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THE SHARD

RENZO
PIANO'S
TOWERING
ACHIEVEMENT
16-PAGE SPECIAL



Not running quite as on time as the trains, the Shard will slowly open over the next few months, with construction now due to finish in June. The hotel plans to start operating early next year (see page 60)

THE SHARD

IT WAS SUBJECT TO A PUBLIC ENQUIRY AND WON AN UNEQUIVOCAL VICTORY THAT HAS PAVED THE WAY FOR LONDON'S NEW SKYSCRAPER-FILLED SKYLINE. BUT THE SHARD IS SO MUCH MORE TO ITS ARCHITECT RENZO PIANO, SAYS HERBERT WRIGHT
SHARD PHOTOGRAPHY BY PAUL RAFTERY
RENZO PIANO PORTRAIT BY DAVID VINTINER

Renzo Piano knows how to make buildings that vanish. Two current projects, one a crystalline tower over London that shatters outdated ideas about what a skyscraper is and about the metropolis it stands in, the other an intervention at the timeless site of Le Corbusier's Ronchamp chapel, both do it.

One disappears into the sky, the other into the earth, and both cunningly use angles. 'A little trick', Piano intimates, as he enters a room at the Paris offices of his practice RPBW, brandishing a photo from an online forum of Shard observers. It shows a surprisingly narrow, angular finger of light tapering into the sky blue, but on either side, the tower's form simply merges with it. 'Like a kaleidoscope that reflects the sky!' bubbles Piano. 'You can spend a day in front

of it and it will never be the same.'

Piano, now 72, is charm and tact embodied, a kindly guru in a woolly jumper that's so sky blue that the Shard could well disappear into it. He is as high on ideas as if they were pills he'd popped. He flatters those he talks with, offering thoughts like intimacies, and frequently responding 'you are right'. The charisma he deploys on developers, mayors and press around the world indicates another characteristic – deep patience.

Ever since 2001 he's been telling the same story to evangelise London's 306m-high Shard, just now finishing construction – but, he says, it's 'a good story'. For him, the mixed-use

skyscraper tells 'the way the city may save land, instead of dispersing, the idea that the city can grow from inside'. He talks about exploiting public transport hubs, and the idea of 'making a building that can intensify the city of London, especially in a place that needs life, without adding traffic. [Then London Mayor] Ken Livingstone was brilliant. He asked me not put more than 48 parking spaces. 48 is nothing!' (It's actually the minimum required for disabled drivers.)

The Shard's vanishing trick, due to its off-vertical facades of especially clear glass, was crucial at the 2003 public enquiry it had to win. 'I was very grateful for those months of discussion,' Piano recalls. 'In some ways the building became better.' Rather than nervous, he says his state was anxiety. 'It's

like going to the doctor with your baby. It's love... and you are taking care of your creature in some way'. Richard Rogers had helped him prepare, stressing public realm and the Shard's intensification of London.

The friendship with Rogers dates from when they taught at the Architectural Association in the late Sixties. Rogers was more scholarly, Piano more interested in practical experiments, taking him into Bedford Square every day to build things. He says they looked like Beatles (presumably White Album period). 'We were like bad boys. That's the reason we won "Beaubo"'. Short for Palais de Beaubourg and said the same as 'bobbo', meaning bohemian-bourgeois types, he uses the name to refer to the Centre Pompidou. 'It was part of the provocation to make a joyful spaceship, right in the middle of Paris,' he says of the huge, colourful art centre just a block away, which still has all the va-va-voom of when it opened in 1977.

After Pompidou, Piano and Rogers were hot names. Piano set up RPBW in 1981, and gradually built it into a global design force, which has recently expanded from Paris and Genoa to New York. He describes the practice as 'a joyful machine'. He shares ownership with 10 partners and 15 associates, some of whom have been there through all four decades. 'They give you strength and continuity, a coherence, not just in terms of design but in the way you behave, with client and all that'.

Buildings are in his blood – he comes from a Genoese family where all the men – >>

'my father, my grandfather, my uncle, my brother' – were builders. It may explain why the practice is called a building workshop. In Paris, it actually fronts on to the street with the model workshop, complete with tools and workbenches for all to see. In the offices, a red model of the ribbing from the Kansai Airport terminal in Osaka hangs from the ceiling like a great tapeworm. 1:100 models of the Shard and 2007's New York Times Building sit together, immaculate white sentinels. Active projects are everywhere around: a major intervention at the Fondation Pathé and a strangely blocky new Ministry of Justice, both in Paris; Valetta's City Gates in Malta, and a 30-year project for a new Colombia University campus in Manhattan's Washington Heights.

Piano won the Pritzker Prize in 1998, and up to last year had served five years on its jury. He's not surprised that Wang Shu

Below: One of Renzo Piano's first sketches for the Shard

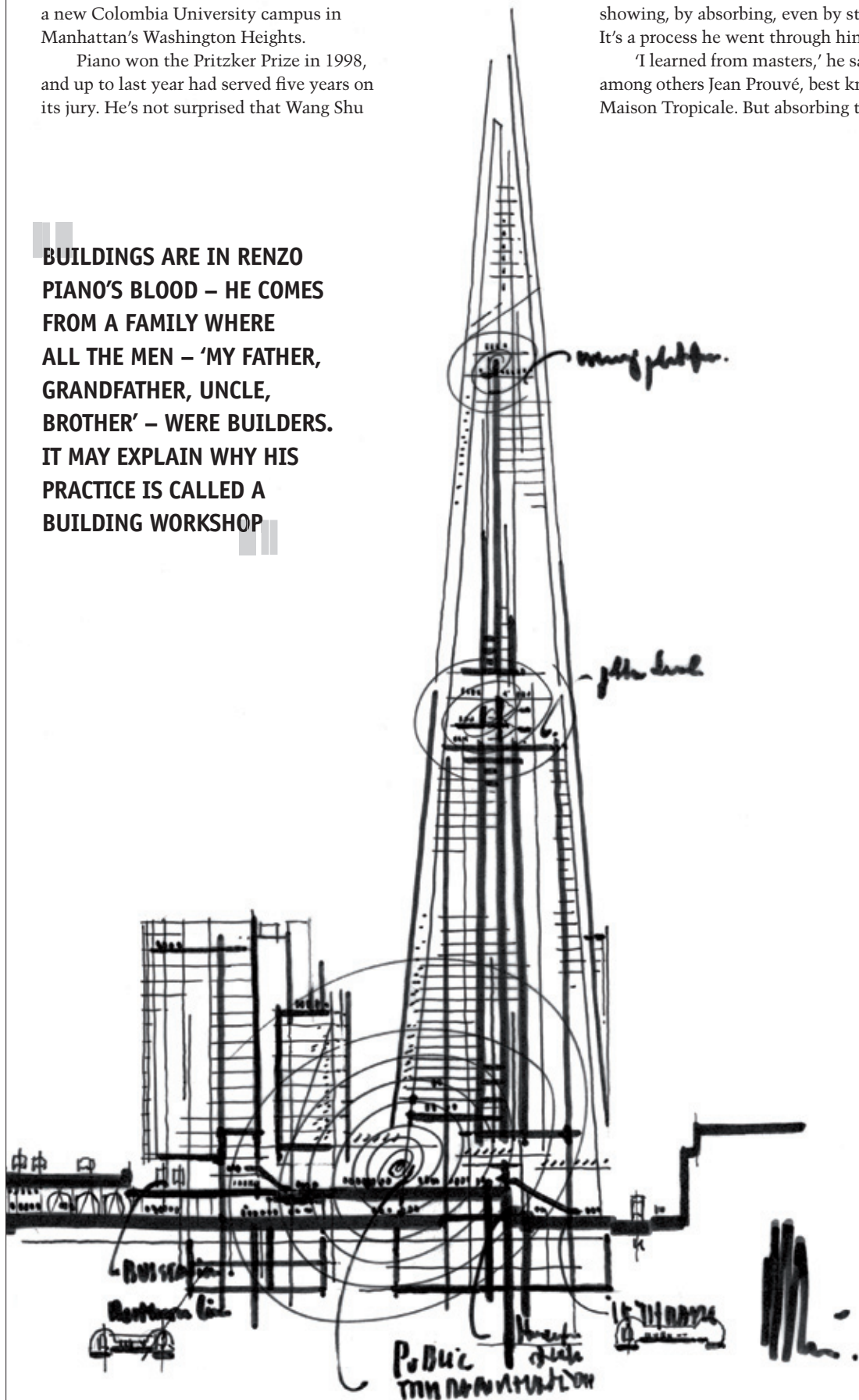
Right: Early image of the Shard, from Southwark, showing its core and, far right, from the same angle but much progressed

won this year. He is adamant that Pritzkers are not given for strategic/political reasons, nor to a predictable name. 'Pritzker is a great responsibility', he says. 'It's trying to detect the little seeds of freedom, of creativity, of talent. It's not easy. I absolutely agree that China is one of those places where this talent shows up.' He notes that while at RPBW, 'Chinese students want to learn and go back with stealing knowledge. I like that!'

The Fondazione Renzo Piano brings international students to work and learn from his practice, an arrangement he compares to 'la bottega', meaning again workshop, but, he says, with Renaissance Italy's implication of 'the art of teaching by showing, by absorbing, even by stealing'. It's a process he went through himself.

'I learned from masters,' he says, naming among others Jean Prouvé, best known for La Maison Tropicale. But absorbing their skills

BUILDINGS ARE IN RENZO PIANO'S BLOOD – HE COMES FROM A FAMILY WHERE ALL THE MEN – 'MY FATHER, GRANDFATHER, UNCLE, BROTHER' – WERE BUILDERS. IT MAY EXPLAIN WHY HIS PRACTICE IS CALLED A BUILDING WORKSHOP



HERBERT WRIGHT

PUBLIC ENQUIRY

As the new millennium dawned, London agonised over building its first central skyscrapers since Richard Seifert's era. English Heritage let Foster's Gherkin pass, but made a test case of the KPF-designed Heron Tower, which it lost in a milestone public enquiry in July 2002. Immediately after, another enquiry into the Shard, what was then called London Bridge Tower (LBT) was announced. It opened on 15 April 2003.

The English Heritage case, which was based on strategic views of historic landmarks, with Historic Royal Palaces making a separate case about the Tower of London, was up against Southwark Council, then mayor Ken Livingstone, the Dean of Southwark Cathedral, developer Irvine Sellar and not least Renzo Piano himself.

Bankside House, behind Tate Modern, effectively became a courthouse in which Piano's tower was on trial, with barristers sat behind stacks of reports. On the opening day, Piano appeared in a tweed jacket, to face the inspector. His old friend Richard Rogers gave an encouraging wink across the room.

Piano said of his tower: 'It is mixed-use, not like other towers... this is an intelligent building, like a little vertical city.' His gentle Italian voice was a world away from the stuffy mannered deference of the proceedings. 'We are sitting on top of energy carriers – that is, train tracks,' he continued. Wielding a long stick like a distinguished schoolmaster, he pointed to the models, sketches and views arrayed around, and talked lovingly about the low-iron glass chosen so that the building would not look 'arrogant'. Alluding to Miesian skyscrapers, he declared: 'It's not like those people who wear sunglasses, they become mysterious... this will be more disappearing, more atmospheric.'

Neil King QC wordily argued English Heritage's case. He conceded the 'striking architectural quality' of the tower, but added that such a building had to be 'in the right place'. He stressed the impact on views of St Paul's: 'From Parliament Hill... the left-hand side of LBT would intersect the right-hand side of the dome, appearing therefore to grow out of it – a profoundly inappropriate effect.' It was a poor move by King – in the late Sixties, Piano lived in Hampstead and knew the view well. 'St Paul's is talking the language of stone, the other the language of glass,' he responded.

Earlier, Livingstone had said that 'a decisive defeat of English Heritage is vital.' That's what he got when the public enquiry backed the LBT in May. It was not just Piano's charm, but a powerful business case for local regeneration that won the day. The result is a wave of architect-designed London skyscrapers still underway today.



LONDON'S NEW SKYLINE

The views from the four points of the compass



can only go so far. 'One day you say, "Fuck!" – I need my freedom', he explains. 'If you don't have that shift to desire freedom, you get paralysed. You have to be grateful and be a rebel'. Piano's 'fuck' moment came as a student with neo-rationalist designer Franco Albini and then techno-functional designer and Domus editor Marco Zanuso.

Piano worked briefly for another master, Louis Kahn in Philadelphia, in 1965. When approached to design new galleries for Khan's 1972 legendary Kimbell Art Gallery in Fort Worth, he initially said no: 'In such a scheme you have a problem because, if you are not careful, if you are arrogant, you start to compete, then you are bloody stupid. Or you can be totally reverential, so subdued, intimidated that you disappear'. Piano was loath to tamper around Khan's work. 'Then', he says, 'I started to build up my freedom... Those schemes are always coming from a

double attitude – respect and rebellion.' Piano's own new Fort Worth \$125m galleries, separated from Khan's, open in 2013.

It was the same story when he was asked, despite being a non-believer, to design facilities at Le Corbusier's Ronchamp chapel. When he finally said yes, he faced a campaign by the Fondation Le Corbusier, guardians of his legacy, to overcome. Piano says it 'was not totally clean' and suspects that 'they wanted to gain control of the chapel'. The foundation gained the support of big-name architects, such as Alvaro Siza, but they never said that his new nunnery and gatehouse, down the slope, was invisible from the chapel, tucked into the earth so as not to disturb the setting that Le Corbusier had found so mystical, or that Piano was the architect. 'Alvaro told me he didn't know,' recalls Piano. A public enquiry voted 40-0 in favour of the plans, which completed last

Below: A CGI of the Shard shows the contrast of heights of its neighbouring buildings, including Southwark Cathedral on the far left

Bottom: Old and new – the Shard looks like it has a traditional brick base in this image, taken from the south

Right: Shard architect Renzo Piano, inside the Shard for photographer David Vintiner

year. 'It's emotionally completely different from the chapel,' he explains. 'It's more about silence, about living in the forest, like a little house.'

Ronchamp and the Shard share Piano's clarity of design and openness to natural light, but how different the tranquility of a nunnery and the vertical dynamics of the big-city skyscraper. The Shard dwarfs anything else on London's skyline, and its crystalline quality makes even the current wave of glass skyscrapers look dingy. Its angularity not only plays with light, but seems to evaporate mass with height.

Piano's original vision was sketched in Potsdamerplatz, Berlin in 2000, when he met developer Irvine Sellar. It has evolved, and now been realised by the architects in charge, RPBW's Joost Moolhuijzen and William Matthews. The Shard's base merges seamlessly with the surrounding public »

RENZO PIANO: CV HIGHLIGHTS

2012 Ronchamp

Nunnery and gatehouse facilities at Le Corbusier's iconic chapel

2010 Central St Giles, London

Office and plaza development injecting colour into area behind Centre Point

2009 Chicago Art Institute Extension

New wing and connecting bridge for great art institution

2008 California Academy of Sciences, San Francisco

Cutting-edge museum complex under a green roof perforated with circular skylights

2007 New York Times Building

Landmark 228m-high glass skyscraper with a mast

2004 Padre Pio Pilgrimage Church, San Giovanni Rotondo

Copper-roofed postmodernist church with piazza and facilities for seven million visitors a year

2000 Aurora Place, Sydney

Piano's first major skyscraper, 188m high plus a 30m-high mast, in a curving form with fin

1990s Potsdamerplatz Masterplan

Masterplanning the rebirth of Berlin's focal urban hub, and design of theatre and office block

1997 Beyeler Foundation Museum, Basel

Glass-roofed gallery integrated into gardens

1994 Kansai Airport Terminal

1.7km-long terminal for new Osaka Airport

1991 Punta Nave, Genoa

RPBW's offices in stepped glass terraces high above sea

1991 Jean-Marie Tjibaou Cultural Centre, New Caledonia

Polynesian cultural centre with 10 wooden buildings inspired by Kanak huts

1990 IRCAM Extension, Paris

Terracotta and glass building for acoustic research centre

1986 Menil Collection, Houston

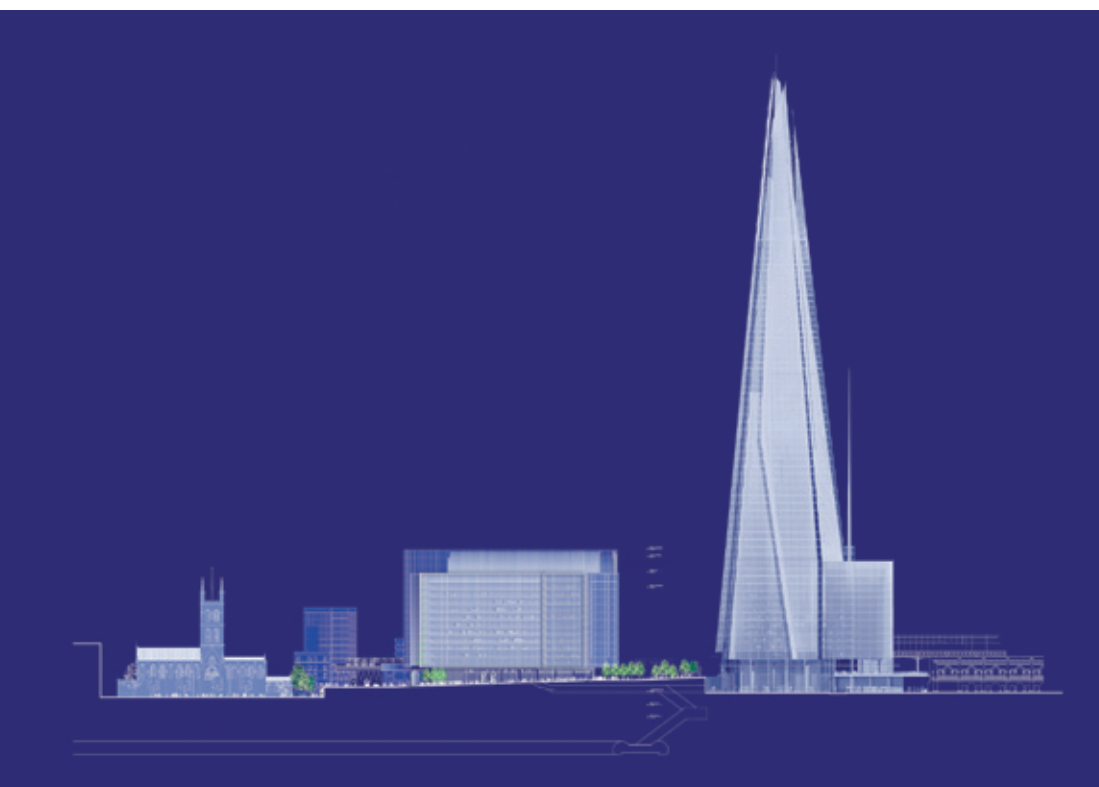
High-tech-style art and cultural centre

1976 Centre Pompidou, Paris, with Richard Rogers

Landmark exhibition centre that spectacularly put high-tech architecture on the map, with new open plaza

1970 Italian Pavilion World Expo 70, Osaka

Piano's first commission, built by brother Ermanno, for pavilion with diagonally cantilevered glass rhomboids



RONCHAMP AND THE SHARD SHARE RENZO PIANO'S CLARITY OF DESIGN AND OPENNESS TO NATURAL LIGHT, BUT HOW DIFFERENT THE TRANQUILITY OF A NUNNERY AND THE VERTICAL DYNAMICS OF THE BIG-CITY SKYSCRAPER



'I LEARNED FROM MASTERS, SAYS RENZO PIANO. BUT ABSORBING THEIR SKILLS CAN ONLY GO SO FAR. 'ONE DAY YOU SAY: FUCK! I NEED MY FREEDOM. IF YOU DON'T HAVE THAT SHIFT TO DESIRE FREEDOM, YOU GET PARALYSED. YOU HAVE TO BE GRATEFUL AND BE A REBEL'

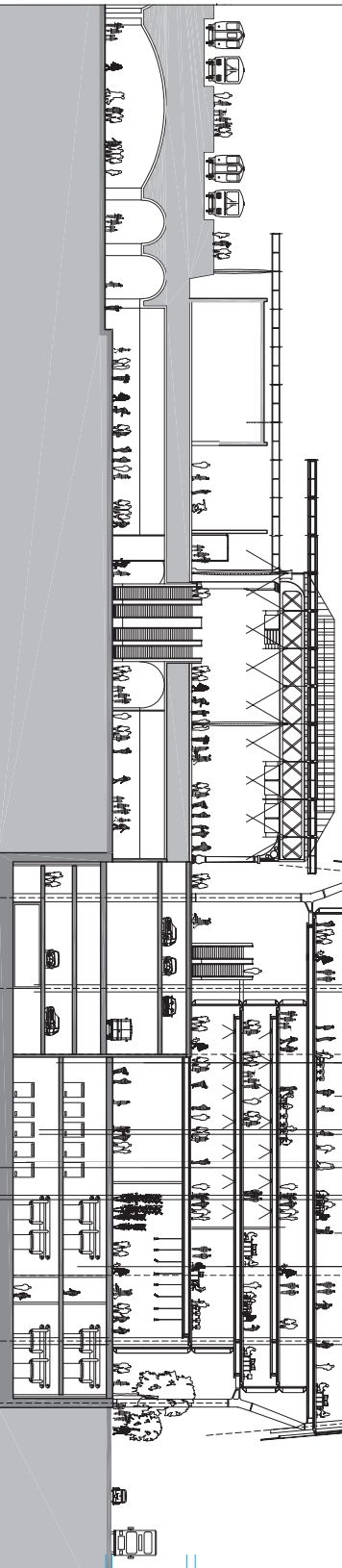


SHARD TIMELINE

- 2018** — Target date for completion of the redevelopment of London Bridge Station
- July 2012** — Construction of the Shard complete
- March 2012** — The Shard tops out at 310m
- September 2011** — Fifth crane installed to build steel-framed spine above core, reaching 317m
- November 2010** — Core reaches 235m, overtaking One Canada Square as London's tallest structure
- January 2010** — Concrete core reaches ground level
- February 2009** — Demolition complete. Site preparation begins with Mace as main contractor
- September 2007** — Shard on hold due to financing concerns over Halabi
- June 2006** — Renzo Piano and Richard Rogers drive a flock of sheep across Millennium Bridge for London Architecture Week
- 2005** — The Place, a Renzo Piano-designed 17-storey office building by the Shard, announced to replace the Safier- designed New London Bridge House
- Spring 2013** — Viewing Galleries and Shangri-La Hotel to open. The Place is completed. Sellar's final element of £1.5bn London Bridge Quarter
- December 2011** — Shard core completed at height of 244m, steelwork above underway. Planning permission granted for £2.5bn Grimshaw-designed redevelopment of London Bridge Station
- June 2010** — First of 11,000 glass panels onsite, cladding begins. LBO buy out TfL's leasing agreement
- March 2009** — Piling begins
- January 2008** — Qatari investors, led by Qinvest bank, buy out Halabi and CLS Holdings. Demolition of Southwark Towers on the Shard site begins
- October 2006** — Mace lined up for £350m construction contract by Sellar's consortium with tycoon Simon Halabi and CLS Holdings
- 2006** — The Shard, The Place with transport and public realm developments rebranded as London Bridge Quarter (LBO). Transport for London (TfL) sign lease to relocate to the Shard
- 2004** — Sellar appoints WSP as structural engineer and Arup as design engineer
- November 2003** — Deputy Prime Minister John Prescott approves what is now known as The Shard of Glass
- March 2002** — Southwark Council and Ken Livingstone approve Renzo Piano's design for London Bridge Tower
- March 2001** — Piano's revised design unveiled. English Heritage compares it to a shard of glass' tearing through historic London
- May 2000** — Ken Livingstone elected Mayor of London
- 2000** — Sellar meets Renzo Piano at Potsdamerplatz, Berlin. Piano sketches new concept for the tower on a restaurant serviette
- 1998** — Developer Irvine Sellar pays £40m for Southwark Towers, a 25-storey 1978 block housing PricewaterhouseCoopers at London Bridge

FACTS

- THE SHARD**
- Height from ground: 306m
 - Area: Gross 12,7137 sq m; Net 84,579 sq m
 - 72 occupied storeys
 - Concrete core, steel frame, post-tensioned concrete slab floors above offices
 - 44 lifts
 - 48 car parking spaces, in a stacker
 - Refuge floors at levels 31, 32, 33 and 68
- SPIRE: LEVELS 73-87**
- Five triple-height floors (15 levels)
 - Cleaning cradle equipment at levels 75 and 87
 - Provision for meditation space at level 78
 - Above level 87, glass shards mounted on trusses continue up
 - Open apex at 310m above sea level
- OBSERVATORY: LEVELS 68-72**
- Height: 244m
 - Triple-height space reached at level 69
 - Level 72 open at corners
 - Total area 2,838 sq m
- RESIDENTIAL: LEVELS 53-65**
- Ten apartments, of which three are duplex
 - Total area 5,814 sq m
- SHANGRI-LA HOTEL: LEVELS 34-52**
- Five-star hotel with 202 rooms on levels 36-52
 - Area 17,842 sq m, each room average 42 sq m
 - Interior design by award-winning Hong Kong-based Steve Leung
 - Infinity pool and bar Glnabar by Andre Fu (see page 60) on level 52
 - Meeting room for 200
 - Double-decker lifts separate guests above, staff below
- RESTAURANTS: LEVELS 31-33**
- Double-decker lifts separate diners above and Observatory visitors below
 - Total area 2,838 sq m
- OFFICE: LEVELS 4-28**
- Floor-to-floor height 3.56m
 - Perforated floor joists, steel decking
 - Total area 5,5247 sq m, including 'Backpack'
 - Backpack is in two parts, 73.6m and 71.4m high
- ENVELOPE**
- Each side of tower has two facades or 'shards', each configured differently, offset from square plan, inclined six degrees from vertical
 - 11,000 glass panels based on 1.5m x 3.8m module
 - Total area 56,000 sq m
 - Triple-glass cavity-ventilated with sun-activated automated shutters in 250mm gap
- GROUND**
- New piazza between Shard and The Place office block
 - Escalators descend to St Thomas Street
 - Large canopies to deflect down-draft
 - Continuous glass canopy connects to London Bridge station platform 9
 - Office entrance level with station
 - Public, office, hotel and residential entrances separated around base
- BELOW GROUND**
- 3 basement levels
 - Piling up to 62m deep into Thanet sand



This image: Grey blinds activated by solar sensors are stored into red boxes at the top of each triple-glass pane, the only colour on the facade

Right: Floor plans at different levels of the Shard, from offices at its widest point to the Observatory viewing platform at its pinnacle

Far right: An elevation drawing shows the blocky extension that Piano calls the 'backpack' and which he strenuously defended at the public enquiry

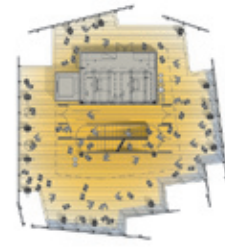


realm and London Bridge station with its 54 million-a-year users.

The tower's jagged facades begin 20m up, two on each side of a square, all angled differently in plan. Grey blinds in each triple-glass panel are activated by solar sensors, and stored in red boxes, the only colour in the facade. The tower's form has a blocky extension, or 'backpack', to pack more in. Piano describes it as 'a liaison' between brick buildings on St Thomas Street and the tower. The highest storeys, above the concrete core, are the Observatory, which will include a jaw-dropping, triple-height space suspended in the sky. It will handle a million visitors a year, a third of what the London Eye gets - Matthews said that any more and it would be a 'turbo-sausage machine'. Above it, Piano considered a meditation space, but access is limited and anyway, the Observatory will already blow people's minds.

The original eco-ideas of drawing on the London aquifer and passively radiating excess heat with 3km of pipe in the spire have been dropped, but the Shard has good sustainability credentials. Much of the steel is recycled, and the concrete uses fly-ash. Heat from offices will reduce energy requirements from above. Not least, it plugs straight into the nexus of rail, Tube and buses. There is confidence for a BREEAM Excellent rating.

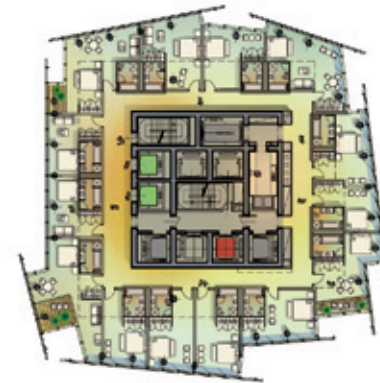
At 310m above sea-level, the Shard breaches the Civil Aviation Authority's 1,000ft limit by just over 5m - Matthews noted that, ironically, planes now fly lower to get the view. It's only serious London competition, the 288m-high Pinnacle, is halted. A decade ago, there were only 18 skyscrapers in the world taller than the Shard, but now there are 60. The Foster-designed twin Hermitage Plaza towers at >>



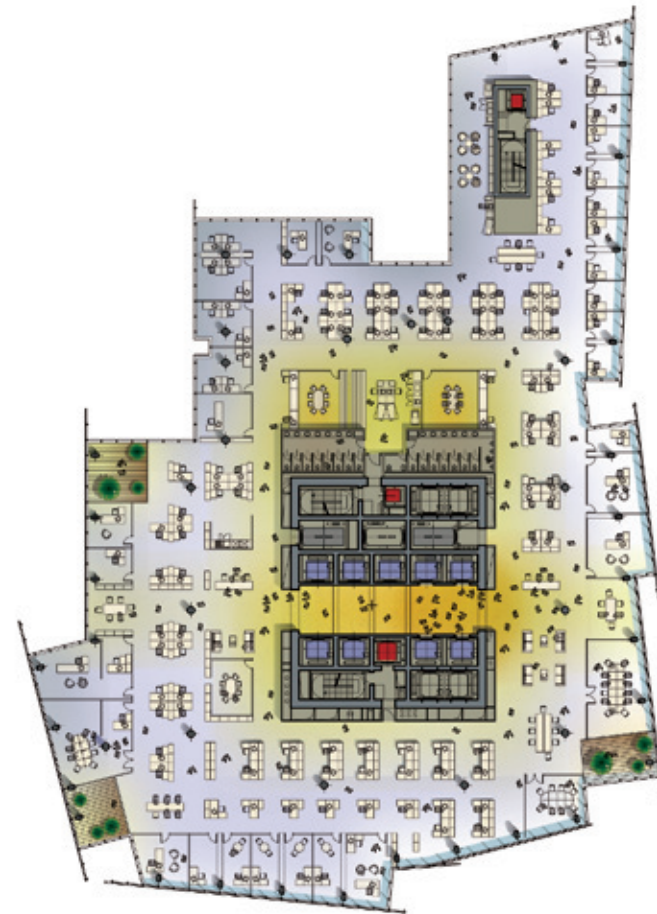
Viewing gallery



Apartments

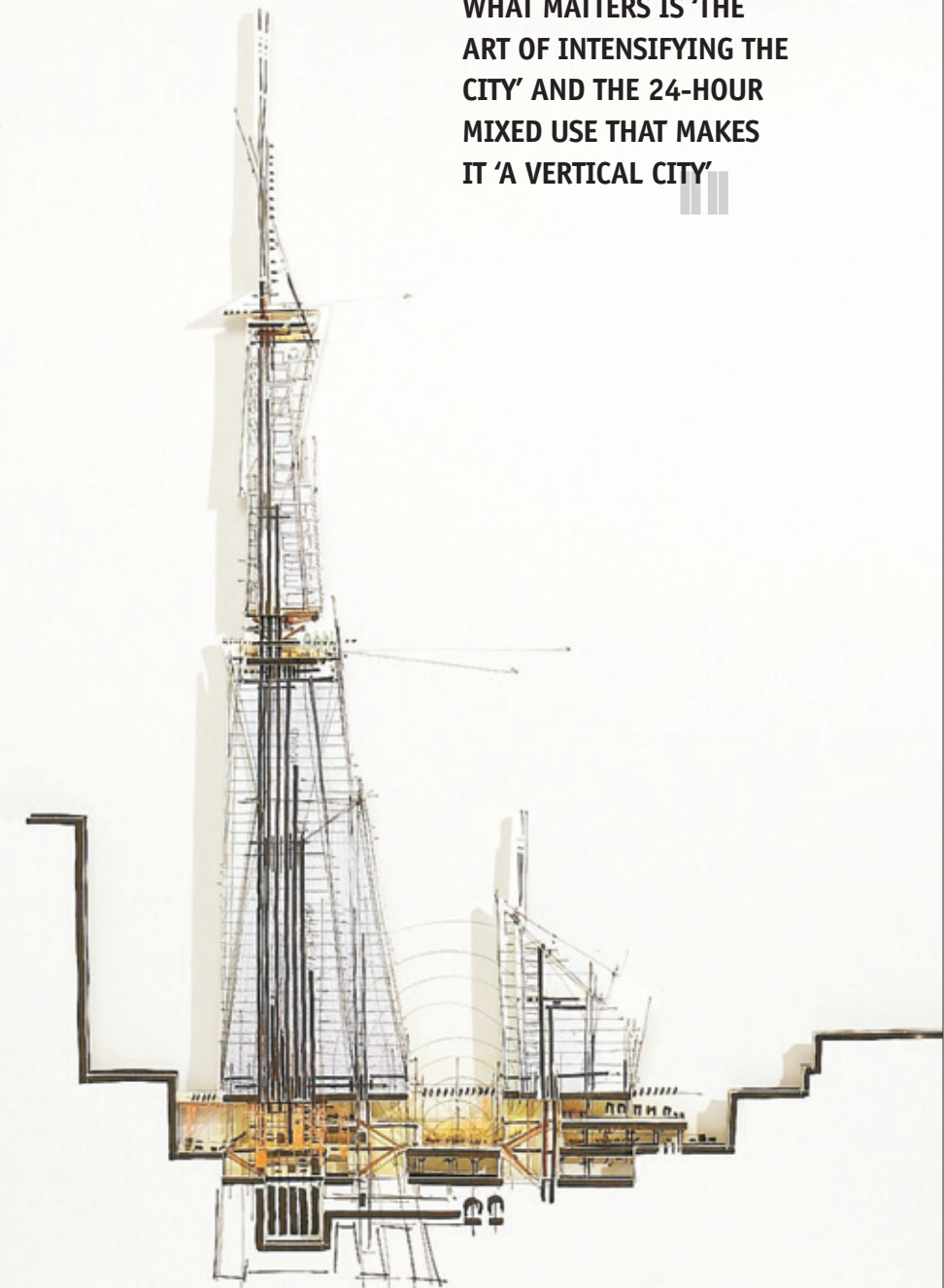


Hotel guest rooms



Offices

FROM THE WORD GO PIANO INSISTED THAT THE SHARD IS NOT ABOUT HEIGHT... WHAT MATTERS IS 'THE ART OF INTENSIFYING THE CITY' AND THE 24-HOUR MIXED USE THAT MAKES IT 'A VERTICAL CITY'





320m high at Le Defense in Paris have been approved. It's as if cities are somehow second rate if they don't have a super-tall (300m plus) tower.

'It's true, you are right,' Piano reflects. 'But this is not a good part of the story. You know very well it's a phallic symbol. In Italian it's called priapismo. I like the idea of going up because it's a pleasure, the fresh air. I don't like the idea that you race up to show you are more powerful than someone else. Our job is not to follow that line.' From the word go he has insisted that it is not about height, although he is set to double the Shard height with Seoul's Yongsan tower. What matters is 'the art of intensifying the city' and the 24-hour mixed use that makes it 'a vertical city'.

But surely, the city is different – full of surprise, different spaces, textures and atmospheres? Piano again agrees – 'I love

historical centres, I love cities.' His analogy of building as city goes back to the Centre Pompidou. 'I used this idea that it's like a little town. You have streets, stairs, plazas, you have different functions. The city is not predictable.' He promises surprise at the Shard, especially at the Observatory – 'I can already see the faces of the people there.'

Piano ponders when asked what buildings he would like to be remembered for. He picks the Centre Pompidou, his own Genoa offices ('a greenhouse on top of the sea, the perfect interpretation of the environment')... and the Shard, whose genesis was when his youngest child was born. 'The tendency is to say you love the youngest child most, the one who is still there, who needs more help... Maybe I'm saying so because the Shard of Glass is the youngest, but also because I love the story.'

Is the Shard a good thing? You bet. Why?

A decade ago there were only 18 skyscrapers in the world taller than the Shard's 310m. Now there are 60, but the best are uniquely local, and the Shard is already visually redefining London

Firstly, as promised, it epitomises the new development model of intensification and connectivity and even suggests an urban car-free future. Secondly, foolishly or not, it confidently reaffirms London's future world status by joining it to the now Asian-dominated club of cities with supertalls, yet does so without denying the history around it. Thirdly, its form reinvents the heavenward aspiration of gothic spires, but with air and light, and just as big glass becomes questioned and cliché, it is re-presented, crisp and fresh. Lastly, most skyscrapers could belong anywhere, from Dallas to Dubai, but the best are uniquely local. The Shard is already visually redefining London, even with the quiet thrill of distant glimpses.

'The building will be adopted, because it will be public,' says Piano. 'I think people will start to love it more and more.' Many are sharing that love already. ■