EXPLORE LAB

PERFORMATIVE ARCHITECTURE

- Research Plan -

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Introduction

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Personal Fascination

Architecture is one of the most influential and impactful forms of creative expression.
A remarkable architectural work propels innovative ideas, serves as a symbol for social movements, ignites inspiration, adapts seamlessly to its surroundings, and can resonate with individuals on a personal level. From this, I've always been intrigued by how architecture possesses the ability to capture people's attention, evoke emotions, and stimulate their imagination. Yet architecture is not the only means of expression capable of achieving this impact.
Growing up exposed to multiple diverse forms of art and artists has led me to find personal fascination in the outcomes of collaborations across different artistic disciplines. most intriguingly, I have observed how these collaborations possess the potential to subtly influence and disseminate high-concept ideas into popular culture. For instance, the somewhat exclusive world of high fashion can find its influence emerging in partnerships with music or film, eventually coming back to impact streetwear through its now larger exposure to the public.
What captivates me is the process of translating complex concepts and rendering them into more accessible forms that enable their ideas to take root.
In essence, I believe that a well-structured approach based-off collective influence can enable hyper-conceptual ideas to manifest themselves in ways that transcend mere novelty.



Problem Statement

In the world of architecture, it is common for the tendency to perceive itself as existing in isolation from other art forms. However, with the integration of emerging digital technologies, this identity of distinction continues to blur further as we see the convergence of creative disciplines with architecture in various settings such as art installations, immersive galleries and stage performances.



In recent years, architectural works have gained prominence in the world of performance, engaging in collaborations to realise forward-thinking design solutions, that redefine our concept of design and bring unique visions to life. For example, as we find ourselves existing further in the digital landscape, we witness a rising trend in immersive galleries.
These spaces, in alignment with the notion of our shrinking attention spans and the acceptance of intangible art, challenge how we engage with art and have brought life back to what was, a slowly dying space. However, I believe that there is a sense of incompleteness in these experiences. The spaces often need to be retrofitted to accommodate this form of display rather than being purposefully designed for it. The consequence is often a black box space that lacks any contextual understanding and feels like a short-lasting form of entertainment. I argue that this may be the result of the lack of a strong, cohesive theory or methodology underpinning these experiences. Additionally, it's worth noting that many performative architectural works are undertaken by non-architects. This could contribute to the potentially unfortunate truth that many of these innovative spaces fall into the category of gimmicks.


While it may seem presumptuous to assume that designers cannot create great works of performative architecture without architects. From my own architectural training and experiences, I know that architects are adept at comprehending on larger scales looking at factors beyond the design's aesthetics or capitalistic incentives but, often look at projects with the potential to tackle issues or push society forward. This perspective allows architects to consider not only the immediate design but also its potential societal impacts and alignment with broader societal visions, leading to tangible, lasting change. Architects also possess the ability to bridge communication among diverse specialists from various fields as well as to a client and the general public. Therefore, keeping architects included in these discussions and designs can help elevate performative architectural projects, extracting their full potential. With that being said, I find that many architects are currently unaware of this opportunity and still have much to learn from the world of performance. Causing a more conscious merging of architecture and performance may result in a fresh beneficial perspective of design for both fields.

Research Question

Although I've expressed criticism of some performative projects, ultimately, these emerging spaces, events, and experiences, including stage performances, art installations, and immersive galleries, challenge and redefine our interactions with space and, by extension, the field of architecture.
I believe much like the early experimentation that accompanied the invention of photography, the current approaches to these spaces can be interpreted as an initial exploration of the extent to which we can push, stretch, and leverage emerging tools and ways of thinking. I view these tools as having the capacity to inform the field of architecture in ways that could offer distinctive solutions to longstanding issues from a new perspective. In other words, by taking inspiration from the higher-conceptual thinking of performative spaces, we can implement innovation in real-world architectural projects and improve architectural experiences.

As a result, my potential thesis question is:

“How can performance-inspired principles be integrated into architectural design to enhance spatial experiences?”.

Research Framework

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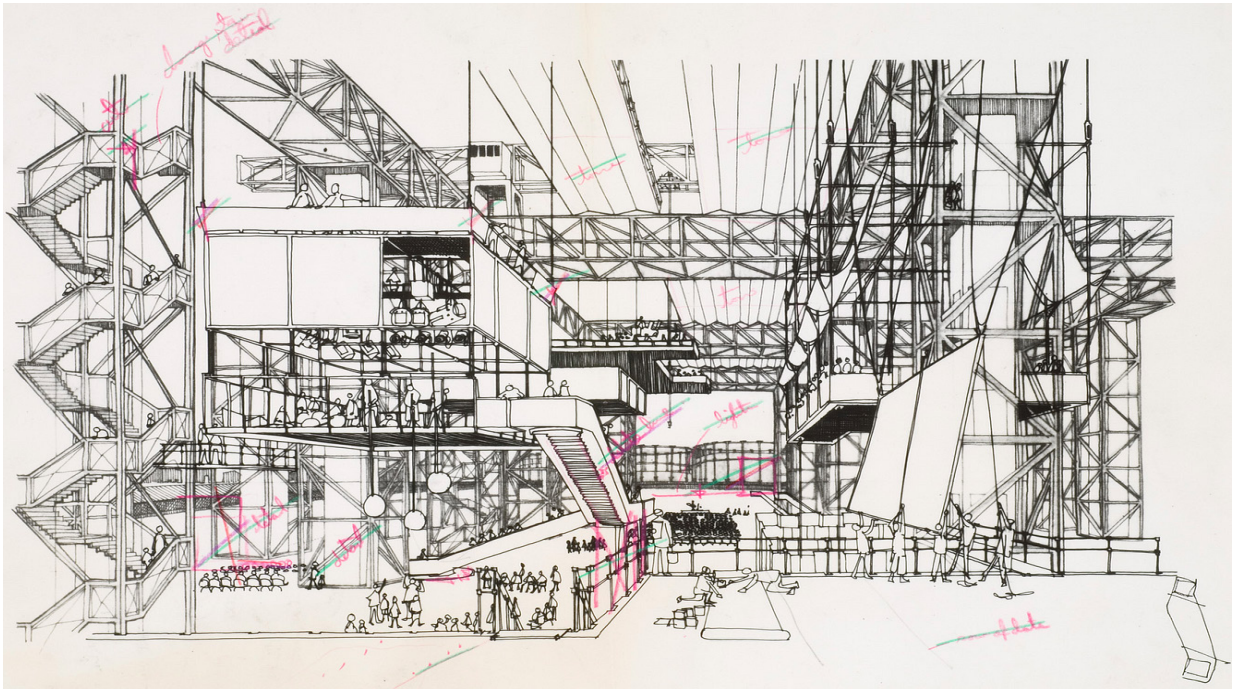
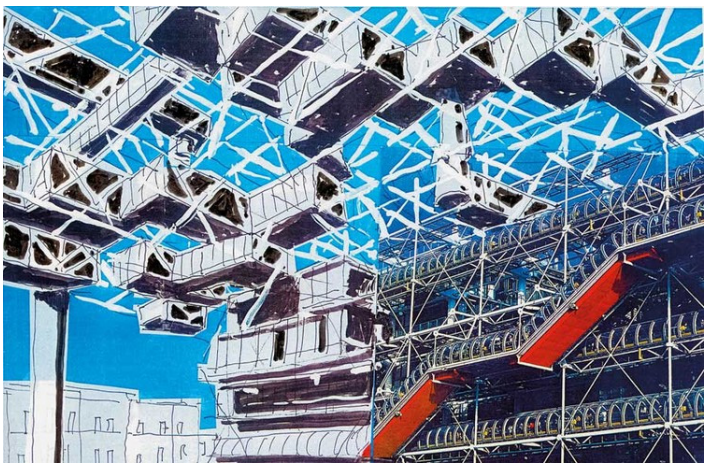
Key Notions

Intriguingly, I believe that my thesis question has likely been explored subconsciously by many designers and architects in the past. Cedric Price's Fun Palace serves as an early example of performative architecture, where challenges were addressed from a unique perspective influenced by the world of performance. In the structure, the occupants transform into performers as they interact, move, and engage with the space, similar to actors on a theatre stage. The fundamental ideas and theories inspired by Price's work as well as other notable figures such as Yona Friedman and Constant Nieuwenhuys, can already be observed in contemporary examples.





Companies like IArt are producing work that can be classified as performative architecture. Their designs use performative notions to serve multiple functions, extending beyond exhibition purposes. Some of their projects have expressed a larger cultural impact as well as addressed issues.






One project tasked with redesigning a local park found a solution for nighttime safety by installing lamps with proximity sensors along the park's pathways. These sensors automatically adjust the lamp brightness based on a pedestrian's position to the lamp, illuminating the path and providing visibility of other park-goers' locations and movements. Due to the function of the lamps' performative nature, there was also an additional benefit in energy-saving.



Research Methodology

Therefore, a natural starting point to initiate my research is to gather and document what is currently and has previously been produced in the world of performative architecture. I propose the most effective approach to this, is to curate and thoroughly examine a comprehensive list of case studies composed of artists, exhibition designers, and set designers, which I believe exemplify the essence of performative architecture, such as the aforementioned company Iart.

Artists	Exhibition Design	Set Design
Daan Roosegaarde	180 Studios	Block9
James Turrell	iart	Es Devlin
United Visual Artists	JA Projects	Mike Carson
Universal Everything	Massimiliano Siccardi	Perron-Roettinger
Yinka Ilori	Remastered	Tawbox
	Stefan Beckman	Villa Eugénie
	STUFISH	
	TeamLab	

`In addition to the analysis of case studies, I intend to supplement my research with a hands-on approach. This would involve physically visiting projects and performative spaces, as well as reaching out to individuals involved in some of the case studies for interviews.

However, a downfall to this approach of research is that each case study comes with many specific goals and achievements that may not all be relevant to my topic of interest. Therefore, in order to navigate through the case studies effectively, I recognised the necessity of creating a structured framework to guide my research.
First and foremost, I only investigated case studies that hold intrinsic value in how the project tackles or redefines our interaction with space. Secondly, I also felt the importance of avoiding falling into the trap of dismissing something as merely “cool” or “beautiful” without recognising the potentially deeper principles it may hold. Therefore, through investigating the societal values added by performative experiences, I established what I believe are the five goals of performative architecture. These goals are purposefully expressed as verbs, as I propose them as points of action and approaches to addressing potential challenges.

The five goals are: To Adapt, To Convey, To Engage, To Enrich, and To Provoke/Inspire.

To Adapt

(Make something suitable for new uses)

- Efficient/creative use of space.
- Enhance Aesthetically.
- Transform the ordinary.

To Convey

(Describes or delivers something)

- Communicate social, political and cultural issues.
- Educate.
- Express heritage.
- Express identity.
- Express values.

To Engage

(Participation)

- Advocates participation
- Build and unify communities.
- Foster creativity.
- Tackle/provide solutions for social, political and cultural issues.
- Therapeutic values (Mental health and safety).

To Enrich

(Improve the quality or value of something)

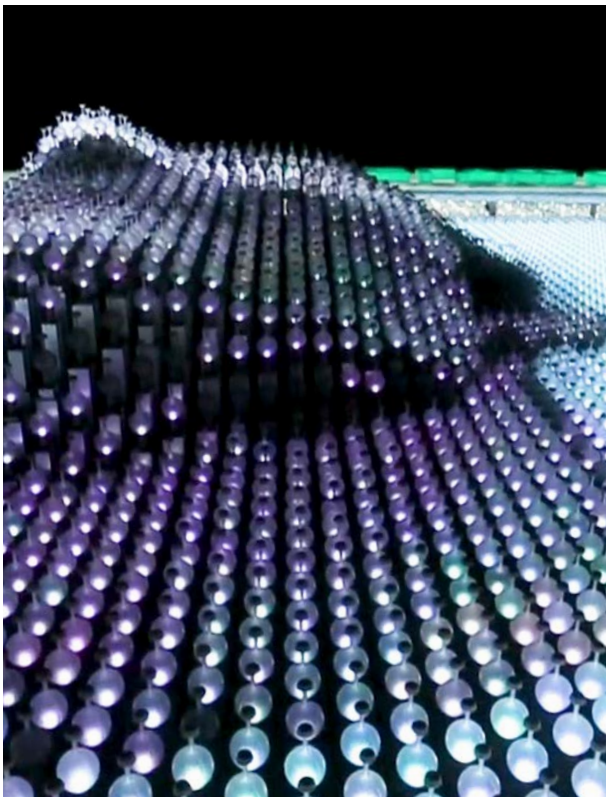
- Cultural enrichment.
- Economic impact.
- Entertainment and leisure.
- Heritage enrichment.

To Provoke/ Inspire

(To give rise to or stimulate action towards something)

- Creative inspiration.
- Emotional stimulation.
- Intellectual inspiration.

Having established these five goals, I can use them as criteria to categorise the list of case studies and determine which goal(s) each one is currently achieving or has the potential to achieve. This categorisation will enable me to effectively filter and emphasise the specific information I aim to extract from each case study.
My research aims to then move beyond the analysis of case studies via the question of "What goal(s) are they achieving?", to shift my focus towards the questions of "How are the five goals being achieved?". This would require recognising and extracting the specific architectural elements employed in each case study. Highlighting similarities and differences among them, eventually creating a catalogue and/or toolbox of architectural elements that can be employed to tackle certain architectural challenges.
Already through my initial research, I've identified two predominant approaches by architectural elements to perform: the kinetic approach and the sensory approach.
The kinetic approach can be defined by architectural elements employing or encouraging a form of motion, whereas the sensory approach is defined by architectural elements stimulating one or more of our physical senses. By diving into my then-established catalogue and/or toolbox, I expect to experiment with both approaches, individually and in unison, creating an understanding of how each architectural element may be manipulated and adapted for future development. To facilitate this, I also feel the importance of hands-on creation, experimentation, and testing, to further my first-hand research.



Research Plan

Collection of
Contemporary Case Studies
+
Relevant Historical Architectural Literature, Movements & Theories.

How Does Performative Architecture Archive the *5* Goals?

What architectural elements are in play?

The Kinetic Approach

(Tangible movements and changes that affect our interaction with space)

The Sensory Approach

(Elements that purposefully engage one or more of our senses to affect our interaction with space)

Research via Physical experimentation

A new perspective and approach to Architectural design.

Design Strategy and Project Outcome

September				October				November	
1.1	1.2	1.3	1.4	1.5	**1.6**	1.7	1.8	1.9	**2.0**

P1

Refining Interest

Initial Research

Pitch

Project Development

Case Studies Collection

Literature Collection

P1

November			December			January			
2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	**3.0**

P2

Literature Analysis

Case Studies Analysis

Interviews + First Hand Research

Design Research and Development

P2

February			March				April		
3.1	3.2	3.3	3.4	3.5	3.6	**3.7**	3.8	3.9	4.0

P3

Research by Design

Prototyping

Program Development

P3

P4

Design Development

April		May				June			
4.1	4.2	4.3	4.4	**4.5**	4.6	4.7	4.8	4.9	**5.0**

P4

Design Development

Final Model

Presentation

P4

P4

Final Production

P5

Preliminary Conclusions, Design Strategies

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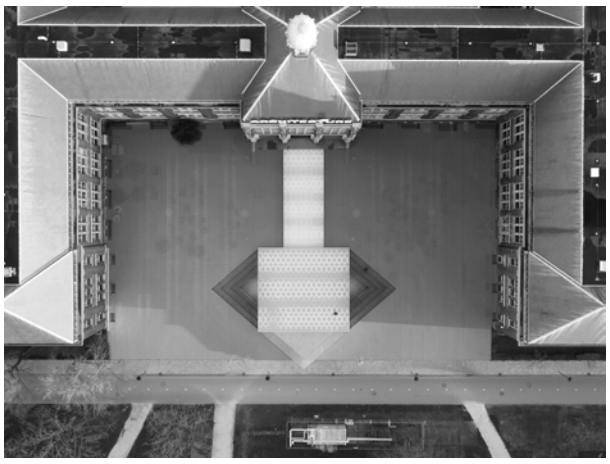
An Example Project

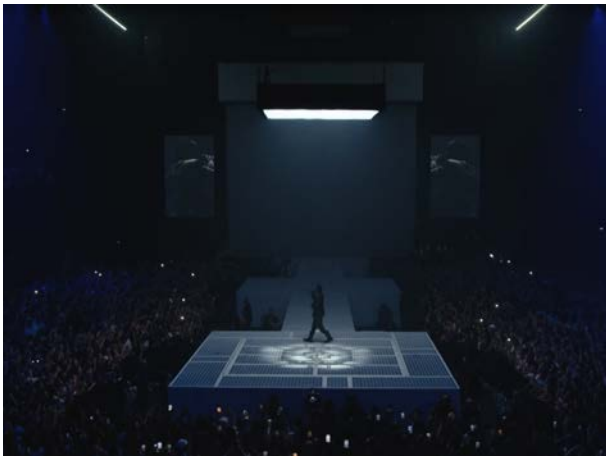
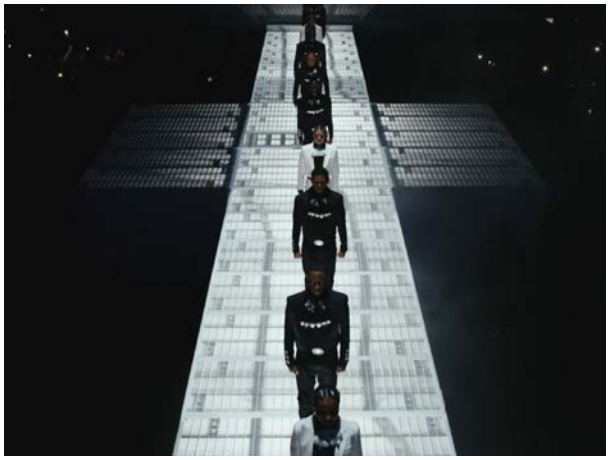
To better convey how my research may manifest into a final outcome, I want to briefly present the small conceptual project that inspired my Explore Lab topic as an example. The task involved reimagining the front square of The TU Delft Faculty of Architecture.



Driving the project, I believe that the square should serve the purpose of showcasing the activities within the building while blurring the boundaries between public and private domains. Additionally, it should reflect the faculty's globally Iconic status by being visually distinctive, achieved in a way similar to how the iconic pyramid outside the Louvre allows the building to be instantly recognisable.

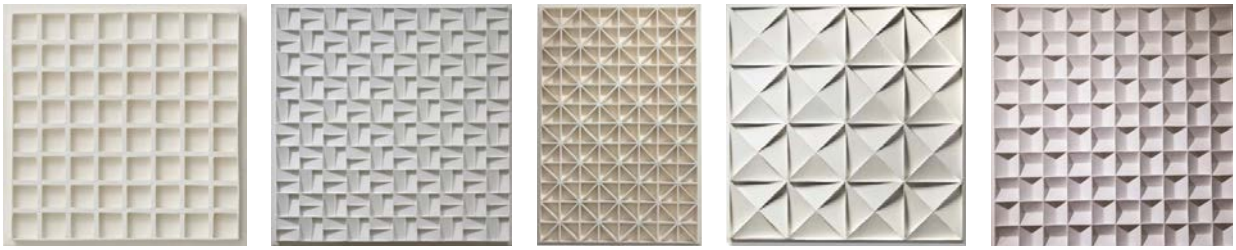
To achieve this vision, I drew inspiration from the unconventional precedence of the stage design from Kendrick Lamar's Big Steppers Tour.



I selected this precedence because of how it handles the interaction between the performer and the audience. It achieves this through a minimalist design, using a white box stage that sharply contrasts with the cluttered crowd that surrounds it. Notably, the stage is elevated at head height just below eye level, creating a visual effect that guides your eyes towards the performer.
In my own design concept, I first envisioned people moving through the square, transitioning from being just regular members of the public (as audience members) to becoming participants of the building (the performers) as they made their way to the building entrance.

Additionally, I drew inspiration from the work of the local Delft artist, Jan Schoonhoven, particularly in designing the floor pattern that would create the guiding lines effect at eye level on the raised platform.



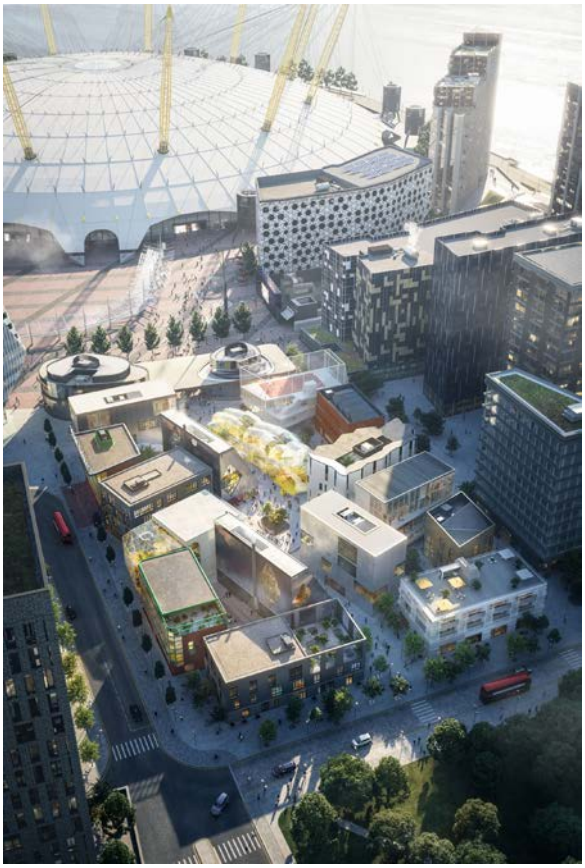
Secondly, Upon observing the existing square, I noticed the disorderly arrangement of various parked bicycles and drew its similarity to the crowd around the stage. Recognising their importance to the design and function of the square, I decided to keep bicycle parking in the space but felt the need to redesign the bike racks to better suit the adaptable nature of the new square. I explored the concept of dynamic floor tiles that could pop up and secure a bike wheel while remaining flush with the ground when not in use. This innovation allows for easy clearance of the square for multiple uses without the need to relocate or remove bike racks.

Research Conclusion

This project represents the initial step in deriving innovative architectural solutions from the principles of performative projects and the works of artists. As a result of my research, my thesis aims to investigate a comprehensive theory guiding the purposeful application of performative architecture, merging creativity and functionality via cutting-edge technologies. In essence, by drawing inspiration from the performative world, my goal is to understand the methods and techniques used to create engaging spaces that approach architectural challenges from a fresh perspective.

Potential Design Outcome

The goal of my research is not to find a specific solution to a particular problem but to establish a new mindset for approaching future architectural challenges. Similar to the previously mentioned project, my final design will need to embody the performative architectural way of thinking while addressing an already well-known site with which I am personally familiar with. I believe the most effective approach is to confront an existing antagonist to anchor my project in reality.
Therefore, I propose that my project reinterprets a development in my hometown of London, England. This could involve reimagining the Battersea Power Station Development, the design district in Greenwich Peninsula, or the proposed second MSG Sphere in Stratford.



While this might invite controversy, it's worth noting that presenting new architectural ideas in this way has a historical precedent, such as Le Corbusier's Plan Voisin in Paris. I believe, therefore, that this approach is justified for exhibiting my thesis research and project.

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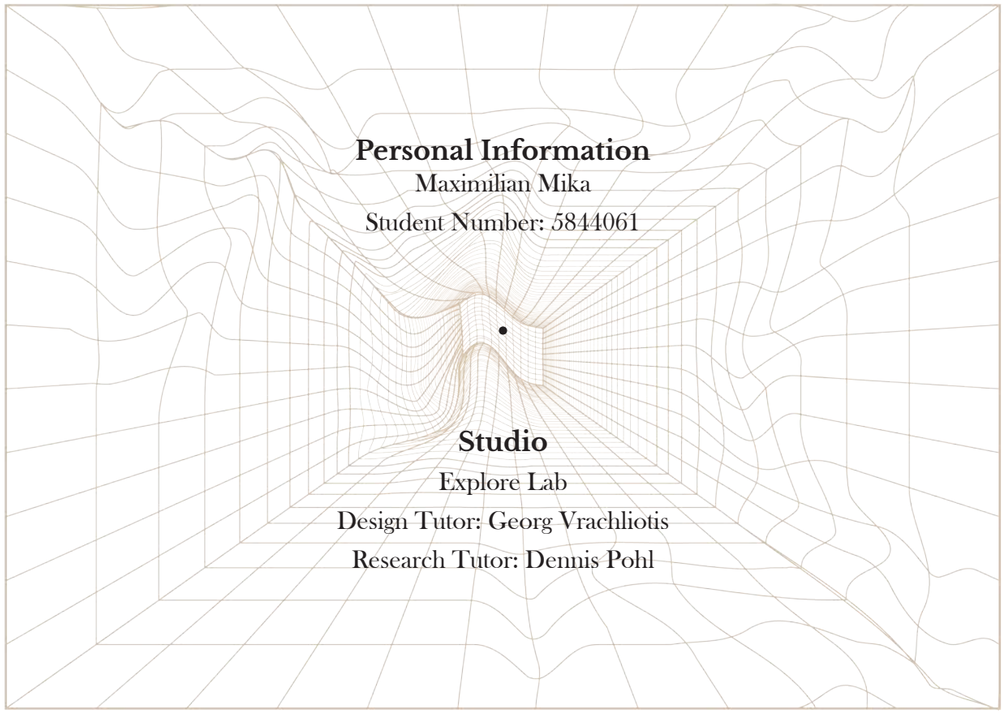
Performative Architecture

- Research Paper -



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CONTENTS

Abstract

Growing up around multiple diverse representations of art and artists, cross-disciplinary collaborations have always fascinated me. Although Architecture's role is often confined to buildings, I see potential in its ability to transmit hyper-conceptual ideas into reality, through these partnerships. Leveraging emerging digital technologies, an outcome of blending creative disciplines can be experienced in events such as stage performances, art installations and immersive galleries. These spaces reshape our engagement with art and architecture yet can often fall short as gimmicks. Therefore, my goal is to investigate a comprehensive theory guiding the purposeful application of the techniques learnt from these spaces, merging creativity and functionality via cutting-edge technologies and design.

This study delves into the history of interactive architecture and the theories formulated by influential figures such as Cedric Price, John Frazer, Gordon Pask, and others. With a critical perspective, the research aims to build upon the contributions of these key figures, influenced by a contemplation of a paradigm shift that I believe to be occurring in recent years, leading to a renewed interest in interactive architecture. By examining contemporary leaders in this resurgence, such as iart, James Turrell, Es Devlin... etc and exploring their innovative approaches, particularly their use of performative elements and sensory experiences. The concept of performative architecture is introduced as the next stage in the evolution of interactive architecture.

Introduction

Personal Fascination

Architecture is one of the most influential and impactful forms of creative expression. A remarkable architectural work propels innovative ideas, serves as a symbol for social movements, ignites inspiration, adapts seamlessly to its surroundings, and can resonate with individuals on a personal level. From this, I've always been intrigued by how architecture possesses the ability to capture people's attention, evoke emotions, and stimulate their imagination. Yet architecture is not the only means of expression capable of achieving this impact.

Growing up exposed to multiple diverse forms of art and artists has led me to find personal fascination in the outcomes of collaborations across different artistic disciplines. Most intriguingly, I have observed how these collaborations possess the potential to subtly influence and disseminate high-concept ideas into popular culture. For instance, the somewhat exclusive world of high fashion can find its influence emerging in partnerships with music or film, eventually coming back to impact streetwear through its now larger exposure to the public (Figure 1).

What captivates me is the process of translating complex concepts and rendering them into more accessible forms that enable their ideas to take root.

In essence, I believe that a well-structured approach based on collective influence can enable hyper-conceptual ideas to manifest themselves in ways that transcend mere novelty.

Figure 1

High Fashion x Collaborates with Music & Film = Influences the Public

Problem Statement

In the world of architecture, it is common for the tendency to perceive itself as existing in isolation from other art forms. However, with the integration of emerging digital technologies, this identity of distinction continues to blur further as we see the convergence of creative disciplines with architecture in various settings such as art installations, immersive galleries and stage performances (Figure 2).

Figure 2

Art Installations

Immersive Galleries

Stage Performances

In recent years, architectural works have gained prominence in the world of performance, engaging in collaborations to realise forward-thinking design solutions, that redefine our concept of design and bring unique visions to life. For example, as we find ourselves existing further in the digital landscape, we witness a rising trend in immersive galleries (Figure 3).

These spaces, in alignment with the notion of our shrinking attention spans and the acceptance of intangible art, challenge how we engage with art and have brought life back to what was, a slowly dying space through diverse means of accessible art. However, I believe that there is a sense of incompleteness in these experiences. The spaces often need to be retrofitted to accommodate this form of display rather than being purposefully designed for it. They also rely on technology such as screens and projections to initiate interactions, however, neglect the potential of the architecture to achieve this. The consequence is often a black box space that lacks any contextual understanding and feels like a short-lasting form of entertainment. I argue that this may be the result of the lack of a strong, cohesive theory or methodology underpinning these experiences. There is a lack of clear guidelines that connect interactive design principles with these spaces, forming a bridge between performative concepts and architectural elements. Additionally, it's worth noting that many performative architectural works are undertaken by non-architects. This could contribute to the potentially unfortunate truth that many of these innovative spaces fall into the category of gimmicks. Adding to this the motivation for the creation of these experiences often comes from capitalistic incentives as they are built for profit. I see this as not too dissimilar to the issue that emerges with for-profit housing projects. In both cases, the project's true motivation undermines its potential needed social cause.

Figure 3

Research Question

Architects are trained to design with a keen awareness of the social impacts of a project and possess the skill to facilitate communication among diverse specialists. Therefore, reevaluating the design of performative spaces from an architectural perspective could potentially avert the risk of novelty and instead highlight the innovative aspects of these experiences. Although I've expressed criticism towards the outcome of some performative projects, ultimately, these emerging spaces, events, and experiences, including stage performances, art installations, and immersive galleries, challenge and redefine our interactions with space and, by extension, the field of architecture. As much as architects can provide a beneficial impact on performative projects, I believe the ideas generated by these projects can also offer architects a fresh perspective for developing innovative design solutions. Much like the early experimentation that accompanied the invention of photography, the current approaches to these spaces can be interpreted as an initial exploration of the extent to which we can push, stretch, and leverage emerging tools and ways of thinking. I view these tools as having the capacity to inform the field of architecture in ways that could offer distinctive solutions to longstanding issues from a new perspective. In other words, by taking inspiration from the higher-conceptual thinking of performative spaces, we can implement innovation in real-world architectural projects and improve architectural experiences.

As a result, my thesis question is:

"How can performance-inspired principles be integrated into architectural design to enhance spatial experiences?".

Theoretical Timeline

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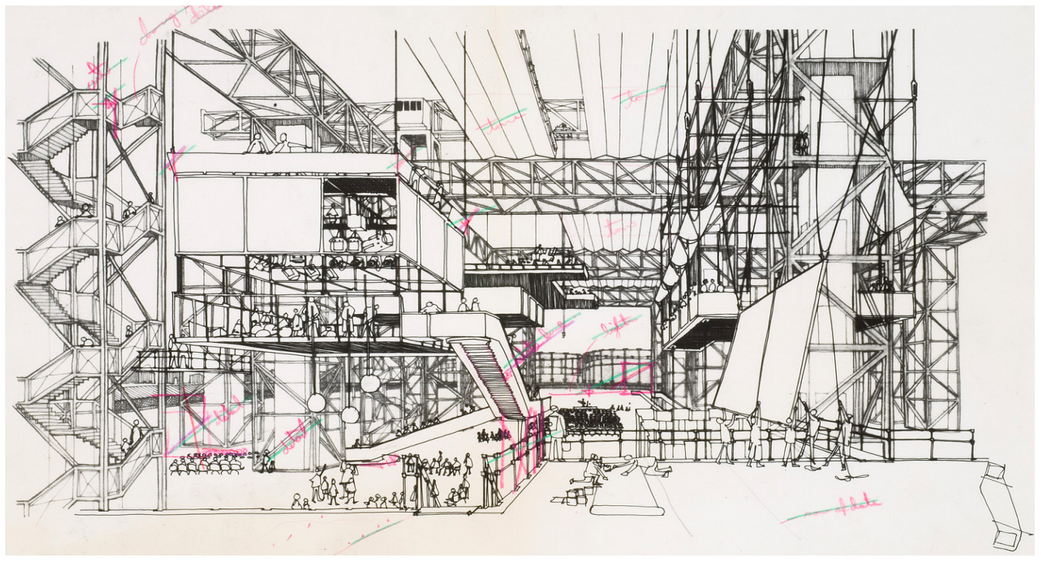
The First Act - Cedric Price

Intriguingly, I believe that my thesis question has likely been explored subconsciously by many designers and architects in the past, but this heritage got lost in performative architecture today. In 1962, the convergence of avant-garde theatre producer Joan Littlewood and architect Cedric Price initiated a transformative cross-disciplinary collaboration. Littlewood's vision sought to transcend traditional theatre, creating a space where individuals actively engaged in performativity rather than passive observation. Described as a "theatre of pure performativity" and a "cultural bricolage," her ideas set the stage for Price's architectural innovation.[1] Stanley Mathews' text *Cedric Price: From the 'Brain Drain' to the 'Knowledge Economy'* distils that Littlewood's "innovative vision provided the conceptual framework" for Price, leading to the design of an "interactive, performative architecture" adaptable to diverse user needs.[2] The collaborative effort resulted in the Fun Palace (Figure 4), a versatile "open steel-gridded structure"[3] designed to accommodate a fully flexible program. It featured suspended rooms for activities like "dancing, music, and drama, movable floors, walls, ceilings, and walkways".[4] Additionally, advanced temperature systems were incorporated to disperse and regulate fog, warm air, and moisture, all with the aim of fostering an engaging and dynamic atmosphere for active enjoyment.[5] The project transformed the occupants into active performers, encouraging them to interact, move, and engage with the space, reminiscent of actors on a theatrical stage. This interdisciplinary venture, referred to as a "university of the streets," merged educational opportunities with leisure and entertainment.[6] With the Fun Palace, Price aimed to transform Littlewood's vision as a solution to prepare society for the approaching technological age.

Figure 4



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2 Mathews. P. 91
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5 "Cedric Price. Fun Palace for Joan Littlewood Project, Stratford East, London, England (Perspective). 1959–1961 | MoMA."
6 Mathews. P. 91

A Paradigm Shift

Mathews' text elaborates further on the societal challenge that Price was addressing, drawing a parallel with Sir Francis Bacon's 'New Atlantis' he suggests that "Both men grappled with a knowledge crisis during a paradigm shift."[7] Going on to clarify that during Bacon's era, this shift marked England's transition from a medieval worldview, whereas, for Price, it represented an awareness of an epistemological shift from the structures and traditions of Britain in the First Machine Age to the post-industrial era. As I reflected on this during my research, I couldn't help but notice a resemblance to what might be the next ongoing paradigm shift of a knowledge crisis, potentially explaining the recent rise in the popularity of architectural works in the world of performance. This contemporary paradigm shift perhaps could be attributed to the dawn of a new digital era, marked by the emergence of technologies like AI. Mathews suggests that Price's shift was prompted by "volatile social and economic conditions" post-World War II.[8] Similarly, a recent global transformative event that arguably parallels the Second World War was the COVID-19 pandemic, which instigated a re-evaluation of concepts within Price's work, such as "adaptable, impermanent, improvisational, and interactive systems."[9] These concepts were possibly further tested during the pandemic, as our interactions with each other and, by extension, with architecture had to be rapidly redefined. Society, post the pandemic has established a new relationship with both private and public spaces, as well as physical and digital realms. The adoption of a 'working from home' culture and 'online teaching' has put questions on the necessity of certain physical spaces. While Price identified the need for rapidly adaptable buildings due to the issues highlighted during the post-war reconstruction, I argue that the present paradigm shift demands not only the adaptation of space but also a renewed focus on drawing people back to spaces. Like a stage in a theatre, buildings should not just be easy to reconfigure but must also serve as a narrative platform, directing and captivating people's attention.

The Second Act - Interactive Architecture

By reducing the dominance of a designer's influence on a building and enhancing its adaptability, The Fun Palace initiated interactive architecture. It promoted and empowered its inhabitants to determine the building's purpose. Cedric Price designed the Fun Palace as a facilitator of performance, but the concept of a dynamically adaptable building evolved from merely hosting performances to the building becoming a performer itself, in Price's Generator (1976-79).
In a similar manner to the Fun Palace, Price's Generator began by establishing a kinetically adaptable system, featuring "150 12' by 12' mobile, combinable cubes."[10] These cubes were constructed using "off-the-shelf infill panels, glazing, and sliding glass doors."[11] In addition, he incorporated "catwalks, screens, and boardwalks" into this modular kit, all of which could be repositioned by a mobile crane.[12] Users could customise the environment to their preferences with this flexible structure, catering to a diverse array of activities, whether they be public or private, formal or informal. The project began to take on a distinctive character as Price sought to customise the user experience for each individual within the building. To accomplish this, Price enlisted the assistance of programmer-architect John Frazer. With a background in cybernetics, Frazer elevated the project by introducing the notion that architecture is a "living, evolving thing".[13]
In a letter to Price, Frazer proposed that "in the event of the site not being re-organized or changed for some time the computer starts generating unsolicited plans and improvements,"[14] transforming the building's role from performing for the 'user' to inviting them to engage with it. Instead of the building merely serving as a stage for the inhabitants' performance, the user contributes and participates in the building's preexisting performance. In essence, proposing an early form of AI, Frazer expresses that it "should have a mind of its own." creating an 'intelligent' building.[15]

The building operates independently, capable of engaging with itself without the constant need for external input and continues to function in perpetuity. It encourages participation but doesn't make it a mandatory requirement. This concept is in line with Gordon Pask's 'Conversation Theory.'[16] The influence of Pask on this idea is not surprising, given his direct collaboration with both Price and Frazer for many years, even contributing to the forward of Frazer's influential book, *'An Evolutionary Architecture.'*[17] Pask's work formed the foundation for much of the architectural advancements in interactive architecture during that period. In essence, 'Conversation Theory' extensively explores the "concept-sharing and concept-forming between different participants who are engaging in a conversation together".[18] This exchange of knowledge can occur between a teacher and a student or, more intriguingly, between humans and machines and thus humans and buildings. Architects began to adopt a model where "spaces and users" were seen as "complete feedback systems".[19] This shifted the perspective of architects, prompting them to view a space as a "compilation of active systems" [20] rather than a mere "static material object" [21] where human engagement can easily be overlooked.
In the late 1980s and 1990s, developing alongside the advancements in cybernetic architecture made by Price, Frazer, and Pask, was the concept of 'Intelligent Environments'. Originating mainly from the field of digital computation, this idea explored spaces equipped with embedded computation and communication technologies. Integrating the digital into the physical world, the goal was to "create an interactive holistic functionality that enhances occupants' experiences". [22]
This development continues today with the growing market of 'Smart Home' systems. However, as Michael C. Mozer argues in *'Lessons from an Adaptive House,'* the adoption and integration of 'smart home' systems have encountered challenges. Mozer identifies two main reasons for their failure, first, inhabitants are generally content with traditional home controls, and second, there is a significant barrier to understanding and willingly learning new interfaces.[23] Successful implementation of 'Smart Homes' relies on 'Smart Inhabitants' actively engaging in conversations with the technology. It's intriguing to note that while the concept of 'Intelligent Environments' sought to redefine our interaction with space, there was limited architectural involvement in the development of these technologies. [24] This is not too dissimilar to the concerns raised earlier with the development of contemporary performative spaces.

While advancements in interactive architecture have led to innovative design solutions for creating buildings that can adapt to their users and environment, there still seems to be a challenge in truly encouraging engagement. Expressed by Price when reflecting on Generator, he contemplates that "By taking the playful so seriously, or the serious so playfully, by distorting the solid and the fixed, Generator shifted the roles of designers, actors, and users, calling into question who and what was

7 Mathews, "Cedric Price". P. 91
8 Mathews. P. 91
9 Mathews. P. 91
10 Steenson Molly Wright, "Cedric Price's Generator | PDF | Architect | Computing And Information Technology," Scribd, accessed December 7, 2023, https://www.scribd.com/doc/190258317/Cedric-Price-s-Generator. P. 15
11 Molly Wright. P. 15
12 Molly Wright. P. 15
13 John Frazer, "An Evolutionary Architecture by AA School - Issuu," February 27, 2015, https://issuu.com/aaschool/docs/an-evolutionary-architecture-webocr. P. 6
14 John Frazer, Letter to Cedric Price, January 11, 1979, Generator document folio DR1995:0280:65 5/5, Cedric Price Archives (Montreal: Canadian Centre for Architecture).
15 Frazer, "Letter to Cedric Price".
16 Gordon Pask, *Conversation, Cognition and Learning: A Cybernetic Theory and Methodology* (Amsterdam ; New York: Elsevier, 1975).
17 Frazer, "An Evolutionary Architecture by AA School - Issuu."
18 Thomas Manning, "What Is Conversation Theory? (1st Edition)," *Cybernetics and Human Knowing* 30, no. 1–2 (2023): 45–63.
19 Michael Fox, "Catching up with the Past: A Small Contribution to a Long History of Interactive Environments," *Footprint* 4 (January 1, 2010): 5–17, https://doi.org/10.7480/footprint.4.1.716. P. 6
20 Gordon Pask, "The Architectural Relevance of Cybernetics," n.d. P. 68
21 Pask. P. 68
22 Juan C. Augusto et al., "Intelligent Environments: A Manifesto," *Human-Centric Computing and Information Sciences* 3, no. 1 (June 15, 2013): 12, https://doi.org/10.1186/2192-1962-3-12. P. 1
23 Michael C. Mozer, "Lessons from an Adaptive Home," in *Smart Environments*, ed. Diane J. Cook and Sajal K. Das, 1st ed. (Wiley, 2004), 271–94, https://doi.org/10.1002/047168659X.ch12.
24 Fox, "Catching up with the Past."

responsible for interactions—and challenging the very performance of architecture." [25] I believe that the ambiguity surrounding which participant initiates interaction and guides the conversation often results in a lack of engagement. Perhaps to mitigate this, clearly defined roles should always be established. In Price's Generator, the programs were valuable for enabling unexpected interactions, but the project could not have prevailed without exploring the connections between the social aspects, site characteristics, and underlying concepts. [26] While technology is often seen as the key to creating interactive and adaptable spaces, it should play a supporting role rather than dominate the project. It's essential to prioritise the project's main purpose over technology. In other words, technology must support as a tool, not rule the project.

Additionally, the cybernetics and computation theories discussed are based on the translation of information and data however, this focus may not fully capture the richness of engaging architectural experiences. For example, elements like smell, which are not easily translated through computation, can contribute to the effective engagement of a space. In fact, Pask hints at an alternative approach beyond the computational and kinetic approaches when acknowledging Gaudí's Park Güell's (Figure 5) ability to create a "dialogue between his environment and its inhabitants" even with "static structures".[27] Therefore, we shouldn't disregard the impact of non-kinetic elements and consider incorporating sensory approaches to interactive architecture.

Figure 5

Antoni Gaudí, Park Güell

25 Molly Wright, "Cedric Price's Generator | PDF | Architect | Computing And Information Technology." P. 15
26 Molly Wright.
27 Pask, "The Architectural Relevance of Cybernetics." P. 74

The Elements of Performative Architecture

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The Sensory Approach

Unlike the kinetic approach used in interactive architecture, grasping the sensory elements that enhance our experiences with spaces and architecture can be challenging due to their intangible nature. Nevertheless, as a tangible practice, architecture regularly engages our senses. As highlighted by Juhani Pallasmaa in 'The Eyes of the Skin', "Architecture is our primary instrument relating us with space and time, and giving these dimensions a human measure."[28] Architecture serves as a means of translating the intangible into the tangible. Our senses play a crucial role in influencing how we perceive space, making them essential in the practice of spatial manipulation. Architects are trained not only in designing buildings but also in considering the societal impact of them and therefore must take into account our sensory experiences. This is why I turned to Pallasmaa's exploration of the sensory approach, as he begins by distilling the historical understanding of our senses to comprehend society's present perception of them.

Pallasmaa asserts that we place excessive importance on sight, stating we live in an 'ocular-centric' society. This attitude began with the Greeks, particularly with figures like Heraclitus, Plato, and Aristotle, who emphasised the importance of vision as a noble sense and a basis for certainty. Sight was established as the sense of truth, following the belief that "The eyes are more exact witnesses than the ears,".[29] This ocular-centric perspective persisted throughout history, with philosophers using visual metaphors to represent knowledge, truth, and reality. During the Renaissance, the hierarchy of senses further solidified the dominance of vision, ranking it highest, followed by sound, smell, taste, and touch. Pallasmaa expresses that this ocular-centric standard continues today, stating that "our technological culture has ordered and separated the senses even more distinctly".[30] He identifies vision and hearing to be regarded as "privileged sociable senses," [31] while the other senses are frequently marginalised. Various philosophers, such as Peter Sloterdijk and David Michael Levin have expressed their criticism stating that "we need to examine very critically the character of vision that predominates today in our world".[32] Pallasmaa contributes to this criticism, arguing that the consequence of neglecting the body and the senses has led to an imbalance which has created the "experiences of alienation, detachment, and solitude in the technological world today". [33]

In the current paradigm shift, the influence of a visually dominant world is evident in the repercussions of social media. Echoing David Harvey's observation, "A rush of images from different spaces almost simultaneously, collapsing the world's spaces into a series of images on a television screen".[34] social media has further distorted our perception of experiencing the world, giving rise to a false sense of connection from the comfort of our homes. However, I argue that the Covid-19 pandemic, which imposed 'at-home' experiences, has sparked a countermovement. As a somewhat ironic example, there has been a resurgence of interest in social engagement, demonstrated by the revitalisation of movie theatres. This resurgence suggests a fundamental human desire for richer sensory experiences and connections, although I would argue we may not be fully aware of how best to achieve this. Furthermore, embracing a more comprehensive sensory approach addresses the necessity of relegating technology to a secondary supporting role,

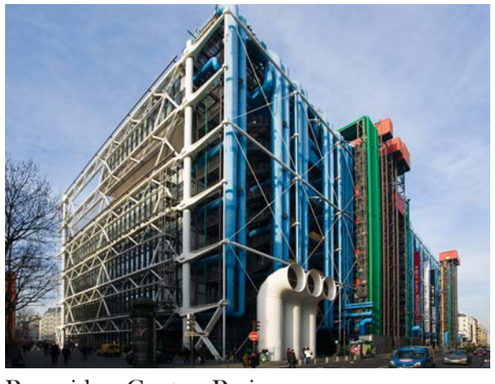
28 Juhani Pallasmaa, *The Eyes of the Skin: Architecture and the Senses*, Reprinted (Chichester: Wiley-Academy, 2007). P. 17
29 Plato, Timaeus, 47b, as quoted in Martin Jay, *Downcast Eyes - The Denigration of Vision in Twentieth-Century French Thought,* University of California Press (Berkeley and Los Angeles), 1994, p 27.
30 Pallasmaa, *The Eyes of the Skin*. P. 16
31 Pallasmaa. P. 16
32 David Michael Levin, 'Decline and Fall -Ocularcentrism in Heidegger's Reading of the History of Metaphysics', in Levin (1993), p 205.
33 Pallasmaa, *The Eyes of the Skin*. P. 19
34 David Harvey, *The Condition of Postmodernity,* Blackwell (Cambridge), 1992, p 293

allowing for more meaningful human interaction with better architectural experiences. Hence, I believe that the evolution of interactive architecture, combining kinetic and sensory approaches, can contribute significantly to fulfilling this inherent desire. Performative architecture, is the integration of both approaches, encouraging people to reengage with architecture and physical spaces.

The 5 Aspects of Performative Architecture

As previously discussed, the evolution from Cedric Price's Cybernetic to Interactive architecture has primarily been driven by the pursuit of creating adaptable buildings capable of dynamically shaping and evolving over time, gaining resilience in the face of volatility. However, the incorporation of interactive architecture seems to have been lost among contemporary architects, with only a few instances, notably seen in the high-tech designs of structures like the Pompidou Centre in Paris or the Lloyd's Building in London (Figure 6 & 7). Despite these examples, the success of kinetically adaptable elements in meeting their intended functionality is questionable, often appearing more as architectural indulgences or gimmicks. Despite this decline, I observe the continued development of interactive architectural concepts in the realm of art installations, stage performances, and immersive galleries. These projects are often conceived by artists, exhibition designers, and set designers who may not be fully aware of the historical background of the concepts they are exploring. However, In the words of Rick Rubin in *'The Creative Act,'* "Innocence brings forth innovation. A lack of knowledge can create more openings to break new ground".[35] This freedom to create without being bound by previous rules and goals allows contemporary examples of performative architecture to uncover new capabilities and dimensions that interactive architecture may not have initially envisioned. As we navigate the current paradigm shift, the adaptability of a building is no longer its sole priority. Drawing insights from contemporary case studies that seamlessly integrate kinetic and sensory approaches, I have identified what I consider the five goals or aspects of performative architecture. These aspects are purposefully expressed as verbs, as I propose them as points of action and approaches to addressing potential challenges. The five goals are: To Adapt, To Convey, To Engage, To Enrich, and To Provoke/Inspire.

Figure 6



Pompidou Centre, Paris

Figure 7

Lloyd's Building, London

1. To Adapt

Defined as the goal of making something suitable for new uses.
This may manifest through the efficient or creative use of space and the ability to transform the ordinary.

2. To Convey

The ability to describe or deliver something.
This aspect can express notions, such as heritage, identity and values of a place or culture, as well as the aims of education and the ability to communicate social, political and cultural issues.

3. To Engage

Encourages and advocates for participation.
The outcome can build and unify communities, foster collaborations and collective creativity, as well as potentially provide therapeutic benefits such as a reduction of loneliness and an increase in the sense of safety.

4. To Enrich

Improves the quality or value of something.
This can be as simple as enhancing aesthetically but also can contribute to and magnify the heritage or culture of a place. Through the implementation of activities such as entertainment and leisure, the aspect of 'To Enrich' can also provide a beneficial economic impact.

5. To Provoke / Inspire

To give rise to or stimulate actions towards something.
This aspect can tackle/provide solutions for social, political and cultural issues through evoking creative, emotional or intellectual ideas. It can encourage you to question your current understanding of something.

35 Rick Rubin and Neil Strauss, *The Creative Act: A Way of Being* (Edinburgh: Canongate, 2023). P. 121

Contemporary Case Studies

To illustrate the concept of performative architecture, I curated and closely analysed a comprehensive set of case studies featuring artists, exhibition designers, and set designers. Although some may be unconventional precedents, these case studies, in my view, capture the essence of performative architecture. These examples employ the kinetic, sensory, or a combination of both approaches to craft experiences that redefine our interaction with space. By examining these case studies in terms of how they achieve the five goals/aspects, I uncovered the societal values embedded in performative experiences. This approach also prevented me from dismissing something merely as "cool" or "beautiful" without acknowledging the potentially deeper principles it may embody.

To give an example of my case study analyses, the company Iart produces work that I believe can be classified as performative architecture. Their designs incorporate both kinetic and sensory elements to fulfil diverse functions, going beyond conventional exhibition purposes. Some of their projects have made cultural statements and addressed societal issues. In essence, described in their own words, they "enhance physical spaces with digital technology – and thus enable novel experiences."[36] This description reveals that their objectives align with the principles of interactive architecture, echoing the concept of 'Intelligent Environments.' Yet, they achieve this by not only aiming to achieve the aspect of 'to adapt' but also 'to enrich' and 'to engage.'

Iart's Stadtpark & Zellweger Park project in Uster (Figure 8) demonstrates how performance-based elements can serve as design solutions to achieve the three of the five performative aspects. The project involves installing 46 lamps along the park paths.[37] Initially designed to provide energy-efficient park lighting, the lamps remain on standby during the day and automatically illuminate at their base with low power at night. Uniquely, these lamps feature proximity sensors that detect approaching pedestrians, causing the light to rise from the base to the upper part of the lamp. In a feature somewhat aligning with Pask's 'Conversation Theory', the illumination of one lamp can influence others nearby, creating a chain reaction of glowing lamps extending ahead of the pedestrians. Coincidentally, the performative nature of these lamps serves multiple purposes, not only conserving energy and lighting a pedestrian path but it also enhancing their sense of safety. The changing interactive lights allow observers to scan the dark park and easily determine the location, direction, and speed of others. This proves more effective than uniformly lighting the entire park, as it is easier to identify a responsive light than to distinguish a figure in the distance. In summary, this project not only successfully adapts the space but also enhances the overall quality of the environment by engaging pedestrians with performative elements, contributing to the overall enrichment of the local neighbourhood.

The Sonorous Reception project (Figure 9) by Iart achieves the same three performative aspects as Stadtpark & Zellweger Park, but it utilises sound rather than light. The sound installation takes the form of a semicircular amphitheatre that dynamically responds to the weather and time of day, creating a continuously evolving soundscape. This reaction is further influenced by the physical presence and interaction of visitors. To accomplish this, 81 light sensors and three motion sensors are strategically placed behind perforated brass panels.[38] When a person is detected, sounds play from the eight closest speakers out of 91, shaping the acoustic environment around them. The localisation of the sound is done to contour the reverberation of the existing space, giving clearer audio. In essence, the project transforms the space by actively engaging with users to enhance their experience. The use of sound as the primary sensory element offers a more dynamic and intimate approach to engagement compared to a lighting-based method. As Pallasmaa stated, "Vision separates us from the world whereas the other senses unite us with it."[39] By making sound the focal point, the project can evoke emotions, contributing to people's comfort in the environment. Specifically, the Sonorous Reception project softens what might otherwise be an imposing and intimidating space without the need to physically alter its existing dimensions.

Figure 8

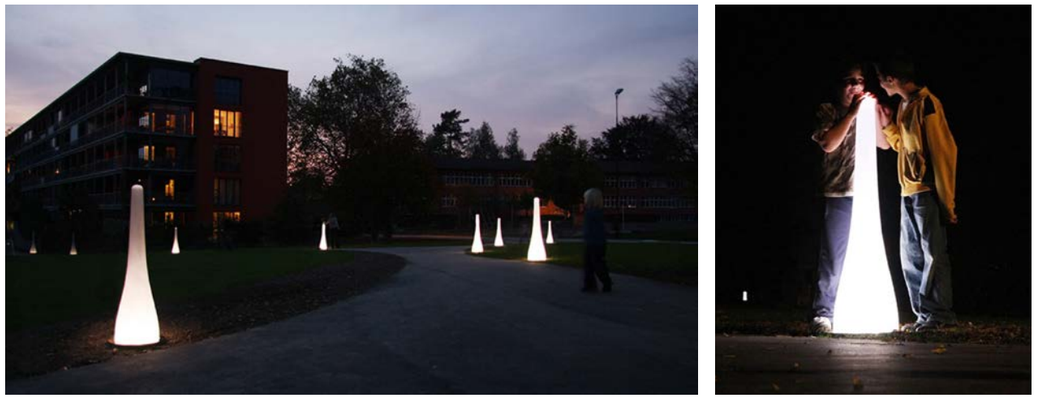


Figure 9

36 "Our Team - About - Iart," accessed January 24, 2024, https://iart.ch/en/about.
37 "Stadtpark Uster - Iart," accessed January 24, 2024, https://iart.ch/en/work/stadtpark-uster.
38 "190 La Salle Street - Iart," accessed January 24, 2024, https://iart.ch/en/work/190-la-salle-street.

39 Pallasmaa, *The Eyes of the Skin. P. 25*

Performative architectural projects don't necessarily have to address multiple aspects using complex interactive elements that combine both kinetic and sensory components. The works of James Turrell serve as an example of performative architecture that exclusively focuses on the sensory approach. In fact, Turrell exclusively engages in the singular medium of painting with light. His work aims to provoke emotions and manipulate our perception of space by challenging our visual senses. Despite Pallasmaa's raises caution on our ocular-centric society, he understands that favouring sight doesn't inherently dismiss other senses. He asserts, "The sense of sight may incorporate, and even reinforce, other sense modalities." [40] Turrell, in this manner, skillfully manipulates light to create a distinctive experience that puts into question our understanding of our sense of sight.

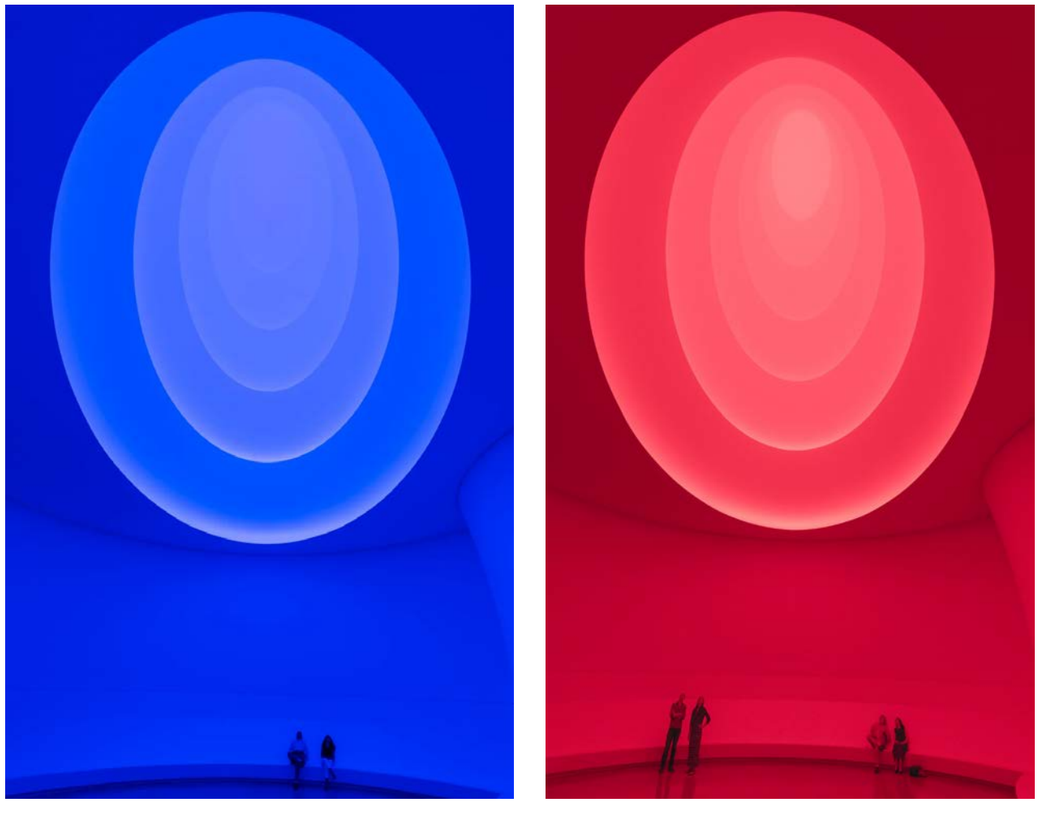
Afrum I (White) (Figure 10), created in 1967 by Turrell, is one of his earlier works that showcased his exploration into manipulating our perception. The objective of this piece is to evoke the visual phenomenon known as 'Dichotomous Perceptual Decision.'[41] This occurs when the brain struggles to distinguish between two possible perceptions simultaneously, leading to a continuous oscillation as it seeks to process the correct interpretation. Afrum I engages with dichotomous perceptual decision by employing a straightforward approach, projecting an intensely bright, uniform light into one corner of an otherwise completely dark room. This gives the illusion of a floating, three-dimensional cube emerging from the wall. The observer's vision alternates between perceiving the light as a solid cube and as a flat beam of light, as the brain is capable of interpreting the image in either way. This artwork achieves the performative aspect of 'To Provoke / Inspire' by in a way, challenging the conventional Greek notion that equates vision with truth. The experience of dichotomous perceptual decision makes you aware that reliance on vision alone can be deceptive. However, once you incorporate your other senses, such as approaching the light and attempting to touch the apparent three-dimensional cube, it becomes evident that the illusion is a mental fabrication. While the project isn't directly engaging, the piece sparks human curiosity, leaving a lasting impression that compels one to engage with it in order to comprehend the artwork.

Figure 10

40 Pallasmaa. P. 26
41 Shaunacy Ferro, "The Mind-Bending Science Of James Turrell's Art," Popular Science, September 24, 2013, https://www.popsci.com/science/article/2013-07/james-turrell-psychology/.

Turrell's artworks, such as 'Afrum I,' not only challenge our sense of vision but also explore how manipulating our senses can impact our perception of space. This becomes particularly evident in his later projects, like 'Aten Reign' at the Guggenheim Museum in New York (Figure 11). In this project, he temporarily adapts the well-known space to redefine its architectural experiences. The Guggenheim's usually open, sun-lit atrium lobby is filled with evenly coloured lights that gradually shift in hue to maximise the intensity of each colour.[42] The project incorporates elements of the existing space by mimicking the six spiralling floors with six cascading rings at each level. Although a second structure is installed within the atrium to achieve this effect, the top section blends artificial light with the natural light from the museum's ceiling, preserving one of the space's key elements. Poetically, keeping it's an element of light which Turrell is exploring. Aten Reign plays with our perception, focusing less on tricking our brains and more on how our photoreceptors and ganglion cells in the retina respond to coloured light. Essentially, your eye adapts to one colour, influencing how you perceive the next. Turrell is highlighting a phenomenon that he observable in nature. Where for example, the colour of a red flower at dusk will appear darker, while a blue one appears brighter. The project leaves participants virtually colour-blind, engaging the Ganzfeld effect (meaning "whole field" in German), which disrupts our sense of vision, creating a sensory deprivation effect. [43] While this can lead to hallucination, it effectively prompts the brain to rely less on vision for information about our soundings and heightens other senses, increasing overall awareness. Turrell adapts the space to induce this thought-provoking effect with the intention of creating a contemplative or meditative atmosphere. with the relatively simple technique of thoughtfully lighting a space, Turrell is capable of aching nearly all of the five aspects of performative architecture.

Figure 11



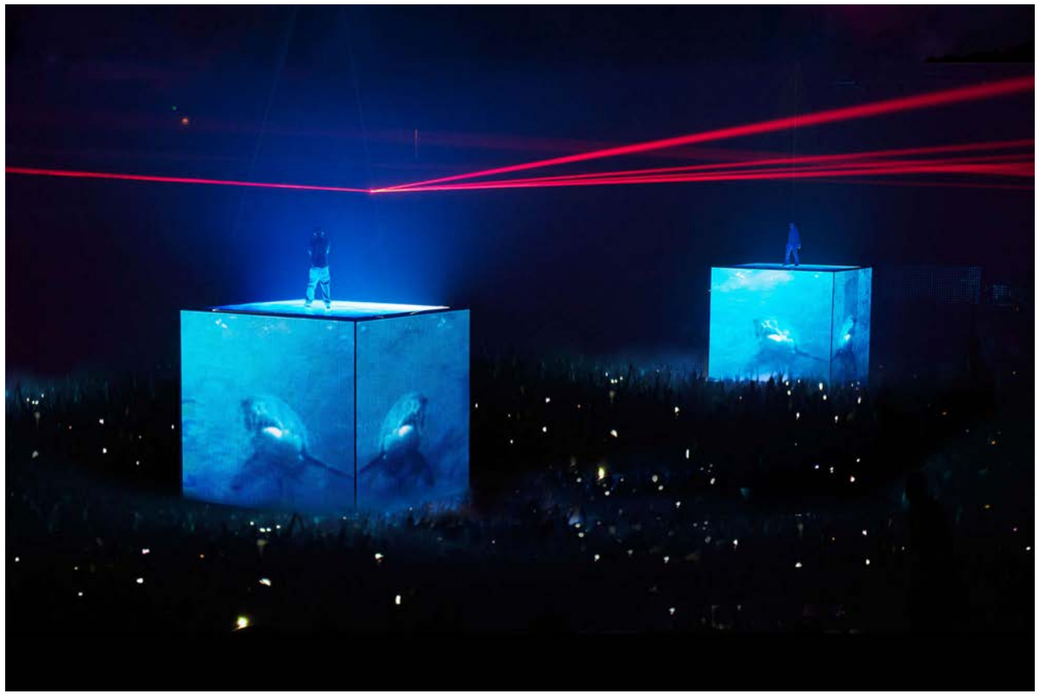
42 Ferro.
43 Ferro.

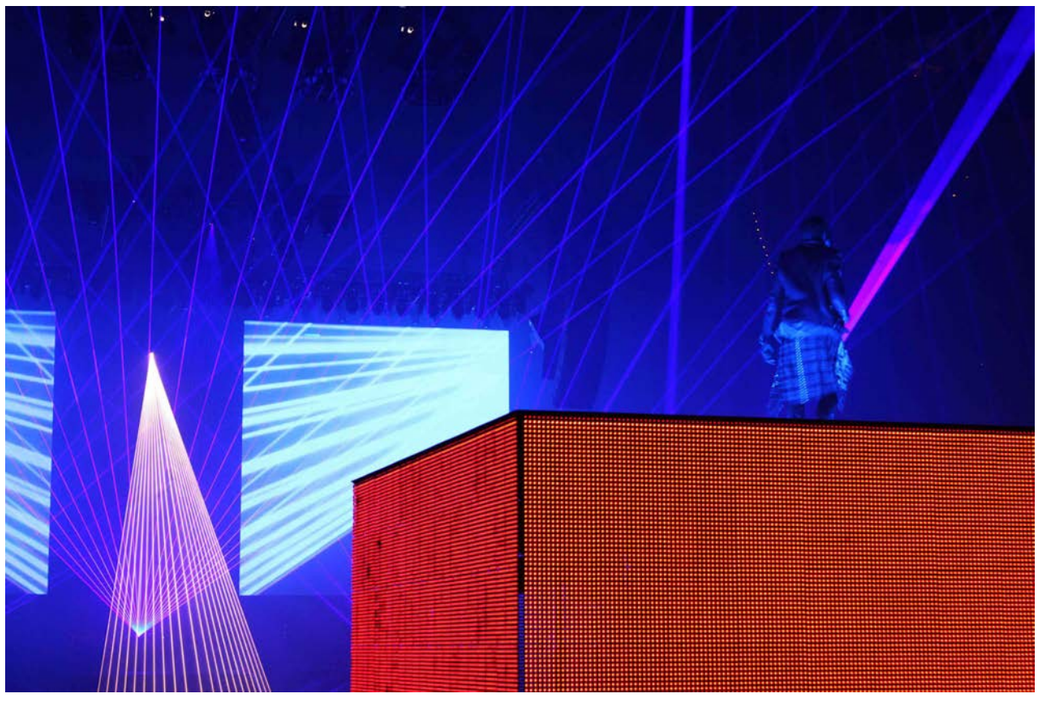
While not necessarily a requirement, it is important to recognise the element of performative architecture to achieve and leverage the quality of the 'iconic.' The term 'iconic,' as defined by the Cambridge dictionary, refers to something that is "very famous or popular, especially being considered to represent particular opinions or a particular time".[44] Being 'iconic' goes beyond mere recognition, it entails symbolising a strong identity or narrative. Given the conclusion of the current paradigm shift, performative architecture must also serve as a narrative platform, directing and captivating people's attention. Therefore, creating something iconic can be interpreted as a successful representation of this objective. Es Devlin, a renowned set designer, excels in crafting and working with the 'iconic'. With a keen focus on understanding audience engagement, Devlin utilises this insight to analyse public perception. "While the audience watches the stage, Devlin observes the audience."[45] Employing both kinetic and sensory approaches in her work, she utilises cutting-edge technology to create captivating "visual narratives" within the majority of her sets. [46]

While typical methods for enhancing audience engagement often involve breaking down the barrier between the performers and the audience to create a sense of involvement, in the case of Es Devlin's work during Jay Z and Kanye's Watch the Throne tour (Figure 12), she takes a different approach by prioritising the narrative. Instead of bringing the audience closer to the artists, she highlights their separation while still engaging them through the concept of 'the iconic.' Devlin achieved this by constructing two large LED boxes in the audience area, symbolised as the 'Thrones'. Both artists perform atop the boxes, placing them 15 feet above the audience. This separation from the performers conveys a sense of grandeur, power, and awe as the audience is physically forced to look up to them. The LED boxes displayed images of predatory animals below the performers, reinforcing the idea of being at the 'top of the food chain.' However, this visual spectacle also evokes a realisation among the audience. While they may envy the artists' elevated position, the imagery of being high up with no apparent protection reflects the metaphorical anxiety of power's instability. The separation, initially a grand spectacle, transforms into a feeling of isolation as the audience empathises with the potential vulnerability of the performers. The displayed predators on the screen shift from being symbolic allies to perceived threats. In a poetic sense, mirroring Jay Z's lyrical prowess, Devlin's stage design becomes a double entendre. It skilfully conveys the emotional duality of power and vulnerability solely through stage design, creating a memorable and iconic experience. Jason Crombie who attended the performance stated it as "life-changing", describing "a feeling that transcends the visual and the auditory; it's something you feel in your heart and your gut."[47] Although a temporary experience, Devlin's use of technology and kinetic elements, complemented by the powerful sensory impact of music, played a crucial role in creating an engaging and impactful overall experience. Mostly noticeably driven by the notion of 'to convey', Devlin still archives to play with all the aspects of performative architecture.

In conclusion, it's important to note that while these examples demonstrate the aspects of performative architecture, they do so without a direct awareness of it. My research seeks to emphasise the potential for transforming these concepts to tackle social issues, creating a connection between the academic and historical foundations in architecture and the current works of contemporary artists. I aspire for my research to enhance both fields, fostering a meaningful connection between their practices.

Figure 12



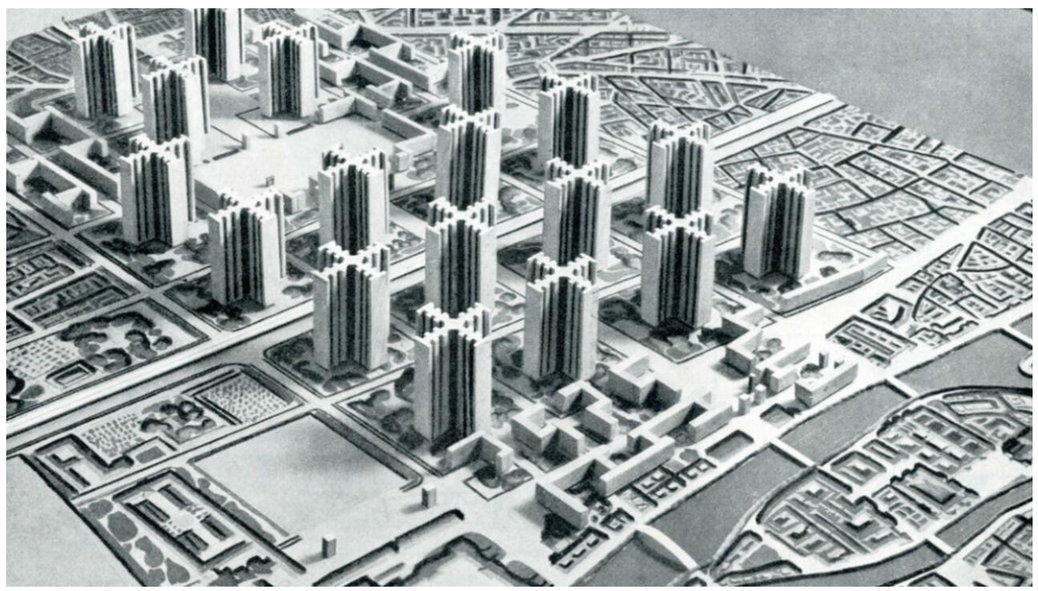


44 "Iconic," January 24, 2024, https://dictionary.cambridge.org/dictionary/english/iconic.
45 "Information," Es Devlin, accessed January 25, 2024, https://esdevlin.com/information.
46 Bharani Sri Gujuluva, "Breaking Stereotypes - Es Devlin on Dynamics of Set Design - Rethinking The Future," RTF | Rethinking The Future, March 18, 2020, https://www.re-thinkingthefuture.com/know-your-architects/a668-breaking-stereotypes-es-devlin-on-dynamics-of-set-design/.
47 "Yeezus Owes It All to Es Devlin | Semi Permanent," accessed January 25, 2024, https://semipermanent.com/stories/es-devlin.

Implementing a Methodology

This research delves into the concept of performative architecture by not merely addressing a specific problem but rather intending to advance the development of the next iteration of interactive architecture. Attempting to propose an innovative design methodology prompts the question of how to introduce a new approach to architectural design. Observing historical precedents, such as the introduction of the modernist movement, provides insights into the techniques employed to disseminate and popularise radical architectural concepts on a global scale. A notable example is Le Corbusier's Plan Voisin in Paris (Figure 13), which played a pivotal role in advertising modernist principles. The drastic transformation of a Parisian neighbourhood gained widespread attention and sparked controversy. While there may be a tendency to avoid design approaches that evoke controversy, it can be argued that almost any building design has an inherent controversial nature. Embracing controversy can be essential for initiating discussions and fostering the evolution of new ideas. Recognising that controversy holds a communicative power, one must therefore understand a building's ability to convey concepts. Regardless of personal opinions on modernist principles, the success of Le Corbusier's Plan Voisin is evident by the replication of its towers in many places globally, highlighting the effectiveness of using controversy as a catalyst for architectural innovation.[48] Le Corbusier's approach worked as a translator of ideas by addressing an existing antagonist, the urban design of Paris, and proposing his unique solution. Leveraging a familiar and well-understood context, allowing people to compare and contrast the existing with the proposed project. This comparative analysis facilitated a better understanding and visualisation of the concepts, contributing to the acceptance and adoption of innovative architectural ideas.

Figure 13



48 "Le Corbusier (Charles-Édouard Jeanneret). Plan Voisin for Paris. 1925. | MoMA," The Museum of Modern Art, accessed January 12, 2024, https://www.moma.org/audio/playlist/269/3495.

It's crucial to acknowledge that controversy as an effective tool of communication, lacks effectiveness without consideration and reflection on the criticisms it generates. Perhaps the most noteworthy aspect of Le Corbusier's Plan Voisin is the countermovement it inspired, in the form of Team 10. Originating in July 1953 at the 9th Congress of C.I.A.M., Team 10 comprised architects and other participants who united against CIAM's rigid urbanism approach.[49] Prominent figures from Team 10, such as Alison and Peter Smithson, advocated for their conceptual designs without outright contradicting the context, encouraging the more likely adoption of ideas. While their project, Robinhood Garden in London (Figure 14), was almost as controversial, it demonstrates how innovative ideas can still harmonise with their real-world contexts. Responding to the same post-World War Two volatility as Price, particularly Britain's demand for social housing in the late 1960s, the Smithsons seized the opportunity to address this need through 'New Brutalism.' Described by Reyner Banham as "an ethic, not an aesthetic,"[50] New Brutalism is evident in the human-scale approach to urbanism. The design strategy for Robin Hood Garden prioritised the sensory aspect of noise, dividing flats into two large housing blocks enclosing a central "stress-free zone" green space. To mitigate noise, measures such as a central mound to prevent noisy activities, a surrounding concrete acoustic wall, a "green line" of trees, and projecting concrete mullions on the façade were implemented. Living rooms and common zones, considered noisy, were placed facing the street, while bedrooms faced the stress-free zone. Beyond crafting a pleasant acoustic environment, Kitchens were strategically planned for the supervision of children playing on decks and in the 'stress-free zone' and the "street-in-the-sky" concept, featuring an exterior widened deck on every third level, aimed to foster a sense of community. [51]

Despite ultimately failing due to poor building management, Robin Hood Gardens is recognized as a highly influential project for its socially sensitive approach to housing. This exemplifies that implementing architectural ideas should not only provoke controversy by challenging an existing antagonist but should also demonstrate thoughtfulness to the needs of the context.

Figure 14

49 "Team 10," Architectuul, accessed January 29, 2024, https://architectuul.com/architect/team-10.
50 Reyner Banham, *The New Brutalism*, 1966, http://archive.org/details/TheNewBrutalismReynerBanham. p.10
51 *The Smithsons on Housing*, 2013, https://www.youtube.com/watch?v=UH5thwHTYNk.

Site Location

Taking from this approach I chose to explore the concept of performative architecture by incorporating it into a familiar context, using an existing antagonist. Following on from Price and Alison and Peter Smithson, my intuition instantly drew me to London, my hometown. With the advantage that I have spent the majority of my life living and exploring the city, I already have a good understanding of the complex backdrop that makes it, especially considering the recent challenges of post-COVID and Brexit, as well as the escalating cost of living crisis. Of course, there are many faults and values that can be highlighted in the city however, London's allure for most lies in its multicultural and diverse nature. The city actively promotes the blending of cultures and knowledge, in a way, reflecting a history of cross-disciplinary collaborations. This characteristic has given rise to numerous performative projects and concepts, I would even argue that it is precisely this aspect of London that allowed the conception of Cedric Prices Fun Palace to be imagined. Originally planned to be situated at Mill Meads, along the Lea River in Stratford, London[52] (Figure 15), I believed that delving into the rationale behind this choice might uncover the underlying antagonist that my project could address.

Figure 15

The Fun Palace aimed to be accessible not only to those in the immediate neighbourhood but also on a regional and national level. According to Price and Littlewood, the site should make use of existing "communication networks," suggesting the untapped potential for improving life through increased mobility. [53] They emphasize the importance of avoiding a site with a "radial-fed focus," as it functions as a communication link terminal, reduces random usage, and promotes specific, occasional uses. [54] The Fun Palace serves as an urban connector and requires that communication routes to the site align with a metropolitan or regional network to accommodate spontaneous usage. Price and Littlewood even envision using derelict properties and waste grounds around the site to either illuminate or obscure the visual boundaries, allowing on-site activity to be measured and visually displayed for long-distance viewing during approach. [55] Interestingly, this highlights

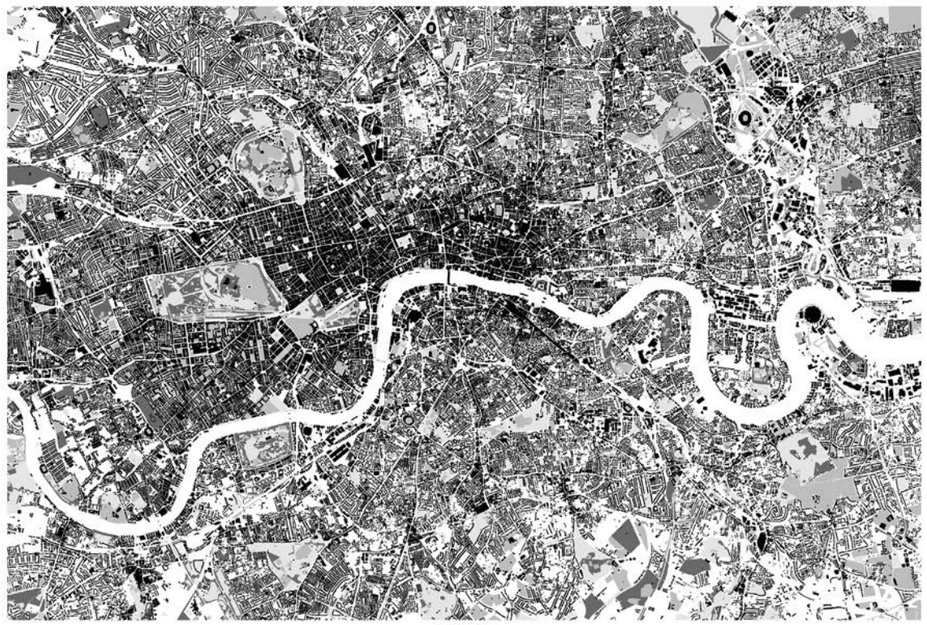
52 Stanley Mathews, "The Fun Palace as Virtual Architecture: Cedric Price and the Practices of Indeterminacy," *Journal of Architectural Education (1984-)* 59, no. 3 (2006): 39–48.
53 Cedric Price and Joan Littlewood, "The Fun Palace," *The Drama Review: TDR* 12, no. 3 (1968): 127–34, https://doi.org/10.2307/1144360. P. 8
54 Price and Littlewood. P. 8
55 Price and Littlewood. P. 8

a pattern of redeveloping leftover industrial sites to support the '60s ideology that questioned the idea of form following function. Transforming purely functional industrial architectures into new, originally unintended uses showcased the adaptability of any space. These spaces were particularly effective in hosting commercial activities that attracted people through entertainment-based programs.

In my search to identify a suitable existing antagonist for implementing the concept of performative architecture, I began by analysing the map of London (Figure 16). My first step involved pinpointing the locations of relevant sites, buildings, and venues to distinguish common trends among their placements (Figure 17). Stripping away the residential zone, I discovered that the majority of these sites are concentrated in commercial and industrial areas, particularly among brownfield sites (Figure 18). A visible pattern emerged, showcasing a predominantly undevoted industrial strip in the east of London (Figure 19). Notably within this strip, the proposed location of the Fun Palace and Robin Hood Gardens emerged somewhat unexpectedly. Development in this industrial strip continues to adhere to the 1960s ideologies, evident in the proposed location of the controversial MGS Sphere (Figure 20). The project to me somewhat reflects a misguided approach to immersive experiences. Considering the context of London and my research findings, I wasn't surprised by the rejection of the MGS Sphere project, despite its success in Las Vegas. Unlike Vegas, London projects must contribute to addressing social issues rather than existing purely for entertainment, as shown by Alison and Peter Smithson's approach. Understanding this, I identified the east London industrial strip as an ideal location for my project, aligning with the principles of the Fun Palace and challenging the still relevant antagonists.

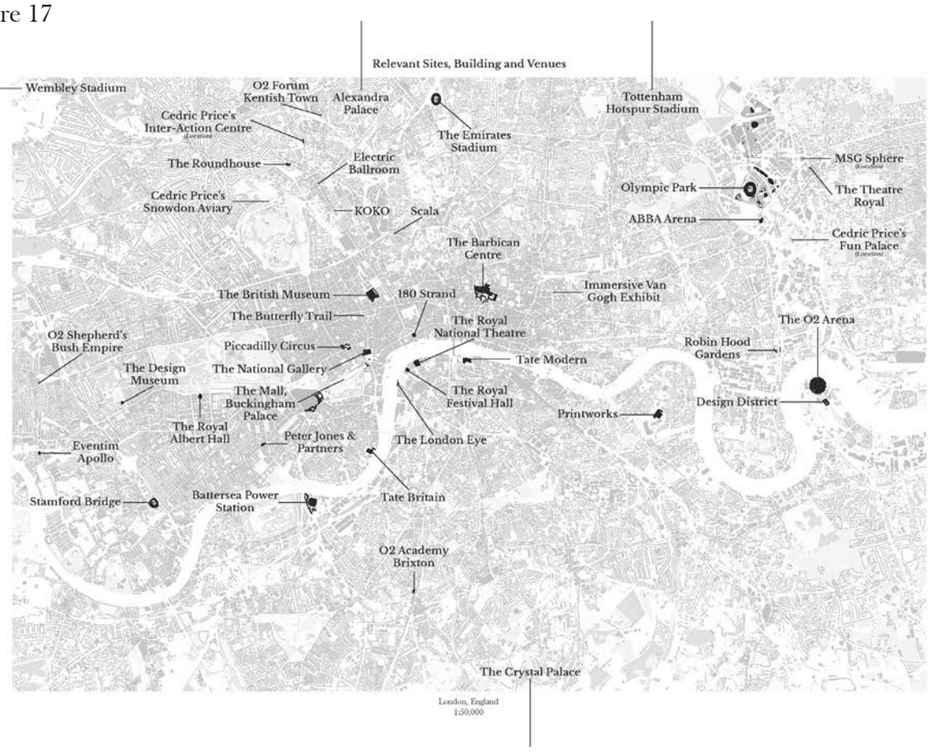
Figure 20

Figure 16



London, England
1:50,000

Figure 17



London, England
1:50,000

Figure 18

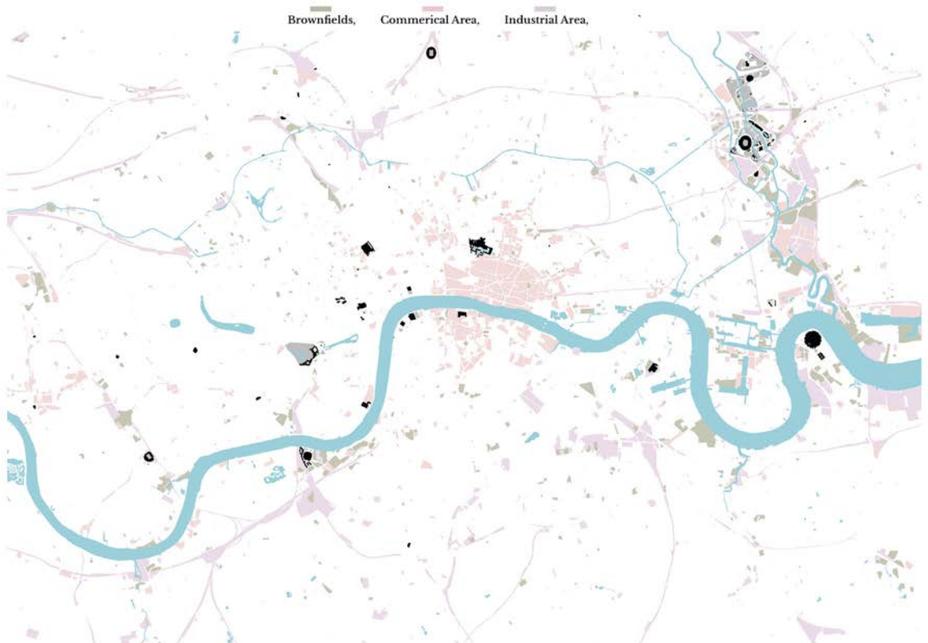


Figure 19

Although I could use the MGS Sphere and the antagonist to redevelop, I believe challenges would arise as the project will not get built. Therefore, searching for a compelling existing development to reimagine with the principles of performative architecture, I stumbled upon the Design District on the Greenwich Peninsula (Figure 21). Beyond its potential synergy with the O2 arena, a space that has hosted many highly influential performances, the Design District possesses the capacity to function as an urban connector due to its connectivity through trains, waterways, and its proximity to London City Airport. Additionally, its program targets users who are more inclined to engage with and adopt new technologies compared to typical residential programs, as evidenced by the shortcomings of smart home systems. This makes the Design District an ideal setting for the performative architectural model.

By selecting this location, my project aims to showcase a prototype of alternative design solutions, serving as a visual and conceptual contrast to inspire future projects. Over time, the implemented methodology can be tested across a variety of programs, providing a clear comparative contrast for a better understanding and visualization of the innovative architectural concepts within performative architecture.

Figure 21

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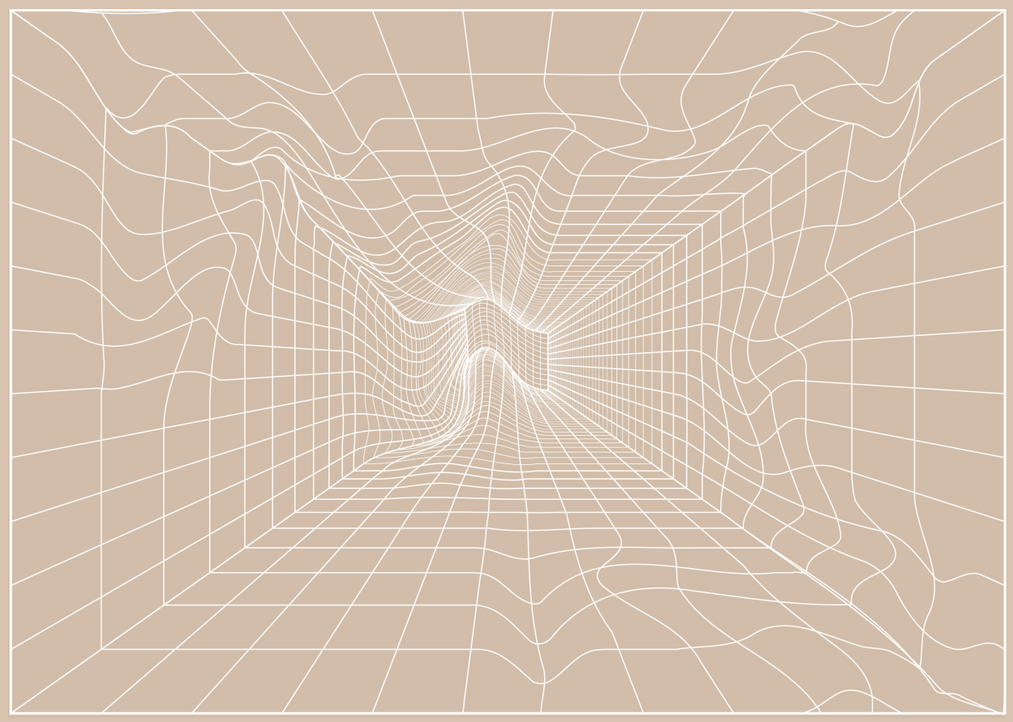

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	**Maximilian Mika**
Student number	5844061

Studio		
Name / Theme	Explore Lab	
Main mentor	Georg Vrachliotis	Architecture
Second mentor	Georgios Karvelas	Building Technologies
Argumentation of choice of the studio	I chose to embark on the Explore Lab studio as I have always been fascinated by my chosen topic and was attracted to the idea of spending a year diving into the subject. I came to study my masters with the ambition to develop a better understanding of my own architectural theories, philosophies and style and I believe Explore Lab gave me the best opportunity to do so. Although I considered implementing my ideas in alternative studios, I felt Explore Lab allowed me the freedom to research my fascinations wholeheartedly. I also enjoyed the benefits of being able to craft my tutoring teams to best suit my project and have a one-on-one tutoring relationship. From this, I appreciate the challenge of organising essentially my own studio and learning to manage my time and work process. After graduation, I hope to implement my fascination by potentially starting my own practice and I feel that the skills and knowledge I gained from doing Explore Lab will assist towards my ambition.	

Graduation project	
Title of the graduation project	Performative Architecture
Goal	
Location:	Greenwich Peninsula, London, England
The posed problem,	In the world of architecture, it is common for the tendency to perceive itself as existing in isolation from other art forms. However, with the integration of emerging digital technologies, this identity of distinction continues to blur further as we see the convergence of creative disciplines with architecture in various settings such as art installations, immersive galleries and stage performances.

	In recent years, architectural works have gained prominence in the world of performance, engaging in collaborations to realise forward-thinking design solutions, that redefine our concept of design and bring unique visions to life. For example, as we find ourselves existing further in the digital landscape, we witness a rising trend in immersive galleries. These spaces, in alignment with the notion of our shrinking attention spans and the acceptance of intangible art, challenge how we engage with art and have brought life back to what was, a slowly dying space through diverse means of accessible art. However, I believe that there is a sense of incompleteness in these experiences. The spaces often need to be retrofitted to accommodate this form of display rather than being purposefully designed for it. They also rely on technology such as screens and projections to initiate interactions, however, neglect the potential of the architecture to achieve this. The consequence is often a black box space that lacks any contextual understanding and feels like a short-lasting form of entertainment. I argue that this may be the result of the lack of a strong, cohesive theory or methodology underpinning these experiences. There is a lack of clear guidelines that connect interactive design principles with these spaces, forming a bridge between performative concepts and architectural elements. Additionally, it's worth noting that many performative architectural works are undertaken by non-architects. This could contribute to the potentially unfortunate truth that many of these innovative spaces fall into the category of gimmicks. Adding to this the motivation for the creation of these experiences often comes from capitalistic incentives as they are built for profit. I see this as not too dissimilar to the issue that emerges with for-profit housing projects. In both cases, the project's true motivation undermines its potential needed social cause.
research questions and	"How can performance-inspired principles be integrated into architectural design to enhance spatial experiences?".
design assignment in which these result.	Based on the model of introducing a new approach to architectural design by addressing a familiar existing antagonist. Reimaging it to provide a comparative contrast to facilitate a better understanding and visualisation of the concepts, contributing to the acceptance and adoption of innovative architectural ideas. My goal is to reimagine the Design District in Greenwich Peninsula, London, England, by incorporating the principles of performative architecture. Inspired by the rationale behind the location of Cedric Price's Fun Palace and considering the potential interplay with the O2 arena, my design seeks to provide a clear comparative contrast for a better understanding and visualisation of the innovative architectural concepts of performative architecture. Unlike typical residential programs, the Design District targets users who actively embrace and adapt to new technologies. This focus increases the likelihood of the concepts taking hold. The project serves as a prototype for

	the alternative design solution, hoping to inspire and evolve in future projects.

Process

Method description

This study delves into the history of interactive architecture and the theories formulated by influential figures such as Cedric Price, John Frazer, Gordon Pask, and others. With a critical perspective, the research aims to build upon the contributions of these key figures, influenced by a contemplation of a paradigm shift that I believe to be occurring in recent years, leading to a renewed interest in interactive architecture. By examining contemporary leaders in this resurgence, such as iart, James Turrell, Es Devlin... etc and exploring their innovative approaches, particularly their use of performative elements and sensory experiences. The concept of performative architecture is introduced as the next stage in the evolution of interactive architecture.

To achieve this, my research entailed a deep dive into literature about the concepts and history of interactive architecture. This included Cedric Price's integration of cybernetics, Pask's 'Conversation theory' and the development of 'Intelligent Environments'. Establishing my understanding of the kinetic approach. A reaction to my findings, I found the need to better understand the sensory approach in architecture, revealed through Juhani Pallasmaa's 'The Eyes of the Skin'. With a now-established architectural theoretical background of both approaches, I curated and revisited my extensive list of Case studies composed of artists, exhibition designers, and set designers who in my view, capture the essence of performative architecture. These examples employ the kinetic, sensory, or a combination of both approaches to craft experiences that redefine our interaction with space.

Drawing insights from contemporary case studies I have identified what I consider the five goals or aspects of performative architecture. These aspects are purposefully expressed as verbs, as I propose them as points of action and approaches to addressing potential challenges. The five goals are: To Adapt, To Convey, To Engage, To Enrich, and To Provoke/Inspire. By examining these case studies in terms of how they achieve the five goals/aspects, I uncovered the societal values embedded in performative experiences.

Taking my research into my design, I expect to experiment with both the sensory and kinetic approaches, individually and in unison, creating an understanding of how each architectural element may be manipulated and adapted for future development. To facilitate this, I also feel the importance of hands-on creation, experimentation, and testing, to further my first-hand research. As this experimentation has the adverse effect of being vastly broad and endless, I will use the programs established in the existing Desing District to focus my efforts on tackling its specific requirements.

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Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

Architecture is one of the most influential and impactful forms of creative expression. A remarkable architectural work propels innovative ideas, serves as a symbol for social movements, ignites inspiration, adapts seamlessly to its surroundings, and can resonate with individuals on a personal level. From this, I've always been intrigued by how architecture possesses the ability to capture people's attention, evoke emotions, and stimulate their imagination. These attributes can also be seen in performative experiences and therefore I see a relation between the two need to be established.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

Stanley Mathews' text Cedric Price: From the 'Brain Drain' to the 'Knowledge Economy' elaborates on the societal challenge that Cedric Price was addressing with the Fun Palace,

drawing a parallel with Sir Francis Bacon's 'New Atlantis' he suggests that "Both men grappled with a knowledge crisis during a paradigm shift." Going on to clarify that during Bacon's era, this shift marked England's transition from a medieval worldview, whereas, for Price, it represented an awareness of an epistemological shift from the structures and traditions of Britain in the First Machine Age to the post-industrial era. As I reflected on this during my research, I couldn't help but notice a resemblance to what might be the next ongoing paradigm shift of a knowledge crisis, potentially explaining the recent rise in the popularity of architectural works in the world of performance. This contemporary paradigm shift perhaps could be attributed to the dawn of a new digital era, marked by the emergence of technologies like AI. Mathews suggests that Price's shift was prompted by "volatile social and economic conditions" post-World War II. Similarly, a recent global transformative event that arguably parallels the Second World War was the COVID-19 pandemic, which instigated a re-evaluation of concepts within Price's work, such as "adaptable, impermanent, improvisational, and interactive systems." These concepts were possibly further tested during the pandemic, as our interactions with each other and, by extension, with architecture had to be rapidly redefined. Society, post the pandemic has established a new relationship with both private and public spaces, as well as physical and digital realms. The adoption of a ‘working from home’ culture and ‘online teaching’ has put questions on the necessity of certain physical spaces. While Price identified the need for rapidly adaptable buildings due to the issues highlighted during the post-war reconstruction, I argue that the present paradigm shift demands not only the adaptation of space but also a renewed focus on drawing people back to spaces. Like a stage in a theatre, buildings should not just be easy to reconfigure but must also serve as a narrative platform, directing and captivating people's attention. I believe the study of the concept of performative architecture can achieve this.

Final Reflection

Master of Science Architecture, Urbanism & Building Sciences

Final Reflection: All tracks

Submit your Final Reflection to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P4 at the latest.

The Final Reflection consists of at least the following data/segments:

Personal information	
Name	**Maximilian Mika**
Student number	5844061

Studio		
Name / Theme	Explore Lab	
Main mentor	Georg Vrachliotis	Architecture
Second mentor	Georgios Karvelas	Building Technologies
Argumentation of choice of the studio	I chose to embark on the Explore Lab studio as I have always been fascinated by my chosen topic and was attracted to the idea of spending a year diving into the subject. I came to study my masters with the ambition to develop a better understanding of my own architectural theories, philosophies and style and I believe Explore Lab gave me the best opportunity to do so. Although I considered implementing my ideas in alternative studios, I felt Explore Lab allowed me the freedom to research my fascinations wholeheartedly. I also enjoyed the benefits of being able to craft my tutoring teams to best suit my project and have a one-on-one tutoring relationship. From this, I appreciate the challenge of organising essentially my own studio and learning to manage my time and work process. After graduation, I hope to implement my fascination by potentially starting my own practice and I feel that the skills and knowledge I gained from doing Explore Lab will assist towards my ambition.	

Graduation project	
Title of the graduation project	Performative Architecture
Goal	
Location:	Greenwich Peninsula, London, England
The posed problem,	In the world of architecture, it is common for the tendency to perceive itself as existing in isolation from other art forms. However, with the integration of emerging digital technologies, this identity of distinction continues to blur further as we see the convergence of creative disciplines with architecture in various settings such as art installations, immersive galleries and stage performances.

	In recent years, architectural works have gained prominence in the world of performance, engaging in collaborations to realise forward-thinking design solutions, that redefine our concept of design and bring unique visions to life. For example, as we find ourselves existing further in the digital landscape, we witness a rising trend in immersive galleries. These spaces, in alignment with the notion of our shrinking attention spans and the acceptance of intangible art, challenge how we engage with art and have brought life back to what was, a slowly dying space through diverse means of accessible art. However, I believe that there is a sense of incompleteness in these experiences. The spaces often need to be retrofitted to accommodate this form of display rather than being purposefully designed for it. They also rely on technology such as screens and projections to initiate interactions, however, neglect the potential of the architecture to achieve this. The consequence is often a black box space that lacks any contextual understanding and feels like a short-lasting form of entertainment. I argue that this may be the result of the lack of a strong, cohesive theory or methodology underpinning these experiences. There is a lack of clear guidelines that connect interactive design principles with these spaces, forming a bridge between performative concepts and architectural elements. Additionally, it's worth noting that many performative architectural works are undertaken by non-architects. This could contribute to the potentially unfortunate truth that many of these innovative spaces fall into the category of gimmicks. Adding to this the motivation for the creation of these experiences often comes from capitalistic incentives as they are built for profit. I see this as not too dissimilar to the issue that emerges with for-profit housing projects. In both cases, the project's true motivation undermines its potential needed social cause.
research questions and	"How can performance-inspired principles be integrated into architectural design to enhance spatial experiences?".
design assignment in which these result.	Sparked through the research process of interviewing non-architectural figures from multi-dispensatory creative industries in London. I discovered that a common frustration creatives feel is a lack of respect. Many expressed feeling treated as if they were charity cases, given only the leftover spaces like old warehouses. Making matters worse, once these artists and creatives invest time and effort into transforming these spaces to suit their needs, he area's appeal and value tend to rise, attracting investors and developers who then reclaim these spaces and convert them into luxury apartments. Unfortunately, this often results in neglecting the existing creative community. Therefore, Inspired by the rationale behind the location of Cedric Price's Fun Palace I looked towards the Greenwich peninsula as my site location. Being the location of the O2 arena, a space that has hosted many large-scale highly influential performances and the recent Design District,

	London's first purpose-built creative district which targets users who are more inclined to engage with and adopt new technologies and alternative approaches. Greenwich Peninsular possesses the capacity to function as an urban connector due to its connectivity through trains, waterways, and its proximity to London City Airport, however, it is currently undergoing massive development with multiple proposals of luxury residential towers. There is great potential for the Peninsular to become an established creative community in London however has symptoms of disconnected developer capitalist visions the creative industry identifies as plaguing London's diverse communities. Therefore, I believe it is the perfect location to base a performative architectural project that is designed from the perspective of spatial experience and personal engagements through innovation. The project, named 'The Frame', serves as a crucial connection between the O2 arena and the Design District, forming a trinity of creative spaces. It focuses on providing a versatile venue for both exhibitions and performances, tailored with the consideration of the contemporary digital creative landscape. By consciously integrating elements from its surrounding context into its design, the project aims to establish itself as a permanent hub for creativity in London. Its design incorporates elements of performance architecture to encourage diverse uses, aiming to inspire future artistic expressions and creative innovation.

Process

Method description

This study delves into the history of interactive architecture and the theories formulated by influential figures such as Cedric Price, John Frazer, Gordon Pask, and others. With a critical perspective, the research aims to build upon the contributions of these key figures, influenced by a contemplation of a paradigm shift that I believe to be occurring in recent years, leading to a renewed interest in interactive architecture. By examining contemporary leaders in this resurgence, such as iart, James Turrell, Es Devlin... etc and exploring their innovative approaches, particularly their use of performative elements and sensory experiences. The concept of performative architecture is introduced as the next stage in the evolution of interactive architecture.

To achieve this, my research entailed a deep dive into literature about the concepts and history of interactive architecture. This included Cedric Price's integration of cybernetics, Pask's 'Conversation theory' and the development of 'Intelligent Environments'. Establishing my understanding of the kinetic approach. A reaction to my findings, I found the need to better understand the sensory approach in architecture, revealed through Juhani Pallasmaa's 'The Eyes of the Skin'. With a now-established architectural theoretical background of both approaches, I curated and revisited my extensive list of Case studies composed of artists, exhibition designers, and set designers who in my view, capture the essence of performative architecture. These examples employ the kinetic, sensory, or a combination of both approaches to craft experiences that redefine our interaction with space.

Drawing insights from contemporary case studies I have identified what I consider the five goals or aspects of performative architecture. These aspects are purposefully expressed as verbs, as I propose them as points of action and approaches to addressing potential challenges. The five goals are: To Adapt, To Convey, To Engage, To Enrich, and To Provoke/Inspire. By examining these case studies in terms of how they achieve the five goals/aspects, I uncovered the societal values embedded in performative experiences.

From research into my design, the project experiments with both the sensory and kinetic approaches, creating an understanding of how each architectural element may be manipulated and adapted. I used interviews, hands-on creation, experimentation, and testing, to further my first-hand research.

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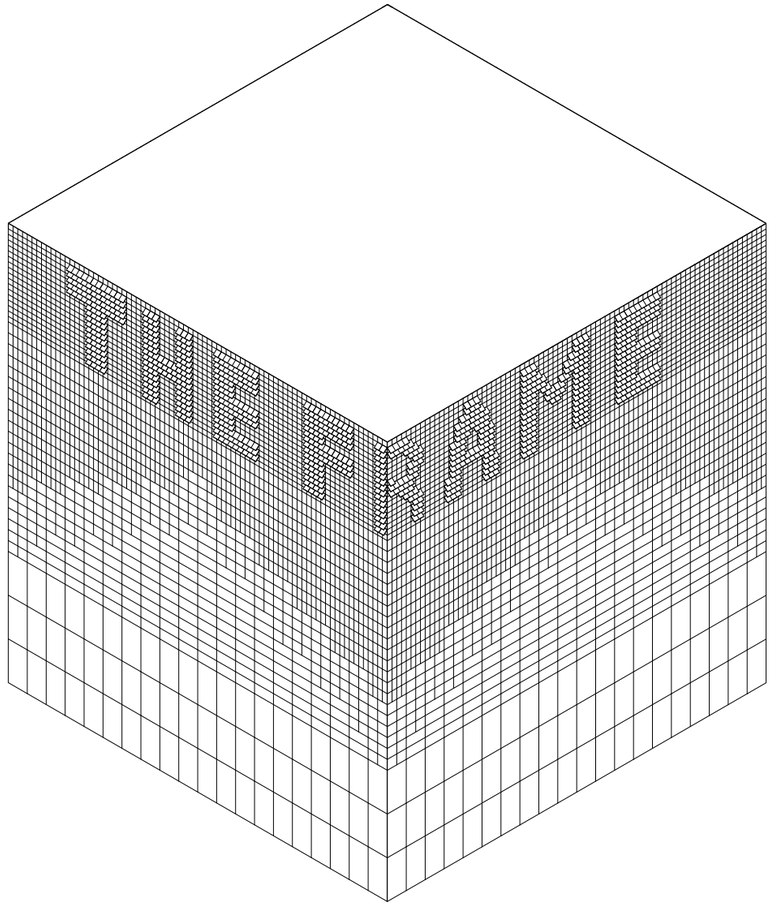
Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

Architecture is one of the most influential and impactful forms of creative expression. A remarkable architectural work propels innovative ideas, serves as a symbol for social movements, ignites inspiration, adapts seamlessly to its surroundings, and can resonate with individuals on a personal level. From this, I've always been intrigued by how architecture possesses the ability to capture people's attention, evoke emotions, and stimulate their imagination. These attributes can also be seen in performative experiences and therefore I see a relation between the two need to be established.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

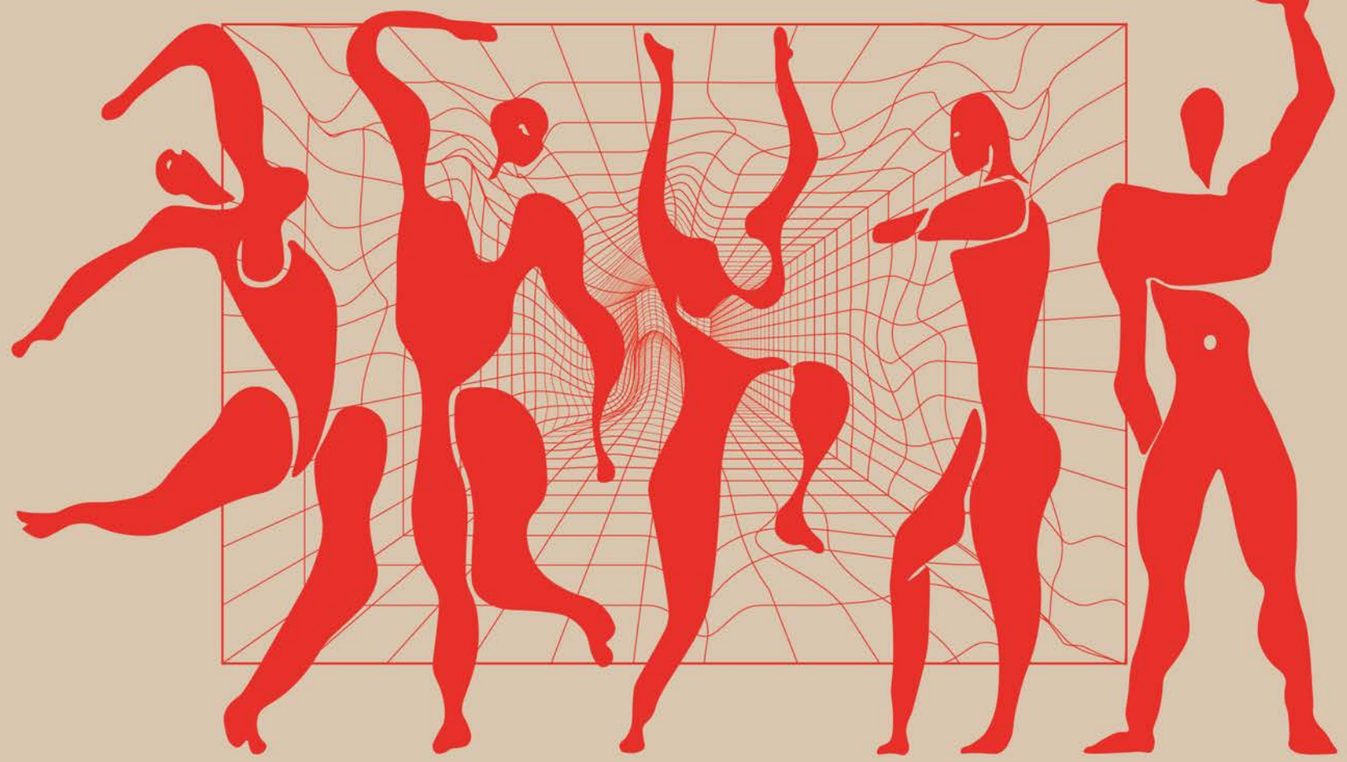
Stanley Mathews' text Cedric Price: From the 'Brain Drain' to the 'Knowledge Economy' elaborates on the societal challenge that Cedric Price was addressing with the Fun Palace, drawing a parallel with Sir Francis Bacon's 'New Atlantis' he suggests that "Both men grappled with a knowledge crisis during a paradigm shift." Going on to clarify that during Bacon's era, this shift marked England's transition from a medieval worldview, whereas, for Price, it represented an awareness of an epistemological shift from the structures and traditions of Britain in the First Machine Age to the post-industrial era. As I reflected on this during my research, I couldn't help but notice a resemblance to what might be the next ongoing paradigm shift of a knowledge crisis, potentially explaining the recent rise in the popularity of architectural works in the world of performance. This contemporary paradigm shift perhaps could be attributed to the dawn of a new digital era, marked by the emergence of technologies like AI. Mathews suggests that Price's shift was prompted by "volatile social and economic conditions" post-World War II. Similarly, a recent global transformative event that arguably parallels the Second World War was the COVID-19 pandemic, which instigated a re-evaluation of concepts within Price's work, such as "adaptable, impermanent, improvisational, and interactive systems." These concepts were possibly further tested during the pandemic, as our interactions with each other and, by extension, with architecture had to be rapidly redefined. Society, post the pandemic has established a new relationship with both private and public spaces, as well as physical and digital realms. The adoption of a 'working from home' culture and 'online teaching' has put questions on the necessity of certain physical spaces. While Price identified the need for rapidly adaptable buildings due to the issues highlighted during the post-war reconstruction, I argue that the present paradigm shift demands not only the adaptation of space but also a renewed focus on drawing people back to spaces. Like a stage in a theatre, buildings should not just be easy to reconfigure but must also serve as a narrative platform, directing and captivating people's attention. I believe the study of the concept of performative architecture can achieve this.



P5

Maximilian Mika

Performative Architecture



Architecture in collaboration with the Arts

Art Installations

Immersive Galleries

Stage Performances

The Performative Architectural Catalogue

The Sensory Approach

Kinetic + Sensory Architectural Elements

	Adapt	Convey	Engage	Enrich	Provoke / Inspire
Taste (or evoke the sense of...)	Aromas, Scents and Fragrances · Material Selection · Vegetation ·	Aromas, Scents and Fragrances · Material Selection · Paint/Colour · Vegetation ·	Aromas, Scents and Fragrances · Material Selection · Water Feature · Vegetation ·	Aromas, Scents and Fragrances · Material Selection · Vegetation ·	Aromas, Scents and Fragrances · Material Selection · Paint/Colour · Water Feature · Vegetation ·
Smell	Aromas, Scents and Fragrances · Material Selection · Vegetation ·	Aromas, Scents and Fragrances · Material Selection · Vegetation ·	Aromas, Scents and Fragrances · Material Selection · Vegetation ·	Aromas, Scents and Fragrances · Material Selection · Vegetation ·	Aromas, Scents and Fragrances · Material Selection · Pyrotechnics · Vegetation ·
Touch	Material Selection · Mobile Floors, Walls, Ceilings · Moveable Walkways · Scaffolding · Spacial Dimensions · Temperature Systems ·	Material Selection · Spacial Dimensions · Temperature Systems · Vegetation ·	Material Selection · Mobile Floors, Walls, Ceilings · Moveable Walkways · Spacial Dimensions · Temperature Systems · Vegetation · Water Feature ·	Material Selection · Mobile Floors, Walls, Ceilings · Moveable Walkways · Spacial Dimensions · Temperature Systems · Vegetation ·	Material Selection · Spacial Dimensions · Temperature Systems ·
Sound	Computer Sensors · Material Selection · Pyrotechnics · Robotics · Sound System · Spacial Dimensions · Vegetation · Water Feature ·	Animatronics · Material Selection · Microphones · Robotics · Sound System · Spacial Dimensions · Vegetation · Water Feature ·	Animatronics · Computer Sensors · Material Selection · Microphones · Pyrotechnics · Robotics · Sound System · Spacial Dimensions · Vegetation · Water Feature ·	Animatronics · Computer Sensors · Material Selection · Microphones · Pyrotechnics · Robotics · Sound System · Spacial Dimensions · Vegetation · Water Feature ·	Animatronics · Computer Sensors · Material Selection · Microphones · Pyrotechnics · Robotics · Sound System · Spacial Dimensions · Vegetation · Water Feature ·
Sight	Computer Sensors · Cranes · Fog Machine · LED Displays · Lighting System · Material Selection · Mirrors · Mobile Floors, Walls, Ceilings · Moveable Walkways · Paint/Colour · Prefabricated Modules · Projector System · Pyrotechnics · Robotics · Scaffolding · Spacial Dimensions · Vegetation · Water Feature ·	Animatronics · Drones · LED Displays · Lighting System · Material Selection · Mirrors · Paint/Colour · Prefabricated Modules · Projector System · Pyrotechnics · Robotics · Scaffolding · Spacial Dimensions · Vegetation · Water Feature ·	Animatronics · Drones · Computer Sensors · Fog Machine · LED Displays · Lighting System · Material Selection · Mirrors · Mobile Floors, Walls, Ceilings · Moveable Walkways · Paint/Colour · Projector System · Pyrotechnics · Robotics · Scaffolding · Spacial Dimensions · Vegetation · Water Feature ·	Animatronics · Drones · Computer Sensors · Fog Machine · LED Displays · Lighting System · Material Selection · Mirrors · Mobile Floors, Walls, Ceilings · Moveable Walkways · Paint/Colour · Projector System · Pyrotechnics · Robotics · Scaffolding · Spacial Dimensions · Vegetation · Water Feature ·	Animatronics · Drones · LED Displays · Lighting System · Material Selection · Mirrors · Paint/Colour · Projector System · Pyrotechnics · Robotics · Scaffolding · Spacial Dimensions · Vegetation · Water Feature ·

Kinetic + Sensory Architectural Elements:

Aromas, Scents and Fragrances.
Animatronics.
Computer Sensors.
Cranes.
Drones.
Fog Machine.
LED Displays.
Lighting System.
Material Selection.
Microphones.
Mirrors.
Mobile Floors, Walls, Ceilings.
Moveable Walkways.
Paint/Colour.
Prefabricated Modules.
Projector System.
Pyrotechnics.
Robotics.
Scaffolding.
Sound System.
Spacial Dimensions.
Temperature Systems.
Vegetation.
Water Feature.
...

The Aspects of Performative Architecture

Conclusions from Research

Performative Architecture looks at the world of performance to inspire how we can **interact with space**. bridging **artists and architects.**

Technology is a key element however it must serve as a **supporting role** to assist the **narrative** of the project.

An **evolution from Interactive Architecture**, Using the **Sensory and Kinetic Approach** to **Adapt, Engage, Enrich, Convey and Provoke and/or Inspire.**

Project Goals

- Adapt to the context, time and user's needs.
- Encourage Freedom of Expression.
- To Engage the Public.
- Create a sense of community and feeling of belonging.
- Influence the surrounding Neighborhood.

Why London?

The city actively promotes the **blending of cultures and knowledge**, reflecting a history of **cross-disciplinary collaborations**.
This characteristic has given rise to numerous performative projects and concepts.

London, England
1:50,000

Relevant Sites, Building and Venues

Wembley Stadium

O2 Forum Kentish Town

Alexandra Palace

Cedric Price's Inter-Action Centre (Location)

The Emirates Stadium

Tottenham Hotspur Stadium

The Roundhouse

Electric Ballroom

MSG Sphere (Location)

Olympic Park

The Theatre Royal

Cedric Price's Snowdon Aviary

KOKO

Scala

ABBA Arena

Cedric Price's Fun Palace (Location)

The Barbican Centre

Immersive Van Gogh Exhibit

The British Museum

180 Strand

The Butterfly Trail

The Royal National Theatre

The O2 Arena

O2 Shepherd's Bush Empire

Piccadilly Circus

Tate Modern

Robin Hood Gardens

The Design Museum

The National Gallery

The Mall, Buckingham Palace

The Royal Festival Hall

Design District

Printworks

The Royal Albert Hall

Peter Jones & Partners

The London Eye

Eventim Apollo

Stamford Bridge

Battersea Power Station

Tate Britain

O2 Academy Brixton

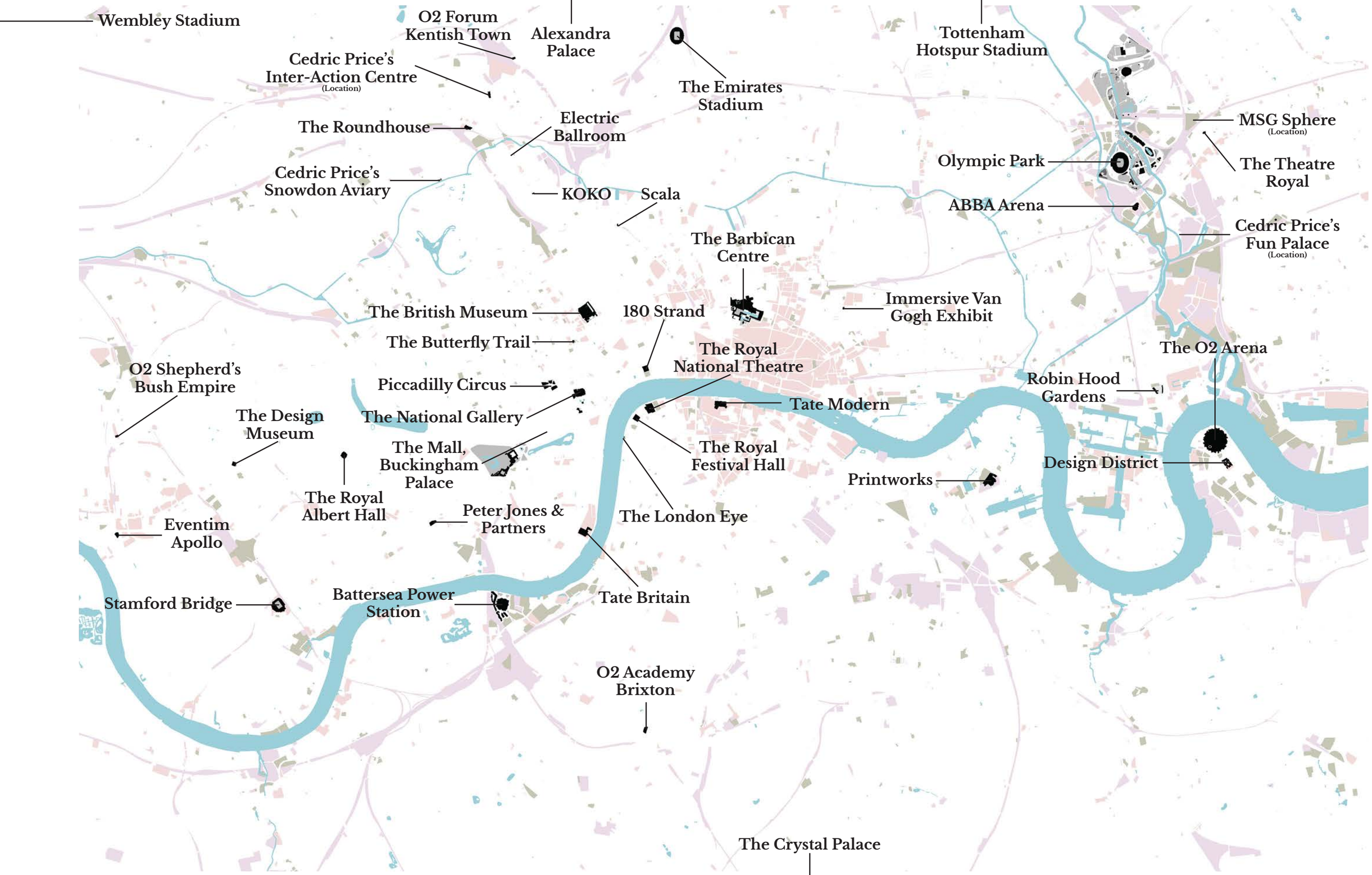
The Crystal Palace

London, England
1:50,000

Non-Residential Area

London, England
1:50,000

Brownfields, Commerical Area, Industrial Area,

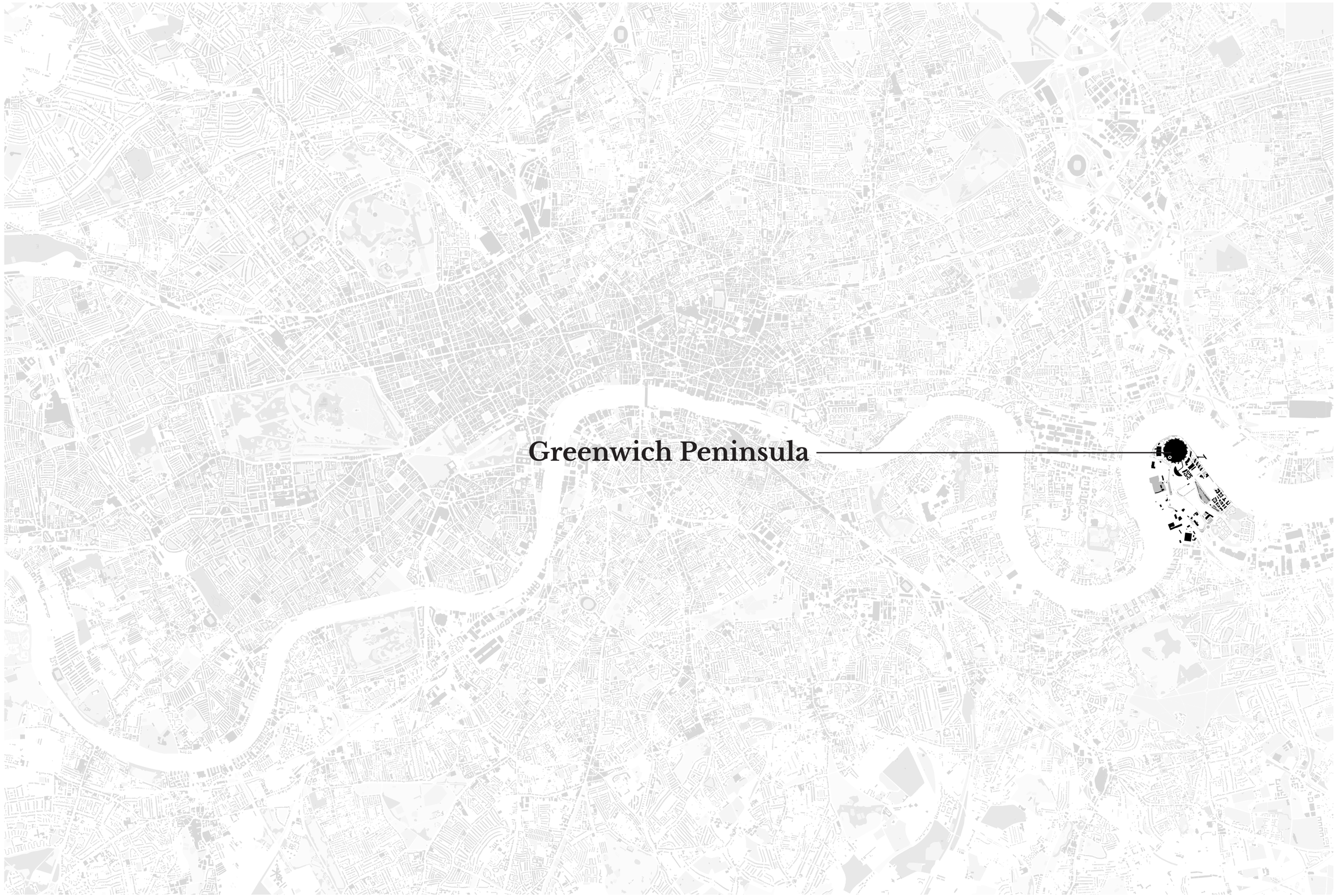


London, England
1:50,000

Almost all relevant Sites, Building and Venues can be connected by just a few Tube lines.

London, England
1:50,000

Site Location



London, England
1:50,000

Why Greenwhich?

With the O2 and Design districts, Greenwich Peninsular targets users of an existing and growing creative community.

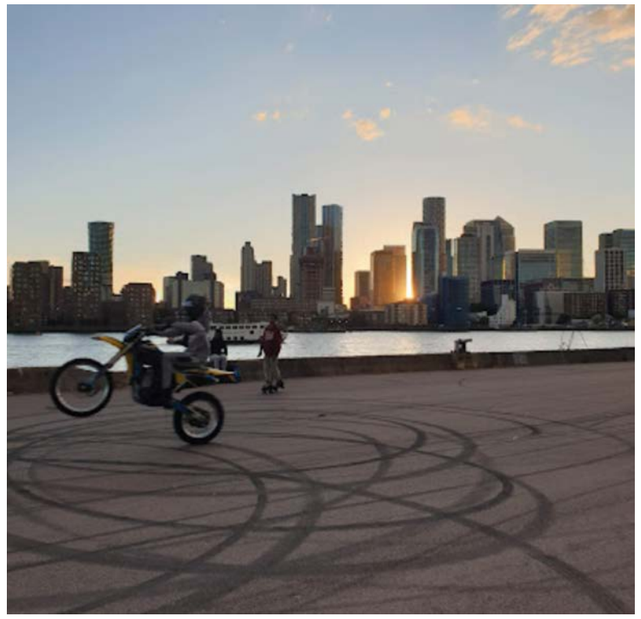
However, the current development of the peninsula proposes multiple luxury residential towers which may threaten this creative community.

Greenwich Peninsula, Currently.

Vision for Greenwich Peninsula, London.

Accidentally Activated

Retaining Existing Creative Community



Retaining Existing Creative Community

Qualities

- View to the city
- Connection to Water
- Open Free-use Space
- A Fairly well lit Bubble

Key Quotes from Interview

"There is no **respect** for the creative world in London. When spaces are created for artists it feels like a charity"

Dean Bryce
Founder of Don't Sleep Music

"Developers use creativity to bring community to an area, raise the interest of the location then remove them for profitable functions such as luxury apartments."

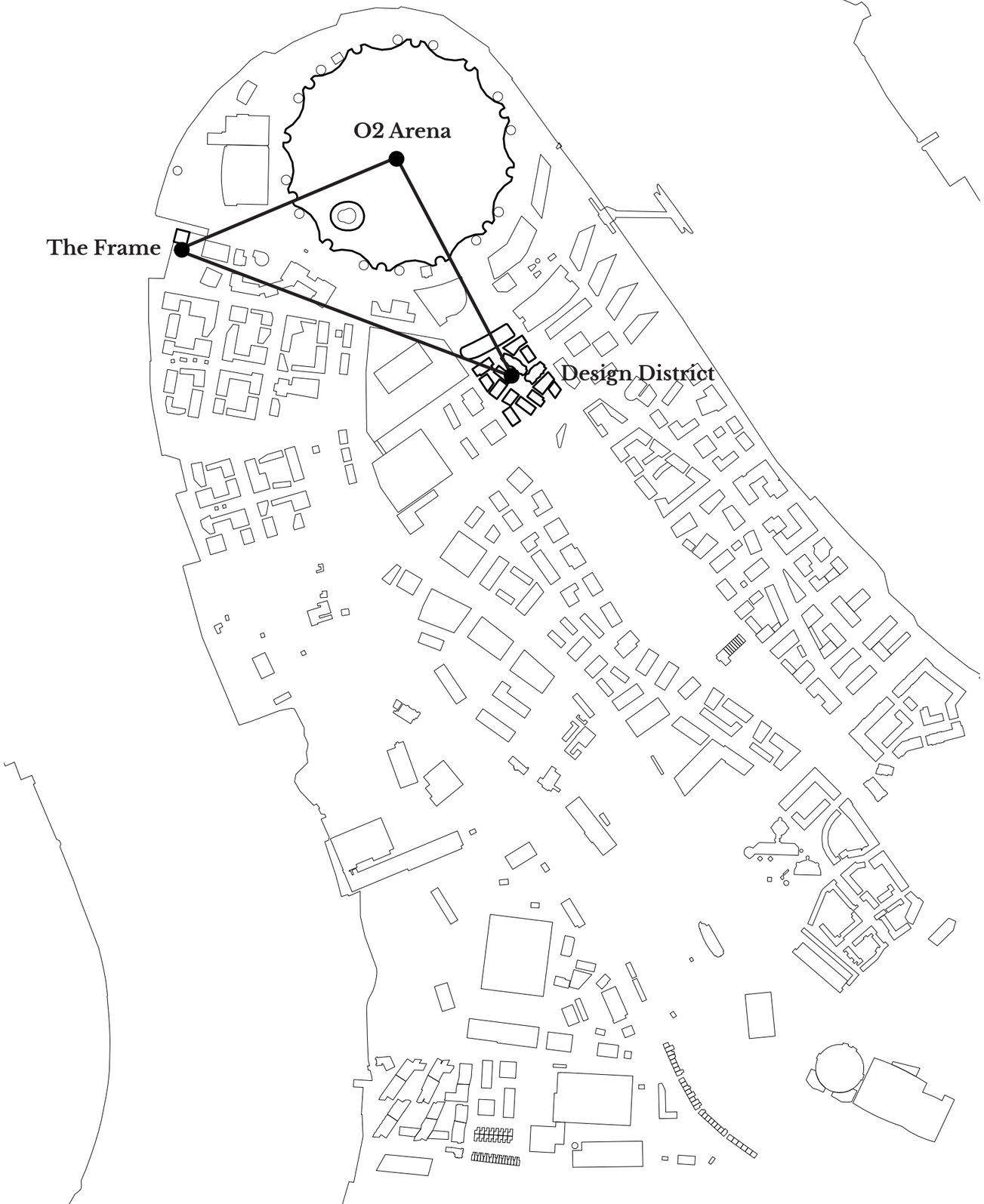
Olivier Geraghty
Founder and Creative Director of O.G Studios

"Perhaps it is **not like a gallery for art but a gallery for people**, to highlight and celebrate their individuality and you unify them this the commonality of being a part of the crazy beast that is London."

Julian Mika
Music Executive at Dont Sleep Music

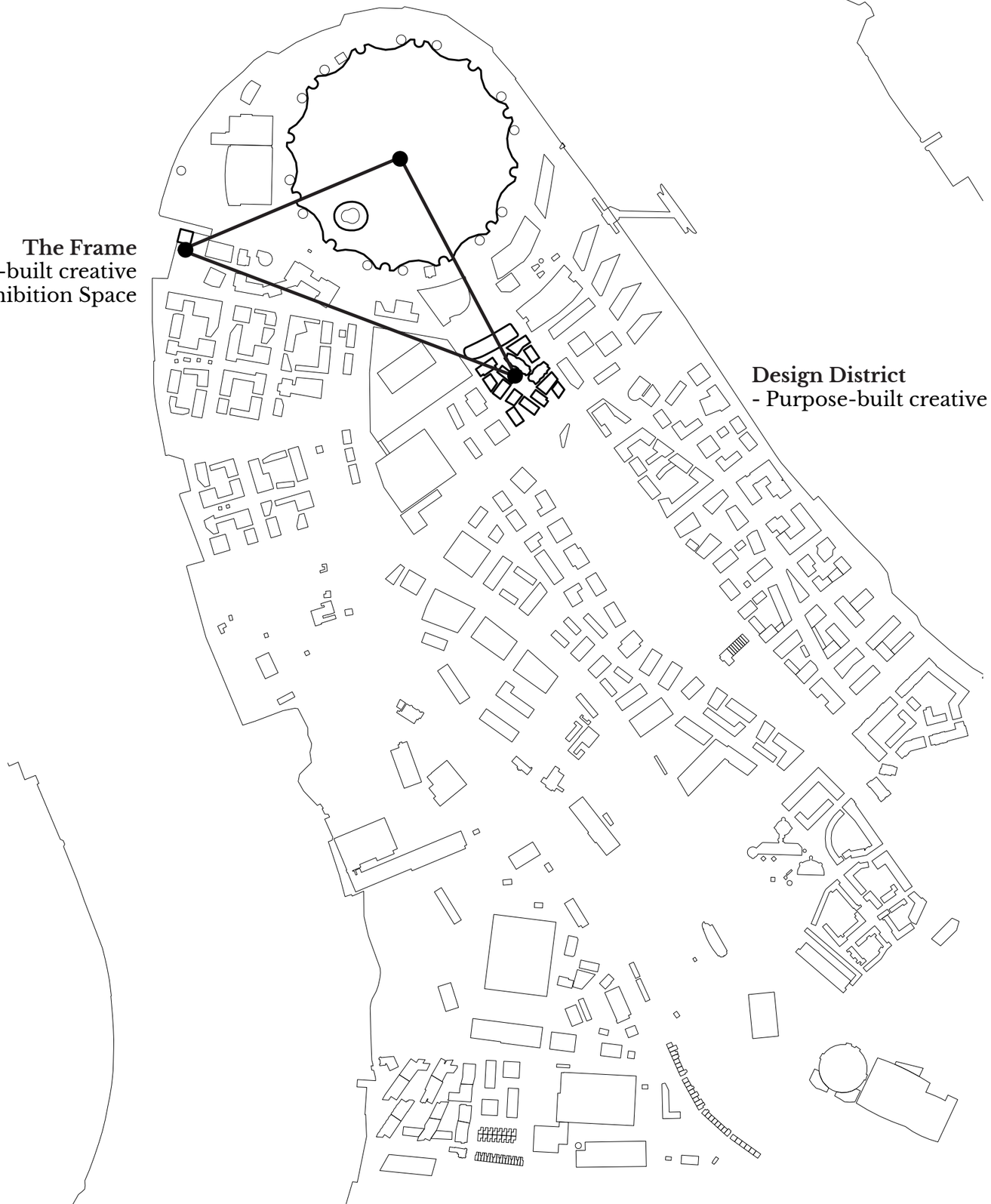
Current

Proposed


O2 Arena
The Frame
Design District

O2 Arena - large-scale highly influential performances

The Frame
- Purpose-built creative
Exhibition Space



Design District
- Purpose-built creative Workspace

The Main Attraction
Capacity of 20,000 people
Attracting 9 million people a year

The majority of which travel
via the tube.

An Increasingly Popular Means of Travel is via Water Routes.

With Uber Boats Running
Every 20 minutes.

Boat Route from Central London

A Route of Discovery
for the Curious.

Drawn by the Waterfront
View to the City

A Route of Discovery
for the Curious.

Visible When
approaching
by Boat

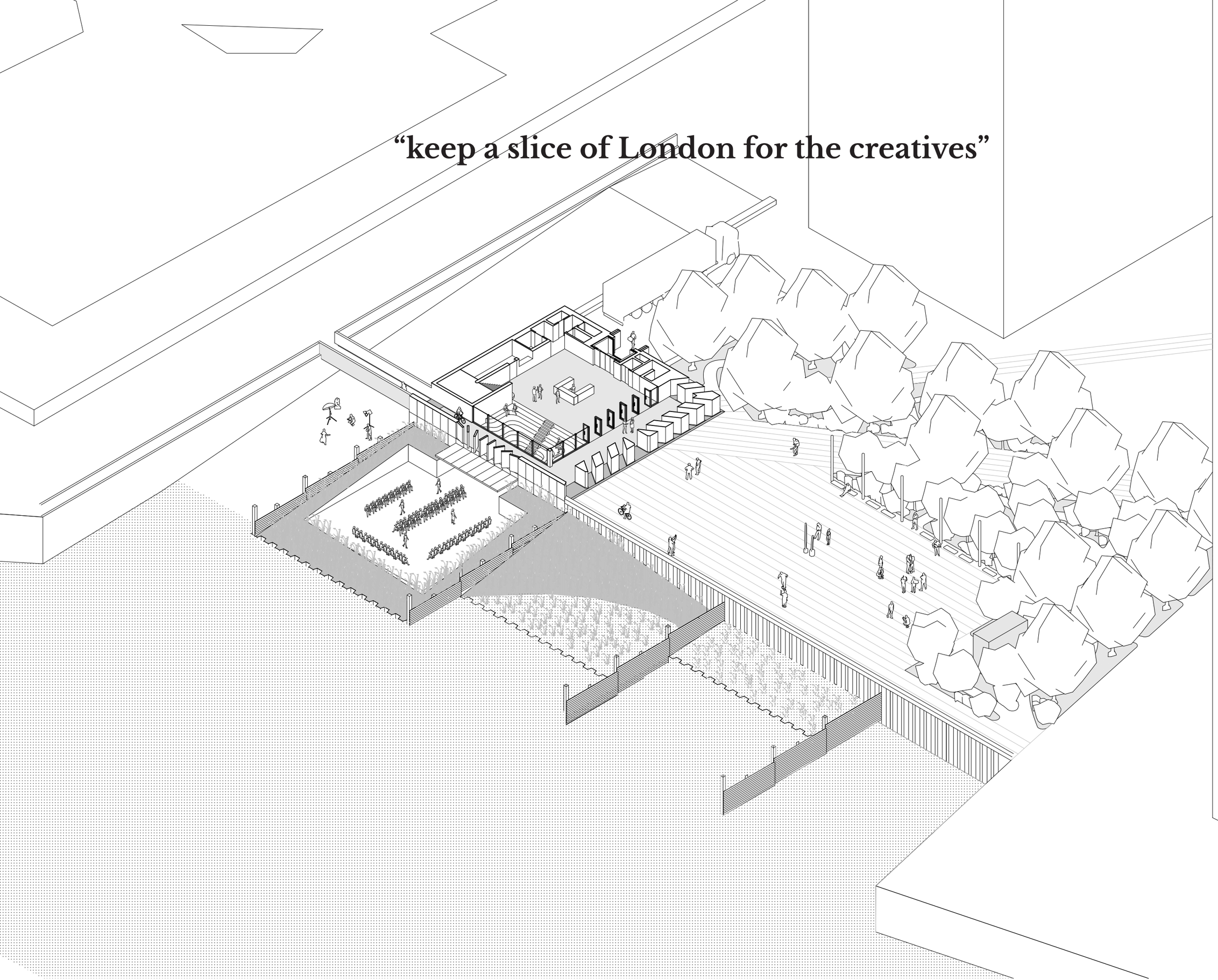
The Approach

A Hidden Gem emerging from an Oasis

The Approach

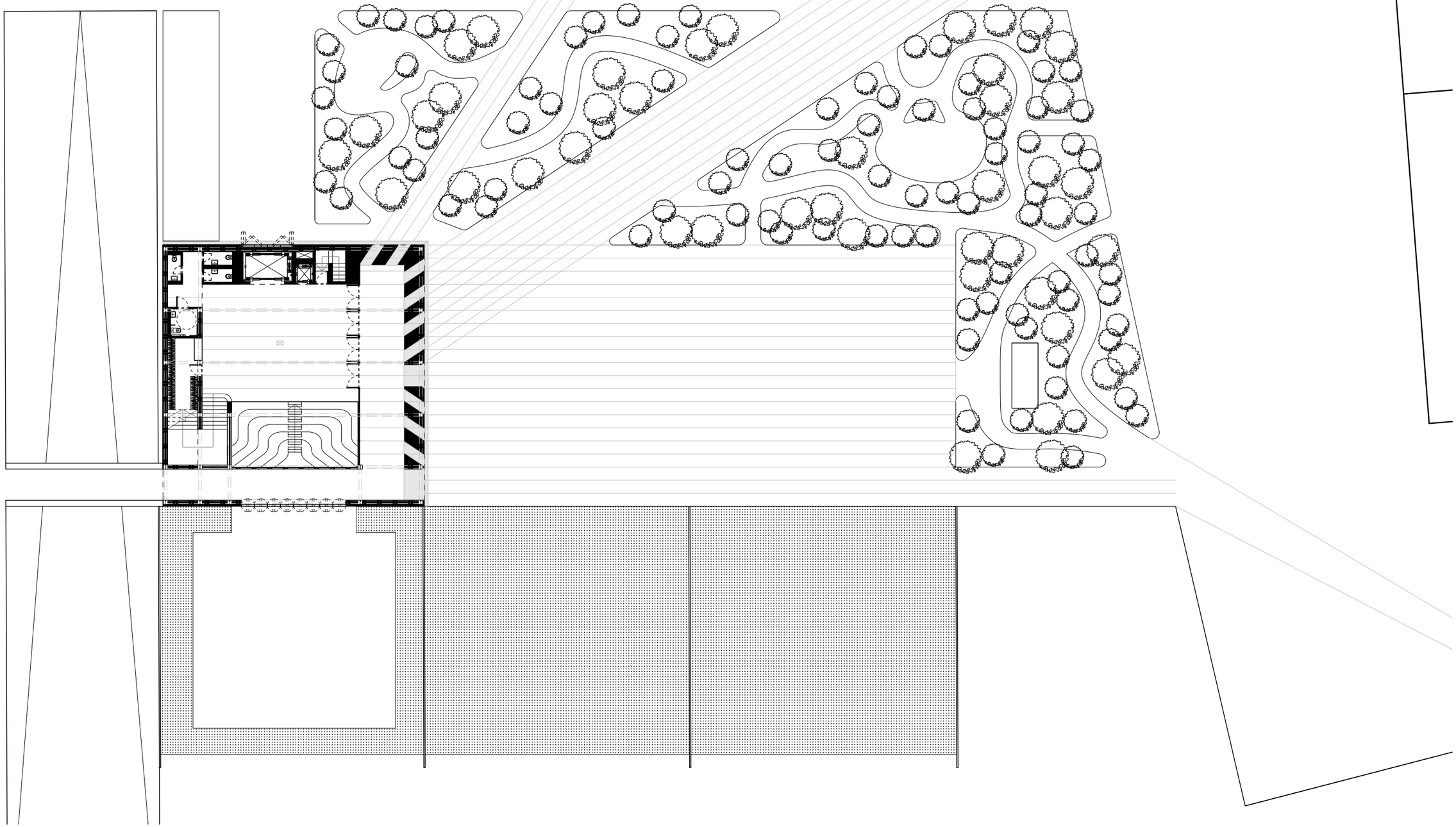
A Journey of discovery leading to the building

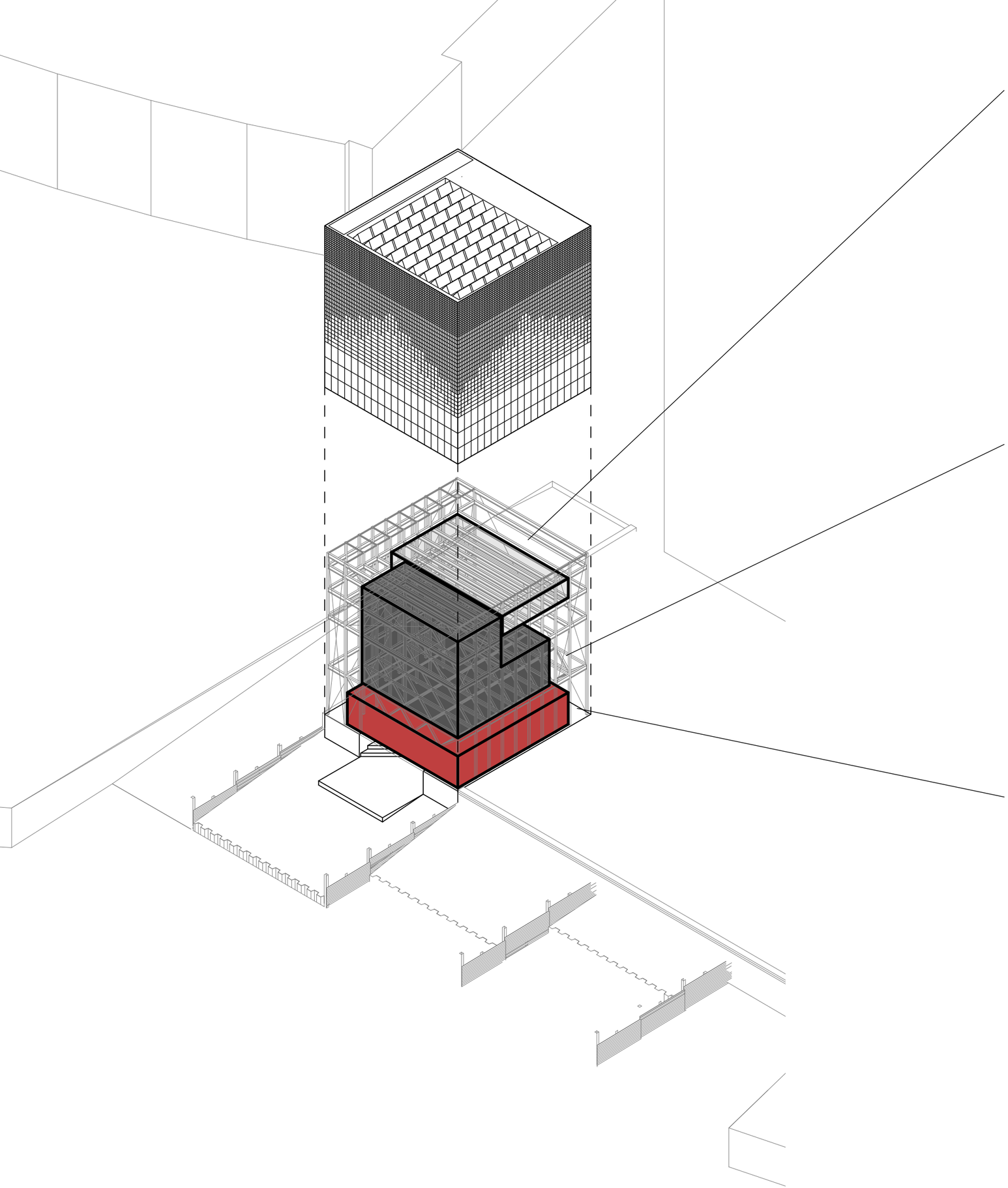
“keep a slice of London for the creatives”



“keep a slice of London for the creatives”

Footpint of 20 x 20m
building on only 1/4 of the site to allowing free public space





The White Box

Symbolising Modern Art Exhibitions

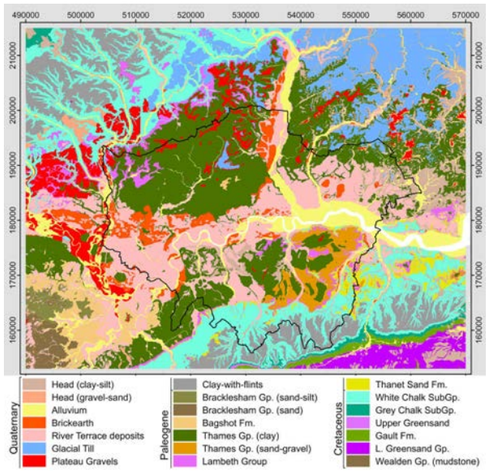
The Black Box

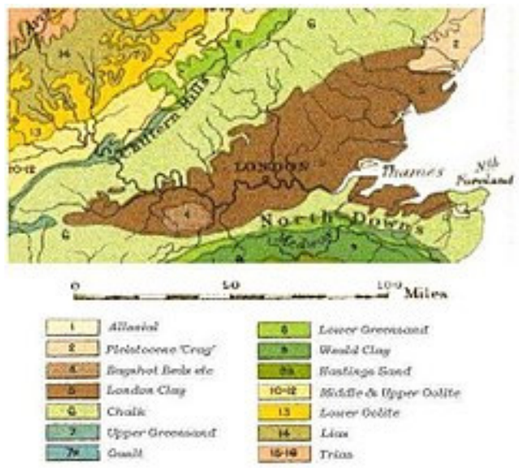
Symbolising Digital, Immersive, Performative Exhibitions

The Red Box

Symbolising Classical Art Exhibitions

Utilising Local Natural Resources

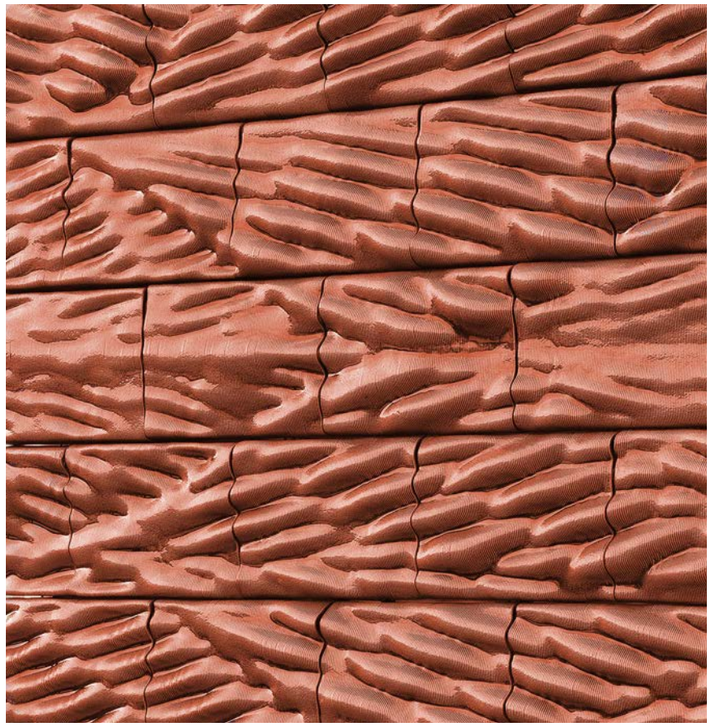




The Majority of Material Extracted while digging foundation in London, partically around the River Thames such as in The Greenwhich Pensula, is London Clay.

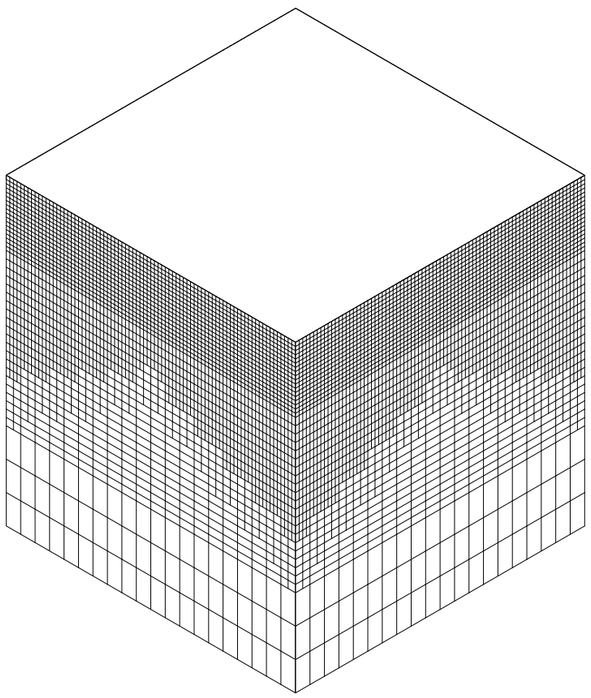
Not only is the use of clay a historical construction material in London, through a little bit of processing the material can be reused to create a sustainably sourced ceramic tile.

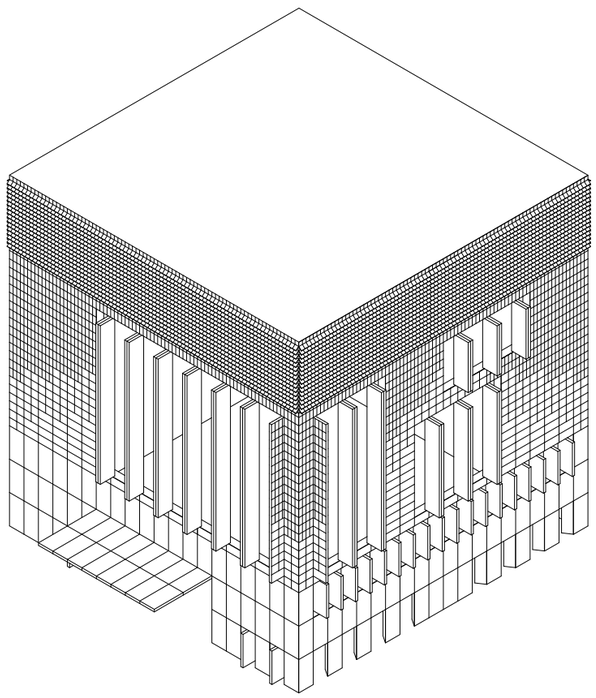
Innovative Manufacturing Techniques

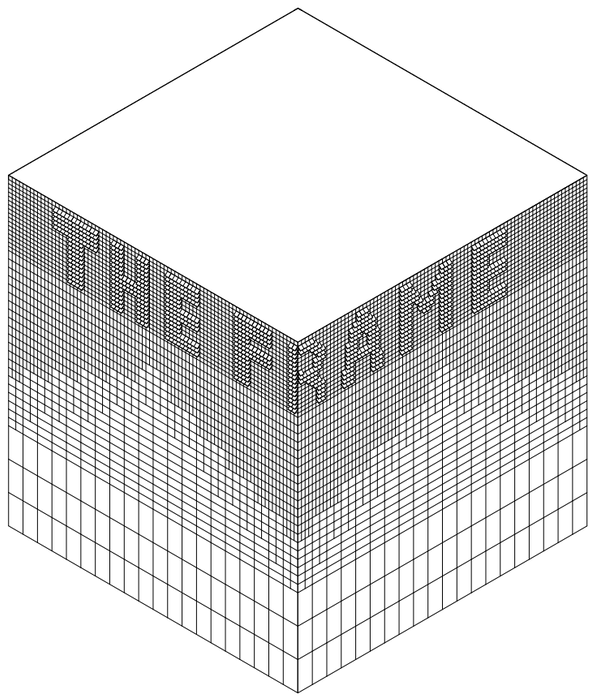


Through Innovations of 3D printing robots, the Clay tiles can be easily manufactured in bespoke forms.

The (Skin) Facade







Cladded in EcoCrete / Recyled Concrete mimiking Portland Stone

Benefits of using EcoCrete:

- Reduces the carbon emissions associated with concrete from 30 to up to 85%
- Easy to use and place
- Complies with BS 8500 and BS EN 206-1
- Creates concrete with a lighter, more aesthetically pleasing colour
- 100% recyclable at end of life, contributing to the circular economy

EcoCrete uses Regen GGBS as a reliable cement substitute

Regen GGBS (ground granulated blast-furnace slag) is manufactured from a by-product of the iron-making industry.

Benefits:

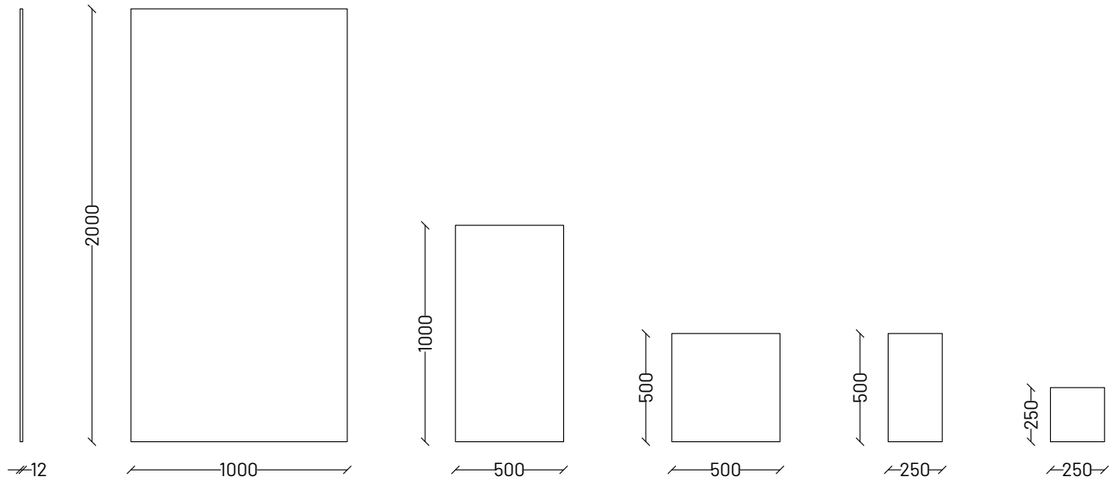
- Low embodied CO2
- No mineral extraction
- Reduced landfill
- Cost-effective

Sourced locally from Heidelberg Materials.

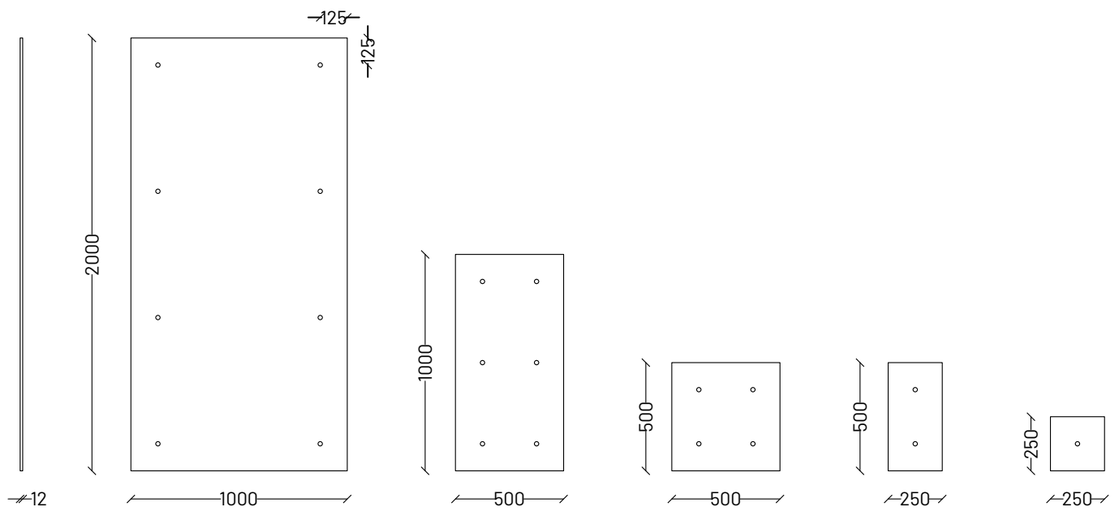
Manufacturer is unaffected by the future development of the Greenwich peninsula

Standardised Facade Tile Sizing (mm)

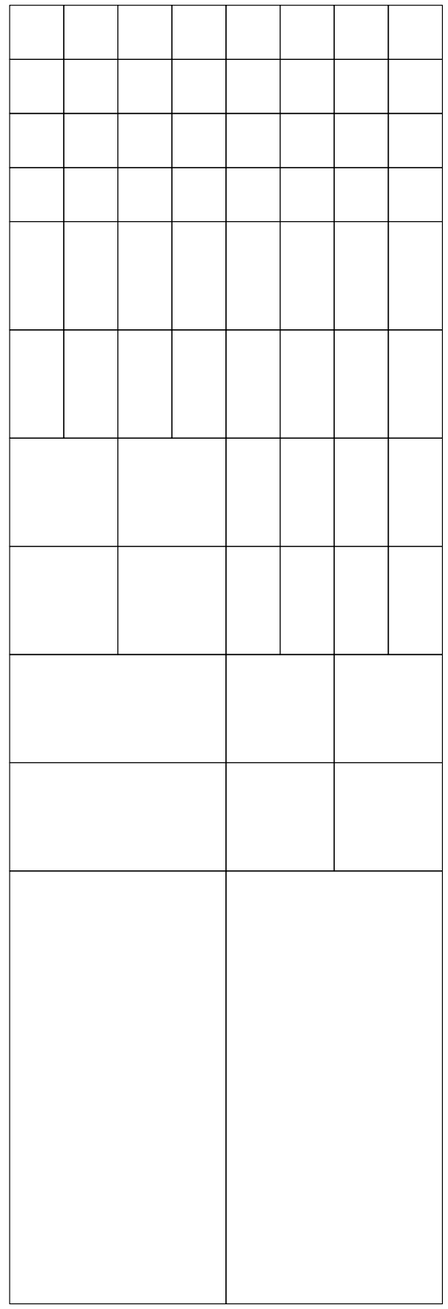
Flat



Stud Impression

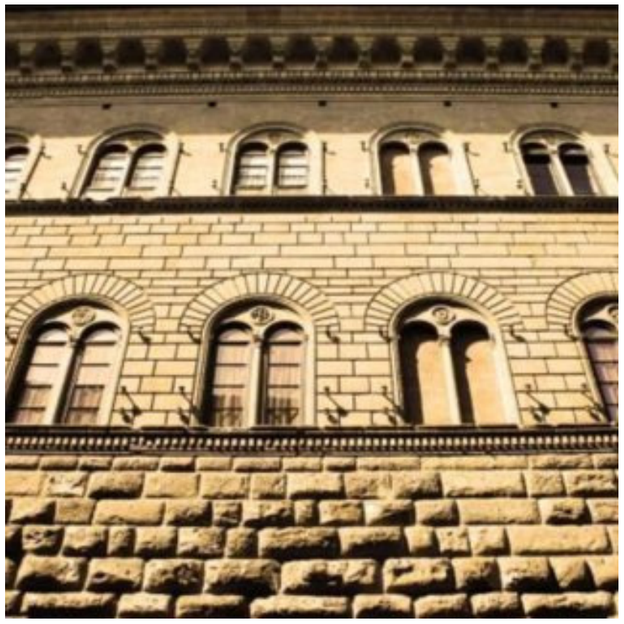


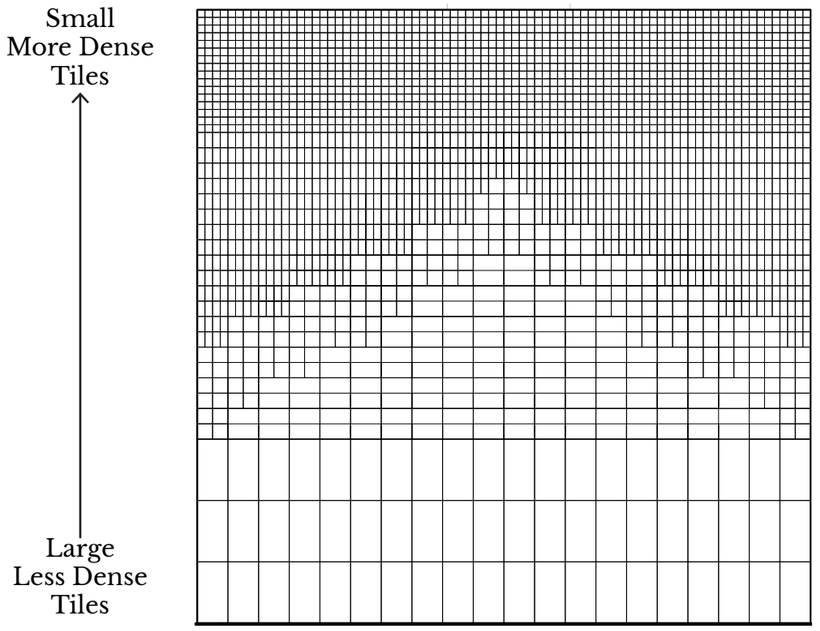
Tile Pattern Arrangement



A Modern Renaissance Stone Facade

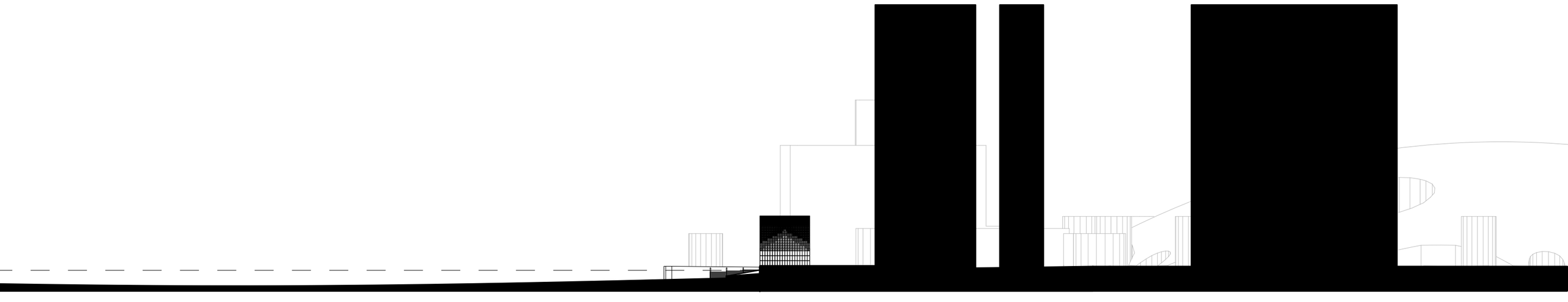
Symbolised through the tile density as you moved up the facade.





Theatre Curtain Motif

Symbolised through the arrangement of the tiles to mimic a parting theatre curtain.



Allowing Freedom of Expression

Tiles are Durable and fairly Inexpensive.

Unlike Portland Stone, they do not have to be treated a precious.

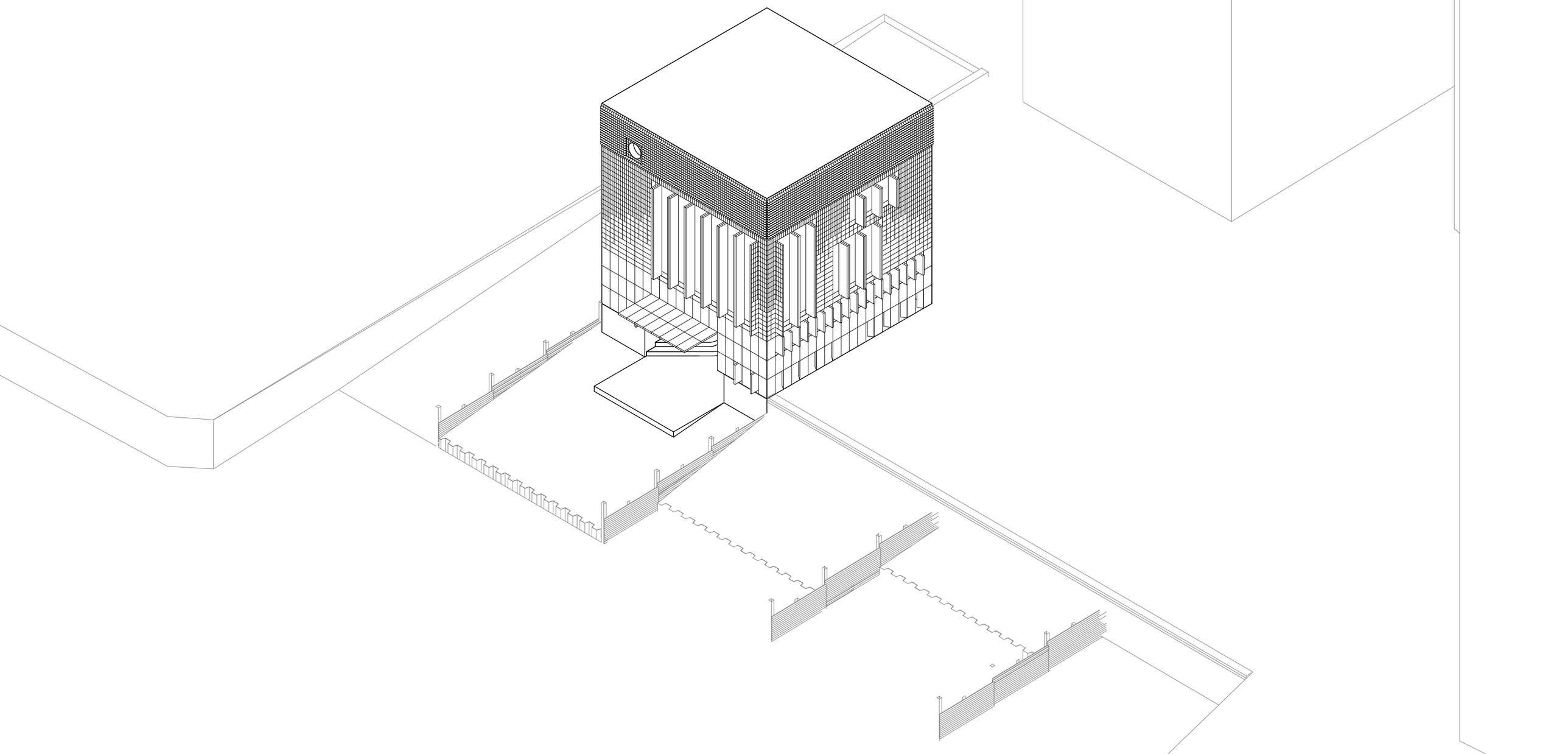
This allows artist and member of public to freely paint and express themselves directly on the facade.

Assembled on a rail Cladding system, when necessary the tile can be easily removed and replaced.

As well as allowing broken tiles to be recycled and replaced this also unlocked the potential to preserve the artwork on the removed tile, allowing them to be displayed in exhibition or sold.

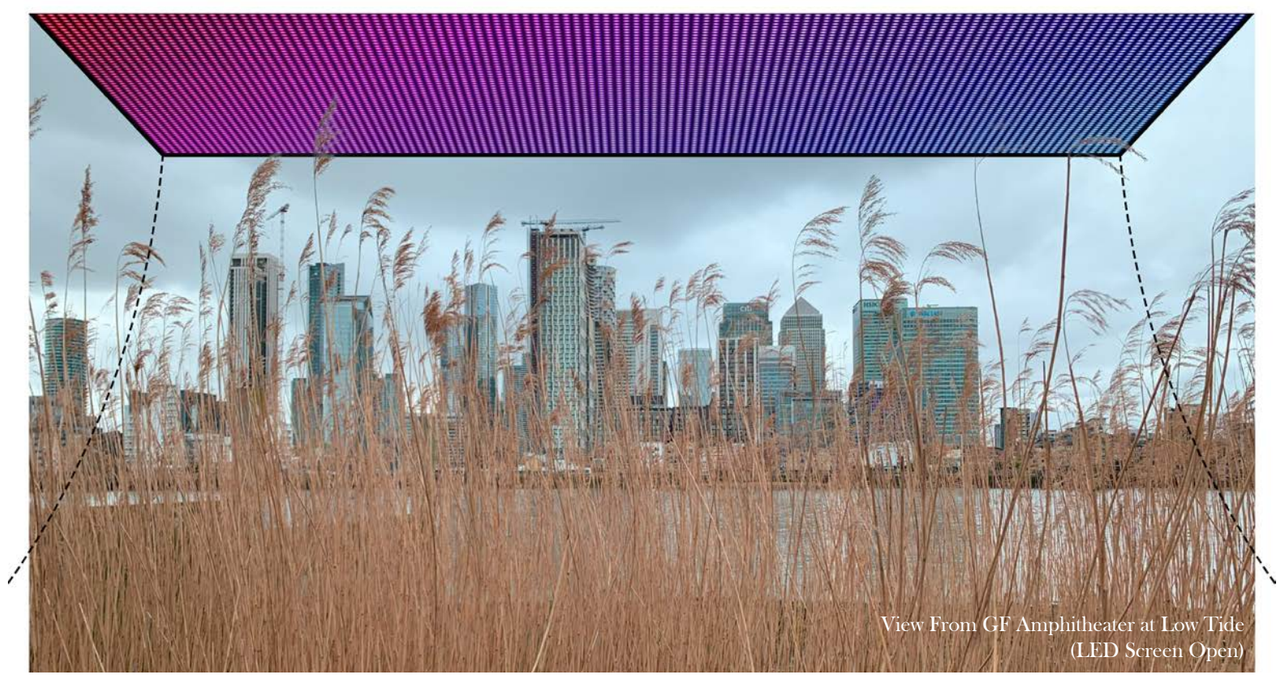
Openings to the View

Bring Natural Light and a backdrop to the Performance Spaces.
(Breaking the Black Box)



Framing the View

View From 1F Performance Space
(Open to View as a Backdrop)

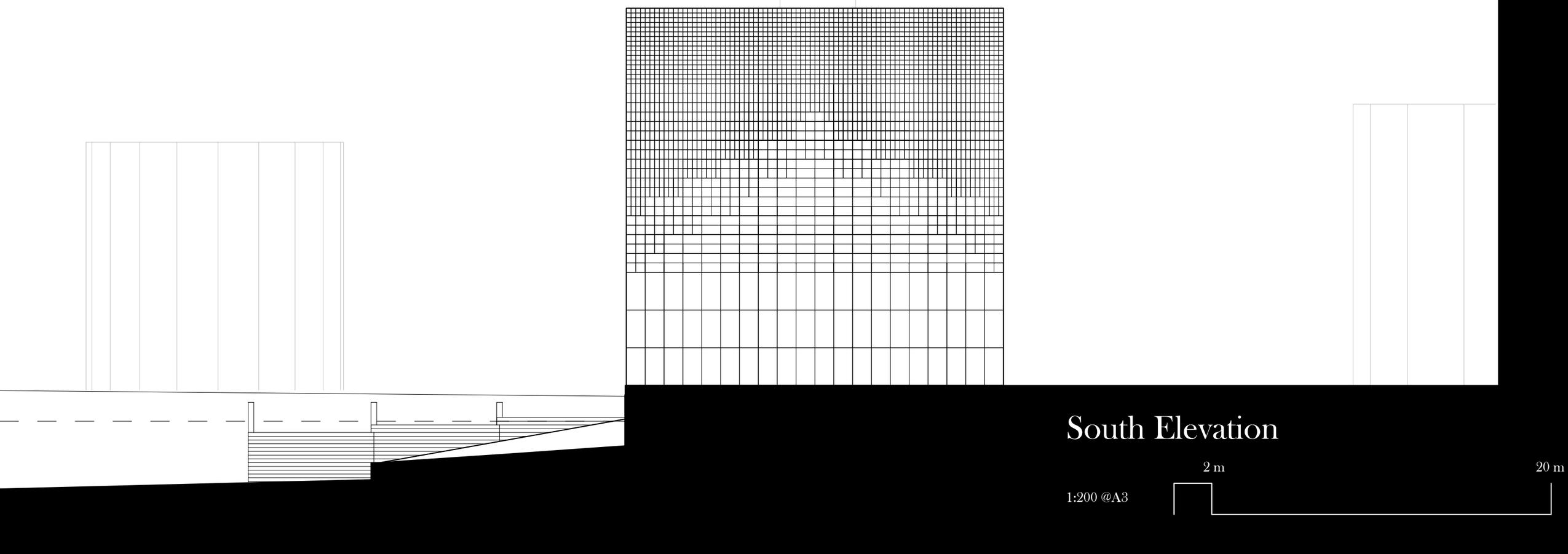


View From GF Amphitheater at Low Tide
(LED Screen Open)

"That **view of the [London] skyline** is the cheapest inspiration you can ever get and the most expensive thing you will feel like is yours."

- Olivier Geraghty
Founder and Creative Director of O.G Studios

Tile Media Display



South Elevation

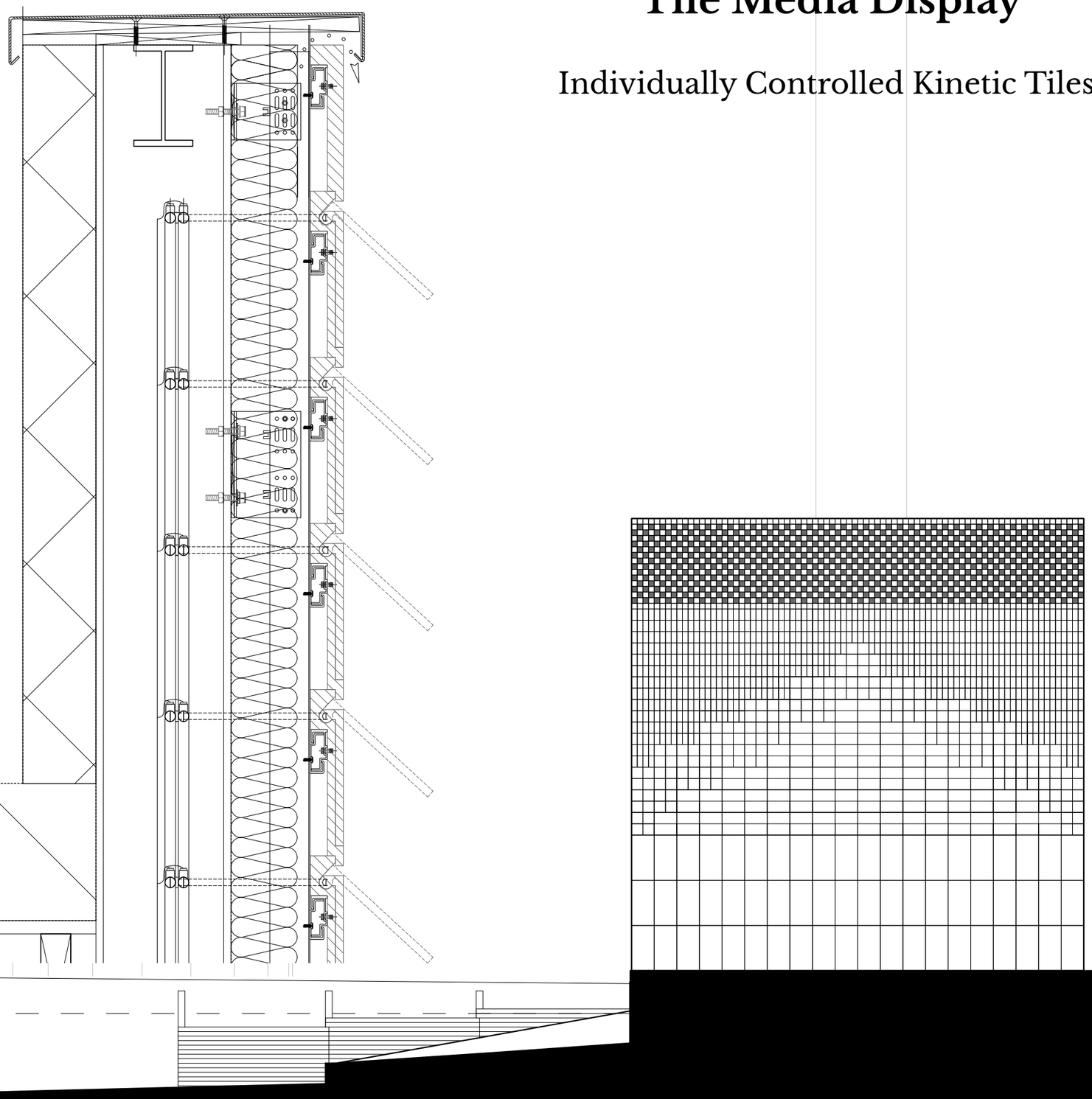
1:200 @A3

2 m

20 m

Tile Media Display

Individually Controlled Kinetic Tiles.



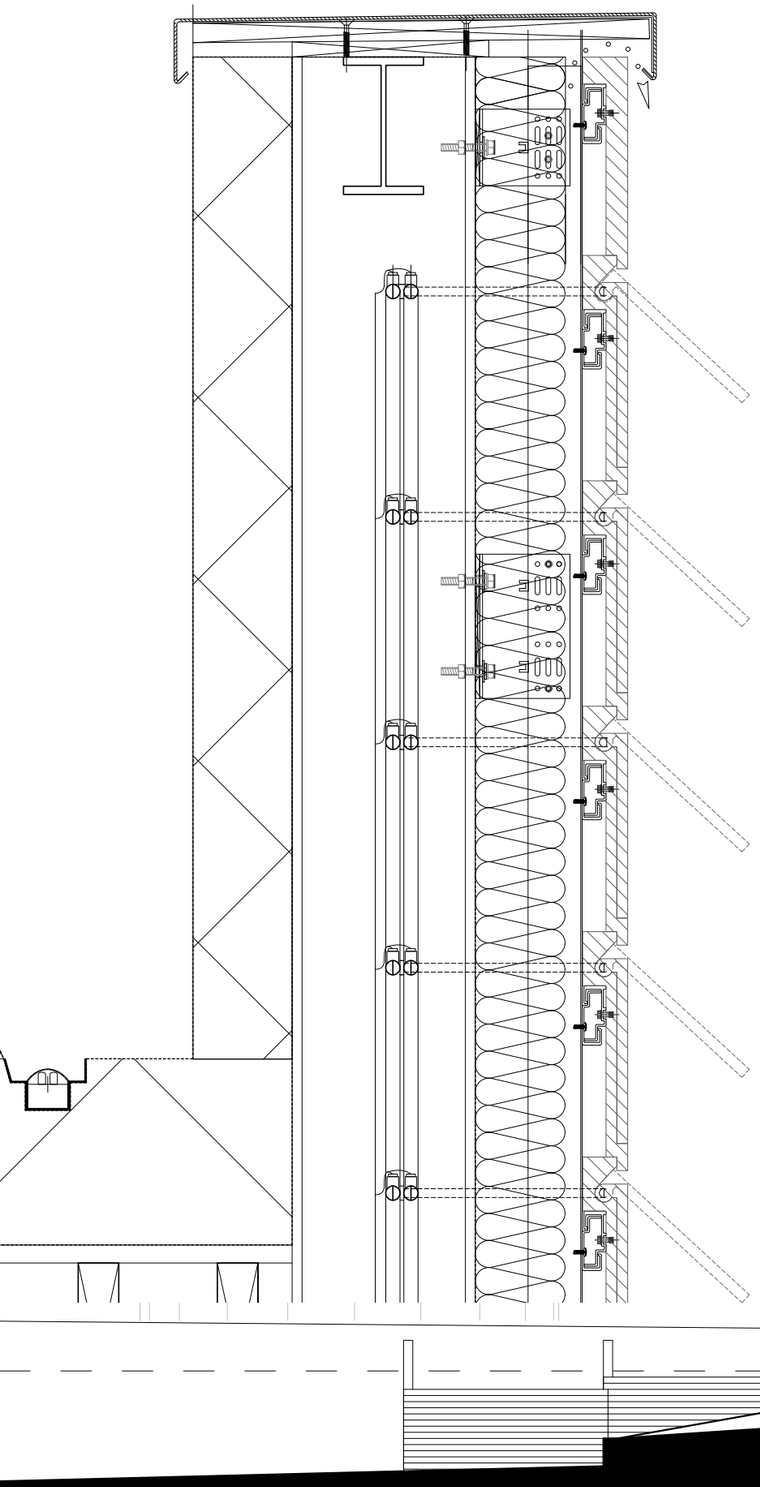
South Elevation

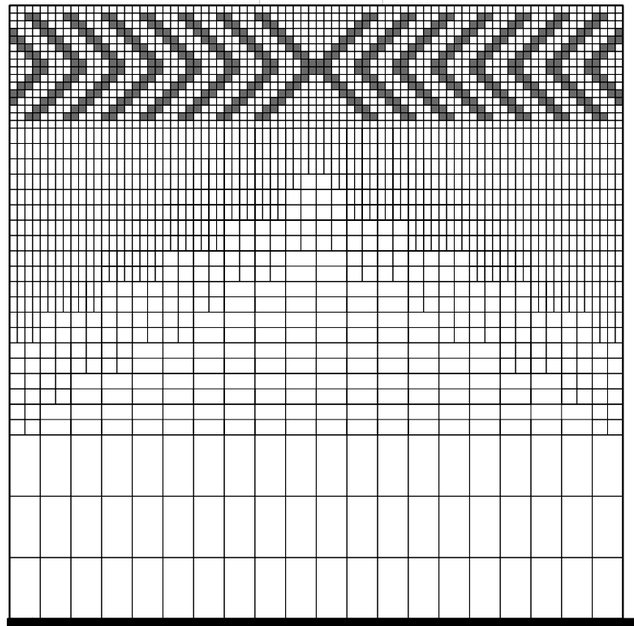
2 m — 20 m

1:200 @A3

Tile Media Display

kinetic (Patterns) Ornamentation





South Elevation

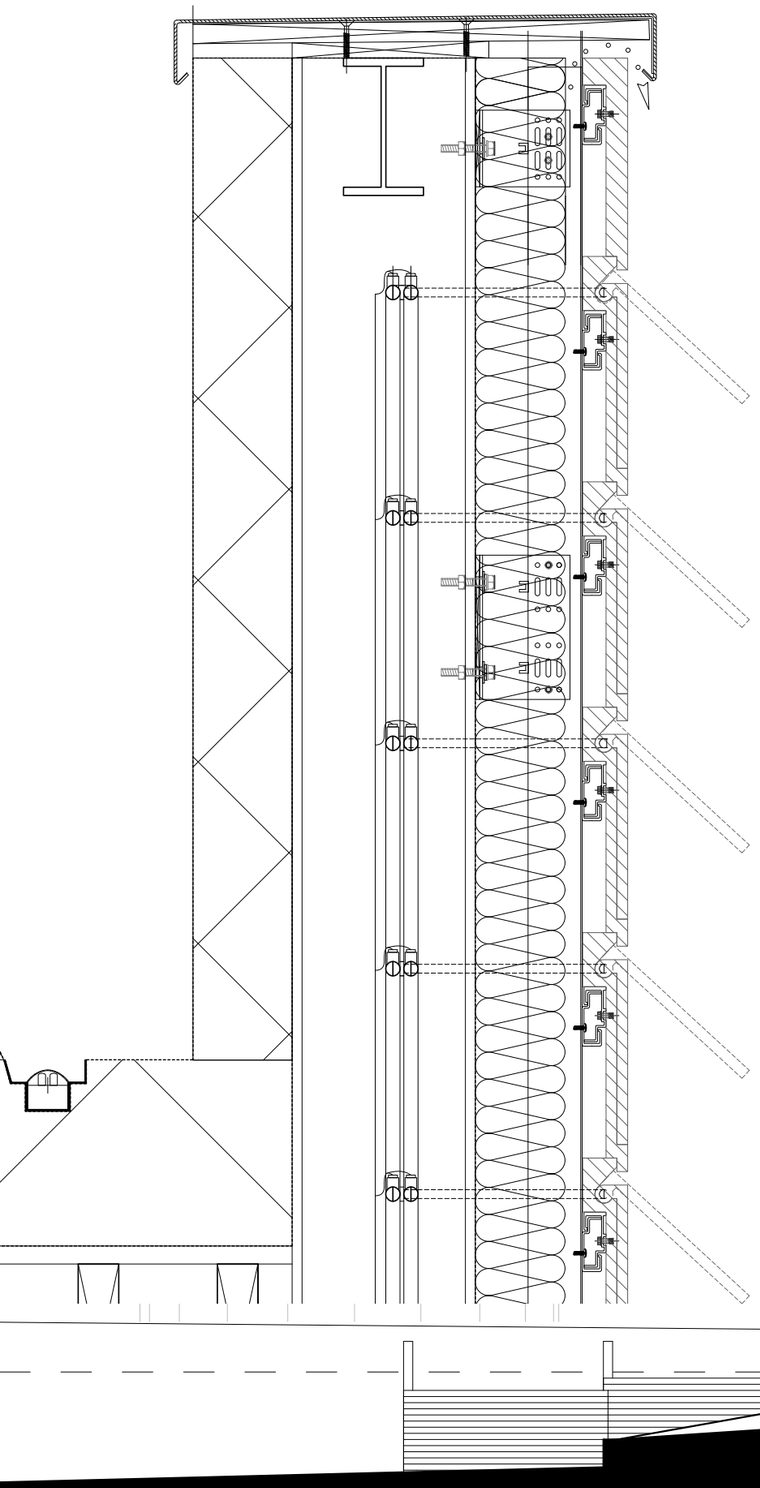
1:200 @A3

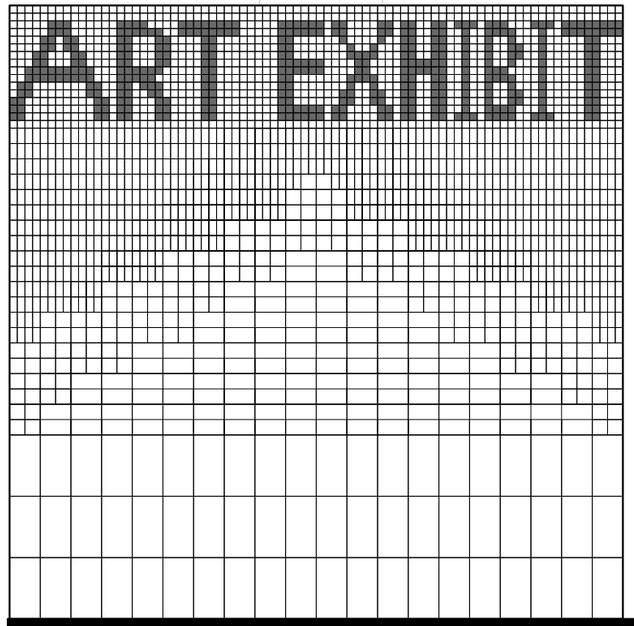
2 m

20 m

Tile Media Display

Text and Information





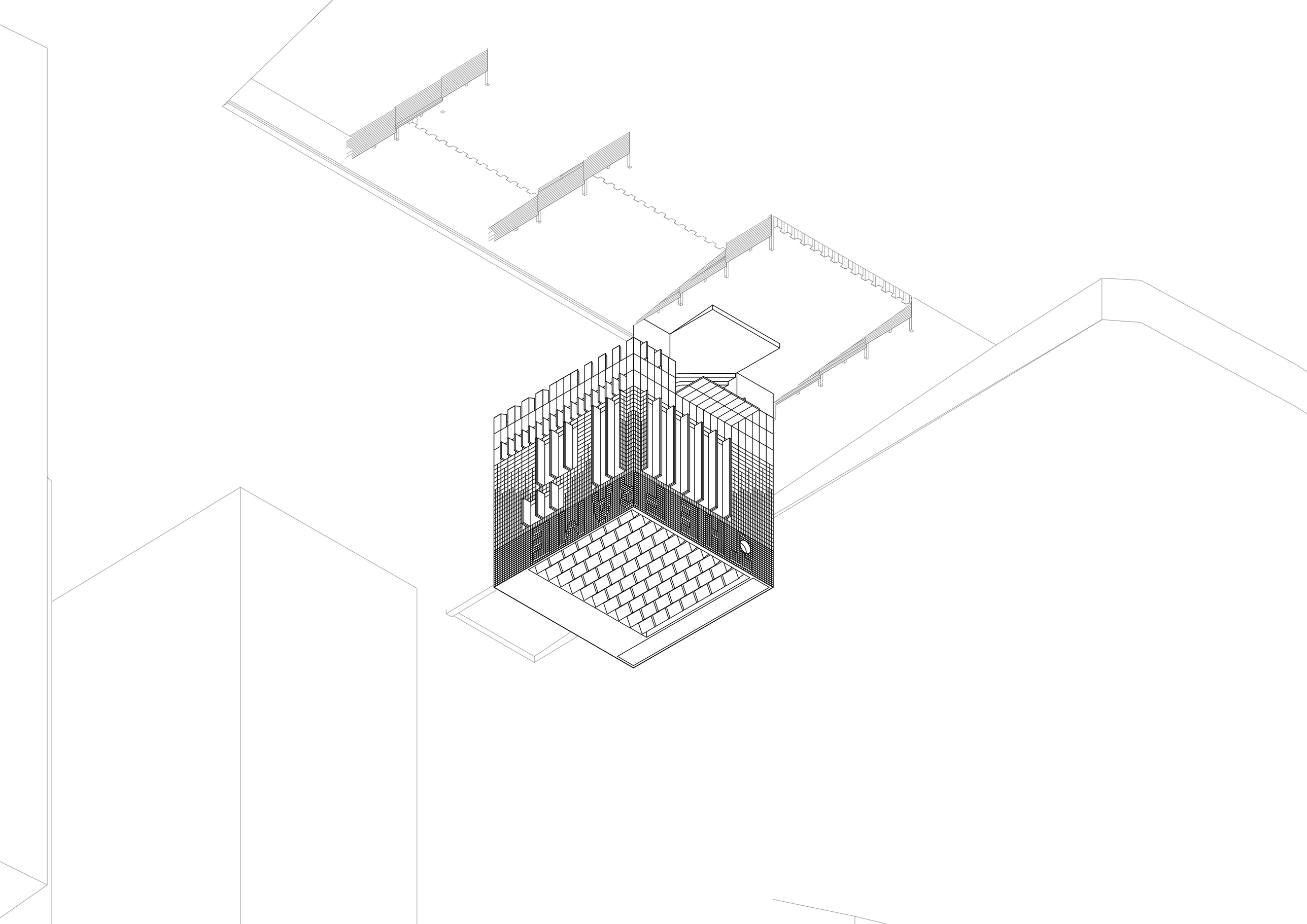
South Elevation

1:200 @A3

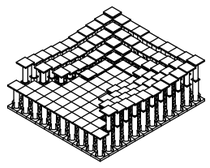
2 m

20 m


A24

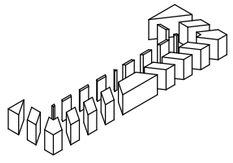


The 5 Elements of the Frame

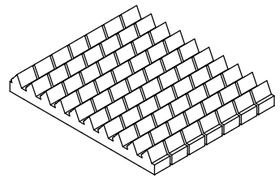


THE WAVE

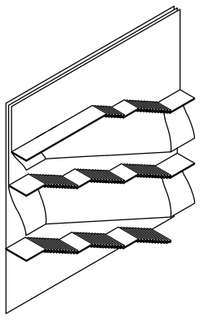
THE FORUM



THE FLITER

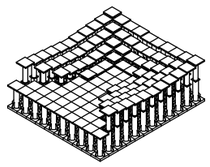


THE SKY



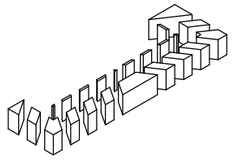
THE TURRELL

The 5 Elements of the Frame

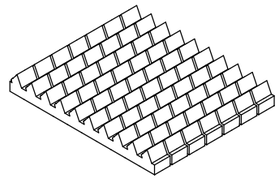


ADAPT

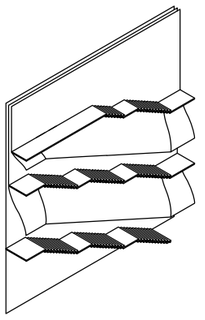
CONVEY



ENGAGE

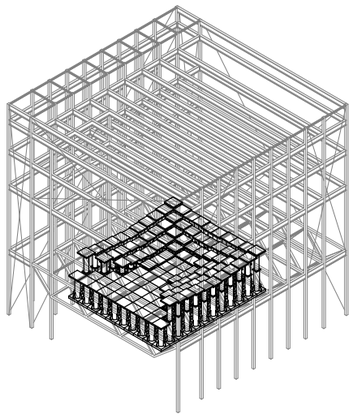


ENRICH

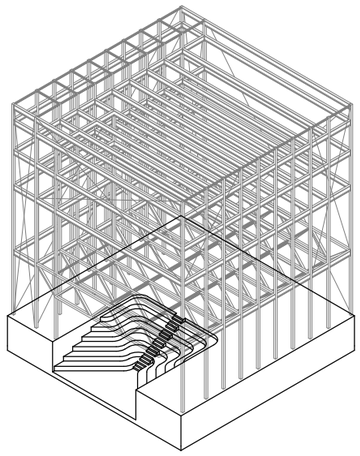


PROVOKE / INSPIRE

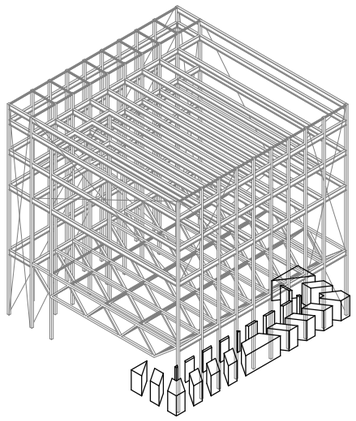
The 5 Elements of the Frame



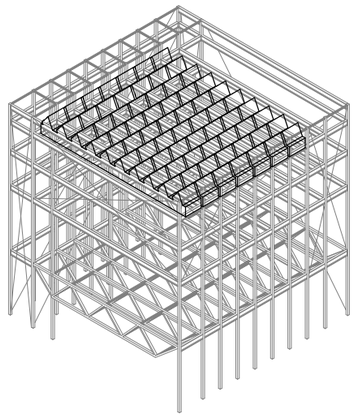
ADAPT



CONVEY



ENGAGE



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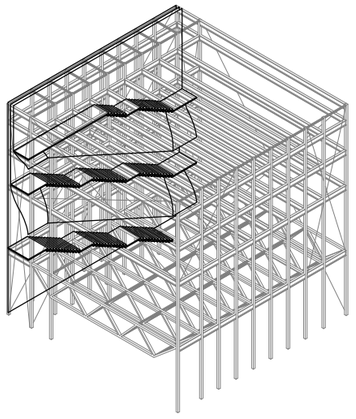
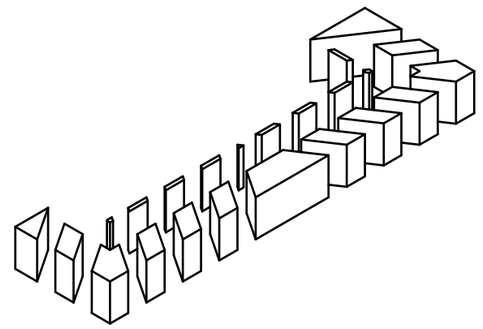
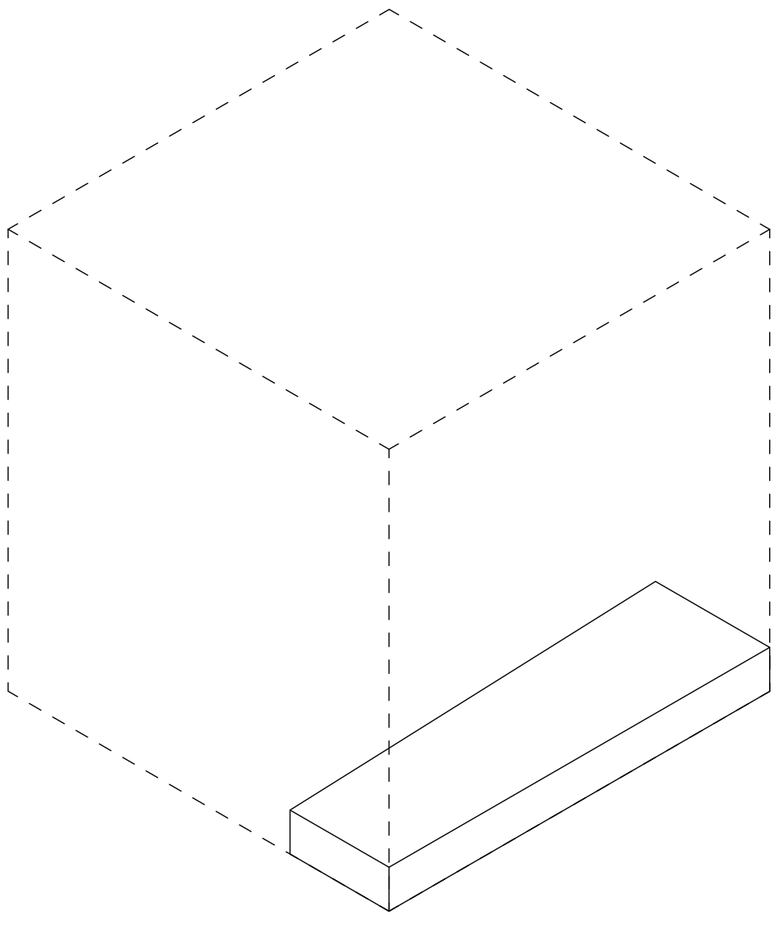


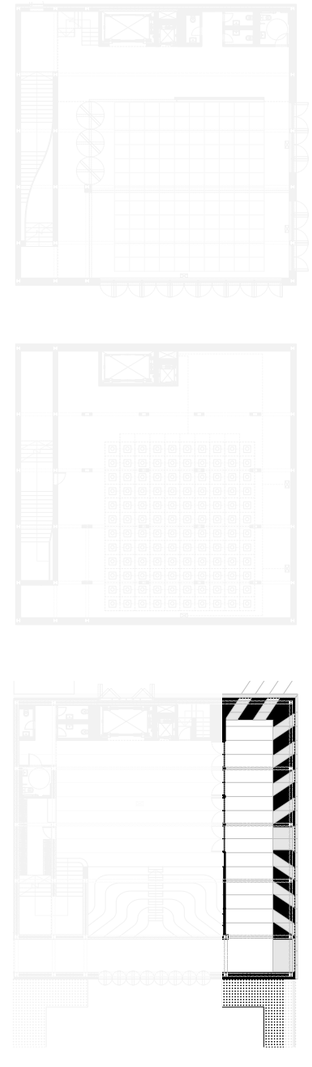
PROVOKE / INSPIRE



THE FLITER

A Filter for the Curious





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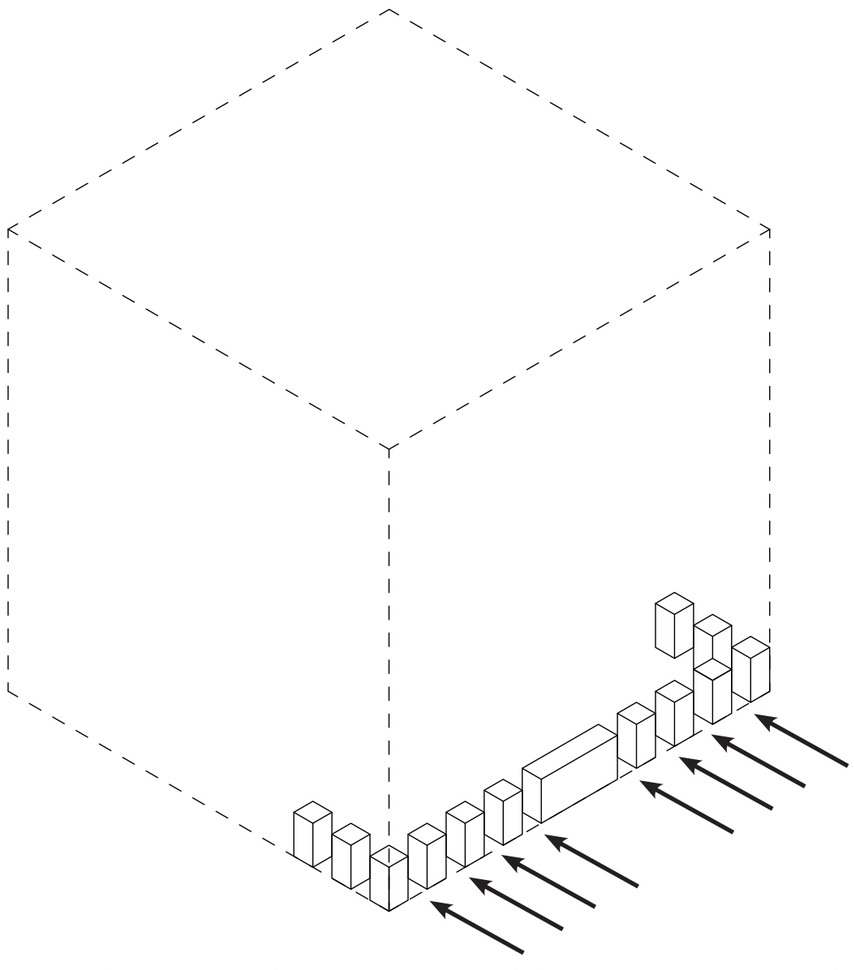
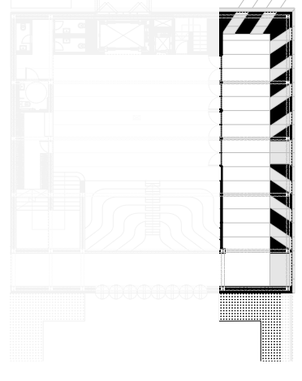
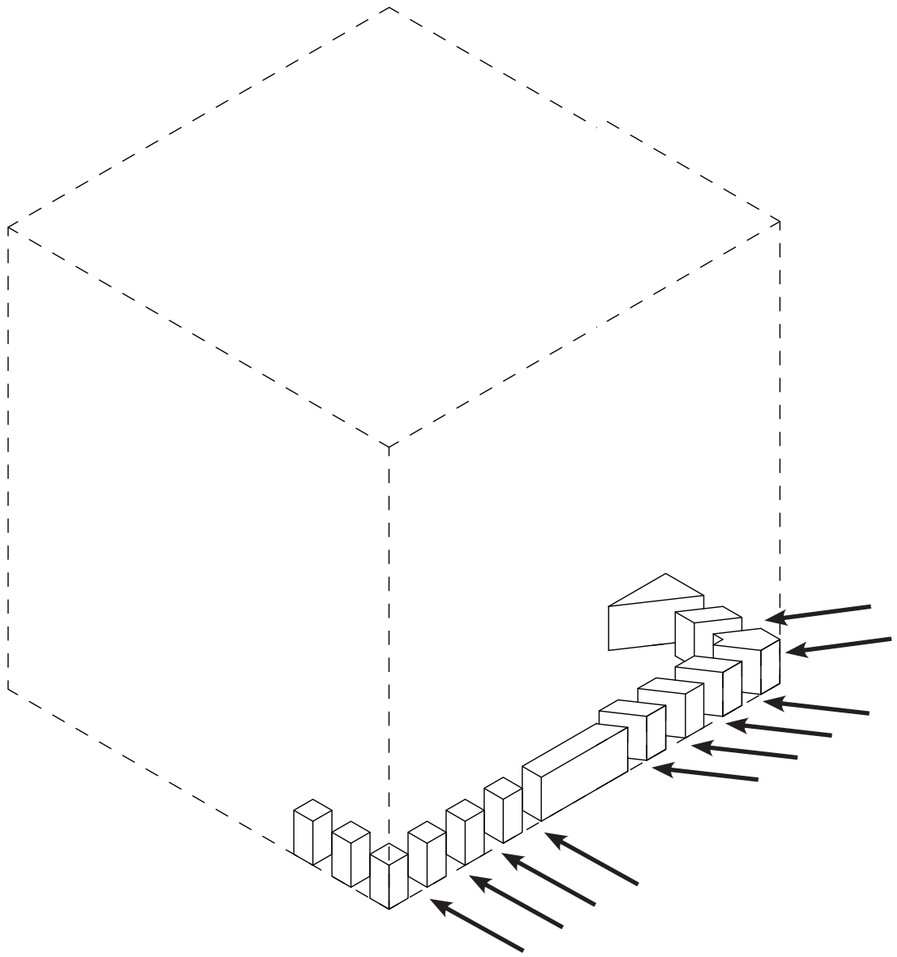


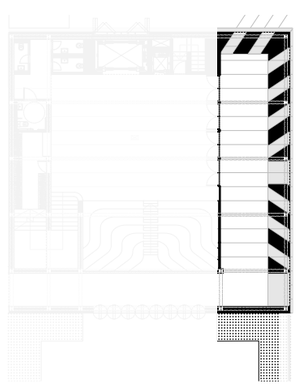
Facade Broken up into 1 m Wide Entrace Points.
Forcing Visitors to Entre Practically Alone.



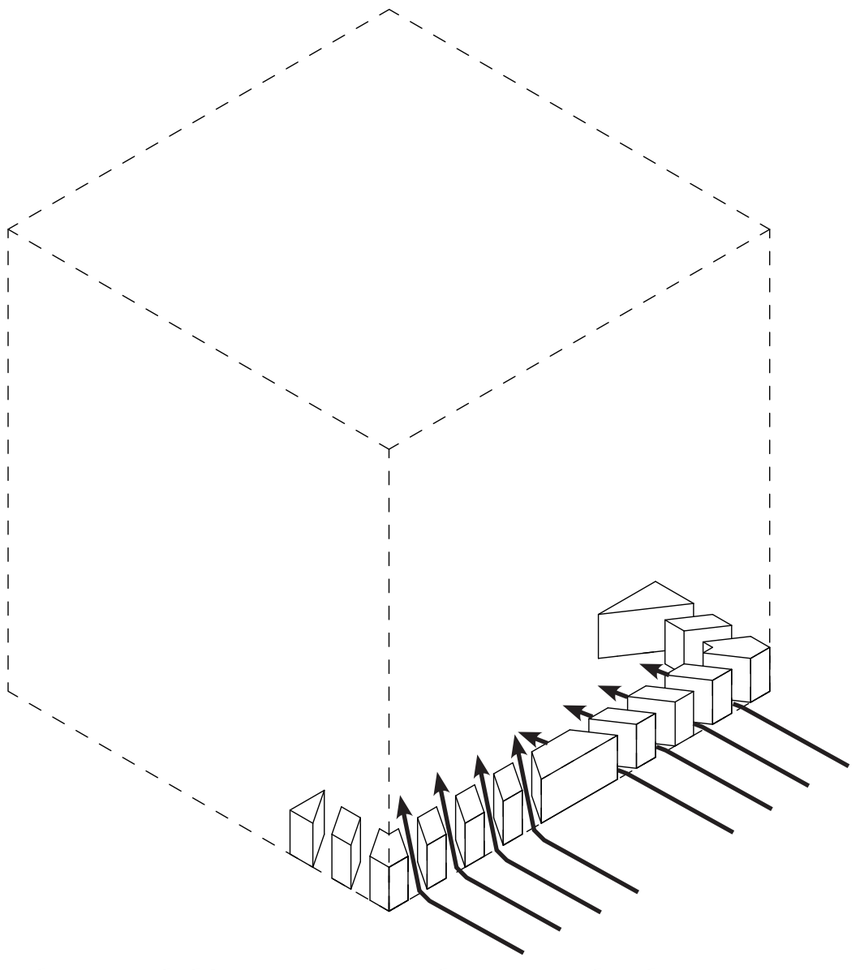
A Filter for the Curious



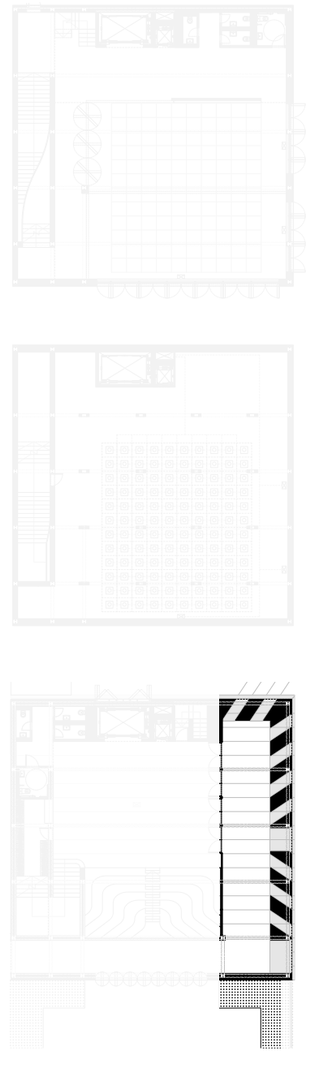
The Entrace Points are then Angled to Adress the Approach

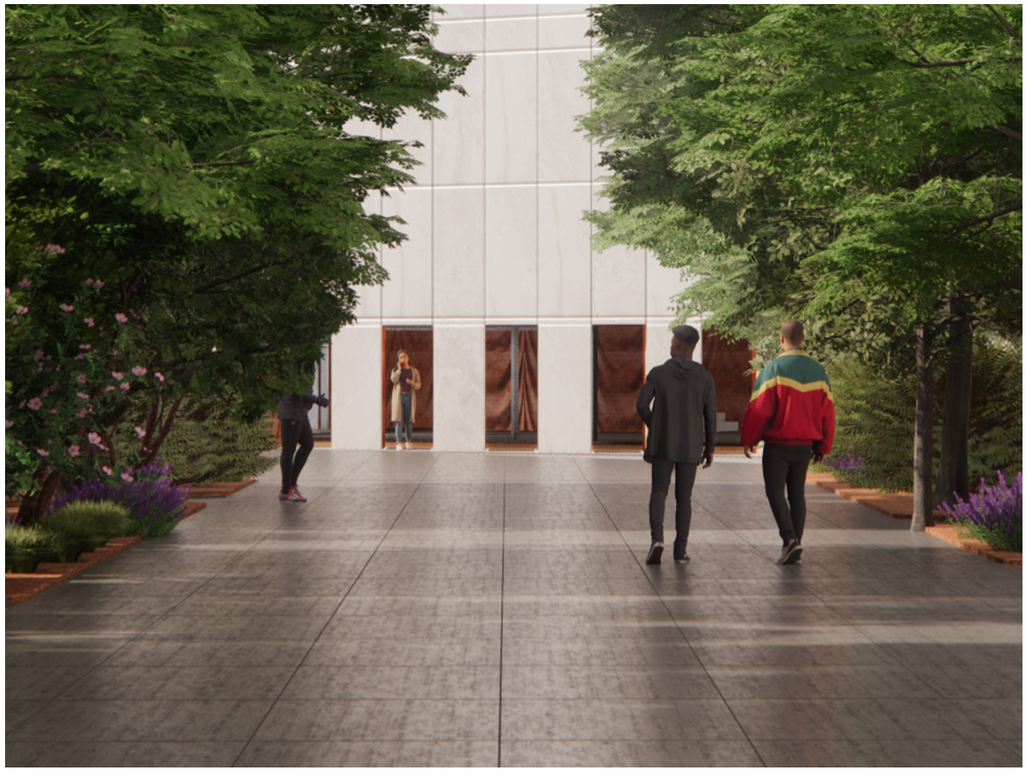


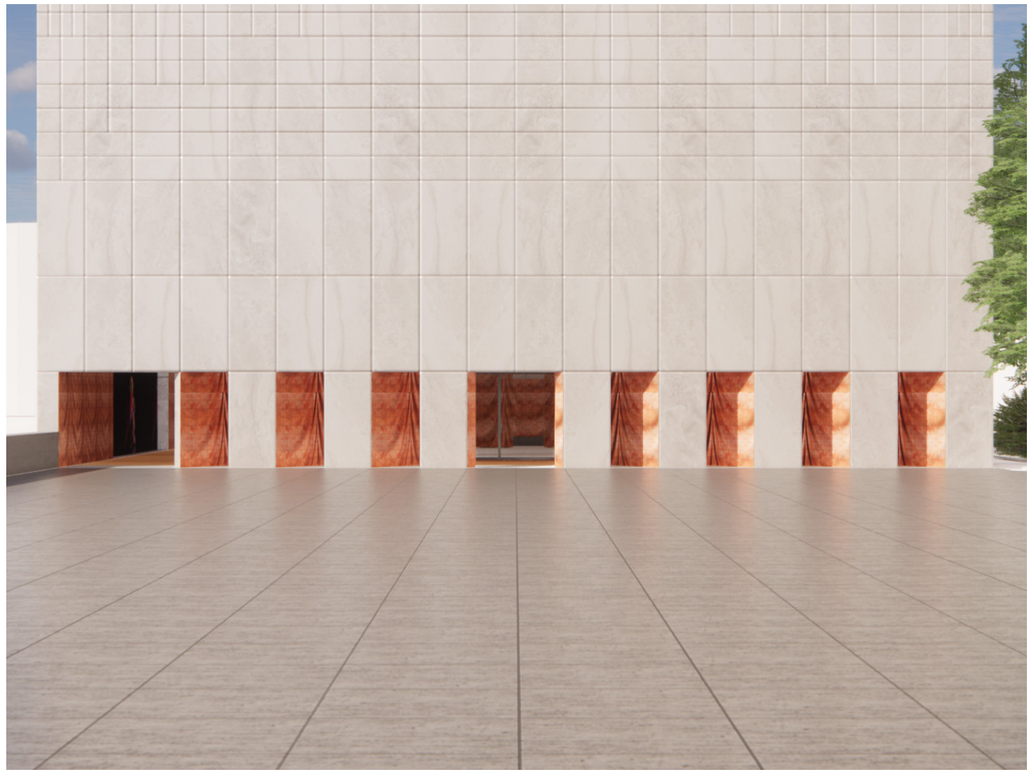
A Filter for the Curious

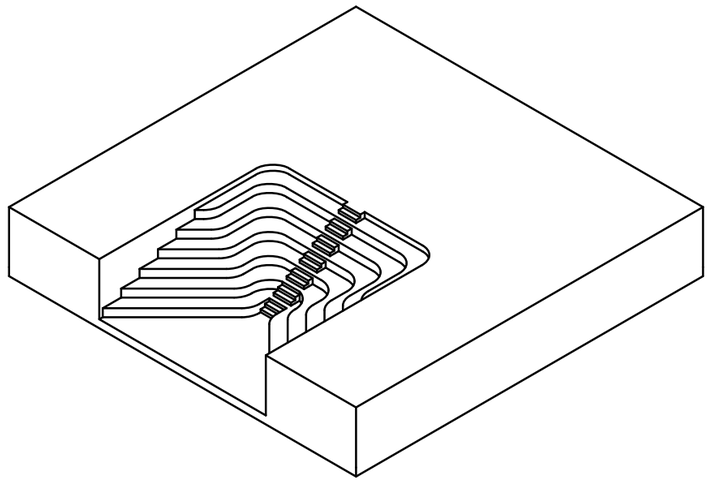


From the Public Square the Angled Entrances Restricting Direct View Through, Forcing a Sense of Discovery.





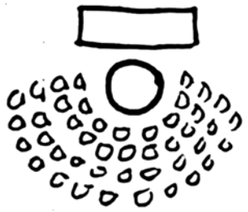




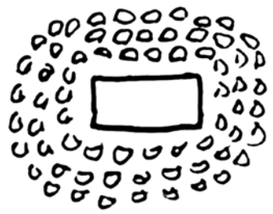
THE FORUM

A New Typology of Display

CINEMA/
LETURE



AMPHITHEATRE



ARENA

ORCHESTRA

CONCERT

FESTIVAL

COMEDY

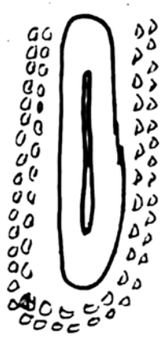
FASHION

BOILER ROOM

AWARD

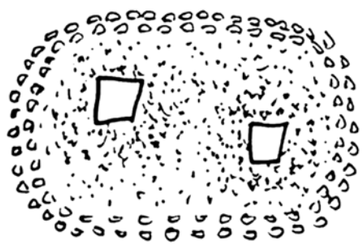
JAZZ

STREET



CIRCUS MAXIMUS

POP



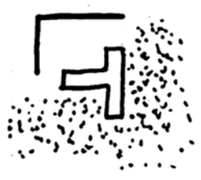
JAY-Z & KANYE WIT TOUR

KENDRICK LAMAR
DIG STEPPERS TOUR

KANYE ST PABLO TOUR

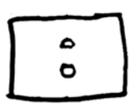
BEYONCE RENAISSANCE
TOUR

LATER... WITH
JOOLS HOULAND



THE TINY DESK

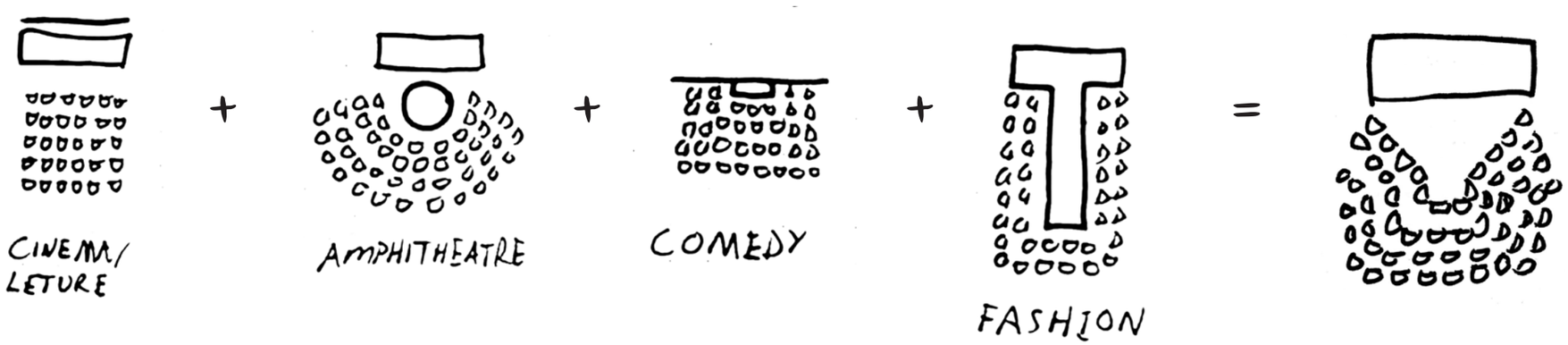
BON IVER
A TALE AWAY
& HOME

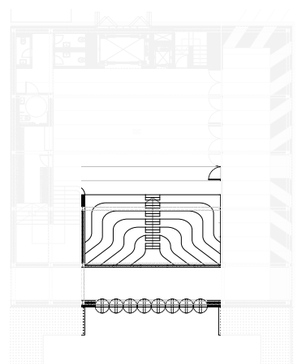


BON IVER
ONE TO ONE

A New Typology of Display

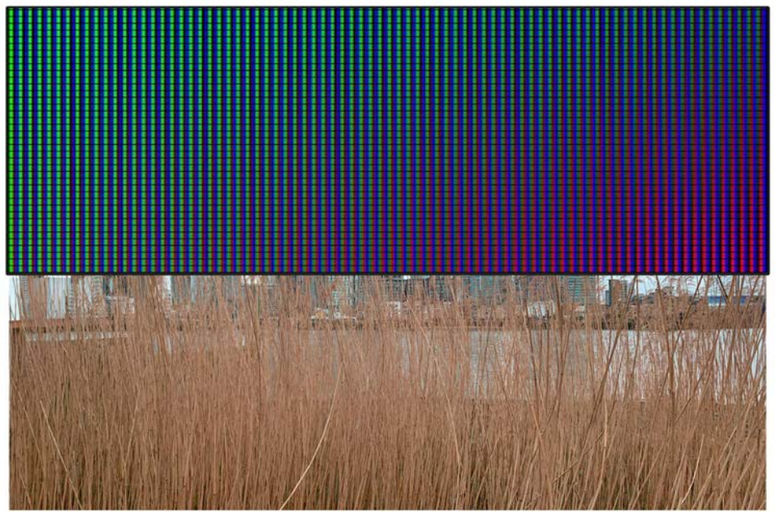
For a New Form of Display

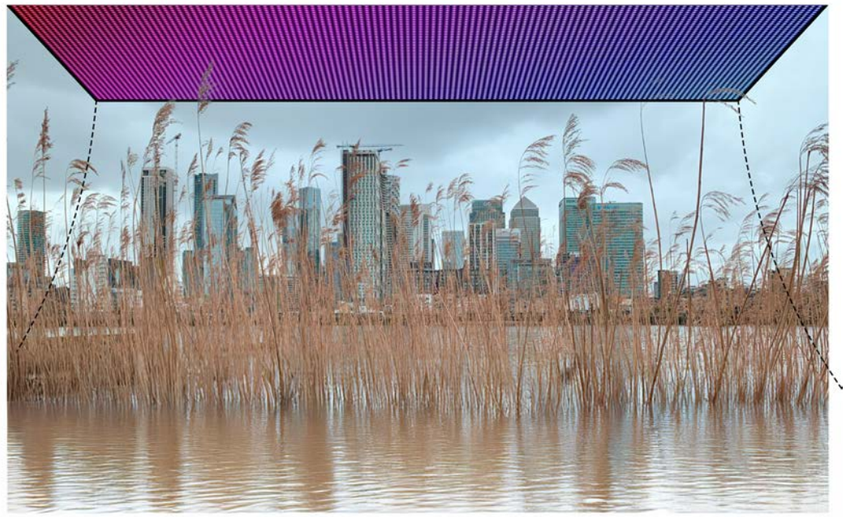


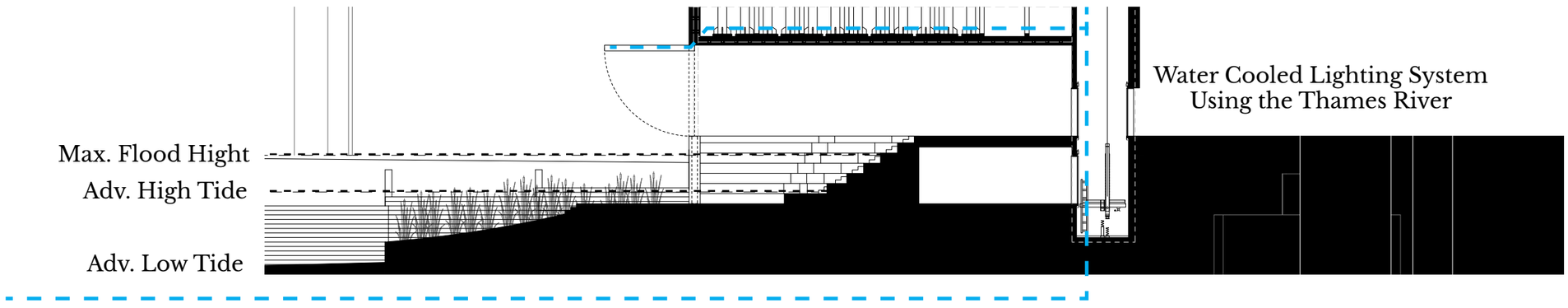


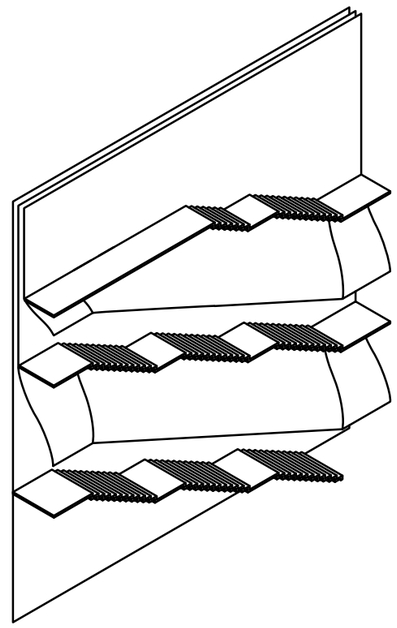
A New Typology of Display

Bring in Nature and the surounding context into Digital Art





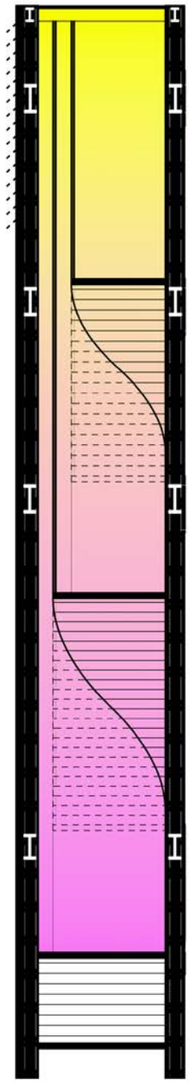


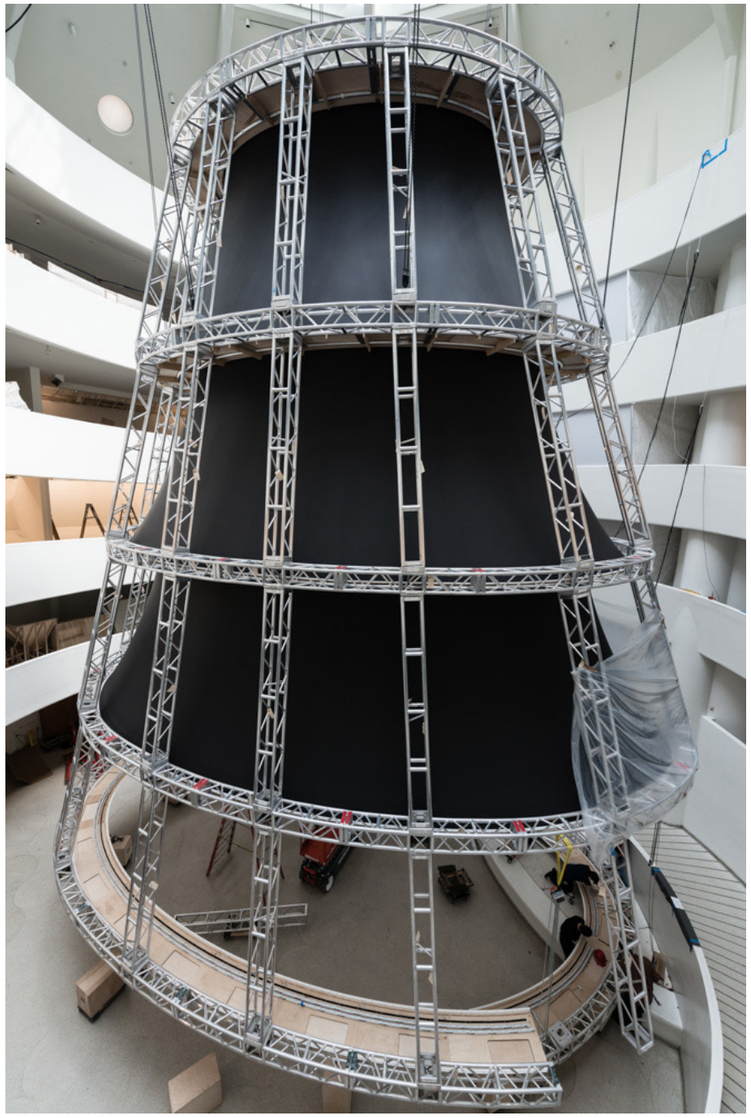


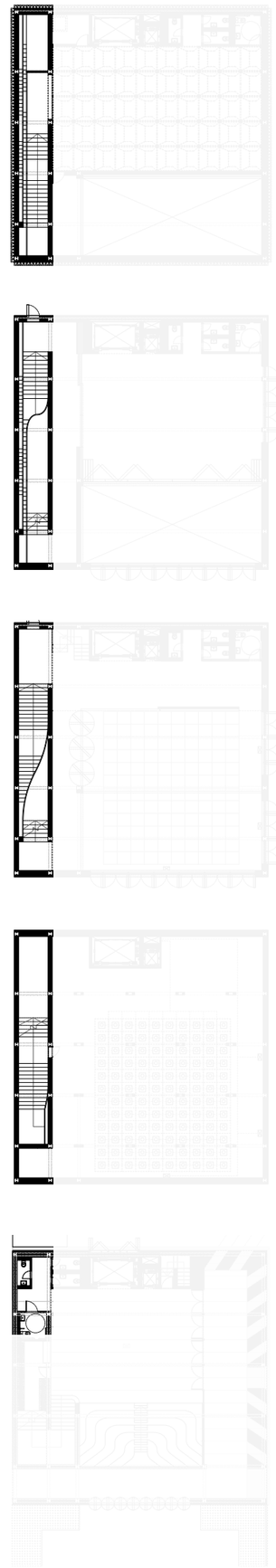
THE TURRELL

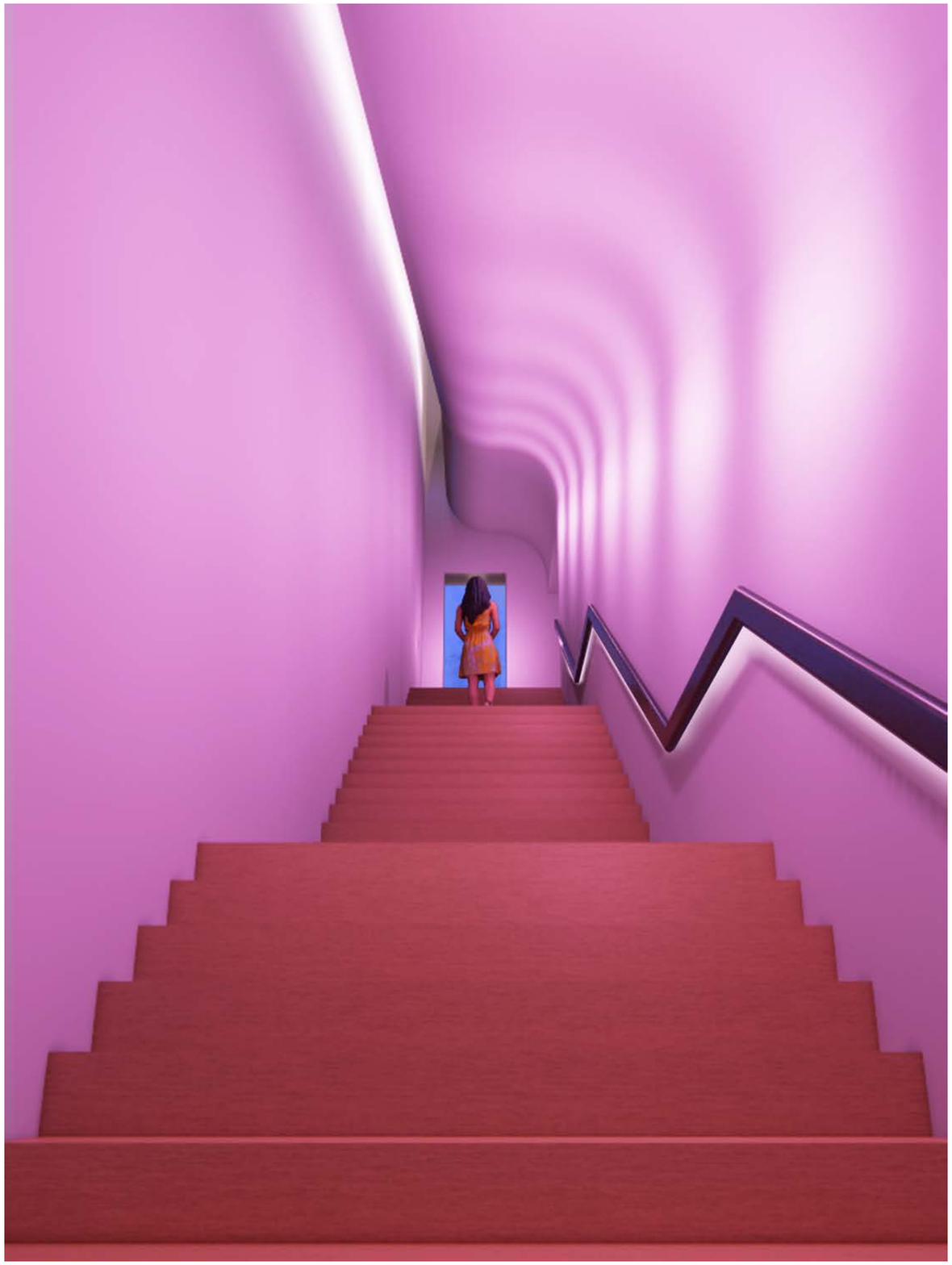
A Sensory Transition

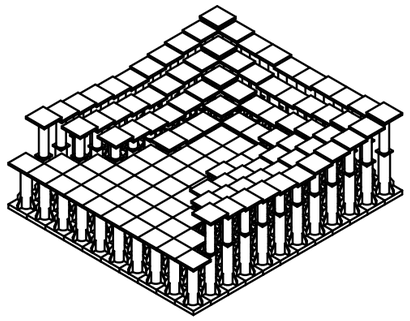
Combining Natural and Artificial light.





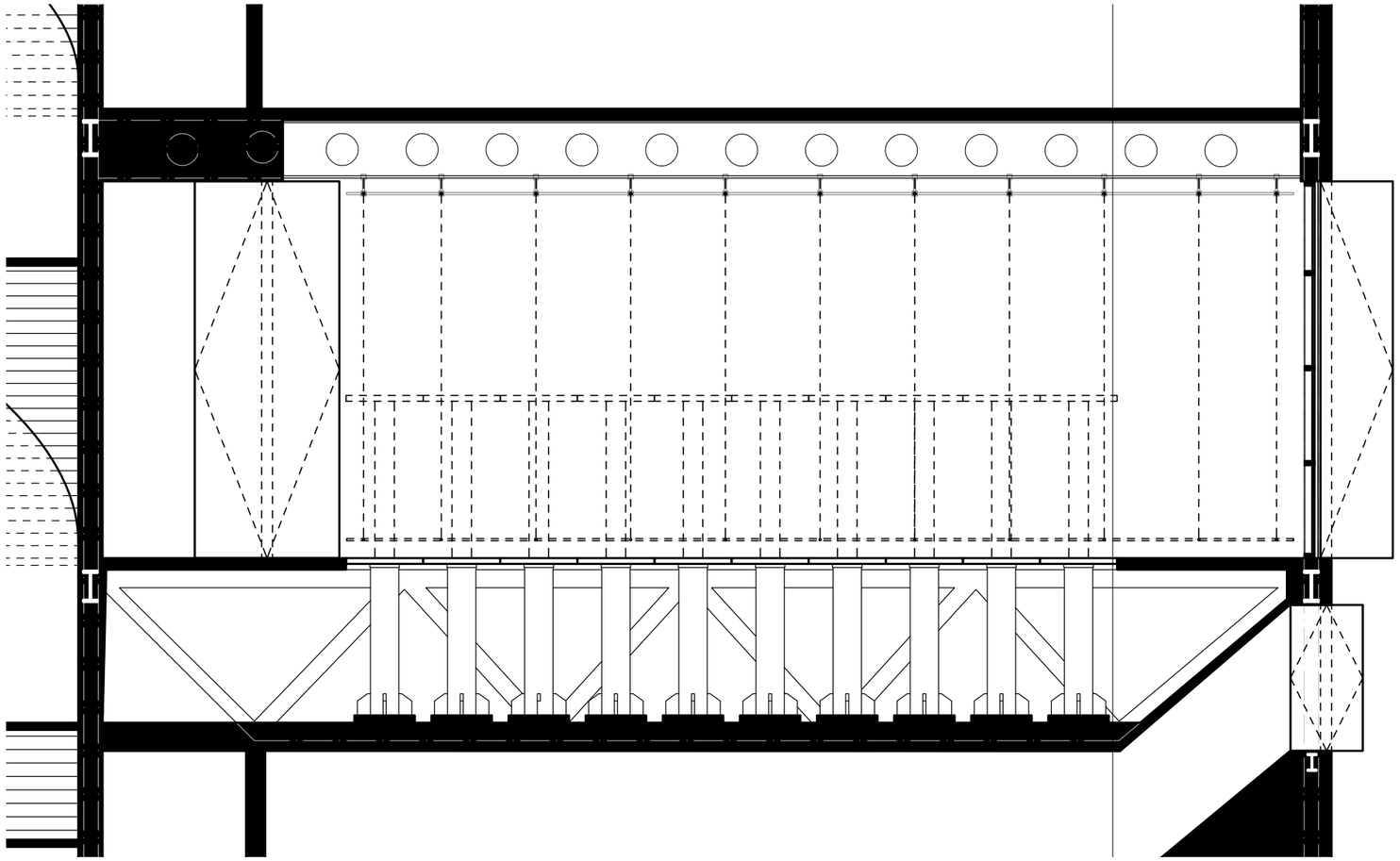




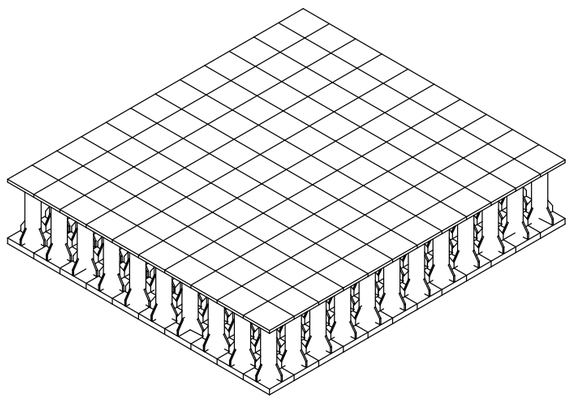


THE WAVE

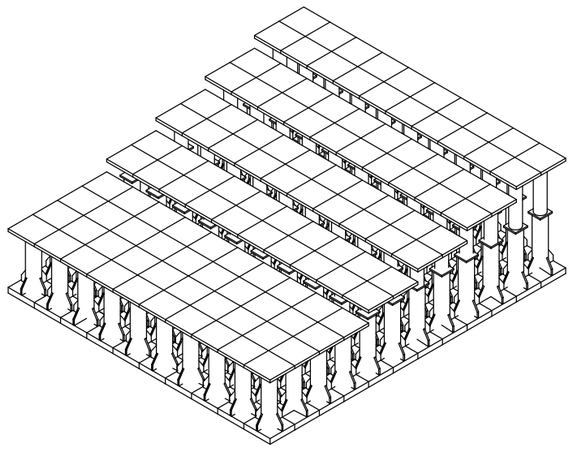
A Reconfigurable Space.



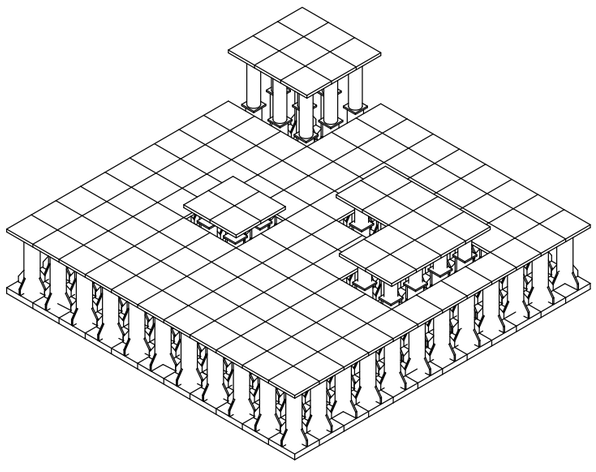
A Reconfigurable Space.



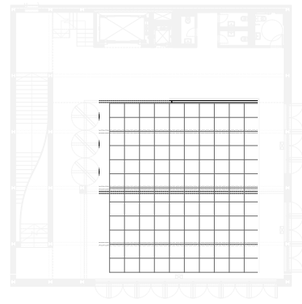
From Flat...

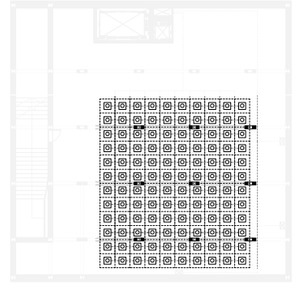


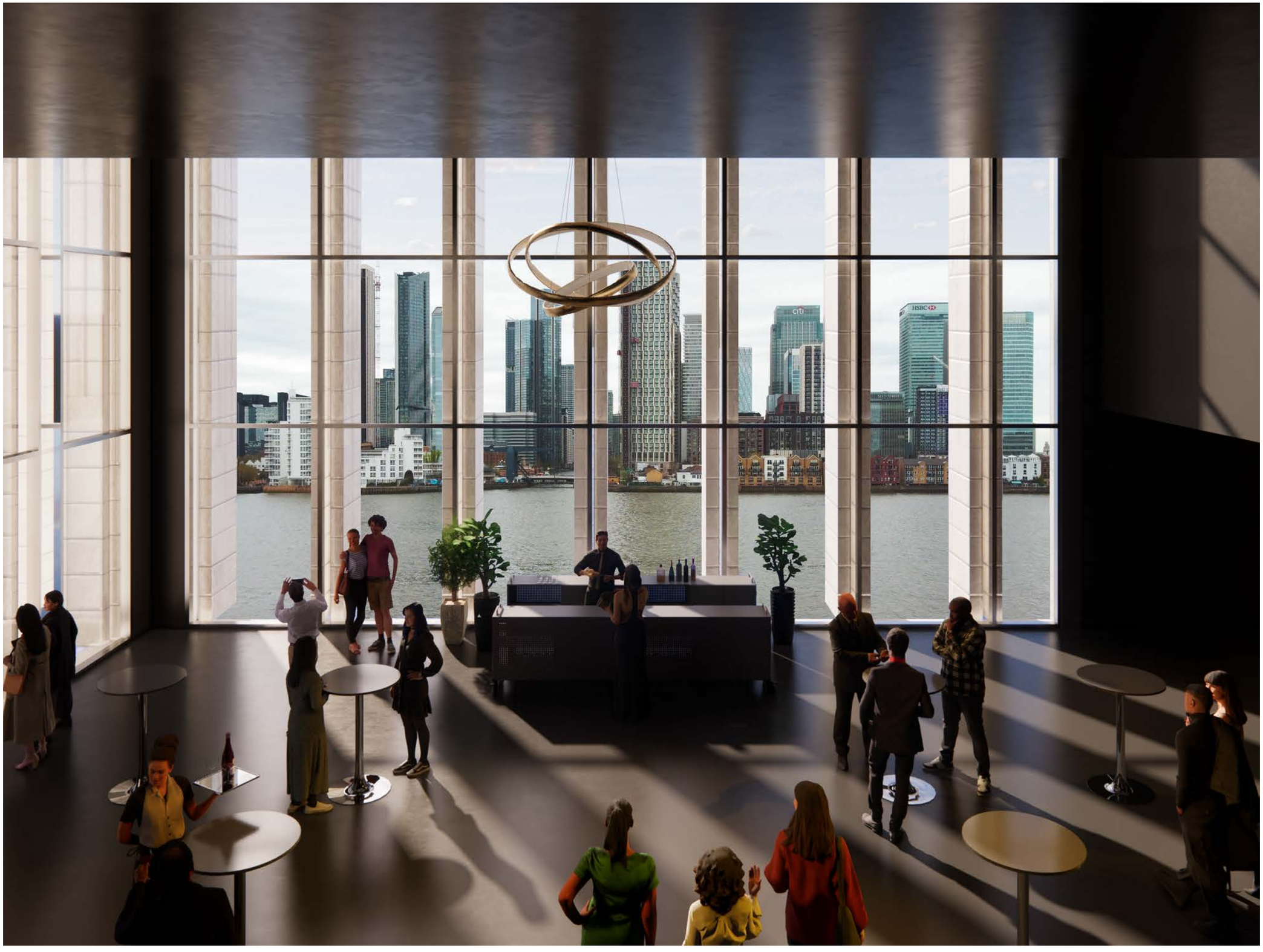
To Seating Configurations



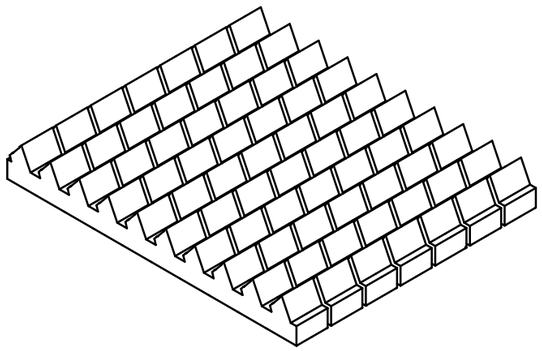
or Stage Configurations





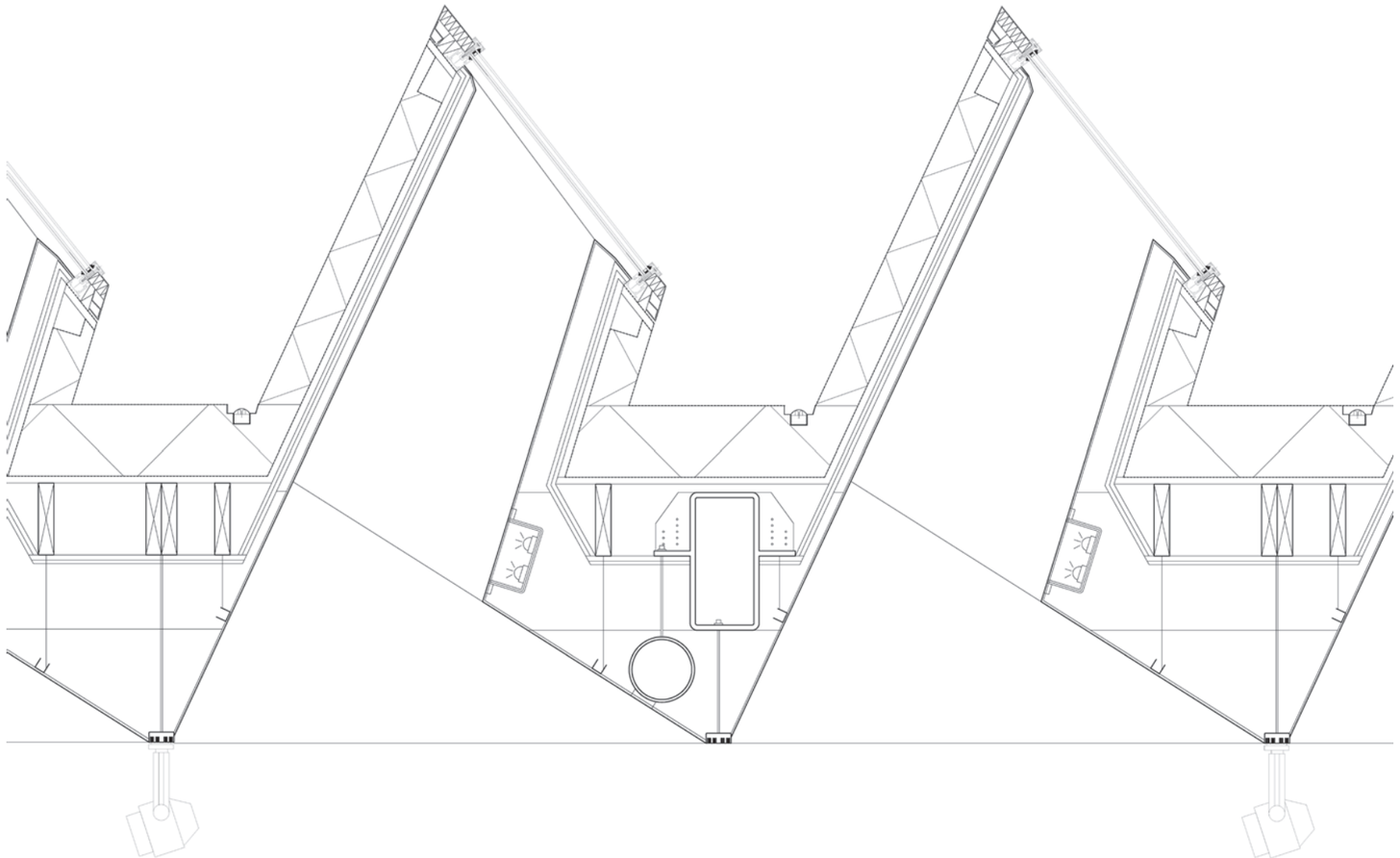

HSBC

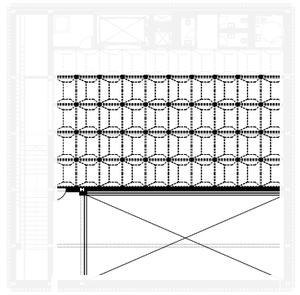

HSBC

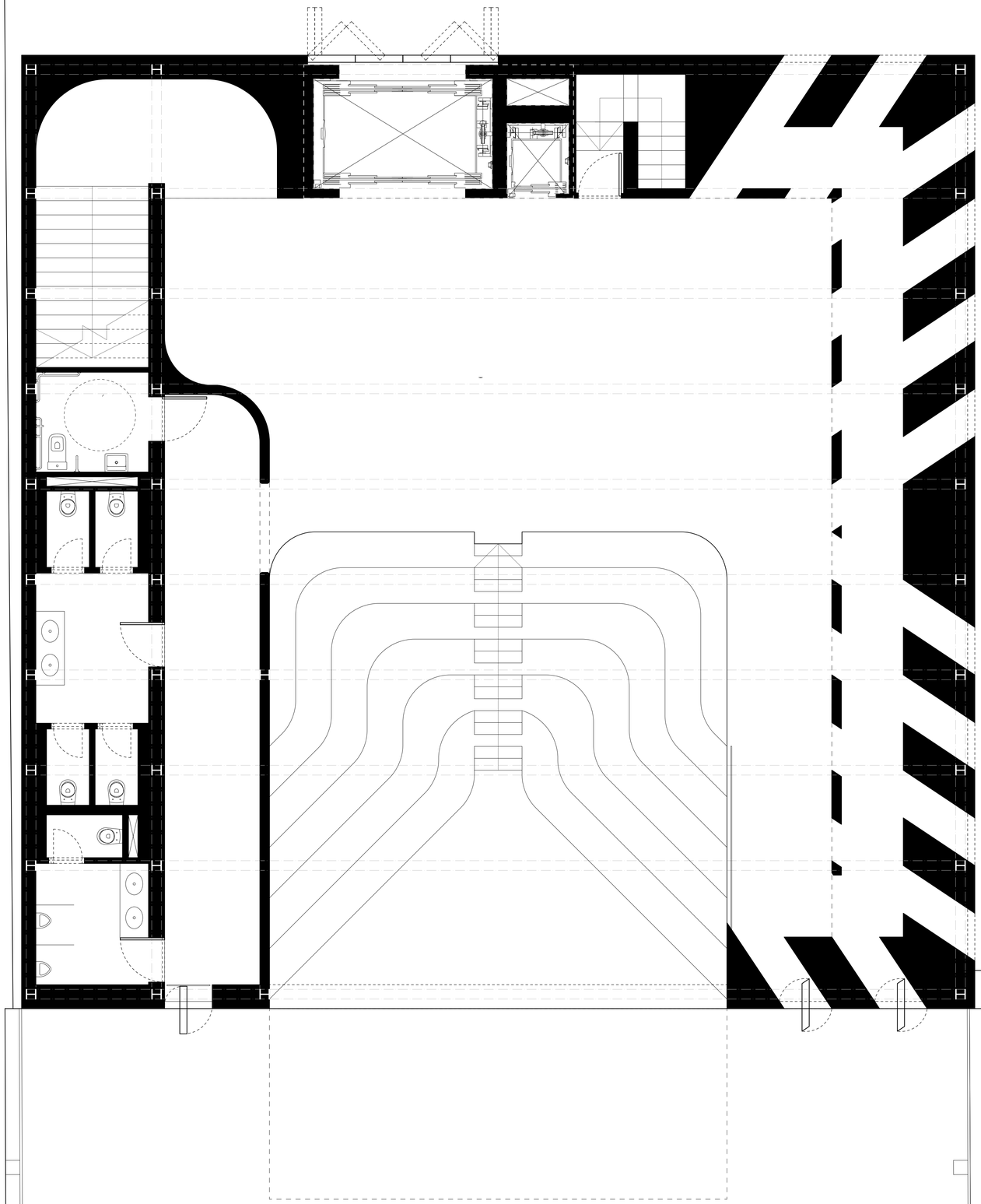


THE SKY

Harnessing Natural Light





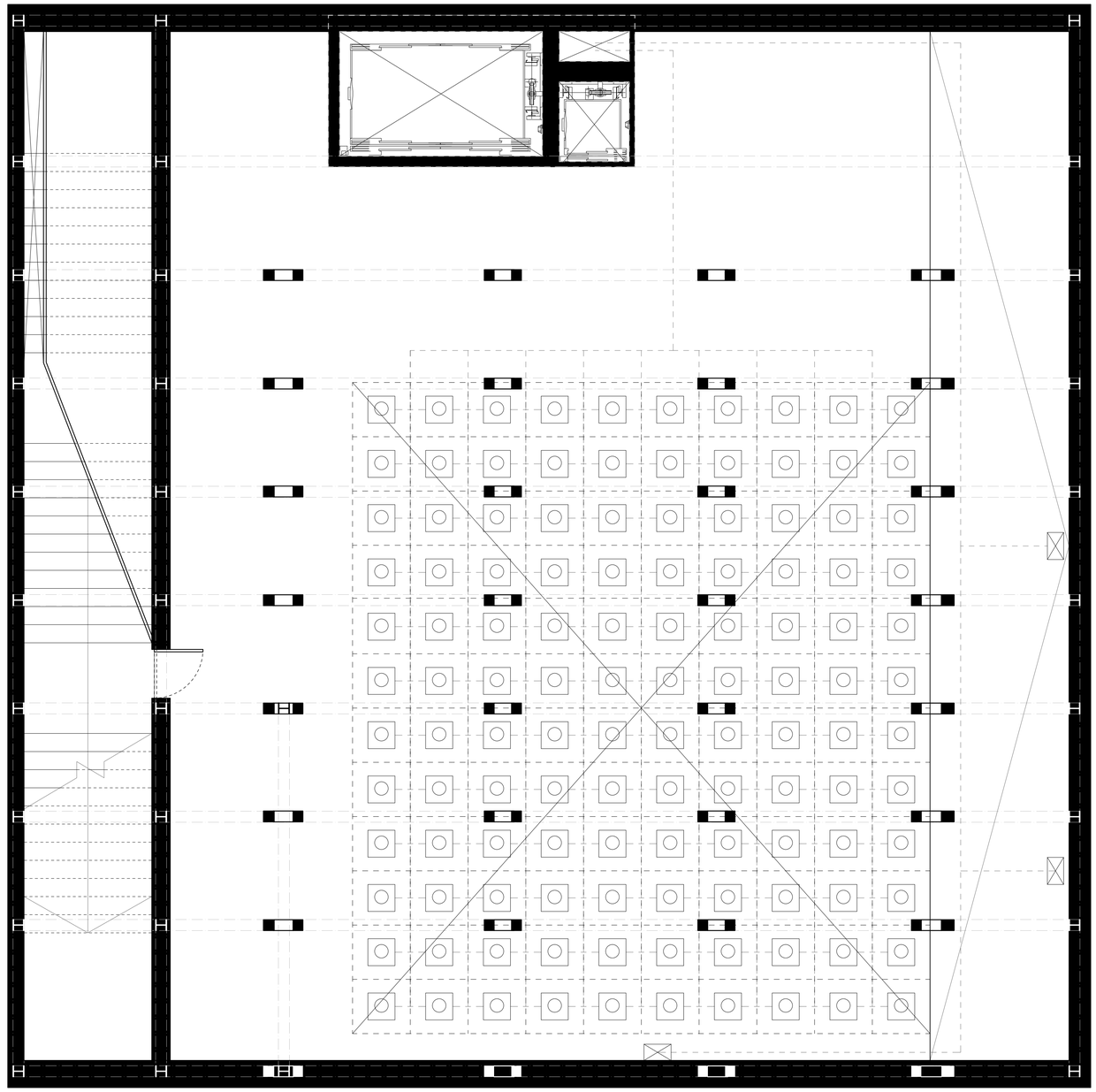


Ground Floor Plan

1:50 @A1

1 m

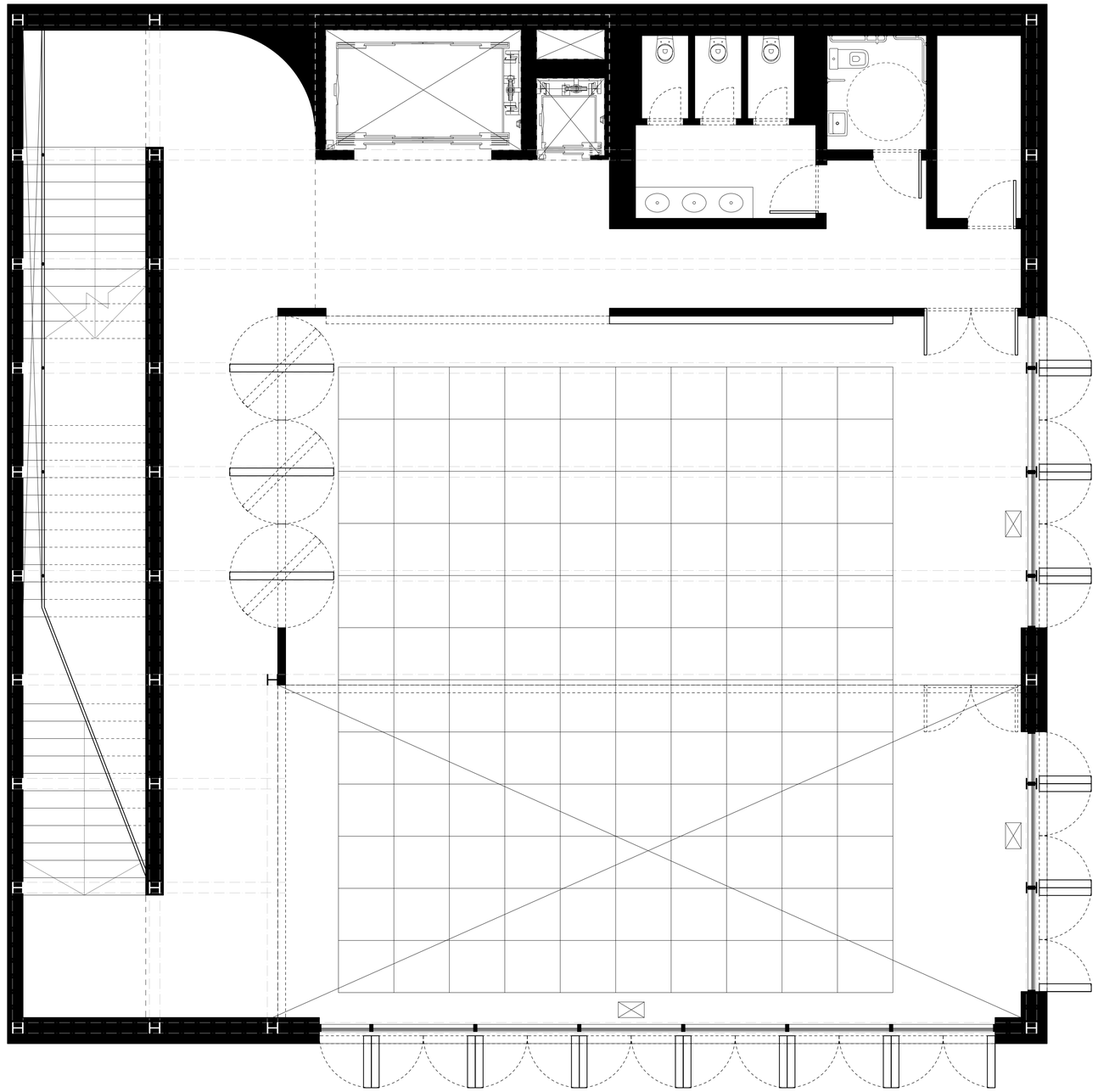
5 m



0.5 Floor Plan (Service Floor)

1:50 @A1

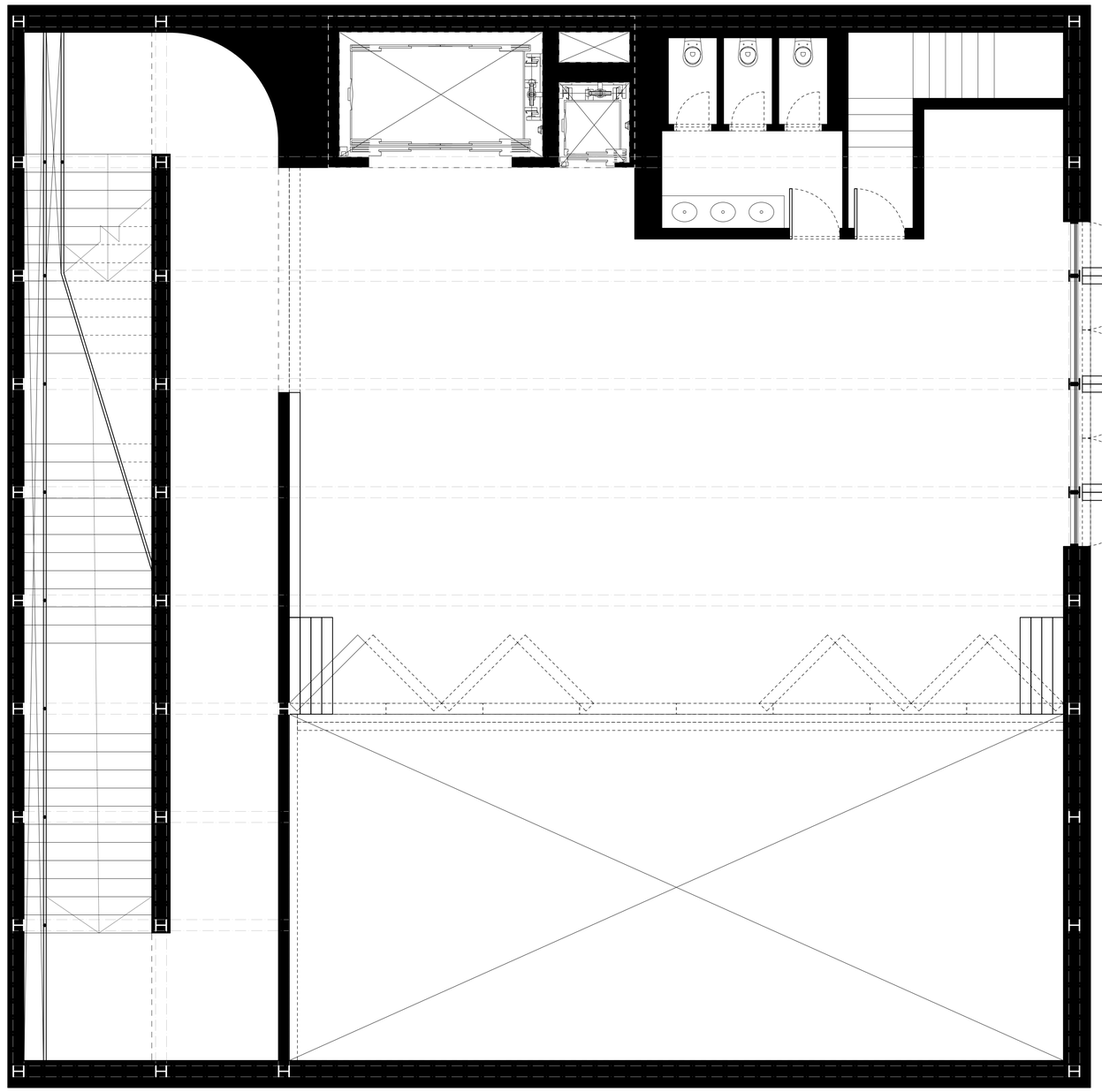
1 m 5 m



First Floor Plan

1:50 @A1

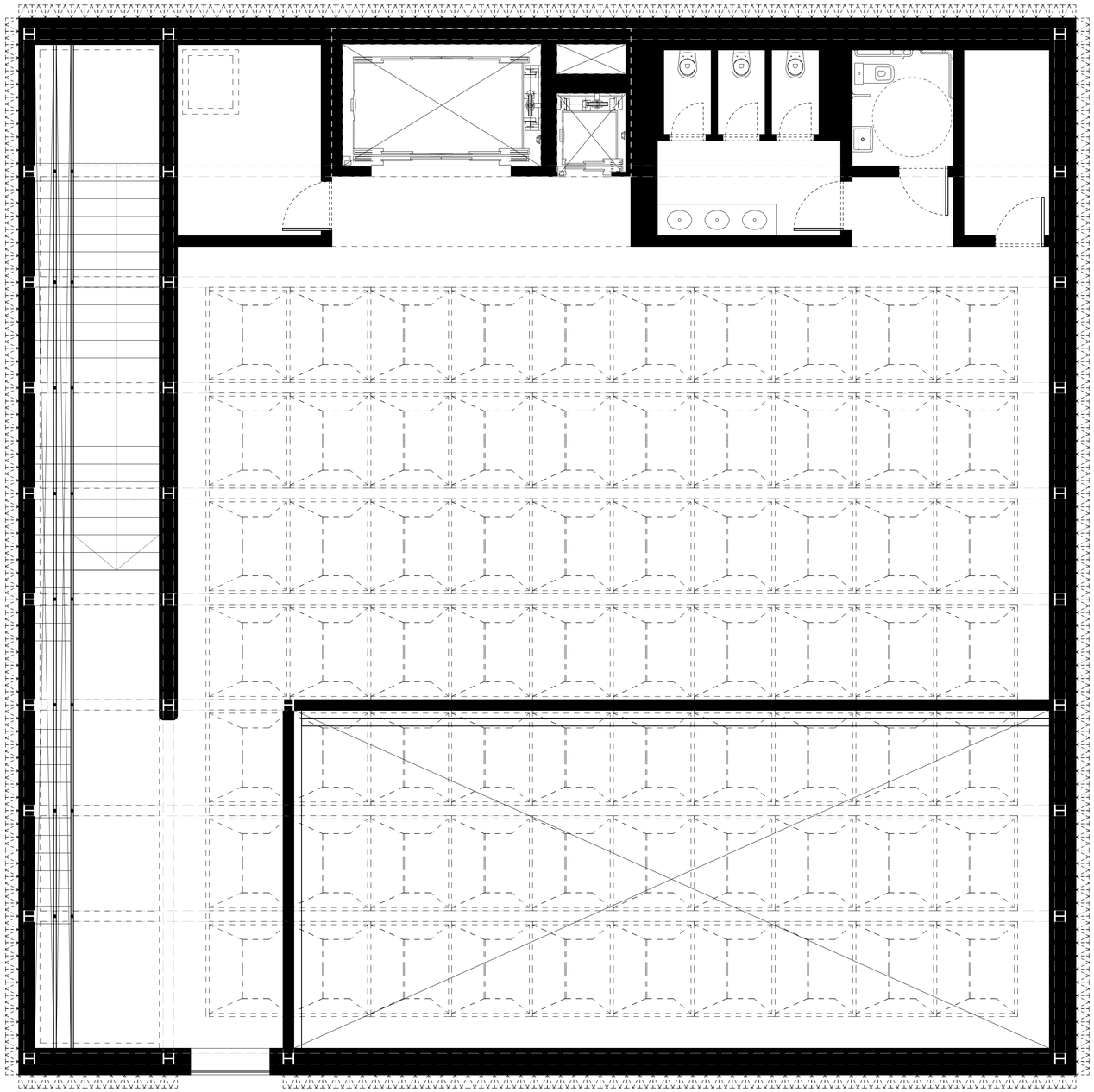
1 m 5 m



Second Floor Plan

1:50 @A1

1 m 5 m



Thrid Floor Plan

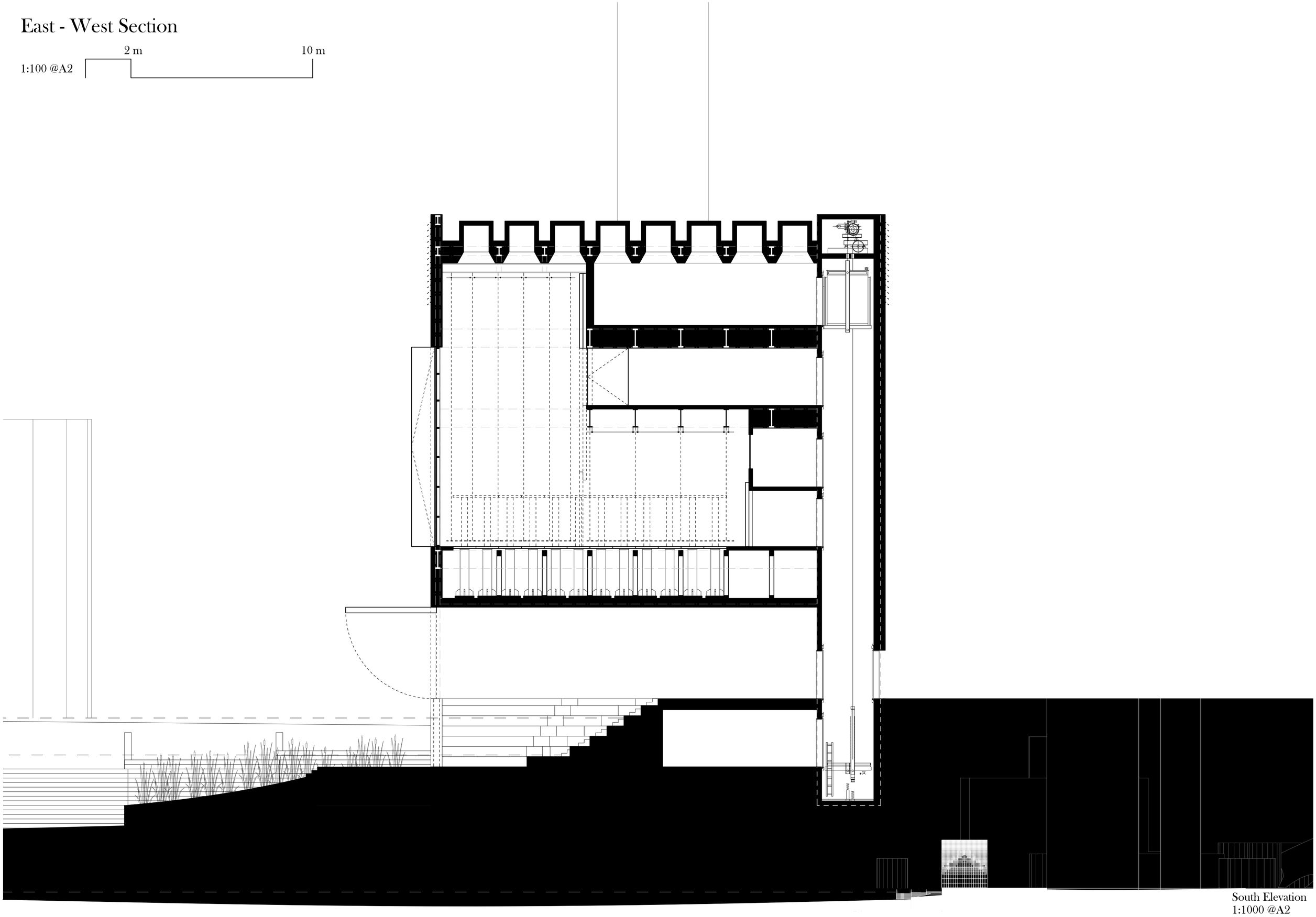
1:50 @A1

1 m 5 m

East - West Section

2 m 10 m

1:100 @A2

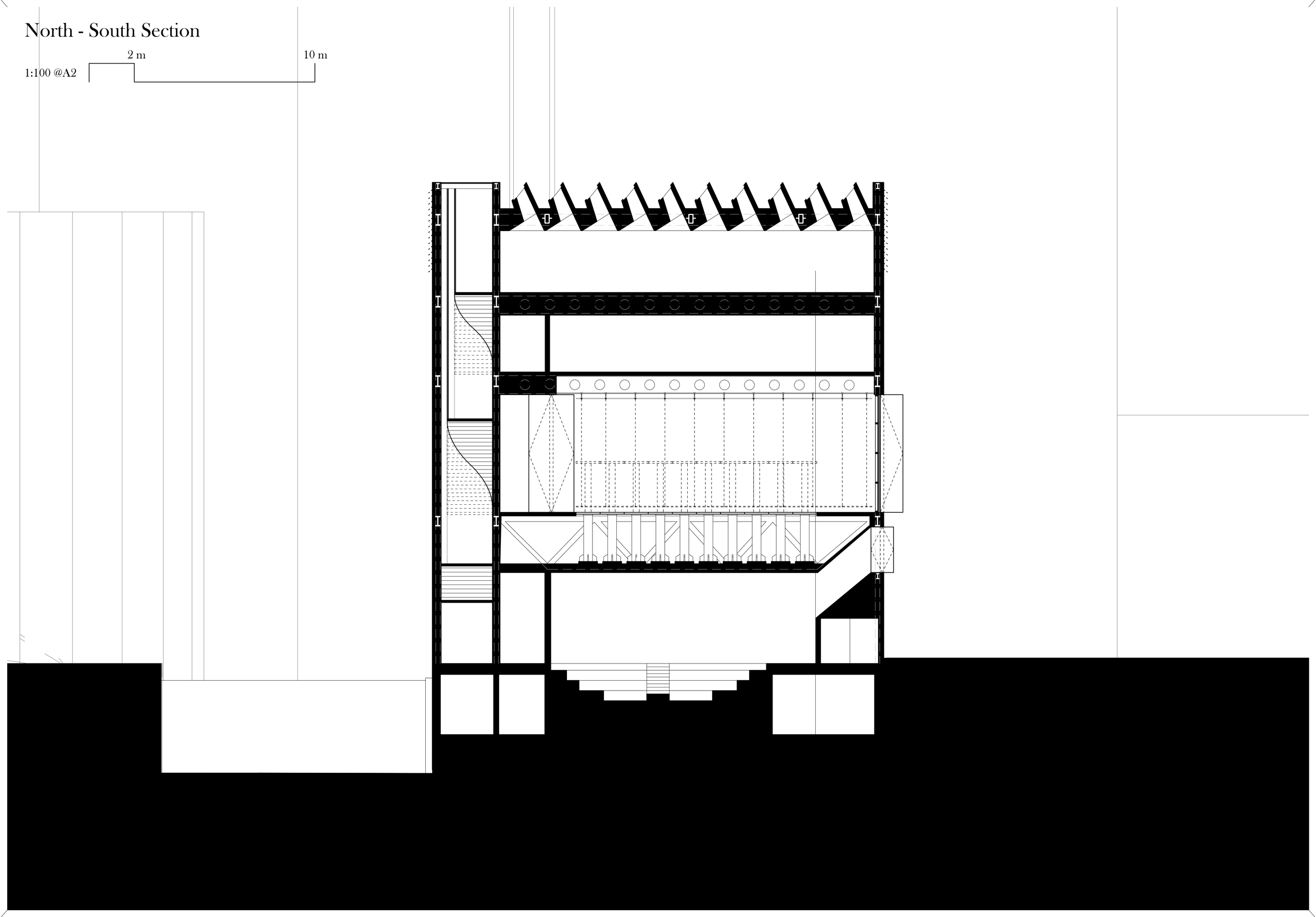


South Elevation
1:1000 @A2

North - South Section

2 m 10 m

1:100 @A2



North Roof Lighting

01. 200x400 Rectangular Hollow Section
02. Flexible Lighting Rail System
03. Hidden Ventilation System
04. Suspended Ceiling
05. Integrated LED Lights (For Low light and atmospheric effect)
06. Drainage System
07.Prefab Wooden Structure and Paneling
08. Ridged Foam Insulation
09. Water Vapor Barrier
10. Skylight

Kinetic Media Façade

11. Parapet Flashing
12. 152.4 x 88.7 Universal Column
13. Computerised Smart Valve
14.Hydraulic Tile Display System
15. Custom 250 x 250 Kinetic Tile

Interior Surface

16. Recessed Celing Light
17. 30 x 30 Metal Wall Stud
18. Gypsum Plasterboard
19. Surface Wall Finish (Paint)

Interior Surface

16. Recessed Celing Light
17. 30 x 30 Metal Wall Stud
18. Gypsum Plasterboard
19. Surface Wall Finish (Paint)
20. 3 Layered CLT Flooring (Durable Vinyl Floor in Performance Spaces)

Facade Opening

21. Curtain Wall System
22. Glazing
23. 199.4 x 492 Universal Beam
24. HAFELE - System 3 Top Pivot
25. Terracotta Tile (Processed London Clay sorced from Site)
26. Cement Bonding Coat
18. Gypsum Plasterboard
27. Rigid Foam Insulation
28. HAFELE - System 3 Bottom Pivot
29. 120 x 60 Rectangular Hollow Section Steel Frame

Facade Cladding

30. EcoCrete Panel
31.Horizontal Profile Railing System - Hidden Fixing Clip (C Clip), TU-S Blind Fasterner (Undercut Anchor)
32. Vertical Profile Railing System
33. Air Cavity
34. Support Bracket
35. Insulation (Rockwool)
36. Weather Resistant Membrain

Performance Space

37. Flexible Lighting Grid System
38. Sound Proof Insulation Panels
39. Ventilation System
40. 800 x 250 Cellular beams
41. Fire Sprinkler System
42. Precast Concrete Flooring Slab
43. Hydraulic Dynamic Performance Floor System

Ground Floor Build up

44. Sheet Piling
45. Stone Floor Tile
46. Concrete
47. Sand
48. Compacted Aggregate
49. Native Soil (London Clay)

Section Detail

1:20 @ A2

0.5 m 2 m