the public and have a community that's not gated and is a public part of a public park. That's an impressive achievement in the context of a public sector which, on the whole,

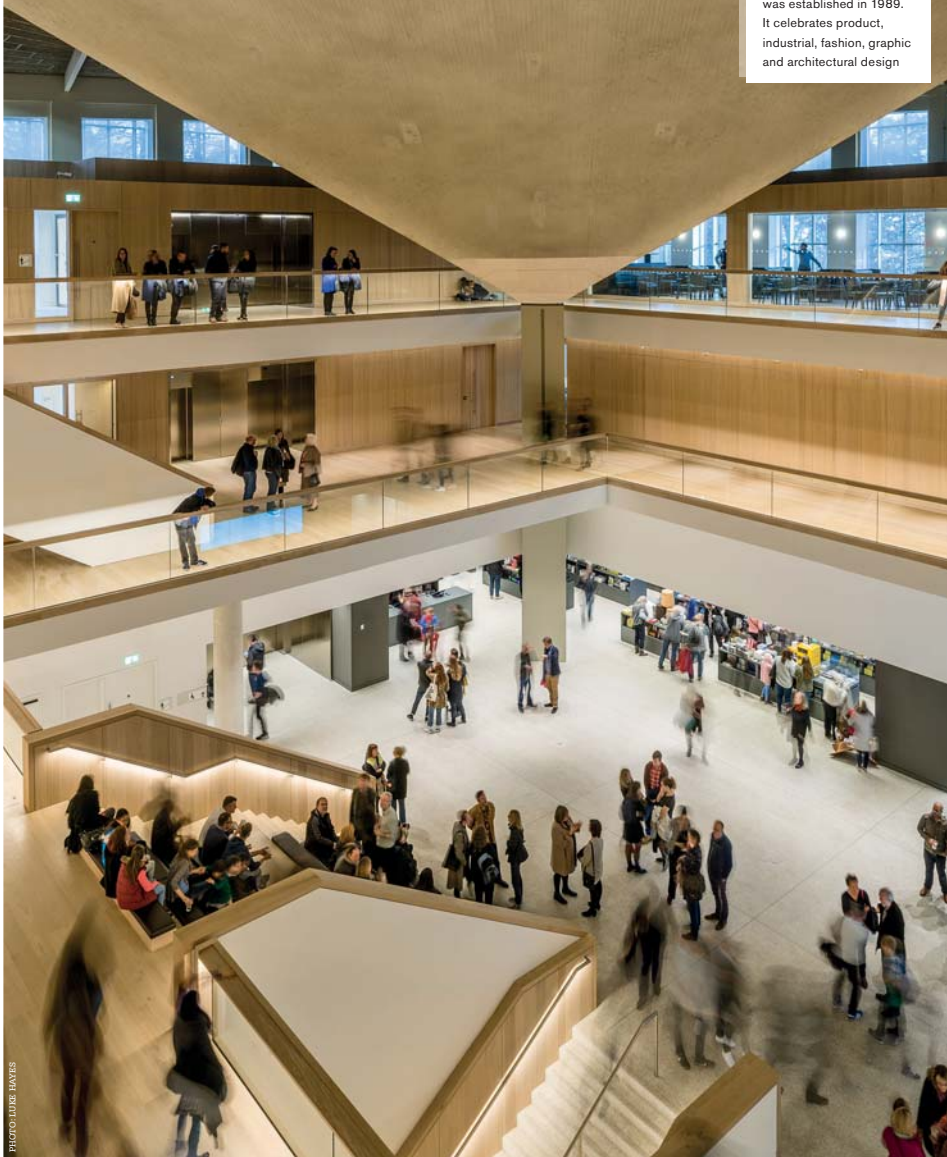
is so passive and has relegated all the initiative to the market.

It was an arranged marriage between housing and a museum; that was the only way the whole project was going to get planning approval. A quicksand of multiple ingredients created an environment where it could happen. I'm very proud of the deal, and the choreography of making it happen over eight years. And I'm proud of the fact we worked successfully with so many people.

Had OMA been the sole architect, things would have been done differently, but in a way I prefer this. In the world of architecture, collegial collaboration isn't something you hear about a lot. It's an egomaniacal profession, so I'm very happy about the broadness of this project.

CO-CREATE: THE DESIGN MUSEUM

The Design Museum was established in 1989. It celebrates product, industrial, fashion, graphic and architectural design





There's a jaw-dropping moment where you open the front door and you see the underside of the original building and the roof

THE PROCESS



SIMON FRASER
Allies & Morrison

PHOTO: ALLIES AND MORRISON

What was your involvement with the project?

We were invited to join OMA to develop the [original] design. The project resumed again at the start of 2011, and we were invited again to join them.

OMA retained authorship of the scheme and when we got involved we evaluated the overall site and looked at the scheme, investigating a number of changes – how the structure of the basement would work, for example, and the orientation of entrances in the residential buildings. The early months were spent re-looking at how the ground engaged with the building.

Initially there was a rolling landscape that came right up to the residential buildings. In time that got pushed back with the creation of small patios and terraces involved bringing value back.

How was the process of collaboration?

What we could bring to bear was a more detailed knowledge of residential housing standards, and our experience of refurbishing listed buildings. For the Commonwealth Institute we were involved with the dramatic changes to the façades and the structure being gutted, new floors put in and the creation of

a new envelope to satisfy the requirements of the Design Museum.

We regularly met up with OMA, John Pawson and West 8, to have discussions and create combined drawings. There are always moments of disagreement, but it was an enjoyable process.

Do you have a personal favourite part of the building?

There's a jaw-dropping moment where you open the front door and you see the underside of the original building and the roof. And seeing the exhibition hall completed is the last piece of the puzzle.



PHOTO: LEE HAWES

OMA designed the three housing blocks (one pictured) that stand alongside the Design Museum

THE INTERIORS



PHOTO: CINDY PALMANO

How would you describe the design of the new museum?

From the beginning I approached the design as an exercise in re-tuning. I didn't want to fight the building – to bend it to my will. I've arranged the new programme like an opencast mine around the central atrium, with the atrium framing the views to the original concrete roof. I like the fact that everywhere you are, there are sightlines connecting you with other areas of the museum

What was your starting point?

The thought I found myself coming back to again and again during the design process was the exhilarating sense of vertical expansion I experienced when I first visited the deserted building and stepped out onto the central dais, into the void under the hyperbolic paraboloid roof structure. That experience was something I wanted to preserve and enhance.

What were the biggest challenges of this project?

There are specific challenges associated with working within an existing structure, especially one

that is Grade II* listed, but I think constraints generally stimulate rather than hamper the creative process. The project has certainly required some memorable feats of engineering: when we were excavating the basement levels, the entire building, including the original roof structure, had to be propped on stilts.

Did you think about how to retain the spirit of the Shad Thames building within this much bigger space?

More space opens up so many new opportunities, but for me the crucial thing was to get the atmosphere right: serene, but also charged with a sort of underlying spatial excitement. You want to make a place that people feel good to be in and where the focus falls naturally on the installations.

How did you approach the design?

It was important to me that we redrew the relationship between the architecture and its surroundings. I wanted to make the threshold a soft, permeable one that would draw people in and through. A significant change



Pawson designed the large atrium so that it frames the views of the original roof



I hope the Design Museum shows people that you don't have to tear down and start from scratch

we've made to the building is that its skin has become transparent on the north and east elevations, meaning that people in the park will be able to look in to the museum and vice versa. This is very much in the spirit of the original architects' concept of the building as a 'tent in the park'. As I see it, we've opened the tent flaps.

What does this project mean to you personally?

I feel very fortunate that my first public building is in the city

where I've worked and lived for almost four decades.

Do you have a favourite part of the new museum?

There are 'moments' in the building that I relish every time I walk around, but I think it's really the way everything comes together that gives me the greatest pleasure.

How do you hope the public will respond to it?

Before this project, there were good examples of repurposing existing industrial buildings for cultural purposes, but very few instances involving the returning of an existing cultural building for a new cultural life. I hope the Design Museum shows people that you don't have to tear down and start from scratch.

How did you find the collaboration process?

So much of architecture rests on dialogue and in this project we have been fortunate in the creative relationships.

If you find clients and collaborators with whom the chemistry feels good, then everything else follows.



We see design as borderless. It's a way to understand the world. Opening a museum is a very optimistic thing

What impact will the move have on the Design Museum?

We're still exploring what the move actually means. We're just realising the scale of the transformation from Shad Thames to here. With that has come the sense of excitement, and of understanding just how complicated a building is. We're expecting an audience of around 650,000 a year, as opposed to the 250,000 we had in Shad Thames. We've got a building with three times the space, we've increased our budget so we'll be operating on about £11m a year, as opposed to the £5m before. It's growing on all fronts.

What are your goals for the new museum?

The point of this move is that we're growing up without growing old. I was hired with a brief to grow the museum; to take us from the edge of the conversation to the centre stage.

We've built a theatre with multiple stages, and now our task is to fill them with a great repertoire.

Justin McGuirk, our curator, has worked hard to achieve that.

The location will bring life to Kensington High Street; it was once a very vibrant and fashionable neighbourhood but has lost that recently. The Tate Modern turned contemporary art from something that was seen by the tabloids as a joke to something part of the mainstream conversation. We have a chance to do that for contemporary design and architecture.

Having worked with John Pawson, OMA and a host of other practices, have you learnt much about designers through this process?

I trained to be an architect, but I didn't become one because I was grossly incompetent and impatient! It was a good starting point for working on this project though. The process with this building has made me realise over the years how much respect I have for any architect or designer who can keep the essence of an idea alive throughout the long drawn out process of realising a project.

Do you have a favourite part of the building?

I knew the building as a child, so it's great to see it brought back to life. I think what John Pawson has done is create a new building inside the old one, which frames the original and almost turns it into an exhibit. I love the way he has made it into a better building than it was before.

What will be the philosophy of the Design Museum moving forward?

We see design as borderless. Opening a museum is a very optimistic thing. We are open to the world and design is a way to understand the world. I've always thought design is too important just to leave to designers, and I think we're trying to demonstrate that. I'm sure it's going to succeed. I can feel it in the building.

THE CLIENT

DEYAN SUDJIC

Design Museum director



PHOTO: LUKA HAYES

CURRENT EXHIBITIONS

The museum is currently hosting three exhibitions in its new home



The Beazley Design of the Year

Comprising over 70 nominations, the exhibition celebrates the best designs from around the world in the last 12 months across six categories: architecture, digital, fashion, graphics, product and transport. Designs include a drinkable book, a flat-pack refugee shelter, a robot surgeon and the last David Bowie album cover.



Design, Maker, User

For the first time in the museum's history, a wide range of its collection is accessible as a free, permanent exhibition. Almost 1,000 items of twentieth and twenty-first century design are on show, including a Bible, a Coca-Cola can, the £5 banknote, a pair of rubber gloves, a plastic garden chair, the London 2012 Olympic Torch and an AK-47 assault rifle.



ALL PHOTOS: LUCIE HAYES



Fear and Love: Reactions to a Complex World

Eleven newly commissioned installations by some of the world's most innovative and thought-provoking designers and architects explore a spectrum of issues that define our time, "including networked sexuality, sentient robots, slow fashion and settled nomads." Fashion designer Hussein Chalayan, architect Neri Oxman and OMA are among the contributors.



FUTURE EXHIBITIONS

The following exhibitions, explained here by the Design Museum, will take place in 2017



Imagine Moscow: Architecture, Propaganda, Revolution

15 MARCH – 3 JUNE 2017

Marking the centenary of the Russian Revolution, this exhibition explores Moscow as it was imagined by a bold new generation of architects and designers in the 1920s and early 1930s. Large-scale architectural drawings are supported by artwork, propaganda and publications from the period.



California

24 MAY 2017 –
15 OCTOBER 2017

While California's mid-century modernism is well documented, this is the first exhibition to examine the state's current global reach. Picking up the story in the 1960s, the exhibition charts the journey from the counterculture to Silicon Valley's tech culture, revealing how this culture of design and technology has "made us all Californians." ●

Hella Jongerius:

Breathing Colour

28 JUNE – 24
SEPTEMBER 2017

We see the world in colour but rarely do we appreciate how colour shapes what we see. Drawing on years of research, designer Hella Jongerius presents *Breathing Colour*; an installation-based exhibition that takes a deeper look at the way colour behaves, exploring shapes, materials, shadows and reflections.



World's first biophilic gym launches as London pop-up

The designer of Maggie's Centres 'healing gardens' creates nature-inspired gym to evaluate the impact of working out in a biophilic environment

Landscape architect Lily Jencks has designed "the world's first biophilic gym," for fitness concept Biofit.

Described as "an organic gym concept for big city life," the pop-up health club is running in west London until February 2017.

With a brief to "bring the outside world indoors," Jencks has created an environment where gym-goers can work out amid natural vegetation, colours, materials, shapes, smells and sounds.

Biofit – founded by health and fitness entrepreneur Matt Morley in 2015 – has been inspired by tech companies such as Apple and Google, which are bringing air-purifying plants and natural landscaping into their offices to reduce employee stress and improve productivity levels.

"Our society needs to calibrate our relationship with the natural world, which is leading to a surge in this kind of biophilic, nature-inspired design," said Jencks. "This gym project is about living more intimately with the green world."

The architect – who has previously created 'healing gardens' for Maggie's Centres across the UK, and who has collaborated with the likes of Rem Koolhaas and Frank Gehry – uses sustainably focused, reclaimed and recycled materials in her work.

The idea is that the use of natural materials and plants will leave clients physically and mentally fitter.

In addition to its biophilic interiors, Biofit has also developed



Lily Jencks

its own range of nature-focused exercise equipment, using timber, cotton and rope. Each piece is non-prescriptive, facilitating a multitude of movements.

Describing Biofit's philosophy, Morley

said: "Human evolutionary history shows we've been lifting, carrying, jumping, striking and crawling for millions of years, working at varying speeds and intensities according to circumstance; so we start there."

"To counteract the effects of a sedentary, 21st century lifestyle, Biofit then integrates mobility work into every session to restore range of motion and protect the joints from injury."

"We also use play to practice new movement skills and

stimulate neurological pathways in a fun, interactive way."

Morley argued the biophilic gym concept can benefit the hospitality, wellness, residential real estate and corporate office sectors, as it encompasses facility design, equipment sourcing and supply, as well as ongoing training and support for coaching staff.

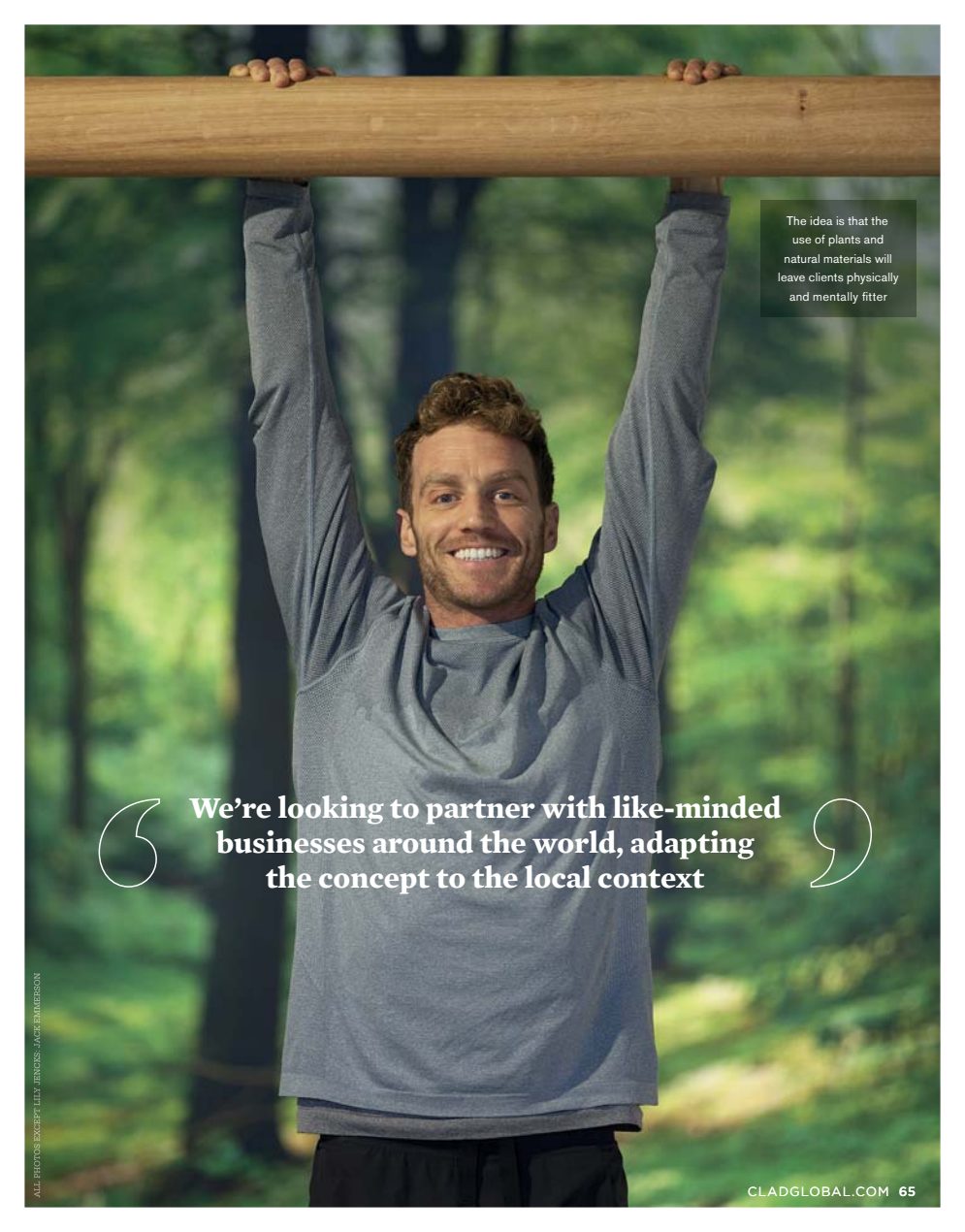
"We're looking to partner with like-minded businesses around the world to deliver the Biofit experience, adapting the concept to the local context," he said.

While the London pop up is in operation – in Notting Hill – Biofit has commissioned research from the not-for-profit fitness organisation ukactive, which will evaluate the impact of exercise in a biophilic indoor environment on mood, anxiety levels, attention span and mental performance. ●



Jencks has created an environment where gym-goers can work out amid natural vegetation and materials



A man with short brown hair and a beard, wearing a grey long-sleeved shirt, is hanging from a thick wooden horizontal bar with both hands. He is smiling and looking towards the camera. The background is a lush green forest with sunlight filtering through the trees.

The idea is that the use of plants and natural materials will leave clients physically and mentally fitter

“We’re looking to partner with like-minded businesses around the world, adapting the concept to the local context”



Wanda Xishuangbanna International Theme Park, China

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Alby Shale helps break ground on the Rwanda Stadium project

BREAKING BOUNDARIES

Two decades on from the genocide that ripped Rwanda apart, a unique stadium project is aiming to bring people together. **Matthew Campelli and Kim Megson report**

Just over 20 years ago, an estimated 800,000 Rwandans were killed during Africa's largest genocide in modern times. Between April and July 1994, hundreds of thousands of Tutsis were murdered by members of the rival Hutu community, in a devastating campaign of violence.

On top of the mass killing, around two million Rwandans were displaced, and the nation has found itself in a period of recovery ever since.

Of all the things in the world to help heal the divisions, cricket has stepped up, and now forms the basis of an inspiring sport development project which is taking place in the country.

Former British Army officer and businessman Christopher Shale, who had worked on social

action projects in the African nation for several years, saw first hand the power of cricket in reconciling the different ethnic groups living in the surrounding areas, and decided that a purpose-built facility would develop the sport and increase the positive atmosphere.

Backed by his friend, the former UK prime minister David Cameron, Shale began working under the banner of the Rwanda Cricket Stadium Foundation (RCSF) on an idea for the facility, which would include an educational hub, as well as a much-needed centre for free HIV testing.

After Shale's untimely death in 2011, his son Alby picked up the mantle, and now the project is close to completion.

"The inspiration for the project came from my father who loved Rwanda and saw how cricket



"The inspiration for the design comes from the green rolling hills of Rwanda and the trace of a bouncing cricket ball"

Michael Ramage



A crowdfunding campaign was launched in October 2016 to raise money for the cricket stadium and pavilions



“The project is innovative both from the point of view of sport and architecture”

Michael Ramage

was being used to build communities,” explains Alby Shale. “He went out to Rwanda because he was asked by David Cameron to set up a project with international development, and Rwanda was the country of choice as it was an area screaming out for assistance.”

Ahead of a May fundraising event – in which David Cameron will be present alongside England legends and RCSF patrons Michael Vaughan, David Gower and Clare Connor – Alby told CLAD that the foundation has £120,000 pledged through crowdfunding, and has a further £130,000 to raise to reach the £250,000 needed to complete the facility.

He reveals that the stadium is well under construction, with the pitch almost ready. If all goes to plan with the fundraising, Shale has pencilled in an opening ceremony for October 2017.

THE STADIUM DESIGN

The RCSF has partnered with Cambridge (UK)-based architecture studio Light Earth Designs to design the stadium, which will be made using local materials and land-use technologies intended to catalyse sustainable building practices.

“The project is innovative both from the point of view of sport and architecture,” says Light Earth Designs founding partner Michael



An charity calendar designed to raise funds highlighted the absence of cricketing facilities in Rwanda

The shape of the stadium's vaults was inspired by Rwanda's hills and the bounce of a cricket ball



Ramage. "The idea of bringing cricket at an international level to Rwanda is very important for the development of the sport in the country, and will allow for fixtures that generate a lot of interest inside and outside Rwanda.

"Architecturally, it will be a building that's very much of Rwanda built by Rwandans for Rwandans. It will be something the entire country can take pride in. It grows out of an in-country interest in the design, rather than being something wacky and imposed from outside.

"The inspiration comes largely from two places: the green rolling hills of Rwanda and the trace of a bouncing cricket ball," adds Ramage. "That has influenced the shape of the stadium's three vaults and the pavilion as they come down a slope between the two cricket pitches."

To avoid using unsustainable and expensive imported materials, the stadium's main vaults will be constructed using recycled ceramic tiling and compressed earth blocks formed of 95 per cent soil

and 5 per cent cement. These will be constructed into a largely self-supporting structure.

Many workers will be hired to complete the stadium and sharing transferable building skills with local people is a key focus of the project.

The facility will contain changing rooms, a press area, a bar and restaurant and a clubhouse offering free HIV testing for the local community. Spectator seating will extend outside, with green terraces built into the banks on either side of the building, overlooking two international-standard pitches.

SECOND PHASE

A second phase of development, taking place after the first building is constructed, will see a multi-purpose facility added – bringing dormitory accommodation, a swimming pool, a gymnasium and six tennis courts to the site.

The facility will be run on a not-for-profit basis, operating a 'sport for all' policy to encourage Rwandans of all ages, genders and backgrounds

to have access to cricket. A training, coaching and support structure will also be introduced by the foundation and the government.

While the stadium will act as a home for the elite level game in Rwanda, Alby Shale stresses the facility's importance to the wider community.

"We are creating an elite facility that checks the necessary International Cricket Council (ICC) boxes for hosting international matches, however it was designed to be a free access facility," he explains.

"People outside of the cricket fraternity can benefit, and we have forged a partnership with the Surf Survivors Fund, which supports the survivors of genocide through community projects and reconciliation through sport."

Working with charity Cricket Without Boundaries, RCFSP will create a programme for 35,000 refugees from the Rwandan capital of Kigali to teach them cricket and HIV awareness. They'll also invite cricketers to refugee camps to promote the sport as a "medium to solve social issues". ●

SPORT

Rwanda Cricket
Stadium Foundation
Pavilion Appeal

**FUNDRAISING
CALENDAR**

As part of fundraising efforts by the Rwanda Cricket Stadium Foundation, a group of Rwandan cricket players made it their mission to find and photograph the 'most beautiful and typically Rwandan locations to showcase cricket in Rwanda, as well as the country itself' to create a charity calendar.





Our vision is
to facilitate
reconciliation,
through the
essential values
of cricket

RCSF





Developers today
have no incentive to
create public space

Richard Meier

As his latest project nears completion, the Pritzker Prize-winning architect talks to Magali Robathan about public space, museums and the colour white

Ispeak to Richard Meier from his New York office. The view from his window, he says, illustrates the most common mistake made by architects today. "There are some buildings here in New York that just seem out of scale," he tells me. "From my window, I can see the Empire State Building, and then I can see other buildings that make it look small. Some of these buildings are out of place. Just because you can build 100 stories high, doesn't mean you should."

"The biggest mistake made by architects today has to be not thinking about the context in which they're working," he adds.

This is not a mistake made by Meier. The Pritzker Prize-winning architect has a body of work that spans more than 50 years and takes in private residences, skyscrapers, civic buildings, offices, hotels – including the W Hotels and the recently opened Seamarq Hotel in South Korea – and a range of public buildings that include Rome's Jubilee Church, the Barcelona Museum of Contemporary Art and his most famous building of all, the Getty Center in Los Angeles.

What unites them is the way they respond to their settings, celebrating materials and natural light in spaces that are open and transparent. The scale and context of his buildings is something Meier thinks about very carefully at every stage of the process.

In the case of his most recent project, the Surf Club Four Seasons Hotel & Residences in Miami, the context is the ocean, and as with all of his buildings, he used the setting as a starting point for the design.

"This project means a lot to me," he says. "It's a terrific site. The context is nature and you try to make the buildings so you can appreciate nature and the water by which they are situated."

The project sees the historic Surf Club transformed into a Four Seasons hotel and residences. The Surf Club, which was designed by Russell Pancoast and opened in 1930, was once frequented by people such as Elizabeth Taylor, Winston Churchill and Frank Sinatra.

Meier's transformation sees the original club restored and used as a lobby and entrance for the complex. Behind it stand two transparent 12 storey residential towers, and an 80 room Four Seasons hotel. The complex will also feature a private members' club, two restaurants, four swimming pools, a spa and fitness center, as well as 40 beach cabanas, a park and oceanside gardens. The hotel is due to open in spring 2017, with the residences opening in the summer.

I ask how much of a challenge it was, harmonising the new building with the original building. "I wouldn't say the modern building is in harmony with it; it's sort of a counterpoint to it," says Meier. "It's

Richard Meier received
his architectural training
at Cornell University and
set up his practice in 1963





Meier's Surf Club expansion makes the most of the sea views



PHOTO © SCOTT FRANCES

Meier with associate partners Dukho Yeon, Reynolds Logan, Bernhard Karpf and Vivian Lee in the NY office



The new towers rise up behind the original Russell Pancoast-designed Surf Club building

IMAGES © JEFFREY



Meier won the commission to design the Getty Center in 1984. It opened in Los Angeles in 1997

nice to have a bit of the old with the new. We were obviously influenced by the original Surf Club, which was a nice building and was in very good condition, even though it hadn't been used for a while."

The buildings are open and airy, in keeping with Meier's style. He sums up his approach as being about "the quality of the spaces, the relationship to the context, transparency, lightness, the way the buildings respond to nature and the changing colours of nature. All of these things are a part of my architecture."

The other thing that runs through Meier's work, of course, is the use of white. When Meier won the Pritzker Prize in 1984, he devoted a large part of his acceptance speech to his appreciation of it, saying: "White is wonderful, because within it you can see all of the colours of the rainbow. The whiteness of white is never just white; it is almost always transformed by light and that which is constantly changing; the sky, the clouds, the sun and the moon."

Speaking to me, he adds: "White expresses the architecture in the clearest way. It expresses the difference between things like the opacity and transparency, between linear elements and opaque elements, it expresses the space and it reflects and refracts light so you see the changes of colour in nature through the whiteness of the building."

STARTING OUT

Richard Meier studied architecture at Cornell University, and worked for several years with Marcel Breuer and Skidmore, Owings and Merrill, before setting up his own practice in New York City in 1963.

White is the most wonderful colour because within it you can see all of the colours of the rainbow

He rose to prominence designing private residences, and in 1972 he was identified as one of the New York Five – a group of influential New York modernist architects that also included Michael Graves, Charles Gwathmey, John Hejduk and Peter Eisenman.

In 1984, Meier achieved mainstream success when he was awarded the Pritzker Prize, and won the competition to design the \$1bn Getty Center in LA – described at the time as 'the commission of the century'. Opened in 1997, the Getty Center complex occupies a hilltop site in the Santa Monica Mountains overlooking Los Angeles and the Pacific Ocean beyond. It's a stunning cluster of buildings housing the museum, the Getty Research Institute, the Getty Conservation Institute, the Getty Foundation and the J. Paul Getty Trust, as well as a series of courtyards and gardens.

Although the Getty Center opened almost two decades ago, Meier admits it will probably always be the project that he's best known for, and his pride in the complex is obvious when he discusses it.



It's rare that a developer is going to give up space for the public, which is very unfortunate

"That project was very special to me," he says. "Right after it opened, they had something like 5,000 people a day visiting. Still, after 20 years, they have about 5,000 people a day visiting. Because of its location, people don't just go for an hour; they go and spend the whole day there; walk around, enjoy the art collections and the gardens, have lunch, enjoy the views. It's up there by itself; a destination, as it were."

The project was inextricably linked with the growing up of Meier's children, he says (he has a son and a daughter), and it became central to their lives. "It took 12 years, and I went there every two weeks, so whenever my children were on vacation we went to LA and stayed in a small house adjacent to the site and took daily walks through the construction. Seeing it evolve was very important to me."

PUBLIC SPACE

Although Meier's work is primarily about designing buildings, it's the public spaces created by these buildings – that often become used in unexpected ways – that really get him going.

Richard's Meier's practice has offices in New York and Los Angeles, and is led by Meier and five partners



PHOTO: SETH LA MAGE

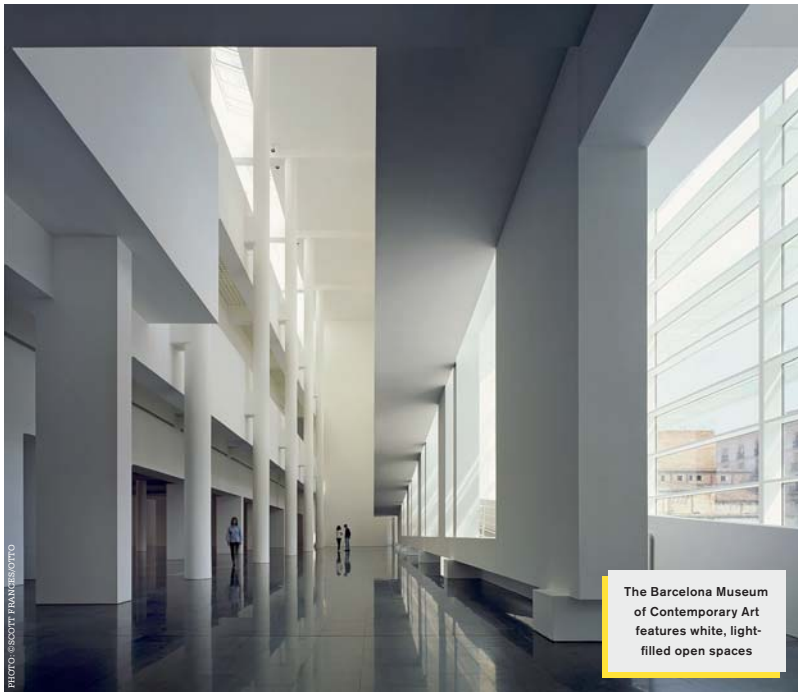


PHOTO: ESCOTT FRANCESOTTO

The Barcelona Museum of Contemporary Art features white, light-filled open spaces

Meier gives the example of the Barcelona Museum of Contemporary Art, which opened in 1995, as a building that has resulted in a highly successful public space. "The museum is very popular," he says, "but so is the plaza in front of the building where every kid growing up in Barcelona brings his skateboard and skates there. It's a very active and well used public space."

One of the first buildings to really have an impact on Meier, he tells me, was Frank Lloyd Wright's Guggenheim. "When you think of the Guggenheim, you think of the great rotunda where people come together. They walk around, see the art, then meet their friends there. It's a place of coming together."

"The problem today, is that developers really have no incentive to create public space," he continues. "It's rare that a developer is going to give up space within their project for the public, which is very unfortunate, because what we need in our cities is more public space and more open space."

The answer, says Meier, has to be creating incentives at government level for developers to include provision for quality public space in their buildings.

LOOKING FORWARDS

As well as the Surf Club Four Seasons, Richard Meier is currently working on residential buildings in New York including 685 First Avenue – a 42 storey housing tower, clad in aluminium and black glass, in a radical departure from Meier's usual colour palette. He is also working on the Ward Village Gateways Towers residential project in Honolulu, Hawaii and a two tower residential development in Bogotá, Columbia. "It's an exciting time for the practice," he says.

Meier is not one for looking back too much, he explains; the most exciting period of his career is "hopefully whatever the next building is," but he does stop to acknowledge what he's achieved from time to time, and he does enjoy visiting his old buildings.

"It makes me happy to see works that were done 20, 30 or 40 years ago," he says.

"It's like the buildings are your children and you sort of take care of them when they're young, but at a certain point, they're on their own. They're no longer something you're involved with, but it's wonderful to visit them and see that they're well."

SELECTED RICHARD MEIER PROJECTS

The Seamarq Hotel was built in preparation for the 2018 Winter Olympics in PeongChang



SEAMARQ HOTEL

GANGNEUNG, SOUTH KOREA

Completed in February 2016, the Seamarq Hotel is Meier & Partners' first project in South Korea. The 150-room hotel was rebuilt as part of a regeneration scheme ahead of the 2018 Olympics in nearby PyeongChang. The project consists of two connected structures – a banquet hall and an 11 storey tower housing the hotel, a private skygarden, a restaurant, a spa, a gym and indoor and outdoor pools. A series of outdoor spaces were designed in collaboration with James Corner Field Operations.

Visitors enter the Arp Museum via tunnels, a semi transparent tower and a glass-walled bridge



PHOTO THIS PAGE © ROLAND HALBE

ARP MUSEUM

BAHNHOF ROLANDSECK, GERMANY

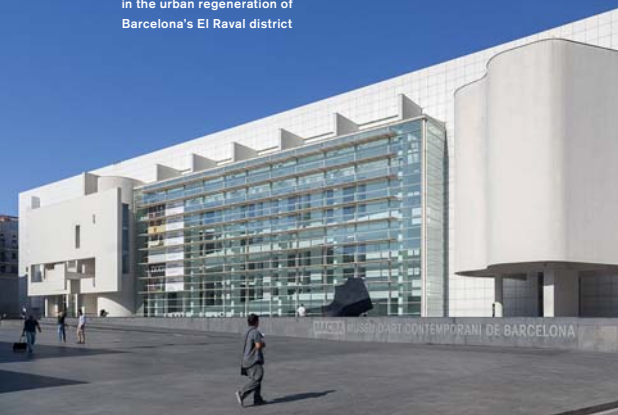
The Arp Museum in Bahnhof Rolandseck, Germany, showcases the work of Dadaist artist Hans Arp and his circle, and was opened in 2007.

Visitors enter the museum via an old village railway station, where they follow a series of tunnels and shafts that cut through the mountain before coming out into a pavilion – independent from the main museum building – which acts as additional gallery space and also 'establishes a sense of expectation and uncertainty'. This leads to another underground tunnel, which ends at a 40m-high shaft housing two glass elevators that take visitors up the shaft to a transparent tower and then open out onto a glass enclosed bridge, which leads to the main museum.



The tunnels burrow into the mountain

The museum played a key role in the urban regeneration of Barcelona's El Raval district



BARCELONA MUSEUM OF CONTEMPORARY ART

BARCELONA, SPAIN

Opened in 1995 in Barcelona's Raval district, the Barcelona Museum of Contemporary Art houses works of international artists in changing exhibitions.

Visitors enter the gallery space through a cylindrical lobby leading to a glazed, triple-height atrium, which provides access to six open, loft-like spaces on successive levels. Further gallery space is housed in a semidetached wing at the eastern end of the block.

SHUTTERSTOCK/JOAN BALOTTA



SHUTTERSTOCK/HANK SHALUNTS

Natural light floods the Getty Center

THE GETTY CENTER

LOS ANGELES, US

Richard Meier was selected to design LA's Getty Center in 1984, following a high profile competition. The modernist complex, which opened in 1997, features the Getty Museum, which is made up of five interconnected two storey pavilions. A circular building houses the Getty Research Institute, and two further buildings house the Getty Conservation Institute, the Getty Foundation and the J. Paul Getty Trust administration offices. It also features a variety of gardens and courtyard spaces.

Natural light plays a key role at the Center; it features many exterior glass walls, with a computer assisted system of shades and louvers controlling the levels of light in the interior spaces. Italian travertine has been used throughout the complex.

RICHARD MEIER MODEL MUSEUM

NEW JERSEY, US

Opened in 2014, the 15,000sq ft Richard Meier Model Museum was designed and curated by Meier, and houses a large collection of his models, sculptures, paintings, collages and books from the 1960s to today. The private museum in New Jersey, US, contains a large model exhibition area, a sculpture exhibition area, an archive and a library open to students and scholars.

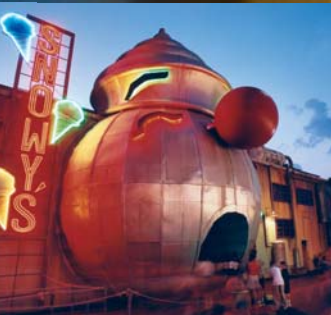
The museum features large scale presentation models and study models of the Getty Center in Los Angeles, as well as models of his many other projects. ●

Richard Meier's Model Museum opened at the Mana Contemporary cultural centre in Jersey City in March 2014

PHOTO ©CHRIS COOPER



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LIGHTING THE WAY

With a green roof and views of New York Harbor, the Statue of Liberty Museum will change visitors' experience of Liberty Island, FXFOWLE partner Nicholas Garrison tells Tom Anstey





RENDER: FRODOE

The museum's rooftop observation deck will provide views of the New York skyline and the Statue of Liberty



The torch was previously displayed in a dark room under the fort. It will now act as a focal point for the museum



Nicholas Garrison, partner, FXFOWLE

You can see the torch displayed in the window, like a beautiful piece of jewellery



On Liberty Island, New York, a new museum is taking shape next to the Statue of Liberty, designed to tell the story of the statue and help turn the island into a fully fledged visitor attraction.

The US\$70m (£63.7m, £57m) museum has been designed by New York practice FXFOWLE.

It's a key part of the island's beautification plan and features a large rooftop garden and a viewing platform overlooking New York Harbor.

"On the island there's a large circular plaza, which was built in the 1980s when the statue was restored," says Nicholas Garrison, principal at FXFOWLE. "Our site sits just off this, so we wanted to get to the roof via a traditional-style set of monumental steps that would engage this circular plaza in a theatrical, neoclassical way. The roof is really the 'aha moment' of the whole project."

DESIGNED TO INSPIRE

The 26,000sq ft (2,400sq m) rooftop – one of the key parts of Garrison's design – incorporates both a viewing spot and a nature space, creating a 'plateau' where visitors can observe and reflect.

"Liberty Island sits in line with the 9/11 site, so when you look across the water you see the One World Trade Center, but you also remember what's not there anymore," says Garrison. "It has a double poignancy when you think about what liberty means. You look across and realise that it's been literally attacked in so many different ways. We felt it was really important that view and that spot was made accessible to the public."

For the three interior galleries, FXFOWLE is working with New York-based firm ESI Design, who are handling the exhibition space.

"We went back and forth on the degree of natural light that the museum should have," says Garrison, discussing the ESI partnership.

"A lot of exhibit designers prefer a 'black box' because their videos show up better, the sound is better controlled and there's no glare. We came up with an entrance based on bright daylight. The idea was that it would invite you in and then you would go through the exhibits inside the museum and would emerge in this glass space in full daylight with these incredible views. Within that emerging space we will have the museum's signature piece – the original torch which sat on the Statue of Liberty's arm for 100 years." ▶

DIANE VON FURSTENBERG

THE STATUE OF LIBERTY MUSEUM IS BEING CHAMPIONED BY PROJECT 'GODMOTHER' DIANE VON FURSTENBERG

Legendary fashion designer Diane von Furstenberg, who has backed Liberty Island Museum since its conception, is leading the fundraising effort for the development through her philanthropic organisation, the Diller-Furstenberg Family Foundation.

"Lady Liberty is a symbol of everything America's about: freedom, hope, possibility and resilience," says von Furstenberg. "It is she that millions of immigrants saw first as they arrived in this country, their hearts full of dreams for a brighter future.

"Now it is my hope that the Statue of Liberty and her incredible story will live on and on, inspiring generations for years to come. What she represents out there is everything we love about this country and everything that has to be protected."

With an impressive network of rich and famous contacts, von Furstenberg came up with an idea to convince them to support the project – to create a sculpture using original iron bars from the statue. The iron bars, which were created by French engineer Gustave Eiffel, supported the statue for a century before they were replaced during restoration works in 1986. The metal will now be used to create a mural of 50 stars, one for each state, which can be bought by donors for \$2m (£1.65m, £1.84m).

"People like what is limited," explains the Belgium-born von Furstenberg.

Those who have bought a Liberty Star so far include Amazon founder Jeff Bezos

Von Furstenberg and New York Mayor Bill de Blasio were among those at the museum's groundbreaking event

for the Bezos Family, former New York Mayor Michael Bloomberg for Bloomberg Philanthropies, Comcast CEO Brian Roberts for Comcast NBCUniversal, Star Wars creator George Lucas, Chanel, Coca-Cola, the Diller-Furstenberg Family Foundation and the Walt Disney Company. As well as its philanthropic work to support human rights, education and community building initiatives, the Diller-Furstenberg Family Foundation has raised funds for a number of cultural projects in New York, including the High Line and the Whitney Museum of American Art. The upcoming Thomas Heatherwick-designed floating park, Pier 55, has also been largely funded by the foundation with contributions of more than \$100m (£83m, £92m).

Von Furstenberg, who became an icon of women's fashion when she invented the wrap dress in the mid 1970s, is known for being a shrewd businesswoman. In 2015, she was named one of *TIME*'s 100 Most Influential People.



Lady Liberty is a symbol of everything America's about: freedom, hope, possibility and resilience







The new building
and landscaping will
create habitats for
local flora and fauna



Very few projects make you glad to be a human; this one does. It inspires you to do your best



The museum will appear to rise from the ground, with the green roof acting as an extension to the park

► A BEACON OF HOPE

The torch, which is 19 foot (5.8 metres) high, is the centrepiece of the final space, dubbed the Inspiration Gallery. During its 100 years on top of the famous statue, the torch was refitted to include stained glass and interior lights.

"It's a beautiful object and a really meaningful one too," says Garrison.

"It was on display, but in a dark room underneath the fort. We wanted to put it in a space that had views of the harbour in full daylight where you could appreciate the patina", he added,

referring to the green tinge that has formed on the statue through the process of oxidation.

"In many ways, New Yorkers think of it as New York green because the statue has become associated with the city. Every sporting event and almost every newscast that starts in New York begins with a flyover of the statue as the intro. It's become synonymous with the city in many ways and so that green is really special. Seeing it in daylight is really important."

Much like the view from the museum's roof, Garrison believes that the view visitors have

when they arrive on the island is key, so his design retains that, offering views of Manhattan and the towering statue.

"You come off the boat and then you have this amazing view across the island. We didn't want to obscure that," says Garrison. "In the plan, you will notice that [the museum] angles off to the left. We've done that on purpose so that it won't be in your main cone of vision when you arrive. When you get off the boat your first impression is of this big statue looming over you on the right, but you've also got this beautiful view of



the city, straight ahead. We thought it was really important to preserve that. When people look to the left, we wanted our building to say, 'there's this really cool thing that you can come and see.' You can see the torch displayed in the window, like a beautiful piece of jewellery."

LEAVING A LEGACY

The museum is expected to welcome as many as 4.3 million visitors annually. Slated to open in 2019, famed fashion designer Diane von Furstenberg is leading the fundraising effort for the development,

which has so far sourced US\$40m of the US\$70m total. Furstenberg's involvement has also been key in maintaining the vision for the museum's design, according to Garrison.

"Diane has been incredibly supportive in helping us realise our goals," he says. "One of the things that happens with a project like this, is the design is constantly under assault by things like budget pressures and schedule issues. Having Diane as a successful fundraiser and champion for the building has helped us to retain a lot of the essential pieces which were really important to us."

Talking about what the project means for New York and its people, Garrison says the statue's powerful message has been the driving force for the entire creative process.

"It's been a lot of fun, and I find that it never gets old," the FXFOWLE principal says. "Very few projects make you glad to be a human being but this one does. It really inspires you every day to get up and go and do the best you can."

"It's just been one of those kind of projects, it hits all those buttons and you really just want to do right by it. So hopefully, we will." ●





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MATERIAL



WORLD

A useful resource for architects and designers, the SCIN Gallery is an independent materials library created to showcase some of the latest, most extraordinary new materials



Co-founder and creative director of SCIN Gallery Annabelle Filer is at the cutting edge of knowledge about materials



Curiosity drives us and I think we all have a little bit of the geek within us

Founded by Annabelle Filer and Graham Cox, the SCIN Gallery curates external exhibitions and opens its library, by appointment, to clients – often designers and architects – looking for specific material advice.

The materials can be used in many different design disciplines, and some trending agencies are now taking advantage of the gallery to assist with future forecasts.

Here, co-founder Annabelle Filer, who is also SCIN creative director, explains the purpose of the SCIN Gallery, how it can be used, and reveals current and future trends in materials.

Why was the SCIN Gallery set up?

SCIN, which is short for Surfaces Covering Interiors, was initially set up in 2003 to bring new materials to the general public. It coincided with an increasing interest in interior design, as demonstrated through the plethora of new media opportunities that were opening up. It was conceived as a series of interior design toolkits that had 10 different materials inside, from laminate to leather to wall coverings,

and backed up by a magazine that gave suggestions as to how they could be used.

We created five publications to showcase them but found that the materials were still too complicated for the general public to want to use, and we saw that it was architects and designers who were actually buying the toolkits, as it gave them a collection of many samples.

As time went on, architects and designers asked us to help them find other materials and so we created a small library and started to get involved in materials research.

Who uses the gallery today?

We're used by architects and designers from every area of design. We also have hoteliers, developers, leisure operators, students and the design-savvy public, as well as retail, buyers and trend forecasters.

We're starting to get more interest from educational establishments and we have many alliances and trade federations too. We're also finding that the digital community is increasingly interested in the SCIN Gallery.

How do you source and find the materials?

We have been searching for materials for over 10 years and have established many different avenues in that time. There is one rule we do have and that's to not use other material libraries, but we're very happy if we reach the same conclusions and if they come to us.

We also have both an online and offline community that likes to tell us about materials they've found, and there is a team of researchers all with their own material specialisms. We're also prepared to wade through some of the very mundane trade periodicals that specialise in certain material markets.

Curiosity drives us and I think we all have a little bit of the geek within us. Since we began, the internet has become a far more accessible place and there are many more design blogs, as well as scientific papers out there.

What is interesting is that finding materials for a specific use, or finding new materials, is much more difficult than you would think.



We're having fun with materials. They're being seen as more than just decorative

Architects and designers have been heading to SCIN Gallery to experience first-hand its range of innovative materials

What trends are you seeing in material design?

Commercially we're looking at the following trends in materials:

'Size Zero' materials

We want super lightweight yet robust materials. Composites are a natural ally for this, and even concrete is part of this, with concrete panels being created using carbon fibre reinforcement or with unusual admixtures such as 'TX Active'. These break down carbon monoxide pollution and in doing so, clean the concrete. There is also nanostone – a stone veneer less than 1mm thick – and all sorts of poured resins as well as large format thin ceramic tiles.

'Playful' materials

We're having more fun with materials, and while still obsessed with concrete and solid acrylics and glass, 3D sculptural panels and bold acoustic materials are in demand.

'Multi Taskers' - the new smart generation

These must be strong, yet translucent or beautiful and of acoustic merit. We emphasise that they're low maintenance, scratch resistant and glossy or non-slip and smooth.

Phase-change materials or coatings that create ambient temperature by absorbing or releasing captured heat can be applied as coatings, such as 'Carbo-e-Therm', or used in glazing for tiles. Materials can also conduct electricity and respond to external stimuli,

FUTURE MATERIALS

- **Reconfiguring:** We'll be able to adapt materials at a molecular level to alter their properties where needed.
- **Water capture:** We'll find ways to capture water in buildings – possibly through new façade materials.
- **Dynamic:** We'll see materials that sense and alter their state, and memory materials that convey information or analyse and process it to adapt themselves.
- **Bacteria and algae:** These will become more important. We're seeing bacteria being used for self healing/growth, as well as being able to grow materials into the finished product.
- **New processes:** 3D printing will evolve – but using waste streams, or being combined with bio engineering.

- **Response:** Lessons learned from defence against terrorism will be used in other areas: auxetic materials which expand on impact and then return to their original state will find uses in other forms of energy capture, and textiles will be more widely used.
- **Waste (emissions, landfills, food, human excrement/decay):** Landfills will become the new quarry for raw materials. We'll use man-made CO2 and – I suspect – human waste and food waste as a feedstock.
- **New sustainable breeds:** Finding natural solutions to fibre-reinforced plastic. Can natural fibre ultimately work with a bioresin?
- **Calcium carbonate:** Can this become an important building material?
- **Insects:** Chitin from insects is an interesting new polymer and building block.
- **The sea:** oceans are an important, underused source of materials and materials inspiration.

such as Water Light Graffiti, which uses moisture sensitive LEDs to work as paint, forming ephemeral art pieces or urban tags.

Materials are moving from the core markets they were created for and can find themselves being 'repurposed'. Medical plastics are becoming more mainstream in product or interior design; clear cellulose, which was originally insulation within train panels, is finding its way into glazing; and filtration textiles such as 'Sefar' polymers are coated with a metal coating to be used in architectural façades.

Future materials

As we continue to try to increase the pace of our lives in the name of efficiency and as we increasingly expose ourselves online, there'll be – and in fact there already has been – a backlash. Materials are able to contribute to wellbeing and privacy. The notion that materials are more than just decorative or supportive is part of the new excitement in this particular area. Material innovation is rapidly changing the world of design and architecture. ●

SCIN SHOWCASE

A selection of some of the most interesting and diverse materials in the SCIN collection, as chosen by Annabelle Filer

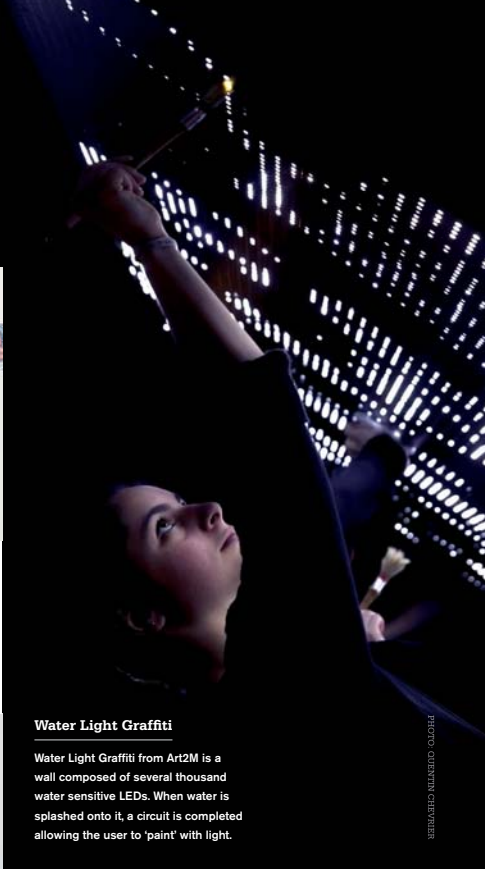
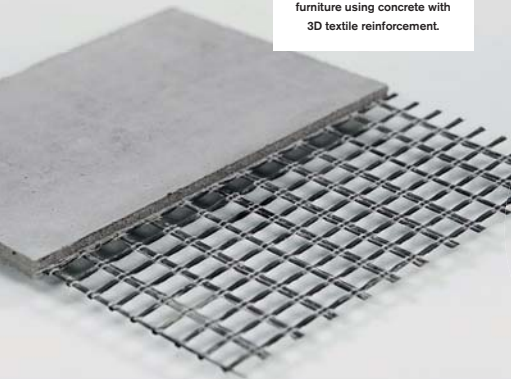


Structural Skin

Spanish designer Jorge Penadés has devised a new production method that transforms the apparently worthless waste from leather factories into an innovative material that is made 100 per cent from an animal source. The result is Structural Skin, a material that Penadés says could be used for creating furniture, flooring, tiles and shoes soles.

Superslim concrete

Germany's Paulsberg creates furniture using concrete with 3D textile reinforcement.



Water Light Graffiti

Water Light Graffiti from Art2M is a wall composed of several thousand water sensitive LEDs. When water is splashed onto it, a circuit is completed allowing the user to 'paint' with light.

PHOTO: CHRISTIAN CHEVRIER

Bioplastic

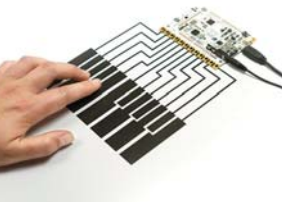
Made from beetle shells and chitin, bioplastic has great future potential as we bring bugs into our food diets. Chitin is the second most common biopolymer with some interesting technical properties including self healing.





Conductive ink

London-based design and technology company Bare Conductive has produced a range of electrically conductive paint and sensor hardware that are changing the way electronics and intelligence are incorporated into the built environment.



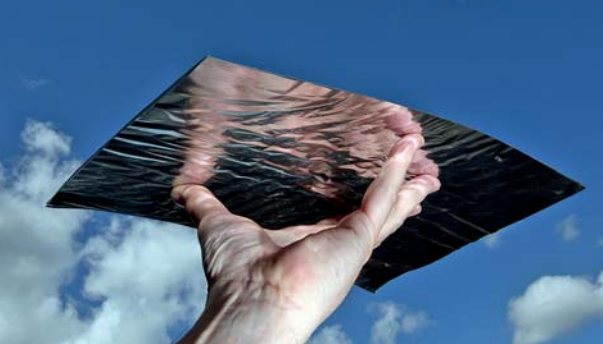
Concrete and linen

An unusual decorative hybrid and a union between a textile designer and an architect, Tactility Factory applies digital stitching to linen concrete to give a unique finish.



Formcard

FORMcard™ is a pocket sized card of strong, meltable bio-plastic that can be moulded into new forms or used to fix broken plastic objects. Launched by London-based designer Peter Marigold in November 2015 following a crowdfunding campaign, the FORMcard becomes mouldable when hot – it is dropped into a cup of hot water and is then ready to use.



FFL technology

FFL technology is a flat, flexible loudspeaker created from a number of laminated materials that can be used in a curved or spherical format for more rounded sound design or in a flat panel where the sound is directed at 90 degrees from the speaker.



GlassX

Phase-change glass for façades alters its transparency state depending on the internal temperature, absorbing and releasing heat energy as temperature fluctuates. GlassX lets architects flood spaces with natural light and reduces a building's heating and cooling load.



Softwood

Albeflex has created innovative wood veneers laminated onto a foam back which can be used in a vast number of different industrial sectors.



Gorilla Glass

Corning's Gorilla Glass will not distort an image when curved. It was designed originally for mobile phone technology.

Elastic conductive tape

German fabric company AMOHR produces elastic conductive tape ideal for wearables and smart textiles. The wires are stitched in a curve in order to allow them to stretch with the fabric.





ACTIVE CITIES

Sixteen years ago Jan Gehl and Helle Sørensen teamed up to launch Gehl Architects, with the ambition of designing more people-friendly cities. Kath Hudson finds out about their approach and achievements

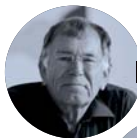
Danish architect and urban design consultant, Jan Gehl, has built his 50-year career on encouraging cities to take a more people-centred approach to urban planning. His philosophy is about improving the quality of life for people living in cities by putting them at the heart of urban planning – making cities easy to navigate on foot and by bicycle and providing places to congregate.

This approach has the benefit of bringing cities to life and making them more liveable. Copenhagen, the birthplace of Gehl Architects, is a shining

example of their philosophy and has embedded Gehl's thinking into its architectural policy.

In 2000, Gehl partnered with Helle Sørensen to launch Gehl Architects in order to bring his vision into practice. Now, with a 70-strong team spread across three offices in Copenhagen, San Francisco and New York, the practice has brought about transformations in cities all over the world, from Oslo to Christchurch.

Having written six books, Gehl is in demand for talks around the world. Lis Sørensen is hands on in the office and is currently working in Vancouver.



Jan Gehl



Helle Sørensen



Gehl Architects is based in Copenhagen, known as a people-friendly city



**If people are able to move more
they are healthier and cost less**

Gehl has been carrying
out research on public
spaces for 50 years



JAN GEHL

How would you describe your approach to urban planning?

Pro-people: based on raising the quality of life and improving physical surroundings, allowing children to be children and adults to be adults, and accommodating the elderly – a fast growing demographic.

Active cities are important, both for sustainability and for health. City planning which makes people sick is expensive. If people are able to move more they are healthier and cost less. Also cities which offer good liveability and quality of life, attract more investment, which is good for the economy.

What do you see as your biggest achievement?

I think my six books, published in 35 languages, have made the most impact on changing the way people think about cities and have given them the tools to do something different.

In my recent biography, *People Cities - The Life and Legacy of Jan Gehl*, the authors, Annie Matan and Peter Newman, write extensively about changing mindsets as a pre-condition for changing cities. In much of my own writings, I criticise the ideologies which have dominated city planning for the past 50 years: modernism and motorism. These have created technocratic, soulless cities which make cars and developers happy, but have no concern for people living in and using them.

What have been the biggest consequences of modernism and motorism?

If you go to the suburbs of Moscow you can see what modernism has done – created soulless concrete silos. And if you take a tour of Los Angeles you can see what motorism has done – spread people out over huge land masses, based on the premise that gasoline is cheap, resources are endless and all families are nuclear and well functioning.

Both concepts have severe weaknesses and use the earth's resources. We are running out of gasoline and there is no room for cars. They are not a smart technology in the big cities of the 21st century. Their use is on the decline in the US and Australia, and car driving worldwide topped in 2009, according to a TED talk by Professor Peter Newman of Curtin University, Perth.

Doctors are now saying the sitting syndrome is the new big killer. City planners are responsible for making it necessary to sit for many hours a day, by their car-oriented planning and by making it difficult to navigate cities on foot and by bicycle.

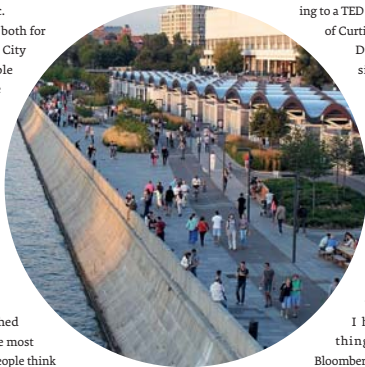
What are the chances of reversing these trends?

I have seen some miraculous things happen, such as Mayor Bloomberg in New York saying he wanted to create the most sustainable metropole in the world and the impressive turnaround which Moscow has made in the last five years. There are now bicycle lanes, wide sidewalks and reduced parking, as well as access to parks and squares. The city has been given back to the people.

I haven't had the opportunity to work in the developing world, but I know there are many people there who have read my books and share my views. Being people orientated, providing better infrastructure for walking and cycling, and giving access to good public transport is the cheapest solution and helps most of the population.

You have criticised London in the past, has it improved at all?

The pace of change has been faster in other big international cities, such as New York, Moscow and Melbourne, because the Mayor of London has limited power. We criticised Piccadilly Circus in our report in 2004. That area has been carefully addressed and is now working better.



Moscow has been "given back to the people," according to Gehl

“The difficulty is accommodating public life as an afterthought to a city which has been planned on the old modernist approaches”

Helle Söholt founded
Gehl Architects with
Jan Gehl in 2000



HELLE SØHOLT

What are the main advantages of cities becoming more people-friendly?

The most obvious is that they become more liveable. Cities shouldn't just be somewhere we drive to for work or the theatre. We should be able to live and spend time there too.

Safety is becoming increasingly important. We feel more connected to our neighbours and community if we perceive we are safe. As people, we are attracted to places where other people are and people-friendly cities allow you to be active with other people. Also walkable communities save energy, which gives environmental and economic benefits.

What are the most important elements of a people-friendly city?

A lively, robust and inclusive public rail network is fundamental for a resilient city. This enables people from all kinds of backgrounds to use their city in the same realm. That's so fundamental to supporting democratic processes and connectivity in society.

Can people-friendly measures be implemented cost effectively?

It costs much less to build pedestrian and cycling infrastructure and public spaces than highways. But the difficulty is accommodating public life as an afterthought to a city which has been planned on the old modernist approaches.

What are the main challenges?

Every city has its own political situation and its own DNA in terms of urban structure, but many challenges come up time and again. Budget is always an issue, with cities being forced to do more with less. Many public agencies work in silo, so our approach of considering social, health and environmental aspects in terms of planning, and working across different municipal agencies, can be quite challenging.

Another common challenge is the renegotiation of space. We fight a lot with unprogressive transport departments, which think cars have the right of way.

Political leadership is incredibly important for a project. In many cities outside Scandinavia, the UK, Australia and Canada, civil servants change when politicians change, so it means we lose all the knowledge and experience which has been built up and need to start again.

We have to embed the politicians in making that change, otherwise it's just an uphill battle. A lot of our work is about getting politicians on board, speaking to them, inspiring them, taking them on study tours. Then we work with people in the communities, engaging with them and listening to their needs.

Is the world moving in the right direction?

I think there is a movement towards a more integrated way of delivering cities and much more understanding of how important it is to focus on people and the social aspects of cities. But I am also disheartened by a lot of new developments around the world. I was in Jakarta last year and it was heartbreaking to see how new developments are happening. It has a low build density,

but high people density, and everything new is being built in gigantic developments with nothing in between. Places like that have an urgent need for help, but can't necessarily afford to bring in a lot of international consultants.

On the other hand, it's been very encouraging to work with Vancouver. They are bringing down two old viaducts to rebuild a more connected city. Many cities are facing the fact that old 1960s gigantic infrastructure is falling apart, which is giving the opportunity to rethink and rebuild.

Are there any other trends?

In the light of the US election we have talked a lot about how there seems to be a stronger divide in society. I think it's becoming more important than ever to focus on the shared infrastructure and public realm in cities, where trends of movement are balanced, and find ways of supporting citizenship, so we all come to understand that we can benefit from developing shared space. Building walls is not a good idea!



Copenhagen has a long history as a highly bike friendly city

LANDMARK PROJECTS

BY GEHL ARCHITECTS

COPENHAGEN

The world's most people-friendly city

Perhaps the world's most people-friendly city, where people cycle to work as a matter of course, Copenhagen has been working with Jan Gehl's research since the 1960s. It is now used as a showcase, as the team bring visitors from all over the world to inspire a vision and experience of what integrated planning looks like in terms of inclusive public spaces, integrated mobility and climate adaptation solutions.



Gehl Architects partnered with Moscow's City Planning department

MOSCOW

A major turnaround

The urban leadership set out to deliver a more liveable Moscow, in order to retain its younger generation and bring back those who leave to study abroad. It started out as a hostile environment. Heritage squares had become islands cut off by traffic, the parks had high fences and too few entrances. Highways, with few pedestrian crossings, ploughed through the city centre, making getting anywhere on foot a struggle, despite the city being compact enough to be walkable.

Much has now changed: the illegally parked cars have gone, pavements widened and disturbing advertising, which interrupted connections with heritage architecture and made navigation difficult, has been removed. A route to the waterfront has been created and a riverfront park is being developed. Former derelict amusement park, Gorky Park, has become a thriving public space with sports facilities, cafés, gardens and outdoor tribunals.

The number of people walking has risen by 40 per cent

MELBOURNE

The southern hemisphere showcase

Jan Gehl has been involved with Melbourne since 1994 and this has become a showcase in the southern hemisphere, having successfully achieved its mission of inviting people back to live downtown. Previously the city was described as a donut, as there was nothing in the middle. Twenty five years ago less than 2,000 people lived downtown and now 20,000 live there.

This has been achieved by widening streets, creating squares, lanes and parks, wider sidewalks, well-designed street furniture and public art programmes. There have been city greening projects, better public transport and new bike lanes. The number of people walking on weekdays has risen by 40 per cent and the city now has a vibrant café culture.

Now Melbourne is embarking on a new process with a new trainline through the city, with five new stations, to support the urban densification.



The city's upgrade of public space has been dubbed the 'Melbourne miracle'

URBAN DESIGN

Here: take
a moment.

This space is an
experiment.
It's a disruption in
the everyday stream,
a place for something
unexpected in something

The Living Innovation Zone
project saw San Francisco
partner with the Exploratorium
museum to create outdoor
installations to connect people



SAN FRANCISCO

Creating a safer downtown

San Francisco's busy Market Street provided a connecting corridor, but wasn't realising its potential and was perceived as dangerous. What began as a traditional public transit project, saw intervention by the Gehl Architects team to bring in a people element, to make the street a public life connector, not just a transport corridor.

Life along the street was reinvented, by tapping into the local maker movement – running a festival, and challenging design groups to reinvent the space. The end result has been lively public squares, sidewalk cafés, good manoeuvrability for pedestrians and cyclists and reliable public transport.



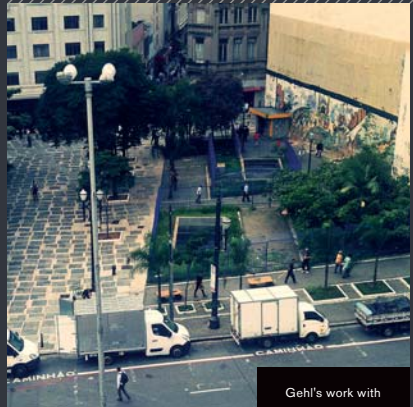
“ Life along
the street was
reinvented ”

SAO PAULO

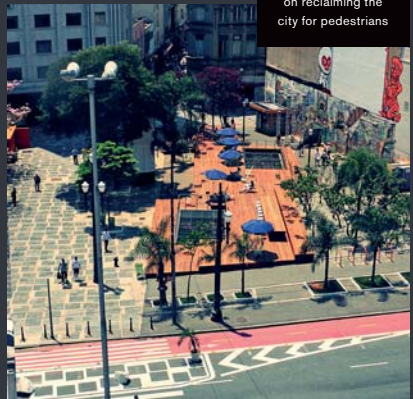
Buzzing public spaces

Sao Paulo is a very important city for South America, as it creates 30 per cent of Brazil's GDP and is a reference city for the region. When Fernando Haddad was elected as Mayor in 2012, one of his first priorities was to try and rejuvenate a city that no longer worked for its inhabitants. Gehl Architects were commissioned to facilitate a dialogue process to develop the concept design for Anhangabaú Square and best practice projects in neighbouring downtown areas.

Gehl created safe places to cross the road which connected the shopping area with many cultural institutions and reinvented unused space, turning it into a vibrant public area, with a wooden deck, chairs and shade. The squares have played host to outdoor cinema, exhibitions and play opportunities, and the number of people spending time in them has risen by 237 per cent. ●



Gehl's work with
Sao Paulo focused
on reclaiming the
city for pedestrians



TINA NORDEN

Norden studied architecture at Westminster, before joining C&P in 1997. She completed her MA at the Royal College of Art in 2000



PHOTO © BRIAN CHAZALS

London's German Gymnasium by C&P won World's Best Overall Restaurant at the Bar & Restaurant Design Awards in October 2016

From the German Gymnasium in London to a small boutique hotel in Prague, Conran & Partners' Tina Norden tells Magali Robathan about some of the practice's most exciting hospitality projects

What is your main focus at the moment?

Conran & Partners were founded by Sir Terence Conran more than 30 years ago and his approach to creating aspirational but accessible design remains at the heart of what we do. However, the scale and focus of the practice has shifted considerably over the years with us now delivering high profile residential and hospitality-led projects across the world... particularly in the UK and Asia.

With the boundaries to the way people live becoming more and more blurred, we're starting to explore sectors we haven't worked in for some time. Office developers are interested in us as a lifestyle brand (their words), to make their commercial spaces more creative, loose fit and aligned to what we are doing across residential, hotels and restaurants.

What is your strategy for trying to establish your own voice?

The only thing we can do is be ourselves, meet people and engage with them. If there's a spark between a potential client or an investor or operator and us, then that's the right starting point. You have to meet up, face to face, and figure out whether you can work together or not. That's ultimately what it comes down to.

How important is the compatibility between the designer or architect and client?

The name and reputation of the practice is always going to be important, and that brings people to our door, but after that, a lot of it's about personality – about whether there's a synergy between you and a potential client, and about whether that person gets you.

They don't necessarily have to like you – it's just whether they feel that you've got the right personality to understand what they're trying to achieve and engage with it in an intellectual and creative manner. Professional clients aren't scared of having someone who'll challenge them – I think they want that nowadays.

How would you sum up Conran & Partners' design philosophy?

We have a very conceptual and analytical approach to design. Our approach is very narrative driven. We start off doing a lot of analysis and then we develop a strong concept. That concept is something we keep coming back to as a design team, but also for the client, it's a story they can buy into. As human beings, we all like stories that you get on an emotional and rational level – these can then be used as a basis for the design language.

The German Gymnasium in London was a major project for Conran & Partners. How did you approach the design?

We got involved with that project at a very early stage, when D&D London were first mooted by the developer Argent [D&D London acquired the site in January 2014 and now operates the 100,000sq ft restaurant].

The German Gymnasium was originally built for the German Gymnastics Society and was England's first purpose-built gymnasium when it opened in 1864. It was later used for a variety of purposes, including as offices, exhibition space and storage space, and wasn't fit for purpose as a restaurant when we got involved. We worked very closely with the



The first floor viewing gallery was reinstated at German Gymnasium, allowing for views of the impressive roof structure

landlord and their architect, who did the base build, to turn it into something that could function as a restaurant unit.

That whole regeneration area behind Kings Cross and St Pancras stations in London is fascinating. The German Gymnasium building – because it was one of the few listed buildings on the site – was always meant to be like a little jewel. It's always been precious to the client.

The building is such an amazing volume; it was really about bringing it to life. When it was converted into offices, the second floor was closed off. Working together with Allie and Morrison [who were appointed to restore and repair the space], we knew we had to open it back up again. When it was a gym, it had a viewing platform around the perimeter of the second floor – we brought that back so that you can look down onto the space from upstairs.

We also brought in some subtle references to the building's sporting history. These include the paintings [Conran & Partners and D&D London worked with curators Dais Contemporary to commission artist Maria Savva to produce six artworks to illustrate German Gymnasium's sporting past]. The balustrade around the upper floor is made from a mesh, which references fencing masks. And when you look at the marble floor from above, the inlays are inspired by the markings you get in sports halls.

We didn't want in-your-face sporting references; just subtle things that allow you to tell a story.

What were the biggest challenges of that project?

From an atmospheric point of view, it was making a very big volume feel intimate. One of the ways we did that was with the lighting, designed with Into – low level lighting is integrated in many of the furniture items, which means your eye is drawn down. So when you're sitting down, you feel cosseted; you feel in a more private, intimate space.

We didn't want in-your-face sporting references; just subtle things that allow you to tell a story

The German Gymnasium was designed by architect Edward Gruning and originally opened in 1864. It was the UK's first purpose built gym



Conran & Partners are responsible for the interiors at the Park Hyatt Jakarta, opening in 2017. What was the inspiration for the design?

With this project, we wanted to create a sophisticated but also quite domestic atmosphere; something that feels holistic and intimate at the same time. We were also influenced by the location and sense of place. Jakarta is a crazy, busy Asian metropolis, with skyscrapers, traffic and all of that, in contrast with the rest of Indonesia, which people tend to visit for its beautiful scenery. We wanted to bring Indonesia into the city.

We created the story of being in a rainforest with different layers, from the forest floor up to the leaves of the trees, so it's darker and more intimate on the lower levels of the tower, and gradually gets brighter and more airy as you move up. We used a materials palette inspired by the natural resources of the country – lots of copper, because it's harvested in Indonesia – and we brought local crafts into the scheme.

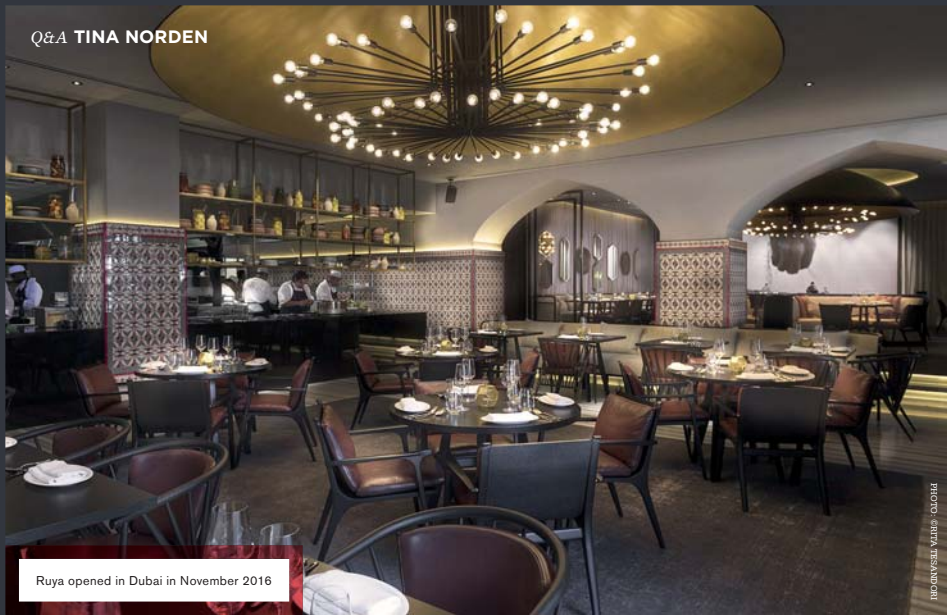
The hotel is housed in a new build tower, and it will include 227 rooms and suites, a luxury spa, a grand ballroom and several restaurants and bars.

You are also designing the interiors for the Park Hyatt Auckland. What can you say about that project?

It's a bespoke building on the harbour front, in a regeneration area next to the city centre that's quite gutsy and urban, but that's also going to be a very high end residential part of the city. So that was the starting point.

The project was about picking up on that bold, urban environment and its site, right next to the harbour front, as well as the history of the Maori people and of the European and Chinese settlers. We wanted to try and unite all of those different cultural influences in New Zealand into the design as a whole. We did that via the artwork – we are working with local art consultants ArtForm, who are commissioning Maori





ABOUT CONRAN & PARTNERS

Conran & Partners is a collaborative design studio working across architecture, interior design and industrial design. They have extensive experience in hospitality design and completed their 100th hospitality project in November 2015 with the opening of German Gymnasium in London's Kings Cross.

Founded more than 30 years ago, Conran & Partners have designed a range of high end destination restaurants, including

the Hong Kong Club in Hong Kong, Guastavinos in New York and London's Royal Exchange, Skylon and Bluebird.

They're currently working on the full interior design scope for two new Park Hyatt Hotel projects in Jakarta and Auckland, which include F+B and spa facilities. They're also interior designers for The House Hotel and Residence in Istanbul; a mixed use development comprising

51 hotel rooms and 155 residences with shared communal facilities.

C&P are established in Asia, having being involved with projects such as Roppongi Hills Residences, Futako Tamagawa, Niki Club, Hotel Icon, Mandarin Oriental and a selection of Park Hotels. They were recently invited to design three artists in residence rooms within the PMQ cultural hub in Hong Kong. Conran and Partners are based in London.

There are lots of debates around the integration of work and leisure in hotels at the moment

artists to design modern tukutuku panels for the spaces. There's a strong tradition of wood carving in both Maori and Chinese culture, so we're going to get some Chinese and Maori carvers to work together to create some pieces for the hotel. We really like that cross-cultural influence.

The seven level hotel will have 190 rooms, three restaurants, a spa and fitness centre and is due to open in 2018.

Turkish restaurant Ruya has just opened in Dubai. What were the inspirations for this project?

We've worked with the owner, Umut Özkanca, for years, so we know him well. This has been a dream of his for a long time. The idea was to create an upmarket platform for Anatolian cuisine; to interpret the food in a contemporary way.

Özkanca wanted to work with a non-Turkish designer, because he wanted us to interpret Turkish and Anatolian heritage in a way that was right for the international market. For us it was about looking at that incredibly rich history, about picking up on the materiality and the crafts of the region. We designed tiles that were influenced by traditional Byzantine patterns and used traditional Turkish Marmara marble.

One of the key things about Turkey is the hospitality; it's a very welcoming country and we wanted that to be reflected in the design. We have a big oven in the centre of the restaurant for bread, and an open kitchen and open bar, so that you're always engaging with the people making your food.

What else are you working on?

We're working on the renovation of a small boutique hotel in Prague called Hotel Maximilian. It's a very challenging project, very design-led, with a fantastic client, the Ploberger family. We've been inspired by the pastel colours of Prague's architecture – we're bringing in beautiful muted colours throughout the hotel. The mock up room for that project is currently in progress, and the hotel should open either the end of 2017 or start of 2018.

Do you have a favourite project you've worked on?

South Place Hotel in London was the first hotel project I worked on. We were involved in every single aspect of the hotel, from the design and lighting to the uniforms, table tops and artwork, so it felt like a typical German Gesamtkunstwerk. I definitely have a lot of emotional attachment to that project.



London's South Place Hotel opened in 2012

What trends or themes are you seeing in hotel design?

There are lots of debates around the integration of work and leisure in hotels at the moment. That crossover is really interesting, because so many people still work while they're on holiday, or they are on a business trip but still want to explore the area. Many hotels ask for a residential feel, but guests still want to feel looked after, so that's a challenge.

Which hotels do you love?

I really like Das Stue in Berlin, which was designed by Patricia Urquiola. It's in the former Royal Danish embassy, which is a beautiful building. It feels homely and comfortable, while being very sophisticated.

I also love the Parker Palm Springs in California. It has a unique voice and you probably either love it or hate it, but it does what it does incredibly well. It's very playful, and there are lots of things to discover there.

Which architects do you admire?

David Adjaye was my tutor at the Royal College of Art in London. I like his work and I learned a lot from him. He was always talking to us about materiality and purpose in designing and that's stuck with me – the idea that architecture needs to speak for itself. I don't think David Adjaye follows trends; his architecture has its own kind of language and I've always admired that.

I am also a huge fan of mid-century modern architecture, particularly on the US West Coast – architects like Richard Neutra, William F Cody and Albert Frey really inspire me. ●

“A drawing is the most genuine form of architecture”

Eric de Broche des Combes

The founder of Luxigon, creators of visualisations for some of the world's most innovative architects, tells Kim Megson about the power of drawing and why he's fighting for more ethnic diversity in renderings



Eric de Broches des Combes founded Luxigon in 2006

How did you begin making visualisations?

It started when I was studying at the School of Architecture in Marseille, France, and I needed a part-time job. I didn't want to work in a supermarket or do manual work because I was a bit lazy! But I could draw well, so I started doing drawings for students and teachers. Then I opened a little drawing shop. I thought it was a temporary moment in my life, because this job didn't exist at the time, however, it slowly but surely became my career.

Can you describe how Luxigon developed?

I was enjoying the work, and the advances in computer technology helped me a lot – before then I was doing everything by hand. The internet also created new opportunities.

I'm a curious person, and I decided I wanted to explore architecture with the best architects – the likes of Rem Koolhaas and Winy Maas who were becoming famous in the 90s. So I moved to Paris, opened an office and then at some point we had a call from Koolhaas' office at OMA. We said: 'Oh my God, we must have done something good!' From there, everything took off.



IMAGE: KÉVIN DE BROUËT DES COMBES

IMAGE: KÉVIN DE BROUËT DES COMBES

Luxigon created the renderings for REX's Perelman Performing Arts Center at the WTC, New York (above)



Eva Tucek's fantastical designs for Blank Space's Fairy Tales architecture competition, visualised by Eric de Broches des Combes

Was it much of a learning curve in those early days?

We soon realised there's a level of excellence expected when you're working with top architects. We worked night after night and did our drawings again and again. These days it's easier because we instantly know what's possible, what's not possible and how to best use the computers, so there's more of a plan. Mind you, there are still projects where we don't sleep for a couple of nights and we need a lot of coffee and determination!

Has your process changed much?

I would say that part of the style that we have now, developed as a result of the limitations I had with the computer when I started. It used to

take hours and hours just to draw realistic glass, so I learned to kind of fake it with Photoshop. That led to our 3D style, a lot of which is created by us rather than relying on software. That means it's more pure, and not such a product of the technology of its time.

What do you enjoy about creating visualisations?

You know, I was an architect, I designed a couple of buildings and I'm still registered, but I love doing visualisations so much more.

I think drawings are even more influential than real buildings, because a drawing is the simplest, most genuine form of architecture. It demonstrates what the architect had in their

mind. The purity of the vision is in the drawing because there's no cost, no gravity, no politics or problems surrounding it. When a design is turned into a real building, it's always somehow a bastardisation of the original vision.

Is there ever an issue with people liking the renderings more than the finished building?

A drawing is like a knife. You can use it for good or you can use it for bad. The problem is more with the viewer than with the person who created the rendering. It's about interpretation, because I don't believe that architecture is getting better – many new buildings look like cakes – but the renderings are definitely becoming more beautiful.



IMAGE: © ERIC DE BROCHES DES COMBES, LUXEMBOURG

REX's CLC and MSFL
Towers in Shenzhen, China
(left); Self portrait by Eric
de Broches des Combes



Architecture is an act of convincing. It's a very political act and visualisations are part of the whole vocabulary. A rendering is a guide, and if it's used correctly by someone with a conscience, it should be a good way to illustrate their vision. The problem is that the people who are looking at drawings know nothing about what goes into architecture. They don't want to read plans or sections. They just want to see a picture of people wandering around a building with balloons and happy kids. This is where simplification comes from. Renderings are not a replacement for detailed plans, they just provide an illustration.

Do you think you have a responsibility to reflect reality in your visualisations?

Drawing is a very powerful tool, which means you have to be careful. Our aim is, of course, to convince people [about a building], but it's our philosophy that we won't lie. I will push something to an extreme, but I will not lie. Anything depicted in the rendering should be something that could happen for real. If I don't feel it is, I'll discuss that with the client.

Having said that, it's really important that people understand that it's not a picture, but an

illustration. A rendering is obviously not exactly like the real world. That's intentional. A lot of our images are populated with stars like Brad Pitt and Angelina Jolie. I mean, why would Angelina Jolie be in a hospital in the suburbs of Paris?

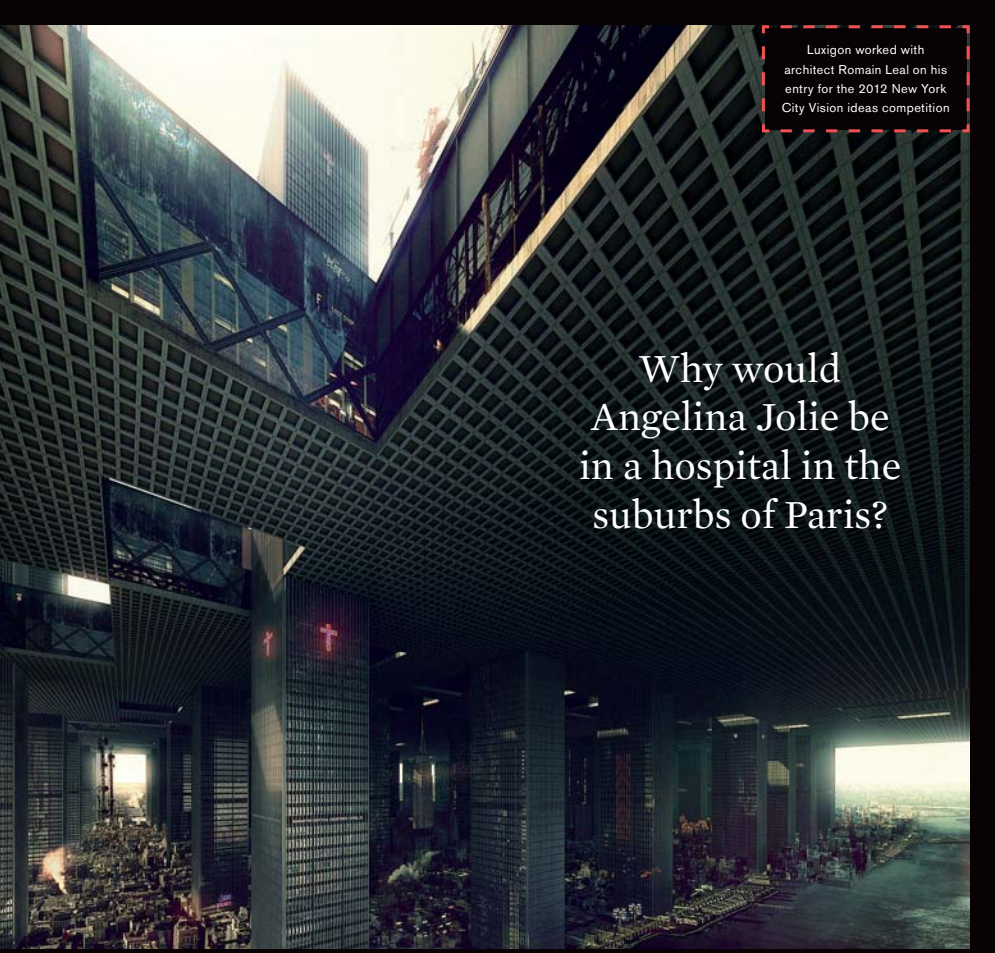
Campaigners have criticised the lack of diversity among the people represented in visualisations. How is it decided who populates the worlds that you're creating?

There's sometimes a preconceived idea about who should and shouldn't appear in renderings from the people who commission the images, which doesn't correspond at all to the real world. For example, we sometimes receive detailed ethnic demographic proportions to follow – for example 12 per cent black people, 24 per cent Asian people – which I think is stupid.

We're also often asked to only include young, healthy people, so that even hospitals are only populated with people who look so good you wouldn't know they're ill. There are no fat kids. Everybody seems to be ecstatic about being in the building, whatever it is; it could be a power plant. They're obviously not real people, because they in no way correspond to the living.


IMAGE: © ERIC DE BROCHES DES COMBES





Luxigon worked with architect Romain Leal on his entry for the 2012 New York City Vision ideas competition

Why would
Angelina Jolie be
in a hospital in the
suburbs of Paris?



A visualisation of a
destination spa and resort
in Qatar created for
Oppenheim Architecture

IMAGE: SERVICE DESIGNERS LUXIGON

Luxigon's renderings for Lankry Architects' Hotel 4 Etoiles, Porte de Vanne, Paris, have a futuristic, sci-fi feel

But increasingly people want realistic images, not only in the realism of the materials presented, but also in terms of population as well. And I think that's a very interesting topic the visualisation world is still not covering. We have technology that can make the image very realistic if you want, but it's up to you to make it socially realistic. So yeah, when somebody is telling me 'don't put too many black people in the rendering,' I say, 'Why the hell would I not put black people in? There are lots of black people living in this area, so let's represent that.'

I'm fighting for more diversity, but I'm even fighting to represent the idea that the sky is grey sometimes. We had an experience recently with a guy from Beijing who asked us to do extremely realistic images. He said, 'I want it to be exactly like a real-life picture...except you remove all the fog and the pollution.' Those battles are the fun of this job. I'm not just here to please the masters.

When you're visualising a really abstract, conceptual structure, how do you begin to realise that?

You have to understand what it's all about first. If you want to convey the idea that it's a sci-fi building, then I would use all the sci-fi code to make it look like it's from the world of *Blade Runner*. You give me a cube, and I can make it look like

it's from *Tron*, or I can make the roughest draft render in the world. It really depends on the will of the architect, and based on that you bring a lot of your own ideas and references to make that happen. Most of the work involved in making an image is in the time spent discussing it, rather than sitting at the computer. Sometimes we're some way off on the interpretation we come up

with, sometimes we're spot on. Sometimes we end up bringing in something that the project didn't have at the beginning.

Can you suggest design changes to the architects?

We have a legitimacy now because we've been doing this a long time, so they listen to us more than in the past. We may suggest the best angle to showcase the building, or suggest making an image that's more rough and risky. Sometimes we even suggest a new façade or a new structure. We're all architects, and we consider ourselves to be doing architecture rather than drawing.

Which architects do you particularly enjoy working with?

Joshua Prince-Ramus and REX are fantastic. We're the same generation and we've been working together for 15 years. I'm sure he'll win the Pritzker in the next five years. It's the same for the Danish firm COBE. I love MVRDV too; Winy Maas is like a Jedi master of architecture and they're not afraid to experiment. But I'm proud of my relationship with most of the studios we're working with. My early Machiavellian plan to speak with the world's best architects actually worked. ●

IMAGE © ERIC DE BROCHE DES COMBES - LUXIGON



Diversity in renderings

The debate surrounding diversity in renderings has grown in recent years, as online databases of 'render people' – cut-out characters who can populate the worlds created by visualisation teams – have become more popular.

The early databases originated in Scandinavia, and as a result the majority of people represented were from nations with predominantly Caucasian populations. According to campaigners, this has limited the diversity represented in renderings.

To counter this, new databases are being established to provide a broader selection of

render people. These include Nonscandinavia, Escalalattina and Just Not The Same.

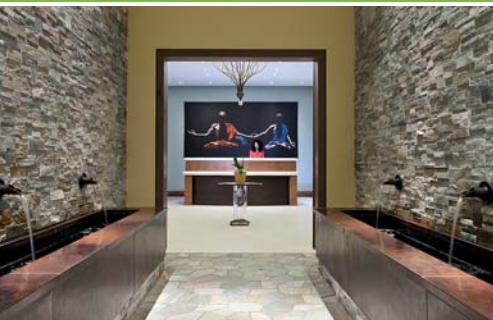
Rose Florian and Kordae Henry, creative directors of the latter, have said their mission is to create a digital catalogue of the 'misrepresented, under-acknowledged and otherised populations that are so absent in traditional design imagery.'

They argue that as a representation of reality, an image "has the power to inspire us, limit us, lift us and oppress us" and can shape "not only how we see ourselves in the present, but also define the limits of what we can reach in the future."



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PROJECT IN FOCUS

**The Museum of
Art, Architecture
and Technology**

A landmark for Lisbon

Following the opening of Lisbon's waterfront Museum of Art, Architecture and Technology, AL_A director Maximiliano Arrocet talks us through the building. Kim Megson reports

A curving, low-rise structure and a recently renovated power station together form the new waterfront home for Lisbon's Museum of Art, Architecture and Technology (MAAT), which explores contemporary culture through visual arts, new media, architecture, technology and science.

Electricity and gas provider EDP has funded the project through its EDP Foundation, and MAAT is the focus of the organisation's cultural campus in the district of Belém. While the main exhibition room at the heart of the building was unveiled at a soft opening in October 2016, the

other galleries and a museum park will open over the next few months. The completion of a pedestrian bridge connecting the site with the heart of the city is tentatively scheduled for March 2017.

Building on Portugal's rich tradition of craft and ceramics, 15,000 3D glazed tiles articulate the façade, reflecting light, shadow and the water.

Four distinct gallery spaces sit beneath the gently undulating roof of the new building, which creates significant new public spaces both on the roof and along the waterfront of the River Tagus. As a result, visitors can walk over, under and through the building. Museum gardens stretch to the water's edge, creating a

new area of public realm for the city.

"Our design draws on the context of the site, creating both physical and conceptual connections to the waterfront and back to the heart of the city," said Amanda Levete, principal at AL_A. "The waterfront is so essential to the project that the design literally reflects it."

AL_A collaborated on the project with local architects Aires Mateus e Associados, structural engineers Afaconsult and Lebanese architectural studio Vladimir Djurovic Landscape Architecture.

Overleaf AL_A director Maximiliano Arrocet, who worked on the project, explains the thought processes behind the building's design.



**THE WATERFRONT IS
SO ESSENTIAL TO THE
PROJECT THAT THE DESIGN
LITERALLY REFLECTS IT**

Amanda Levete

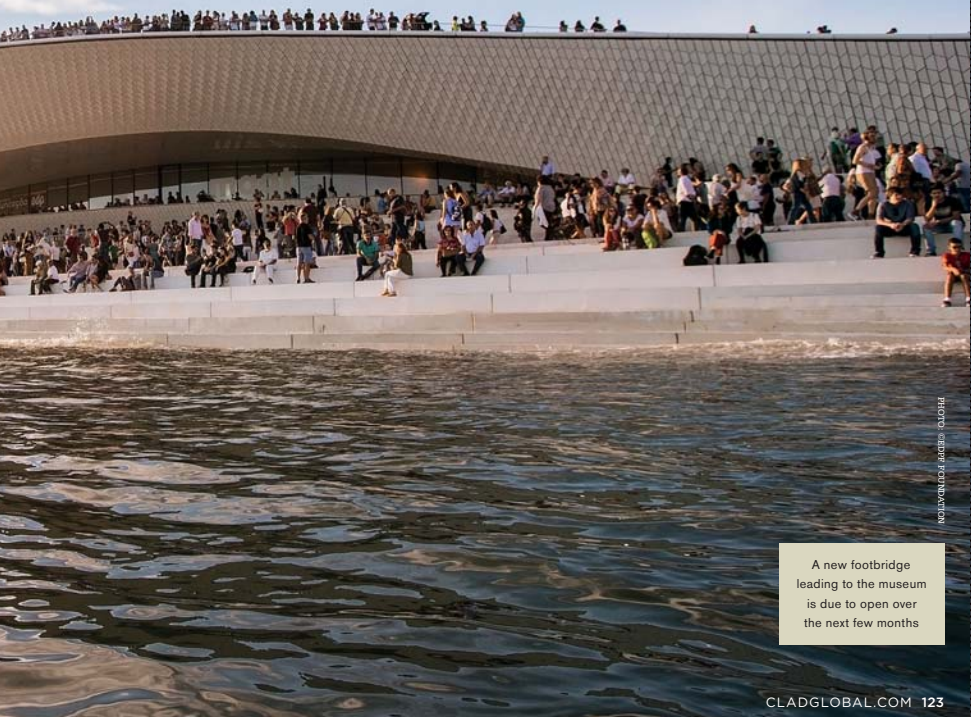


PHOTO: THIERRY FICHMANN/ATX

A new footbridge
leading to the museum
is due to open over
the next few months



AL_A is led by Maximiliano Arrocat (pictured), Amanda Levete, Ho-Yin Ng, and Alice Dietsch

**Maximiliano Arrocat,
director of AL_A,
explains how the studio
created a landmark
museum for Lisbon**


The site

When we first visited the site, we went at midday on a day in November, and we stayed until the sun was setting. What really impressed us was the quality of the light. To begin with, it was so bright you needed sunglasses, then it became a really vivid red. There was also the amazing rippling effect on the water. We understood immediately we were dealing with a very special site. It's the river, but you feel you're on the sea.

The other big driver for us was the existing historic building, with its very defined architecture and spaces. We understood that it was important not to create a type of architecture that took anything away from what was already there.

We looked at the disconnection between the site and the city centre – which is quite common in cities with industrial areas – and we decided to bring back the connection to the river and create a space that could be used by the public. So our design represents a movement or a gesture that extends out of the landscape, remains lower than the existing building, creates a new public realm and maximises accessibility.

It was very important to choose materials really rooted in Lisbon culture. In the city, the use of white Moleanos limestone designates a public space, so it was important we included a non-slippery version of this on the ground surfaces and the steps down to the river. »



The design allows the public to walk on the roof, giving views of the river

PHOTO © ADRIANO PAVAN

The roof

“Because of the sloping gesture we created, we had the opportunity to bring people to the rooftop, which becomes an elevated public space. This is my favourite part of the building. I think when you go up there, you suddenly experience the river in a completely different way and for the first time you’re connecting visually back to the city. People go and they can look across the river, look towards the impressive bridges, and turn and look towards the city and the Royal Palace, which can now be seen from a new angle. This space can be used as an outdoor cinema, it can be a curated arts space, it can host pop-up events and it can be used in ways we haven’t even thought of yet.”



The waterfront

“Even if you’re not interested in the building you can gather here. We introduced steps down to the river, which is something that only historically happened in Lisbon’s Praça do Comércio. You can gather in the shaded area created by the overhanging roof, and walk straight down to have contact with the river. Even without the building, this would be an area of attraction. Creating exciting spaces was crucial for this project. The re-appropriation of cultural buildings as public spaces is very important. We’re interested in breaking down this notion of art being elitist. An art museum can be for everyone.”

PHOTO © FRANCISCO KUDREIN

The museum aims to restore the connection between the city and the water

PROJECT IN FOCUS

**The Museum of
Art, Architecture
and Technology**

The façade

“In Lisbon, the more important the space, the more intricate the pattern on the façade. For this reason we eventually chose to use a hexagonal pattern. We discovered if we dislocated ceramic tiles, we would have the same pattern as the rippling water. This creates a surface that plays with light and casts shadows like a sundial. At midday the building has a completely different appearance from the one it has in the evening.

There's always a moment of initial excitement when you have an idea like this; a Eureka! moment. Then there's always a terrible moment of doubt, usually a week later, that last for a few months. You think, 'How are we going to fix this element and fabricate it and glaze it?' Doubting is an

important part of the design process, because you need to question the idea to prove it works.

The façade material took us a long time to choose. We had budget limitations, and we needed to find the right combination of weight and strength. The ceramic universe is huge and there are thousands of shades of white. It had to be possible to mechanically fix the tiles because of the wind, and porosity had to be very low so that the tiles won't crack when the temperature changes. To get the right tile took us nearly three years. We're very happy with the result; different people will give a different description of the building and its colour depending on what time of day they go and what angle they see it from.”

The museum is covered with 15,000 tiles, referencing Portugal's history of ceramics

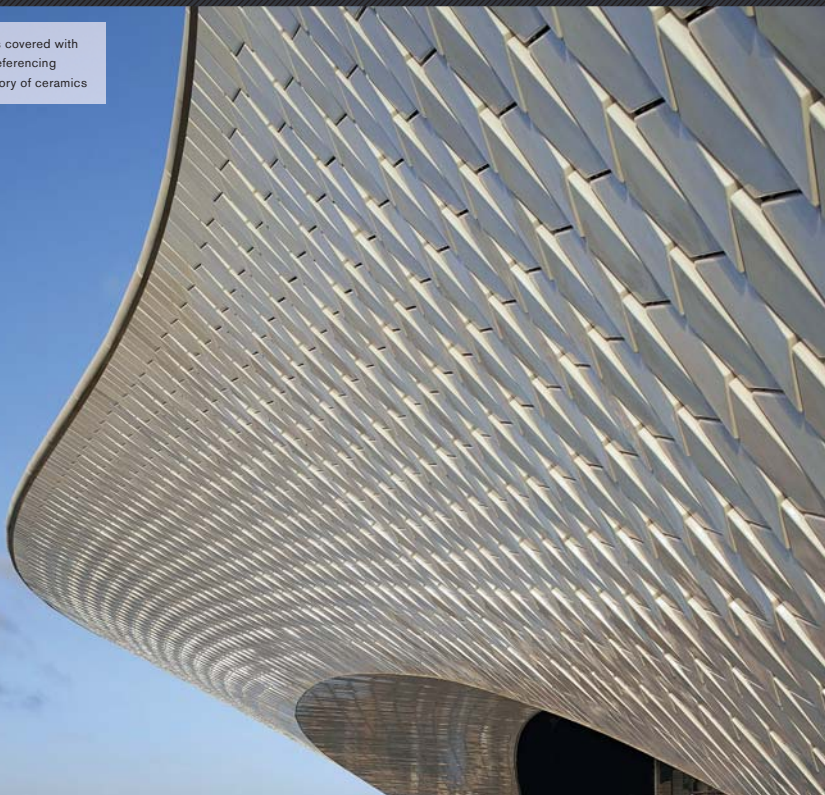




PHOTO © FRANCESCO MORETTA

The exhibition spaces have been designed to host large scale installations

The galleries

It was always very important for us to make the inside of the building a fluid extension of the public space outside and the landscape, so a large ramp takes you down into the galleries. It's counterintuitive; you enter and then have to go down, past the restaurant and café and into the elliptical free main gallery.

We've included very flexible roof rigs, with different lighting and sound setups, pass rails and trusses, so artists will really be able to respond to the possibilities of the space.

The oval gallery can be experienced three dimensionally and from different angles – you observe it from the top, then come down and enter it. Dominique Gonzalez-Foerster, who did the first installation (called Pynchon Park) really took the opportunity of the space to create something unique. People inside the gallery, underneath a netted canopy, interact with visitors above them, and so they themselves become part of the art.



PHOTO © FRANCESCO MORETTA

CLADkit

From molecular 'glue' to stackable football pitches and a camouflaged solar roof, we take a look at the most exciting innovations in product design



For full company and contact details of any of the products and services featured here, please visit www.CLAD-kit.net

GD-Lighting Design illuminate multifaceted MOCAPE



PHOTO: JIE SHI

Chief designer Yenchin Wang

G-D Lighting Design has revealed its lighting design for the Museum of Contemporary Art and Planning Exhibition (MOCAPE) in Shenzhen, Guangdong Province, China.

The shapes that form the exterior of the newly opened Coop Himmelblau facility proved to be a challenge to light however, with lighting designers Yenchin Wang, Hui Ren and Tim Cheng having to find a solution to glare and self illumination caused by the shape of the structure.

They found the solution with the use of building information modelling (BIM)

and CAD programme Rhino.

By constructing a 1:1 digital architectural model of the MOCAPE in Rhino, the designers were able to accurately map lighting positions across the face of the building and successfully trial lighting designs.

They were also able to analyse photometrics, power supplies and material reflectance.

The design incorporates U-shaped shading grooves with exterior baffles, custom made for the project.

CLAD-kit keyword:
GD Lighting



A challenging building to light



PHOTO: OLIVIER CLAVAL

Olivier Clavel (above) has created water displays that can be controlled via an app

Olivier Clavel blends water and tech to make zen spaces

French artist and designer Olivier Clavel has drawn inspiration from science and technology to create a water sculpture for a new French spa and wellness development.

Clavel's water fountains for the forthcoming Le Royaume des Sens City Spa in Merignac, near Bordeaux, blend technology, light and water to create the effect of levitating water.

Clavel uses water to custom create indoor and outdoor spaces including water walls, fountains, ponds or swimming pools.

Controlled by a mobile phone app, the water, sound and light effects can be changed to alter the mood.

The designer is expecting to duplicate his fountain design for several cities

including Paris, Toulouse and Bordeaux.

He said: "It's no accident that we find the sound of water flowing to be relaxing. This is why I combine the vibration of water with the music transmitted through my fountains. When light is added, the whole contributes to developing that zen feeling that is so sought after."

Clavel has previously installed his designs at Domaine de Verchant, Relais & Château 5* hotel, in Castelnau-le-Lez.

The LED or optical-fibre lighting used in Clavel's designs can be controlled by a smartphone and built into a home-automation system in order to create a customised ambience.

CLAD-kit keyword: Clavel



The billionaire has big plans for solar

Elon Musk unveils camouflaged solar roofs

Billionaire entrepreneur and Tesla founder Elon Musk has fully unveiled his plans for solar roofs, which use camouflaged tiles to disguise the presence of fully integrated solar cells – boosting the aesthetic appeal of the sustainable technology.

The new solar roof concept has been designed for home use in mind, with sunlight captured by the tiles turned into electricity for immediate use or storage in one of Tesla's at-home Powerwall batteries. However, the resilience of the tiles, and the fact they are to be scalable and customisable, means they could one day be used for almost any building.

In the long-term, Musk said he wants to see developers shift away from placing individual solar panels on top of a pre-existing roof structure.

"The goal is to make solar roofs that look better than a normal roof, generate electricity, last longer, have better insulation and cost less than a normal roof plus the cost of electricity," he said. "Why would you buy anything else?"

CLAD-kit keyword: Elon Musk



The solar roof tiles come in four styles

IMAGE COURTESY: AL_A

IMAGE COURTESY: AL_A



The three-storey pitches are built using a carbon fibre structure

AL_A design stackable football pitches to revive fading communities

Amanda Leveté's architecture studio, AL_A, have created a unique concept to bring stackable 5-a-side football pitches to derelict sites in London.

The project, called Pitch/Pitch, is designed to bring communities together through sport. Each three-storey carbon fibre structure is conceived as a temporary installation that is fast and easy to erect, meaning the pitches could be built to coincide with major football tournaments or to quickly bring life back to fading communities.

Developed in collaboration with Arup, each system is modular – with the levels linked by two staircases – and can be stored in shipping containers to be transported to

another venue once it has been dismantled. Platforms for spectators are incorporated into the design, and extra facilities such as changing rooms can be prefabricated and delivered to a site on demand.

AL_A director Maximiliano Arrocet said: "As an office we enjoy sport, and we've always viewed it as a way of creating social cohesion."

Each pitch is standard size for 5-a-side, but the facilities can also host dance classes and yoga, and could feasibly be adapted for other sports.

AL_A are seeking partners to aid the financing and implementation of the scheme across London.

CLAD-kit keyword: AL_A



AL_A believe the temporary pitches could boost social cohesion in communities



A large-scale model has been developed

The windows of the future will use quantum dots to generate power

A team of researchers have made a breakthrough in developing technology that can turn any window into a daytime power source.

By covering windows with sunlight harvesting quantum dots, called luminescent solar concentrators, the team says it is able "to disrupt the way we think about energy."

Experts from the Center for Advanced Solar Photophysics at the Los Alamos National Laboratory in the US have scaled up palm-sized demonstration models of the technology to windows large enough to put in and power a building.

"A fraction of light transmitted through the window is absorbed by nanosized particles, or semiconductor quantum dots, dispersed in a glass window, re-emitted at the infrared wavelength invisible to the human eye, and wave-guided to a solar cell at the edge of the window," said lead researcher Victor Klimov. "A window becomes an electrical generator that can power your room's air conditioner on a hot day or a heater on a cold one."

CLAD-kit keyword: Quantum dots



The launch of Nulty Bespoke coincides with the practice's fifth birthday.

Nulty launches bespoke luminaire division

Lighting design consultancy Nulty has launched a bespoke luminaire design and manufacturing company named Nulty Bespoke.

As lighting scheme designers for establishments such as the Royal Albert Hall, Nulty has often required handcrafted alternatives to off-the-shelf fittings, in order to achieve a delicacy of detail and seamlessness between light and space.

Nulty Bespoke is a solution for architects, interior designers and other lighting design practices who are increasingly demanding their own tailor-made fixtures.

Company founder Paul Nulty said: "Our experience in all aspects of the design, manufacturing and installation process mean we can create exquisite products on time and on budget."

Since opening in 2011, Nulty has delivered high-end projects across several sectors within the UK and internationally.

CLAD-kit keyword: Nulty



"By scratching our own itch, we're also able to provide our colleagues in the industry with the handcrafted and unique lighting fixtures they desire"

Trevor Morgan, Managing Director

Molecular 'glue' could make towering timber skyscrapers a reality, research finds

Molecules 10,000 times narrower than the width of a human hair could hold the key to building super-strong wooden skyscrapers in the future, new research has found.

Team at the Universities of Warwick and Cambridge in England have unlocked the mystery of how key sugars in cells bind to form strong, indigestible materials.

The research explains how thick, rod-like cellulose and long, winding xylan – the Earth's two most common large molecules – stick together to form strong plant walls

despite being fundamentally different.

"We knew the answer must be elegant and simple," said Professor Paul Dupree from the department of biochemistry at the University of Cambridge. "And in fact, it was."

"What we found was that cellulose induces xylan to untwist itself and straighten out, allowing it to attach itself to the cellulose molecule. It then acts as a kind of 'glue' that can protect cellulose or bind the molecules together, making very strong structures."

CLAD-kit keyword: Molecular glue



Wooden skyscrapers may become commonplace

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