

Designed by **ANISH KAPOOR**
with **CECIL BALMOND/ARUP**

MAYOR OF LONDON


ArcelorMittal

ArcelorMittal ORBIT





Our ambition is to turn the Stratford site into a place of destination, a must-see item on the tourist itinerary – and we believe the ArcelorMittal Orbit will help us achieve that aim.

Boris Johnson
Mayor of London

Like many parents we try pathetically to improve our kids by taking them to see the big exhibitions. We have trooped through the Aztecs and Hockney and Rembrandt – and yet of all the shows we have seen there is only one that really seemed to fire them up.

I remember listening in astonishment as they sat there at lunch, like a bunch of art critics, debating the intentions of the artist and the meaning of the works, but agreeing on one point: that these were objects of sensational beauty.

That is the impact of Anish Kapoor on young minds, and not just on young minds. His show at the Royal Academy broke all records, with hundreds of thousands of people paying £12 to see his stuff – an extraordinary achievement for a contemporary artist.

So I am thrilled that we are today announcing that Anish has won a competition to design an Olympic visitor attraction to be built in the park for 2012.

Of course some people will say we are nuts – in the depths of a recession – to be building Britain's biggest ever piece of public art. But both Tessa Jowell and I are certain that this is the right thing for the Stratford site, in Games time and beyond.

Our Olympic Park already has so much to offer, from the stadium and velodrome to shopping at Westfield to Zaha Hadid's aquatics centre. But about 18 months ago we decided we needed something extra, something to distinguish the east London skyline, something to arouse the curiosity and wonder of Londoners and visitors.

With £9.3 billion going into the Games, we need to do everything we can to regenerate the area and to ensure the crowds are still coming here in 2013 and beyond.

Our ambition is to turn the Stratford site into a place of destination, a must-see item on the tourist itinerary – and we believe the ArcelorMittal Orbit will help us achieve that aim.

I must confess that my original idea was much more modest. I thought we might have a kind of 21st century Trajan's column, with a winding frieze of modern Londoners, perhaps done by primary school children. That was soon left on the drawing board, eclipsed by the daring suggestions of some of the greatest artists in the world.

With the help of a panel of experts, including Nick Serota and Julia Peyton-Jones, we eventually settled on Anish. He has taken the idea of a tower, and transformed it into a piece of modern British art.

It would have boggled the minds of the Romans. It would have boggled Gustave Eiffel. I believe it will be worthy of London's Olympic and Paralympic Games, and worthy of the greatest city on earth.

In helping us to get to this stage, I especially want to thank David McAlpine and Philip Dille of Arup, and everyone at the GLA, ODA and LOCOG. I am grateful to Tessa and also to Sir Robin Wales and Jules Pipe for their encouragement and support.

Above all I want to thank Lakshmi Mittal for his superb generosity and his commitment to London. Had I not bumped into him, for the first time, in a Davos cloakroom, we would not be where we are today.

Our conversation took about 45 seconds. I explained the idea, which took 40 seconds. "Great. I'll give you the steel," he said, and that was it. In reality, ArcelorMittal has given much more than the steel.

We are not there yet, but I have great confidence in the team we have assembled, in the ODA led by David Higgins and the organisational skills of Peter Rogers.

So watch this space, folks. Correction: don't just watch this space. I hope you will soon be able to see this space being built, to climb up it with your family, and to be amazed at the view.



Lakshmi N. Mittal
Chairman and Chief Executive Officer
ArcelorMittal

“I live in London – I’ve lived here since 1997 – and I think it’s a wonderful city. This project is an incredible opportunity to build something really spectacular for London, for the Olympic Games and something that will play a lasting role in the legacy of the Games.”

What was your initial reaction when Boris first suggested the idea of an Olympic Park sculpture?

Boris first mentioned it to me in a cloakroom in Davos last year. We were both on our way to separate dinner engagements so we had only a few moments to discuss it. But I was immediately interested because I remember the great excitement felt throughout the city when it was announced that London had been selected to host the 2012 Olympic and Paralympic Games. I think the Games are one of the few truly iconic global events; they really bring people together, as countries unite around the desire to win.

The 2012 Games are now only two years away and I think everyone in London wants to put on an amazing show for the world. So when Boris mentioned the idea of constructing a special piece of art to commemorate the Olympics, I was fascinated to know more, particularly when he said he wanted it to be built from steel.

I live in London – I've lived here since 1997 – and I think it's a wonderful city. This project is an incredible opportunity to build something really spectacular for London, for the Olympic and Paralympic Games and something that will play a lasting role in the legacy of the Games.

Why is ArcelorMittal funding this project?

ArcelorMittal is a global company with operations in more than 60 countries. Our purpose is to produce steel. Steel is used in so many aspects of life: the cars we drive, the houses we live in and the stadiums being constructed for the London 2012 Games. Building a huge steel structure to celebrate the London Olympic and Paralympic Games is a great opportunity for ArcelorMittal to showcase the unique qualities of steel and its critical role in the world's infrastructure. It is also a fantastic way to give a lasting gift to London, to play a part in the regeneration of a specific area of London and to signal our support for an iconic global sporting event.

How much steel will be used in the project and where will it come from?

The ArcelorMittal Orbit will use approximately 1400 tonnes of steel. The steel will be sourced from ArcelorMittal plants around the world, with exact locations depending on the grades of steel required and the technical requirements of the project. As much of it as possible will be provided by ArcelorMittal.

Who came up with the name ArcelorMittal Orbit?

The Orbit was the name given to the initial working design by Anish and Cecil. Their creation is an orbit, a continuous loop or continuous journey from the start to the finish. There are no crossroads or links, it starts at one end and finishes at the other.

This was very much part of Anish and Cecil's creative representation of the Olympics and the extraordinary physical and emotional effort that people undertake when they compete. Like the Orbit, the Olympics has a beginning and end but throughout it is a continuous drive to do better, to challenge oneself to do as well as possible.

So while it started off as the name of the working design, we all liked it and felt that it represented both the Games and what the sculpture is in a creative sense. We called it the ArcelorMittal Orbit because ArcelorMittal is supporting the project and is proud to be the company that is enabling such a unique piece of art to be constructed.

What was it about the design that made it stand out from the other submissions?

Last year we held a competition and asked people to submit a design for an Olympic tower. We had around 50 submissions, which was fantastic in itself, but what was really extraordinary was the way in which the word 'tower' was interpreted by the different artists.

The judging panel made a unanimous decision to go for Anish and Cecil's design. Anish and Cecil have a unique, well-documented and very successful working relationship. They have created some remarkable art in recent years, and the judging panel really felt that their entry not only represented the essence of the Games, but it was also buildable within an ambitious time frame.

We are delighted with the outcome. We have a bold, beautiful and magnificent sculpture which, when built, will be one of the world's largest sculptures. We think it will be a phenomenal addition to London's skyline and the cultural landscape.

When will the sculpture be complete?

We will be starting work as soon as possible and we anticipate it will be complete by the end of December 2011 at the latest. Visitors will have access to the ArcelorMittal Orbit during and after the Games. It will also be available for hospitality and will offer a wonderful view of the stadium.

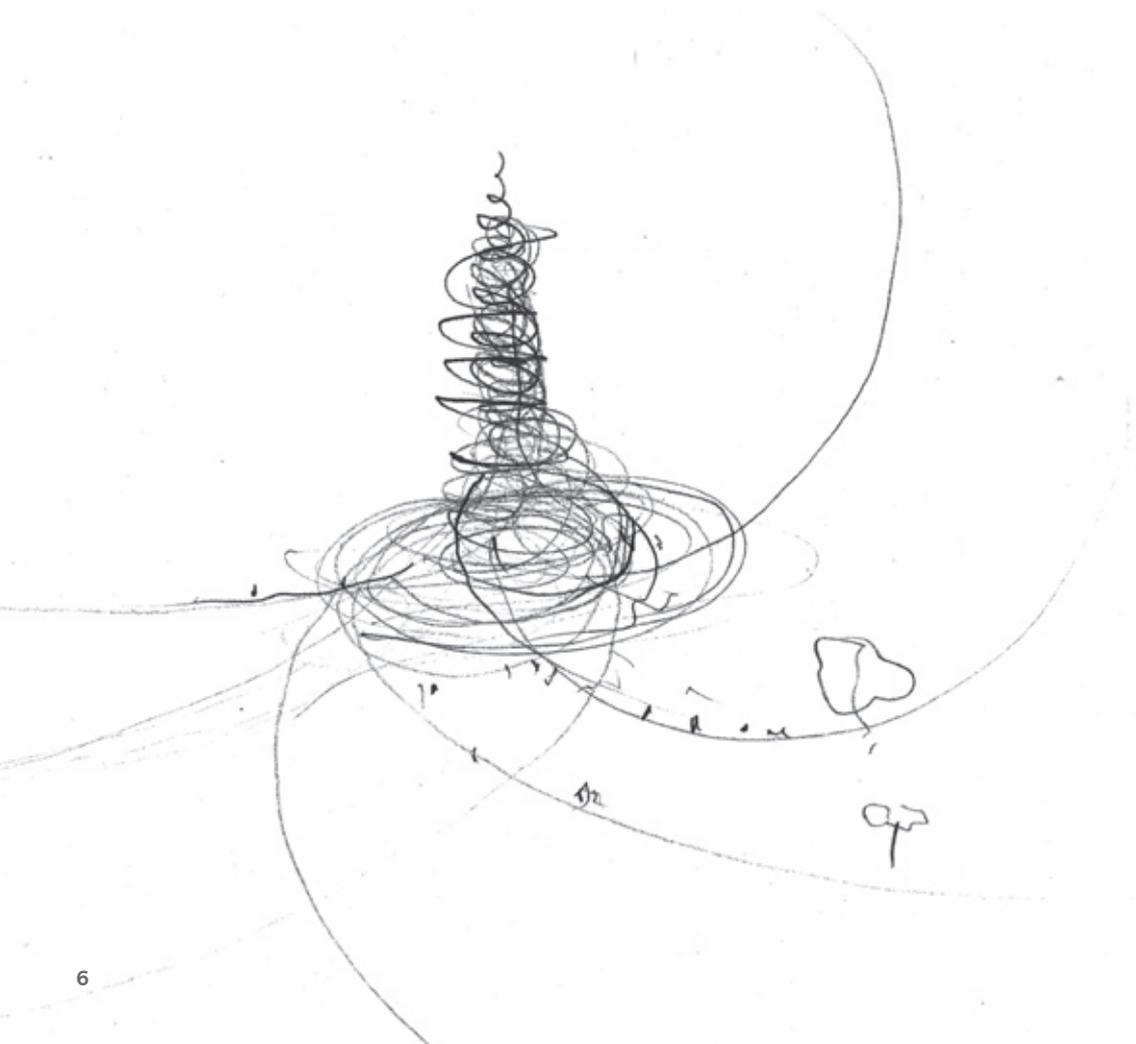
How do you think Londoners will react to the sculpture?

I hope they react very positively. I hope this great piece of art will become another reason for people to visit London and, in particular, draw them to that area of the city. Anish Kapoor is undoubtedly one of the world's greatest living artists and I hope the people of London will feel proud that such a unique sculpture is being built in their city to celebrate the Games. We at ArcelorMittal are certainly proud to be part of it.



Anish Kapoor
Cecil Balmond

“We are both interested in a place where architecture meets sculpture,” says Kapoor. “We are also really into geometry and the way that form and geometry give rise to structure – that’s been an ongoing debate between Cecil and me for the last 10 years or so, coming from our two very different perspectives.”



Anish Kapoor and Cecil Balmond on the inspiration and creative process behind the ArcelorMittal Orbit.

The key to the unique collaborations by Cecil Balmond and Anish Kapoor lies in the pair's refusal to be labelled.

It's tempting to pigeonhole Cecil Balmond as the down-to-earth pragmatist who counterbalances the visionary fantasies of Anish Kapoor – to categorise him as the structural technician bringing the artist's creative genius to reality. Tempting, but misleading.

Such a straightforward analysis of their roles in creating some of the world's great monumental artworks is far too simplistic, and does not do justice to the individuals' talent and broad vision.

Of course, the 56-year-old Kapoor is an artist, while Balmond, a decade older, is a structural engineer by trade. But they are both unconstrained by these convenient labels. Over his 30-year career, Kapoor has developed a reputation for grand-scale installations and public sculptures, effectively blurring the lines between the fields of art and architecture, between concept and construction, form and function.

Similarly Balmond, Deputy Chairman of global engineering company Arup, has long forged highly productive relationships with many of the world's leading architects including Rem Koolhaas, Daniel Libeskind and Toyo Ito. He has also designed buildings and structures himself, is an acclaimed author in the field of design and heads up Arup's Advanced Geometry Unit (AGU), a quasi-academic research group which blends science, maths and architectural design to 'explore the impossible' in terms of structural engineering.

So the coming together of two such multidisciplinary creative talents always had the potential to produce work of significant impact, not least because both parties have a reputation for thinking far beyond the conventional.

"It's important for every structure to have a sense of the poetic," says Balmond. "We want people to forget the engineering, the construction, the materials and simply 'experience' it." To illustrate this point, he uses the analogy of a world-record breaking athlete: we don't want to know about the years of hard training, we simply want to witness the magic of someone running faster than ever before.

Anish Kapoor, who was born in Mumbai but has lived and worked in London since arriving as a teenager to study art, first came to national prominence on winning the Turner Prize in 1991. Over the following decade his work became increasingly grand in scale, frequently employing apparently simple curved forms that housed a series of apertures and cavities. In 1999 his 35-metre tall Tarantara was installed at Gateshead's Baltic Flour Mills, followed by his Sky Mirror, erected outside the Nottingham Playhouse to reflect the sky and surroundings in 2001 (and later replicated in even larger form outside New York's Rockefeller Center).

But it wasn't until Kapoor was invited to provide the installation for the Tate Modern's Turbine Hall in 2002 that he first worked with Cecil Balmond. By this stage, the quietly spoken Balmond had already shifted the perceived role of the engineer in architecture from enabler to co-creator via his ground-breaking work with Koolhaas's OMA group and his realisation of the captivating 2002 Serpentine Pavilion in conjunction with Japanese architect Ito.

So 'trespassing' into the art world felt like an entirely natural step for a man who describes himself as an intuitive rather than mathematical thinker. However, Balmond has recalled how Kapoor was "an artist who is not used to sharing" – who had to be persuaded to work in genuine collaboration to create a buildable structure for the Tate project.

That structure evolved into Marsyas, the extraordinary 450-foot blood-red PVC tubular sculpture that, like many of Balmond's pieces, seemed to defy gravity. Interestingly, Balmond recalls that the art world heaped praise on Kapoor for creating a wonderful piece of art, while the architecture critics raved over Balmond's feat of engineering.

"Sculpture is about seeing something in 3D from the outset, whereas most architects tend to see things in plan form. Anish tells me I think more like a sculptor, and he finds fertile ground in working with us (at AGU) in that respect," says Balmond.

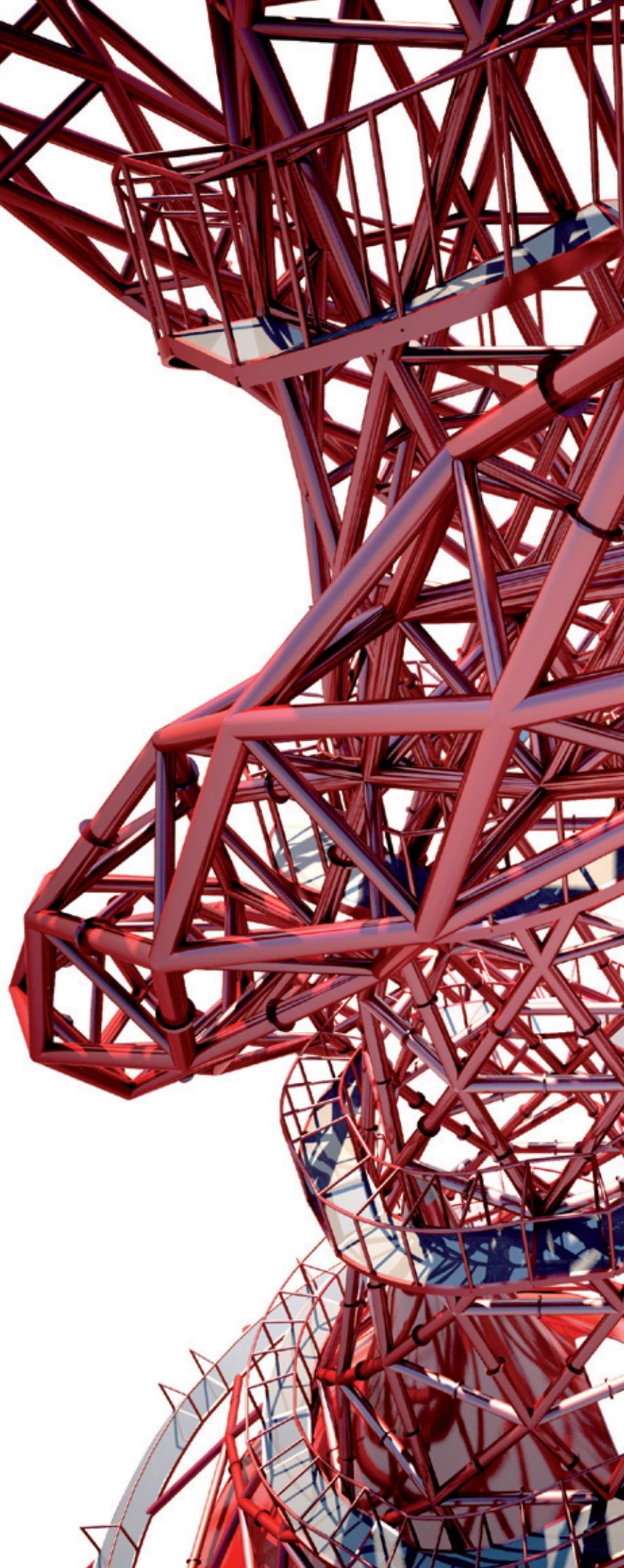
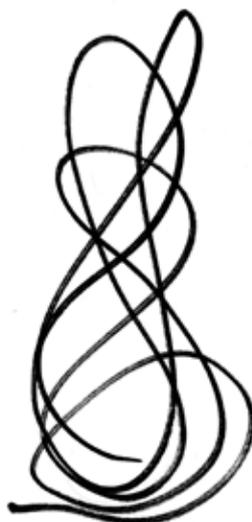
As well as taking on numerous projects independently – Kapoor's acclaimed Cloud Gate in Chicago and Balmond's work on Beijing's Bird's Nest stadium spring to mind – the pair has maintained a fruitful partnership. They are currently working together on the 'Tees Valley Giants' project – five enormous pieces of public art commissioned by Tees Valley Regeneration – as well as the ArcelorMittal Orbit.

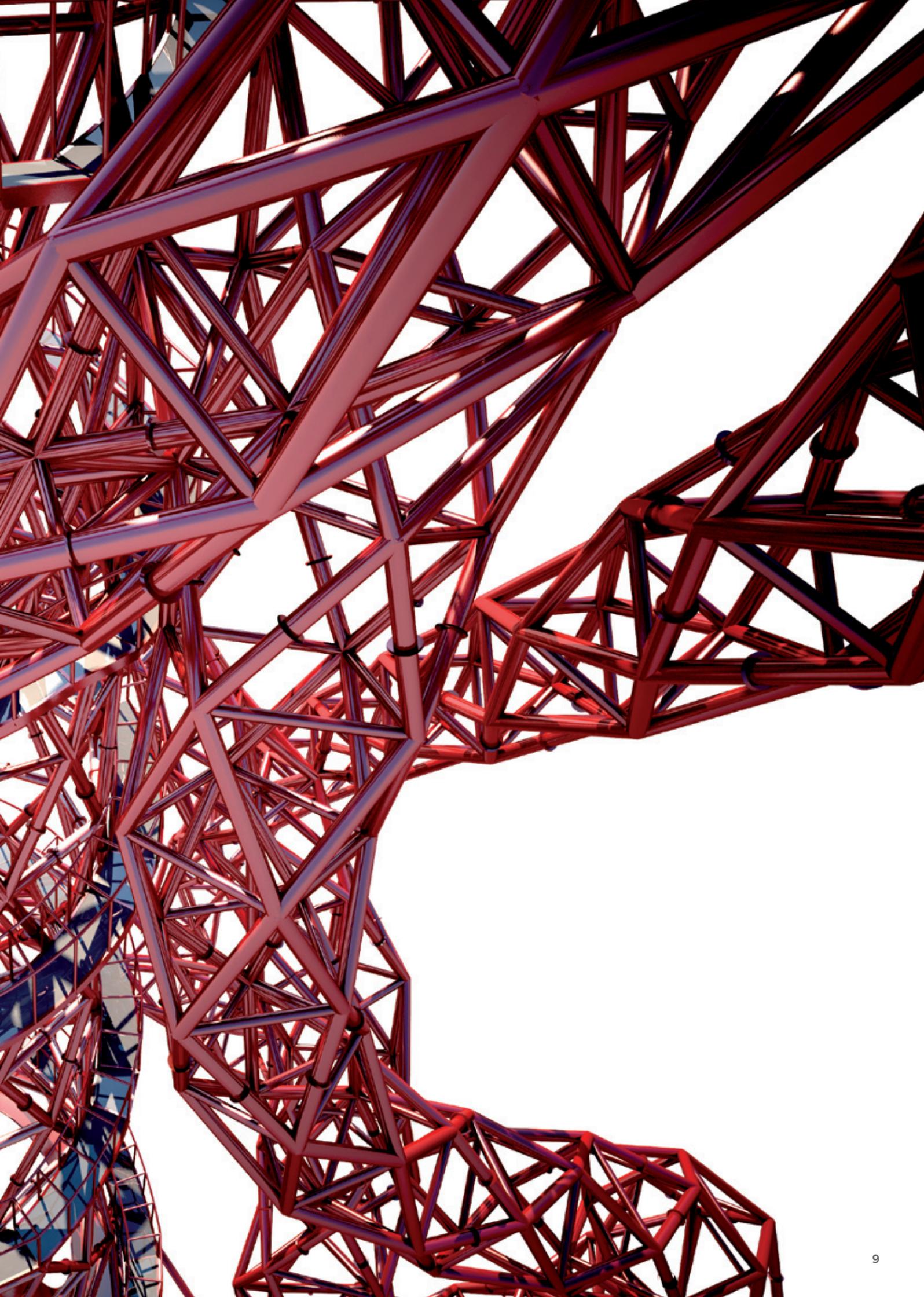
"We are both interested in a place where architecture meets sculpture," says Kapoor. "We are also really into geometry and the way that form and geometry give rise to structure – that's been an ongoing debate between Cecil and me for the last ten years or so, coming from our two very different perspectives."

They meet regularly to sketch and draw as well as assess models and computer animations, frequently checking back that the work adheres to "the fundamental truth of the project".

The latest challenge for this unique artistic partnership is bigger than ever: creating a highly significant monumental artwork that is effectively a functioning building at the same time, neither pure sculpture nor pure architecture.

But the relationship between these two men – spurring each other forward, finding solutions to material and structural obstacles and challenging our very notion of stability, space and form – both reflects and enhances the possibilities inherent when creative disciplines coalesce. All we can do is expect the unexpected.









In conversation with Anish Kapoor and Cecil Balmond.

How did the ArcelorMittal Orbit come about?

AK: Cecil and I have worked together over a long period of time. We were invited by the Mayor's office to submit a proposal for a tower of at least 100 metres, on the Olympic site. Tower structures are something we've toyed around with before, so it seemed natural to us to take this on and try and understand what a 21st century tower could be like.

CB: The opening comment to me was "Boris Johnson is looking for an icon to match the Eiffel Tower". So of course that was irresistible to me.

What inspired you in this work?

AK: One of the references was the Tower of Babel. There is a kind of medieval sense to it of reaching up to the sky, building the impossible. A procession, if you like. It's a long winding spiral: a folly that aspires to go even above the clouds and has something mythic about it.

What I'm interested in is the way 21st century thinking about older technologies allows one to go both forwards and backwards.

The form straddles Eiffel and Tatlin.

CB: The word Orbit came to mind; just the word as a metaphor. We started sketching, the hand went round this way first, then it gradually became more complex and I was thinking of an electron cloud moving. As you look up you will feel as if it's compiling itself in space.

AK: It's this notion of a journey that takes you upwards.

Anish and I have debated over the years about nonlinearity, which is using instabilities as stabilities. It's a new way of thinking, a radical new piece of structure and architecture and art, and London is the place to do it.

Can you explain the form, and how it works?

CB: What is new in this piece is its geometry and how it's been put together.

All tower structures are pyramidal, but we wanted to see if we could create a structure that seemed unstable, seemed to be propping itself up. So, we've slowly evolved a form that seems to be teetering, weaving itself, a loop.

The whole thing is in a twist, it's never centred, never quite vertical. That takes a certain amount of engineering prowess to put together but it also gives a certain form.

What is the significance of the material used in constructing the ArcelorMittal Orbit?

CB: The ArcelorMittal Orbit could really only be built in steel, to give the minimum thicknesses and the maximum strength. I didn't really think of any other material. Actually, you couldn't really do this coiling structure in anything else.

Tell me a bit about the way the two of you collaborated on this project.

AK: We are really interested in geometry and the way that form and geometry give rise to structure, and that's something that's an ongoing debate between us from our two very different perspectives.

CB: Over the years, Anish and I have been debating and trying to find the essence of a form that has its own architecture, sculpture and structure. By merging these into one piece of work, we think it has deep resonance more than any single piece of art or architecture.

Scale is a vital part of this process. We're talking of something that is 120 metres tall. The spaces in between the structure are cathedral like; they're very tall, very big. In between the mass and the jumble of it, there's the geometry.

All the people who work with me are great 3D thinkers. In the world of architecture a lot of people design in section, but a sculpture is seeing something in 3D from the outset.

I have a team of architects and engineers in my Advanced Geometry Unit (AGU) at Arup. It is a very special group, including Daniel Bosia and Florian Gauss. They have been instrumental in realising this project.

What will the ArcelorMittal Orbit mean for the Olympics, and for London?

With the Olympic Village and the whole area being developed, this sculpture completes the composition and adds a fabulous exclamation mark. It celebrates the site.

This is not just for the Olympics, this is for London, and the ArcelorMittal Orbit should stand the test of time.

This site, while it looks over London, is a bit of virgin land where one can set the parameters again. Viewing is a very important part of what it is.

It is a radical piece of work, and that always attracts its own interest in time. Something that has its own intrigue in architectural terms will always draw people. It's for the Olympics, London and the world.

How will people who visit the ArcelorMittal Orbit engage with it, do you think?

CB: I believe we all love to see something being built. As kids we all play with building blocks. The real three dimensionality of this piece is going to animate and excite people to be part of it.

There comes a moment when you are aware that a piece has been engineered and I am fighting against that. Ultimately it has to be designed, calculated, built and constructed, but you should not notice the effort.

AK: The experience will be about winding up and up and in on oneself. It is a long way to walk. And it's pretty steep. Then of course at the top we have a truly spectacular view of London.

You want to forget the construction and engage with what you're experiencing. People will make it their own.



Anish Kapoor

Anish Kapoor is one of the most influential sculptors of his generation.

Born in Bombay in 1954, he has lived and worked in London since the early 70s. He studied at Hornsey College of Art, London (1973 – 1977) and at Chelsea School of Art, London (1977 – 1978).

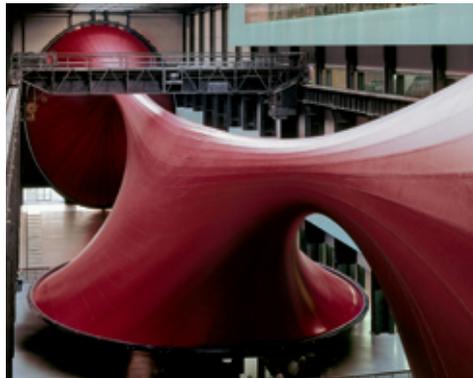
His first solo exhibition was held at Patrice Alexandre, Paris in 1980. His international reputation was quickly established with an array of solo exhibitions held in various countries around the world. He has represented Britain in the Paris Biennale in 1982, and again in 1990 at the Venice Biennale, for which he was awarded Premio Duemila.

The following year he won the prestigious Turner Prize Award. He recently acted as Guest Artistic Director of the Brighton Festival 2009. He was elected Royal Academician in 1999 and has been awarded Honorary Fellowships by the London Institute and Leeds University (1997), University of Wolverhampton (1999) and the Royal Institute of British Architects (2001).

His recent major solo exhibition at the Royal Academy of Arts in London (26 September – 11 December 2010), showcasing a number of new and previously unseen works, was the most successful ever presented by a contemporary artist in London.

1	2
3	4

- 1 Marsyas, 2002
PVC and steel
Inst: Tate Modern, 2002-2003
Photo: John Riddy
Courtesy: Tate
- 2 Dismemberment, Site I, 2003-2009
PVC and steel
25 metres x 84 metres
(west end: 25 x 8 m, east end: 8 x 25m)
Photo: Jos Wheeler
Courtesy: the artist
- 3 Cloud Gate, 2004
Anish Kapoor
Stainless steel
33 ft x 66 ft x 42 ft
Millennium Park, Chicago
Photo: Peter.J.Schluz , Patrick Pyszka
Courtesy: the City of Chicago
and Gladstone Gallery
- 4 Svayambh, 2007
Wax and oil-based paint
Dimensions variable
Inst: Royal Academy of Arts, 2009
Photo: Dave Morgan
Courtesy: the artist and Royal Academy of Arts





Cecil Balmond

Deputy Chairman of
Ove Arup & Partners Limited

Cecil Balmond's work is an open-ended visual application of theory. It has led to what could be described as a new forensic in aesthetics: a distillation of unrealised design potential that taps into sources that are not readily associated with architecture. It is also a compelling design force for architecture where Balmond's principle that structure is architecture puts a whole new rigour into his forms overlapping art with science.

He says: *"I see structure as a punctuation of space, episodic and rhythmic. These are wholly architectural concerns."*

Cecil Balmond founded The Advanced Geometry Unit at Arup in 2000 to pursue such ideas in the built form. It has been highly influential in a raft of renowned projects including Casa de Musica, in Portugal, with Rem Koolhaas; Marsyas at the Tate Modern, with artist Anish Kapoor; and Serpentine Pavilions, with Daniel Libeskind and Toyo Ito, plus Alvaro Siza and Eduardo Souto de Moura. His designs for the bridge in Coimbra, Portugal, the Weave bridge in Philadelphia, and the museum buildings in the Emirates create new typologies.

Balmond is the author of "No. 9" (1998), and "Informal" (2002), which won the Banister Fletcher prize for the best book of the year on architecture. The publication of his latest book "Element" (2007) coincided with the opening of the series, Frontiers of Architecture at Louisiana Museum of Modern Art, Denmark with a widely acclaimed exhibition on Cecil Balmond's and the Advanced Geometry Unit's work.

Balmond's installation, H-edge, was first unveiled at Artists Space in New York (2006). He rebuilt it for The Graham Foundation for Advanced Studies in the Fine Arts in Chicago together with a number of new installation pieces (2008-2009). H-edge is currently at the Carnegie Museum of Art; meanwhile, the Tokyo City Opera gallery is hosting an exhibition of Balmond's designs that opened in January 2010. The Tokyo exhibition is a tour-de-force, introducing visitors to an art form that blurs the boundaries between art, architecture, engineering and science.

Cecil Balmond was born in Sri Lanka, where he trained as a civil engineer. He joined Arup in London in 1968.

1	2
3	4
5	

- 1 Danzer Installation
Tokyo City Art gallery
- 2 Institute of the Pen
Emirates
- 3 Serpentine Gallery
2002
- 4 CCTV Headquarters Building
Beijing
- 5 Weave Bridge
Philadelphia





Sir Nicholas Serota, Director, Tate, on probing the parallels between art and sport.

Sir Nicholas Serota
Director, Tate

How is Anish Kapoor pushing the boundaries of his own body of work with this piece?

Anish Kapoor is an artist never content to rest despite his success. He is always questioning himself and us and our responses to his work. He's prepared to take on the idea of reinventing what a tower might mean and give it new energy. Most towers are just vertical erections, but this has a twist – the energy you might traditionally associate with this type of structure but in a surprisingly female form. The two together are really interesting.

Is it art or architecture?

Anish Kapoor increasingly works on an environmental scale, but his Marsyas project at Tate Modern in 2003 showed he's capable of working on an architectural scale. Cecil Balmond gives that ambition a reality and conviction that a sculptor working on his own might not achieve, so it's a building designed in collaboration with a great engineer and a great artist. I think it will make a wonderful addition to the London skyline.

Art and sport seem like strange bedfellows. Why should such collaborations be of interest to us?

Art and sport are not as far apart as people sometimes think. The Olympics were initially conceived as a festival of the body and the mind – that is to say sport and culture and the arts – and one of the great things about 2012 is that it will help to bring these elements back together in a way that hasn't been achieved in previous Games.

Anish's work has this sense of energy, twist and excitement that one associates with the human body as it explodes off the blocks down the 100m straight. In an abstract form, the sense of movement you have in the body is very much present in this sculpture. As such, it's the perfect answer to the question of how sport and art come together – and it's a great commission as well. For someone to help bring this into being in the way that Mr Mittal has is a really impressive piece of patronage.

What are the strengths of this kind of experiential installation compared with more traditional sculpture?

A sculpture of this kind that can be enjoyed by walking through, travelling up in the lift, and looking out from the platform will make people aware of their own bodies and their place in the world. Many artists have sought to control space in this way in recent years and this sculpture-cum-tower-cum-engineering feat is at the leading edge of where we are heading.

Thanks to all those who have participated in the development of the ArcelorMittal Orbit so far including:

Tony Aikenhead	James Lough
Andrew Altman	Barbara Marino
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Jan Boud	Johanna Pearson
Ben Cackett	Julia Peyton-Jones
Neale Coleman	Giles Read
Sujogya Dash	Mike Richards
Nicola Davidson	Peter Rogers
Paul Deighton	Malcolm Ross
Pierre Engel	Marion Saul
Simon Evans	Stefan Schwarz
Jerome Frost	Sir Nicholas Serota
Florian Gauss	Justine Simons
Guto Harri	Mark Sorrell
Samantha Hart	Chris Townsend
Dan Hawthorn	Hans Ulrich-Obrist
Oli Heywood	Sarah Wang
David Higgins	Sarah Weir
Roisha Hughes	Patrick White
Patrick Le Pense	Stevie White-McQuillan
David Lewis	Peter Wright
James Lingwood	Anita Zabłudowicz
Sir Stuart Lipton	
Ian Louden	

