RIBA Studio Diploma in Architecture
C4 Cultural Context - Extended Essay:
Design appraisal and analysis of a recent building

TATE MODERN | Bankside

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Introduction

The story of Tate Modern began at two points in history. The site and indeed the building that would become one of Britain’s most iconic cultural institutions originated in 1947 on the south bank of the river Thames, when the famous architect Sir Giles Gilbert Scott was commissioned to design Bankside Power Station. The client and building use converging on the site 45 years later, following the Tate Trustee’s Museums and Galleries Act of 1992 (HMSO), when they announced their intention to create a separate gallery for international modern and contemporary art.

Today, Tate Modern attracts almost 6,000,000 visitors a year, putting it consistently in the top three for modern art museums and making it one of the most visited museums of any kind in the world. On the weekend following the opening of the New Tate Modern on 17th June last year, it received 143,000 visitors, setting a new record.
This essay is about the New Tate Modern, analysing the original 1994-2000 adaptation of the former Bankside Power Station (now known as The Boiler House and Turbine Hall) and the 2005-2016 transformation and extension (The Switch House and Tanks), as one contemporary building designed and constructed in two distinct phases.

Figure 1.3 Infographic wall map – heat applied vinyl onto polished concrete. All Tate Modern wayfinding and signage was designed by Ian Cartlidge of Cartlidge Levene and Morag Myerscough for the 2016 reopening.
It must be difficult for millennials or foreign property speculators to imagine, in a cultural quarter now defined by Tate Modern and with developers clamouring to erect high-rise luxury accommodation (to fill with ethereal speculators), that Bankside was originally a very undesirable place. Charles Booth described the area in his 1899 publication *Life and Labour of the People in London*:

…there is in this round a set of courts and small streets which for number, viciousness, poverty and crowding is unrivalled in anything I have hitherto seen in London…the inhabitants are…the dregs of the population. Steele, J. ed. (1997).

![Figure 2.1 Bankside in January 1947, showing the former 1891 Bankside power station on the left with its 18 grit-spewing chimneys, bombed out dereliction in the foreground and the smog obscured silhouette of St. Paul's to the right. (© Crown Copyright, The National Archives, HLG 79/918).](image)
The situation didn’t improve much over the next four decades, then war broke out and 6 years of German bombing raids left their mark on the area.

Following World War II, London was growing fast and the demand for electricity increasing rapidly year upon year. London needed more power. Despite a great deal of public and political resistance for replacing the heavily polluting coal fired power station with another in the heart of the capital, the construction of a new more efficient replacement was deemed a necessary evil. A public enquiry was held on 14-18th January 1947 between the electricity industry, local government, and government ministries to discuss the new Bankside Power Station. In his report the Inquiry Chairman surmised, ‘The south bank...is notoriously ugly and even a large new industrial building could not seriously affect it’.

Therefore, on 22\textsuperscript{nd} May 1947, a month after the House of Commons announced their decision to proceed with Bankside, the electricity commissioners gave their formal consent and Sir Giles Gilbert Scott was employed to improve the appearance of the power station. The coal shortages of that year saw that the new power station would be oil fired (the first of its kind in Britain) and he envisaged combining the boiler flues into a central chimney to give the appearance of a ‘slender tower or campanile’, The Times (20 May 1947). This tower, with a height of 99m, was designed not to compete with the dome of St. Paul’s over the river, at 112m. This relatively low height, along with the cooling effect of using river water to wash the flue gases would cause considerable local pollution in the form of ‘plume droop’ and eventually contribute to its shutdown.
Bankside Power Station was constructed in two phases to allow the existing Victorian plant to continue to generate, the eastern part was constructed from 1947-53 and the final western part between 1959-63. During this time, the old station was known as Bankside A and the new building Bankside B. The completed steel framed building was 155m long, 73m wide and wrapped in 4.2 million bricks. At peak output, the four generators combined produced 300 million watts of power, and each day consumed 1,600 tonnes of oil and the condensers drew in over a million tonnes of water from the Thames.

By the late seventies, Bankside Power Station was generating very little electricity due to the rise of oil prices and increasing resistance to the localised pollution from a far more environmentally conscious public. So on the 31st October 1981, just 18 years after its completion, it was decommissioned as a generating power station.
The southern side known as the switch house continued to function as a huge transformer hub (the eastern half of which still performs this duty today) but the turbine hall and other spaces lay empty and razor wire and earthworks were erected around its perimeter to defend it from would-be tenants. It would have to wait another 13 years for its fate to be decided.

Figure 2.3 Site Plan, with the site area of Tate Modern highlighted in red. St. Paul's can be seen directly to the north on the axis of the Millennium bridge, the shadow of The Shard looming toward the museum from the bottom right of the image, 2017. (© Google).
In 1993 the Tate, which had been led at that time by Director Nicholas Serota for 5 years, started to canvas the views of artists and curators. In January 1994, a questionnaire was sent out to 50 artists, asking for their views on their favourite exhibition venues, which recent projects they thought successful and the most common mistake made in recent museum architecture. One artist, Gerhard Richter, responded:

‘my aversion to architects is so distinct, that I rather could try to design a museum than being able to give you any useful answer’. Dercon, C (2016) p.47.

His opinion was shared by many of the other artists, not all showing the same disdain for their creative brethren but most for the failure of contemporary architecture at that time to provide the exhibition and performance spaces that they craved.

In the two years leading up to the 28th April 1994, when it was announced that Bankside had been chosen, the Tate Trustees considered several sites around London for the new gallery such as the South Bank, Effra (near Vauxhall) and Greenwich Reach. Bankside was favoured for its location, the potential of a very large industrial building and the inherent charm of Scott’s design. The choice was not universally praised however as many wanted a new building, an assertive cultural landmark to symbolise a progressive Britain in the new millennium.
The site was chosen and a competition was held by the Tate which received 150 requests from hopeful architects. Of these, thirteen were chosen to propose initial design strategies and then a final six proceeding to a more detailed second round.

Five of these six were world leading architecture practices and all proposed dramatic alterations to the Bankside building, they were: Tadao Ando Architect and Associates (Japan); David Chipperfield Architects (UK); Rafael Moneo (Spain), and Rem Koolhaus/OMA (Netherlands). The Swiss duo of Jacques Herzog and Pierre de Meuron were virtually unknown back then, certainly not the ‘starchitects’ they have since become, and their approach was very different. Michael Craig-Martin, a Tate trustee on the competition panel in 1994, said:

‘The only architects who truly turned the building into a building itself were Herzog & de Meuron. Everybody else built something in it; they proposed turning it into a building’.

They won the competition by proposing to do the least to the power station, in terms of altering its external appearance. But, their planned transformation involved demolishing most of the interior and a lot of the external fabric, so it was first and foremost a restoration project, and not at all a simple ‘loft extension’ as it was often rather cynically referred to as.
The projected cost for Tate Modern was £80 million but this would eventually rise to a final budget of £134.5 million. The recently formed Millennium Commission donated the lion’s share of £50 million, which was the maximum permissible grant from the National Lottery’s main distributor. A further £12 million was donated from the Government regeneration agency English Partnerships, towards the purchase of the Bankside site and removal of the power station’s plant, £6.2 million from the Arts Council, and £1.5 million from the London Borough of Southwark. The other half of the money came from private donations.

Tate Modern was officially opened by Her Majesty the Queen on 11th May 2000. It was phenomenally successful, attracting 5.3 million visitors in its first year, together with the draw of the new Millennium Bridge (which was so popular it had to close for 7 months to be strengthened), the South Bank was almost immediately transformed.

A year after opening, a Bankside Regeneration Study was commissioned and delivered by Richard Rogers Partnership. This study analysed the site in great detail and looked at future possible urban regeneration ideas.
This unprecedented success led the Tate Trustees to consider further development of the site earlier than first envisaged. In 2004, the real opportunity for ‘Transforming Tate Modern’ arose (this was the name given for the redevelopment and extension scheme). EDF, who at that time owned the live transformers and the switch house containing them, were able to replace them with a new smaller generation of transformer, freeing up the west switch house. As well as gaining what would become all of the floor area required for new gallery space, the audible hum from the aging transformers was banished.

Later in 2004 a second competition was held between four shortlisted practices; Richard Rogers Partnership, Dominique Perrault, Wilkinson Eyre and Herzog & de Meuron.
Herzog & de Meuron won, and a planning application was submitted in 2006, but with a Switch House extension that looked very different to the one we see today.

![Figure 3.4 CGI for original glass Switch House extension, approved in 2007. The overall form is similar but internal arrangement and aesthetic strikingly different. (© Herzog & de Meuron).](image1)

![Figure 3.5 Revised CGI for Transforming Tate Modern with brick clad Switch House, approved in 2009. (© Herzog & de Meuron).](image2)

The original scheme, approved in August 2007, was formed from a pyramidal stack of contorted glass blocks. Despite being approved by Southwark Council it was negatively received and attacked by many critics. The architectural historian Gavin Stamp was concerned about the demolition of yet more of Scott’s power station (the west switch-house) and that the symmetry of the building would be compromised. He described it as ‘not only pretentious, excessively domineering and ill thought out in itself’ but in danger of ‘gravely damaging Scott’s building both physically and aesthetically’. Dercon, C (2016) p.43. I discuss the materiality change to brick in Chapter 5.

A revised planning application was submitted in January 2009 and approved in March the same year. Work started in December and took six and a half years to complete. The original budget set for the Transforming Tate Modern project including the Switch House extension was £215M, this would be increased by £45M by the time of its completion in June last year.
If you approach the museum from the Millennium bridge to the north, you can enter straight away through the River entrance or turn right and walk through the landscaped gardens along the riverside, passing the imposing central chimney and towering dark brick façade of the Boiler House. As you turn the corner the full width ramp of the western entrance comes into view. The ramp begins to descend outside and proceeds down into the Turbine Hall, named after the central atrium’s original function, housing the five turbines that once generated a sixth of the capital’s power.
Figure 4.2 Exploded Isometric showing organisation of spaces and use types, 2017. By author.
One of the most important spatial features of Tate Modern is the Turbine Hall, the creation of a street within a building. Removing the decking that formed the ground floor of the former power station to form the ramp sacrificed the potential use of a very large basement. This is testament to how greatly the client and architects wished to emphasise the qualities of this space. As you walk through the low glazed strip and under the crosswalk at the base of the western elevation, you enter this grand rectangular atrium.

The ramp continues down for 5 of the 21 steel framed bays along the hall’s length. You are immediately in awe of the Turbine Hall’s proportions, 75 feet wide but 115 high, this verticality emphasised by the five vertical strip windows facing you on the eastern elevation, and only challenged by the hall’s 500 foot length. The huge volume is intersected by just two bridges traversing it at levels 1 and 4.

As you continue down the ramp you arrive at its base in the centre of the museum and are presented with the northern internal façade. You can see the shops, galleries and restaurants, and can quickly gain an awareness of the layout and start to understand its configuration. This has become even more successful now that the Switch House has been incorporated and opened up, and you can see into the Tanks to the south.

From the start of the ramp outside to the eastern end of the turbine hall, where there is usually an art installation, it is a good two-minute walk. As you meander down the carpeted section, being careful to avoid children rolling across your path, you can’t help but look up at the black painted steel frame, Herzog & de Meuron’s pale green glowing light boxes protruding into the space, and the people looking down from the bridges and balconies above.
The two storey green glass box that sits atop Tate Modern, referred to as the Light Beam, runs the entire length of the Boiler House, but stops short of the eastern end in what appears to be a deliberate break of Scott’s seemingly rigid symmetry. This is actually due to the asymmetry in the original building’s plan, where the east elevation is inset from the extents of the north and south façades. A relatively small amount of the Light Beam is open to the public. Apart from a small member’s room on the fifth, and a restaurant and the East Function room on the sixth floor, its primary function is to provide natural light via clerestory glazing to the Boiler House’s double height galleries below. This method of top lighting for the level 4 galleries was necessary due to Scott’s vertical strip window design, which stop short of this level.

The processional stair from the south entrance of the Switch House to the viewing gallery at the top, takes many forms and directions as it meanders up and around the building. A great deal of experimentation went into this vertical journey that the architects wished to take visitors on. The stair changes form and direction as it winds its way around the Switch House tower.
There is generous circulation space throughout the museum and especially in the new tower, as it was researched and found that one of the main reasons people gave for visiting Tate Modern was to meet other people. Indeed, most of the Switch House’s floor area is concourse circulation space, the new galleries formed in the recent transformation are housed within the former west ‘switch house’, the transformer space adjacent to the Turbine Hall on levels 2 to 4, which donated its name to the new extension.
The indomitability of Scott’s industrial cathedral is deliberately undermined by slicing away the western corner at ground level to form a fully glazed riverside café. Leaving the brick façade miraculously floating above and exposing the fragility of the brick cladding wrapping around a steel frame. This principle is emphasised again in the cladding of the Switch House.

One of the biggest points of discussion with the Switch House extension is its pyramidal form and the perforated brickwork cladding. The pyramidal form is the extrapolation of geometries found in both the site context and the existing building. ‘The site geometries of street pattern and visitor flow are connected to the layered structure of the existing
Tate Modern, to create a volume capable of accommodating the brief area of 21,500m², according to the Design & Access statement. The arrangement of the oil tanks was also a starting point for the form of the tower, their cloverleaf footprint extruding and twisting upward to terminate as a square floorplate aligned with the main building’s rectilinear grid. There have been many analogies made to the tower’s form, a Ziggurat, Tower of Babel, tent, even a Star Wars Sandcrawler. Personally, its overall form in isolation reminded me of the Mesoamerican pyramids, which were generally steeper and flat-topped, such as the Votive Pyramid (see Figure 5.3 below).

As stated in chapter 3, in Herzog & de Meuron’s original 2006 design, the Switch House was a very different building. Its overall form was similar with the building envelope a twisted prismatic pyramid; despite being taller and pointier (more Egyptian than Mesoamerican), but in the original design, the envelope was formed completely from glass. I have read many interpretations of the reasons for the redesign and complete U-turn in the external materiality of the extension. Of all the interpretations, I would like to favour the Architects’, which as Jacques Herzog states:
‘There are two things that we abandoned in the course of the design process: the typology of stacked cubes and glass as the main material. We felt less and less comfortable with the design and it was a relief to realise that we had come up with a much better, more natural solution’.

In the same interview with Chris Dercon, Director Emeritus of the Tate, Pierre de Meuron talks of the relationship of the Switch House’s materiality with its neighbours:

‘To use the same cladding for the old building and the new extension, namely bricks, was the right decision too. It has unified the entire complex so that it can stand up to its neighbours. If, as in a previous phase of the project, we had worked in glass and steel, the new extension would have become an undesirable ally of the development around it. In not doing so, Tate Modern 2 has become an erratic mineral block in the midst of the surrounding commercial environment’. Dercon, C (2016) pp.105-6.

I think this last statement is fundamentally important; that materiality can most clearly express the cultural persona of a building. By employing in this extension, the unpretentious and utilitarian qualities of brickwork, belonging to buildings such as the industrial cathedral that it extends, the architects have imbued the Switch House with an identity that is honest, discerning and cultured. They have handed it a cloak of respectability, a foil to the planar glazed dilettantes in close proximity.

A more cynical viewpoint is that the timing of the first design, and the immediate economic meltdown of 2008 succeeding it, had a value engineering effect on the material choice. Either way, I believe the extended design period has benefited the resulting buildings, the new extension but even more so the original building.
This change of cladding material to masonry could appear relatively banal, but the method of its arrangement and construction is quite complex and intriguing. The bricks themselves are of nonstandard size and proportion, 215mm square in plan, 69mm high and stacked vertically in pairs. These 145mm high ‘blocks’ are then arranged in a Flemish bond, as the original building, but with the headers pushed in and then removed altogether as the walls leave the relative danger of the ground and the reach of even the most intrepid rock climber. The inclinations of some of the planes are achieved by offsetting the blocks at each course so that, despite first appearances, each of the 336,000 bricks used for the Switch House, is aligned vertically.

Where these angled planes meet, the folds are articulated in a deliberately course way, appearing torn and disjointed and lending the form real drama and dynamism. I have come across a few negative opinions of this design decision, with some describing it as
appearing unfinished or scrappy. I personally feel this was a deliberate device that has sacrificed superficial beauty and geometric perfection to emphasise the break of symmetry and rectilinear order inherent in Scott’s original design. Everyone knows what a neat corner of brickwork looks like and how easy it is to achieve, Herzog & de Meuron have used the medium of masonry to tell a different, and far more engaging story.

As you walk nearer to and through the entrance doors of the glass curtain wall ground floor (which leans away from you in the same plane as the brick above), the dominance of the woven fabric brickwork gives way to the heavy and geometrically sculptural poured concrete frame that establishes and pervades the interior ambience from then on.

The concrete frame is exposed and celebrated throughout the building, the filtered daylight from the punched brick shell reflecting off the multi-faceted columns and beams. The heaviness of this frame appears to increase ascending the levels as the constant widths of the tapered columns converge on a smaller and smaller floor plate. There are non load bearing elements to the concrete frame on these upper floors, their duty transferring from resisting structural to influencing cultural forces.
The floors of the concourse and circulation spaces are polished concrete, having a shinier appearance to the walls and columns, but along with them lending the building a real sense of solidity. Throughout the galleries, on levels 3 & 4 of the Boiler House, the concrete floors are overlaid with unsealed European oak, the idea being that they would be polished by the gallery user’s feet over time. There were claims by some art conservationists at the time of its opening that the oak dust kicked up by thousands of feet shuffling around daily could harm the artworks. The flooring contractors warned the architects at the time of the acidic and corrosive nature of oak dust, but these warnings were largely dismissed as the spaces would be well ventilated and regularly cleaned and the rough and natural quality of the flooring was felt to be a very important part of the gallery space’s sensuous ambience.
The ventilation grilles set into the timber floors throughout are cast iron and deliberately industrial. The white painted MDF walls join the floors and ceilings with no skirting or connecting joints. The deliberate uniform gaps between both can be seen and create a sense that the walls are floating over a continuous enfilade throughout each gallery level. These walls, which are very thick, are concealing the majority of services to these spaces. The doors between them also recede completely into vertical slots or are concealed behind oak linings within the portals.

Figure 5.11 Untreated rough sawn European oak flooring of Boiler House. Now polished from 17 years of pedestrian traffic.

Figure 5.12 Same timber flooring used through Switch House to unify the spaces. Clearly rougher in texture from only 8 months of pedestrian traffic.
The helical stairs that connect the lower floors, with their poured concrete stringers flowing seamlessly with the concrete floors they connect, are very well cast and finished, and are works of sculpture themselves. Natural untreated timber forms the inlaid treads and also the seating within the circular wells creating interesting spaces to pause or rest. The plywood used for the seating apparently reflecting the shuttering in which the concrete stairs were cast.

The artificial lighting has been designed to create calm and almost meditative circulation spaces, some of the fittings appearing more like the light boxes of an artist’s installation. The fluorescent tubes lighting the helical stairs are arranged radially into cast niches.
Well over half of the people that visit Tate Modern are under 35, according to Tate’s own annual report for 2014-15, it had the highest number of visits by young people for any art museum in the world – 3.5 million, or an average of 10,000 a day.

I certainly felt that there were plenty of college students and families with young children on the three occasions that I have visited since the New Tate Modern opened last year. I took my six-year-old daughter with me on one occasion and she really enjoyed the experience, her personal highlights included rolling down the carpeted ramp of the Turbine Hall and the objects exhibition, particularly the giant cube of rose coloured glass - Roni Horn’s *Pink Tons*.

In terms of exhibiting art, which many have argued is the building’s secondary function after a public space, there are now six floors of permanent exhibition spaces, three each side of the Turbine Hall on levels 2, 3 and 4. The Tate Modern originally having a total of

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*Figure 6.1 The full width carpet runs most of the length of the Turbine Hall's ramp, encouraging people to sit or lie down, relax or...roll to the bottom.*

*Figure 6.2 Pink Tons (2009) by New York artist Roni Horn. This 1,100x1,200x1,200mm cast glass cuboid weighs 4,514kg, and my daughter now wants one.*
12,402 m² exhibition space, the Switch House extension adding a further 3,500 m² on its three upper levels and 1,805 m² of performance art space in two of the three converted oil tanks at basement level. The third oil tank was given over to plant and non-public areas. A large amount of the circulation space within the Switch House, 4,980 m², is made up of the central concourses, which were designed to serve as additional display areas.

There are six shops in total, with 1,000 m² of the retail space divided equally between the two main shops - the original on the northern side of the boiler house at level 0, and the new shop on level 1, by the south entrance of the Switch House. Expanding the retail was one of the greatest desires of the extension’s brief and despite doubling the amount...
of retail space they are always busy. The 300m² River Shop, constructed a year after the original opening, parts the flow of visitors arriving through the river entrance of the Boiler House like a planar glazed retail island (see Figure 6.7 below), and the Tate Edition shop encourages window shopping of its artworks before you walk in. A further 150m² of retail is provided by a permanent exhibition shop on level 3 of the Boiler House and a flexible retail/exhibition space of 200m² on Level 2 of the Switch House.

There are two public restaurants, which are sited at the top of the Boiler House and the Switch House so that they *should* both enjoy the best views to the north across the river and to St. Paul's. There are also two café/bars at ground level, a new bar at the entrance to the Switch House providing 70 seats inside and another 40 on the terrace (see Figure 6.8 above), and the original large café at the western entrance to the Turbine Hall seating 240. Two small espresso bars serving level 3 of the Boiler House and the level 10 viewing terrace of the Switch House complete the F&B provision.
There is a large provision for private hiring for functions, art activities and exhibitions at Tate Modern. Almost all the F&B spaces can be hired out, as well as the East Function Room, many of the concourses, the viewing terrace, the Tanks and even the Turbine Hall, if you are a Tate corporate sponsor such as BP (although, their bags are now packed – see below).

The Turbine Hall has also been used for unauthorised art performances such as that by the Liberate Tate movement, who in 2011 set up camp there for 25 hours and daubed Anti-BP sponsorship messages in charcoal (still can’t decide whether this is a carbon neutral activity) down the entire ramp. A true multi-use space.

Figure 6.9 A private corporate function held in the Turbine Hall. (© Sternberg Clarke Entertainment).

Figure 6.10 An artistic demonstration held by the Liberate Tate group in 2011, in an effort to publicise the controversial sponsorship of Tate by BP, 2011. (© Martin LeSanto-Smith).
An art museum should allow patrons to navigate through the exhibition spaces with as little distraction from viewing the artworks on display as possible, wayfinding should be instantaneously informative and the routes through intuitive. Herzog & de Meuron submitted detailed circulation studies as part of their competition entry, and this in-depth analysis, as well as helping them win the competition, shows in the final arrangement of gallery spaces. You can appreciate the thought that has gone into their design. Subtle at first, and without any deeper interpretation could be construed as lazily conceived plain white boxes, but this is where the genius of Herzog & de Meuron really lies. They have not let their architectural egos cloud the experience of perceiving the artworks on display. Through the cleverly engineered and controllable lighting, use of few materials, clean lines and unfussy detailing, the spaces create the right setting without constantly demanding your attention.

Figure 7.1 The minimum 5m height of the galleries allow the ceiling to rise out of view and all viewers of exhibits, big or small, to feel immersed in the experience.

Figure 7.2 The large concourse spaces throughout the gallery, create opportunities for all sorts of encounters outside of viewing artworks, such as meeting loved ones.
Lighting is one the most important factors in displaying artworks and can have the greatest effect on the setting of the scene and the perception of the exhibits, even subconsciously. Natural light lends a more dynamic quality to the spaces and also connects the users to the seasons, time of day and weather outside.

The artificial lights have been designed in a way to give the gallery spaces a uniform status with no discernible hierarchy despite their different sizes. Where there are no windows in the top gallery of the Boiler House, the ceiling skylights have the same design as the light installations in other galleries so the user is not aware of the difference. The galleries of the original building are all approximately 5 metres high except double height galleries at the western end and the central gallery on the top level.

Figure 7.3 Section through the Switch House showing the varied storey heights, relationship of strip windows to storeys and revealing the tower as a circulation core. By author.
The fenestration of the Switch House is seemingly designed to camouflage the number of storeys and interior layout. The horizontal ribbon windows are of different heights and don’t relate in a rhythmic way to the floors that they serve, some floors having two with one at high level, whilst others are hidden entirely. At night when the interior lights shine through the perforated brickwork of the covered openings, more of the internal arrangement is intelligible but it still manages to intrigue and beguile when trying to interpret these qualities, as the building’s form does with its underlying geometry.

The new restaurant on level 9 of the Switch House has received criticism, culinary and architectural, from many diners. Most of the architectural criticism focuses on the fact that when you are seated you can’t admire the view as the horizontal strip windows are small and set too high. With the restaurant sitting just below the viewing terrace which has the largest cut made into the brick envelope, it would look unbalanced if there was a larger band of glazing (such as on level 5 - see Figure 6.4) immediately below this. I feel this is a case of the external aesthetic dictating the functionality of the internal space.

Figure 7.4 The fantastic view from level 9 Restaurant of Switch house is somewhat impaired for seated diners by high cill level of ribbon windows.

Figure 7.5 Looking back from the Boiler House, the level 9 restaurant is immediately below the viewing terrace, where a higher window could upset the balance.
Herzog & de Meuron collaborated with many artists in the years leading up to their commission for Tate Modern, including Joseph Beuys, Helmut Federle, Pipilotti Rist, Thomas Ruff, Adrian Schiess, Rosemarie Trockl, Hannah Villager and Jeff Wall. They worked very closely with the Swiss artist Rémy Zaugg for many years; sometimes referring to him as the firm’s fifth partner. Ursprung, P (2002) p.25. Jacques Herzog himself pursued a parallel career as an artist in the 1980’s. Despite this collaboration and personal experience, they believe that art and architecture are very different and should be kept distinct. In the 1994 book Architectures of Herzog & de Meuron, Portraits by Thomas Ruff they say this:

‘In our view, the proximity between the work of art and the work of architecture is justified, but I think that to apply the image of art to architecture is the worst thing you could do…’ Ursprung, P (2002) p.14

In 1996, just before the competition entry, they completed the artist’s studio for Rémy Zaugg in a suburb of Mulhouse, France.

Figure 8.1 Exterior of Studio Rémy Zaugg, Mulhouse, France, 1996. (© Herzog & de Meuron).

Figure 8.2 Interior of Studio Rémy Zaugg, Mulhouse, France, 1996. (© Herzog & de Meuron).
Studio Rémy Zaugg gave them an opportunity to test many of the concepts for the gallery spaces of Tate Modern. The rooms inside the studio are of comparable size, proportion and finish to the galleries on levels 3 and 4 of the Boiler House, being 5m in height, with the same overhead lighting from diffuse lit panels fit flush with the ceilings and appearing as opaque skylights.

The walls and ceilings are white with no joins or embellishments but this could describe many galleries before or since. The philosophy behind Studio Rémy Zaugg and Tate Modern was the banishment of all intrusive fixtures in favour of the twin virtues of light and space. To create exhibition areas devoid of distraction and clutter, so that the appreciation of the artworks can be pure and unadulterated. In all the Tate’s galleries, there is not a fire extinguisher to be seen. I determined this is because if you could see one then it could be argued that it should be given as much contemplation as the other ‘exhibits’, such as in Michael Craig-Martin’s 1996 painting Knowing (Figure 8.4 below).

![Figure 8.3 Boiler House Level 4 Gallery lit by high level Light Beam, devoid of unintentional ‘ready-mades’, to distract.](image)

![Figure 8.4 Knowing (1996) by Michael Craig-Martin. Depicting everyday objects of unusual colouring, size and relationship, to appreciate. (© Michael Craig-Martin).](image)
The precedent of smaller and more intimate, artificially lit gallery spaces was set as far back as 1939 with Philip L. Goodwin and Edward Durell Stone’s Museum of Modern Art in New York.

Then museums began to integrate with their surroundings, and this was achieved in 1977 by Richard Rogers and Renzo Piano with their Centre Georges Pompidou, Paris. Developing an earlier concept of a building as a living city from Cedric Price’s Fun Palace, the Pompidou Centre looked to opening up the art museum and centring it on a large transparent exhibition hall. Rogers and Piano also saw the appeal of creating a public rooftop viewing gallery. 20% of the 5 million annual visitors to Centre Pompidou ride the escalator up the side of the building for the views at the top, without visiting the exhibition spaces inside.
The Kunstmuseum (Museum of Art) in the architects’ home town of Basel, Switzerland had a great influence on Herzog & de Meuron. The original museum from 1936 was extended in 1980 and again last year by other local Swiss architects Christ & Gantenbein. Having the largest public art collection in Switzerland on their doorstep was a key cultural influence on the young Herzog & de Meuron. One sculpture in particular, *Six Cold Rolled Steel Boxes* by the artist Donald Judd was acquired by the museum in 1975 and they admired the ‘unbelievable beauty’ of Judd’s creations (Ursprung, 2002, pp.18-20).
The additions to the roofline of Tate Modern in phase one and the tapering pyramidal form of the Switch House in phase two were determined in part by the need to preserve statutory sightlines of St. Paul’s Cathedral across the river (see Figure 9.1 below).

St. Paul’s Cathedral is an internationally recognised landmark in the London skyline, and since 1938 the City of London Corporation has operated a unique policy known as the “St Paul’s Heights” to protect and enhance important local views of the Cathedral from the South Bank.

After ascending the ten flights of straight stairs that run from the fifth floor completing the processional route up the new tower, you reach one of the undoubted highlights of the
experience of the building, as a public space, a 360-degree viewing platform cutting a swathe through the masonry shell of the tenth floor. One of the new extension’s most controversial talking points is the viewing gallery’s direct view into the floor to ceiling glass of the apartments of Richard Roger’s Neo Bankside development just a few metres away. The inhabitants of those apartments, who paid such a premium precisely for their proximity to the Tate Modern, are now playing the protagonists in its greatest installation of performance art. With their whole lives on display, down to their choices of furniture, art and even magazines they now have a most intimate connection with the gallery. The Tate responded to complaints from the few inhabitants by installing polite notices to respect the privacy of their neighbours.

In his pre-opening review of the Switch House in The Guardian, 21st November 2014, the writer and journalist Will Self concludes:

*The new Tate Modern will thus be not an art gallery per se, but a sort of life-size model of what an art gallery might be should our culture have need of one. Since it doesn’t, but rather has a requirement for visitor attractions that reify the ever-widening gulf between haves and have-nots, I’m absolutely certain it will prove an outrageous success.*
I don’t agree that our culture does not have need of art galleries, and although he is using his review of the extension to make a point concerning the wealth divide that is most evident in cities like London, what the viewing gallery has achieved is precisely the opposite of his assertion. A spectacular view can be had by all for free, identical to that from the £20M penthouses next door, save for being free of glazing, that enshrouds the indoor ‘balconies’ of Neo Bankside.

The Switch House has also influenced its nearest neighbour, the former Bankside Power Station that it extends. There now exists a more complex spatial relationship between the 65m tower, the Boiler House at 26m and chimney at 99m. Whereas the chimney once stood proud as the lone bastion of verticality on the South Bank, it is now utterly dwarfed by the 306m Shard less than a kilometre away. Its dominance further eroded by the proximity of the 45–83m high trio of Neo Bankside, and the soon to be completed One Blackfriars (informally ‘The Vase’) will stand at 170m high and is just 370m away, half the distance to St. Paul’s (see Figure 9.2). Far from the new extension harming the former Bankside Power Station’s prominence, it is has avoided blocking key sightlines of St. Paul’s whilst maintaining Tate Modern’s authority and presence against a mounting invasion of speculator fuelled glass behemoths.
In 1897 Henry Tate donated his collection of 65 paintings and £80,000 toward the construction of The National Gallery of British Art (now Tate Britain). This act of philanthropy lives on today in the four Tate Galleries, free and accessible for everyone. Tate Modern is not just a modern and contemporary art museum, or even a public space. It is a cultural landmark that has come to symbolise London and Britain in the 21st century.

It is very difficult to speculate how this situation might be different if the Tate Trustees had chosen one of the other sites or five shortlisted practices to transform Bankside Power Station into Tate Modern. If another site had been chosen and a new building erected or if Herzog & de Meuron had not been the architects throughout the transformation, then I don’t believe it would be the success it is today.

What the Tate Trustees directed by Nicholas Serota and Herzog & de Meuron have achieved is to respond to the requirements of the artists, museum users and the public, to transform the site of a disused power station into a vibrant and vital cultural quarter. The Transforming Tate Modern project completed last year has realised a design strategy that began more than twenty years ago, addressing most of the aims that the first phase could not. The Switch House and Tanks have provided the much-needed extra exhibition space, in terms of floor area but also diversity, with the performance spaces and learning centre. It has also created a southern entrance and turned the level 1 bridge over the
Turbine Hall into a true circulation hub, a central starting point to begin your journey. The Turbine Hall itself has become a central street and atrium, so it not only one of the most impressive public exhibition spaces in the world, it now forms a unifying spine to the rebalanced museum.

Herzog & de Meuron have used their knowledge of the arts and the desires of artists and curators to create a template for the exhibition of contemporary art. They have created the quality and diversity of gallery spaces that were sought, to respond to the needs of artists in the 21st century, that can no longer be served by corridors of wall space. The influence of their exhibition space designs and a new ‘museum architecture’ can already be seen in contemporary projects such as the Basel Kunstmuseum extension.

There have been criticisms of many aspects of Tate Modern, some arguing that the new performance spaces are underused and that there is still not enough gallery space. But the arrangement and allocation of space followed careful research about the what the building was being used for and it is now fit for purpose, as an art museum and public space for the present, with the capacity to evolve to address future needs.

The South Bank has been transformed in the seventeen years since Tate Modern’s first opening. In the nineties, it was an undesirable place, the poor neighbour to the northern side of the Thames with St. Paul’s looking down at the derelict Bankside Power Station. Creating a museum and public space on this site, with the landscaped grounds and transport links such as the Millennium bridge has been pivotal in this urban regeneration.
But it was Herzog & de Meuron’s approach, and the decision of the Tate trustees to adopt it, that has transformed Scott’s industrial cathedral into a symbolic cultural edifice.
Books


Research Papers/Reports


Newspapers/Magazines/Journals


Websites


Trip Advisor (2017) Tate Modern Restaurant at the Switch House. Available at: https://www.tripadvisor.co.uk/Restaurant_Review-g186338-d10789510-Reviews-Tate_Modern_Restaurant_at_the_Switch_House-London_England.html
Image Credits

Front Cover
Turbine Hall from level 4 bridge. Taken on 25th February 2017. By author.

Contents Page Background
Switch House brickwork detail. Taken on 30th December 2016. By author.

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http://www.britainfromabove.org.uk/sites/default/files/BANKSIDE_6.jpg

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https://static.standard.co.uk/s3fs-public/thumbnails/image/2016/05/12/tate-modern-new.jpg

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https://www.theguardian.com/artanddesign/2016/may/15/herzog-de-meuron-interview-tate-modern-switch-house-extension#img-1

Figure 3.2 Competition model for original Tate Modern, 1996. (© Herzog & de Meuron).

Figure 3.3 Extract from the 2001 Bankside Urban Study – Building the Vision (p. 37). These concept diagrams describe the site requirements and constraints following completion of the Tate Modern. Many of these were later addressed by Herzog & de Meuron’s Transforming Tate Modern project. (© Richard Rogers Partnership).
http://www.tate.org.uk/download/file/fid/32125

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http://afasiaarchzine.com/2011/02/herzog-de-meuron_12-3/
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http://www.detail-online.com/inspiration/sites/inspiration_detail_de/uploads/imagesResized/projects/780_201306070210038ee0a57cc57fe8fc80ed9ee1eachaard264dcd4d807.jpg


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http://www.sternbergclarke.co.uk/images/4277.png

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http://kerstinmoeller.blogspot.co.uk/2015/06/time-piece-liberate-tate-occupation-of.html

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http://www.tate.org.uk/art/artworks/craig-martin-knowing-t07234

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https://images.divisare.com/images/dpr_2.0.f_auto,q_auto,w_800/v1465546431/a7yp8j5oourkiq5uwm/christ-gantenbein-stefano-graziani-radu-malasincu-kunstmuseum-basel.jpg

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Figure 9.4 The Tate’s mostly unheeded notices, put up in response to complaints from less exhibitionist neighbours, 2017. (© The Evening Standard).

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