

Biography



Ryan Smith is a fifth-year architecture student at Auburn University. His interest in the built environment emerged out of lifelong passions for art, engineering, and history. A high school research project exploring adaptive reuse of parking structures in his hometown of Birmingham, Alabama, raised his awareness of architecture as a force for change and a reflection on broader social influences. Ryan studied mechanical engineering before shifting to architecture; he draws upon lessons from both disciplines in his work. Experience studying abroad in Barcelona inspired him to apply for the Aydelott Award as a continuation of his interest in the intersections of architecture, historical narrative, and public space. Outside of his studies, Ryan enjoys amateur photography, biking, and always accepts the opportunity to explore new places. He looks forward to building on the experiences made possible by Aydelott in his future endeavors.

Cover

Recipient:

Ryan Smith

Mentors:

Matthew Hall, Ernesto Bilbao, Mary English

Buildings:

1. Zeitz MOCAA | Heatherwick Studio | Cape Town, South Africa
2. Acropolis Museum | Bernard Tschumi | Athens, Greece
3. Palais de Tokyo | Lacaton & Vassal | Paris, France
4. Allmannajuvet Zinc Mine Museum | Peter Zumthor | Sauda, Norway

Institution:

Auburn University,

College of Architecture, Design, and Construction

Introduction

Travel is a chance to experience cultures and contexts different from our own, and examine how preconceived notions of place align with reality. I have always been fascinated by how the narratives of our collective and individual pasts shape our future, and there is no more enduring dialogue between the past and present than the one embodied in the museums we create. Museums shape historical and cultural narratives in their role as centers for interpretation and education. The decision to build a museum is a momentous one, a signifier of perceived value or desire to tell a particular story.

The projects selected are contemporary museums engaging with specific contextual histories, each a unique architectural response to existing elements in the built environment. Their designers work in dialogue with others across time - reflecting, repurposing, and reshaping our understandings of the past to achieve the goals of 21st century institutions. By recognizing history as a tangible component of place, architects may reuse more than material fabric, utilizing the feelings evoked by our relationship with the past. Sometimes the historical context in question is the topic of the museum, at other times it is simply an additional layer of depth within a broader architectural response.

My initial impressions of the projects were formed by establishing historical context, drawing upon a broad range of sources including periodicals, websites, books, and blogs. While traveling, I sought to understand the museums through alternate lenses underlying architectural expression. Information only possible to obtain on site - such as the specific relationships between contained museum

objects and their containing architecture, the atmospheric effects supporting or impeding museum narratives, and the present usage of the buildings by staff, visitors, and the local community - were critical in evaluating each project. The photograph and sketch as curated images were used to document all of the above conditions and highlight less discussed angles. Interviews with users, visitors, and staff at each site revealed the impact of these buildings upon those who occupy them. Travel itself is presented as an experiential narrative, chronicling the journeys that shape opinions on architecture long before the buildings themselves come into view.

This report aims to unify these diverse lenses by weaving several points of view into a continuous narrative, shifting across geographic and chronological scales. By juxtaposing historical, architectural, and experiential accounts within each chapter, a more holistic perspective is produced. In engaging with the past, architecture takes on new dimension in the present.

01

Zeitz MOCAA

Heatherwick Studio | Cape Town, South Africa



Fig. 01 Heatherwick Studio, Exterior View, Zeitz MOCAA, Cape Town, South Africa, 2017.
Photograph by author.

Zeitz MOCAA



Fig. 02 Heatherwick Studio, Exterior View, Zeitz MOCAA, Cape Town, South Africa, 2017.
Photograph by Iwan Baan, 2017.

Introduction

The Zeitz Museum of Contemporary Art Africa (MOCAA), located in Cape Town, South Africa, is dedicated to the “exhibition, collection, preservation, and research” of contemporary African art.¹ Designed by London based Heatherwick Studio and opening in 2017, it is the first major museum dedicated to contemporary art produced by Africans and the African diaspora. The privately funded museum occupies a former grain elevator and silo, once the tallest building in sub-saharan Africa and abandoned in 2001. Over 60,000 sq.ft. of gallery space is embedded within the repurposed structure in a lively waterfront district.

At night the museum shines from within and without, standing out in an increasingly dark city. An overtaxed electricity grid has resulted in regularly scheduled blackouts across South Africa known as load shedding, leaving much of the population in darkness. The energy crisis is one of many historical legacies in a divided society that continue to shape events.

South Africa and the Grain Elevator

To truly understand the Zeitz MOCAA as it stands in the present, we must first consider the past. South Africa is a nation long defined by the heritage of colonization and struggles for social equity. From the first European settlements at Cape Town in 1652, the legal, economic, and political systems of the Cape Colony dispossessed and marginalized native Africans to the benefit of Dutch colonists. Successive waves of colonial settlement and consolidation - first by the Dutch and later by the British - laid the foundations for a stratified and discriminatory society. This potential was realized when the South African colonies were granted independence in 1910 as the Union of South Africa. The Union's government was controlled by a white minority and promulgated laws denying non-white citizens political representation, freedom of movement, and economic opportunity. By 1948 these policies would become formalized as the Apartheid system.²

In 1919, the Union of South Africa was preparing an ambitious campaign of state-sponsored industrial development. The booming mining operations that had driven much of the nation's early growth were now in decline. High unemployment and unrest among landless white citizens drove the government's development plans, including the creation of state funded electricity and steel corporations.³ Opportunities for

growth were also identified in the agricultural sector, which lagged behind peer nations in export capacity. The fertile Transvaal province contained the state's best farmland - almost exclusively owned by white settlers - but was distant from major ports like Durban and Cape Town. Transporting grain over such distances was expensive, inefficient, and often damaged crops en route. Export focused infrastructure would thus benefit white farmers in the Transvaal and earn the government crucial support. There was an obvious solution: the grain elevator.

Grain elevators increase the volume of grain or similar cereals that can be unloaded (elevated) from transport and sorted in bulk. When paired with a silo bin structure for secure storage, an elevator facility is central to modern trade in maize, grain, oats, barley, rye, and soy. Invented in Buffalo, New York, in 1842, grain elevators rapidly proliferated across the industrializing world.⁴ Their form is

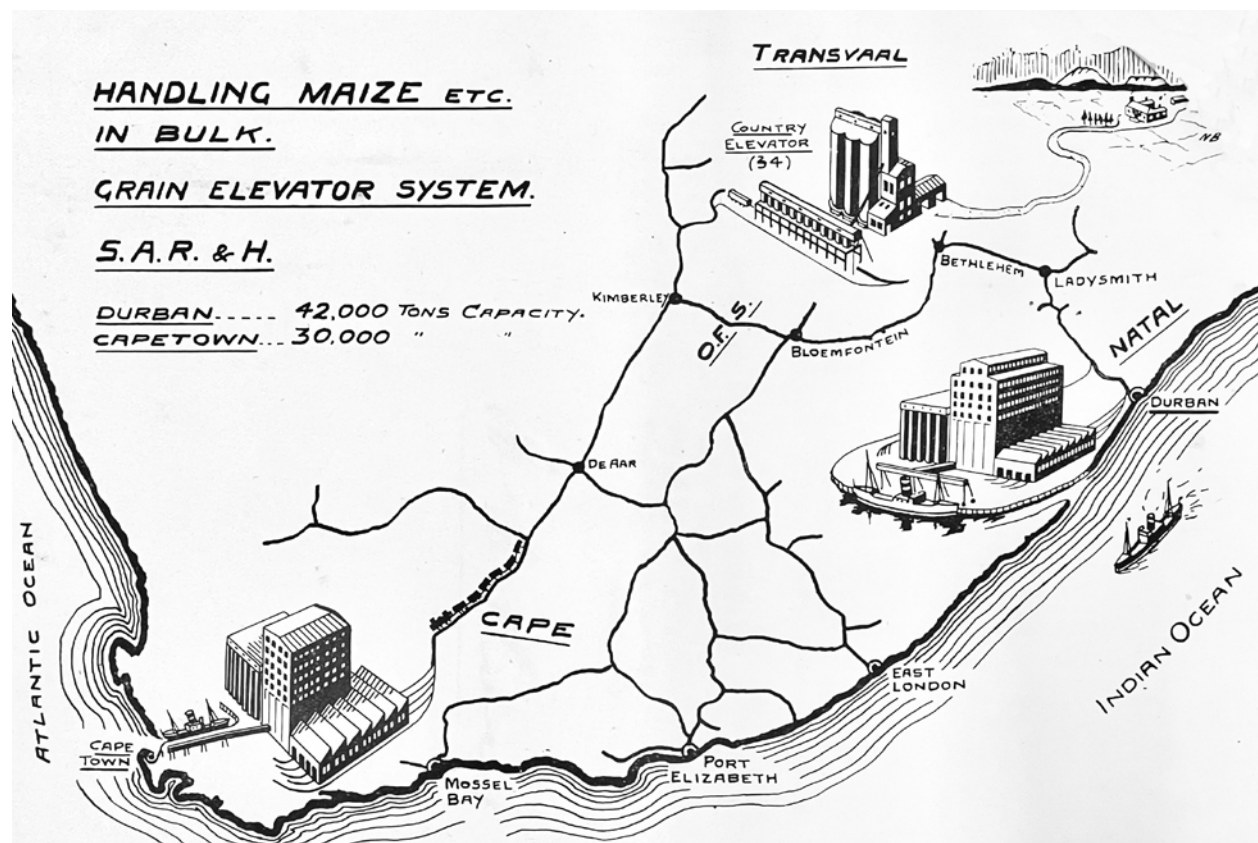


Fig. 03 Proposed South African Grain Elevator Network, South African Railways and Harbours Magazine, No.60, August 1923.

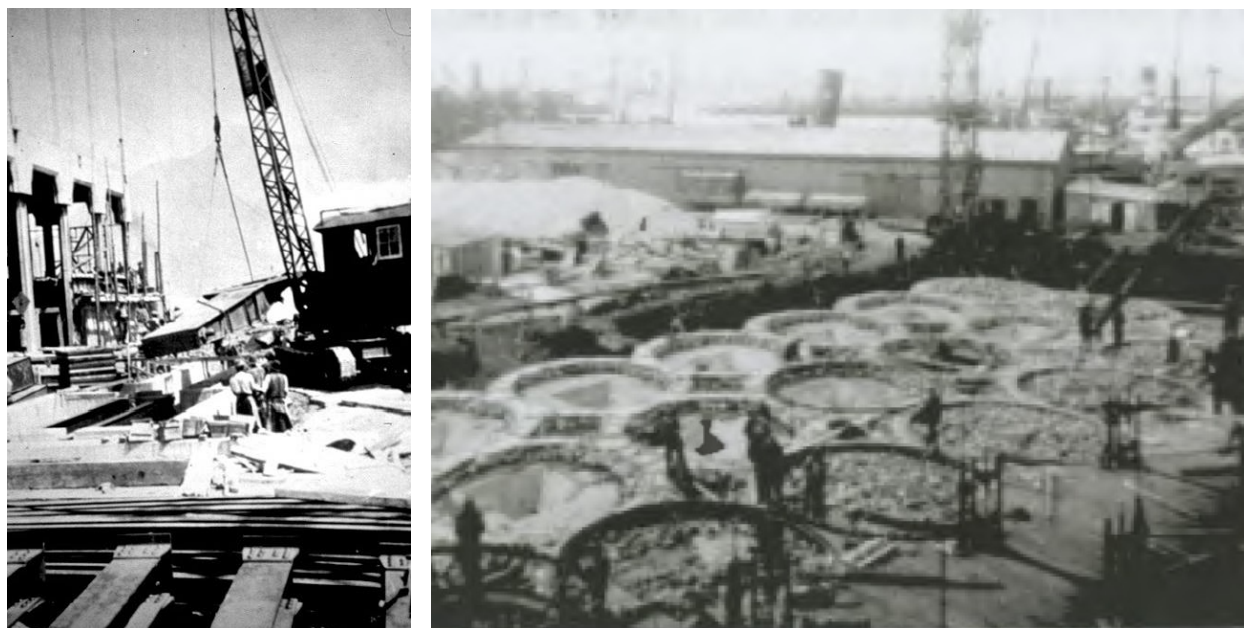


Fig. 04-05 Construction of the Cape Town Elevator, Port Engineer, Table Bay Harbor, 1921.

determined by their function, requiring height and lateral strength. Elevators raise grain, then utilize gravity for cleaning and storage, meaning a taller elevator accommodates more complex processing and greater storage. Cylindrical silos resist both external pressure and internal vacuums. Highly combustible maize dust made reinforced concrete the material of choice for grain elevators, including the facility in Cape Town.⁵ Its century-old structure is now pitted and aged into a rough hewn surface, but remains a monolithic presence on the historic waterfront.

Elevator Construction

Construction of the Cape Town elevator began in 1921 on reclaimed land in Table Bay Harbor. Cape Town was too far from interior farmland to be an obvious location for a port elevator, but its western position cut four day's sailing time off the journey to Europe.⁶ Laborers strained around the clock to construct "the gray towering

slab of concrete," battling a foundation inundated with seawater and unstable ground. Land reclaimed from the sea just forty five years earlier seemed on liable to return. Yet the site was simply too well positioned to pass up - work would proceed at substantial cost.

Ninety foot tall silo bins were erected in just fourteen and a half days, rising a remarkable six feet per day in a pour of almost ten thousand tons of reinforced concrete.⁷ Roughly one thousand workers were employed on the project at any given time in a chaotic scramble of activity. Injuries were frequent, and six workers would die during the course of construction. Many of those working in the most dangerous conditions were convict laborers from the notorious Breakwater Prison, built in 1860 to provide Table Bay Harbor with

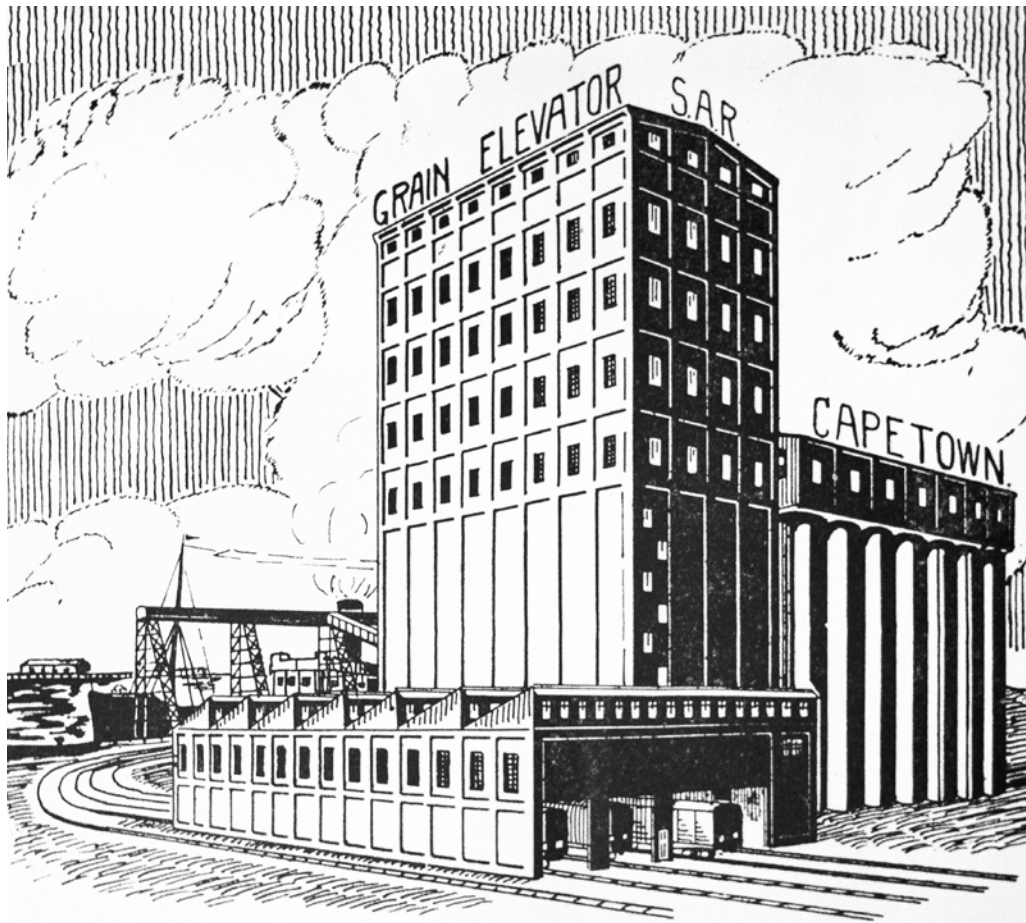


Fig. 06 Cape Town Elevator, South African Railways and Harbours Magazine, No.60, August 1923.

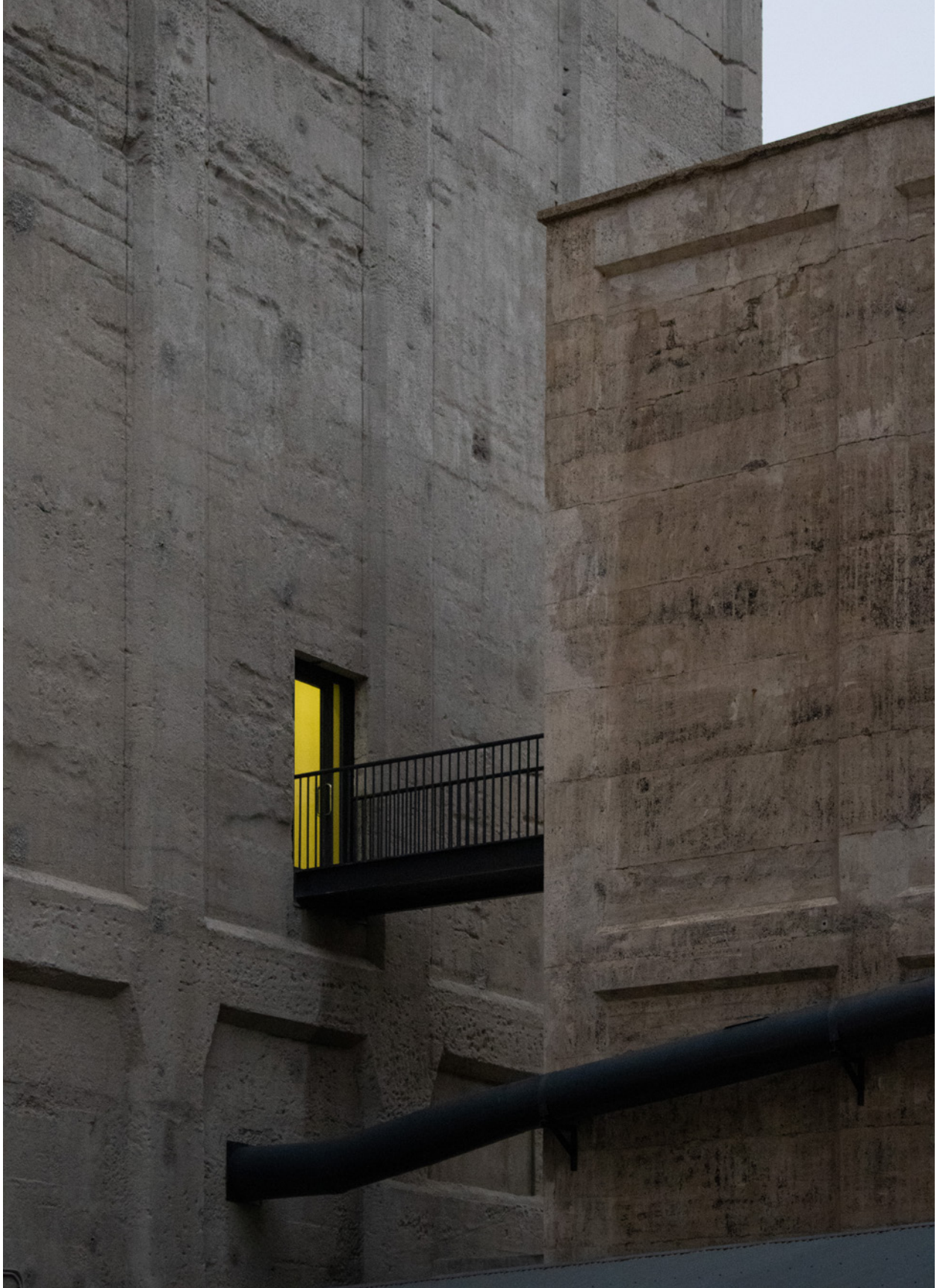


Fig. 07 Heatherwick Studio, Exterior View, Zeitz MOCAA, Cape Town, South Africa, 2017. Photograph by author.

convict labor. Indigenous groups, particularly the Khoekhoe, San, and Xhosa peoples, were prosecuted under colonial laws criminalizing movement across arbitrary borders and habitation on ancestral lands now occupied by white settlers.⁸

Elevator Operation

After successful trials in August 1924, the Cape Town elevator opened to much publicity. A 1923 issue of the South African Railways and Harbours Magazine advertised a 41% savings on the cost of shipping grain through the elevator system. The general manager of the R&H system wrote, "the advantages to farmers, traders, and buyers of grain ... are overwhelmingly strong ... as soon as the grain elevators are available, there will be no alternative [to] ... the elevator system."⁹ Completion of several inland elevators meant the national system was operational. The network was an immediate success, with plans for additional elevators made almost immediately. White South African farmers now sold their produce more efficiently and at better rates than ever before. The new elevator complex was of an previously



Fig. 08 Cape Town Elevator, Port Engineer, Table Bay Harbor, circa 1940.



Fig. 09 Heatherwick Studio, Silo Equipment, Zeitiz MOCAA, Cape Town, South Africa, 2017.
Photograph by author.

unimaginable scale, now the tallest building on the African continent.

To store grain, specially designed rail cars dumped grain into hoppers beneath the tracks in the shed outside the elevator. The grain was hauled to the top of the elevator, then released to flow through the weighing, cleaning, and drying floors. Scales weighing fifty tons of product at a time conveyed torrents of grain to five hundred ton silos.¹⁰ Silty maize dust circulating in the elevator left whitish powder on men and machinery alike. Exports were reweighed and fed onto conveyor belts under a gantry leading to the docks. Loaders poured grain into docked ships bound for international markets.

A staff of black "laborers" and white "assistants" operated the Cape Town elevator for seventy seven years. Under Apartheid law, managerial roles were reserved for whites while black staff were

limited to low level positions. Around fifty Xhosa speaking laborers performed the most demanding tasks while being denied equal wages. A smaller group of white Afrikaans speaking supervisors reported to an English overseer.¹¹ Strict racial and ethnic segregation was mandated until the facility's final years, reinforced existing lingual and socioeconomic barriers. Basic functions of the elevator remained essentially unchanged for its operational history. In the 1980's, a faltering Apartheid government was forced to gradually cut rail subsidies, making export via the Cape Town elevator unviable.¹² After loading its final shipment in 1995, the facility was abandoned in 2001. A product of both necessary economic development and deeply discriminatory government policy, previous conceptions and history of the Cape Town elevator complex are challenged by its new life as a center for African Art.

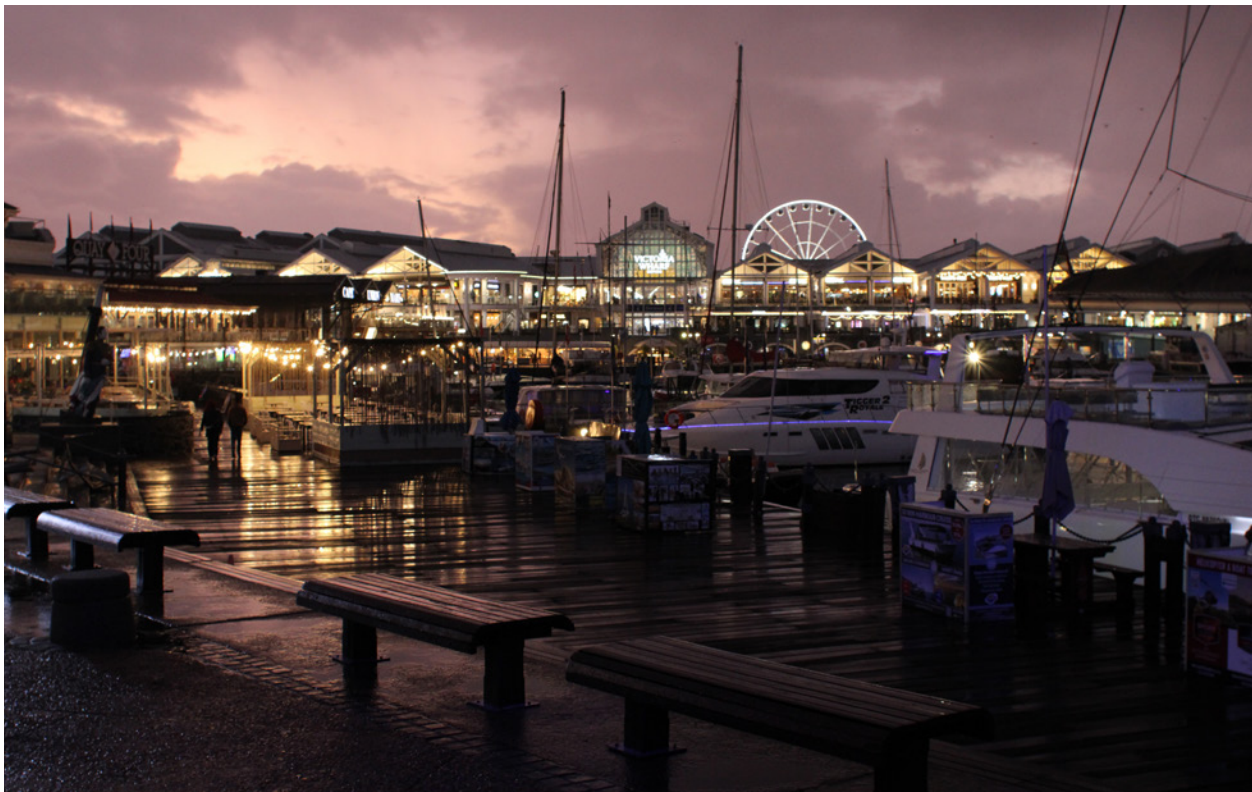


Fig. 10 Victoria and Alfred Waterfront, Cape Town.
Photograph by author.

Urban Context

Today the Zeitz Museum occupies a central position in the Victoria and Alfred Waterfront, a massive multi use development. Beginning in 1988, the historic waterfront was redeveloped into a shopping, entertainment, and leisure destination while maintaining an active dockyard, now the oldest working harbor in the southern hemisphere.¹³ Fishing vessels sit in drydock across the street from international corporate offices, and tourists shop in malls built above historic fortifications. Blending industrial and cultural heritage with trending commerce, the V&A Waterfront receives almost two thirds of the Cape Town's annual tourist spending.

The area around the museum has become known as the "Silo District" since its completion. Like many tourist hotspots, the V&A Waterfront is scarcely visited by locals. In a nation with a median income of less than sixteen thousand dollars per year, the glitzy hotels and designer stores of the waterfront might as well be a foreign country for the vast majority of South Africans. Heatherwick Studio's work on the site included work on the Silo Hotel, a luxury accommodation occupying six stories of the elevator tower above the museum. Heatherwick's involvement was limited to designing the structure and windows, but the hotel's proximity is a stamp of exclusivity on an institution seeking to serve a wider audience.

Museum Architecture

The museum is a marriage of two historic volumes: the former "working house" elevator, which housed machinery for processing and moving grain, and the "storage annex" of silo bins. The towering fifty seven meter elevator was constructed on a rectilinear structural



Fig. 11 Heatherwick Studio, Museum Entrance, Zeitz MOCAA, Cape Town, South Africa, 2017. Photograph by author.

frame, which is now exposed on the upper levels. The gently rounded tubes of the silo bins reach a lower twenty seven meters. No longer connected by their original network of conveyors and walkways, the threshold between the volumes is joined by a ribbon of glass wrapping around and over, admitting light through the seam.

Visitors enter the museum by passing under the track shed where four rail lines once converged to deposit grain at the silo. Unlike the grain, which was dumped below, visitors proceed on level ground into the museum. Beyond a reception desk, there is no hiding the spatial heart of the museum - the massive atrium presents itself immediately.



Fig. 12-15 Heatherwick Studio, Atrium, Zeitz MOCAA, Cape Town, South Africa, 2017.
Top left photograph by Iwan Baan, 2017. Remaining photographs by author.

The atrium is cleanly cut out of the mass of silo tubes. The slices are curvilinear and smooth, subtracting a vertical ellipsoid revealing the internal geometries of the bins. Heatherwick Studio maintains the shape was generated by a three dimensional scan of a maize kernel found visiting the site and scaled to monumental proportions. Thus even in its absence, grain remains at the heart of the space. Daylight is cast downwards through a glass roof above the carved silos. The glass supports a rooftop viewing platform and event space, occupied by shifting dots of visitors as seen from far below. Elevators slide silently along one side of the atrium, as the subtraction reveals a network of tunnels on the level below.

More than a dramatic entrance, the atrium is the orienting point of a highly internal museum. The space is continually referenced by galleries, walkways, elevators, and stairs from different perspectives, but is more than a visual landmark. The reverberation of concrete multiplies the hum of visitors and the thrum of sonic art into a powerful presence, able to work its way into distant spaces. Traces of the space's former use remain - exposed sections of steel members where beams once ran, labels of long defunct companies on decommissioned machinery - a persistent reminder of those who once built and inhabited this place.

When filled with up to 500 tons of grain each, the thin walls of the 42 silo tubes increased their effective strength by exerting pressure upon each other. Carving into the tubes to create the atrium altered this structural dynamic by removing the core upon which outer tubes attached themselves and leaving a central section floating above the atrium. Heatherwick Studio has subtly reinforced the structure by



Fig. 16 Heatherwick Studio, Silo Bin Intersection, Zeitz MOCAA, Cape Town, South Africa, 2017. Photograph by author.

casting a cylinder of concrete inside the existing tubes. This new layer more than doubles the thickness of each silo, but retains the unadorned simplicity of the original cast. Minimal formwork lines and a matching complexion reduce the presence of the additions, which blend well with the roughness of the original tubes. Suitably strengthened, the silo becomes a flexible module. Its verticality is embraced to contain the primary circulation through the museum - a pair of cylindrical glass elevators and a spiral stairway - each formed to the shape of the tube and a spectacle in their own right.

There is no singular path forward from the atrium. A series of galleries are accessible by stair or elevator, but do not assert themselves spatially, instead retreating from the atrium into a separate, confined world. In contrast, the lower tunnels and the rooftop event space draw attention from the moment of entry. The tunnels are what remains of the final steps in silo operations. Beneath each bin, the valves that once opened to release grain now sit silently, connected by a network of shafts running lengthwise.



Fig. 17-18 Heatherwick Studio, Lower Tunnels, Zeitz MOCAA, Cape Town, South Africa, 2017. Photographs by author.



Fig. 19 Heatherwick Studio, Gallery, Zeitz MOCAA, Cape Town, South Africa, 2017. Photographs by author.

There are no galleries or exhibits here, no attractions to draw visitors into the cramped, maze-like tunnels. Yet they venture down, drawn by the mysterious passages into the area of the museum that has most retained its historical integrity. Antique pipes rattle during winter rains. A damp mustiness lingers in the air, a reminder that the tunnels lie below sea level, only meters away from the harbor. The network converges at the point where the atrium intersects the tunnels, slicing through the immense concrete foundation and bringing a hint of openness to an otherwise confined space.

The stair and elevators that access to the tunnels also connect the gallery levels above. The galleries are separated into two multi-story masses, one on each side of the atrium. These masses collide

with the atrium as rectilinear volumes of an almost immaterial white plaster. Despite their clear massing, individual galleries within each mass remain fragmented and disconnected, with discrete entrance points for each of the exhibitions. To enter the galleries is to step into another world. The light and noise of the atrium instantly disappears, replaced by a hermetic stillness. There are no points of reference here, only a meandering series of rooms sharing a spartan sense of museographic efficiency. The only evidence that visitors are inside of the silo they experienced moments before are a few rough hewn concrete pillars remaining at the points where tubes once converged.

Journeys through the museum culminate on the 6th floor, which occupies what was previously the roof above the silo. Tubes containing the elevators and stairs are extended to reach this new level, which immediately presents a dramatic view of the surrounding area. The

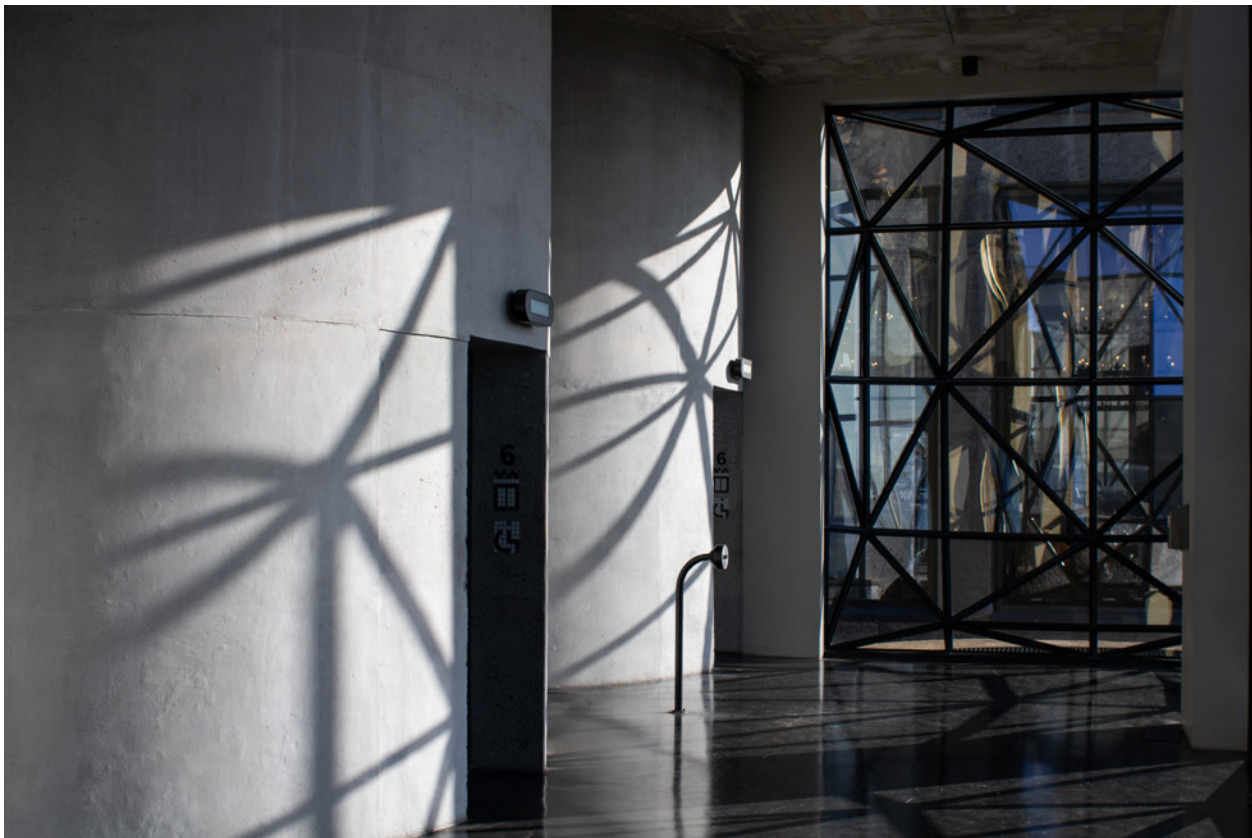


Fig. 20 Heatherwick Studio, Rooftop Lobby, Zeitz MOCAA, Cape Town, South Africa, 2017. Photograph by author.

exterior structural grid is occupied by triangulated, pillow-like windows of Heatherwick's design. The windows stretch outwards, as if blown into shape or struggling to contain an immense pressure. From a distance, they recall the faceted stones produced by Cape Town's longstanding diamond trade. Panoramic views of the city and the surrounding region are a dramatic release from the internality of lower levels. Quays and shipyards hum with activity steps away from crowds of tourists in the Waterfront District. The dramatic slopes of Table Mountain cradle the historic heart of the city as it slopes down to the bay. Barely visible to the north is Robben Island, site of decades of Apartheid-era incarceration for Nelson Mandela and hundreds of political prisoners.

The entire floor is wrapped in glass, including the open air viewing platform above the atrium. Intended as a sculpture garden, the space remains unoccupied. Fritted glass floor panels reveal the silo tubes of the atrium below. Looking down, it is possible to see the entire atrium from above. This is also the first place that the Silo Hotel can be viewed from the museum, looming over the sculpture garden in five stories of pillowed glass and concrete. Two narrow walkways link the garden to the hotel lobby by passing over the ribbon of glass connecting the silos to the elevator tower.

Artist Perspectives

At the time of my visit, the Cape Town based artist Igshaan Adams was concluding a seven month atelier residency at the museum. Adams' team of assistants and collaborators have transformed a third floor gallery into an active workshop as they race to complete a series of works before an upcoming exhibition. Adams whirls through the studio,

guiding visitors and assistants alike through his vision for the pieces and the experiences shaping his work. "Art was never an option for someone like me growing up," he explains.¹⁴ Born in Cape Town's Bonteheuwel township under Apartheid, Adams, 41, is a living testament to the blossoming of opportunities in the decades since South Africa's transition to democracy. His oeuvre of woven, sculptural pieces explore his own experiences in the contested racial, sexual, and religious environment of South Africa.

The high profile nature of a Zeitiz residency is not lost on the artist. Adams explains, "for so long Africans have had to travel outside the continent to experience world class art institutions, the opportunity to visit something closer to home is a new experience." Curators from prestigious international museums visit regularly, and art displayed at the museum is taken more seriously on the world



Fig. 21 Heatherwick Studio, Igshaan Adams in Residence, Zeitiz MOCAA, Cape Town, South Africa, 2017. Photograph by ArtInsure, 2023.

stage. Yet his perception of the museum itself is more pragmatic. Adams dislikes the fragmented organization of the gallery spaces, but notes that the curatorial team has worked to make the layout more productive. The atrium's proximity also poses challenges. "It's difficult to compete with [the atrium]" he says, and "it seems inevitable that the qualities of the atrium will filter into the work produced and displayed here".¹⁵



Fig. 22 Heatherwick Studio, Tunnels, Zeitz MOCAA, Cape Town, South Africa, 2017. Photograph by author.

Interpretation

Tasked with repurposing a historic grain elevator possessing a strong identity, Heatherwick Studio has chosen to integrate its work within the structure's existing frameworks. The modular silo tubes and structural grid, already present within the grain elevator, have been adopted and modified to suit the needs of the contemporary museum - being sliced, punctured, extended, and revealed. "The existing complex had a spirit and atmosphere which we felt was essential to retain," writes Mat Cash, project leader for Heatherwick Studio.¹⁶ This is seen most clearly in the atrium. The cavernous negative space evokes the feeling of entering a gothic cathedral, individuality lost in a monumental space. Vertical lines exposed within the carved tubes draw the eye upwards towards light filtering from above, diffused on delicate subtracted geometry. Reverberance creates a hushed, respectful atmosphere. These qualities may have been observed fleetingly within the original silo, but by boldly shaping a new space within the mass, Heatherwick has allowed them to reach their full potential.

The dichotomy between the complexities of the atrium and circulation spaces and the simplicity of the galleries speaks to the challenges facing designers of contemporary art institutions. Curators and artists desire maximum versatility when mounting rotating exhibitions of diverse media. The resulting "white box" spaces are placeless and seemingly immaterial, lacking relation to the existing structure that grounds other spaces in the museum. The absence of any exterior connections gives the galleries a subterranean quality, despite their elevation. Removed from outside influences, focus shifts

entirely to the museum's contents. Compared to the overstimulating atrium, the galleries are a sensory deprivation tank. Visitors have no choice but to reckon with, embrace, or challenge the art displayed. The museum's most impactful spaces are those few that bridge the gap between art and the existing architecture, allowing each to strengthen the other.

By utilizing the former Cape Town grain elevator, Heatherwick Studio has repurposed its past in service of the Zeitz MOCAA. Beyond merely preserving a piece of industrial history, the longstanding structure lends a sense of permanence to the newborn institution still establishing itself within its aged walls while memorializing those who once built and operated it. The history of the grain elevator remains in conversation with the life of a museum presenting a new vision for celebrating African artists.



Fig. 23 Heatherwick Studio, Staircase, Zeitz MOCAA, Cape Town, South Africa, 2017.
Photograph by author.

Notes

1. "About Us," Zeitz MOCAA, accessed December 17, 2023, <https://zeitzmocaa.museum/about-us/#:~:text=Zeitz%20Museum%20of%20Contemporary%20Art,discursive%20and%20enrichment%20programmes%3B%20encourages.>
2. "Introduction: Before Apartheid," Facing History and Ourselves, accessed December 17, 2023, [https://www.facinghistory.org/resource-library/introduction-apartheid.](https://www.facinghistory.org/resource-library/introduction-apartheid)
3. David Worth, "Gas and Grain: The Conservation of Networked Industrial Landscapes" (PhD Thesis, University of Cape Town, 2004), 113.
4. Worth, "Gas and Grain," 108.
5. Worth, "Gas and Grain," 24.
6. Worth, "Gas and Grain," 16.
7. Worth, "Gas and Grain," 124.
8. Facing History and Ourselves, "Introduction: Before Apartheid."
9. "General Manager's Bulletin No. 60," South African Railways and Harbours Magazine, No.60, August 1923.
10. Worth, "Gas and Grain," 152.
11. Worth, "Gas and Grain," 58.
12. Worth, "Gas and Grain," 130.
13. Zeitz MOCAA, "About Us."
14. Igshaan Adams (artist in residence, Zeitz MOCAA), in discussion with the author, Cape Town, South Africa, May 2023.
15. Adams, in discussion with the author.

16. Eleanor Beaumont, "Building study: Heatherwick Studio's Zeitz MOCAA gallery in Cape Town," Architects Journal, December 11, 2017, <https://www.architectsjournal.co.uk/buildings/building-study-heatherwick-studios-zeitz-mocaa-gallery-in-cape-town>.

02

Acropolis Museum

Bernard Tschumi | Athens, Greece



Fig. 01 Bernard Tschumi, Archaic Gallery, Acropolis Museum, Athens, Greece, 2009.
Photo by author.

Acropolis Museum



Fig. 02 Bernard Tschumi, Entrance, Acropolis Museum, Athens, Greece, 2009.
Photo by author.

Introduction

"Ancient Greece is the most beautiful invention of the modern age."

- Paul Valéry¹

The Acropolis Museum exhibits the definitive collection of artifacts from the ancient Athenian Acropolis. Designed by Bernard Tschumi, the museum opened in 2009 at the base of the sacred rock. A series of chronological galleries guide visitors through the 150,000 sq.ft. building in the heart of a dense Athenian neighborhood. The museum is an architectural argument for the return of looted artifacts to Greece and a proud statement of Greek cultural heritage. The Acropolis and its monuments occupy a rare prominence in the cultural imagination. Few ancient sites are as recognizable or as influential as the Parthenon or the slopes of the Acropolis. Our understanding of the history in question is unlikely to change, but the way we tell stories of the past is always contingent on the needs of the present.

The Acropolis

The rocky hill of Athens' Acropolis is a naturally commanding position, emerging sharply from the plains of Attica. The peak is reached by clambering up sloping paths and steps constructed over centuries. Inhabited for over six millennia, the hill served as a fortified palace complex for the rulers of Athens before gaining religious significance in the 8th century BCE, with the establishment of Athena as patron goddess of the city.² The Acropolis, literally meaning "high-city" was at the center of ancient Athens, serving religious, military, and civic functions in the birthplace of democracy. A growing city erected the first major temple on the site in 580 BCE, known as the Hecatompedon. The early Acropolis was sacked and destroyed in 480 BCE following conflict with Persian Empire, setting the stage for a triumphant resurgence.³



Fig. 03 The Acropolis of Athens from the Acropolis Museum, Photo by author.



Fig. 04 The Parthenon, Photo by author.

Athens led an alliance of Greek states known as the Delian League to victory against the Persians but demanded tribute from these former allies after the war was won. Under leadership of the statesman Perikles, Delian funds bankrolled an enormous campaign of Athenian public works, culminating in the monuments of the Acropolis. First among these was the Parthenon, a colossal temple of Athena built in the Doric order by architects Ictinus and Callicrates and adorned with sculpture by Phidias, completed in 438 BCE.⁴ The Parthenon combined stylistic refinements in temple design with superb craftsmanship and materials to produce the defining architectural statement of the classical era.

The friezes and metopes of the Parthenon are sculptural decoration, carved in relief on Pentelic marble blocks around the four sides of the building. 92 rectangular metopes were positioned above the outer colonnade in a rhythmic series vividly depicting mythical battles of Greek legend.⁵ The frieze is a continuous sculptural band 525 feet long originally running above the inner temple walls. Depicting the Panathenaic Procession, a religious festival celebrating the birth of the goddess Athena, the frieze is the Parthenon's best preserved sculptural element.⁶ Unlike the friezes and metopes, statues on triangular pediments above the east and west sides were not carved into the blocks of the temple but attached separately, contributing to their destruction over time. Further works built on the Acropolis during this period include the Propylaea, a grand entrance to the Acropolis, and the Erechtheion, a temple featuring columns sculpted as female figures known as Caryatids.⁷



Fig. 05 The Erechtheion and Caryatids, Photo by author.



Fig. 06 Parthenon Gallery, British Museum, Photo by author.

Artifacts from these structures form the heart of the Acropolis Museum's collection and are featured in museums around the world, most notably the British Museum in London. Between 1801 and 1805, agents of Lord Elgin, British ambassador to the Ottoman rulers of Greece, claimed vague permissions from the Sultan to remove "pieces of stone with old inscriptions or figures thereon."⁸ Around half of the Parthenon frieze, fifteen metopes, most of the remaining pediments, a Caryatid, and numerous other artifacts were removed, then shipped to London to join a burgeoning British Museum.⁹

The first museum of the Acropolis was built in 1865 in the shadow of the Parthenon.¹⁰ Squeezed into a low building in the southeast corner of the sacred rock, the museum was too small to display its full collection or accommodate ever-growing throngs of tourists.

Design competitions for a new museum in the Makriyianni neighborhood at the foot of the Acropolis in 1976, 1979, and 1989 were inconclusive. Greek demands for repatriation of the Elgin Marbles from Britain in 1982 only added pressure for a new museum.¹¹ Greek authorities made pragmatic and moral arguments - not only was Greece capable of providing a world class home, but the marbles belonged in Athens as irreplaceable national heritage. A final design competition in 2000 selected Bernard Tschumi Architects, in collaboration with Michael Photiadis, to build an institution that could implicitly present these arguments to a global audience.

Urban Context

The museum's site lies over several blocks in the heart of the Makriyianni neighborhood, less than one thousand feet southwest from the Acropolis.¹² Streets are narrow and densely packed with souvenir shops and restaurants below five and six story mid-century apartments. Athens has grown since Greek independence in 1833 from a village of four thousand to a metropolis of over three million people.¹³ The result is a dense urban landscape of midrise buildings often lacking greenspaces. The Acropolis and its surrounding park are a notable exception. Low trees cover dusty yellow hillsides crowded with tourists and locals alike. During the summer months, the district swells with travelers from every corner of the world seeking to experience the Acropolis for themselves. From the Acropolis above, it's easy to spot the dark, angular form of the museum looming over its neighbors.

Museum Architecture

The museum is composed formally, in Tschumi's own words, of a "base, middle, and a top - made out of three materials, marble,



Fig. 07 Bernard Tschumi, View of Museum from Acropolis, Acropolis Museum, Athens, Greece, 2009. Photo by author.

concrete, and glass.”¹⁴ The simplicity of this description belies a more intricate relationship between the three sections and their context. From the museum’s entrance on the pedestrian Dionysiou Areopagitou Street, the two lower levels run parallel to the street along an east-west axis. The base is the most opaque section, wrapped by a concrete screen perforated with a regular grid. As the site slopes away from the Acropolis, the screen expands vertically to shield lower levels on the southern side of the museum. The middle is the largest section, cantilevering over the base on all sides and sandwiched by exposed concrete slabs. Glass curtain walls infill the double height northern and southern facades, flanked by fins sheathed in corrugated metal to the east and west. The top is the smallest of the stacked volumes, a unitary glass box rotated to align with the orientation of the Parthenon. Despite occupying several blocks in one of the densest areas of Athens, the museum retreats from the street on all sides. Rows of manicured olive trees and lush gardens are inaccessible behind a steel fence, isolating the structure from the busy streets nearby.

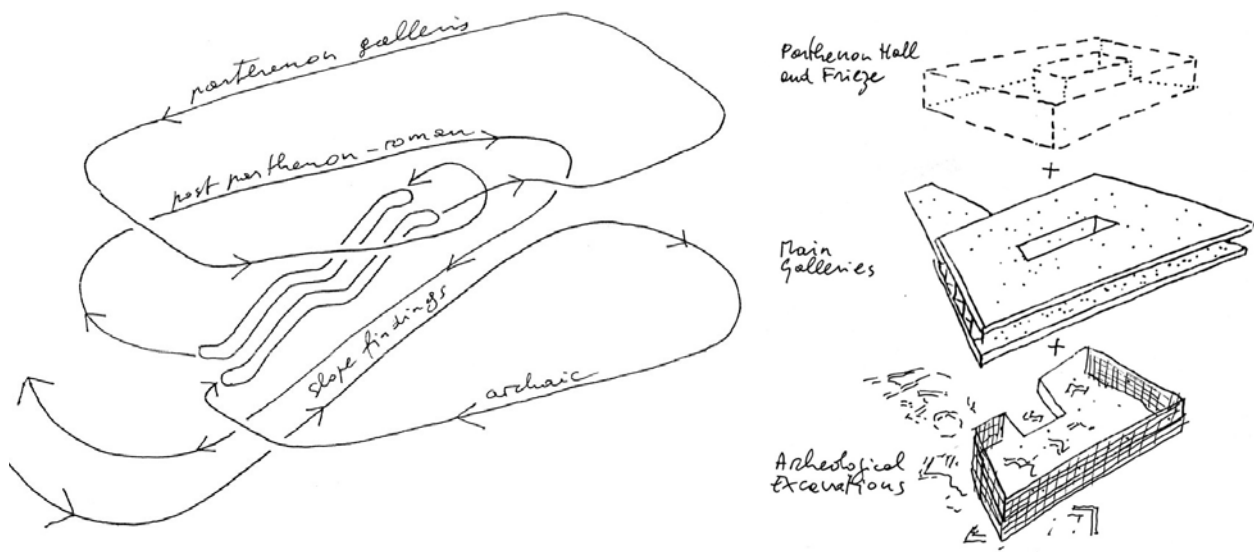


Fig. 08-09 Bernard Tschumi, Circulation Diagram (left), Massing Diagram (right), Acropolis Museum, Athens, Greece, 2009. From *The New Acropolis Museum*.



Fig. 10 Bernard Tschumi, Ruins Walkway, Acropolis Museum, Athens, Greece, 2009.
Photo by author.

Conceptually, the museum stages a journey through the history of the Acropolis, moving forward in time before returning to the present day. Artifacts are categorized in four sequential galleries: Slopes of the Acropolis, Archaic Period, Parthenon, and Roman Period, spatially rising and falling with Athenian fortunes during each era. Two linear concrete service cores leave the galleries open and flexible, in addition to maximizing daylighting.

Before they enter the contemporary museum, visitors encounter the past. The remains of an ancient Athenian neighborhood occupied until the sixth century CE cover much of the museum's site and remain an active archeological excavation.¹⁵ Tschumi preserved the delicate ruins by lifting the museum above the excavations on pilotis, placed in consultation with archeologists. A void in the entrance plaza reveals

the ruins below, a record of centuries of habitation superimposed in stone fragments. Steel walkways weave between concrete columns carrying the museum, encouraging exploration of the layered landscape. Fritted glass panels embedded in the plaza admit light into the ruins. Above, a gestural balcony extends towards the Acropolis.

Ascent through the museum begins on the ground floor in the linear Slopes Gallery. Ramped glass floors incline along the length of the aptly named space, displaying finds from homes and shrines once occupying the hillsides of the Acropolis. Excavations beneath the museum are visible through the floor, pairing domestic objects on display with homes they may have once occupied. Positioned between service cores, light enters the gallery through the glass floor of the Parthenon annex above. Echoing noise from crowds of visitors cascades through the space and into galleries beyond. The slope culminates



Fig. 11-12 Bernard Tschumi, Ruins beneath museum, Acropolis Museum, Athens, Greece, 2009.
Photo by author.

in a flight of stairs on axis with the pediment of the Hekatompedon, the first large temple on the Acropolis.¹⁶ Having ascended the slope, visitors are now confronted with artifacts from the peak.

The Archaic Gallery is the museum's largest, featuring artifacts produced between 700 and 480 BCE, before the destruction of the Acropolis by Persian invaders.¹⁷ The triangular space is posed as an agora, populated by statuary figures scattered throughout the double height gallery and interspersed by a grid of concrete columns. Light diffuses through south facing frosted glass in concert with skylights above, providing bright side illumination ideal for viewing the sculptures within. Circulation is fluid and undefined, immersing crowds of visitors within a dynamic field of sculpture. Artifacts are arranged in chronological order towards the narrow end of the gallery,

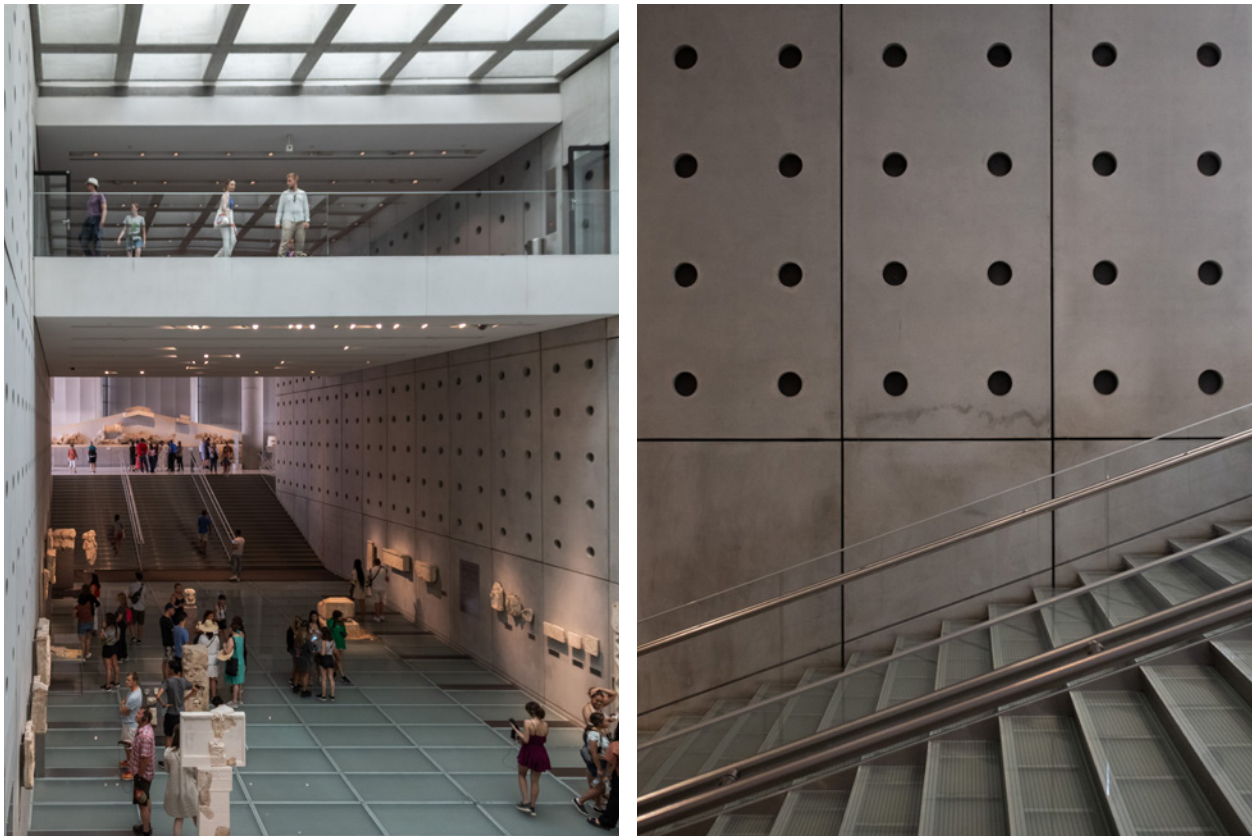


Fig. 12-13 Bernard Tschumi, Slopes Gallery, Acropolis Museum, Athens, Greece, 2009.
Photo by author.



Fig. 14 Bernard Tschumi, Archaic Gallery, Acropolis Museum, Athens, Greece, 2009.
Photo by author.

culminating in a wide, processional stairway towards the apex of the building.

The Parthenon Gallery is the glittering glass crown of the Acropolis Museum. As reconstruction of the temple continues on the mount above, the gallery displays its delicate sculptural masterpieces in a facsimile of their original positions. The gallery wraps around an inner core precisely recreating the dimensions and orientation of the Parthenon, allowing visitors to circulate around the works as they were originally viewed. The friezes and metopes are accordingly positioned in two concentric layers, replicating their respective positions on the inner and outer walls. Friezes wrap around the gallery at eye level as the metopes are lifted above, framed between the exact number of columns as the Parthenon. Remains of the east and west pediments are displayed at either end of the gallery.



Fig. 15 Bernard Tschumi, Parthenon Gallery, Acropolis Museum, Athens, Greece, 2009.
Photo by author.

Light enters the space on all sides through a continuous glass wall providing panoramic views of Athens and the Acropolis. Unblemished white marble floors and precast concrete panels contrast with the patinated amber sculptures, yet many of the pieces retain a pristine white softness. These are plaster casts made of marbles possessed by other museums, primarily the British Museum in London. The decision to display casts alongside original pieces enables a unified presentation of the works, while reminding visitors how many are no longer in Athens.

Despite full exposure to the baking sun, careful use of fritting and a partial second layer of glass keep the gallery comfortable and avoid overexposure. Secondary linear skylights provide additional illumination above both friezes and metopes, seeking to recreate “comparable lighting conditions” to their original positions.¹⁸ Excellent views of the Parthenon contextualize the works on display.



Fig. 16-17 Bernard Tschumi, Parthenon Gallery, Acropolis Museum, Athens, Greece, 2009.
Photo by author.



Fig. 18 Bernard Tschumi, Caryatid Balcony, Acropolis Museum, Athens, Greece, 2009.
Photo by author.

The same stairway used to reach the Parthenon Gallery brings descending visitors to the museum's final exhibits, covering the post Parthenon era and Roman rule. A balcony overlooking the Slopes Gallery contains five of the six Caryatids with an empty space for their absent sister. Adjacent galleries are single height spaces with views of the entry plaza, as if to acclimate visitors to the outside world and prepare them to leave the museum. The gallery gradually narrows until visitors return to the top of the Slopes Gallery. Descent towards the lobby reveals the Caryatids looking down from above, a final glimpse of the elevated world of the Acropolis.

Post-Classical Athens

After the heights of the classical era, Athens lost her independence to the successive imperial powers of Macedon, Rome,



Fig. 19 Bernard Tschumi, Slopes Gallery, Acropolis Museum, Athens, Greece, 2009.
Photo by author.

Byzantium, and the Ottomans.¹⁹ The Acropolis remained a potent symbol and natural citadel, continuously occupied and repurposed. Ancient monuments were converted, destroyed, or allowed to fall into ruin as Athens dwindled into an agricultural backwater. The biggest blow came in 1687, when Venetian bombardment of an Ottoman garrison on the Acropolis ignited gunpowder stored in the Parthenon, destroying the temple in a singular cataclysm.²⁰ At a time when preservation was most needed, foreign interest and removal of artifacts from the Acropolis did more to scatter its treasures than any occupying power.

Greek independence in 1833 spurred nationalist interest in the Acropolis as a site of Greek cultural heritage. Early efforts to

preserve the site destroyed modifications made after the Roman period in an effort to recreate an "original" state.²¹ Archeologists discovered and preserved the artifacts forming the basis of the Acropolis Museum's collections while discarding elements from later periods. A casual visitor to the museum today could not be blamed for thinking that time had somehow skipped from the Romans to Lord Elgin. Over a millenia of the site's history is absent from the museum - the product of a conscious choice to tell a "Greek" story at the expense of a more rich and layered truth.

Interpretation

As an argument for the return of the Elgin Marbles to Greece, the Acropolis Museum is undoubtedly a success. By emphasizing the museum's intimate contextual relationship to the Acropolis, Greek claims receive weight in an global climate already predisposed against lingering traces of colonial injustice. It doesn't hurt that the bespoke galleries of the Acropolis Museum rigorously optimize viewing



Fig. 20 Bernard Tschumi, Parthenon Freize, Acropolis Museum, Athens, Greece, 2009.
Photo by author.



Fig. 21 Bernard Tschumi, *Layers of Movement*, Acropolis Museum, Athens, Greece, 2009.
Photo by author.

conditions, outshining the comparatively ill suited spaces of the British Museum. Tschumi's exhibition design highlights missing elements with subtlety, leaving visitors to draw their own conclusions. A steady flow of recently repatriated artifacts into the museum speaks for itself.²²

The Acropolis and the Acropolis Museum are collectively an incredibly popular tourist destination. Rather than negate this fact via intricate circulation or limited internal views, Tschumi's design embraces a deeply public procession. The organization of expansive sequential galleries unifies circulation and exhibition space into a collective journey. Balconies, overlooks, and glass floors are self referential, revealing crowds moving through other stages of the

museum. The Archaic Gallery, Tschumi writes, is populated “in the casual arrangement of [statues],” as an agora of past and present, but this effect extends to the entire building.²³ Visitors transfixed by friezes or weaving between marble busts become part of the exhibition themselves, the latest participants in a dialog across time.

Despite an extroverted interior character, the museum is a disengaged player in the urban environment. High fences give a cold shoulder to the immediate context and reject the site’s centrality within Makriyianni. The beautifully maintained grounds of the museum are largely off limits even to visitors, creating an elysian no man’s land in a neighborhood where every inch of public space is welcomed. In material and form, the museum is a sharp break from the surrounding context. This is a reasonable approach given the monumental significance of the museum’s contents - it is unlike any other institution in the city. Yet the design’s unwillingness to make concessions to public



Fig. 22-23 Bernard Tschumi, Museum Exterior, Acropolis Museum, Athens, Greece, 2009.
Photo by author.

space only replicates the true Acropolis' detachment from the city. By refusing to engage with its context, the architecture is elevated as an isolated form above those it ostensibly seeks to educate. Tschumi writes "context ... was the field of investigation that the museum both epitomized and fulfilled," citing the museum's perch above an archeological site, use of natural light in galleries, and the design of galleries tailored to specific artifacts.²⁴ The Acropolis Museum does incorporate these responses, but they do not address concerns about the more local impacts of the design.

It is understandably difficult to disentangle the character of the Acropolis Museum from notions of the Acropolis itself, not least due



Fig. 24 Bernard Tschumi, Entrance Plaza, Acropolis Museum, Athens, Greece, 2009.
Photo by author.

to its physical proximity. The museum mirrors its subject literally and figuratively. The Acropolis is reflected in the glass facade of the Parthenon Gallery as one enters the museum. The circulatory scheme of climbing slopes and steps towards the Parthenon is a reproduction of the ascent to the Acropolis in miniature. Dimensions are copied to replicate the spatial character of the Parthenon. The treasures of Athens are again elevated above the reality of the city below. Conception of the mirror image - via reflection, facsimile, or plaster cast - is a recurring theme in the architecture. In reflecting specific qualities of a prominent historical site, the museum expresses its own interpretations of a complex past.

Curating a clear conceptual narrative of classical Athens, the Acropolis Museum draws upon its subject to thoughtfully situate its contents in a dynamic architectural environment. Incorporating both ancient ruins and state of the art technology, the museum's sharp lines and contemporary materials conceal a design largely deferring to the monument it seeks to engage with. We cannot speak to or study the creators of objects found on the Acropolis as we can more recent artists, but the galleries of the Acropolis Museum allow us, for a moment, to enter their world.



Fig. 25 Bernard Tschumi, Partheon Gallery, Acropolis Museum, Athens, Greece, 2009.
Photo by author.

Notes

1. Ezra Klein, "The Chief Ideologist of the Silicon Valley Elite Has Some Strange Ideas," *New York Times*, October 26, 2023, <https://www.nytimes.com/2023/10/26/opinion/marc-andreessen-reactionary-futurism.html#:~:text=As%20Paul%20Val%C3%A9ry%2C%20the%20French,It's%20a%20vibe>.
2. "Acropolis, Athens," UNESCO, accessed December 17, 2023, <https://whc.unesco.org/en/list/404/>.
3. "Parthenon," *Encyclopedia Britannica*, accessed December 17, 2023, <https://www.britannica.com/topic/Parthenon>.
4. *Britannica*, "Parthenon."
5. Brian A. Sprague, "The Parthenon Frieze: Viewed as the Panathenaic Festival Preceding the Battle of Marathon," (Thesis, Western Oregon University, 2007), 4.
6. Sprague, "The Parthenon Frieze," 5.
7. *Britannica*, "Parthenon."
8. "An introduction to the Parthenon and its sculptures," *The British Museum*, accessed December 17, 2023, <https://www.britishmuseum.org/blog/introduction-parthenon-and-its-sculptures>.
9. *Britannica*, "Parthenon."
10. Bernard Tschumi, "Conceptualizing Context," in *The New Acropolis Museum*, ed. Bernard Tschumi Architects (New York: Rizzoli International Publications, 2009), 24.
11. *Ibid.*
12. Tschumi, *The New Acropolis Museum*, 82.
13. "Athens," *Encyclopedia Britannica*, accessed December 17, 2023, <https://www.britannica.com/place/Athens/The-Acropolis>.

14. Tschumi, *The New Acropolis Museum*, 84.
15. Tschumi, *The New Acropolis Museum*, 29.
16. Tschumi, *The New Acropolis Museum*, 34.
17. Tschumi, *The New Acropolis Museum*, 35.
18. Tschumi, *The New Acropolis Museum*, 84.
19. Britannica, "Athens."
20. Ibid.
21. Britannica, "Parthenon."
22. Derek Gatapoulos, "With eye on British Museum, Greece welcomes back ancient art," March 24, 2023, <https://apnews.com/article/greece-parthenon-vatican-elgin-acropolis-british-museum-3e5cff29ab2f8f45defd5dd7dcae25a1>.
23. Tschumi, *The New Acropolis Museum*, 85.
24. Tschumi, *The New Acropolis Museum*, 84.

03

Palais de Tokyo

Lacaton & Vassal | Paris, France



Fig. 01 Lacaton & Vassal, Exterior Plaza, Palais de Tokyo, Paris, France, 2002.
Photograph by author.

Palais de Tokyo

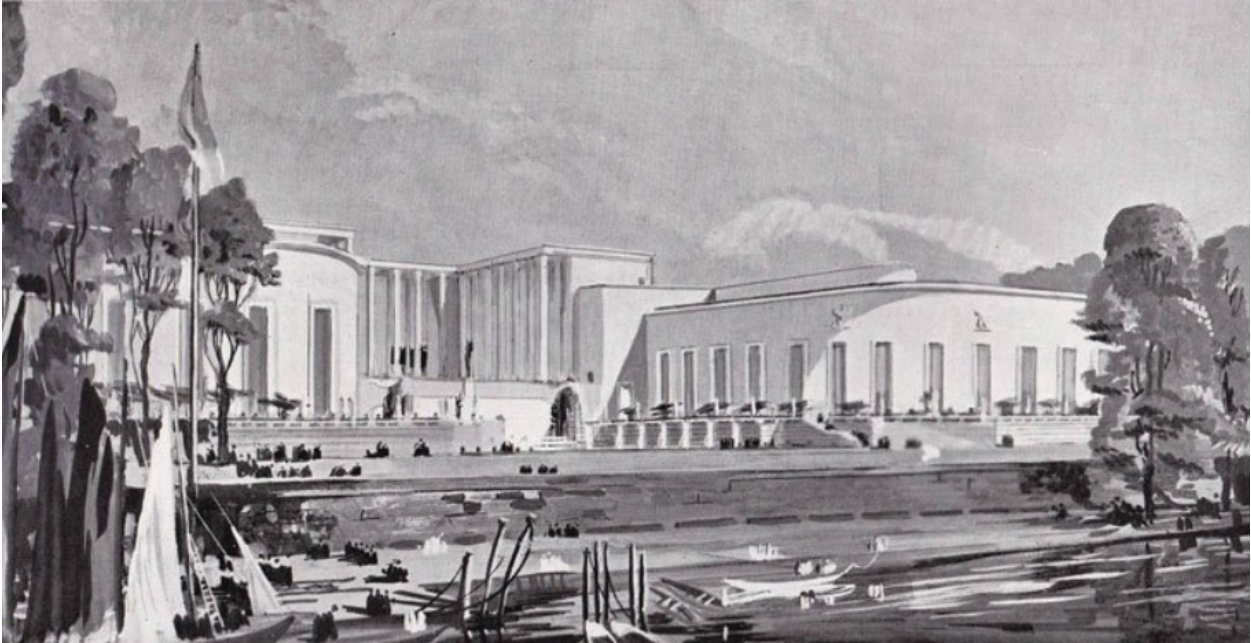


Fig. 02 Dondel & Aubert, Competition Drawing, Palais de Tokyo, Paris, France, 1937.

Introduction

“It can take a long time for public buildings to be given the operating regime or the allocated role that will allow them to grow old gracefully.” - Jean-Baptiste Minnaert¹

Constructed for the 1937 Exposition Internationale in Paris, the west wing of the Palais de Tokyo served as a gallery for the French national collection of modern art until the opening of the Centre Pompidou in 1976. Commissioned to convert the abandoned wing of the Palais into a “Center for Contemporary Creation,” the office of Lacaton & Vassal completed successive renovations in 2002 and 2012. The new museum, now one of the largest contemporary art museums in Europe, occupies the interior of the Palais stripped down to its structural bones in a flexible and constantly evolving inhabitation.²



Fig. 03 Cover of *L'Illustration*, 1937, from *The History of the Palais de Tokyo*.

The 1937 Exposition Internationale, officially dedicated to “the arts, science, and peace,” took place in an increasingly confrontational period in world history.³ The Soviet Union and Nazi Germany dueled for architectural primacy in opposing pavilions as Picasso’s *Guernica* was unveiled nearby. The opening of the Palais de Tokyo, a complex of two new museums of modern art, attracted little notice. Yet the contradictions and tensions in Paris in the summer of 1937 have been reflected more strongly in the Palais than any of the temporary pavilions.

Past Lives of the Palais

The Palais de Tokyo was always intended to be a fixture of the contemporary art scene. Demand for a national museum to house modern art had been building in France for decades prior to the 1937 Exposition. The condition of the French state’s collection – scattered between several buildings across Paris, none designed as museums – was considered a national embarrassment.⁴ The Exposition was an opportunity to create a permanent home for a unified display of sculpture and painting reflecting recent developments in the arts. A site of commensurate importance was selected, adjacent to the Seine between the eponymous Quai de Tokyo, (now Avenue de New York) and the Avenue du Président-Wilson in the 16th arrondissement. The site dropped a precipitous twelve meters between the two avenues on marshy, unstable ground.⁵ Yet it was local politics that presented the most salient threat to the project.

The City of Paris footed the bill for most of the Exposition and owned the intended site. The City thus demanded the right to construct its own museum of contemporary art on the same site. The State had no

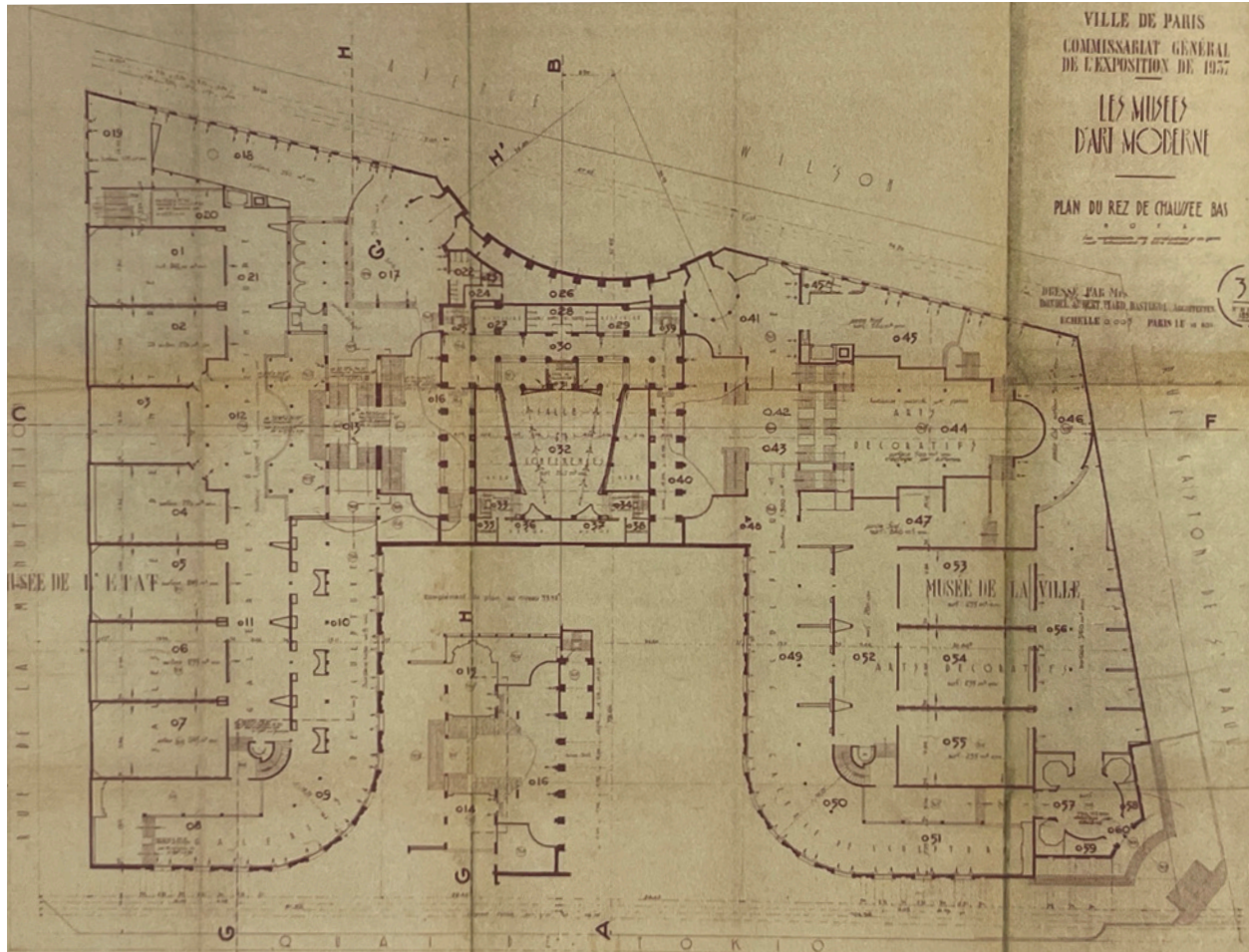


Fig. 04 Dondel & Aubert, Ground Floor Plan, Palais de Tokyo, Paris, France, 1937.
from *The History of the Palais de Tokyo*.

choice but to reluctantly share the property. A design competition for the dueling museums, which would be constructed simultaneously in a unified proposal, began in late 1934. Over one hundred and twenty entries included a scheme by Le Corbusier rejected for "exceeding the budget, being too tall, and [not giving] a good enough view of the Seine."⁶ The awarded entries shared a common sensitivity to the urban landscape, valued over "intrinsic museographic qualities." The winning proposal was submitted by Jean-Claude Dondel and André Aubert, a little known pair both in their early thirties.

Dondel and Aubert's scheme situated the museums along opposite sides of the site, perpendicular to the Seine. A generous plaza would separate the institutions of L'Etat and La Ville, aligned with an axis running between the two avenues. The state museum, Musée National d'Art Moderne, (MNAM) received the smaller western wing. The city museum, Musée d'Art Moderne (MAM) has occupied the eastern wing to the present day. The design features a language of "refined classicism," informed by modernist influences and the monumentality of previous World Fairs.⁷ Clad in marble and white limestone, facades are bare save for two massive bas-reliefs and a handful of metopes facing the symmetrical central plaza. An upper court lifts a portico joining the museums, "[stretching] the proportions of an Ionic order that has forgotten its bases and capitals."⁸ Employing the latest museographic techniques, Dondel and Aubert's design left interior walls blank with



Fig. 05 Dondel & Aubert, Sculpture Room, 1948, Palais de Tokyo, Paris, France, 1937. from *The History of the Palais de Tokyo*.

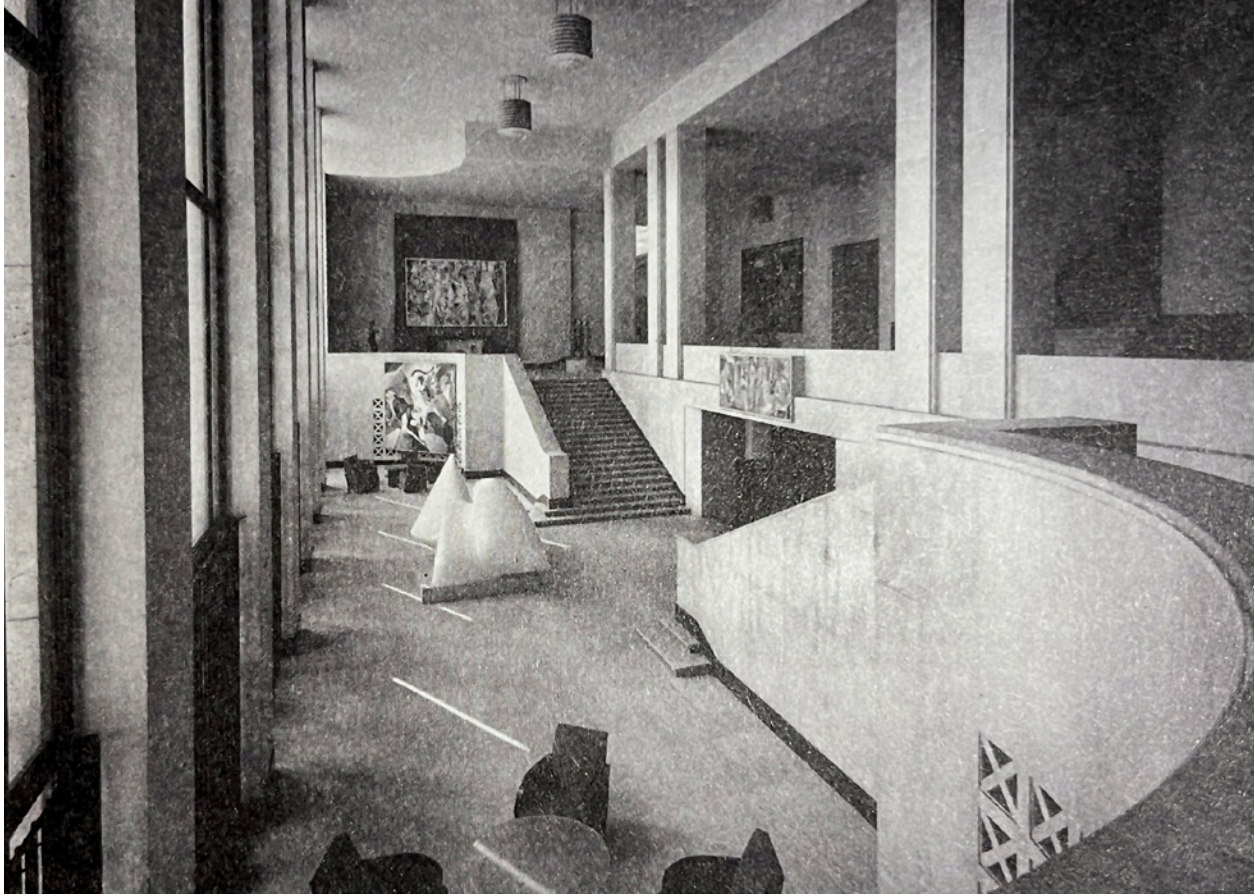


Fig. 06 Dondel & Aubert, Staircase, 1960, Palais de Tokyo, Paris, France, 1937.
from *The History of the Palais de Tokyo*.

overhead lighting from generous skylights. Marble and plaster softly illuminated by grids of translucent glass concealed any trace of the efficient concrete and brick structure.

Construction began in July 1935 on a tight schedule and limited budget.⁹ Scrambling to finish before the Exposition's opening, glass roofs were poorly installed, novel electrical shutters broke quickly, and air conditioning was deemed too expensive. Both museums would play a part in the Exposition, but designers and organizers worked with purpose beyond the temporary fair. The MAM held events and receptions in 1937, then closed for renovations and "finishing touches" intended to last two years. The eastern wing wouldn't reopen for another

twenty four years.¹⁰ The MNAM likewise hosted a popular historical retrospective of French art before closing for its own renovation. Opening under German occupation in 1942, the Palais primarily served as a warehouse for stolen Jewish property.¹¹ The MNAM officially opened in June 1947. France's wandering collection of contemporary art had finally found a home.

Yet remaining in the new museum proved difficult for the MNAM. The "structuring of [the Palais'] spaces constituted a nearly impossible challenge in hanging the collection".¹² Works were hung on doors, in hallways and stairwells, and forced into unwelcome juxtapositions by the sheer volume of the space. Decades of renovations resolved many of these issues in the eastern wing but were prohibitive in time and cost for the west. As early as 1956, calls began circulating to abandon the Palais as an "implemented rough draft."¹³ The Centre Georges-Pompidou was "designed as the opposite of the Palais de Tokyo" in its maximum



Fig. 07 Piano & Rogers, Gallery, Centre Pompidou, Paris, France, 1977.
Photograph by author.

flexibility. The MNAM moved to the Centre 1977, beginning decades of upheaval in the west wing of the Palais.¹⁴ After a brief stint as the Musée d'art d'Essai, an experimental rotating collection loaned from other state museums, the Centre National de la Photographie opened in 1984. The photographic collection was joined by institutions dedicated to cinema in 1986 and renamed Maison de l'Image, conceived as a holistic center of film and photography. Multiple plans for renovation of the building, again renamed the Palais du Cinema, were adopted and postponed until 1995.¹⁵ Interior demolition proceeded for three years, removing partitions, ceilings, and cladding until work was suddenly stopped. The Palais du Cinema had found a more promising site in Bercy. The west wing of the Palais de Tokyo was now abandoned again.

Making the Museum

Architects Anne Lacaton and Jean-Phillippe Vassal (L&V) were invited to the site in 2000. They found an interior "partially demolished and partially reconstructed," largely "in a state of ruin."¹⁶ Demolition had revealed an efficient concrete structure of immense volume, more comparable to a factory than a museum. The Ministry of Culture sought to temporarily reopen the Palais as a



Fig. 08-09 Lacaton & Vassal, Abandoned Site, Palais de Tokyo, Paris, France, 2002.
Photographs by Lacaton & Vassal.

"Center for Contemporary Creation," (CCC) displaying work by young and emerging artists with no permanent collection of its own. Asked to design a limited installation for under €3,000,000, L&V instead proposed inhabiting as much of the space as possible while leaving the building largely untouched. "The architecture was already there," explained Vassal, "our desire was then to reveal the Palais de Tokyo in its intrinsic properties."¹⁷

Inspired by Djemma el-Fnaa, a bustling, multi use square in Marrakesh, the architects perceived the project as "an outside space rather than an inside space," sensing an opportunity to create "a true landscape that stretches as far as the eye can see, [where] you can walk on and on without stopping."¹⁸ Their work was thus limited to operations necessary to reopen the space as a museum, while promoting a feeling of transparency. Leaving the defining moves to Dondel and



Fig. 10 Lacaton & Vassal, Electric Conduits with Piping installed by artist *Mountaincutters*, Palais de Tokyo, Paris, France, 2002. Photograph by author.



Fig. 11 Dondel & Aubert, MAM Gallery, Palais de Tokyo, Paris, France, 1937.
Photograph by author.

Aubert, L&V “reinforced the structure ... repaired the stairs ... [and redid] the electronics, ... we would not concern ourselves with finishes.” If the exposed structure can be considered the skeleton of the building, then L&V have installed a new nervous system of conduits, wires, and lights. Modifications are unique in each situation, down to the individual columns. Eschewing drawings, models, and traditional forms of representation, the architects moved into the building to personally supervise construction.¹⁹

Musée d’Art Moderne

Across the Palais’ plaza, the Musée d’Art Moderne retains much of Dondel and Aubert’s original design, a vision of an alternate reality for the CCC had the west wing not been gutted. Marble and linoleum

floors are subdivided into a disorienting array of rooms, broken up by dramatically proportioned staircases. Galleries are austere, efficient, and interchangeable, presenting a fixed collection largely produced in the early 20th century. There is a sense of inertia and stagnation common to established museums; bound to display their most prominent holdings, there is little impetus for novelty or innovation. Even on weekends there are few visitors and the halls remain quiet. Despite their proximity, the two museums of the Palais could not be more different.

Museum Architecture

The museums share a common exterior identity as part of the greater Palais, a sprawling multistory complex of white marble. L&V's additions to the exterior were functional and programmatic, adding fire stairs, a community garden, and opening new entrances. The Palais'



Fig. 12 Lacaton & Vassal, Main Entry, Palais de Tokyo, Paris, France, 2002. Photograph by author.



Fig. 13 Lacaton & Vassal, New Stairway and Bridges, Palais de Tokyo, Paris, France, 2002. Photograph by author.

original design navigated the site's elevation change by leaving a multilevel gap between the mass of the museum and Avenue du Président-Wilson. L&V bridge the gap with minimally detailed steel bridges and stairs, turning a formerly inaccessible facade into a popular streetfront restaurant. A series of identical spiral staircases along the eastern side of the museum satisfy contemporary egress codes and land amidst the well maintained community garden.

To enter the Palais is to step into a landscape of contradictions. Sprawling over four levels, the industrial simplicity of the concrete structure contrasts with a variety of spatial conditions. The primary entrance remains in its original location on Avenue du Président-Wilson, a decorative entryway immediately contrasted by the raw concrete columns and slabs inside. Depending on the current exhibitions, visitors may continue forward, climb up

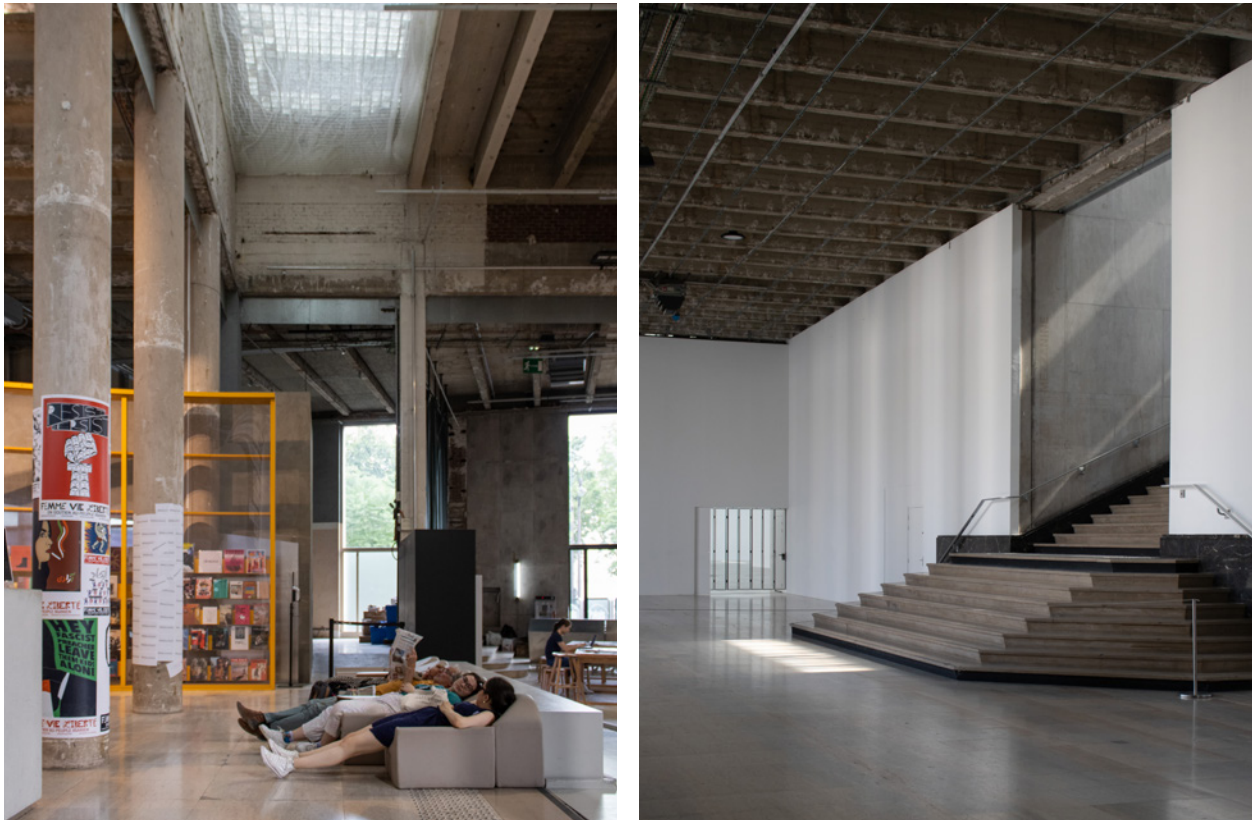


Fig. 14-15 Lacaton & Vassal, Lobby (left), Staircase (right), Palais de Tokyo, Paris, France, 2002. Photograph by author.



Fig. 16 Lacaton & Vassal, Third Level, Palais de Tokyo, Paris, France, 2002.
Photograph by author.

to the third level, or descend into the two levels below. No clear hierarchy of space is established. A relaxed atmosphere pervades as visitors lounge on sofas or chat over coffee, free to inhabit the space as they please.

The third and highest level is well illuminated by skylights spanning the length of the floor in a skeletal steel framework. When not serving as exhibition space, it is a venue rented by the corporate sponsors who finance much of the museum's operations. Beyond the entrance, the second level contains a bookstore and a large exhibition space. There are no set displays or walls fit for hanging art. An unfinished concrete floor is interspersed with sections of marble and pierced by a grid of stained and pitted columns. Crumbling plaster reveals brick within the walls.

The first level contains similar material conditions and is exclusively an exhibition space, with windows opening onto the Palais' central plaza. A circular plaster dome encircled by columns is the heart of the level, which is typically subdivided into zones for specific exhibitions. A children's area nearby hosts birthday activities for budding contemporary artists. L&V's most prominent modification is a line of thin concrete columns added to stabilize the floor above. Perfectly smooth, contrasting with the roughness of other finishes, the columns fade into the visual background. Looking closely reveals just how much work L&V have done - new conduits, repaired columns, resurfaced floors - all impossible to escape but easy to miss. Their modifications are subtle and self effacing, enabling the Palais to generate its own atmosphere.



Fig. 17 Lacaton & Vassal, First Level Dome, Palais de Tokyo, Paris, France, 2002.
Photograph by author.

Despite being stripped of its cladding, the proportion and scale of the existing architecture remains monumental. Triple height ceilings, grand symmetrical staircases, and classically inspired flourishes remain, albeit reduced from their original state. The staircases are the best preserved element of the 1937 design and have retained their marble cladding, making them a refined transition between the unfinished levels.

Descending to the basement reveals the first spaces not originally intended for public use. Gone are the traces of marble and plaster, replaced by shotcrete and rough sloping floors. A dense network of beams and columns frame open spaces surrounded by a labyrinth of twisting corridors. In the early years of the CCC, several tunnels were secretly occupied by urban artists using the Palais itself as



Fig. 18-19 Lacaton & Vassal, Occupied Stairs (left), New Columns (right), Palais de Tokyo, Paris, France, 2002. Photographs by author.



Fig. 20 Lacaton & Vassal, Basement, Palais de Tokyo, Paris, France, 2002. Photograph by author.

their canvas. Rather than stop them upon their discovery, curators invited more artists to participate. The resulting works within the subterranean passages are known as the “Lasco project” after the cave art of Lascaux, France.²⁰ These passages also contain YOYO, a nightclub occupying a former theater beneath the Palais’ upper court. The CCC is open until 10 PM, after which life at the Palais moves to YOYO until the early hours of the morning.

Changing seasons bring a new set of exhibitions staged in unique relation to the space. Each display is a temporary inhabitation, as expansive or cloistered as the work demands, utilizing natural light or creating its own. The museum is thus a constantly evolving presence within its architecture. Daria de Beauvais, senior curator at the Palais de Tokyo, considers an exhibition’s relationship to the museum to be fundamental to its success. “Rule #1 is don’t try to fight the architecture,” she explains, “the building is half of the exhibit.”²¹



Fig. 21 Iacaton & Vassal, Lasco Project, Palais de Tokyo, Paris, France, 2002. Photograph by author.



Fig. 22 Lacaton & Vassal, View from Rooftop, Palais de Tokyo, Paris, France, 2002.
Photograph by author.

Interpretation

L&V have carefully minimized the visual and spatial impact of their work at the Palais de Tokyo. Their vision recognizes the appeal of its seemingly abandoned interior landscape, utilizing the existing architecture to create the CCC's unique atmosphere. The unfinished quality of the museum's surfaces produces a sense of informality rarely found in such a high profile institution. Absent the usual frameworks of defined circulation and discreet galleries, the space coaxes visitors out of the typical modes of observation and into new relations with the work. L&V's conception of a "space, fluidity, and extreme transparency [helping] to transform people's interactions," has been realized, perhaps too successfully.²² One experienced guide confided, "we have to watch [visitors] closely here, they feel too comfortable going into places they shouldn't or touching the work."

The Palais has attempted to balance the sense of freedom evoked by its architecture with the needs of the institution, gradually erecting walls and closing off disused areas. The necessity of these changes is at odds with the architects' vision for a continuous interior landscape, but do not yet compromise the fundamental openness of the museum.

The most impactful additions to the site are programmatic. Three new restaurants, a bookshop, and a basement nightclub have transformed the once disengaged Palais into a continuously active urban element. Despite its location in the glitzy 16th arrondissement, its plaza is one of the most popular skateboarding spots in Paris. The Palais and its surroundings are an island of activity late into the night in an otherwise restrained district. The architects could not plan or dictate the social life of the institution. They have instead recognized the possibilities of the existing and allowed the architecture to step forward as a facilitator of urban life.

A changing climate has wrought its own effects. Skylights once praised for flooding galleries with light have transformed the unventilated upper levels into a solar oven. The third floor remains off limits after dangerous heat imperiled visitors and compelled an early closure last summer. The entire Palais has been reorganized in response. Visitors no longer enter the museum on street level. Instead, they climb down two flights of exterior stairs to reach the cave-like basement galleries, cool and damp even at the peak of summer. Moving upwards through the museum brings light, warmth, and a reminder of the natural forces at play. Work by artist Mountaincutters pokes fun at the situation with a series of wall mounted thermometers.

It is a testament to L&V's vision for flexible space that such dramatic responses have been possible. Few institutions, forced to close entire levels or create a new entrance, would persevere as smoothly as the Palais. The multitude of spaces, paths, and entrances offer the possibility of continual renewal and reinvention. But these possibilities alone do not make the Palais unique - the idea of flexible spaces is a recurring theme in contemporary design, rarely surviving the transition from concept to reality. It is all too easy for institutions to become entrenched, physically and psychologically, in old patterns of behavior no longer suited to the moment. The success of the Palais de Tokyo lies in the mentality it evokes from both visitors and staff, a willingness to drop pretense and engage with a marvelous landscape on its own terms.



Fig. 23 Lacaton & Vassal, Stairway, Palais de Tokyo, Paris, France, 2002. Photograph by author.



Fig. 24 Lacaton & Vassal, Palais Plaza, Palais de Tokyo, Paris, France, 2002.
Photograph by author.

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04

Allmannajuvet Zinc Mine Museum

Peter Zumthor | Sauda, Norway

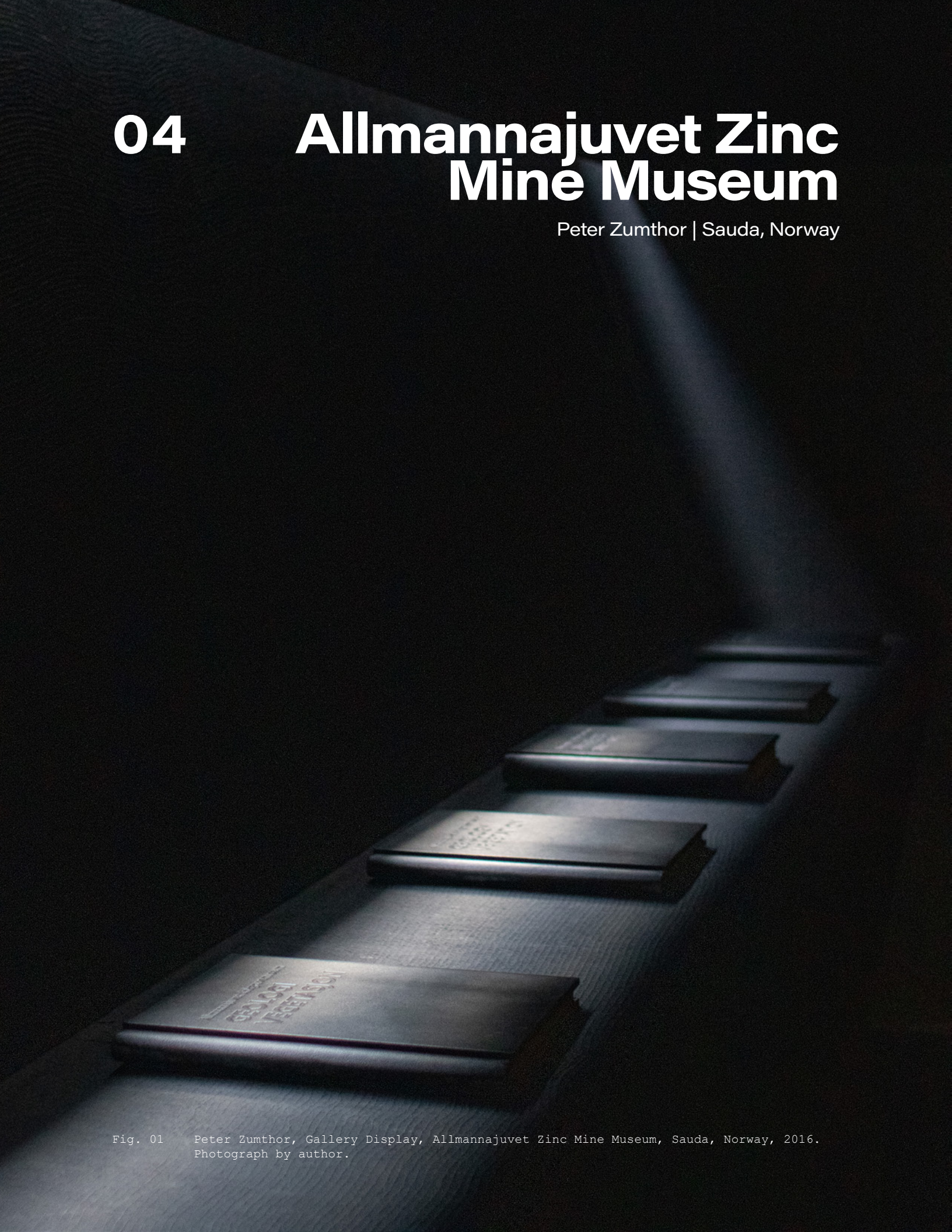


Fig. 01 Peter Zumthor, Gallery Display, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016.
Photograph by author.

Allmannajuvet Zinc Mine Museum



Fig. 02 Peter Zumthor, Exterior View, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016. Photograph by author.

Introduction

“Cultural memory touches on something in man that is older and more durable than his immediate presence, something that moves him because in it he meets his immortal alter ego” - Sibyl Moholy-Nagy¹

The Allmannajuvet Zinc Mine Museum commemorates a historic industrial landscape in central Norway. Designed by Peter Zumthor and completed in 2016, the museum is composed of four pavilions strung along a historic mining trail. A roadside rest stop, a cafe, a gallery, and a staging area, the structures are mediators between visitors and the mine, providing interpretation, as well as spaces for gathering and rest. Commissioned by the Norwegian Public Roads

Administration, the museum is a popular stop on National Scenic Route Ryfylke, established to promote tourism in remote areas.²

Allmannajuvet is a valley located about six hours drive west of Oslo, near the town of Sauda, resting in the southern end of the Scandinavian mountain range. Fjords of the western coast begin where these mountains meet the North Atlantic, allowing fingers of icy water to snake hundreds of kilometers inland. The highest and steepest mountains are found towards the center of the range, working their way up the length of the country like a rocky spine. Until the mid 20th century, travel into the mountainous interior was difficult in even the best of circumstances, and all but impossible during the coldest months. Today several roadways wind through the valleys and peaks, linking Oslo to the cities of the western coast, but the highlands between them remain sparsely populated and largely undeveloped.



Fig. 03 Journey to Sauda, Norway, 2023, Photograph by author.

There are no trains to Sauda, and the closest connection to a major city is a two hour ferry ride to Stavanger. The Zinc Mine Museum is a further ten minute drive from the town center, so renting a car was a necessity. Heading west out of Oslo, the gentle forests and suburban developments surrounding the city are soon supplanted by forested slopes and winding lakes. From here the road rises and traffic dwindles. Five hours west, the road becomes a single twisting lane, crossing dams and passing sheer drops with the same cool confidence as sheep dotting its course. Finally the road starts to descend, still as narrow but now following the course of a river valley into Sauda.

The town is nestled along the eponymous Saudafjord in the low lying plains at the mouth of the Storelva river. With fewer than five thousand people, the town is one of the largest in the Ryfylke region and serves as a local administrative center.³ The skyline is dominated by the looming Eramet Smelteverk metallurgical plant, producing ferromanganese alloy used to strengthen steel. Built in 1915 by the American Electric Furnace Company (EFC), the plant remains the



Fig. 04-05 Sauda Smelteverk, Sauda, Norway, 2023, Photographs by author.

largest smelting facility in Northern Europe.⁴ The otherwise remote site has one undeniable geographic advantage - plentiful access to hydroelectric power - that has made it a competitive industrial center for over one hundred years. The plant operates around the clock, unloading raw manganese from African cargo vessels to feed the furnaces bathing the complex in a purple hue. The smelter is Sauda's largest employer and once transformed the town in its image. Houses designed by American architects and built by the EFC in the early 20th century are a recognized historic district, and one popular poem from the period includes the line "god bless all them Yankee dollar."⁵

The Old Mine

Ironically, Sauda's present metallurgical industry has little to do with the history of mining in the region. The late 1870's brought a prospecting boom to central Norway. Opening of profitable titanium and copper mines paired with a "finders keepers" mineral rights policy sent villagers scrambling up mountains and down gorges in a frantic search for new deposits.⁶ In most cases, the first person to register a claim would gain ownership, even if the find was on private land. Sauda was an agricultural town, but farmers flocked to join the mineral hunt all the same. 1881 saw the first major discovery - ore samples from a steep river valley a few miles outside of town contained little copper but a surprising quantity of zinc.⁷ The valley, perhaps better described as a ravine, was Allmannajuvet, or "All-Man's-Gorge." The inhabitants of Sauda had struck paydirt, but would earn little for their efforts. The townspeople had neither the capital or the know-how to run a mine, and sold their claims to one of several recently established companies. The only one to successfully operate a mine was the Sauda Grube

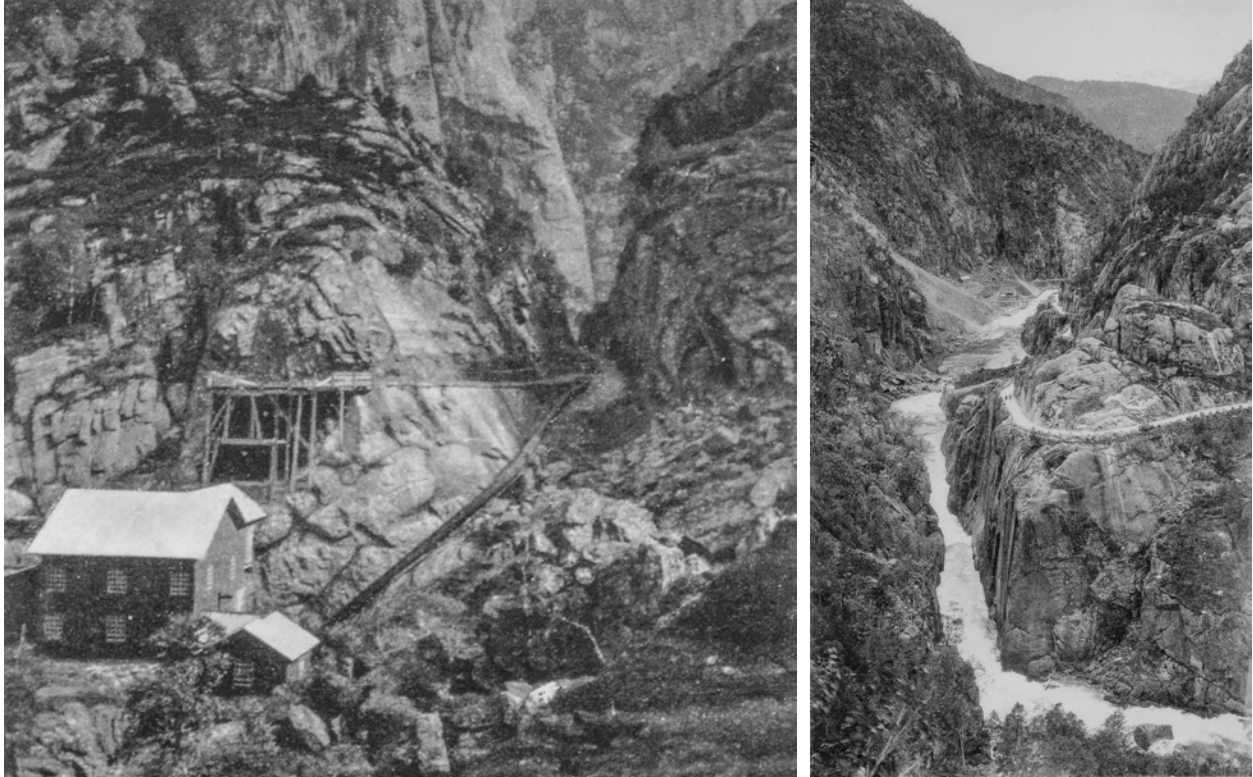


Fig. 06-07 Ore Crusher, 1890 (left), Allmannajuvet Ravine, 1890 (right), Sauda, Norway. From *Allmannajuvet Zinc Mine Museum: History*.

Compagni, or Sauda Mining Company, which established the "Old Mine" in Allmannajuvet.⁸

Zinc is most commonly used to galvanize steel and iron, a process creating a protective coating that prevents rust. Zinc ore extracted from Allmannajuvet was shipped to Wales where it was processed, then used in British steel production.⁹ No road or trail existed in the valley before one was hewn out of the rocky slopes for the mine. Fifteen kilometers lie between the mine entrance and the docks in Sauda, half of which runs through the perilous slopes of Allmannajuvet. Dozens of workers strained to shore up trails and erect bridges large enough for packhorses. Yet it would prove easier to extract zinc than profit. A slowing Norwegian economy spurred a sale to English investors in 1888, barely four years into full operation. Staffing at the mine

varied wildly during English ownership. Over 100 workers in 1888 fell to 20 in 1893 before surging to 168 in 1897.¹⁰ Most were young men who came as migrant labor from other regions in Norway or the Nordics. An English director oversaw a diverse staff operating and supporting the mine, including foremen, craftsmen, miners, drivers, maids, and cooks. Trails constructed during these early years have developed into the primary road through Allmannajuvet today.

Museum Architecture

Following the course of the mining trail, the museum is only accessible by car. A ten minute drive from Sauda rapidly transitions as rolling fields give way to hills and then mountainsides until the road twists into the Allmannajuvet ravine. Cut off from the outside world, the narrow faces of the gorge constrict into a tight channel. The ravine was the only place in Norway where I lost cell service -



Fig. 08 Mining Trail, Allmannajuvet, Photograph by author.



Fig. 09 Peter Zumthor, Pavilions in the Valley, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016. Photograph by author.

conceivably plotted by Peter Zumthor - but more likely a result of the extreme topography. The road clings to the southern side of the ravine overlooking the rapids of the Storelva River. Much improved from its historic condition, the route now curves past tunnels blasted through the rock. A dense tree canopy and curving canyon walls obscure and reveal views. Signs mark the route to the museum, but the canyon is powerfully disorienting. Just when it's possible to think that you've gone too far, the museum appears. Two dark, rectangular forms rest prominently beside and above the road. One perches on a wooden framework jutting out from a hillside, the other rests on the edge of a stone embankment leaning over the river.

The restroom and service building occupies the embankment. A wall of gray-blue stones makes a right angle towards the riverbed, sloping to retain the parking area. Glue laminated wooden members impregnated with dark brown creosote carry a black rectangular box with inset zinc doors, hanging over the stone wall towards the river. Corrugated zinc panels form a pitched roof lifted above the structure, draining towards the river. A gauze-like mesh pattern of jute burlap fluidly wraps a



Fig. 10 Peter Zumthor, Site Plan, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016. Plan by architect.



Fig. 11-12 Peter Zumthor, Service Building, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016. Photographs by author.

central box, frozen in place by layers of black PMMA, a petroleum derived synthetic membrane. Wooden members run vertically but remain offset from the form they support. Load is carried into beams set diagonally into the embankment. Entering the restrooms requires moving from the asphalt onto a thin section of wooden decking revealing the drop below. For many visitors, this pavilion is the extent of their experience at the museum, merely a bathroom break on a longer drive.

The formal language of container and contained established here is repeated in the other pavilions. A tectonic timber framework utilizes simple bolted connections between columns and beams, cross braced by tertiary members above and below the occupiable burlap wrapped box. Load is distributed between many thin elements, contrasting with the unitary form of the contained box. Creosote stained timber emits a charred aroma, recalling its use on power lines, rail ties, and historic trestle bridges. The sticklike frameworks supporting each pavilion do not recreate mining era structures, but



Fig. 13-14 Peter Zumthor, Cafe (left), Access Stair (right), Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016. Photographs by author.

their positioning within the landscape and utilitarian forms evoke a sense of industrial efficiency.

On the opposite side of the road, stone stairs work their way up the slope towards the Mining Cafe. The cafe occupies one side of a prominent outcrop where the mine's office once stood, a brief walk down the trail. Overgrown stone foundations outline the former office with clear views of the entire valley. A few steps away are the well disguised remains of a bunker built by the Norwegian resistance during the Second World War to take advantage of the prospect and observe the movements of occupying forces.¹¹

The cafe also relishes in the view, expanding vertically within its square footprint and maintaining the language of a wooden framework suspending a black volume beneath a pitched roof. A short flight of stairs descends from the building but floats inches above the ground, a detail shared in Zumthor's seminal 1986 Shelter for Roman Ruins.¹² The interior is continuously wrapped in the same solidified black burlap as the exterior, producing a rough, light absorbing texture. Visitors circulate around a compact kitchen and gift shop to the dining area, where Zumthor designed furniture follows a low ribbon of glass wrapping three of the four sides. According to museum staff, a menu of authentic mining-era broth devised by the architect was discarded soon after the museum's opening in favor of less immersive but more palatable fare. When the museum is closed to the public in winter, the cafe hosts local events. Panoramic views of the site and



Fig. 15 Peter Zumthor, Cafe Interior, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016. Photograph by author.

roadway make the structure a watchtower, observing all who drive by or walk the mining trail, and the only place where the entire project can be perceived at once.

From the cafe, the trail curves around a depression towards the gallery. Wooden members stretch upwards from steel plates clinging onto a sheer rock face, supporting a volume towering over the clearing below. Near the base lies the remains of ore crushing and washing buildings, reduced to stone foundations amidst channels where water once flowed. Approaching the gallery requires visitors to double back on a smaller path and consider the site from the perspective of workers in the former structures. Ascending another floating staircase, visitors enter the darkened space. Three exhibits are embedded into the black burlap walls: a collection of artifacts found within the mine, leather bound manuscripts describing the architecture, history, and geography of the site, and original documentation of the early mining operations.

Light streams from behind each of the three exhibits, softly and precisely illuminating the contents with an unseen source. The shafts fall diagonally, marking the sides of each niche and lending the beams an implied spatiality between illuminated surfaces. Ceilings and corners lie in permanent shadow. Full height glass wrapping a niche at the end of the space washes the floor with soft light. Visitors come face to face with the steep drop into the clearing from the same position where ore was once dumped into machinery below.

Exhibits curated by the architect are not sealed behind glass or framed with interpretative signage. Tools, possessions, and even a wooden clog are laid out to speak for themselves. Context is provided



Fig. 16 Peter Zumthor, Mining Gallery, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016. Photograph by author.

by the books displayed, a product of Zumthor's collaboration with local historians, geologists, and writers. Created to contextualize the mining operations, natural landscape, and architecture of the museum, they relay these conditions in objective prose. One of the volumes, *Sub Terra, Sub Sole*, is an anthology of mining related fiction across centuries and cultures, each selection presented untranslated in its original language. The books and their contents are unique to the gallery and unavailable anywhere else.

The staging area for mine tours is the final pavilion and the only one to break from the established box - framework typology. Adjacent to the sloping trail, a timber structure and low corrugated roof define the space. A bank of corten steel lockers contain helmets and

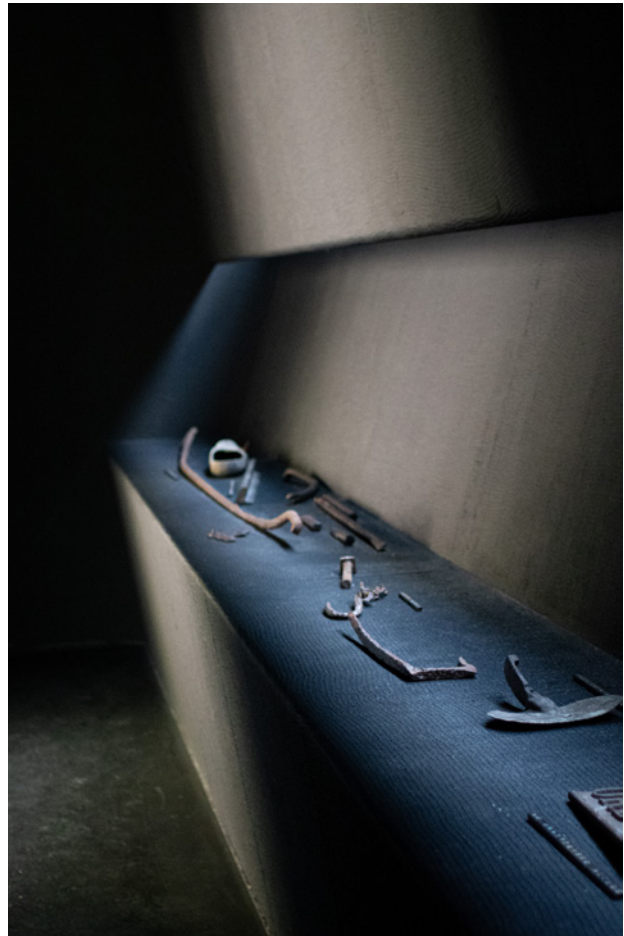


Fig. 17-18 Peter Zumthor, Mining Gallery, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016. Photographs by author.



Fig. 19 Peter Zumthor, Gallery Display, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016. Photograph by author.

lanterns for the journey into the mine. This pavilion marks the end of Zumthor's work on the museum, and is a point of departure for those visiting the mine.

Mine Tour

The mine entrance lies above a bend in the river one kilometer down the trail. Thin guidelines are all that stand between hikers and a steep drop into the rapids below. A steel bridge now spans the gap where floods have swept away the path. A wooden structure imitating the original entry shields the mine entrance from rockslides. Chilly air fills the low, narrow passages, lit only by visitor's headlamps. When the mine was in operation, carbide lamps no brighter than a match were the sole source of illumination. Useful fittings were stripped



Fig. 20 Peter Zumthor, Staging Area, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016.
Photograph by author.

long ago, leaving behind broken bottles and rusting machine parts. The tunnel winds 500 meters into the mountain, squeezing through tight passages and revealing shafts connecting to upper levels before terminating in a chamber where the largest zinc deposit was found.

Mine Operations

Miners used dynamite to blast the shaft into the mountainside, breaking ore into pieces that were carted outside and cleaned before being brought into Sauda.¹³ The mine's activity was spread over nine buildings, including an office, two stables, sheds for craftsmen, the washery, and a villa in Sauda occupied by the manager.¹⁴ Work was dangerous and difficult. Long hours and hard labor challenged even experienced miners, with three men dying in accidents between 1888 and

1889. Guardrails installed in the wake of these accidents still stand along the trail today. For twelve hours in cramped and murky tunnels, miners would earn around two kroner per day. This was more than laborers working outside of the mine and most residents of Sauda could hope to earn.¹⁵

Despite considerable investment, the mine would not operate for long. The mine's owners cut staffing to 44 in 1898, and were unable to restart operations the following year. This was hardly the first fluctuation in the mine's brief history, but it proved to be the last. Tests in 1903 and 1905 concluded the mine was no longer viable. So too did regular surveys up to 1986. The original buildings stood until 1938, when they were sold and moved to new locations in the area.¹⁶



Fig. 21 Inside the mine, Allmannajuvet, Photograph by author.

Interpretation

The Zinc Mining Museum has revived the physical and cultural landscape of Allmannajuvet after decades of abandonment. Once a financial liability, the mines have become an asset, exerting a gravitational pull on sightseers and tourists towards this remote region. Rather than seeking to recreate or mimic history, the museum stages the traces of a forgotten industrial landscape in an "emotional reconstruction" of the past. The new pavilions reinforce the presence of the archaeology, providing a sense of scale and context otherwise unattainable from ruins alone. Seeking to create "a new framework for experience that stimulates emotional awareness," Zumthor evokes the experience of the miners in an abstracted manner, placing artifacts in a dark, tunnel-like gallery.¹⁷ The darkness of the pavilions inside and out is a reminder that they are as much a product of the mine as zinc, an extractive history made physical.

The books in the gallery are a secondary result of the architect's work and undeniably enrich the visiting experience by presenting in-depth contextual research found nowhere else. There is a rewarding feeling to the exclusivity of their contents - the idea that one only becomes capable of understanding by traveling. Yet the argument for keeping these works exclusive to the site presents uncomfortable implications. To deny those unable to travel to remote Norwegian fjords - or those incapable of climbing the steps into the gallery - the opportunity to learn is an unsympathetic decision at best. The romanticization of personal experience is an understandable response to a digitized era, but rather than open doors, Zumthor has erected a burlap wrapped wall.

Beyond intimate study of the ravine, the structures of the museum draw upon a broader context. Both the creosote treated lumber and the PMMA coated burlap walls reference the longstanding use of tar in Norwegian vernacular architecture, particularly Norwegian stave churches. Eidsborg Stave Church, constructed around 1250, is a short drive from Sauda.¹⁹ Regular coats of viscous pine tar protect the ancient wooden structure from moisture and decay through the extremes of Norway's seasons and create a glossy black sheen. Beads of tar collect along eaves and seep from siding, running in streaks down the stone foundations. At Allmannajuvet, creosote, which is derived from tar, seeps out of the wood grain like black tears, seemingly frozen in place yet slowly staining the ground below. Tar is used in this context as both a physical and metaphorical preservative, delaying



Fig. 22 Peter Zumthor, Gallery and foundation ruins, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016. Photograph by author.

the inevitable decay of wood just as the museum preserves the mine's memory. Change is imperceptible but constant. Seemingly solid drops of tar are in fact liquid, simply running at a pace we are unable to perceive.

Zumthor describes his fascination with the union of past and present through a story of mining, preservation, and memory - "The Unexpected Reunion" by Johann Peter Hebel, 1811. The story relates the disappearance of a young German miner, leaving his fiancée to mourn. Fifty years pass in a procession of wars, revolutions, and events large and small until a body is found preserved in the mine's vitriol water "as if he had died only an hour before."¹⁹ The miner's fiancée is the only person to recognize him as her lost love, now reaching the end of her life while he remains untouched by the passage of time. "The great



Fig. 23 Peter Zumthor, Creosote Timber Connections, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016. Photograph by author.



Fig. 24-25 Eidsborg Stave Church, Photographs by author.

narratives of linear time are caught in an ellipsis," as the story interweaves the broad sweep of history with a deeply personal tale.²⁰ An intimate story of the type defining our lives as individuals is thus given equal weight to a narrative of monumental scope. Zumthor writes, "something thought to be irrevocably lost comes back with an almost painful beauty. [At Allmannajuvet] I cannot create anything as cogent as that, but I would like to get close." In evoking the experiences of the miners, the museum sparks empathy and understanding across the barrier of time.

The striking pavilions of the Allmannajuvet Zinc Mine Museum reinhabit a forgotten landscape, providing new perspectives on the site

by recognizing the past not as a fixed element but as an interpretive partner. Building upon existing physical and emotional foundations, Zumthor challenges travelers to reflect upon the experiences of those who have gone before and consider how our own lives may one day be remembered.

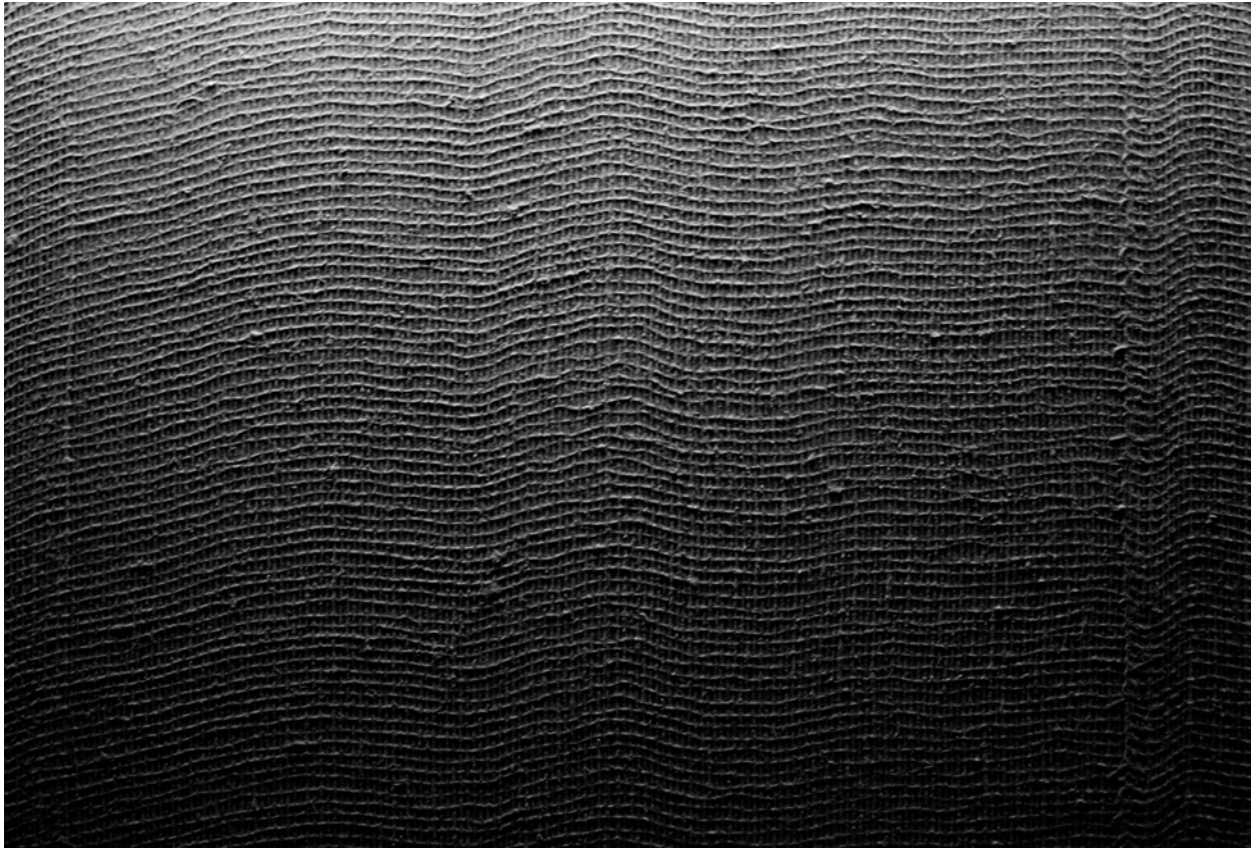


Fig. 26 Peter Zumthor, Burlap Texture, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016. Photograph by author.



Fig. 27 Peter Zumthor, Gallery and Cafe, Allmannajuvet Zinc Mine Museum, Sauda, Norway, 2016. Photograph by author.

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Conclusion

Traveling to the sites presented in this report has been an incredible privilege and a once in a lifetime opportunity. I am grateful to have received this award, and I know it has forever changed my perceptions of architecture. In exploring the relationship between contemporary architecture and historical context, questions of intent and knowledge are continually raised. Did the architect make a deliberate allusion, or is this mere coincidence? Were they fully aware of the site's history? If so, how did they interpret it? In studying the intentions of each architect, the built expression of their work, and the history and context of each site, I hope to have provided some clarity on these questions, at least for the four sites examined. Each of the museums studied benefits from an intentional architectural relationship with the past, deriving unique atmospheric, emotional, and symbolic qualities to support their contemporary objectives.

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