
TEMENOS
ANISH KAPOOR AND CECIL BALMOND

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Designed by Cool Blue

Contents

Introducing Temenos

Kate Brindley
Director, mima

With the launch of Temenos in June 2010, Middlesbrough continued its legacy of commissioning ambitious art by the leading sculptors of our day. This new work by Anish Kapoor and Cecil Balmond joins important works such as Bottle of Notes by Claes Oldenburg in acting as landmarks and destinations for the public and recognising the sense of pride and ambition in the area.

Temenos is located in the Middlehaven area of Middlesbrough, the riverside area earmarked for the town's most significant development under a masterplan by Will Alsop. Standing at an impressive 50 metres and measuring 110 metres in length, the sculpture will join a new home for Middlesbrough College, the UK's largest carbon zero mixed use development and of course the Riverside Stadium, home to Middlesbrough's beloved football club.

Since being launched to the world's media one year ago, Temenos has helped to generate almost £10m-worth of positive coverage for the area, making clear our town's commitment to bringing great art to our citizens, a mission that mima is also proud to be part of.
To mark the sculpture's first birthday we are delighted to publish this book which presents the history, development and realisation of Anish and Cecil's new work.

We are grateful to Anish and Cecil for bringing their vision to Middlesbrough. This ambitious project though could not have happened without the support and creativity of a great number of people and institutions. In particular we would like to thank Mayor Ray Mallon, Steve Gibson and Neil Bauser from Middlesbrough Football Club; Pete Halsall from Bio-Regional – Quintain; Alison Clark Jenkins, Matthew Jarrat and team at Arts Council England, Gerda Roper and the Meteor education staff at Teesside University; Alistar Howarth from One North East; Joe Docherty, Sean Egan and Mark Hopgood from TVR; Chris Munro from HCA; Tim White and Middlesbrough Council; Kate Brindley, James Beighton and the team at mima; and the construction team, engineers and riggers from Balfour Beatty who all worked in partnership to achieve the high quality vision conceived by Anish Kapoor and Cecil Balmond.

Lastly we would like to gratefully acknowledge the support and commitment of the funders: Middlesbrough Football Club, BioRegional-Quintain, One North East, Homes and Communities Agency, The Northern Way, Northern Rock Foundation and Arts Council England.

Temenos: A Symbol of Middlehaven's Transformation

Pat Ritchie

Chief Executive of the Homes and Communities Agency (HCA)

Middlesbrough Docks, circa 1960. Courtesy of Middlesbrough Reference Library

Contemporary image of the Middlesbrough Docks area

Temenos is a world-class landmark, a tourist attraction and an internationally acclaimed public artwork – but in the context of Middlesbrough's regeneration, it is much more than that. As a symbol of renewal, Temenos is a bold statement of intent, signalling the transformation of derelict docks into a place of aspiration: a flagship development with a business quarter, eco-homes and a modern college to strengthen Middlesbrough's position as the Tees Valley's economic capital.

And it's appropriate that Middlehaven's revival should be accompanied by an impressive statement: after all, the dock played a central role in the town's rapid rise to prominence as an industrial powerhouse in the mid-19th century, quickly eclipsing smaller shipping facilities further upriver.

It's worth remembering Middlesbrough's unique and proud history as we work to build a 21st century economy, based on new and vibrant sectors like the digital and creative industries, while building on Tees Valley's traditional strengths in petrochemicals and steel.

As recently as 1801, Middlesbrough was a tiny hamlet with just 25 people living in four farmhouses. The new Middlesbrough Dock, as it was then known, opened in May 1842 to carry coal, iron, ceramics and other products, contributing to the dramatic upsurge of industrial activity that created the town we know today.

The new dock quickly became a bustling place, packed with cranes, trains and ships loading their cargoes, and supporting a massive increase in the volume of coal shipped through the town. But just as it had supplanted earlier docks upriver, Middlesbrough Dock was itself overtaken by Tees Dock, which opened in 1966 to accommodate ever larger vessels. In July 1980, the Evpo Wave ship unloaded 5,000 tons of bauxite – the final act in the dock's history – and the area went into serious decline.

As the docks became cut off from the town centre, the quality of the land, buildings and environment deteriorated. The legacy of almost 140 years of shipping and industry was a heavily contaminated site requiring major remediation works before any large-scale redevelopment could go ahead. In the years that followed, the Teesside Development Corporation was able to bring different parts of the dock site together under its ownership and take the first steps to establish essential infrastructure.

1995 saw the next step forward, with Middlesbrough Football Club marking its move from Ayresome Park to the new Riverside Stadium with a 2-0 win over Chelsea. Between 2000 and 2003 English Partnerships – which later became part of the Homes and Communities Agency – invested £18m in decontaminating the dock area. Essential services like gas, water and electricity were installed, roads built and development platforms prepared. Accumulated silt was removed, the area between the three Victorian 'fingers' was filled in, dock gates were replaced and walls refurbished.

In 2003, Tees Valley Regeneration (now Tees Valley Unlimited) worked with English Partnerships, One North East and Middlesbrough Council to develop a new masterplan for the area. Recognising the need for a new, long-term vision, the partners appointed the international architect Will Alsop to create proposals for Greater Middlehaven, encompassing the dock site, the former industrial zone and the adjacent St. Hilda's area.

His brief for the 120-hectare site was to create a vision to "inspire and excite, and firmly establish the area as a waterfront destination of international significance." Alsop's vision acknowledged the area's proud industrial heritage, but looked to an innovative and radical future for the landscape, with homes, employment and learning alongside new leisure facilities. A thriving riverside quarter would reconnect Middlehaven to the town centre, with high quality buildings adding vitality to the town centre and strengthening Middlesbrough as the economic hub of the Tees Valley.

Developers were then sought for the first phase of development at Manhattan Gate, where Terrace Hill completed Hudson Quay 1 – now home to the Crown Prosecution Service and the engineering firm Hertel – and the recently completed Hudson Quay 2. Middlesbrough College, faced with the logistical nightmare of outdated buildings spread across four campuses, found an ideal solution at Middlehaven. A striking and beautiful new college building brought together 10,000 students at Middlehaven, with the college's management hailing the building's impact on student numbers, perceptions, and importantly, results.

The new college has since won a national award for its impact on the area's regeneration. Now well advanced on site is the £200m RiversideOne, a groundbreaking eco-friendly development by sustainable community developer BioRegional Quintain. Early in 2010, in spite of the recession, work got underway on RiversideOne's first building, known as CIAC (Community in a Cube), thanks to additional support from the Homes and Communities Agency. The 750-home development aims to create the UK's largest zero carbon scheme, within a vibrant waterside community.

Will Alsop's masterplan for Middlehaven

Other developments are adding momentum to Middlehaven's revival. The nearby Boho Zone is fast becoming the town's new creative quarter, with Erimus Housing's Bohouse scheme providing a hothouse to nurture new businesses in the sector. Meanwhile, the Council-owned Custom House is being transformed into a state-of-the-art MyPlace youth centre, with a performance hall, media studio, training and leisure facilities.

The vision for Middlehaven is an ambitious one, and it won't happen overnight. The initial phase involving the dock site will be followed by later phases in the former industrial zone and the St Hilda's area. But the long-term commitment of public and private sector partners like the Homes and Communities Agency, Middlesbrough Council, One North East, BioRegional Quintain, Middlesbrough College, The Northern Way and Middlesbrough FC is bearing fruit. Learning, jobs and homes are already bringing thousands of people back to what was a post-industrial wasteland.

Temenos is the bold and striking artwork that announces Middlehaven's revival to the world. Built to a scale that matches both the achievements of the past and our aspirations for the future, its giant structure and elliptical rings have already become a familiar feature on the skyline alongside older Teesside icons like the Transporter Bridge and the Clock Tower.

Anish and Cecil's creation has brought Middlesbrough to a worldwide audience. Combining the language of the town's industrial past with a precision to match its emerging role as a digital and creative hub, Temenos can be the standard bearer for the area's continuing regeneration.

The Challenges of Public Art

Matthew Jarratt
Arts Council England

mima, Middlesbrough Institute of Modern Art, and
Claes Oldenburg and Coosje Van Bruggen's *Bottle of Notes*

As well as aspiring to make 'Great Art for Everyone,' artists who create large scale public sculpture know that the challenges are often much harder to overcome than those they may encounter in the studio. For commissioners, big public sculpture has become a prerequisite for the most ambitious public and private sector developments and regeneration schemes in the last two decades - it is a way to get noticed, to change perceptions and to create new narratives about a place. Temenos is amongst the small number of public sculpture projects which meet the twin challenges of creating inspiring art and promoting a change in how we perceive our towns and cities.

During a century of sculptural innovation in Britain the dialogue with the public has shifted from gallery to plinth, then into architecture and now into public spaces, and the North East of England has seen the commissioning of fantastic sculpture from some of the world's leading artists.

The journey in Middlesbrough began in 1993 with the bold commissioning of the Bottle of Notes sculpture by Claes Oldenburg and Coosje van Bruggen. In time the Bottle was joined by mima - the Middlesbrough Institute of Modern Art and in 2010 Anish Kapoor and Cecil Balmond completed Temenos. These three visual arts projects have a shared history of partners who were ambitious, focused on change, committed to challenging expectations and looked to inspire. Each of these projects have been developed and delivered in the midst of demanding political, financial and social agendas which could have limited their ambition but it is a great credit to the resolve of the people and partnerships in Middlesbrough that the projects were delivered to such a high standard and critical acclaim.

The North East has a distinct legacy from two decades of arts commissions within regeneration. Following on from the Bottle of Notes the Arts Council's Lottery Fund was established just as the region hosted the Year of Visual Arts in 1996. This funding helped galvanise local authorities to support major sculpture projects including David Mach's Train, in Darlington, Tony Cragg's Terris Novalis in Consett, Juan Munoz' Conversation Piece in South Shields, Skyspace at Kielder by James Turrell, Antony Gormley's Angel of the North in Gateshead and Couple by Sean Henry sited offshore at Newbiggin by-the Sea.

In turn these new objects in the North East landscape generated a wave of interest from developers, Health Trusts, planners and public realm designers and a growing appetite for the visual arts in public spaces which enabled hundreds of commissioning opportunities for artists within a period of intense regeneration and public building.

In the 1980s there would have been few expectations that a region which was striving to move forward from the legacy of coal mining and shipbuilding could become a centre for public sculpture and the visual arts, but a number of strong partnerships have enabled artists to work in the region and create some of their most ambitious work. Temenos has pushed this reputation forward and reinforced the perception that the North East is a place which supports new design and creativity and encourages artists' ideas at the centre of major projects.

The concept for a work on the scale of Temenos developed alongside the plans for one of the region's biggest regeneration projects at Middlehaven, which is creating a new public zone around the former industrial dock where Middlesbrough Football Club had already established its stadium. Joe Docherty, then Chief Executive of Tees Valley Regeneration, (which later became Tees Valley Unlimited), conceived the idea for a series of major artworks alongside the transformation of a number of post-industrial sites in the area. When presented with a blank building site, the challenge for Kapoor and Balmond was to imagine a future Middlehaven and to anticipate how a major sculpture would sit alongside buildings that had yet to be designed and a wider landscape which included the historic Transporter Bridge and the industrial horizon of the River Tees' chemical engineering plants.

The partnership of Kapoor and Balmond brought sculptural form and engineering invention together to make a work that responds to its location and historic reputation for steel. The design for Temenos looked forward uncompromisingly with a giant structure which can appear to be both a floating computer drawing and disappearing spiders web depending on the angle of view and time of day. Middlehaven is now reinventing itself as an area in which to live and to study. It is inhabited by football supporters, students, digital innovators and office workers who will experience Temenos as an unexpected and even cinematic artwork which is totally at home by the Tees.

Temenos leaps across the site with cable net spanning the corner of the Middlehaven dock and the giant tilted circular ring transforming its structure into a suspended elliptical halo. It is a structure which is alive with tension, disorientating to walk under, seemingly invisible but nevertheless a sublime and huge form against the sky. Temenos is a sculpture without the bold colour or reflective surfaces often associated with Kapoor but it is perhaps a more experimental form with tough engineered materials which point in a new direction for his large scale public works. Ideas of scale, ambition and inspiration have driven Temenos and are all values at the heart of the industrial Tees riverscape at Middlehaven.

Arts Council England has been delighted to help broker, fund and support Temenos through the early design development stages to its construction and launch. From the Bottle of Notes to mima and now Temenos, the visual arts have changed the way Middlesbrough talks about itself, and the stories others tell about us, and the success of Temenos has been realised through ambitious clients and artists producing work to the full extent of their creativity and imagination.

Anish Kapoor

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

Born in 1954 in Bombay, he has lived in London since the early 1970s. Over the past twenty years he has exhibited extensively with solo shows at venues including Kunsthalle Basel, Tate Gallery, Hayward Gallery and Royal Academy in London, Reina Sofia in Madrid, CAPC in Bordeaux, Haus der Kunst in Munich and in 2010 his first major exhibition in India took place at the National Gallery of Modern Art in New Delhi and the Mehboob Film Studios in Mumbai.

He has participated in many group shows internationally including those at the Whitechapel Art Gallery, Royal Academy of Arts and Serpentine Gallery in London, Documenta IX in Kassel, Moderna Museet in Stockholm and Jeu de Paume and Centre Georges Pompidou in Paris.

He represented Britain at the Paris Biennale in 1982 and at the Venice Biennale in 1990, where he was awarded the 'Premio Duemila'. He won the Turner Prize in 1991 and received the prestigious Unilever Commission for the Turbine Hall at Tate Modern in 2002, which he realised with the much-acclaimed work, Marsyas. Among his major permanent commissions is Cloud Gate (2004) for the Millennium Park in Chicago, considered to be the most popular public artwork in the world.

Throughout his career he has worked extensively with architects and engineers on projects. In addition to Temenos, he created the site-specific work, Dismemberment Site I for the sculpture park The Farm Kaipara Bay, north of Auckland, New Zealand, and was recently awarded the commission with Cecil Balmond for a permanent artwork for the London 2012 Olympic Park, Orbit. In 2011, thirty years after his first exhibition in Paris, he was invited to create a new work Leviathan for the city's Grand Palais as part of the Monumenta series organised by the French Ministry for Culture and Communication.

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). He was awarded a CBE in 2003.

He is represented by the Lisson Gallery, London; Gladstone Gallery, New York; Regen Projects, Los Angeles; Kukje Gallery, Seoul, SCAI the Bathhouse, Tokyo; Galleria Continua and Galleria Massimo Minini in Italy and Kamel Mennour in Paris.

Sky Mirror, 2006
Stainless steel
Installed at Rockefeller Centre, 2006
Courtesy Public Art Fund

Svayambh, 2007 (top)
Wax and oil-based paint, Dimensions variable
Installation: Royal Academy of Arts, 2009
Courtesy: the artist

Dismemberment, Site I, 2003-2009
PVC and steel, 25 m 84 m (west end: 25 x 8 m, east end: 8 x 25m)
The Farm, Kaipara Bay, New Zealand
Courtesy: the artist

Discovering Temenos

Richard Cork
Art Historian, Critic and Editor

Middlesbrough Dock, circa 2006

Temenos being constructed, 2010

Like many sculptors before him, Anish Kapoor sets no limits on the size of the work he aims at producing. In this respect, he has inherited the restless ambition of Michelangelo, who went quarrying for marble in Carrara and -- according to a friend -- 'was seized with a wish to carve, out of a mountain overlooking the sea, a colossus which would be visible from afar to seafarers.' This beguiling ambition was never fulfilled, and yet five centuries later Kapoor has been able to execute a prodigious variety of impressive, large-scale commissions for major locations across the world.

A lesser artist might well feel tempted to rely on a formulaic approach when tackling such monumental projects. But Kapoor has responded in a fresh, inventive spirit to each of these singular sites. Refusing to rely on predictable solutions, he delights in taking risks and ambushing the viewer with sculptural surprises. Nowhere more engagingly than in the Tees Valley, where an enormous space in the fast-changing context of Middlehaven has acted as a powerful stimulus to his imagination. Immediately we encounter it, this sculpture leaps through the air with a dynamism which releases us from hidebound ways of seeing. Temenos invites everyone to cast conventional viewing aside and respond more freely. Once we have met the challenge, a whole array of unguessable possibilities become available to the adventurous onlooker.

The richness of this experience is hinted at in the mysterious title given to the sculpture. The original meaning of the word temenos, 'land cut off and assigned as sanctuary or holy area', may sound puzzling at first. After all, the territory occupied by Kapoor's tour de force lies in Middlesbrough dock, dominated from many vantages by the lean, machine-age geometry of the iconic Transporter Bridge and industrial cranes extending their metallic prowess into the sky. How can a 'sanctuary or holy area' possibly be created in such a setting? One answer lies in the metamorphosis now detectable throughout this muscular locale. For Middlesbrough College has found a home here, along with the Riverside Football Stadium. No longer exclusively caught up in the tough, often gruelling activities which drove it during the nineteenth century and beyond, Middlehaven today is post-industrial. And Temenos succeeds in prophesying the town's future even while acknowledging the formidable strength of its past.

Using a material as tensile as stainless steel, Kapoor worked with his long-time collaborator Cecil Balmond on ensuring that the sculpture is, on one level at least, an admirable engineering feat. Building such a structure, which weighs 156 tonnes, was a truly exacting enterprise. Yet the outcome looks effortless rather than weighed down by the amount of expertise it required throughout the prolonged period of planning and construction alike. Far from presenting us with a wearisome testament to careful calculation and sheer hard work, Temenos springs into life with irresistible panache. One of its giant rings seems to rest with nonchalant ease on a block near the water's edge. And then its cables curve up through space, spanning nearly 110 metres before the other ring opens near a tall, dramatically tilting pole. Rising to a height of almost 50 metres, this immense sculpture might easily have overwhelmed the viewer with a display of grandiose, oppressive bulk. Temenos, however, has no time for heavy-handedness. On the contrary: it eschews solidity in favour of minimal abstraction, paring the principal forms down until they arrive at essence alone.

Like the Transporter Bridge, Temenos is purged of all superfluity and stands out with a bracing sense of starkness against the sky. But unlike the Transporter Bridge, which relies largely on a taut rectilinear dialogue between upright and diagonal elements, Temenos is driven above all by a fascination with the circle and the ellipse. The intricate tracery of lines linking them gives the work its energy, and they proved strong enough to support the weight of the hard-helmeted 'spider men' who, a long way from the ground, were responsible for its construction. Photographs show the courageous delivery team leaning against and even sitting on the lines while marshalling them into a web. Their interlinked structure must withstand everything hurled at them during even the wildest bouts of winter weather. Temenos occupies a very exposed position, and it has been built to survive the most destructive storms which might assail the Tees Valley region in our increasingly uncertain climatic future.

At the same time, though, Kapoor ensures that the lines pervading this sculpture seem ethereal. Webs in nature are, after all, supremely delicate, and he implies that everything in our world is, in the end, vulnerable. Hence the feeling of wonder provoked by his complex, inexhaustible work. While we marvel at the engineering prowess which enables Temenos to thrive in such a wind-battered place, Kapoor makes us realise that its delicacy is unearthly as well. Viewed from the end nearest to the Riverside Football Stadium, it appears on the point of disappearing altogether. There is nothing accidental about this vanishing-act. It reflects a desire on Kapoor's part to let us meditate on the fundamental mysteries of existence.

All these considerations must have shaped his decision to choose the title Temenos. For the idea of 'land cut off and assigned as sanctuary or holy area' opens up the possibility of a removal from the daily, often remorseless pressures created by humanity's fundamental need to earn a living. In a trenchant 1807 poem called *The World Is Too Much With Us*, Wordsworth declared that 'getting and spending, we lay waste our powers'. And now, in a world stricken by severe economic recession, the vision provided by Temenos is more salutary than ever. It invites us to extricate ourselves -- for a while, at least -- and find an alternative way of thinking. After all, the word 'sanctuary' does not have to be automatically associated with organised religious worship. It can also signify a place of refuge, where anybody might be able to feel liberated from mundane anxieties and contemplate an infinitely larger reality. From a distance, Temenos resembles trumpets summoning everyone to come nearer and explore the sculpture in a more intimate way. Walking towards the territory inhabited by Temenos, where we are confronted by rings so immense that they soar far above our heads, encourages us to savour the vastness of the world in its entirety. Once we have completed the journey, and stand as near as possible to the rings, they lose their resemblance to musical instruments and take on a very different identity.

Seen close-to, they draw us in with compelling force. On a physical level, no one could now follow the example set by the 'spider-men' and clamber across the mesmeric network of lines. But we are able to explore them with our eyes and feel them in our bones, thereby letting the lines pull us into a region which becomes as overwhelming as the cosmos itself. We can roam around inside the sculpture, acknowledging how diminutive our own bodies appear in relation to this engulfing immensity. Although it might threaten initially to devour us, the voyage of discovery offered by Temenos is not at all alarming. Once we begin to imagine ourselves floating deep inside it, the experience proves liberating. The spaces between the lines make the fear of claustrophobia recede. Instead, Temenos opens our minds with invigorating generosity, revealing an unfathomable yet fascinating airiness surrounding us wherever we look.

At the far end, the presence of another ring implies that the journey will never come to an end. The spirit of openness continues, for Kapoor does not allow any shutters to descend and frustrate our appetite for exploration. Temenos develops, ultimately, into a very elemental art-work. The more involved we become with the sculpture's interior, the more our awareness grows of the earth, water and air beyond it. This is the central paradox governing our response to Temenos: it acts on us most powerfully when becoming so ethereal that it almost ceases to exist.

Performances, 1977

Table of Dreams, 1976 (left)
Cloth, steel , wood and paint
152 x 213 x 110 cm

Artist's studio, 1977 (below)

White Sand, Red Millet, Many Flowers, 1982
Mixed media and pigment
101 x 241.5 x 217.4 cm
Collection Arts Council,
South Bank Centre, London

In this respect, we benefit from remembering that Kapoor spent the first nineteen years of his life in India, as the son of Hindu father and a mother whose family had emigrated from Baghdad. Living for most of the time in a small town outside Delhi, he did not grow up with any special devotion to art. But the Indian insistence on painting and sculpture's relationship with religion, most spectacularly in the great temples which he visited as a child, had a profound influence on his subsequent work. Not that he was ignorant of western alternatives. Kapoor already had a wide knowledge of the European tradition before coming to England in 1973. Understandably, though, this interest was quickened most keenly by western artists with a strong spiritual dimension in their work: Barnett Newman, Mark Rothko, Yves Klein and above all Joseph Beuys, whose emphasis on the artist as a shaman with redemptive powers had a special significance for the young Kapoor.

Only in 1979, during a return visit to India, did he appreciate how his native inheritance could best be harnessed to the work he was producing in London. The luminous powder colours sold outside the temples, for use in religious rituals, came as a revelation to him. So did the devotional carvings within the shrines, where the god Shiva seemed capable of fusing intense physicality with an aura of remoteness. The same union of opposites soon informed the sculpture Kapoor made back in England. He began applying powder colours to forms reminiscent of fruit, breasts and mountains. Brilliant yellows, blues and reds gave his work an immediate sensuous appeal. At the same time, though, these shimmering and seductive presences also had an other-worldly quality. Even as it enhanced their ripe and often erotic allure, the soft powder had a disembodying effect. The work seemed on the point of melting.

Kapoor's vision has always been haunted by absence as well as presence. The centrepiece of his exhibition as Britain's representative at the 1990 Venice Biennale was a congregation of red sandstone boulders called Void Field. Filling the room with their rough-hewn bulk, they looked like a cluster of rocks occupying a primordial religious site. But all this solidity was undermined by the small circular marks punctuating the top of each block. Close scrutiny revealed that they were holes, leading the eye down to an immense and disturbing emptiness deep within. The weight and mass of the sandstone were subverted by this inky vacuum. Plain statement gave way to conundrum, and material certainty was replaced by a haunting awareness of the unknown.

Void Field, 1990
12 elements
Sandstone and pigment
Courtesy: Lisson Gallery

In the early 1990s, after Kapoor won the Turner Prize at the age of 37, he began working on even grander projects. Unafraid of thinking on a monumental scale, he collaborated with the architect David Connor on a tower for the 1992 Expo in Seville. Visitors approached the entrance up a 45 metre-long ramp curving round the lower half of the structure. They then found themselves standing in an oval room, with polished plaster walls lit only by a hole in the roof. The circle of light it cast on the floor contrasted very dramatically with a real hole nearby. And the bulbous cavity beneath the hole, occupying an alarming amount of space, was painted blue because, as Kapoor explained, 'blue makes a much better black than black does.'

Exploring the entire structure amounted to an eerie experience. Once entered, the lofty building's seemingly impregnable solidity gave way to an ethereal alternative, offering stillness and unfathomable mystery within.

Building for a Void, 1992
Project for Expo'92, Seville
Concrete and stucco
15 x 8.4 x 6.9m
Courtesy the artist and David Connor

Since then, Kapoor's swiftly expanding international reputation has provided him with opportunities to produce even more ambitious and visionary work. Take Taratantara, the spectacular temporary installation he made for the Baltic building at Gateshead in 1999. At that stage, the gigantic former Flour Mills had been completely emptied. It was a shell, waiting to be transformed into an 'art factory', and Baltic's director Sune Nordgren asked Kapoor to work there. Taratantara's jubilant title hinted at the revelation to come. A blazing red PVC membrane was stretched over the open end wall. But it curved inwards as well, terminating in a throat. The aperture tempted you into the building. And there Kapoor delivered a flamboyant visual blow, comparable in impact with the sound made by Joshua when he brought down the walls of Jericho. Sprouting into the form of double trumpet, Taratantara stretched right across the 170-foot void. The redness, combined with the swollen size, stunned viewers walking underneath. Yet its taut skin showed just how rigorous Kapoor can be, giving his vaulting apparition a remarkable amount of tensile strength.

In the autumn of 2002, he went even further at Tate Modern. Confronted by the overwhelming vastness of its Turbine Hall, few artists could have responded with the audacity and verve he commanded. Many visitors were astonished by the impact of the sculpture he installed there. For Kapoor invited them to encounter three colossal, enveloping cavities, stretching out like the mouths of monumental trumpets from an organic form that arched its way through the immense space at his disposal. By calling the sculpture Marsyas, he stirred mythological memories of the bloody flaying which Apollo savagely inflicted on a hapless satyr's body. Yet Kapoor's Marsyas was far less violent and unnerving than Titian's late painting of the same theme. It provoked above all a sense of awe in Tate Modern's visitors, who found themselves wondering at the combination of boldness and enigma that gave the work its fascination.

Taratantara, 1999
Baltic Centre For Contemporary Art, Gateshead 2000
16 x 32.6 x 51.8 metres
Courtesy the artist and Lisson Gallery

Marsyas, 2002 (opposite)
PVC and steel
Installation view: Tate, 2002-2003
Courtesy: Tate, London

Around the same time, Kapoor was granted a commission which Michelangelo would have cherished. The new Millennium Park in Chicago offered boundless opportunities for artists and architects alike. Both Frank Gehry and Renzo Piano made dynamic use of the sites they were given, but Kapoor remained undaunted by their prowess when he produced Cloud Gate. Erected in 2004 and swelling to a height of more than twenty metres, it is a titanic spectacle. Even so, this mighty stainless steel sculpture does not seem at all ponderous. It has a momentary feeling, as if the whole piece might at any instant change in size or even dissolve altogether. Rather than calling attention to itself, Cloud Gate lives up to its title by seeming strangely elusive.

As we approach the work, our eyes grow increasingly aware of its environment. For the entire sculpture is highly reflective. Its polished surface is like the biggest mirror in the world. Instead of brandishing its solid presence, Kapoor makes sure that his work offers panoramic views of Chicago's high-rise architecture ranged around it. And not content with celebrating the impact of these buildings as they surge into space, Cloud Gate also glows with the full expanse of sky encircling the city. Walking round the sculpture, we grow intensely aware of the vastness surrounding it. In this respect, it can be seen as providing a notable precedent for the intentions behind Temenos. Even as he makes three-dimensional objects occupying the limited space at their disposal, Kapoor never wants us to forget the vacancy beyond. That is why he encourages us to walk underneath Cloud Gate. Standing at its centre, we can look up and around while marvelling at his ability to astound and delight.

The absolute assurance of Temenos marks another high point in his career, and proves that he is enjoying a formidable maturity as an artist. Kapoor recognised that the piece of land he was invited to transform had been blighted for almost half a century. Yet he responded at once to the ambition behind the project, and was stimulated even more by the fact that it was a landscape of giant objects ranging from chimney-stacks and bridges to ships. They persuaded him not to make a solid, over-bearing colossus, but instead to develop radically attenuated forms using cable as a key component.

Kapoor was under no illusions about the challenge confronting him. The location he had been given was difficult to handle, and it lacked in particular any clear sight-lines. He also experienced problems when thinking about a title for the sculpture. 'I was looking for something that spoke to the idea of a place apart', he recalls, 'and it took me weeks to find a title. When I thought of Temenos, I worried about whether it was too esoteric for the public to understand. But when I proposed it, the reception was enthusiastic. Although the word Temenos obviously has religious connotations, I wanted it to convey the idea of a path or a trajectory. The ring leans forward on you, either to invite or to threaten, but in a very unconfining way. It's a geometric, abstract work that eludes definition.'

That is why Temenos proves so fascinating and inexhaustible. While Kapoor made sure that he was very attentive to the existing character of a site where the older structures 'had all been driven by industrial or engineering purposes', he decided in the end that it was important to place 'an ambiguous object in this landscape determined by use. Temenos is a work about ephemerality. It's very big, but hard to grasp -- a passing thing. I felt the space demanded that, escaping physicality. I made the model with a stocking, and Cecil's great genius was to work it all out properly. I didn't want the making of the thing to get in the way of the work's impact. It's all about the pull between a pole and two rings, basically. I didn't want the sculpture to be too emblematic, like a corporate sign. I recognise that regeneration is possible through works of art, and the bit of land on which Temenos has been placed is now changing radically. So the sculpture is a catalyst, playing a part in public engagement. But it's rather an esoteric work, and doesn't reveal itself immediately. I can't sum it up in one word.'*

Nor should he. Everyone who visits or lives in Middlesbrough will be able to explore Temenos, make up their own minds and then react in a new way when they encounter it again. Successfully eluding classification, it takes us to a place of pre-conscious mystery, poised somewhere between the known and the unknown.

*Interview with the author at Anish Kapoor's studio, 1 March 2011

Cloud Gate, 2004 (top left)
Stainless steel
10 x 20.1 x 12.8m
Millennium Park, Chicago
Courtesy of the City of Chicago and Gladstone Gallery

Temenos, 2010 (left)
Steel
50 x 50 x110 metres
Installed Middlesborough
In collaboration with Cecil Balmond, ARUP

mima

Corner Piece, 2007 (above foreground)
Resin and paint
190 x 180 x 180cm
Courtesy of the artist and Lisson Gallery, London

Untitled, 2007 (above background)
Acrylic
101.6 x 101.6 x 99.1cm
Courtesy of the artist and Lisson Gallery, London

Untitled, 2007

To coincide with the launch of Temenos, mima, working in direct collaboration with Turner Prize winning sculptor Anish Kapoor, presented an exhibition dedicated to the artist's studio practice. It celebrated and explored his exciting use of material, space and surface.

After completing his studies at Chelsea, he travelled to India before beginning his first body of pigment works, titled 1000 Names, on his return to London. The vivid use of colour and hue has an intense quality within these pieces, particularly Kapoor's use of red.

'Red is a colour I've felt very strongly about. Maybe red is a very Indian colour, maybe it's one of those things that I grew up with and recognise at some level. Of course, it's the colour of our bodies. In a way, it's inside out, red.' – *Anish Kapoor 1*

This theme of 'inside out', or negative space, is one that has continued to inform Kapoor's work. His sculptures often feature carved apertures and cavities; spaces filled with nothingness. In My Body Your Body, 1993, Kapoor plays with light and dark, the visible and non-visible; 'That's what I am interested in, the void, the moment when it isn't a hole, it is a space full of what isn't there.' – *Anish Kapoor 2*

Kapoor's most recent stainless steel sculptures are mirror-like, reflecting or distorting the viewer and its surroundings. Through these forms, space does not only recede away from, but also comes out at the observer. This relationship between artwork and viewer is something considered carefully by Anish Kapoor. The idea of immediate recognition, that the eye is a quick instrument casting judgement and assumption, is a rapport more valued by Kapoor than scholarly interpretation: '…it's an immediate translation. The theoretical stuff comes later, it's sort of irrelevant. I'm much more interested in the effect that the body has, or that the body receives if you like, from a work.' – *Anish Kapoor 3*

It is the knowledge that sculpture is as much to do with space and our relationship to it, as it is to do with form, that underlines Kapoor's practice and makes his work so interesting. At mima, we were able to witness this through a varied body of pieces chronicling the major stages of his artistic spectrum; from pigmented vibrancy, through mysterious cavities and onto inviting and fascinating reflection. mima was delighted to present the work of such a major figure in contemporary art and proud to be supporting, and further celebrating, the launch of Tees Valley's Temenos.

1 Transcript of the John Tusa Interview with Anish Kapoor, BBC Radio 3
2 Anish Kapoor quoted by Charlotte Higgins, The Guardian, 2008
3 Transcript of the John Tusa Interview with Anish Kapoor, BBC Radio 3

Untitled, 2005
Stainless steel
205 x 205 x 61cm
Courtesy of the artist

My Body Your Body, 1993
Fiberglass and pigment
248 x 103 x 205cm
Courtesy of the artist

My Body Your Body, 1993 (above background)
Corner Piece, 2007 (above foreground)

Untitled, 2005

Cecil Balmond

Cecil Balmond is one of the world's most renowned designers. He has brought advanced structure into an art form, generating a new aesthetic. Balmond's dynamic and scaleless approach is informed by the sciences of complexity, non-linear organization and emergence of form.

Balmond was born in Sri Lanka and studied advanced structures at Imperial College. He is former deputy chairman at Arup and founder of the company's experimental research and design group, AGU (Advanced Geometry Unit). Comprising mathematicians, engineers, musicians and scientists, the AGU examined the structural dynamics of everything from shapes and patterns to natural occurring phenomena. Under his creative direction, the AGU has co-designed some of the world's most famous and daring structures, including the V&A'Sprial'extension with Daniel Libeskind (1994), Casa da Musica with Rem Koolhaas (2005), Taichung Metropolitan Opera House with Toyo Ito (2006), CCTV tower with OMA (2009) and Marysas (2002), designed with Anish Kapoor.

Balmond has also co-designed Serpentine Pavilions with Daniel Libeskind (2001), Alvaro Siza & Eduardo Souta de Moura (2005), Rem Koolhaas (2006) and Toyo Ito (2002). The 2002 pavilion was based on an algorithm devised by Balmond. It earned him the prestigious Gengo Matsui prize in Japan.

Balmond currently runs his own studio in London, a research focused practice involved with architecture, design and art. His own designs are numerous, and include Weave, a bridge for the University of Pennsylvania (2009) and the Pedro E Ines footbridge in Coimbra (2006).

A philosopher of form, Balmond's work has been presented in a number of critically acclaimed art exhibitions including Frontiers of Architecture 1 at Louisiana Museum of Modern Art in Denmark (2007); H_Edge at Artists Space in NewYork (2006); Solid Void at Graham Foundation for Advanced Studies in the Fine Arts in Chicago (2008-2009); Forum 64 at Carnegie Museum of Art (2009-2010) and most recently Element at Tokyo Opera City Art Gallery in Tokyo (2010).

He has received many awards, including the RIBA Charles Jencks Award for Theory in Practice, and the Sir Banister Fletcher Prize, a biannual award for Best Book of the year on Architecture, given to Balmond for Informal (2002). His other publications include Element (2007), an exploration of science, art and nature, and Number 9: The Search for the Sigma Code (1998).

Balmond lectures and teaches extensively. He currently holds the Paul Philippe Cret Chair at Penn Design as Professor of Architecture, a position once held by Louis Khan. At Penn, he is the founder of the NSO (Non- Linear Systems Organization), a material and structural research unit. Balmond has also been the Kenzo Tange Professor at Harvard Graduate School of Architecture, Saarinen Professor at Yale University School of Architecture and Visiting Fellow at the London School of Economics.

Serpentine Pavillion, 2002
Toyo Ito and Cecil Balmond with Arup.
Serpentine Gallery, London

Element, 2010 (top)
Cecil Balmond
Tokyo Opera City Art Gallery
Tokyo, Japan

Forum 64, 2009 - 2010
Cecil Balmond
Carnegie Museum of Art
Pittsburgh, USA

The Informal Mr Balmond, Afloat in the Sacred and Artful Spaces of Geometry

Jay Merrick
Architecture Critic, The Independent

Pedro E Ines Bridge, 2006
Coimbra, Portugal.

When Ray Mallon, the Mayor of Middlesbrough, announced the completion of Temenos in the Middlehaven Suite of Boro's stadium one could see, over his right shoulder, the precisely delineated 21st century geometry of the Temenos sculpture; and, far beyond it, the wonderfully pragmatic structure of the Victorian Transporter Bridge – aka the Tranny – completed in 1911 by Sir William Aroll and Co.

To Mallon's left, through the big picture window overlooking the pristine football pitch, there was the rich but no longer Premiership green of the turf, and the lush red backdrop of the serried ranks of seating. Not content with declaring that the designers of Temenos, Anish Kapoor and Cecil Balmond, were postmodern Rembrandts in the making, Mallon quoted Einstein: "Insanity is doing the same thing over and over again and getting the same result."

He meant that, in Middlesbrough, brilliant new ideas are better than rusty ones. But in our Google age of instant and multifarious cross-connections of data – where more is less, to invert the famous Modernist dictum – this particular quote seems poor evidence of genius. We surely prefer to think, again via Einstein, that all meaning is relative in a universe where time's once obvious arrow has unravelled into the sub-atomic riddles of String Theory and light-speed proton particle collisions 100m beneath a Geneva suburb. As Mayor Mallon segued into an almost Shakespearean soliloquy praising the presence of Boro's great Caesar, Steve Gibson, my concentration frayed and gradually re-focused on the recollection of a long and engrossing conversation – one of many, before and since – with Cecil Balmond in 2006.

He was describing his boyhood in Sri Lanka in the 1950s and talking about how the monsoon rains sluiced down the forested hillside above the university campus at Peradeniya in Ceylon. He was then a boy of 11 or 12 and liked to ensconce himself at the far end of his home's verandah during the deluges. Inside, in this particular retelling, his mother is playing Chopin in the living room. Young Cecil's fingers turn, with great delectation, a page in *The Adventures of Sherlock Holmes*. What has this to do with Temenos? A great deal.

So imagine it... Conan Doyle's ultra-logical Edwardian sentences murmuring across the humid pages; heavy bead-curtains of rain falling on the slopes of Mount Kandy. Just the ticket for Cecil, a member of the Four Aces, a Singhalese version of the Famous Five, based not on ginger beer, Twiglets, bicycles and things turning out frightfully well, but on the religions and symbolisms that informed the boys' not so secret student brotherhood: one was Hindu, one Catholic, one Buddhist, and one Protestant.

Balmond speaks of being "irradiated by the refractions of Hindu iconography and the mystical texts of the Vedas. Existence in Ceylon, "was a very rich thing. It's a convoluted and deeply layered culture. And I remember the forest and the rope bridges, too – how they trembled and swayed; not at all secure, but somehow quite wonderful, magical." The bridges tremble to this day, and the infinite complexity of their disordered movement is embedded in Balmond like the patterns of a mandala.

There's one more early image that seems relevant. Before moving to Mount Kandy, Balmond and his family lived in a house on a dusty road in Colombo in the 1940s – "a fairly humble street. There was a dirt track and I played barefoot. The track ended in a swamp. And there were all these jack-trees – very lean and flexible." At this point he produced his pen and sketched the front elevation of his home in Colombo; a very plain house protected by a parapet wall from stray animals and the profoundly unsettling mystic gazes of orange-robed *saddhus* . "I used to lie on that parapet many a night. I'd just look up at the infinite stars – their patterns." And he read, too. His father would open the glass doors of the bookcase and say: "Why don't you try *this* one?" Balmond remembers James Jeans' *The Mysterious Universe*, and Aldous Huxley on biology, both in cheap, wartime editions.

The point is this: these fragments of Balmond's personal back-story are just as crucial to his imaginative contribution to the design of Temenos as his much more obvious reputation as one of the world's most brilliantly original engineers, who also happens to be vice president of Arup, an international engineering super-practice. Balmond's closely collaborative role in the design of some of the world's most extraordinary structures and artworks reflects an imagination far beyond the bounds of academic engineering excellence. Like the late-period Anish Kapoor, Balmond has become a thoroughly artful master of the strangely floating worlds of geometry, form and space. And, quite apart from contributing to the development of the concepts and designs of remarkable structures, it is Balmond's responsibility to make them stand up, and *work*.

Balmond is, increasingly, searching for deeper and more complex geometric patterns in the universe, and applying his ideas to architecture and artforms. He has set out many of these ideas in his books. The first, *Informal*, dealt with the highly unusual applications of maths and geometry in some of his key projects, and has sold tens of thousands of copies; his latest book, *Element*, carries these cross-relationships into extraordinary geometric, visual, and artistic territories.

These relationships filter into the work he does with his Advanced Geometry Unit at Arup, which is finding new ways to plot the trace-lines of highly unusual geometric patterns and proportions. Together, they've created forms flowing with such strangely fugitive compressions and tensions that allow us to think, perhaps for the first time, of stealth structures. And the visual ambiguities of Temenos put it in this category.

For more than a decade, Balmond has been the Obi Wan Kenobi-like force behind some of the most radical outbreaks of architecture and art. They include Daniel Libeskind's V&A Spiral project; Toyo Ito's pavilion at London's Serpentine Gallery; Rem Koolhaas's stunningly folded CCTV headquarters in Beijing; and Anish Kapoor's flubbery Marsyas installation in the Turbine Hall at Tate Modern. The detailed design of these projects were strongly influenced by Balmond's unique understanding, and manipulation of, structural forces; his contribution to their conceptual developments was equally significant.

Balmond's contribution to Ito's Serpentine Pavilion is a telling example. The building's exquisite wraparound geometry was composed of the literally solidified trace-lines of a complex proportional matrix; and, until Temenos, this building had been the most compelling demonstration of Balmond's virtuoso ability to inform spatial artistry. Perhaps surprisingly, the geometry of the Pavilion can be explained in two sentences. The trace lines of repeated algorithmic proportions – a halving, followed by a thirding – were programmed to ping around rotated square outlines, and this produced an overlay of patterns on a flat plane. The pavilion was formed, almost literally, by folding the final pattern into a box shape, with the intersecting lines replaced by actual lines of structure.

"What is now on the agenda," Balmond suggests, "is a future interpretation of space... the patterns and the algorithms. Out of such uncertainties come surprising stabilities, and the rational is seen to be buried within a deeper irrational." And the key to that "deeper irrational" is something he calls "the generative line" – a force that is simultaneously invisible, virtual and actual. "It follows tortuous paths," he explains, "it forms eddies in open squares and plazas, only to vanish underground, tracking the world above before emerging again in turrets and towering skyscrapers. The line occupies buildings and runs through assembled grids, if only one knew how to look. It is like glue, and quicksilver... the generative line escapes every abstraction and exasperates the observer, and keeps moving, in several disguises."

Languages, patterns, embellishments, mysterious visions. The deeper irrational of Balmond's almost sacred generative line must have begun in the stars above that parapet in Colombo, and in the whippy branches of the jack-trees. It must have flickered through the ghost-infested forests of Peradeniya, surfacing again in Balmond's early experiments with number-arrays in which "each number possessed a charmed life. It's like James Joyce and *Ulysses*. You enter a world of language and you're *in* it, and you can't escape the damned thing." One of his favourite quotes is from GH Hardy's 1941 book, *A Mathematician's Apology*: "Hardy said that the most beautiful things have no use. And then, later, they *do*!"

Thus, in Balmond's case, structural research becomes an almost Zen-like condition of wanting to know by not knowing – and coming clean about it. He refers to this state as "a dark and impossible journey into an unattainable interior... I realise that, as I look deeply at patterns, travel into them purely for their own sake, I try to void myself out. I find it very calming. It's really about how things connect with a deeper mystery. I may never find it!"

How refreshing, though, that some of the starting points of Balmond's art collaborations are almost hilariously banal. One part of the solution to Kapoor's Marsyas installation, for example, was partially triggered by his inquisitiveness about the inner foil layer of a packet of Doritos corn chips. The articulacy he brings to the development of structures and artforms is reflected in this ability to link disparate subject matter. He can, in the space of two or three minutes' conversation, make lucid connections between number theories, Tanzanian guitar bands, the structure of cancerous cell division, and the paintings of Paul Klee.

"Form is dynamic," Balmond told the American architecture commentator, Lynn Becker. "It's not about shape – that's literal. Form has something to do with the configuration in space of connectivity. It is the rhythm of those connections that provoke deeper resonances, the feeling of deeper archetypes." Those resonances and tensions, essentially between distinct shapes and the more mysterious formations that underlie them, have been crucial in the AGU's collaborations with artists.

The idea of a fine line between structure, architecture, and art is not new, of course. But Cecil Balmond prefers to think not of a line of division, but of myriad connections. His own H_Edge installation, shown as a large-scale artwork in New York and Chicago, demonstrates this. The installation is composed of 6,000 double-crescent steel plates, connected by short lengths of chain, which creates a maze of self-supporting hedges and voids – space redefined by patterns of solid, void and seemingly infinite gradations of light and shadow. "Pattern, sequence, seriality – all of them can create a deep and poetic reaction to structure," according to Balmond.

H_Edge, followed by an even more ambitious exhibition expressing the ideas and forms in his book, *Element*, created important precedents. They emphasised how geometric experiment could be at the heart of artworks whose forms defined space, and provoked unexpected perceptual effects, rather than simply demonstrating gee-whiz structures. Balmond's *Element* show at the Tokyo Opera City Art Gallery in 2010 was praised for its artistry by critics, and Toyo Ito suggested that it had created an microcosmic city of ideas.

This oscillation between visual traction and ambiguity is one of the most obvious qualities of Balmond's and the AGU's most recent involvement with Kapoor in designing Temenos – the Greek word for sacred space. It is the first completed sculpture in the proposed Tees Valley Giants series of large scale artworks that are scheduled to appear in Darlington, Hartlepool, Redcar and Cleveland and Stockton.

The sculptural form of Temenos was influenced not only by Marsyas, but by a Kapoor sculpture co-designed with the AGU in a New Zealand valley for a private client. That structure is formed by a fabric skin stretched between two steel rings – one mounted vertically, the other set flat on its foundation. The "skin" and form of Temenos is produced by a configuration with different forces acting on it. More than five miles of cable-net weighing 156 tons, is stretched in tension 50m above the dockside between a post, a 32m diameter circular ring, and a 28m x 16m elliptical ring.

The effect of Temenos as an artwork is very different to Marsyas, whose gleaming fabric form had the Turbine Hall as its monumental display case. "Anish and I walked the land in the Middlehaven port area, and so we knew the sculpture had to have an industrial language," Balmond recalls. "But it couldn't be fabric, or smooth-skinned. I knew that a stainless steel net would look very interesting because it would seem to appear and disappear. The idea of a mast and rings also felt right. We couldn't copy local industrial structures, but we could use a refined language of steel. And we didn't want a sculpture that seemed to grow like Marsyas. It had to fly in some way, or be levitated. We wanted it to be seen from the motorway as disembodied rings in the sky."

In that sense, he adds, Temenos is like his structural design for Alvaro Siza's 1998 Portuguese Pavilion in Lisbon, where the edges of the "draped" concrete roof seem not to meet the walls of the building, countering the mass and logic of the overall form. In Temenos – in effect, a catenary tension bridge – the sculptural form of the mesh creates a mysterious visual point and counterpoint: viewed from either end, the rings, post and cable-net created a perfect, almost 2D graphic effect. But seen obliquely, or from the side, the sculpture's qualities of proportion and structure are much stranger.

Weave bridge, 2009
Cecil Balmond
University of Pennsylvania,
Philadelphia, USA

Museum of the Penn, 2009
Cecil Balmond
UAE

CCTV, 2009
With OMA
Beijing, China

Element, 2010
Cecil Balmond
Tokyo Opera City Art Gallery
Tokyo, Japan

"When you walk around it, something happens," says Balmond. "The curvature goes away from you – it flips, as if you're looking in a convex mirror. This transience of form intrigues me." He recalls the moment he saw the completed Temenos for the first time: "I didn't know in advance that this sense of inversion or foreshortening would happen. I loved that day – seeing a *drawing* in the sky!"

That throwaway line makes Temenos sound an easy creation compared to what Balmond describes as the "black magic" sculptural engineering of the 140m long Marsyas, whose stretched fabric had to be accurate to within 5mm at its mounting points. For Temenos, the key challenge was to get the hundreds of tensioned connections in the cable-net right, in relation to the fixed points of mast and the grounded ring.

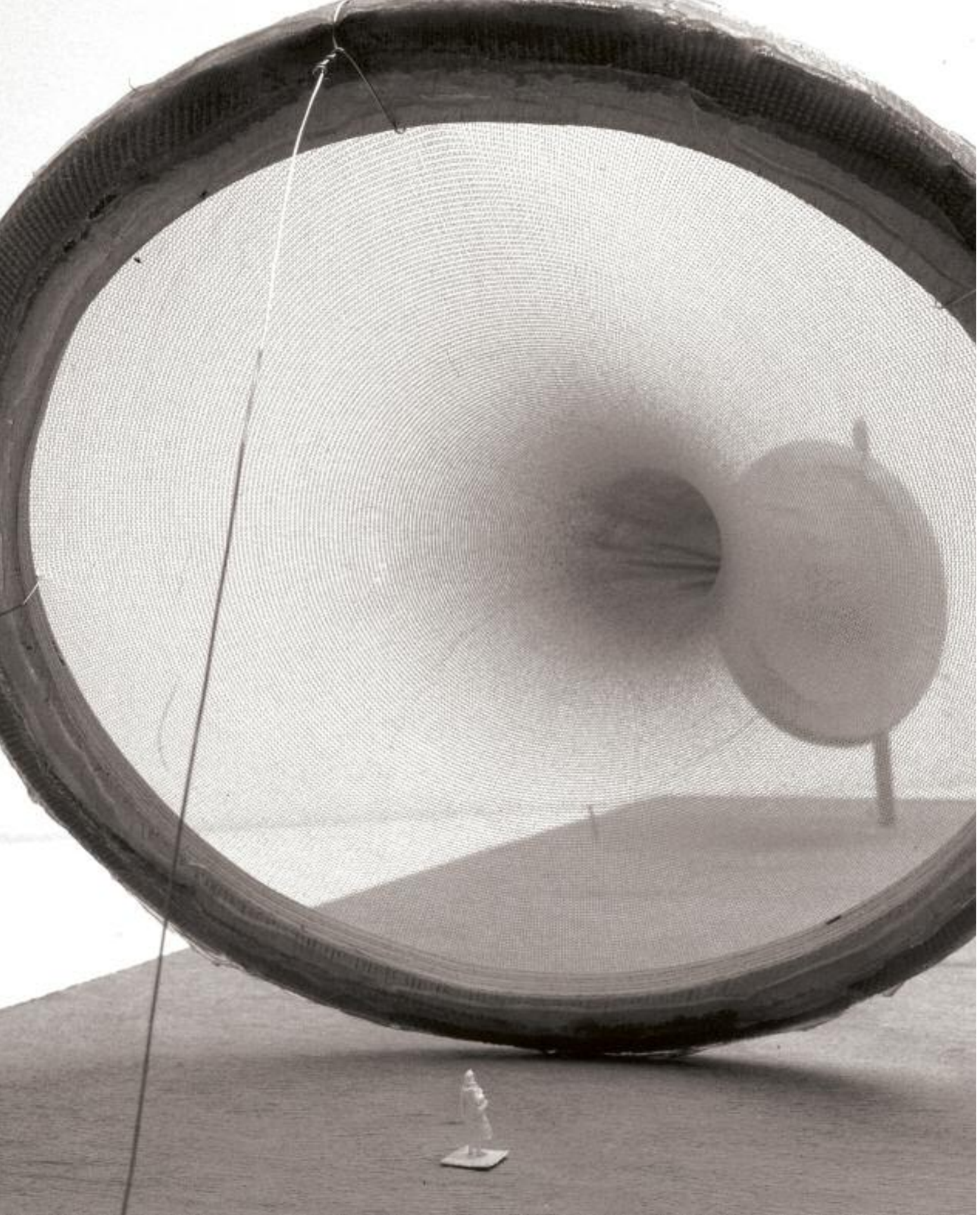
The AGU tested the shape of the net by using a software examination process known as 'dynamic relaxation'. The cables were treated as a network of one-dimensional elements, with a node at each connection point. The tension in each cable was calculated, and the position of the nodes adjusted in search of an optimum design and performance solution. Thousands of fractionally adjusted configurations were analyzed before the cable net settled into a stable form where, at each node point, the tensions in all directions were equal. Having established a cable-net whose form would satisfy Kapoor's sculptural demands, and retain its shape, the cable thicknesses were calculated – as were details relating to wind forces, vibration, and ice formation.

Designing Temenos was one thing, erecting it quite another. Balmond and the AGU's solution was to reverse-engineer the sculptural formation process. In bullet-points, all the longitudinal cables were laid out and attached to the circular ring, and the hoop cables linked to the two longitudinal cables that would eventually lie along the top of the cable-net. The circular ring was then lifted into position, with stay-cables, and rotated 2m forward of its final position. On the other side of the dock, the mast was lifted into position and propped. The elliptical ring was then lifted onto a temporary cradle at ground level, before being placed in its final position as the cable-net was stretched.

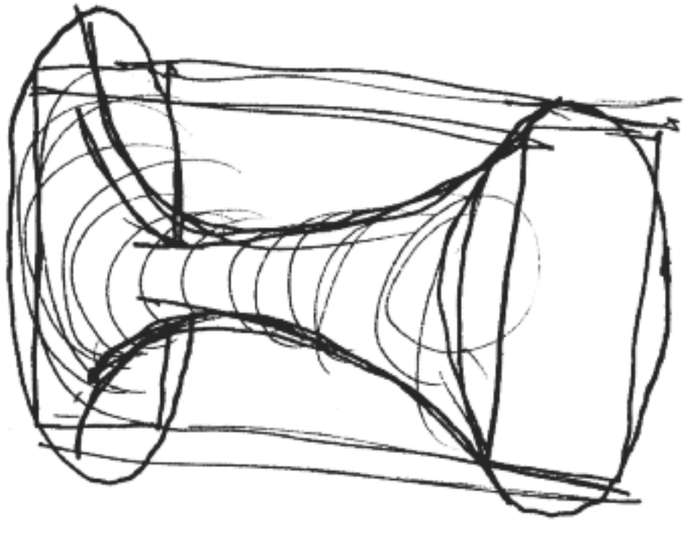
Making art isn't easy, and in Middlesbrough the finely wrought inscription in the sky that is Temenos proves that to make something happen – turning a sculptural possibility into reality – demands a set of extraordinarily sophisticated practical skills. Only then do the sinews and geometry of engineering become art – "the still point that isn't still," says Balmond, recalling TS Eliot. "You enter a gothic cathedral – Wells, or Ely, or Notre Dame. And there's something beyond the fluting and the arches and the vaulting. There's something else. I feel like there's *another* construction there, and it's something to do with the people who made it – the seriousness of their purpose. Something discrete that becomes continuous. The continuum is the afterglow."

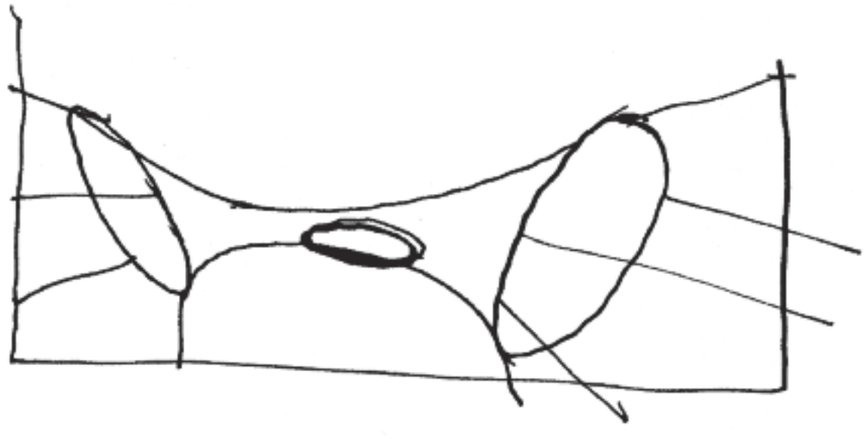
Another quote from the mathematician GH Hardy suddenly *kerchings* like the bell of an old cash-register. "The mathematician's patterns," wrote the august Cantabrian, "like the painter's or the poet's, must be beautiful; the ideas, like the colours or the words, must fit together in a harmonious way. Beauty is the first test: there is no permanent place in this world for ugly mathematics."

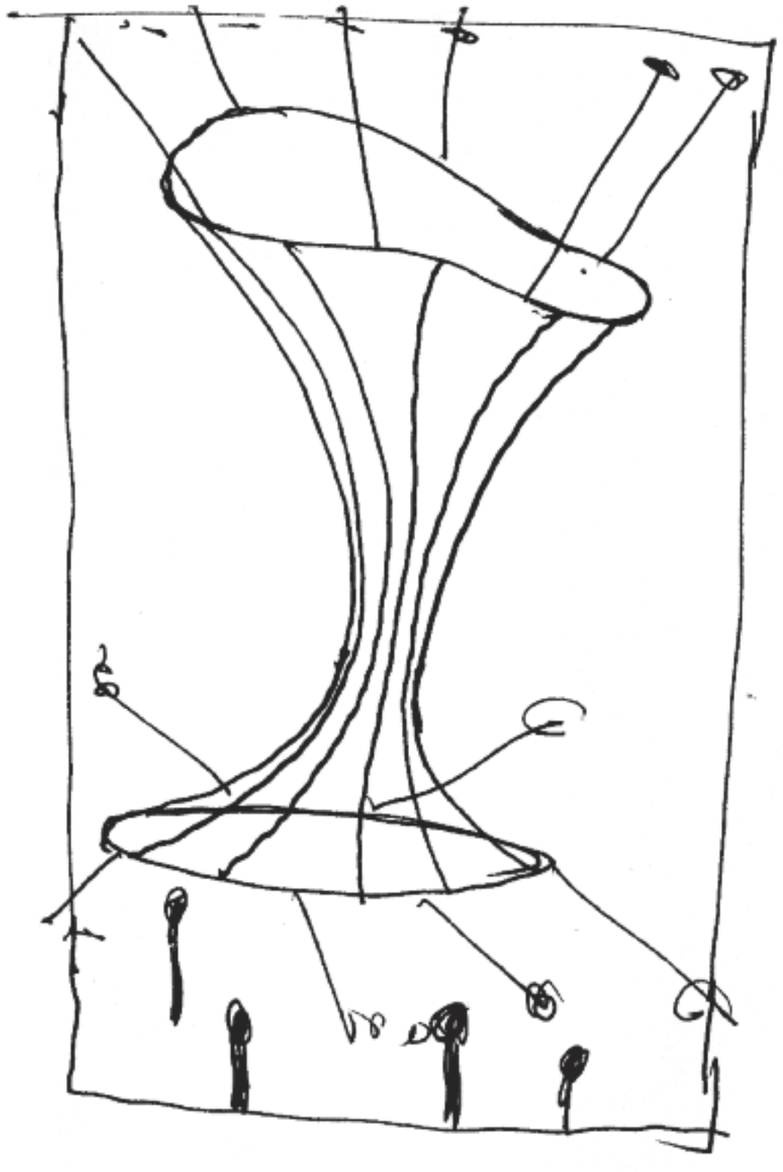
It is tempting to think of Temenos, the sacred space above the dock created by Anish Kapoor and Cecil Balmond, as a sculpture whose patterning of beautifully finessed tensions murmurs with the legendary music of the spheres. But, no – it is the image of the unpredictable, trembling sway and bounce of those delicate rope bridges in Sri Lanka in the 1950s that seems more resonant. When the underlying patterns of art and engineering coalesce as they have done in Middlehaven, we get a glimpse of Balmond's "deeper irrational" – geometry and form that is as real and distinct as the Transporter Bridge, but also like something that is still taking shape in our imaginations and refuses to be defined.

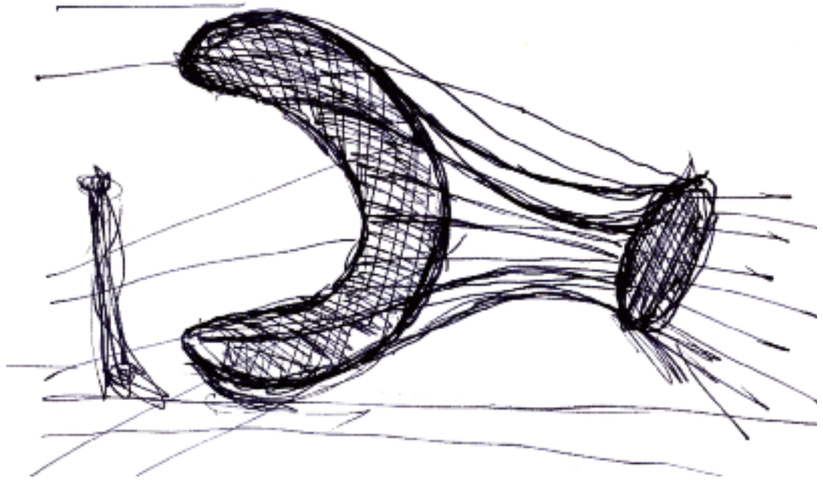


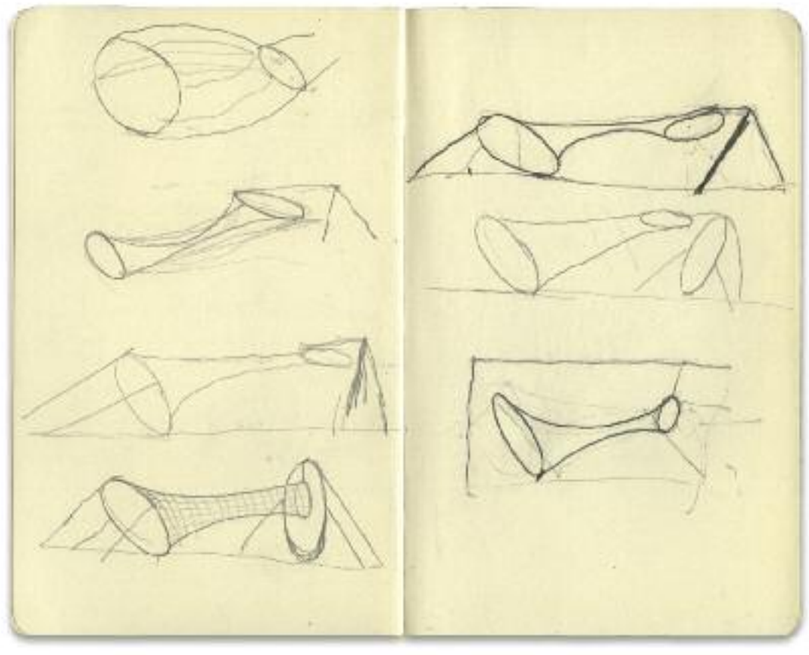
Towards Temenos

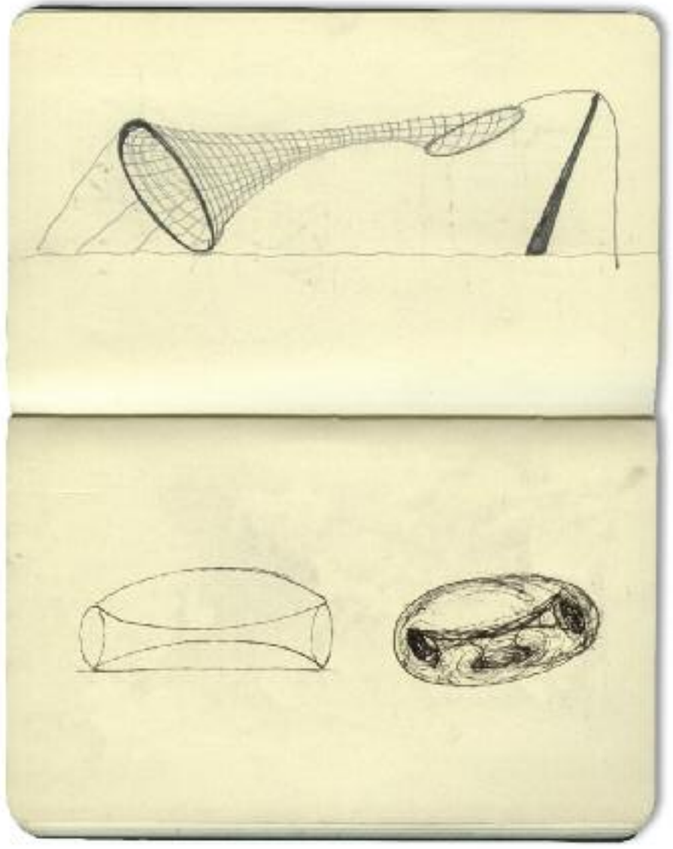


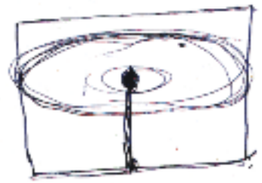


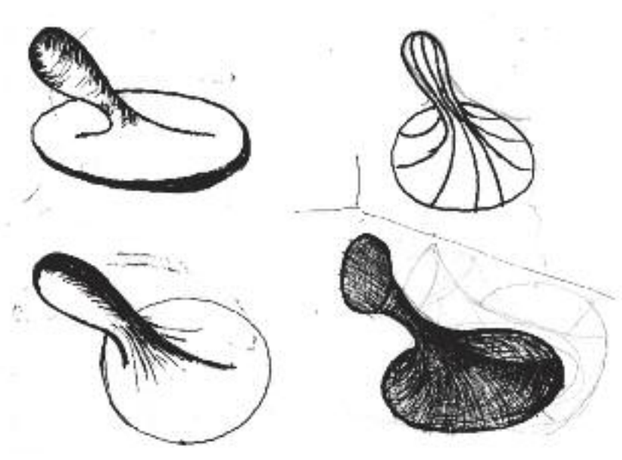


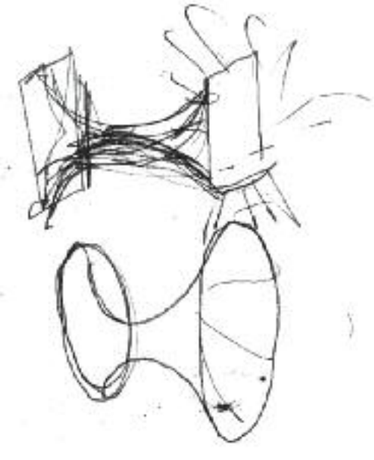




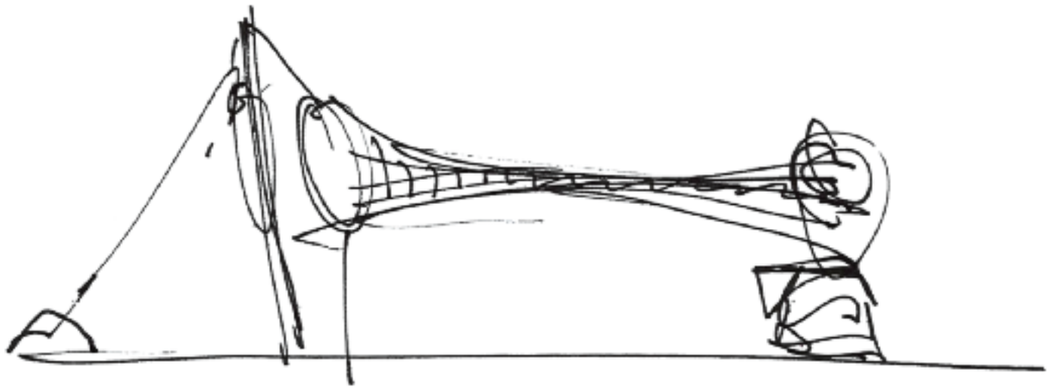


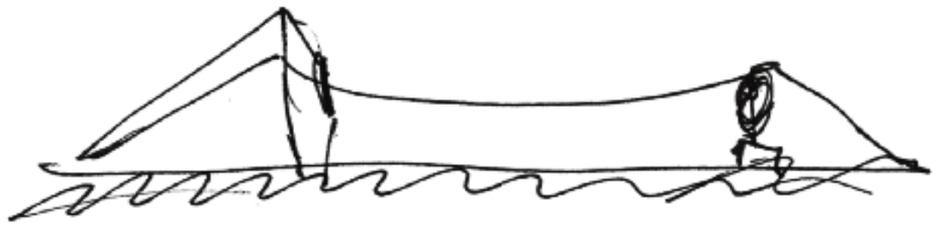


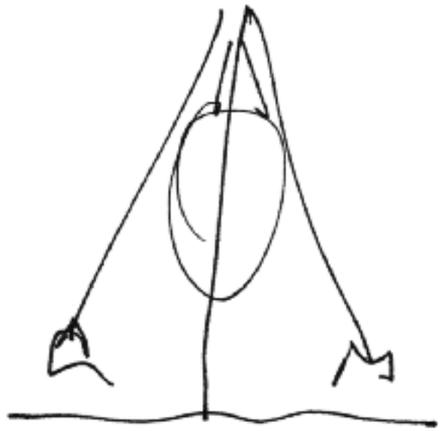


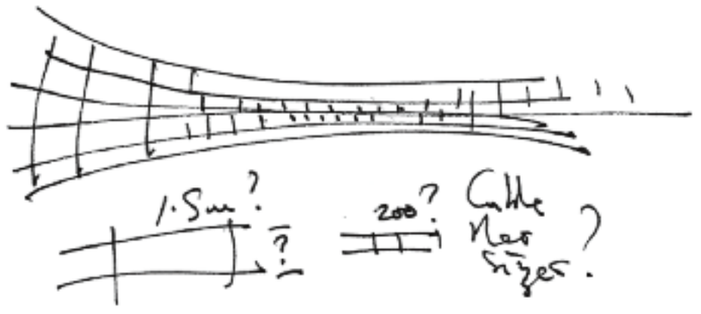


Sketches of Temenos, 2000-2009
Cecil Balmond

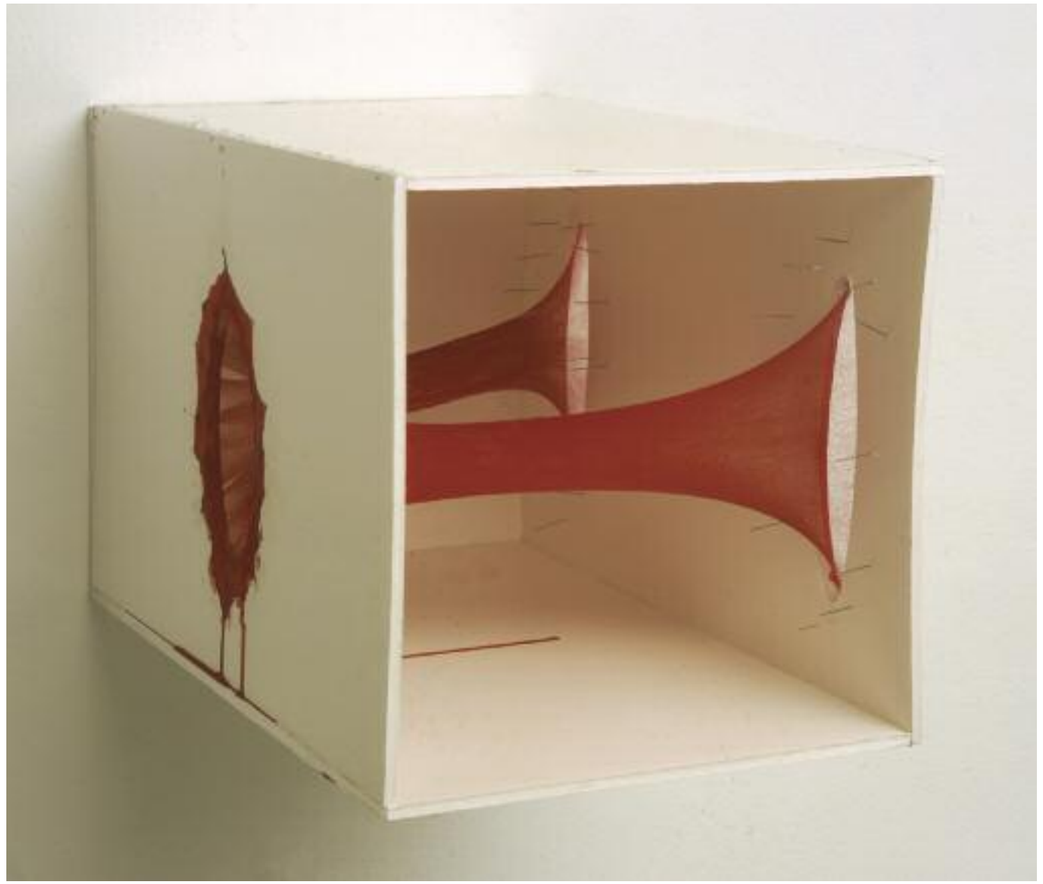








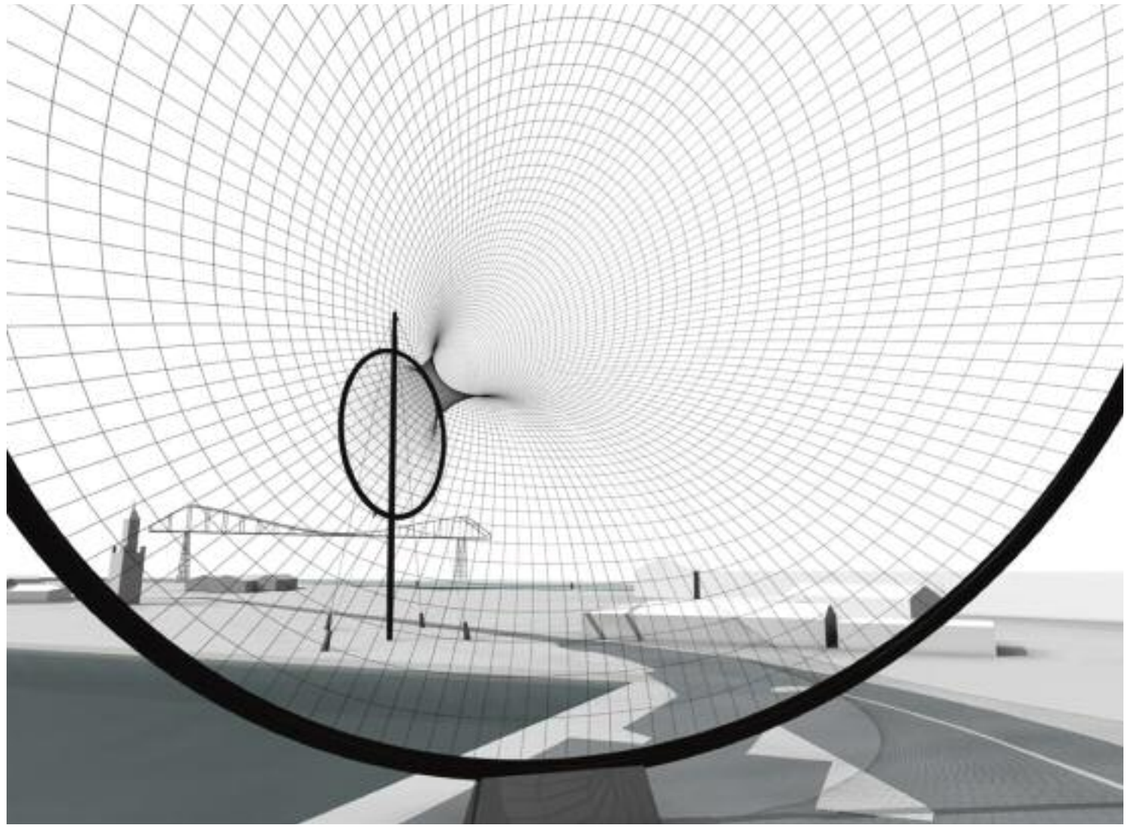
Temenos ATG/CB

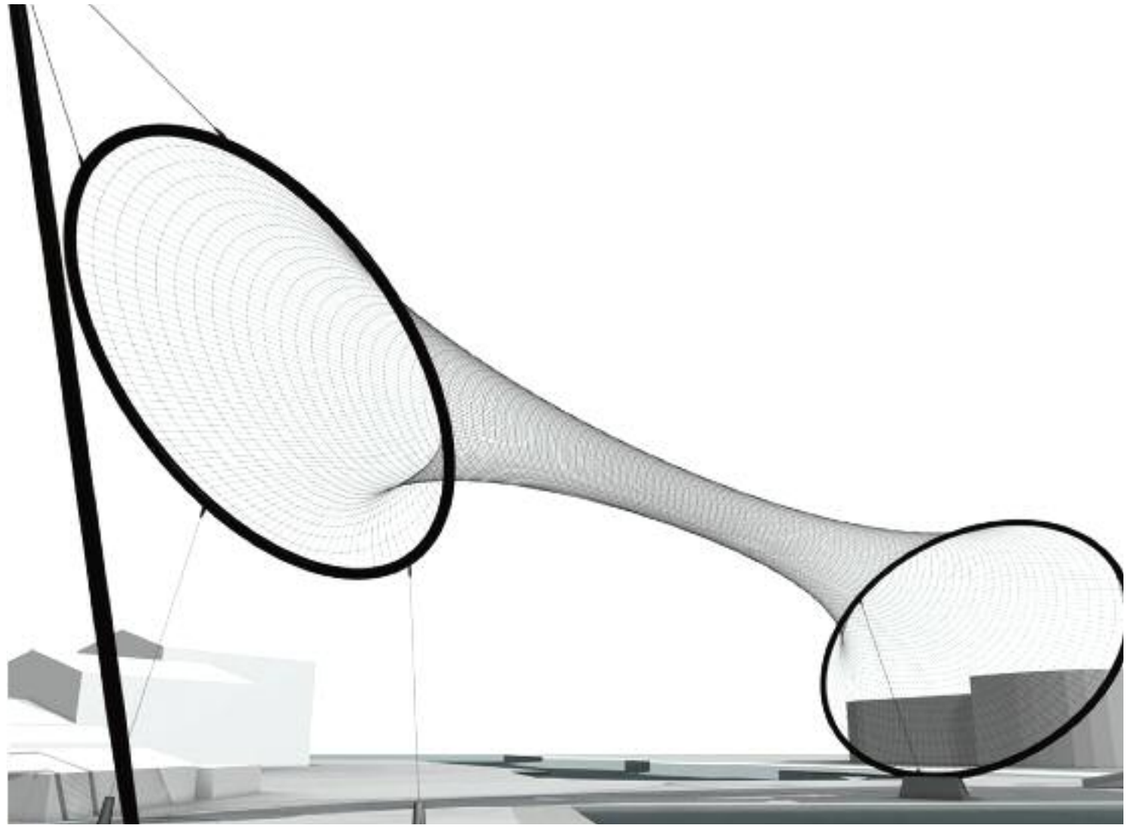


Foamcore, nylon and paint, 2000
Anish Kapoor

Model for Temenos, 2006
Anish Kapoor

Model for Temenos, 2006
Anish Kapoor





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RB01	CHS660xvaries
RB02	CHS813xvaries
S01	3No. 32 Bridon Dyform Cables
S02	3No. 32 Bridon Dyform Cables
S03	4No. 32 Bridon Dyform Cables
S04	4No. 32 Bridon Dyform Cables
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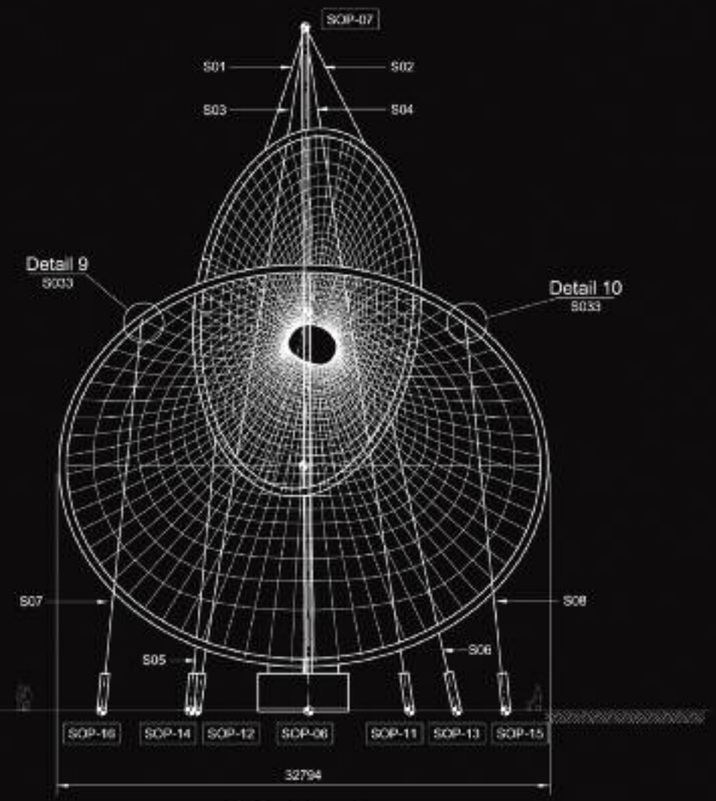
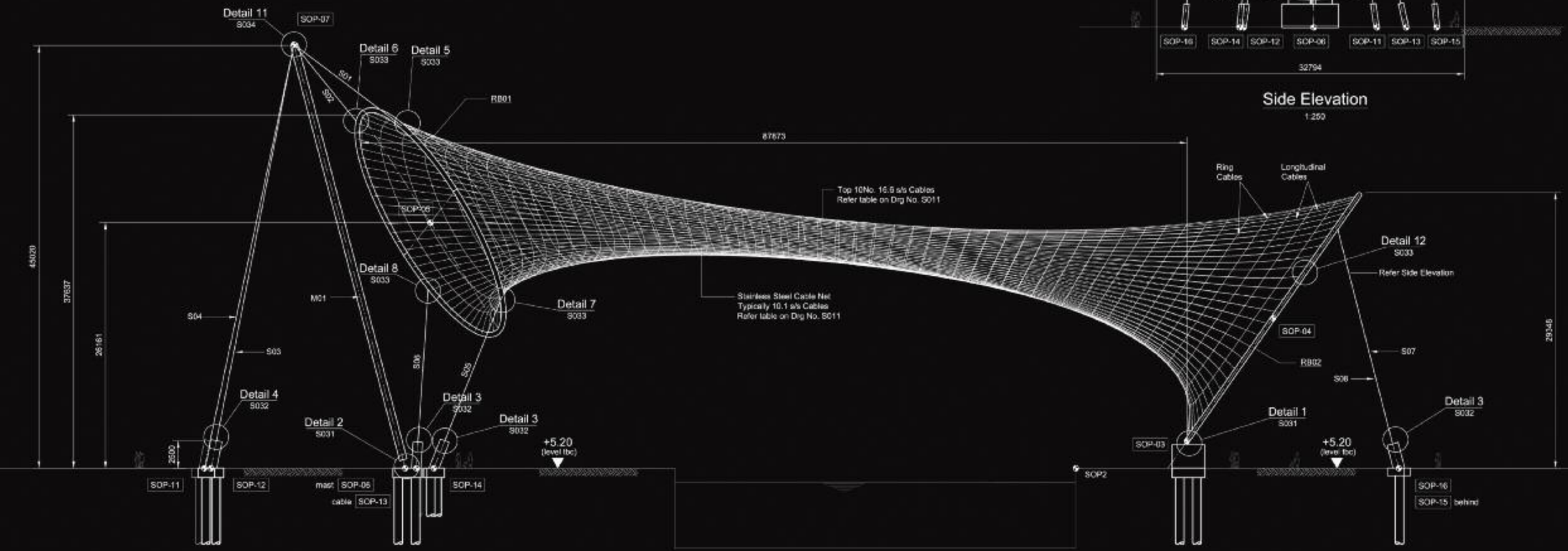


Side Elevation
1:250




SHS 2 SWL 10 TONNES


MFC
Club Store

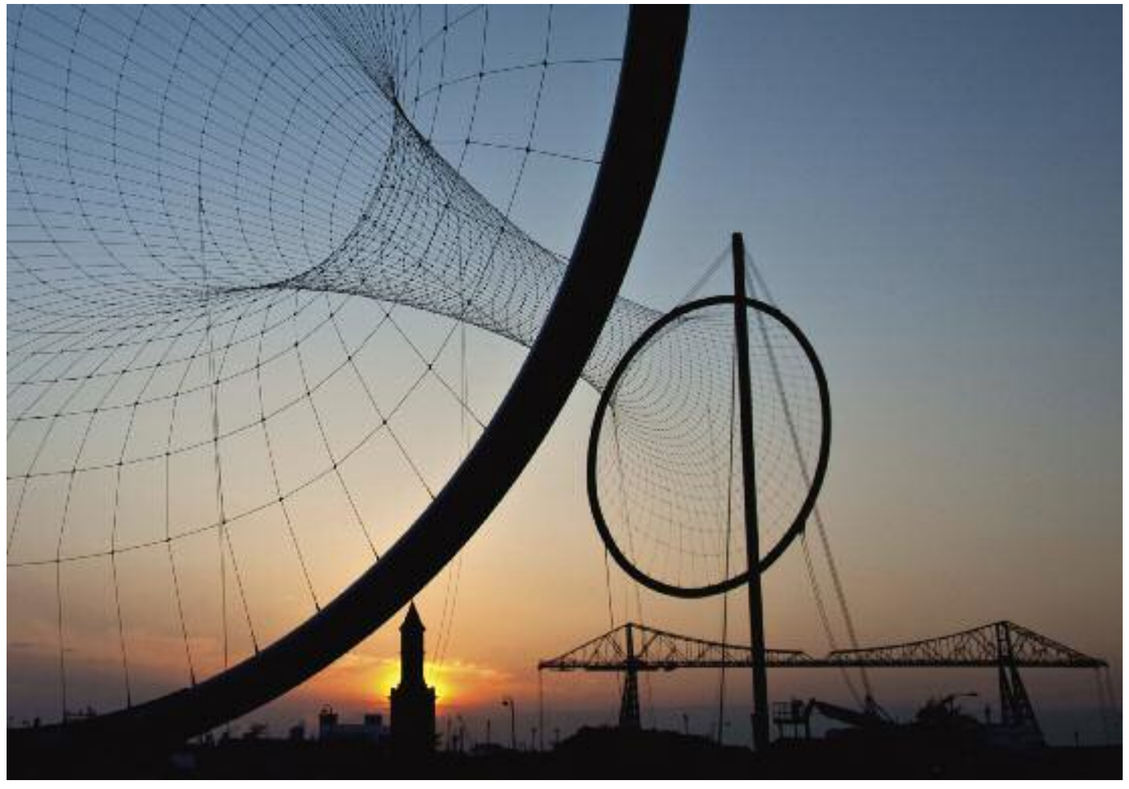

Temenos
L60

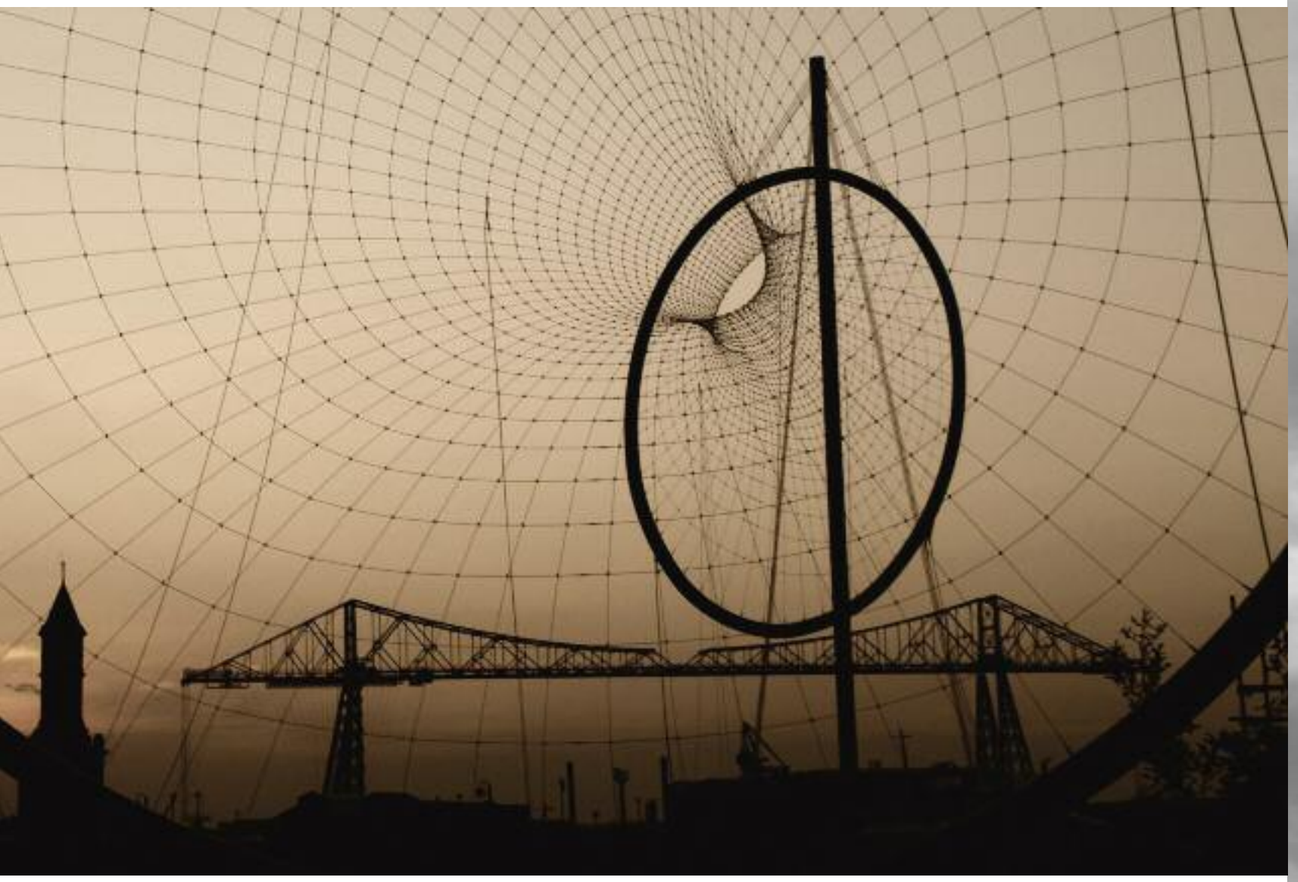

Tel:0164
Fax:0164

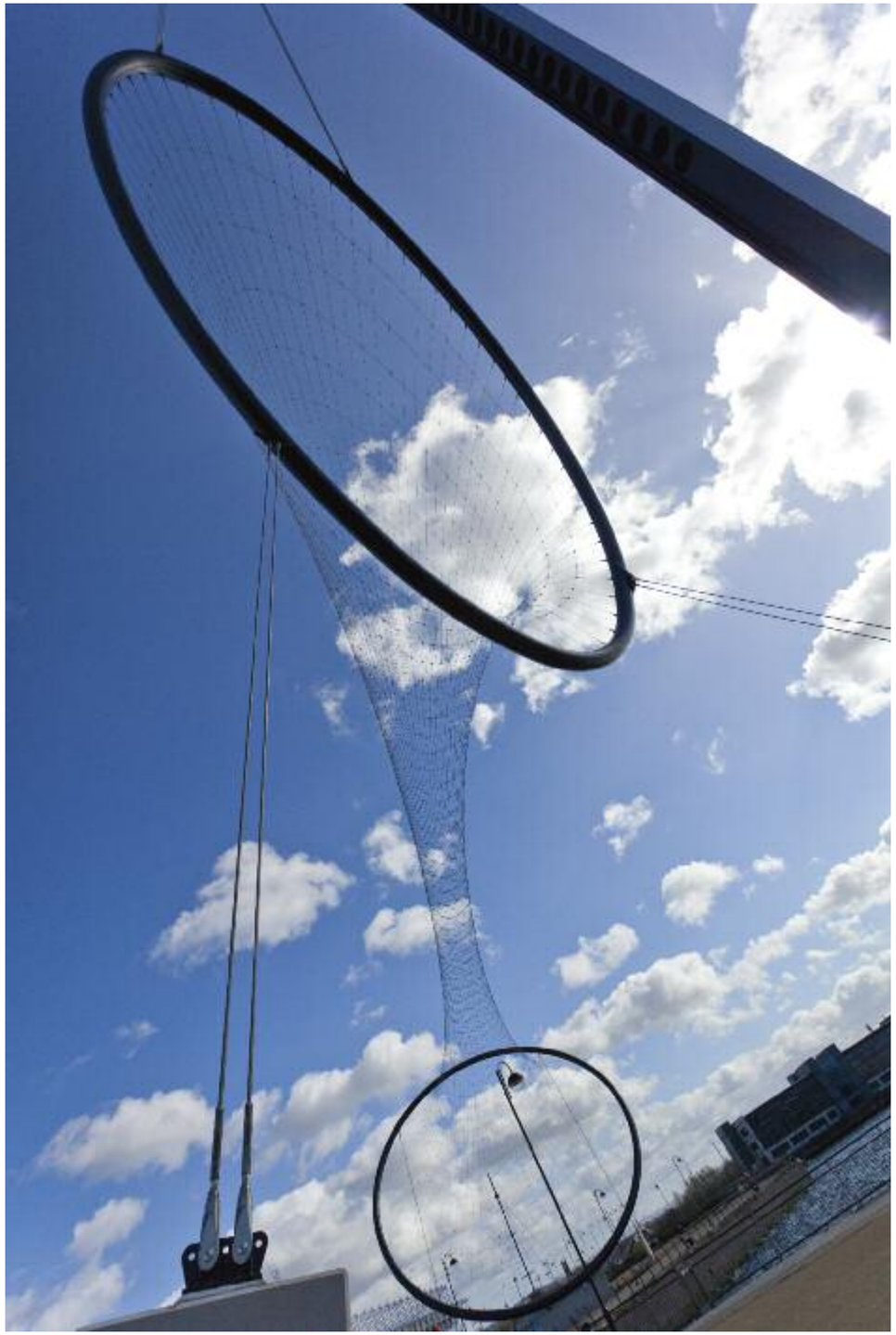

VISITOR
Balfour
Beatty
VISITOR
Balfour
Beatty

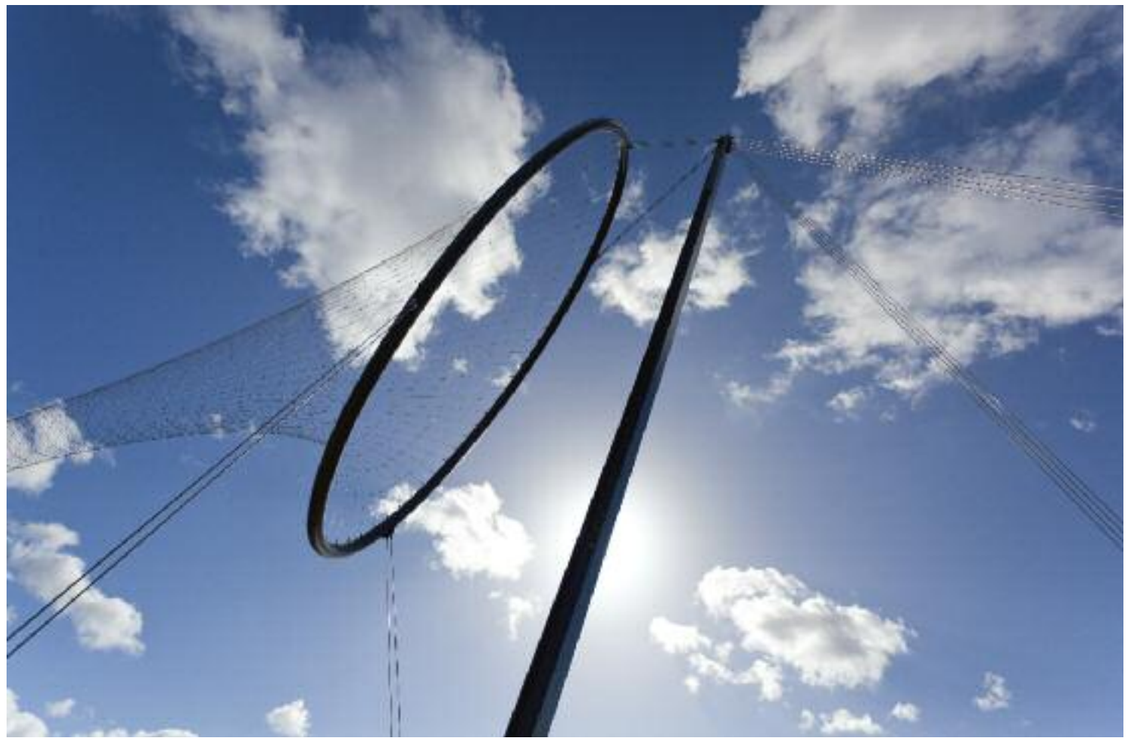
Temenos

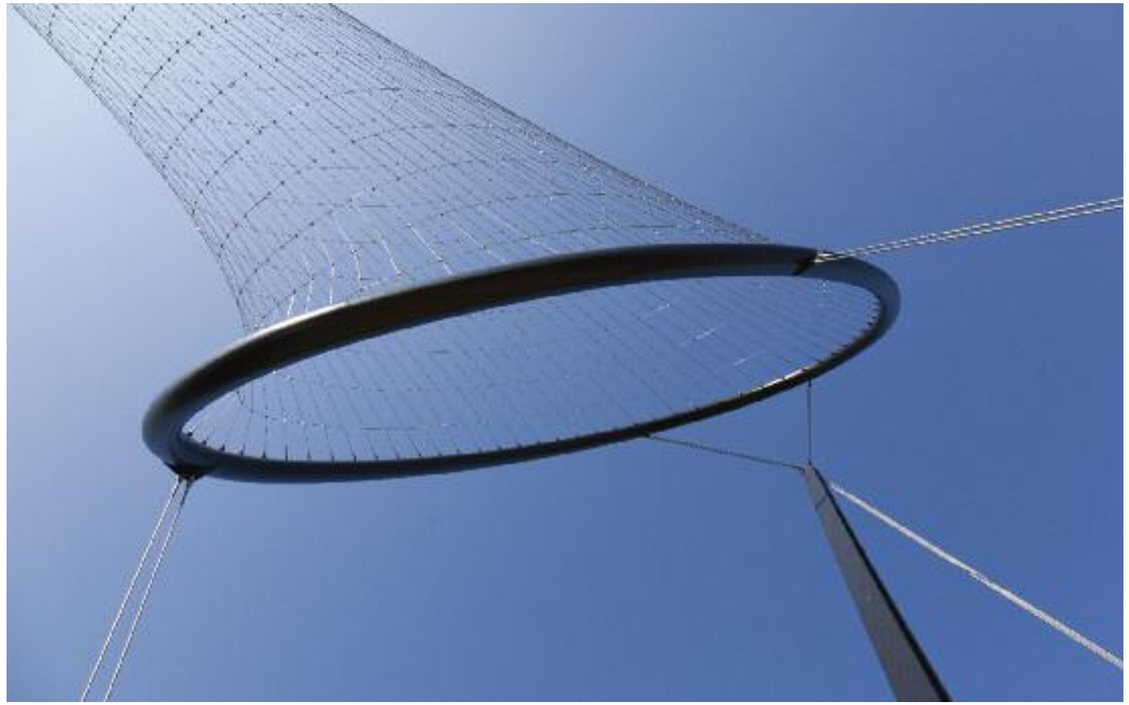
‘Land cut off and assigned as a sanctuary or holy area’











The Meteor Programme

The Meteor programme at Teesside University seeks to engage young people in activity designed to raise aspirations and achievement. Primary schools that participate in Meteor are located in some of the most deprived areas of the Tees Valley. Meteor's aim is largely to expose pupils to University life through contact with university students and staff to raise their aspirations and awareness of higher education. The scheme has been recognised nationally as making a positive impact on the transition process from primary to secondary school. The scheme has won national awards and recognition from the former Prime Minister Tony Blair.

Traditionally the typical Meteor programme has involved students being involved in activities around the arts, sciences, engineering, technology, mathematics, computers, performance, criminology and so on. All activities are designed to be bite-sized and to leave students with a desire to do more!

The University was delighted to be involved in raising awareness of the Tees Valley Giants project and offered the Meteor Summer School as a focus for engaging young people in the concept of public art and its construction. The Summer School focussed on 'creativity' and the University Schools of Arts and Media, Science and Engineering and Computing would each deliver sessions which would mirror the creative design process, engineering and final construction of an artefact. The project brief for teams of participating pupils: To design and build your own Tees Valley Giant.

The day commenced with an introduction from the Project Manager of Temenos, followed by a design briefing by staff from the School of Arts and Media. They were shown how to research and sketch their prototype 'giant' ideas. Using wooden building blocks, elastic bands, 'blu-tac' and imagination, they explored 'cantilevers', 'negative space', 'climbable' and 'top heavy' structures. Each prototype model revealed new potentials for sculptural forms and public space.

In the afternoon, staff from the School of Computing helped the same students visualise through the use of creative software how a full-sized version of their ideas might look when it was built. Each pupil was able to develop their vision of a giant in their 'back-yard'.

During the final part of the day, staff from the School of Science and Engineering helped students build on their earlier creative work using materials from the morning session. Pupils scaled up their structures to produce two meter high versions of their earlier prototypes. The teams had to take on various roles to manage the actual build - pupils were selected to wear high-visibility vests and helmets, as they would on a construction site and they had to organise their own teams to construct their 'Giant', without it falling down.

From an academic point of view the day was about inspiring creative vision, confidence, raising awareness of Tees Valley's newest piece of public art and basic physics! From the point of view of these young creatives the whole learning experience was fun. By the end of the week 400 budding artist-sculptors had learnt the basics of design and construction and better still a real feeling that they had a connection to 'Temenos' and were happy to tell family and friends about their exciting project. What better introduction to Temenos could they have had, than to have designed and built their own Tees Valley Giant.

"It's so interesting seeing Temenos up close, the way the structure's built. I'd like it to inspire other young people to build their own structures in the future. The activities we've done for Meteor in school have been really fun and I want to go to University when I'm older. I want to study to become a Doctor as I like helping people."

Heena Akram, 11, from Abingdon School

"I really like the shape of Temenos, it's interesting and good for Middlesbrough. I'm looking forward to building my own structure at the University in July. I liked the Zoolab Meteor tour when it came to our school as we got to see lots of different animals. I also want to go to University when I'm older."

Shaan Hussain, 11 from Abingdon School

Modern Times

In 2009, mima education recruited a group of young people aged 14-21. Advertising in local schools, colleges, libraries, youth centres and the Middlesbrough Evening Gazette, mima aimed to recruit a collection of enthusiastic young people interested in photography, journalism, design and/or modern and contemporary art. Responding to mima's then current exhibition, Gerhard Richter: Modern Times, the young people created a newspaper exploring how Richter's style, colour and influences could be seen in music, fashion and popular culture today.

This newspaper, called The Modern Times, was delivered to 48,000 homes in Teesside and gave the group the name they have since adopted. The Modern Times, or TMT, has continued to evolve and grow in following, impact and reputation. The group continue to develop accompanying mima exhibition resources and programme and deliver events for other young people and have since scripted and performed an original play about youth culture, winning the Marsh Trust Regional Volunteers award.

Following the dedication and success of TMT, mima were very keen to involve the group in the interpretation of its high profile show Anish Kapoor; an exhibition to coincide with the launch of Temenos. With the inauguration of Temenos, Middlesbrough has gained a unique and awe-inspiring sculpture that calls upon the twin skills of our region; heavy industry and precision engineering.

For a young person's view on Kapoor's work and its impact, TMT member, Charlotte, was given the opportunity to see the artist's winter show at the Royal Academy and interview the man himself. She documented her responses and Kapoor experiences, her unique viewpoint forming part of mima's gallery guide accompanying the exhibition. TMT also delivered a public talk about Anish, mima's exhibition and Temenos to a very enthusiastic audience in Spring 2010.

For more information about TMT or to find out about other unique Kapoor-like experiences, young people's workshops, talks and events, 'like' on Facebook after searching for 'The Modern Times'.

For the last six months I have been part of mima's The Modern Times project, working alongside the gallery's education team, curators and other Teesside young people. As a representative of The Modern Times I was given a golden opportunity to meet internationally acclaimed artist, Anish Kapoor. I travelled to London to meet him and tour his exhibition at the Royal Academy of Arts.

I was particularly struck by a spectrum of stainless steel, silver and gold mirrors dominating one of the gallery spaces. The pieces were circular, concave and convex mirrors, awe-inspiring in their simplicity and beauty. They made me rather nostalgic, evoking a sense of fun, the like of which I experienced at fun fair houses as a child.

After viewing the artworks we were given the delightful opportunity to talk to Anish Kapoor directly. He spoke openly about his work, sharing the idea that he bases the majority of his art on aesthetics. The 'meaning' is uncovered after the piece has been executed and put into context. He values the fact that the individual must decide how to view the work and what it means on a personal level.

I asked Anish Kapoor "What do you wish you knew?" He looked up at me, with confusion in his eyes, peered through his silver hair and, with initial hesitation, revealed "I'd like to be able to play the violin."

Meeting an artist of Anish Kapoor's stature was an amazing experience. I didn't know what to expect from him but he was lovely, down to earth and gave us an incredible insight into what inspires him to create and achieve success. Anish Kapoor's words of wisdom captivated and inspired me to have the confidence to pursue my own artwork. He has fuelled my passion and determination to become a successful young individual in the creative industry.

I hope this is not the last time I meet Anish Kapoor and anticipate now the experience of a finished Temenos. It is a symbol of a better future for the Tees Valley region; one I look forward to being realised.

Charlotte Wood, age 17
25th January 2010

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