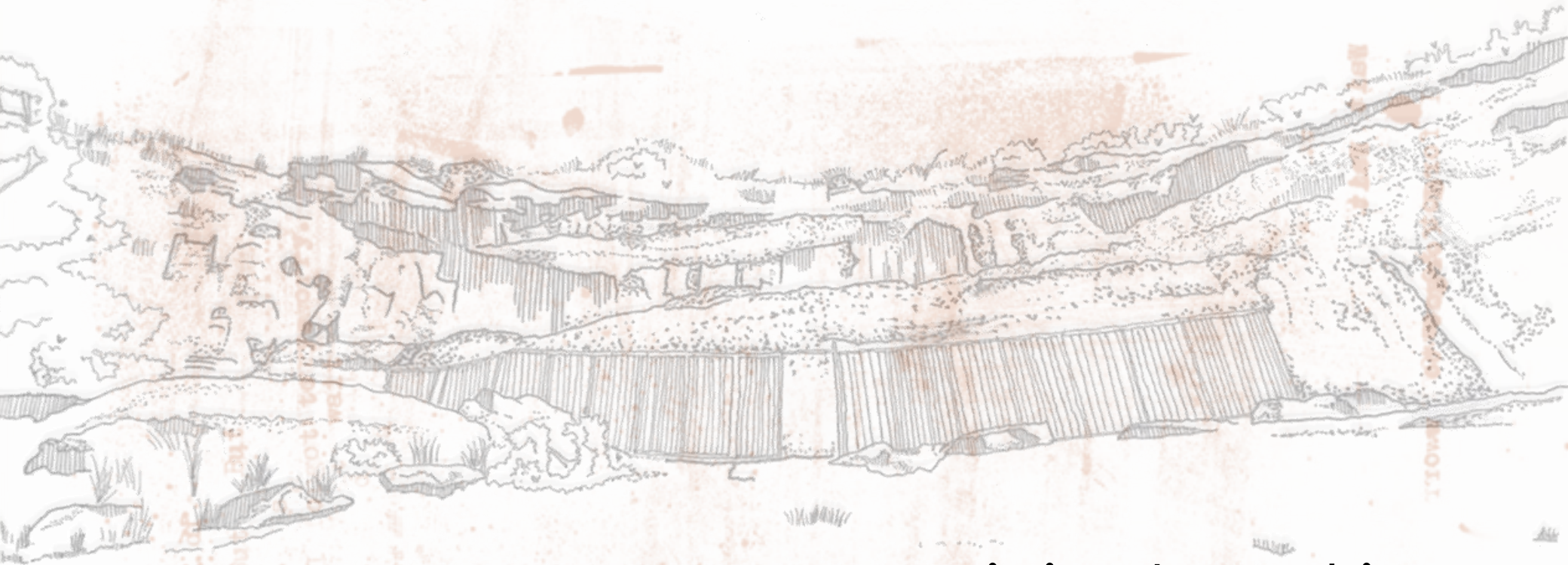




consanguinient markings

A crypticarium for the Wonderwerk Cave near Kuruman, Northern Cape.



Declaration of authorship:

This dissertation is submitted in partial fulfilment of the requirements for the degree Masters in Architecture. All the work contained in this document is my own except where otherwise acknowledged.

**Department of Architecture, Faculty of Natural and Agricultural Sciences,
University of the Free State.**

Mieke Badenhorst | 2019381926 | miekebadenhorst01@gmail.com | 083 825 2760

Supervisors:

Prof. J.D. Smit

P. Smit

Dr. H. Auret

Declaration of original authorship:

The work contained in this dissertation has not been previously submitted to meet requirements for an award at this or any other institution of higher education. To the best of my knowledge, this dissertation contains no material previously published or written by another person except where due reference is made.

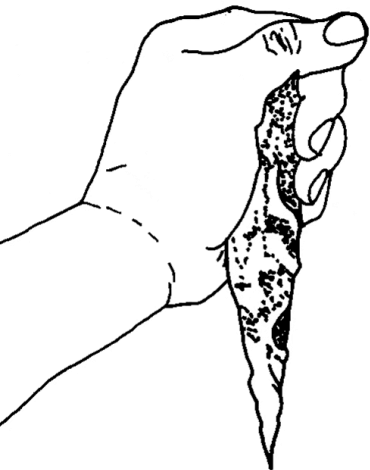
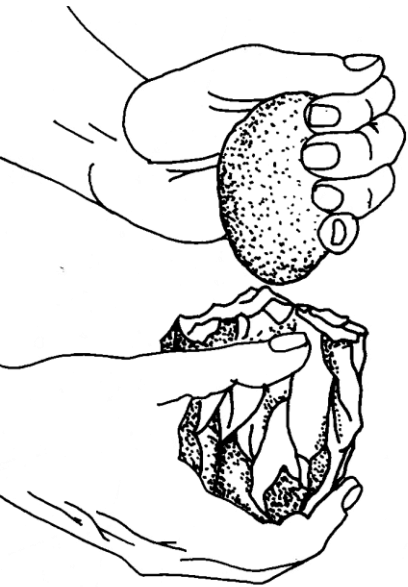
Acknowledgements:

First and foremost, to the Father, the Lord of my life, and original Architect I am forever grateful, for without God this dissertation would not have been possible. Through His strength and peace, He provided me, I was able to finish this year with great joy in my heart.

To my loving parents, Tess and Stephen Badenhorst, and my siblings, Nadia and Ruben Badenhorst, for supporting me and listening to me when I needed someone to talk to.

To my friends, thank you for putting up with all the emotions this year has brought me and for always sharing encouraging words and loving support.

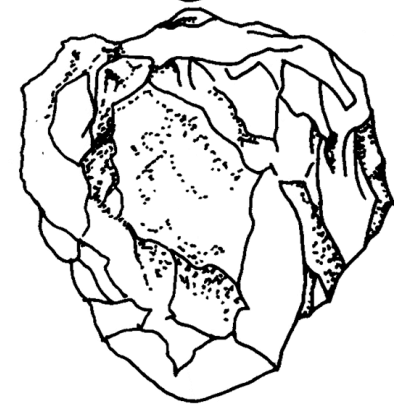
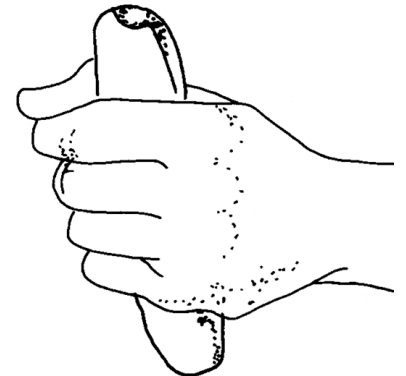
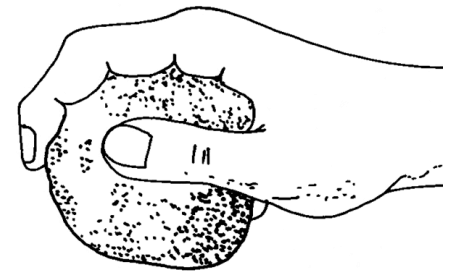
Finally, my supervisors, Prof. Jan Smit, Prof. Petria Smit and Dr Hendrik Auret for helping me to improve where possible and guiding me through this project.



ARCHAEOLOGY

Paths
Winding their way
stop short at cave openings.
Words
Written on plaques
Bear witness to the unseen past
Crying themselves hoarse
In deserted towns
Crazy-like strike against the walls.
Far far away
Beyond the rim of lost civilizations
Silence suddenly rebounds
And reverberates.

(Nasir, 1975: Online)



ABSTRACT

Contemporary discourse in architecture has ignited a contentious discussion surrounding the ethical considerations of constructing architectural interventions on culturally and historically significant archaeological sites. This debate often centres on the potential loss or distortion of the intrinsic historical and cultural values inherent to these sacred locations, as highlighted by Sechaba Maape.

In a country grappling with a history of suppressing indigenous knowledge systems, how can archaeology's propensity for revealing and making sense be augmented by post-colonial Afropolitan poetics sedimented in an architecture of consanguinity to drive the design of a crypticarium of interpretation for the Wonderwerk Caves in the Kalahari?

The study proposes a crypticarium as an architectural intervention; a novel typology which tries to draw near a deeper ground sustaining both the awe, hiddenness, and mystery that cultural sites hold for indigenous groups, and the need for clarity, revelation, and understanding which drives archaeological research.

To drive this kind of design, a study of the architectural implications of Afropolitan poetics will be conducted. Specifically, the writings of Achille Mbembe, Ryan Thomas Skinner, and Sarah Balakrishnan, will be consulted to suggest how a place of thick relationships can be composed, thereby revealing the new design as an architecture of consanguinity.

The crypticarium aims to create a space where obscure information from different cultural narratives can be internalized and integrated through its interpretation and appropriation liberating each visitor to overcome the limitations of their backgrounds and find their way to uncover the multifaceted relationships between mystery and clarity.

TABLE OF CONTENT

EXAMINER'S NOTES i

ABSTRACT

vi

TABLE OF CONTENT vii



01 INTRODUCTION 1



02 LAYING THE GRID OF THEORETICAL DISCOURSE 13



03 DIGGING THE SITE: MYSTERY AND CLARITY 31



- 1.1 Introduction
- 1.2 The Site
- 1.3 Problem Statement
- 1.4 Unfolding the research question
- 1.5 Client and brief



- 2.1 Introduction
- 2.2 Rethinking archaeological sites in South Africa: A phenomenological perspective
- 2.3 Phenomenology as through *Afropolitanism*
- 2.4 A Relational Thickening
- 2.5 An Architecture of Consanguinity
- 2.6 Touchstone
- 2.7 Conclusion



- 3.1 Introduction
- 3.2 Macro-Site Analysis
- 3.3 Meso-Site Analysis
- 3.4 Micro-Site Analysis
- 3.5 Alternative Site Analysis
- 3.6 Mapping the coordinates

TABLE OF CONTENT

04 EXCAVATION 1: DESIGN STRATEGY 61



- 4.1 Introduction
- 4.2 Clarifying A Design Strategy Of Consanguinient Architecture
- 4.3 Concepts
- 4.4 Precedent Studies
- 4.5 The *crypticarium*
- 4.6 Conclusion

05 EXCAVATION 2: DESIGN DEVELOPMENT 83



- 5.1 Introduction
- 5.2 Initial reaction
- 5.3 Further development
- 5.4 Conclusion

06 EXCAVATION 3: UNEARTHING THE CRYPTICARIUM 97



07 TECHNICAL REPORT 127



- 7.1 Introduction
- 7.2 Construction Approach
- 7.3 Construction systems and Materiality
- 7.4 Systems
- 7.5 Conclusion

CONCLUSION 145



- Conclusion
- Reflection

REFERENCES 147





CHAPTER

01



INTRODUCTION

1.1 Introduction	3
1.2 The Site	6
1.3 Problem Statement	7
1.4 Clarifying the research question	9
1.5 Client and brief	11

1.1 INTRODUCTION

Archaeological sites are cryptic places. They offer clues and markings of the distant past. They let us peer into the distant past of the human story, but the images are murky, and our sight is veiled. When peering so far into human history we are venturing into a strangely consanguineous reality; a situation in which every marking may be made by our kin, by a blood relationship of the very distant past. These are everyone's ancestors, and the audience is the world. How should we architecturally draw near such places?

The archaeological process has become central to how we perceive the land we inhabit, influencing our understanding of history and our connection to those around us. It exposes us to forgotten ways of thinking and doing, reviving rituals from the past and challenging our current being in the world.

However, this approach presents a challenge. Archaeological artefacts and findings are often interpreted through a Westernized lens, by which the focus is set on the revelation, clarity and a sense of certainty, imposing a linear appreciation of such complex historical narratives in such mysterious places.

This seeking of certainty has led to a flattening of lived reality, because of our possible misunderstanding of mystery. Maybe, as explained by Franciscan friar Richard Rohr, mystery should be understood as "that which is endlessly knowable" (2011: online video).

When we embrace this appreciation of mystery, then one can be more open when drawing near the cryptic nature of archaeological sites. We can have both mystery and clarity. In the spirit of consanguinity, to illuminate archaeological study more inclusively, it is time that Indigenous perspectives get a say in how Indigenous sites are studied and understood.

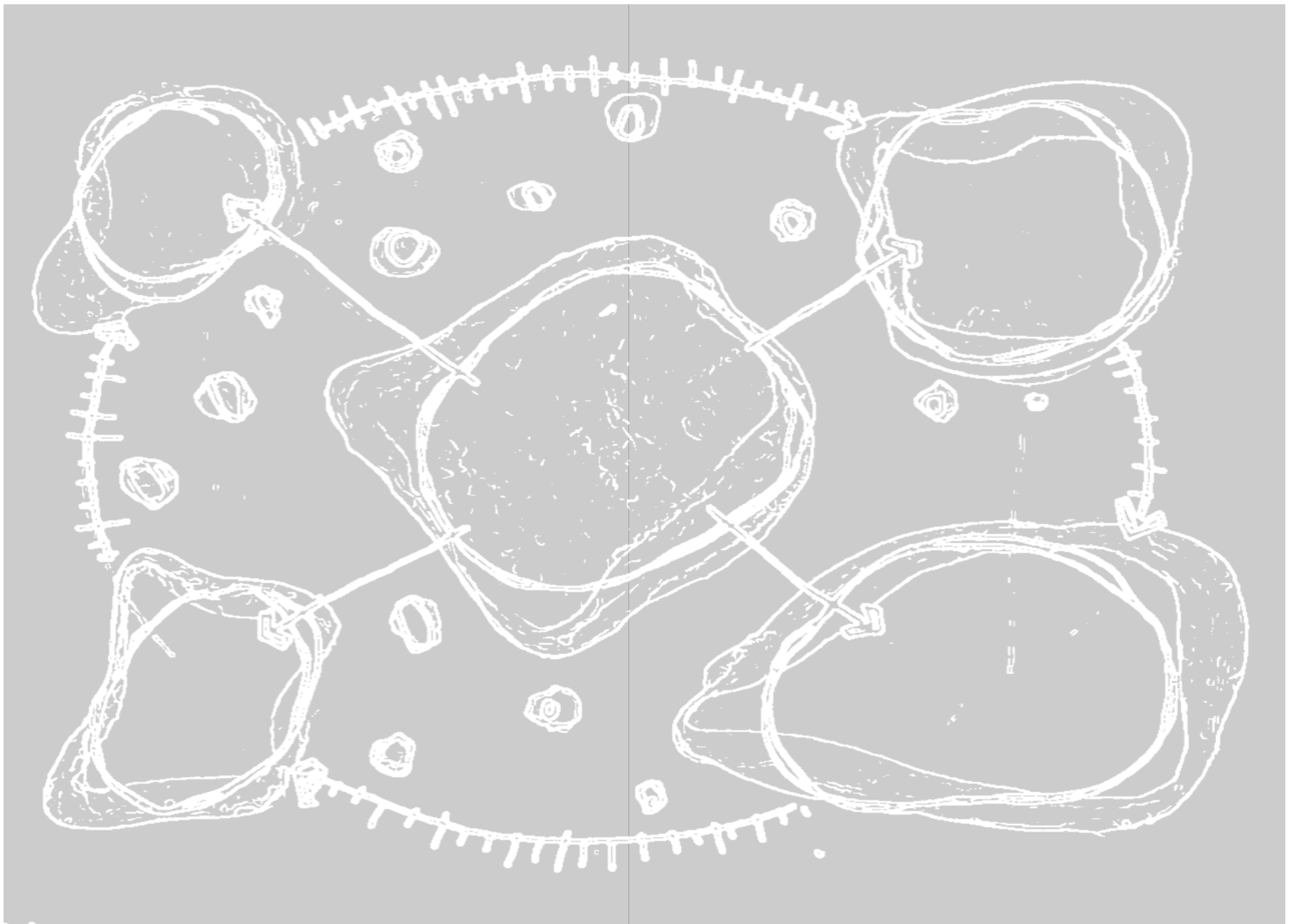


Figure 01: Interpreting the agglomeration of unknown commonalities into a relational thickening: Obscure Markings (author).



Figure 02: Laid out grid of the archaeological findings in the cave at Wonderwerk farm (author).

1.2 THE SITE

The Ghaap Escarpment, which runs along the Northern Cape, is a region rich in significant archaeological artefacts. Located between the small towns of Danielskuil and Kuruman, the Wonderwerk Cave stands out as a renowned archaeological site. This cave has yielded groundbreaking historical discoveries, including fossilized plants, stone tools, and evidence of the oldest controlled fire recorded (ThePast, 2021: Online).

In addition to serving as a research site for students who study and interpret these findings, the Wonderwerk Cave is also open to the public, allowing for visitation daily, as well as acting as a venue for functions. Given the complexity and significance of the historical artefacts found at this site, and its accessibility to the public, I propose that Wonderwerk Cave is an ideal location to introduce the concept of the crypticarium. This will allow us to challenge and transform the experience of visitors, offering a new way of revealing and interpreting the site's rich history.



Figure 03, 04 & 05: Whispers of the stories foretold on the site of the Wonderwerk Farm (author).



Figure 06: The Wonderwerk farm (author).

1.3 PROBLEM STATEMENT

In ensuring the design of the cryptic space facilitates inclusivity, it is essential to comprehend the historical and cultural significance of the existing site. Sechaba Maape, South African architect and academic, emphasizes the crucial nature of accurate and culturally resonant representation in 3D modelling initiatives, and as I believe, architectural interventions on such sites, as discussed in his work "The Drone, the Snake, and the Crystal: Manifesting Potency in 3D Digital Replicas of Living Heritage and Archaeological Places." In this reading, Maape advocates to transcend Western-centric perspectives.

He advocates for a phenomenological engagement with the site and the integration of indigenous knowledge systems to authentically capture the essence and significance of archaeological sites.

According to Maape, archaeological sites are dynamic entities imbued with cultural narratives, memories, and experiences. Therefore, he asserts the necessity of a design approach that facilitates meaningful engagement and immersion, as detailed in the work by Maape, Wessels, Schoville & Wilkins (2022: 405-406).

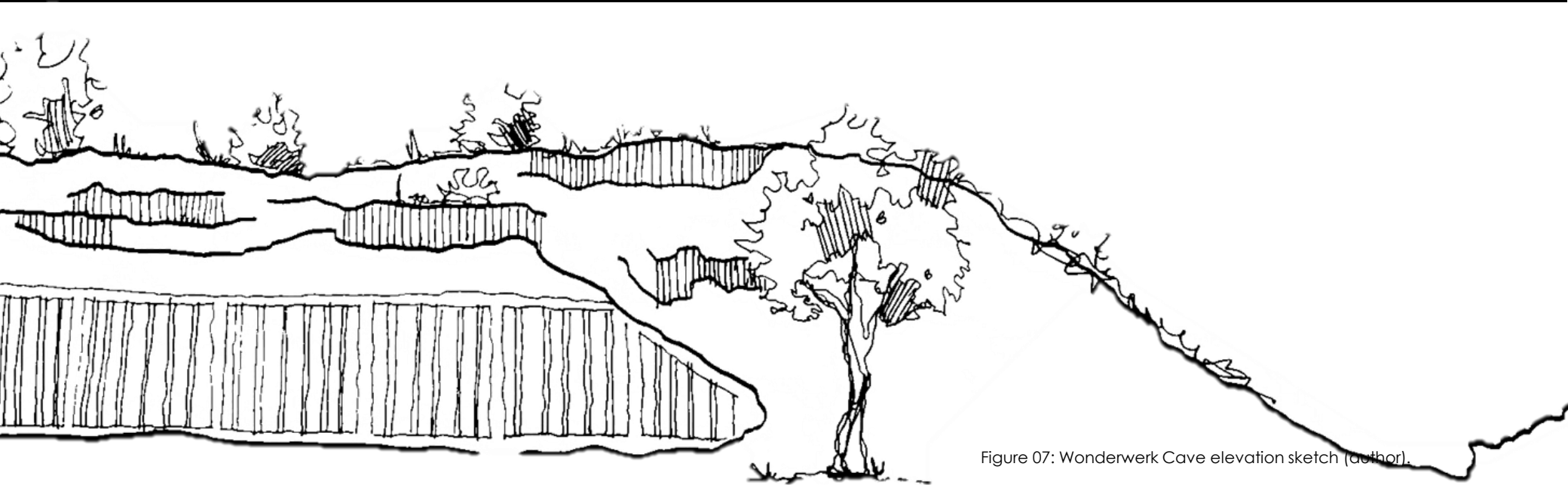


Figure 07: Wonderwerk Cave elevation sketch (author).



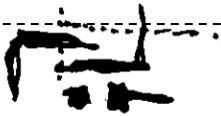
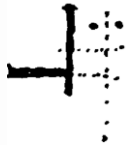
Figure 08: The Wonderwerk Cave on plan (author).

1.4 CLARIFYING THE RESEARCH QUESTION



In a country grappling with a history of suppressing indigenous knowledge systems, how can archaeology's propensity for revealing and making sense be augmented by post-colonial **Afropolitan poetics** sedimented in an **architecture of consanguinity** in order to drive the design of a **crypticarium of interpretation** for the Wonderwerk Caves in the Kalahari?



				
	According to Maape (2022: 405-406) there are certain methods to approaching such significant sites, such as a cave, to ensure it being understood as a place, and not just a space. These objectives introduce ways in which westernization, which is a common occurrence when interpreting indigenous sites, can be prevented.			
			The cave is currently an active archaeological research site, thus drawing from archaeological pedagogies, concepts can be introduced that draws a grid between the human-nature of revealing and sense-making and an architectural design approach.	 
	A cryptic space that endorses a coming together and inclusivity to all because of the possibilities interpreted and appropriated from it.			By dusting away at the meaning of <i>Afropolitan</i> poetics and the potential it holds for developing to an architecture of consanguinity the propensity of archaeology's process and man's need for understanding can be met and challenged when visiting the proposed site of the design. 

1.5 THE CLIENT

The McGregor Museum:

The inception of the McGregor Museum dates back to the 24th of September 1907, driven by the perceived necessity for a cultural institution in Kimberley. This imperative was catalyzed by the benevolent contribution of Mrs McGregor, widow of the former mayor of Kimberley, who generously endowed the museum's establishment (museumsnc, n.d.: Online).

The Wonderwerk Cave currently operates as a satellite of the McGregor Museum. The integration of the cave within the administrative purview of the McGregor Museum is poised to enhance its visibility and accessibility to the public sphere, thereby facilitating heightened engagement and appreciation of the site's historical and archaeological significance.

Vision:

"To know and conserve the past and the present for the future"



Figure 09: Images depicting the visions of the McGregor Museum (museumsnc, n.d.: Online).

Mission:

"To research and conserve the natural and cultural history and diversity of the Northern Cape and promote an awareness thereof through service excellence"



Figure 10: Images depicting the mission the McGregor Museum sought out to employ (museumsnc, n.d.: Online).

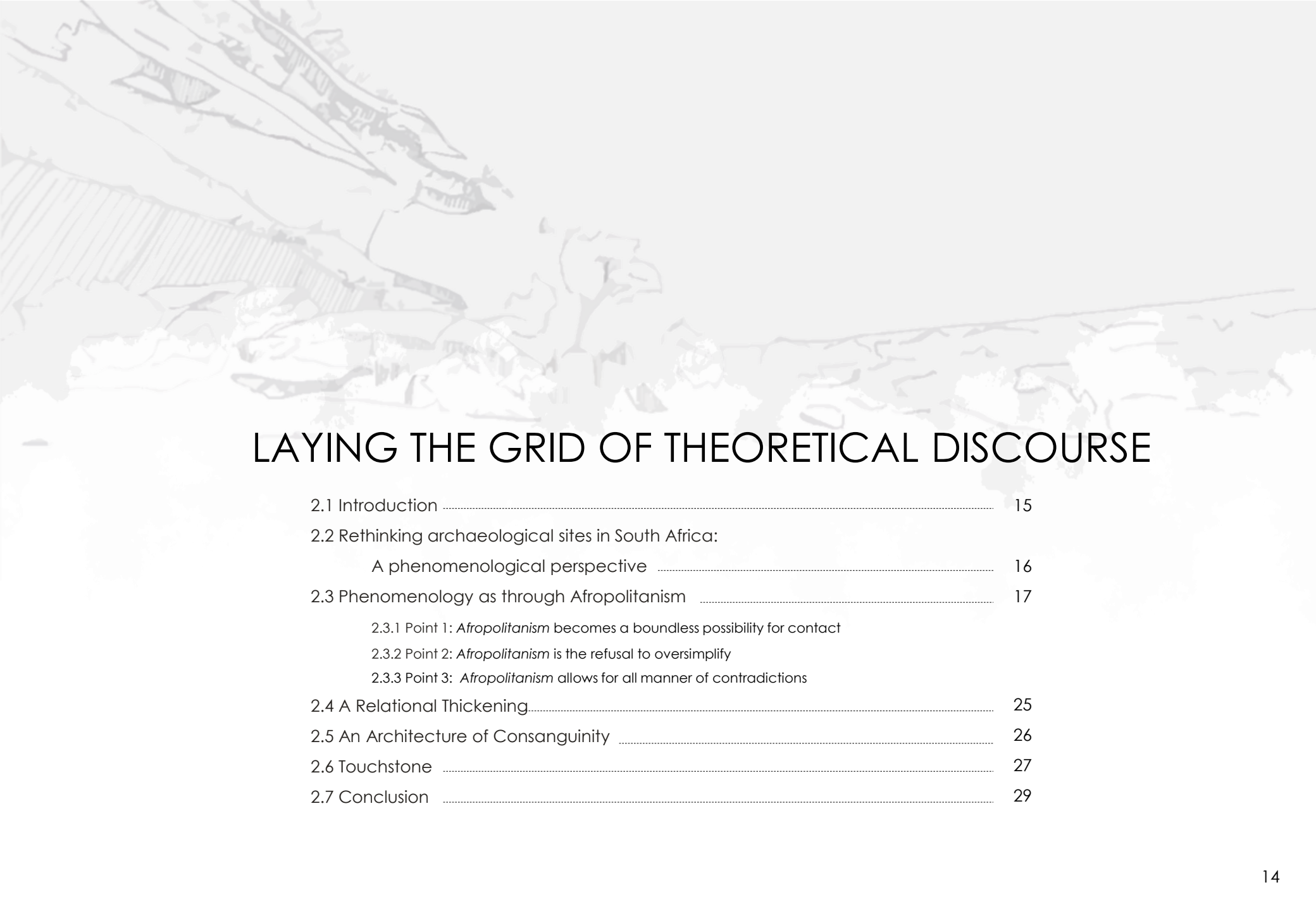
The vision and mission of the museum is well-aligned with the intent of the design proposal.



Figure 11: An image of the cave from the outside: Locked out (author).



CHAPTER 02



LAYING THE GRID OF THEORETICAL DISCOURSE

2.1 Introduction	15
2.2 Rethinking archaeological sites in South Africa:	
A phenomenological perspective	16
2.3 Phenomenology as through Afropolitanism	17
2.3.1 Point 1: <i>Afropolitanism</i> becomes a boundless possibility for contact	
2.3.2 Point 2: <i>Afropolitanism</i> is the refusal to oversimplify	
2.3.3 Point 3: <i>Afropolitanism</i> allows for all manner of contradictions	
2.4 A Relational Thickening.....	25
2.5 An Architecture of Consanguinity	26
2.6 Touchstone	27
2.7 Conclusion	29

2.1 INTRODUCTION

In a country grappling with a history of suppressing indigenous knowledge systems, how can archaeology's propensity for revealing and making sense be augmented by post-colonial Afropolitan poetics sedimented in an architecture of consanguinity To drive the design of a crypticarium of interpretation and appropriation for the Wonderwerk Caves in the Kalahari?

Chapter Two seeks to define the concept of Afropolitan poetics, to explore the idea of consanguinity—a shared connection among all people. By engaging with the writings of Achille Mbembe, Ryan Thomas Skinner, and Sarah Balakrishnan, the chapter will examine how these perspectives offer new ways of understanding Afropolitan poetics and how it introduces an interplay between archaeology and architecture in places of deep historical significance.

This exploration will ultimately highlight the parallels between archaeological practices of revealing and sense-making, as well as the importance of mystery, and architectural experiences in shaping spaces with rich historical narratives, thereby fostering what can be described as consanguineous architecture. In laying the groundwork for this concept, the chapter also lays the foundation for understanding how a crypticarium, a place, can be connected to an architecture of consanguinity.

The chapter will conclude with a touchstone exploration, encapsulating the opposing core objectives of the proposed crypticarium, while clarifying the intricate relationship between archaeology and architecture. This synthesis will illuminate how the two disciplines intersect to create a space that both preserves and interprets the site's layered histories, fostering deeper engagement with its cultural and archaeological significance, yet questioning the methodologies of the archaeological process. This furthers the idea behind the beauty of obscurity and mystery that the crypticarium aims to celebrate.

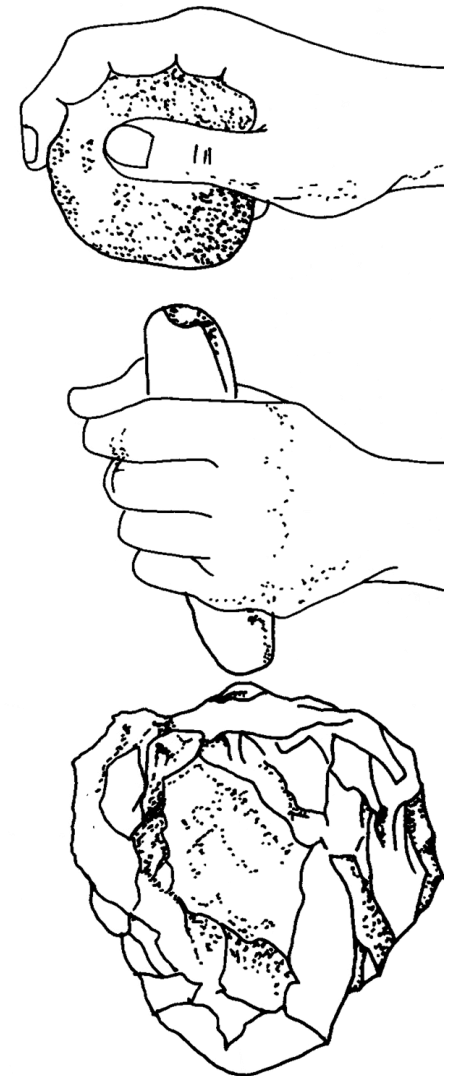
2.2 RETHINKING ARCHAEOLOGICAL SITES IN SOUTH AFRICA:

A PHENOMENOLOGICAL PERSPECTIVE

Archaeological knowledge functions as a crucial medium for conveying information and interpretations to the public. However, this process is inherently shaped by the perspectives and interpretive frameworks of those who unearth and analyse historical artefacts (Maape et al., 2022: 397-398). In the South African context, the legacy of apartheid has further complicated this dissemination, particularly due to the dominance of Western-centric paradigms in archaeological practices. These paradigms often impose a Eurocentric perspective on non-Western artefacts and spaces, which diminishes the complexity and richness of their historical significance. This issue stems from the fact that archaeological research has traditionally been conducted within frameworks that privilege Western methodologies and viewpoints.

As Maape et al. (2022) argue in their work "The Drone, the Snake, and the Crystal: Manifesting Potency in 3D Digital Replicas of Living Heritage and Archaeological Places," such linear approaches frequently fail to capture the multi-dimensional nature of significant sites. In a country like South Africa, which possesses a diverse and layered cultural heritage, there is a tendency to impose contemporary meanings onto these sites. While this may be well-intentioned, it often neglects the complex historical contexts in which these sites were originally shaped and experienced. Maape et al. (2022) suggest that "these places are an entanglement of genealogies; they are rather places where the past, present, and future collapse." This perspective underscores the need to view archaeological sites as dynamic entities that transcend mere historical significance, reflecting a confluence of temporal dimensions. This can be done through certain methodologies that Maape introduces when he speaks about the replicating of such significant sites into 3D models, however, this can be held for architectural interventions on archaeological sites too.

Moreover, it is important to recognize that human perception is inherently shaped by our physical interaction with the world (Ingold 2000). A phenomenological approach to understanding these spaces would allow for the recognition of archaeological sites as meaningful places. Such an approach enables visitors to experience these spaces with their cultural and historical contexts intact, rather than reducing them to static entities of space. Not only does this augment the visitor's experience of these sites, but also preserves the integrity of what was originally there.



2.3 PHENOMENOLOGY AS THROUGH AFROPOLITANISM

According to the Cameroonian historian Achille Mbembe in his work "Afropolitanism" (2020: 58), he conceptualizes Africa as a continent characterized by continuous movement and dynamic interchange. He also describes Africa as a hub of both dispersion and immersion, where movement occurs through trade, artistic expression, and migration (Mbembe, 2020: 58). This notion of dispersion is exemplified by the migration of Africans to various regions outside the continent.

The diaspora communities often adapt to new cultural environments, acquiring citizenship and new identities, thereby integrating African cultural elements into diverse global contexts. In addition to this outward dispersion, intracontinental migration within Africa also illustrates a significant aspect of dispersion. Movement from one African country to another exposes individuals to different life worlds, resulting in the development of varied perceptions and experiences. This internal migration underscores the view that Africa's history is marked by constant movement and cultural interaction (Mbembe, 2020). The phenomenon of immersion complements this narrative. It involves the settlement of individuals from regions such as Asia, Europe, and the Middle East in various parts of Africa for reasons including refuge or missionary work (Mbembe, 2020: 59). These settlers introduce their cultural practices—encompassing dietary habits, fashion, and languages—into the African context. Despite their diverse origins, these individuals often assimilate into African identities, creating a complex cultural landscape. This process highlights the intricate relationship between different cultural backgrounds and African identity.

Mbembe's assertion that "The cultural history of the continent can hardly be understood outside the paradigm of itinerancy, mobility, and displacement" suggests that our understanding of belonging is shaped more by the interweaving of multiple worlds than by mere cultural mixing. This becomes an introduction to the understanding of the concept of Afropolitanism.

Afropolitanism, according to Mbembe (2020: 60), can be defined as an "awareness of the interweaving of the here and there." It is the presence of the elsewhere within the here and vice versa, reflecting a sensitivity to the aesthetics, cultures, and histories that intersect in diverse contexts (Mbembe, 2022: 60). According to Ryan Thomas Skinner, an associate professor of music and African American and African studies at the Ohio State University, in his writings of "Why Afropolitanism Matters." He describes that Afropolitanism functions as a conceptual framework through which we can interpret and engage with the contemporary world (Skinner, 2017: 3).

"Afropolitanism is a particular poetic, or aesthetic, derived from a way of being in the world refusing on principle any form of victim-identity—which does not mean that it is not aware of the injustice and violence inflicted on the continent and its people by the law of the world" (Mbembe, 2022: 60).

To effectively utilize the poetics of Afropolitanism to better understand how this can augment historically significant sites, it is essential to establish a clear understanding of its nature and its three distinctive characteristics.

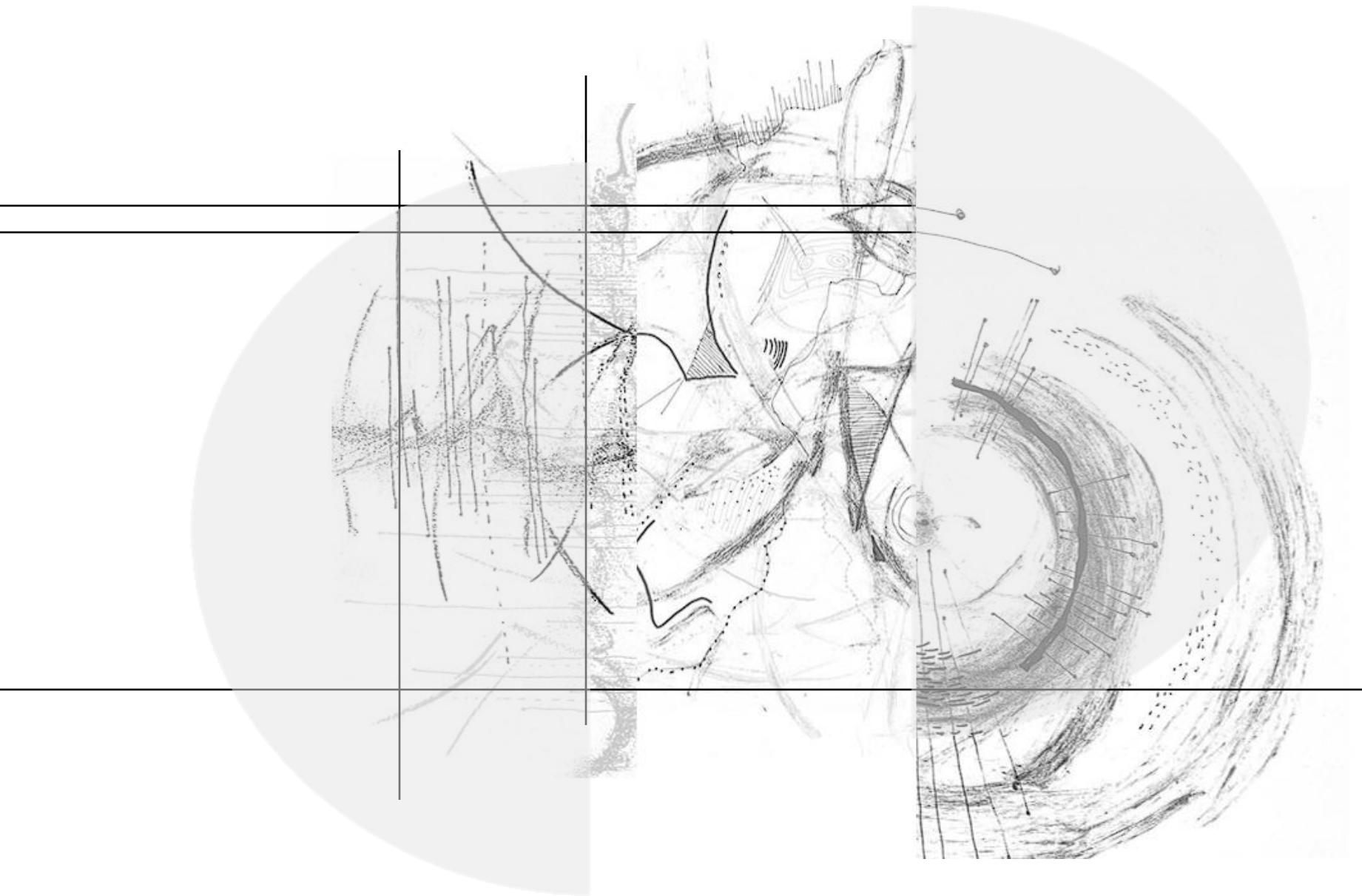


Figure 12: *Afropolitan poetics as through phenomenology* (author).

2.3.1 Point 1: Afropolitanism becomes a boundless possibility for contact (Balakrishnan, 2017: 8)

Afropolitanism, as articulated by Selasi (cited in Balakrishnan, 2017: 8), embodies a contemporary and diverse form of cosmopolitanism that reflects a reimagined African identity. Balakrishnan notes that Selasi describes Afropolitanism as transcending outdated stereotypes, highlighting the success of African diaspora members in various creative fields across global cities. This perspective moves beyond traditional notions of racial identity, embracing a universalism that marks a significant departure from earlier movements rooted in racial solidarity. Consequently, Afropolitanism has become a conceptual framework for scholars analysing cross-cultural exchanges in cities such as Johannesburg and Durban—urban spaces historically defined by their colonial legacies but now reimagined as vibrant centres of cosmopolitan potential.

In the context of post-apartheid South Africa, Afropolitanism has facilitated new forms of engagement and connection, offering an inclusive way of being in the world. It enables individuals from diverse backgrounds and complex histories to engage meaningfully with one another, fostering interactions that transcend conventional boundaries of identity and community. However, this conceptualization is not without criticism. Some argue that Afropolitanism can, at times, oversimplify the intricate historical and socio-political dynamics it seeks to address, portraying them as mere stepping stones toward a post-racial future (Balakrishnan, 2017: 8).

Critics contend that the concept risks presenting an African identity that is sanitized and commodified for cosmopolitan audiences, thus diluting the authenticity and depth of African cultural expressions to align with Western-centric expectations (Skinner, 2017: 6).

Contrary to these critiques, Mbembe asserts that Afropolitanism represents a profound shift in how contemporary Africans experience and interpret their world. He suggests that Afropolitanism is not merely a response to Western frameworks but a deliberate departure from the historical paradigms of earlier African periods, particularly those he describes as the "postcolony" (Skinner, 2017: 11). For Mbembe, Afropolitanism signifies a transformative way of understanding African identity that is not confined by the rigidities of the past.

Adopting an Afropolitan perspective in this dissertation, therefore, does not seek to establish exclusive identity frameworks. Instead, it encourages continuous contact and exchange between individuals, cultures, and ideas. This approach fosters an ongoing process of reconfiguring and reinterpreting one's understanding of self and world, celebrating diversity and incorporating it into one's own lived experience and identity. Afropolitanism, in this sense, offers a dynamic and evolving paradigm that acknowledges and embraces the complexities of contemporary African existence, enabling a richer and more intricate engagement with both local and global contexts.

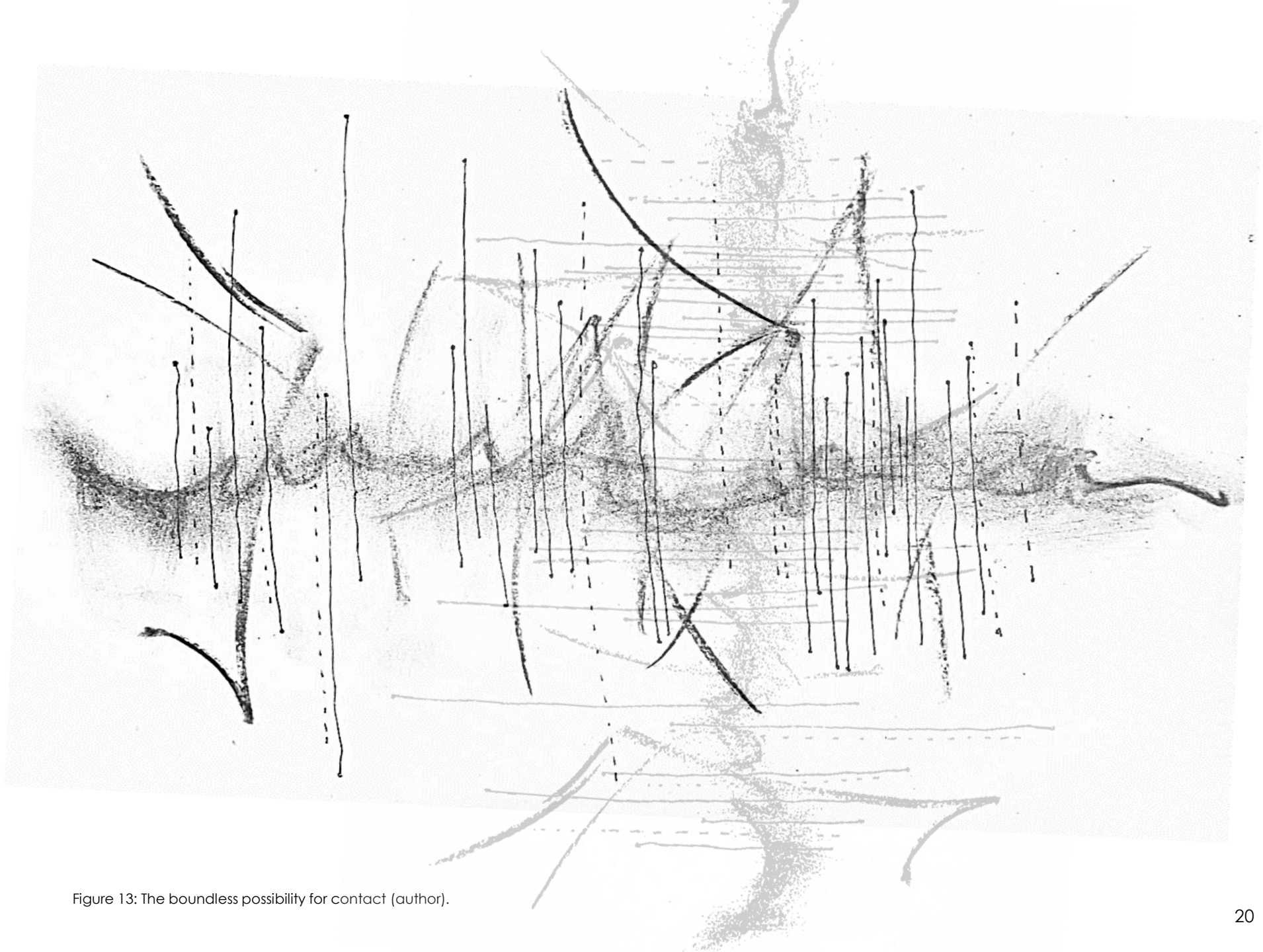


Figure 13: The boundless possibility for contact (author).

2.3.2 Point 2: Afropolitanism is the refusal to oversimplify (Balakrishnan, 2017: 8).

The dynamic nature of Afropolitanism allows for boundless possibilities of contact, as mentioned in point 1, yet it is crucial to recognize that these identities, characterized by constant change, resist simplification. Each individual's cultural and historical background is marked by a unique complexity that defies reductionist interpretations. Thus, "Rather than essentialising the geographical entity, we seek to comprehend the cultural complexity. (Skinner, 2017: 4)" Afropolitans engage with Africa on multiple scales of place and identity, making claims and establishing connections that transcend conventional boundaries (Skinner, 2017: 4).

Skinner articulates that Afropolitanism embodies a rejection of reductive interpretations, advocating instead for an appreciation of the multifaceted cultural complexities associated with Africa. This approach involves engaging with Africa across various dimensions and acknowledging the diverse modes of identification and senses of place that exist (Skinner, 2017: 6). The concept of African identity is profoundly significant, and fully understanding its scope can be both challenging and enriching.

This perspective involves a shift toward outward expression, adaptation, and transformation. Drawing on French historian, Michel Foucault's, idea that institutions and ideologies evolve, Mbembe argues that key elements of postcolonial practices influence the Afropolitan mindset (Mbembe, 2022: 58). He identifies social pluralism and popular culture as central components of the postcolonial experience, essential for comprehending Afropolitanism. According to Mbembe, the postcolonial social landscape is a mosaic of distinct spheres and domains, each governed by its principles, necessitating continuous adaptation and improvisation. This fluidity leads to flexible identities that are strategically adjusted to navigate various contexts, resulting in what Skinner describes as a "complex web of relational thickening" (Skinner, 2017: 17).

In essence, Afropolitanism challenges simplistic notions of African identity by embracing the plurality and dynamism inherent in the postcolonial experience. It encourages a deep engagement with the diverse cultural and historical narratives that shape contemporary African identities, advocating for a comprehensive understanding of the continent's rich and varied realities.

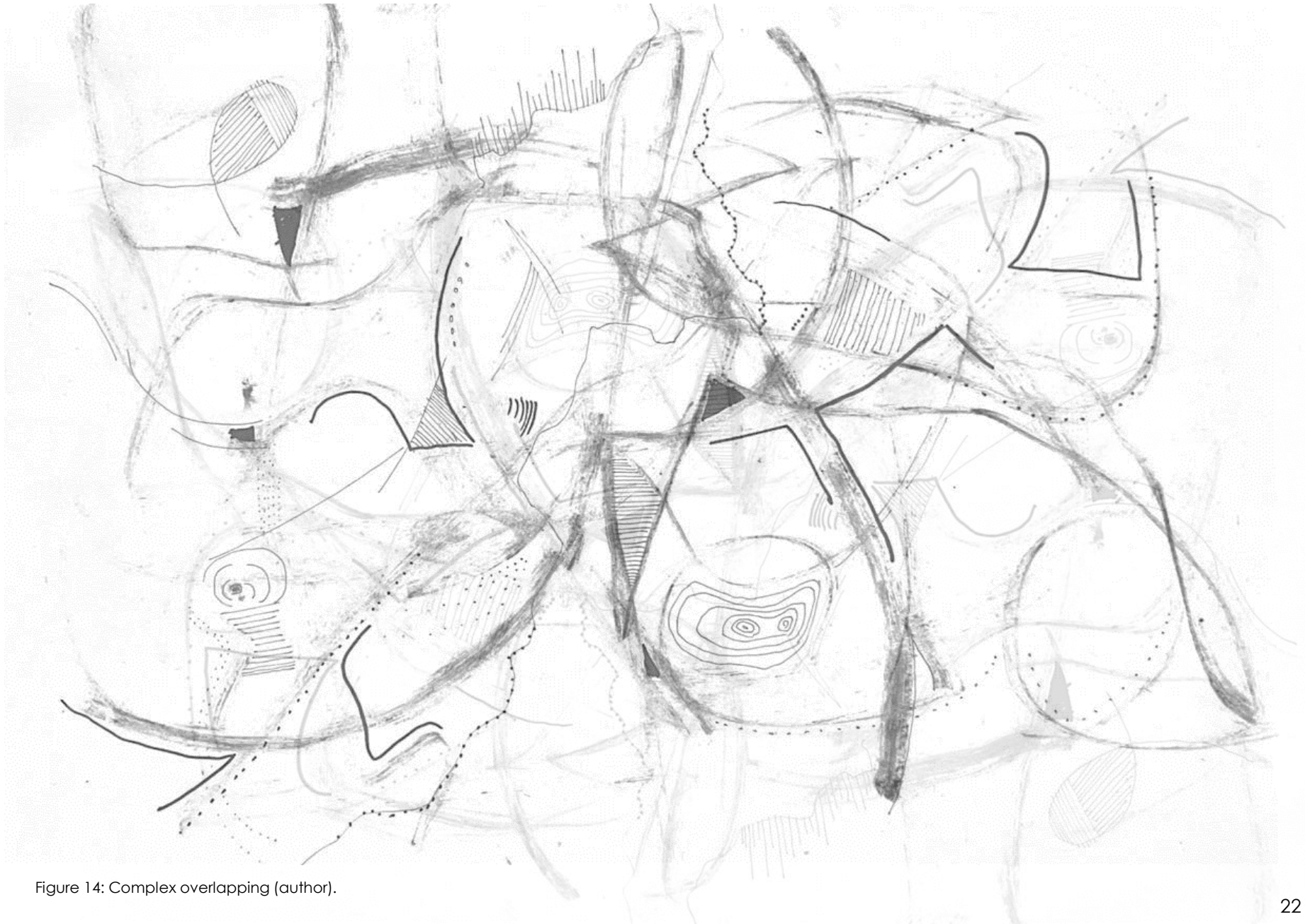


Figure 14: Complex overlapping (author).

2.3.3 Point 3: Afropolitanism allows for all manner of contradictions (Mbembe in Skinner, 2017: 14).

"Our mode of belonging, of existing and inhabiting the world, has historically been characterized not merely by cultural amalgamation but, at the very least, by the intricate interweaving of worlds—a process marked by a gradual, and at times, incoherent negotiation with forms and symbols that we have not freely chosen, yet have managed, as best as we could, to adapt and make our own" (Mbembe, 2020: 59).

As previously mentioned, instead of passively accepting pre-established frameworks—especially in a post-apartheid South Africa, a context profoundly shaped by a complex historical legacy—there arises a potential for articulating a language of extraversion, appropriation, and renewal, enabling individuals to engage critically with the logics and structures of preceding African eras.

According to Mbembe, the twentieth century is defined by what he describes as transnationalisation, representing a postnational turn toward increasingly decentralized authority and significant diaspora formation, both within and beyond Africa. It is from this that the concept of Afropolitanism originates (Mbembe cited in Skinner, 2017: 12).

Afropolitanism, thus, invites a mode of thinking that embraces diversity and juxtaposition, rather than resisting such contradictions based on tradition or comfortability. It arises from a deeper understanding and growing awareness of the complex and dynamic nature of the contemporary African experience. The celebration of both traditional, alongside modern experiences of individuals that commonly contradict one another is welcomed, allowing individuals to form and adapt new identities as they experience the world and new places.

This perspective urges us to recognize and appreciate the various ways in which modern Africans, across diverse backgrounds, actively engage with and shape the world, traversing multiple scales of place and modes of existence (Skinner, 2017: 12).

Rather than being constrained by traditional interpretations imposed by Eurocentric or Western paradigms—an issue that has historically affected South Africa—there is a call for a phenomenological engagement with spaces to create, meaningful places, particularly through the lens of Afropolitan poetics.

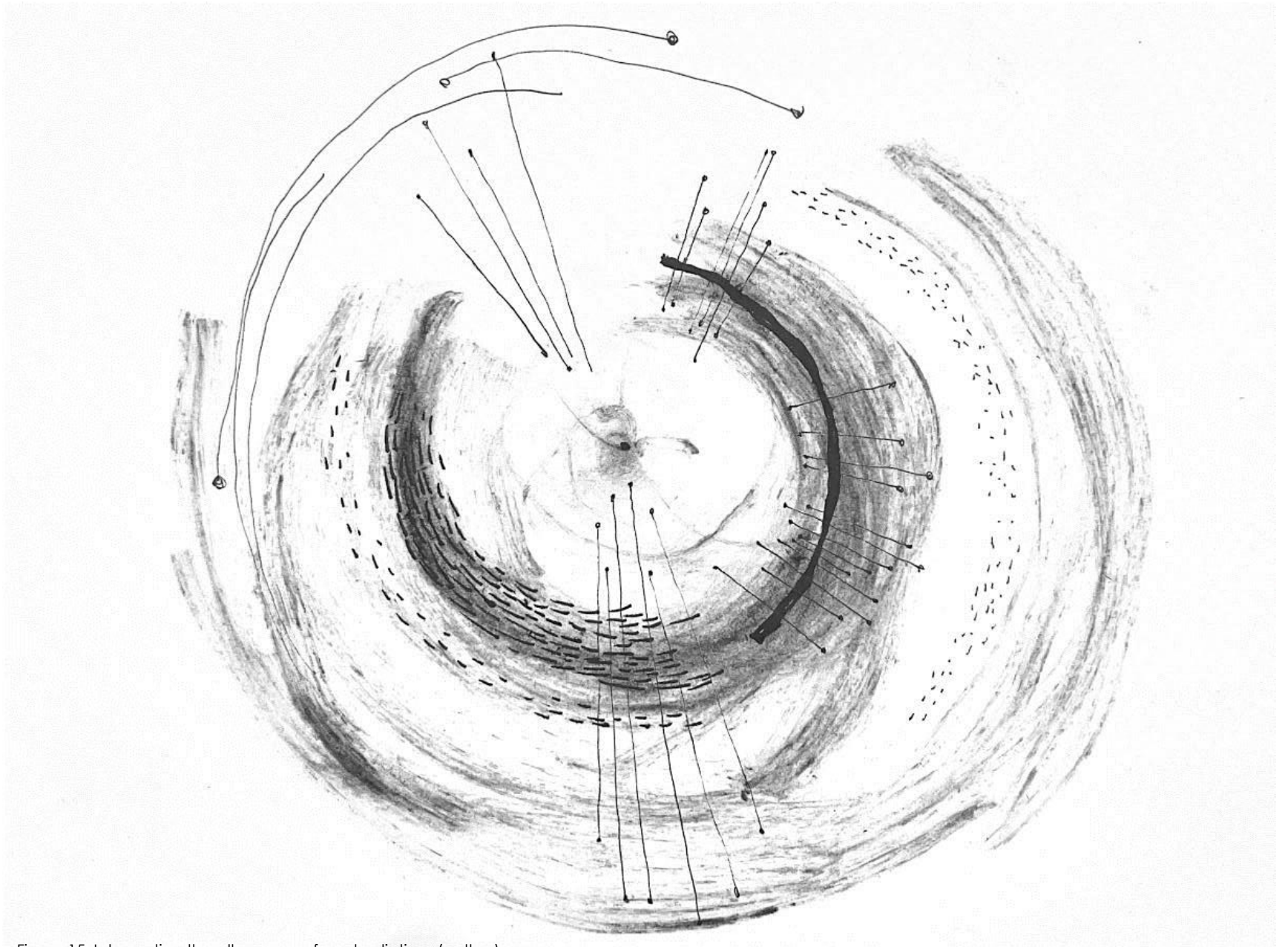


Figure 15: Interpreting the allowance of contradictions (author).

2.4 A RELATIONAL THICKENING

Afropolitan poetics, as outlined through its core characteristics—boundless possibilities for contact, a refusal to oversimplify, and an allowance for all manner of contradictions—culminates into an overarching conceptual understanding of relational thickening. This concept captures the multifaceted nature of both history and identity, challenging linear and reductive narratives typically shaped by Eurocentric perspectives. Rather than attempting to elucidate or simplify these complexities, Afropolitanism provides a framework through which individuals, irrespective of their cultural or historical backgrounds, can celebrate the inherent mystery and opacity of such intricacies. Our perception of the world is inherently shaped by our engagement with it, and as we navigate spaces laden with less understood or obscure historical narratives, our understanding evolves into a more dynamic or even obscured form.

This principle is not confined to the African context but extends globally, particularly to archaeological sites where historical narratives are often contested or unknown. In this regard, Sechaba Maape's work on archaeological sites offers significant insights. Maape argues that these sites, steeped in historical and cultural meanings, gain significance through personal engagement (Maape et al., 2022: 405-406).

This process of interaction allows for the transformation of seemingly enigmatic places into shared spaces of relevance for all who visit, thereby contributing to relational thickening. As individuals engage with these spaces, they uncover previously unknown commonalities, fostering a sense of unity in locations that might initially appear distant or complex.

The discovery of shared meanings mirrors the archaeological endeavour of revealing historical narratives and artefacts that were once obscured. However, this raises a critical question: is the act of revealing and interpreting these revelations essential, or is the mere presence within these obscure spaces sufficient to establish connections across diverse cultural backgrounds? It may be argued that the act of simply being within such spaces can itself highlight shared human experiences, creating a meaningful bond that transcends cultural or historical distinctions. In essence, the experience of inhabiting these ambiguous spaces enables individuals from diverse backgrounds to perceive these places as personally relevant, despite differences in cultural heritage or historical knowledge. This relational thickening facilitates a connection among all visitors to such places, transforming the space into one of appropriation, where individuals infuse it with their own experiences and interpretations.

2.5 AN ARCHITECTURE OF CONSANGUINITY

Through the process of relational thickening, a concept derived from Afropolitanism, a novel sense of connection begins to take shape—one that transcends our immediate understanding. This form of connection emerges from the complex and often obscure intersections of our histories and cultural backgrounds, which while challenging to decipher, suggest an underlying unity. Despite the multiplicity of individual identities, there exists a shared bond—an inherent consanguinity—that links us in ways that may not be immediately apparent. This kinship, or shared sense of belonging, transforms ordinary spaces into meaningful places that resonate with collective significance.

This can be termed an architecture of consanguinity. Such an approach is envisioned in the conceptualization of a crypticarium at the Wonderwerk Cave site—an interpretive space designed to facilitate a deeper engagement with the site's complex historical and cultural narratives. The crypticarium will serve as an immersive environment where obscured or enigmatic information is made accessible and relevant, fostering an inclusive appreciation of the site's multifaceted heritage, without interpreting the information to a linear interpretation, as has been the problem with archaeological sites.

The concept of the crypticarium represents a transformative architectural intervention, one that seeks to uncover and articulate the hidden connections between disparate cultural and historical elements. It offers a platform for individuals to engage with and reinterpret these narratives, thus cultivating a collective sense of belonging and identity.

By inviting participants to navigate and contribute to the understanding of such obscured histories, the crypticarium becomes more than a physical space; it becomes a dynamic medium for relational thickening, where the complexities of identity and history are not only acknowledged but celebrated.

In this framework, Afropolitan poetics profoundly influences our perception of archaeological sites like Wonderwerk Cave. It encourages us to see these spaces not merely as repositories of the past but as living sites of relational interaction, where diverse cultural narratives intersect and inform one another. This perspective allows for the recognition of shared human experiences and connections that, while obscured, are nonetheless present and significant. It redefines our engagement with such sites, highlighting the potential for individuals from varied backgrounds to find personal and collective significance in places once considered remote or enigmatic.

Ultimately, an architecture of consanguinity, as embodied by the crypticarium, reflects the ethos of Afropolitanism. It offers a space for the continual reinterpretation and reimagining of identity and place, acknowledging the inherent contradictions and complexities that define our shared human experience. This architectural approach not only enriches our understanding of historical and cultural sites but also fosters a more inclusive and interconnected sense of belonging that transcends conventional boundaries.

This raises an important question: What does an architecture of consanguinity look like in practical terms? Before developing a design strategy, it is essential to first investigate the site for which the crypticarium is proposed.

2.6 TOUCHSTONE

The primary objective of the touchstone is to clarify the core intentions of the proposed crypticarium at the site. As previously outlined, the project's intrinsic connection to archaeology requires a deep understanding of archaeological methodologies.

Therefore, the approach of the touchstone was to take part in the pedagogical approach of the archaeological process, encouraging persons to reveal and make sense of the findings hidden within.

The touchstone is displayed as an archaeological exhibition, consisting of five distinct cubic structures, each containing concealed artefacts. These cubes are arranged along a timeline, with each representing a different historical period, akin to stratified layers in the earth.

As participants engage with the cubes, they are provided with tools such as hammers, sickles, and paintbrushes, allowing them to carefully dismantle these temporal segments and uncover the hidden artefacts within. This participatory approach offers visitors a unique opportunity to engage actively in the discovery process, mirroring the archaeologist's task of revealing and interpreting the past. By doing so, the visitors partake in a symbolic excavation, not only uncovering the artefacts but also making sense of the revelations, just as archaeologists do in their daily work.

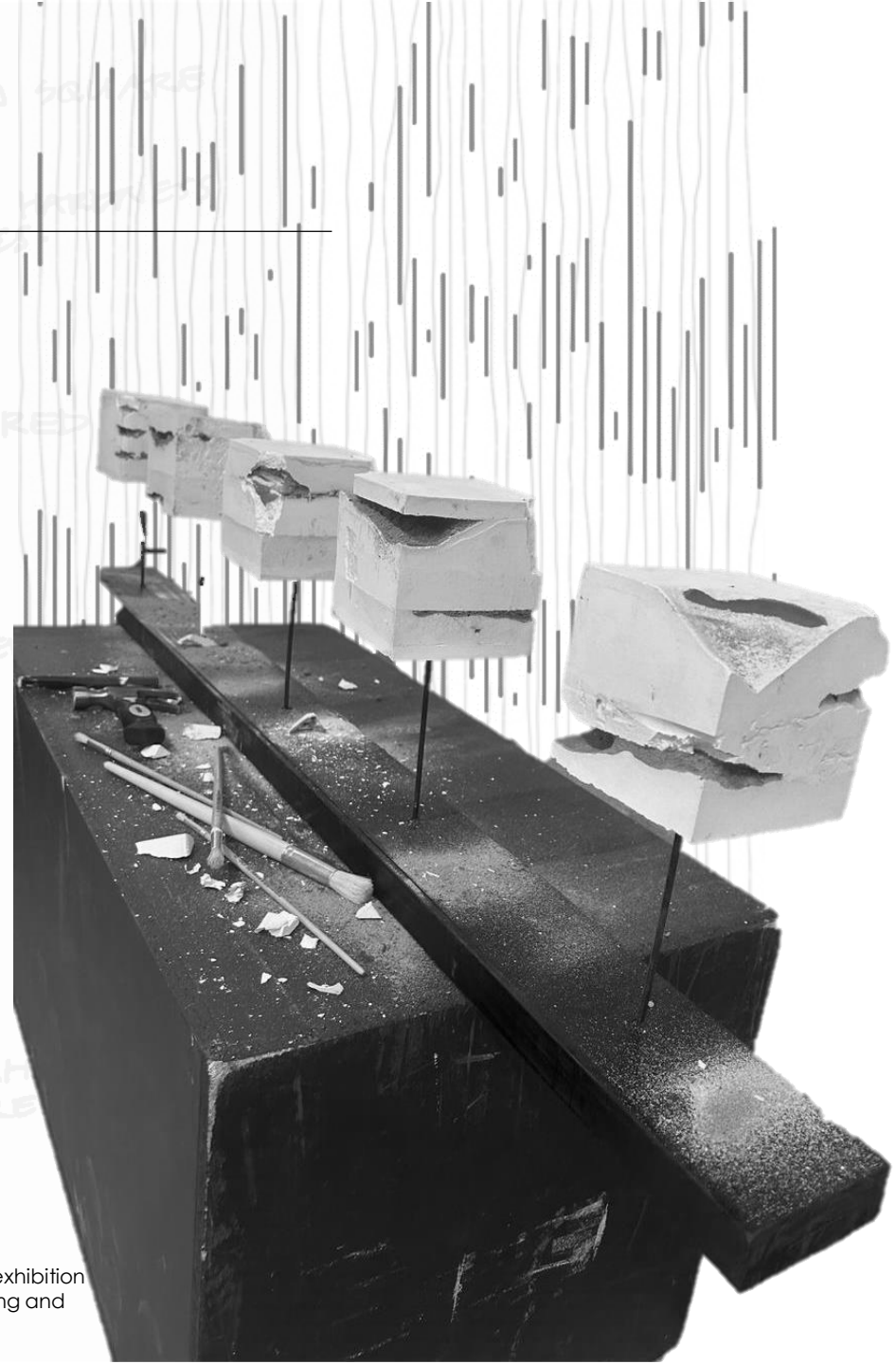


Figure 16: Timeline of an archaeological exhibition inviting people to take part in the revealing and making-sense process (author).

However, this process is intended to provoke critical reflection in the participants. They are prompted to consider: if these artefacts represented the remnants of their own culture or the inner lives of their ancestors, would they value the acts of discovery and dismantling in the same way? The aggressive dismantling of these time-bound capsules, coupled with the desire to understand, may begin to feel iconoclastic. In contrast to the long periods during which artefacts have been hidden and protected within the earth, this rapid revelation can seem almost sacrilegious, driven by a sense of entitlement to knowledge. If the act of study necessitates the destruction of what we admire, this further raises the question: is there not a fundamental flaw in this methodology?

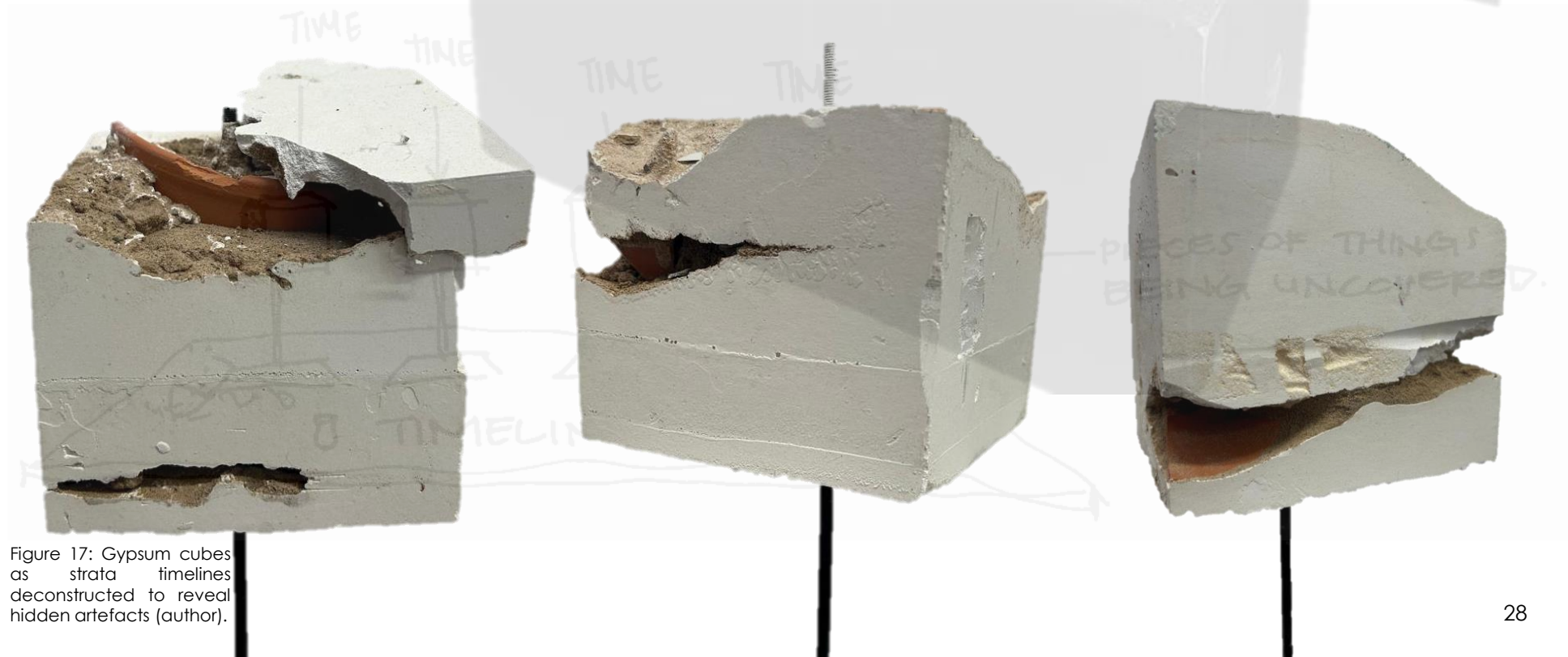


Figure 17: Gypsum cubes as strata timelines deconstructed to reveal hidden artefacts (author).

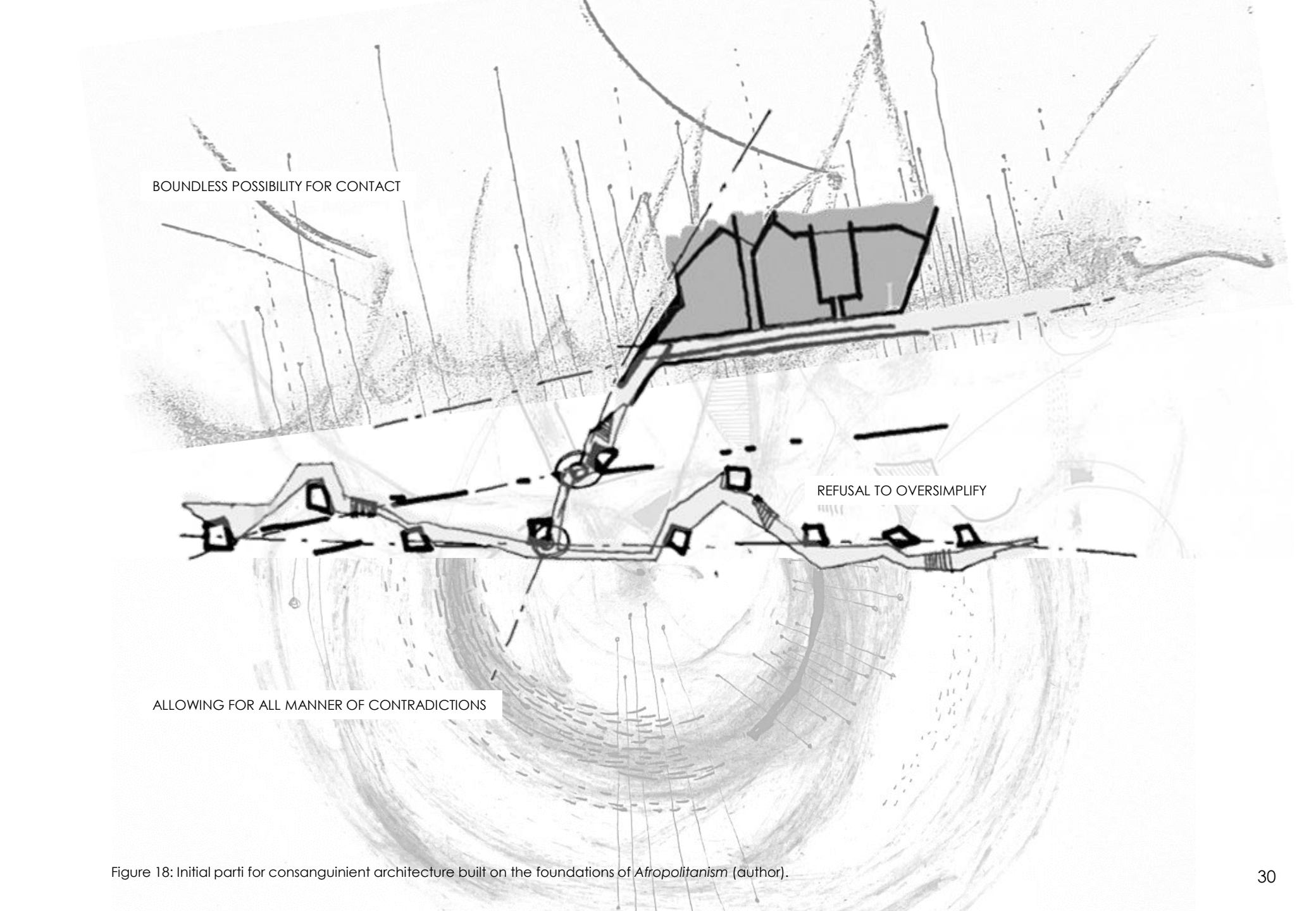
2.7 CONCLUSION

The legacy of apartheid has left a lasting impact on archaeological interpretation, with Western-centric paradigms often dominating the field. This Western influence has led to a reductive understanding of complex cultural and historical contexts, diminishing the richness of non-Western artefacts and narratives (Maape, et al. 2022: 405-406). Maape (2022) argues that traditional linear approaches to interpreting archaeological sites fail to account for their dynamic and multi-dimensional nature. Instead of viewing these sites as static relics of the past, it is essential to recognize them as evolving entities that integrate past, present, and future dimensions. Furthermore, the concept of Afropolitanism, as articulated by Achille Mbembe, Ryan Thomas Skinner as well as Sarah Balakrishnan provides a valuable framework for understanding the way African identities may thrive on multiple forms of "contact" (Balakrishnan, 2017: 8) and the "refusal to over-simplify" (Balakrishnan, 2017: 8) to stimulate forms of relational thickening" (Skinner, 2017:14).

Afropolitanism emphasizes continuous movement, cultural interchange, and the integration of diverse elements, challenging simplistic and reductive interpretations of African history and identity. It offers a lens through which we can engage with African heritage in a way that acknowledges its rich and multifaceted nature.

Ultimately, incorporating a post-colonial phenomenology of perception into archaeological interpretation enhances our ability to uncover and appreciate the shared meanings and personal significance of historical sites. This approach fosters a deeper connection between individuals and archaeological spaces, revealing commonalities across cultural and historical boundaries. By embracing these perspectives, we can transform our understanding of archaeological sites from mere artefacts to vibrant, dynamic places of shared relevance and significance. In summary, integrating phenomenological and Afropolitan perspectives into archaeological practice allows for a more inclusive and comprehensive interpretation of heritage. This shift not only honours the complexity of historical and cultural contexts but also enriches our engagement with the past, making archaeological sites meaningful to a diverse range of individuals and communities. Furthermore, this appreciation for Afropolitan poetics can be used to imagine an architecture of consanguinity.

The following chapter will explore and discuss mysteries on the proposed site of the Wonderwerk farm. Only after clarifying the site and the complexities it holds can a further investigation of what an architecture of consanguinity looks like be done.



BOUNDLESS POSSIBILITY FOR CONTACT

REFUSAL TO OVERSIMPLIFY

ALLOWING FOR ALL MANNER OF CONTRADICTIONS

Figure 18: Initial parti for consanguinient architecture built on the foundations of *Afropolitanism* (author).



CHAPTER

03

DIGGING THE SITE: MYSTERY AND CLARITY

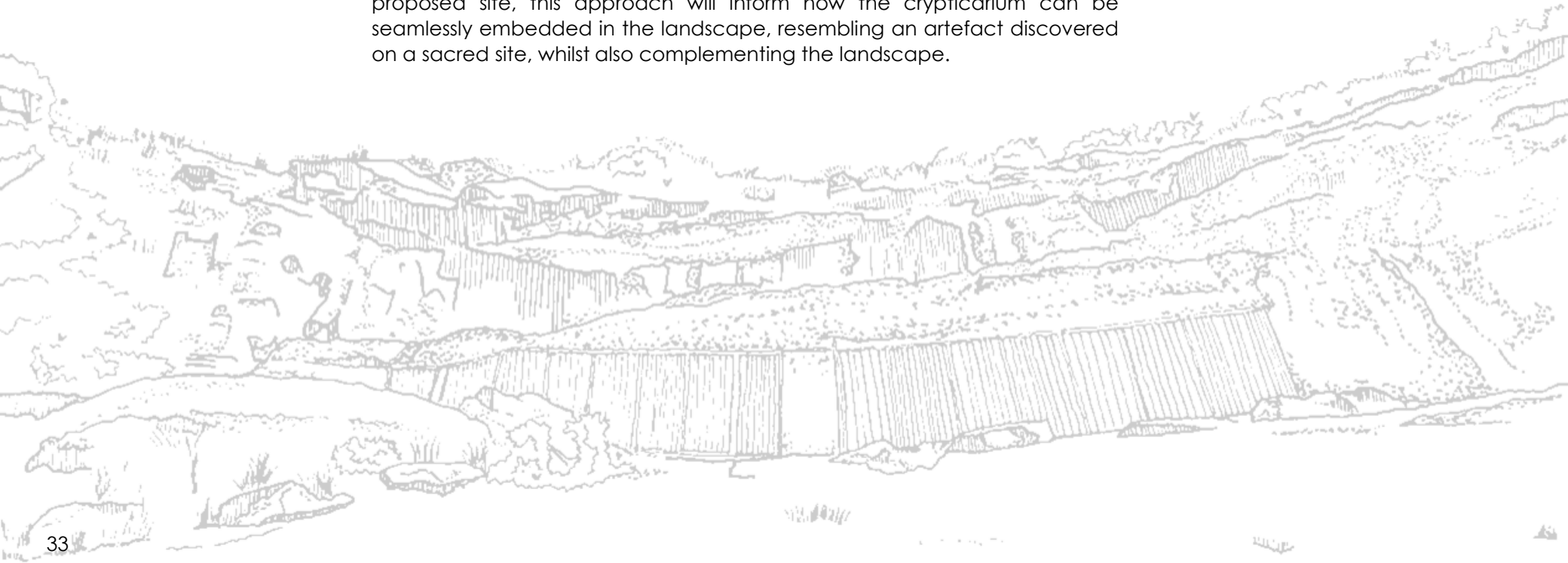
3.1 Introduction	33
3.2 Macro-Site Analysis	35
3.2.1 Historical Narrative	
3.2.2 The !Kung Tribe	
3.2.3 The Batswana People	
3.2.4 Contextualising The Site	
3.2.5 Climate	
3.2.6 Soil	
3.2.7 Vegetation	
3.2.8 Community	
3.3 Meso-Site Analysis	37
3.3.1 Location of the site	
3.3.2 Accessibility	
3.3.3 Structures On Site	
3.3.3.1 Structures For The Public	
3.3.3.2 Structures For Private Use	
3.3.3.3 The Cave As The Obscure Datum	
3.3.3.4 Navigating The Cave	
3.4 Micro-Site Analysis	56
3.4.1 Site Characteristics	
3.5 Alternative Site Analysis	57
3.6 Mapping The Coordinates	60

3.1 INTRODUCTION

With a thorough understanding of Afropolitan poetics and consanguinity, as well as fostering an appreciation for the obscure nature of these complexities, it is now imperative to conduct an in-depth analysis of the proposed site for the crypticarium. This analysis is sedimented in the archaeological characteristics, namely mystery and clarity, and will be conducted across macro-, meso-, and micro-scales.

At a macro scale, the historical narrative of the site will be examined; at a meso scale, the focus will shift to the existing structures; and finally, at the micro level, the specific characteristics of the site will be examined.

By uncovering (or just perceiving) both mysteries and insights of the proposed site, this approach will inform how the crypticarium can be seamlessly embedded in the landscape, resembling an artefact discovered on a sacred site, whilst also complementing the landscape.



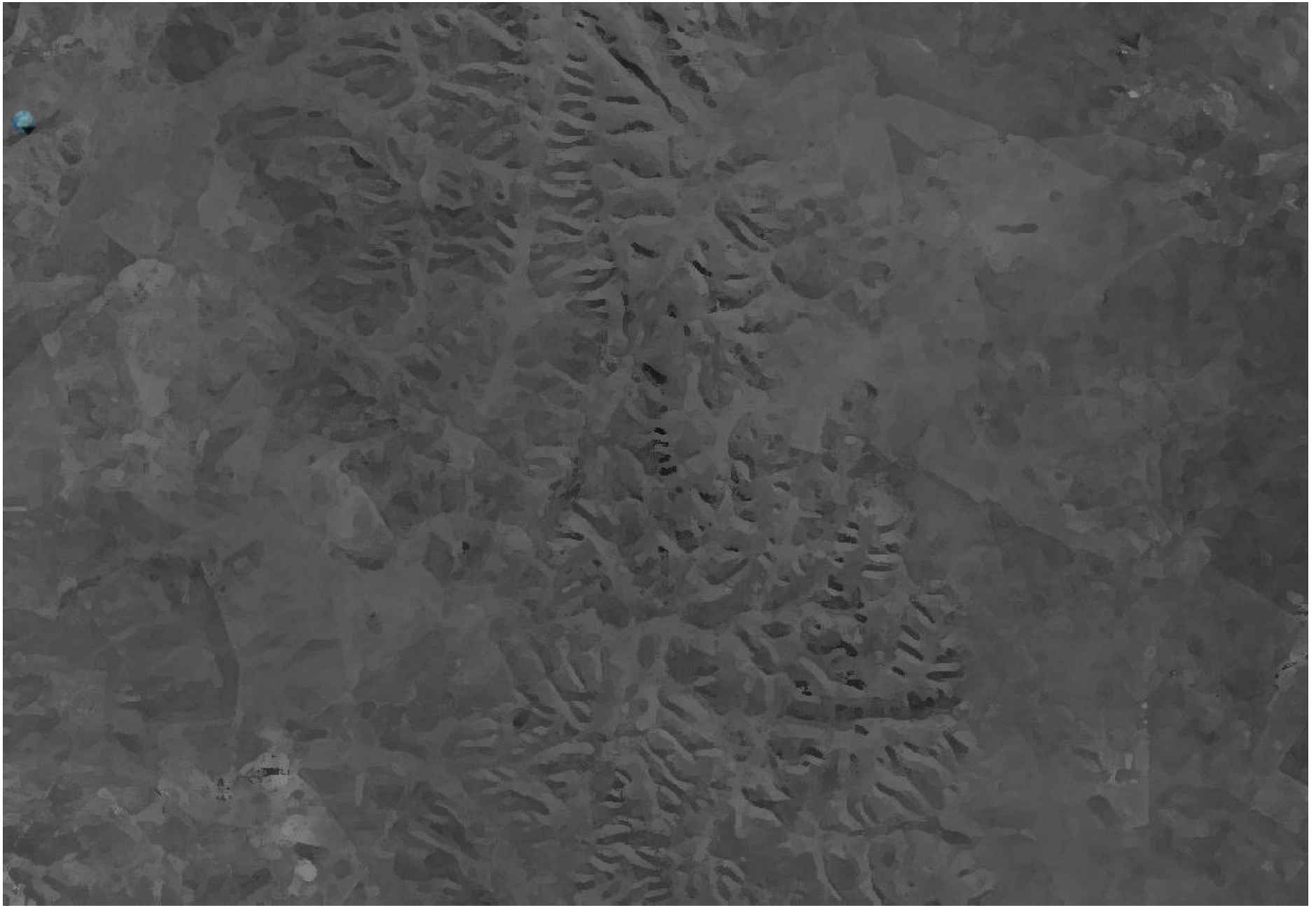


Figure 19: Obscured aerial view of the proposed site with coordinates: [27°50'42"S 23°33'14"E](#) (GoogleEarth, 2024: Online; adapted by author).

3.2 MACRO SITE ANALYSIS

3.2.1 HISTORICAL NARRATIVE

In the late 1800s, simultaneously with the discovery of significant hominid fossils in the Cradle of Humankind took place, early human artefacts were uncovered in the gravel deposits along the Vaal River, particularly at Klipdrift in the Northern Cape. Among these findings was the Taung skull (Horwitz and Chazan, 2015). However, the prominence of discoveries in the Cradle of Humankind, combined with the ambiguity surrounding the Taung skull's discovery, led to the oversight of the Northern Cape's rich archaeological sites (Horwitz and Chazan, 2015).

One such overlooked site is Wonderwerk Cave, located in the hills between Kuruman and Danielskuil, near the Vaal River. This region, frequently traversed by the Moffat Mission, ultimately led to the establishment of Kuruman as a missionary station.

It was during these travelling, that the missionaries discovered the Wonderwerk Cave, a large dolomite cavity on the eastern end of the hills (Horwitz and Chazan, 2015).

Over time, the cave was inhabited or utilized by various cultural groups, including the !Kung of the San peoples, the Batswana peoples who traversed the Kalahari, and later, European settlers such as the Bosman family (Horwitz and Chazan, 2015).



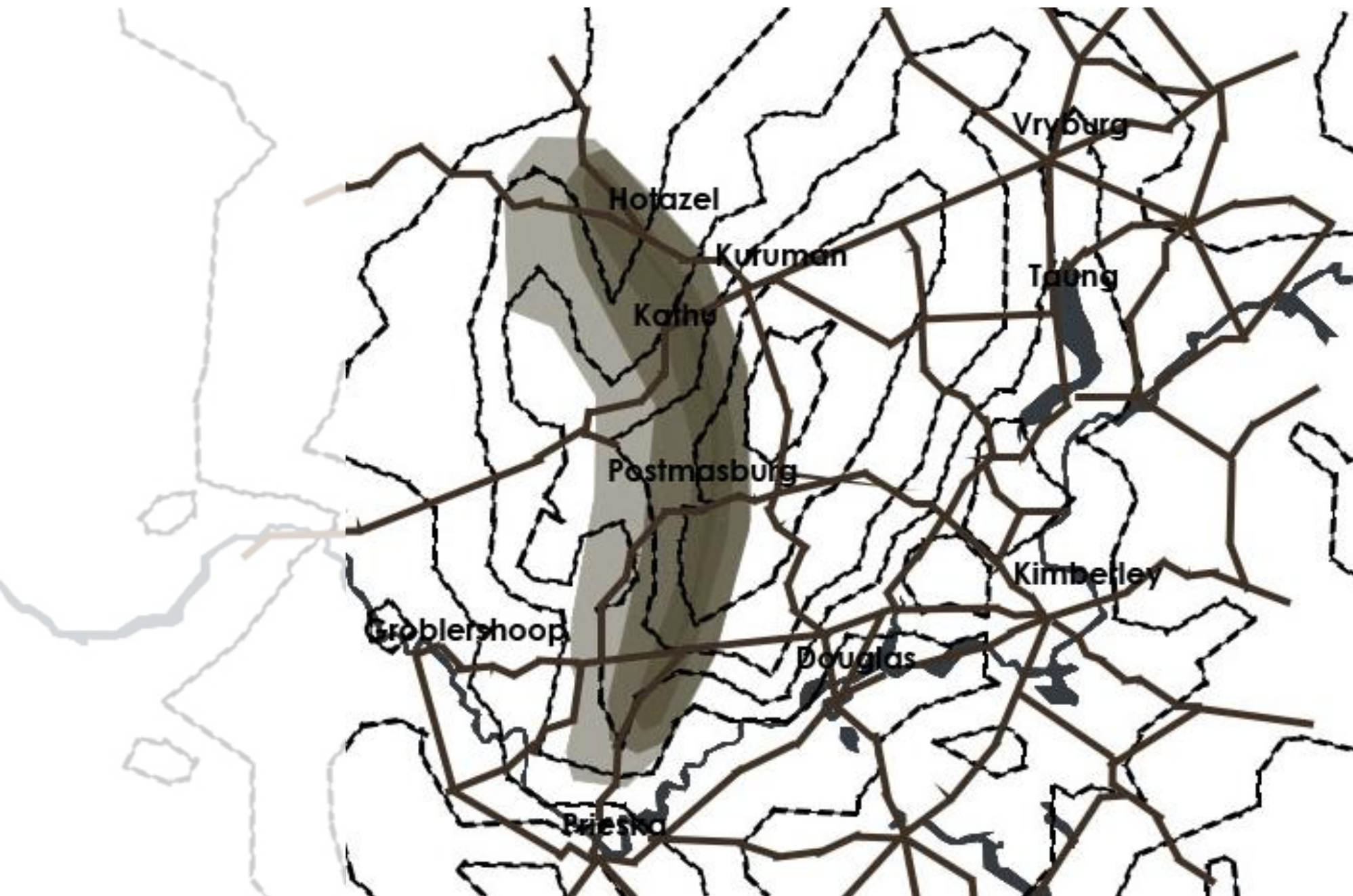


Figure 20: Range of hills located between Kuruman and Danielskuil, where the Wonderwerk Cave is hidden (author).

Between 1909 and 1911, the Bosman family lived in the cave while constructing their farmhouse, later using it as a cart house and winter sheep shelter, see Figure 24 (Horwitz and Chazan, 2015). In 1937, a water inspector visiting the farm noted the large cavity and recovered "Bushman flint axes" during an excavation (Horwitz and Chazan, 2015). This discovery sparked commercial interest in the Bosman family, leading to the excavation of ancient artefacts during World War II. Lithic tools and fossils were transported to Johannesburg in the 1940s, attracting researchers and initiating ongoing excavations for over 84 years (Horwitz and Chazan, 2015).

Figure 26 depicts the different excavation spots within the cave, as well as the specific time stamps during these 84 years of discovering and revealing.

The Wonderwerk Cave continues to be a site of significant archaeological interest, with ongoing discoveries of artefacts, fossils, and rock drawings. Another milestone for the research of the cave was reached when the Zamani Project created a 3D model of the site, contributing to the ongoing research and preservation efforts (Horwitz and Chazan, 2015).

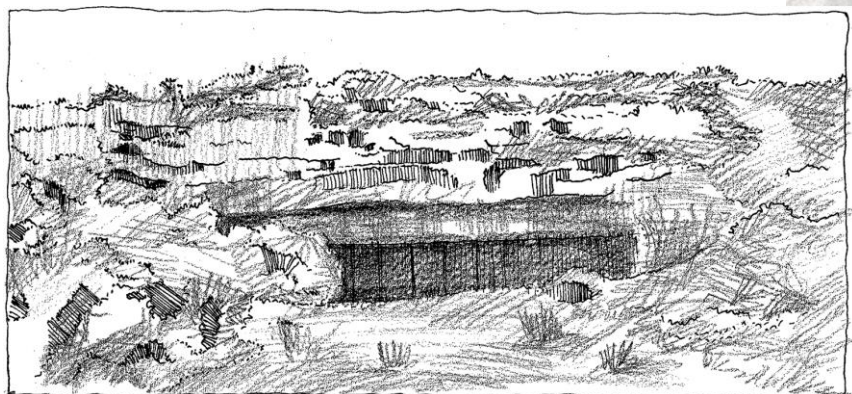


Figure 21: Illustration of the Wonderwerk cave opening on the eastern side of the hill (author).



Figure 22 & 23: Artefacts spotted near the Wonderwerk Cave farm (author).

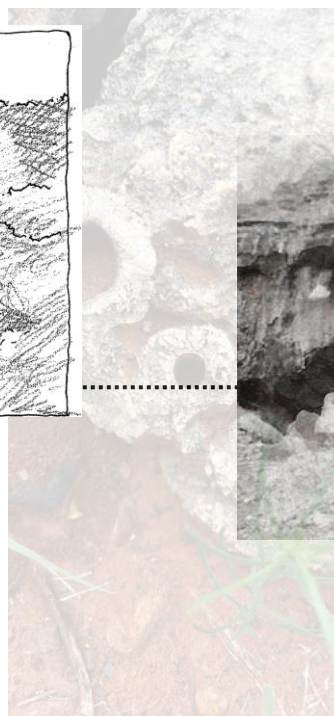


Figure 24: Photograph of the Malan excavations at the cave (Horwitz and Chazan, 2015: 599).



Figure 25: Geological phenomena spotted near the Wonderwerk Cave farm (author).

The discovery of stone tools and the presence of rock art in multiple areas within the cave, which suggests the practice of spiritual and religious rituals for approximately 10,000 years (World Monuments Fund, 2017: Online), underscores the site's contextual significance and sacredness. These cultural practices are integral to the site's heritage and this complexity previously referred to, which will not be oversimplified and must not be overlooked during the architectural design approach to the proposed site.

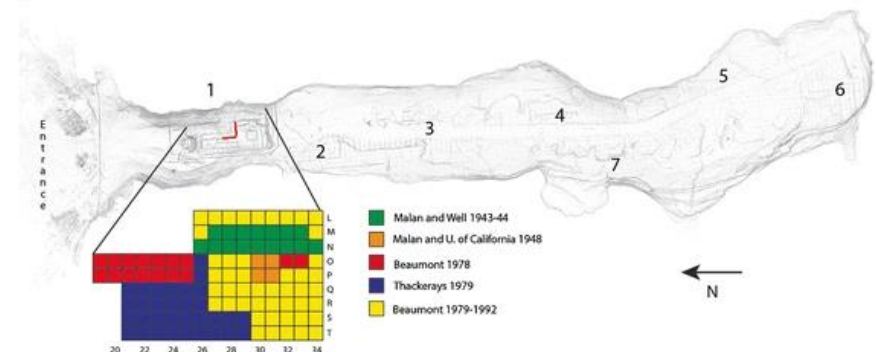


Figure 26 : Archaeological findings map within the Wonderwerk Cave with date stamps (Horwitz & Chazan, 2015: Online).



Figure 27: Geological phenomena spotted near the Wonderwerk Cave farm (author).

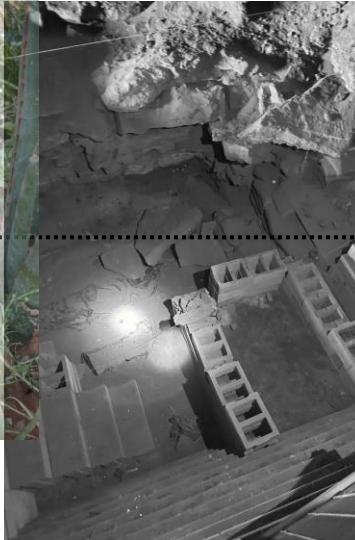


Figure 28: Current archaeological excavation site in the cave (author).



Figure 29: Illustration of large stalagmite near the entrance of the cave (author).



Figure 30: Rock art spotted at the entrance of the cave (author).

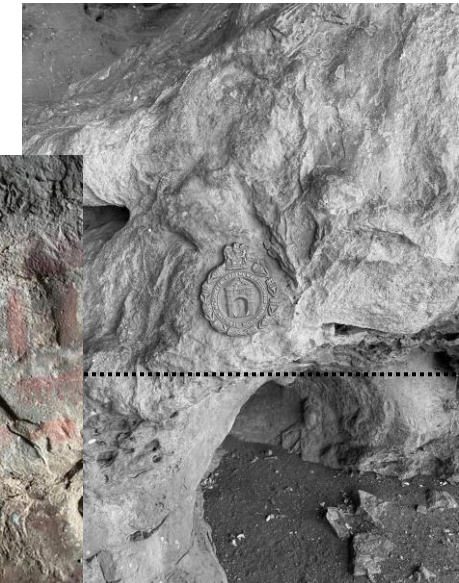


Figure 31: McGregor Museum heritage site plaque near the entrance of the cave (author).

3.2.2 The !Kung tribe:

The San people, an indigenous group native to Southern Africa, predominantly inhabit regions of Botswana, Namibia, and southeastern Angola (Pauls, n.d.; online). Within this broader group are various tribes, including the !Kung, also referred to as !Xun or Ju, who traditionally traverse the western edge of the Kalahari Desert, as well as northern Namibia, Botswana, and southern Angola (Africa101lasttribes, n.d.; online).

Historically, the !Kung were distinguished by their reliance on traditional hunting and gathering practices, a way of life that persisted until the 1970s when many of these groups transitioned to living in Bantu villages or working on European ranches (Africa101lasttribes, n.d.; online). Their knowledge of the region's fauna and flora is extensive, with a detailed classification of plant species and their uses (SiyabonaAfrica, n.d.; online).

!Kung Homesteads:

The !Kung people adapted their architectural practices to the seasonal migrations of game, moving between mountain ranges and, on occasion, coastlines. Their dwellings were temporary in nature, utilizing rocky overhangs, caves, and lightweight structures (SiyabonaAfrica, n.d.; online). Unlike many other San groups, the !Kung constructed light-framed, semi-circular shelters made from sticks and saplings, which were then covered with grass (Pauls, n.d.; online).



Figure 32: !Kung family gathering around homesteads (SiyabonaAfrica, n.d.; online).

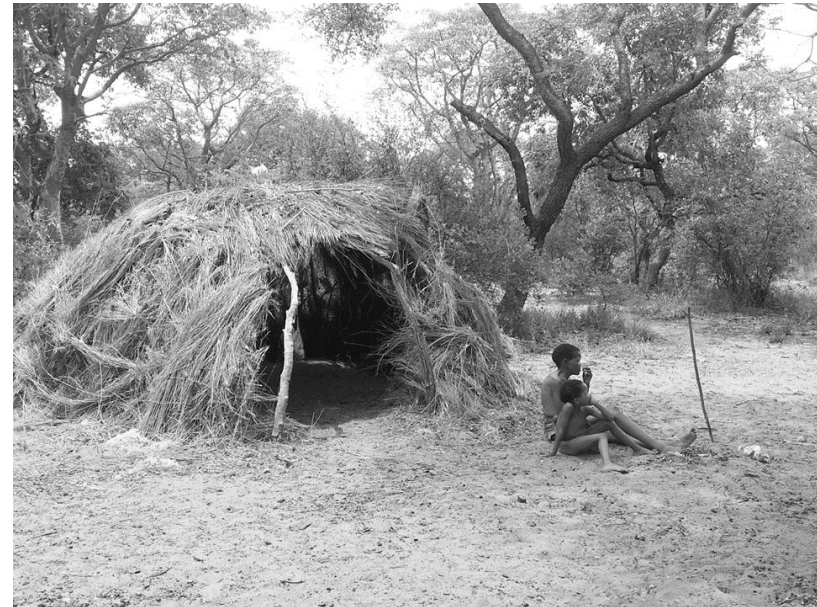


Figure 33: Typical !Kung homestead (Dowling, 2022; online).



Figure 34: Obscured illustration of a gathering of a !Kung family (alamy, n.d.; online; adapted by author).

3.2.3 The Batswana people:

The citizens of Botswana, collectively referred to as Batswana (plural), are broadly classified into two main groups: Setswana-speaking and non-Setswana-speaking communities. Over 60 percent of the population traces its heritage to one of the Setswana-speaking groups (Michler, n.d.; online).

Historically, except for the semi-nomadic Bushmen, the majority of Batswana communities practised pastoralism, establishing permanent settlements. These villages were strategically located either in hilly regions for defence or near reliable water sources, where grazing conditions were most favourable for livestock (Michler, n.d.; online).

Batswana homesteads:

The homesteads of the Batswana people are typified by circular huts constructed from reeds or mud with grass-thatched roofs.

These huts are mostly enclosed by a fence of poles or reeds. The village centre features communal dining areas and smaller huts used for storage, where each family has allocated land for cultivating crops, along with a cattle post for raising livestock (Michler, n.d.; online).



Figure 35: Typical Batswana family homestead (Michler, n.d.; online).



Figure 36: Typical Batswana homestead (author).



Figure 37: Illustration of a gathering of a Batswana family (author).

3.2.4 Contextualising the site

Enclosed within the bounds of the relatively understudied Ghaap Escarpment. The Ghaap Escarpment, a geographical feature in the landscape, is typified by abrupt changes in elevation. As seen in Figure 38, it assumes considerable significance within the Northern Cape region due to the notable concentration of Paleolithic artefacts embedded within tufa deposits (Doran, 2010). Its western border marginally intersects with the municipalities of Danielskuil, Kuruman, and Griekwastad.

This geographical delineation is pivotal in contextualizing the proposed site, given the prolific archaeological discoveries along the Ghaap Escarpment.

The proposed site is situated in the northeastern part of the Northern Cape, defined by the Savanna biome, nestled amidst the expansive terrain of the Kalahari, as depicted in Figure 41.

The savanna biome, constituting the largest biome in South Africa, encompasses approximately 46% of the country's total land area. Originating on the peripheries of tropical biomes ending the rainfall, savannas experience consistently high temperatures throughout the year, with precipitation predominantly occurring during the summer months (vegetationofsa, 2024: Online).

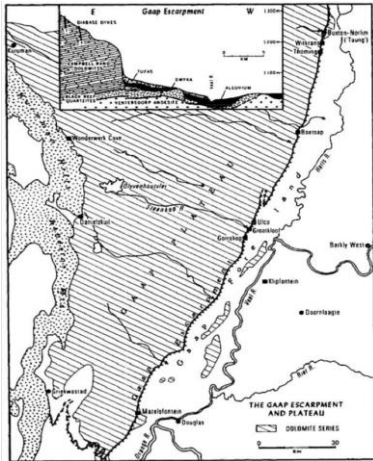


Figure 38: Illustration of the Ghaap Escarpment (Butzer, et al. 1978).

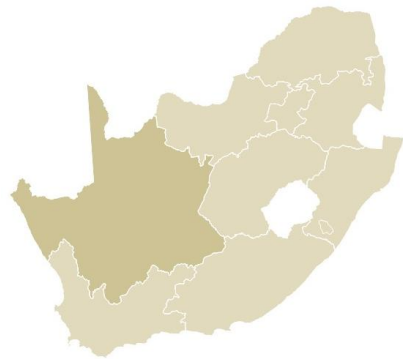


Figure 39: Map of South Africa depicting the Northern Cape province where the cave is located (author).

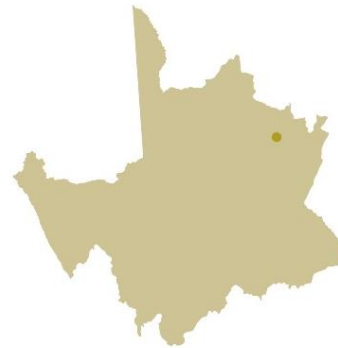


Figure 40: Map of the Northern Cape province marking where the cave is located (author).

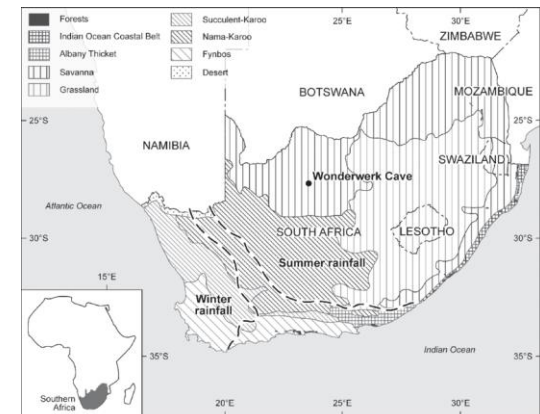


Figure 41: Illustration of biomes in South Africa, as well as the location in which the Wonderwerk Cave is located (Botha, Ecker, Thorp, Piuze. 2015).

3.2.5 Climate

The Kuruman region, situated within the savanna biome, experiences a mean annual precipitation of 480 mm. The dry season generally extends longer than the wet season (Meteoblue, 2024, online).

3.2.6 Soil

The soil in this biome predominantly consists of deep, wind-blown red sandy layers interspersed with rocky outcrops. This substrate supports a dense ground cover of grasses, alongside an open layer of shrubs and trees (Botes, 2020, online).

3.2.7 Vegetation

The vegetation of the savanna biome is typified by a grass-dominated ground layer, with an upper layer of woody plants. Variations in vegetation density are evident, with low woody vegetation constituting shrub veld, denser thickets classified as woodland, and intermediate stages referred to locally as bushveld (VegetationofSA, 2024, online).

3.2.8 Community

The site is currently managed by the farm owners in collaboration with the McGregor Museum. It lies between two small towns, with local communities situated close to the site.

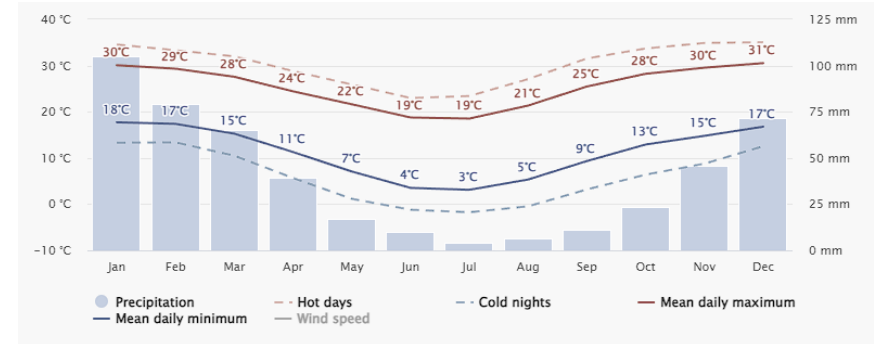


Figure 42: Diagram depicting average temperatures and precipitation in Kuruman meteoblue.com, 2024; online).

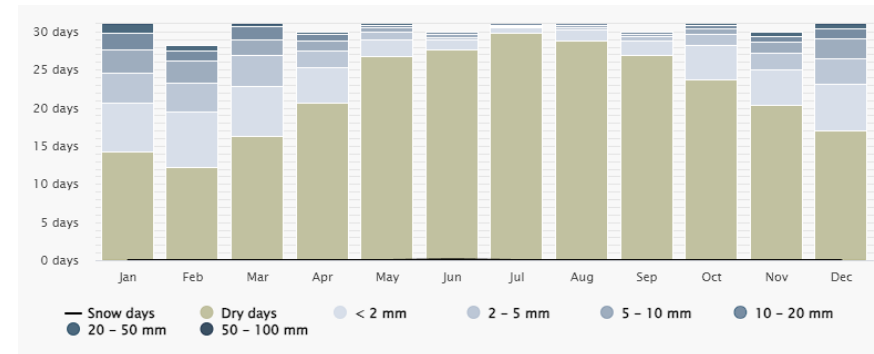


Figure 43 Diagram depicting average precipitation amounts per day in Kuruman meteoblue.com, 2024; online).

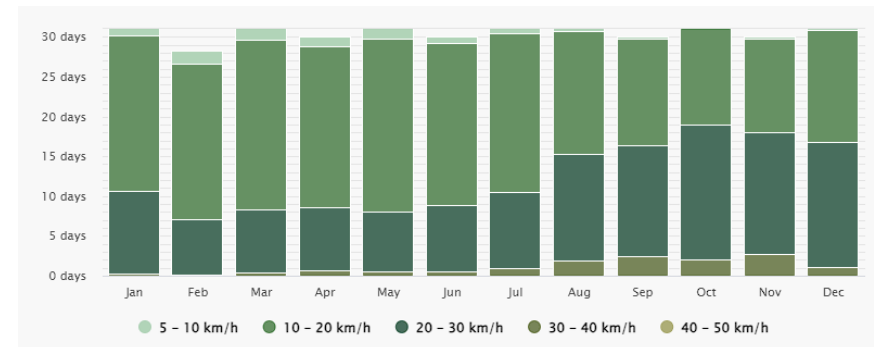
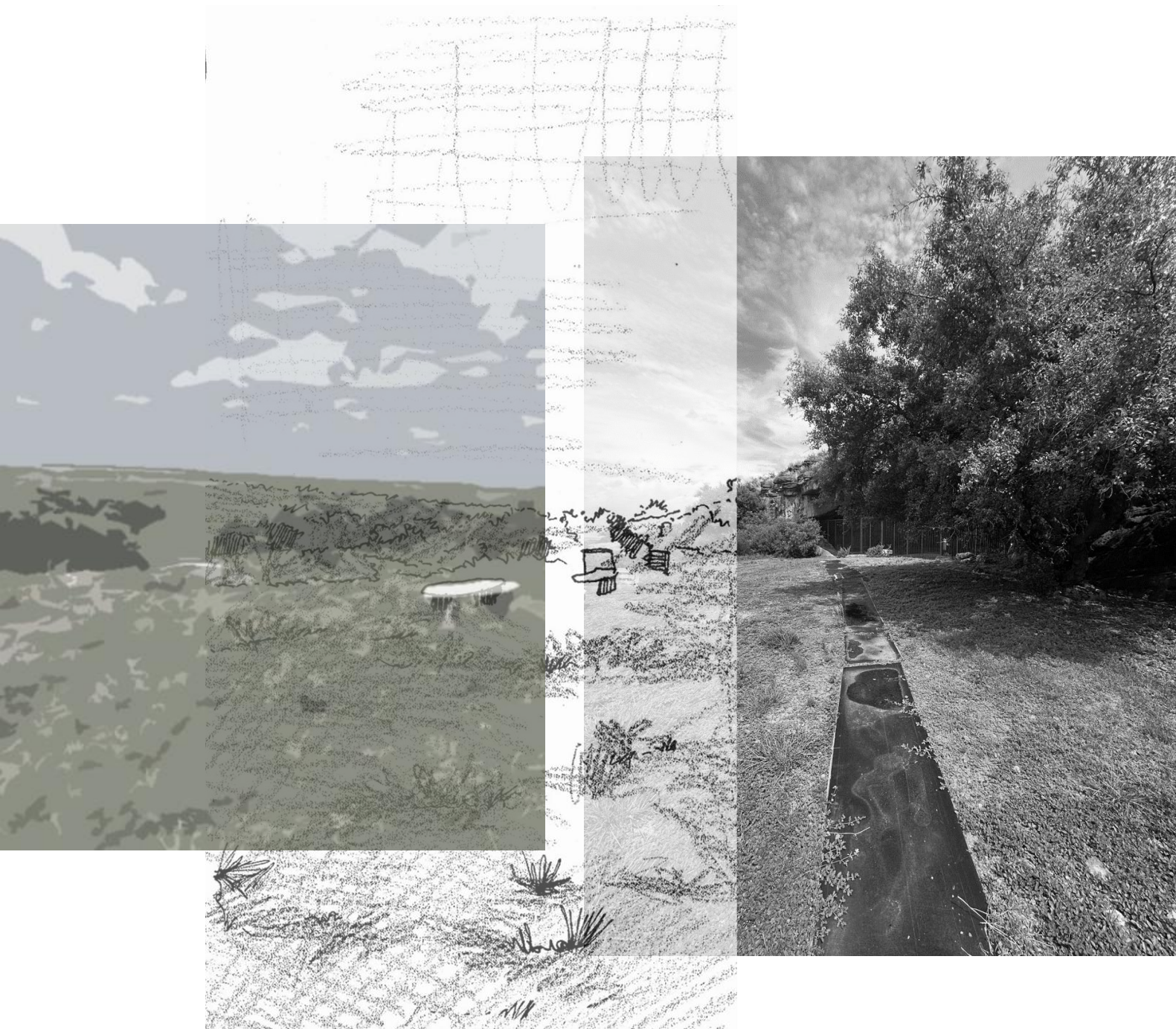


Figure 44: Diagram depicting average windspeeds in Kuruman (meteoblue.com, 2024; online).





3.3 MESO SITE ANALYSIS

3.3.1 Location of the site

The proposed site is located in the Northern Cape, between the towns of Kuruman to the north and Danielskuil to the south, as delineated in Figure 46, along the peripheries of the Ghaap Escarpment.

Positioned adjacent to the R31 highway, which runs parallel to a series of hills south of Kuruman, the main access road leading to the cave is approximately 46 kilometres from Kuruman.

3.3.2 Accessibility

Access to the site is facilitated via the Wonderwerk farm, accessible directly from the R31, to both the public and private sectors.

The cave is known to be one of the oldest known cave occupations in the world (WonderWerk, n.d.: Online). The site is not uncommon for archaeologists, geologists, and researchers from many different research facilities, such as Toronto University and Hebrew University.

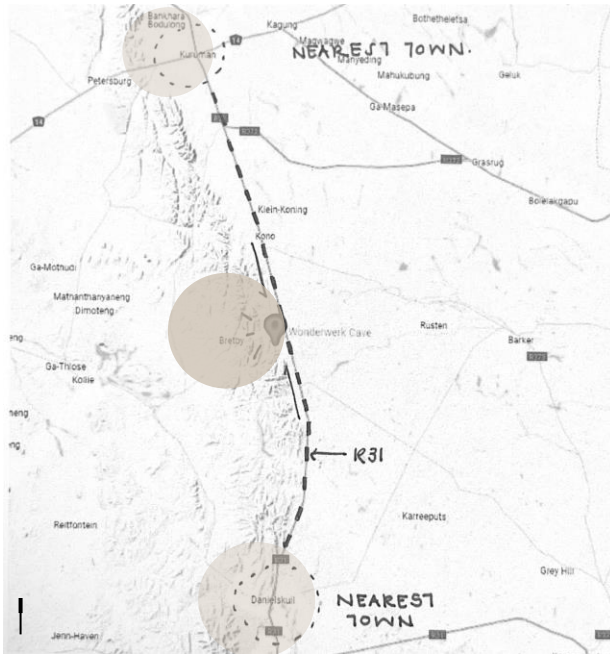


Figure 46: Illustration of the site in its general location, showing the nearest towns (GoogleMaps. n.d.; online; adapted by author).

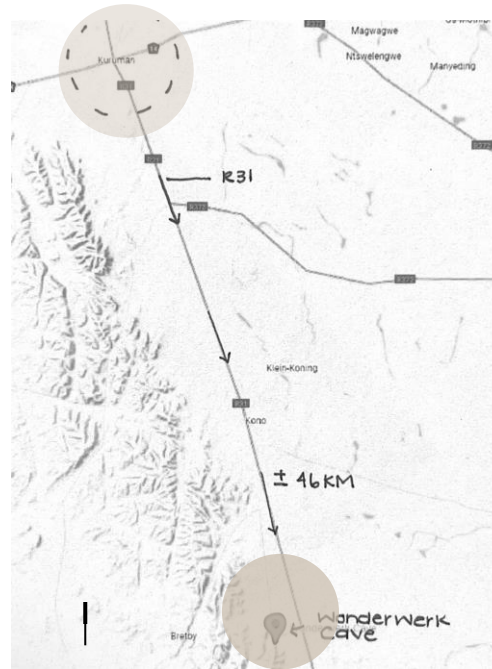


Figure 47: Illustration of the site showing its proximity to Kuruman (GoogleMaps. n.d.; online; adapted by author).

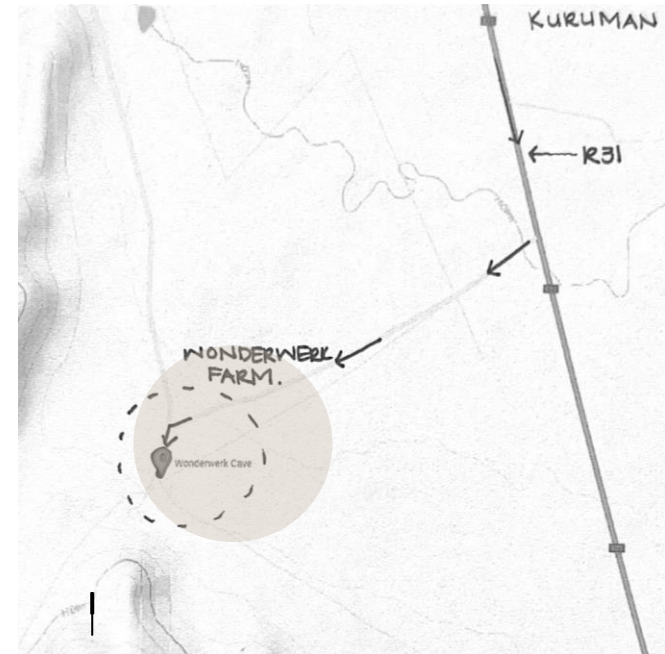


Figure 48: Illustration of the site from the R31 to the Wonderwerk Farm (GoogleMaps. n.d.; online; adapted by author).

3.3.3 Structures On The Site

As the site is currently a satellite of the McGregor Museum, open to the public, as well as an ongoing and active archaeological site, the site has some public and private structures to allow for the accommodation for both these groups.

3.3.3.1 Structures For The Public

Upon arrival at the site, visitors are first greeted by a gatehouse, where an entrance fee of R30 is required for access. Following this, visitors may proceed to the entrance of the interpretation centre, which is equipped with displays detailing the historical significance of the site, a tuckshop for refreshments, and an external gathering area for communal activities.

To the east of the interpretation centre, an ablution block is located, providing lavatories and showering facilities for visitors' convenience.

Within the cave itself, a carefully designed walkway, created by Craig McLenaghan Architecture, facilitates visitor access while ensuring minimal disruption to the integrity of the archaeological sites (McLenaghan, 2016, online).

3.3.3.2 Structures For Private Use

To the west of the gatehouse is the workers' residence, designated for staff accommodation. Additionally, to the west of the interpretation centre, three residences are positioned to provide lodging for archaeologists conducting active research at the site during their stay.



Figure 49: Illustration of the entrance gate to the site of the Wonderwerk Farm, where the cave is located (author).

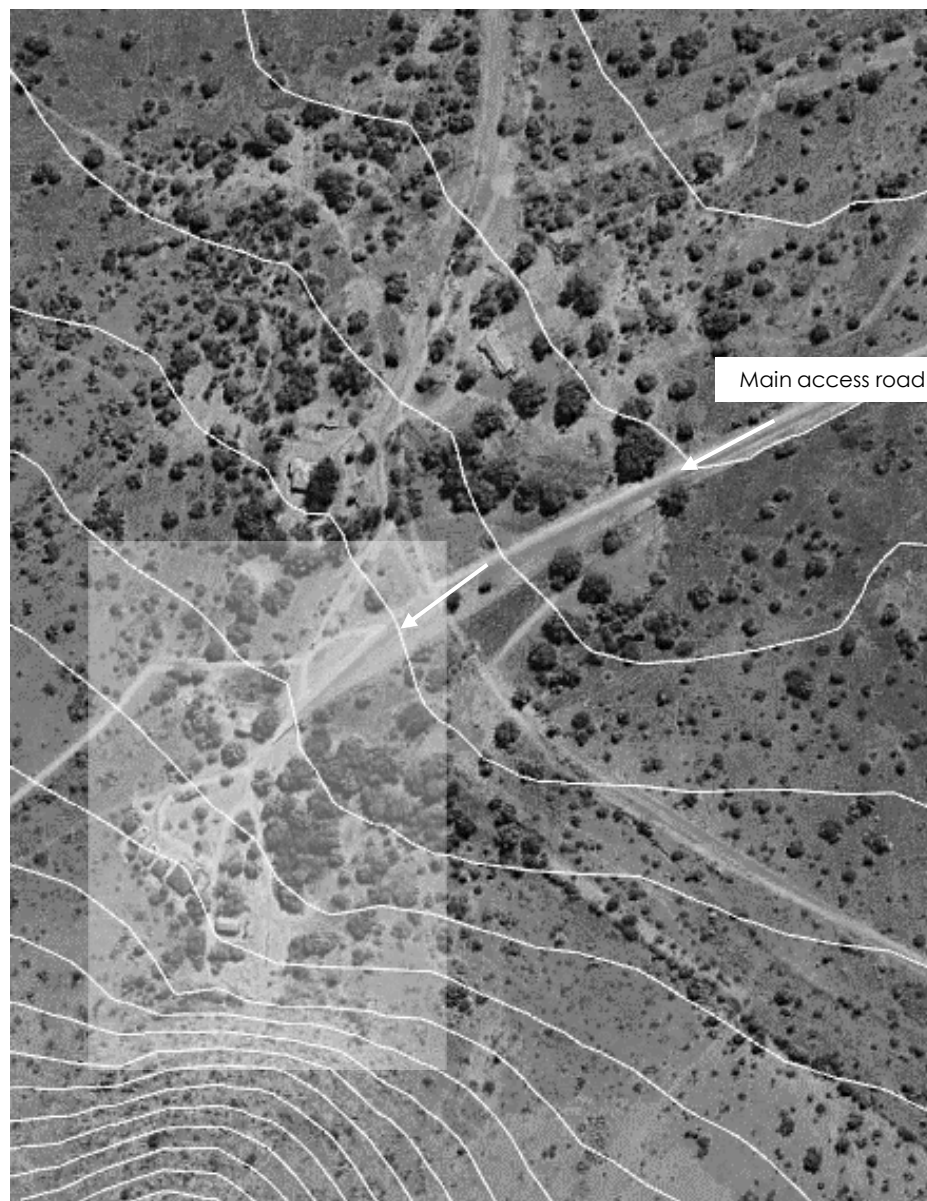


Figure 50: Unobstructed aerial view of the proposed site on Wonderwerk Farm with contours (GoogleEarth. n.d.; online; adapted by author).

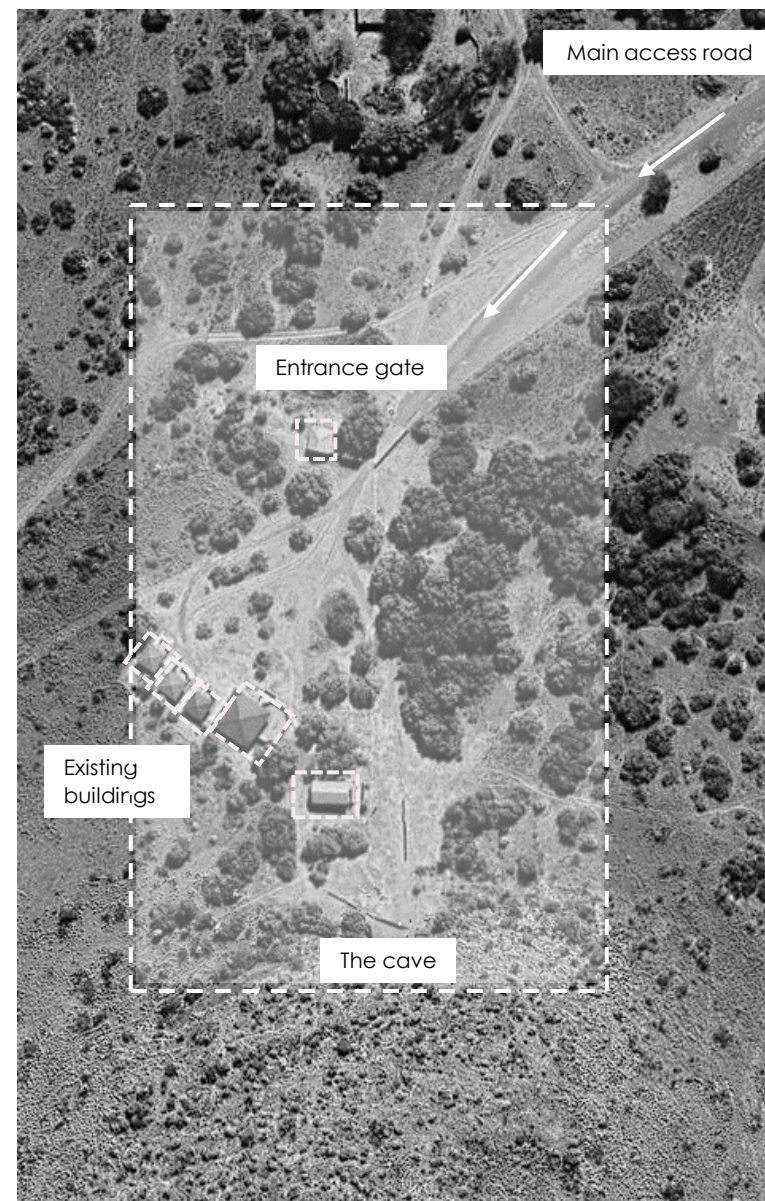


Figure 51: Aerial view of the proposed site (GoogleEarth. n.d.; online; adapted by author).

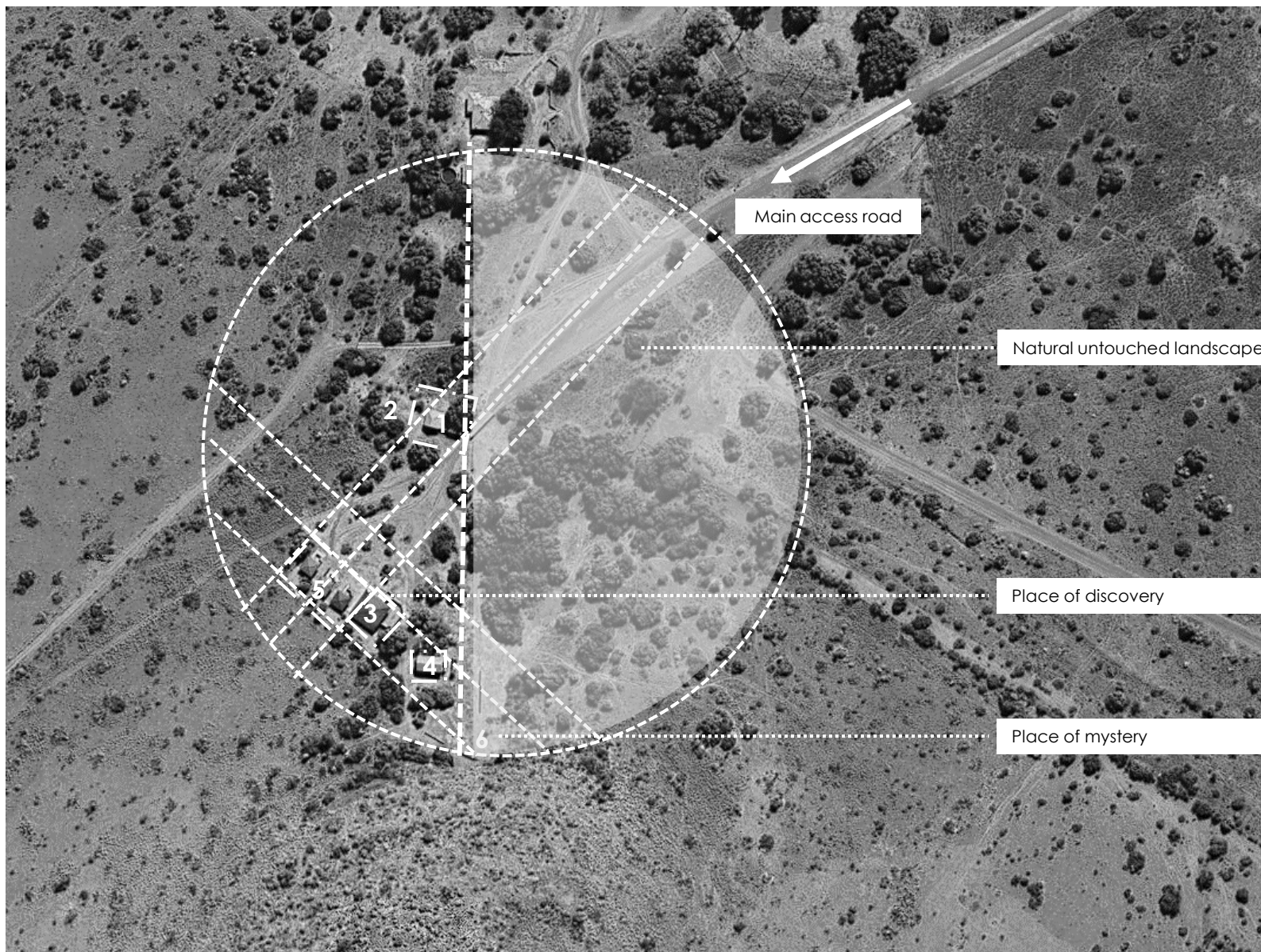


Figure 52: Attempting to clarify the current site conditions (GoogleEarth. n.d.; online; adapted by author).



3 – Interpretation centre

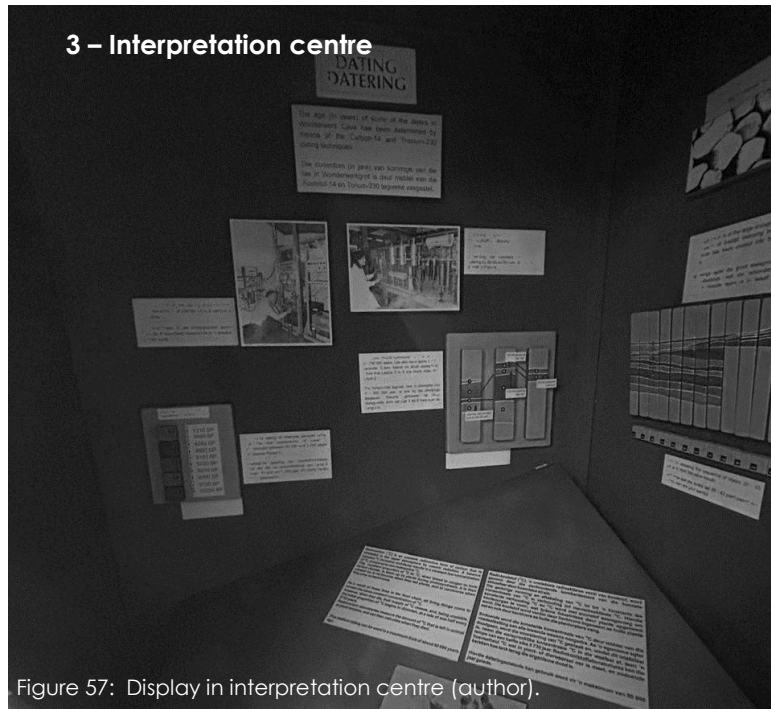


Figure 57: Display in interpretation centre (author).

4 – Ablution block

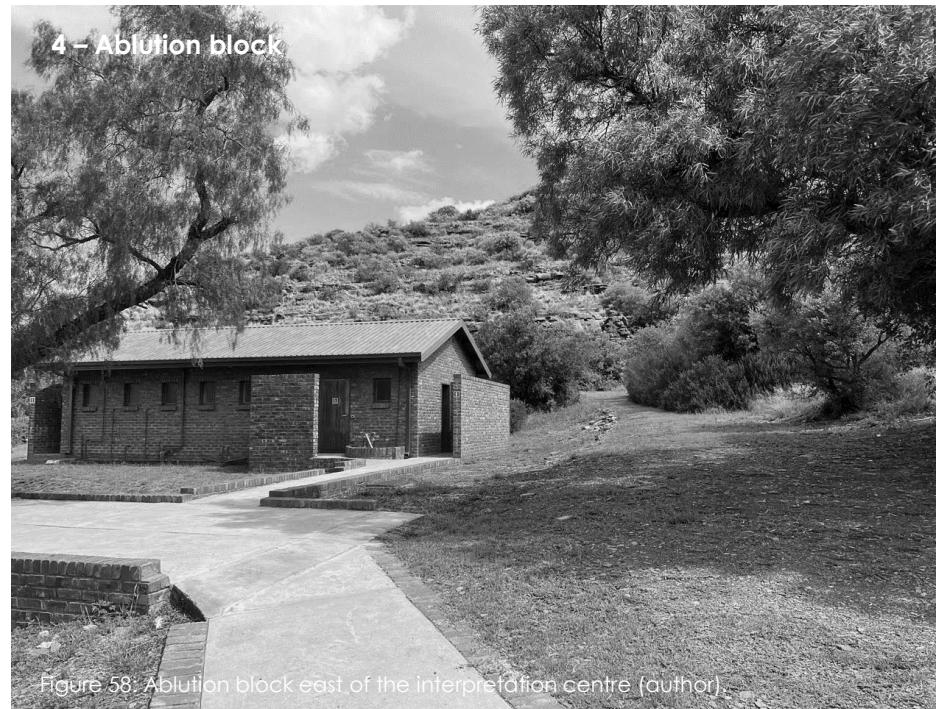


Figure 58: Ablution block east of the interpretation centre (author).

5 – Research residences



Figure 59: Row of residences to the west of the interpretation centre (author).

5 – Research residences



Figure 60: Residence blocks south of the site (author).

3.3.3.3 The Cave As The Obscure Datum

The Wonderwerk Cave was officially declared a national heritage site on 12 March 2010 (SAHRA, n.d.: online). Extending 140 meters into the hillside, the cave has produced archaeological discoveries reaching depths of up to 6 meters below the surface. Since the initiation of formalized research in the 1940s, the site has offered profound insights into both environmental history and human occupation.

In light of this, the cave becomes a place imbued with obscure and complex meanings. Through the lens of the Afropolitan perspective discussed in the previous chapter, the cave—with its intricate cultural and historical narratives—serves as a symbolic datum on the site, embodying both local and global dimensions of identity and heritage.

Preserving the cave with deliberate care, while respecting its function as an active archaeological site, enables an authentic engagement with its "untouched" qualities. Currently, a walkway, designed by Craig McLenaghan, allows visitors to traverse the interior space without disturbing the cave or ongoing excavations.

The proposed crypticarium will further honour the cave's integrity by preserving its raw, cold, and mysterious atmosphere, allowing visitors to encounter it in its natural state, thus celebrating its original essence.



Figure 61: Plaque declaring the Cave as a national heritage site (author).



Figure 62: Mysterious rock drawing on the cave interior walls (author).



Figure 63: Amphitheatre and gathering space inside the cave (author).



Figure 64: Walkway leading into the cave (author).

3.3.3.4 Navigating The Cave

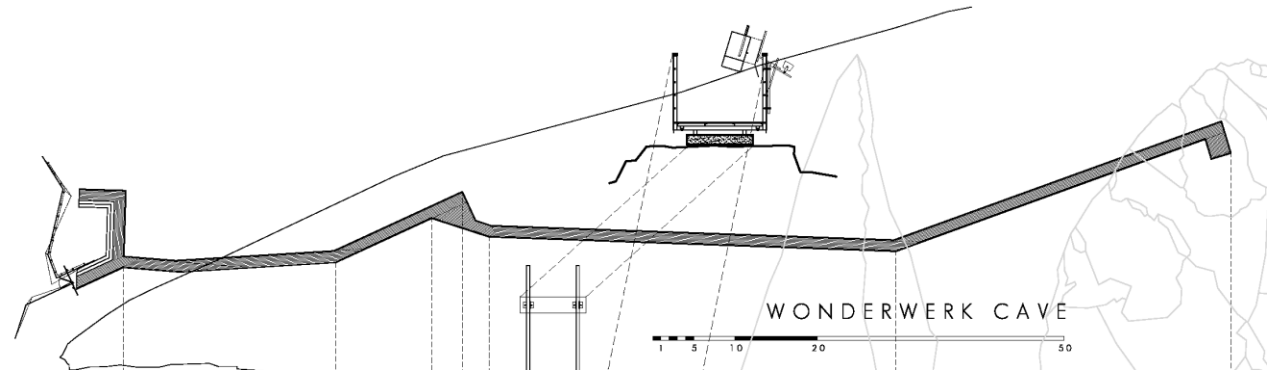


Figure 65: Plan of the designed walkway inside the Wonderwerk Cave interior (McLenaghan, 2016, online).

The design of the walkway within the cave interior is rooted in the concept of Pathways through Time, embodying the interplay between the ephemeral nature of change and the enduring impact of geological processes. In this ancient landscape, remnants continually surface as others disappear, reflecting the cyclical dynamics of the site. The installation itself represents only a small fragment within the cave's extensive history, intentionally conceived to be both constructed and eventually "un-made" (McLenaghan, 2016, online).

Key considerations in the design of the walkway through this sacred space include scale, materiality, and tectonics. The structure was built as a prefabricated assembly, assembled on-site without the use of ground anchors. Its stability is ensured by its self-weight and the strength of the interlocking components. Notably, the walkway can be entirely dismantled into transportable segments, leaving no lasting trace on the environment. This deliberate impermanence underscores the transient nature of the installation, adding a temporary architectural layer to a landscape where the earth's natural form is in constant flux (McLenaghan, 2016, online).



3.4 MICRO SITE ANALYSIS

3.4.1 SITE CHARACTERISTICS

The site is located on the northeastern slope of a dolomite hill on the farm. Scattered across the site are dolomite rocks from the hills in the surrounding area, with shrub-like vegetation leading to the cave opening. The cave's entrance is oriented toward the north, allowing much natural light into the mouth of the cave, however, it becomes much darker and much more mysterious as you move deeper into the cave, which stretches up to 140 metres into the hill.

The elevation change from the gatehouse to the cave entrance raises approximately 20 meters. The ascent from the gatehouse to the interpretation centre features a gradual incline; however, beyond the interpretation centre, the gradient becomes notably steeper as one approaches the cave opening, with a level interior guided by the previously analysed walkway.

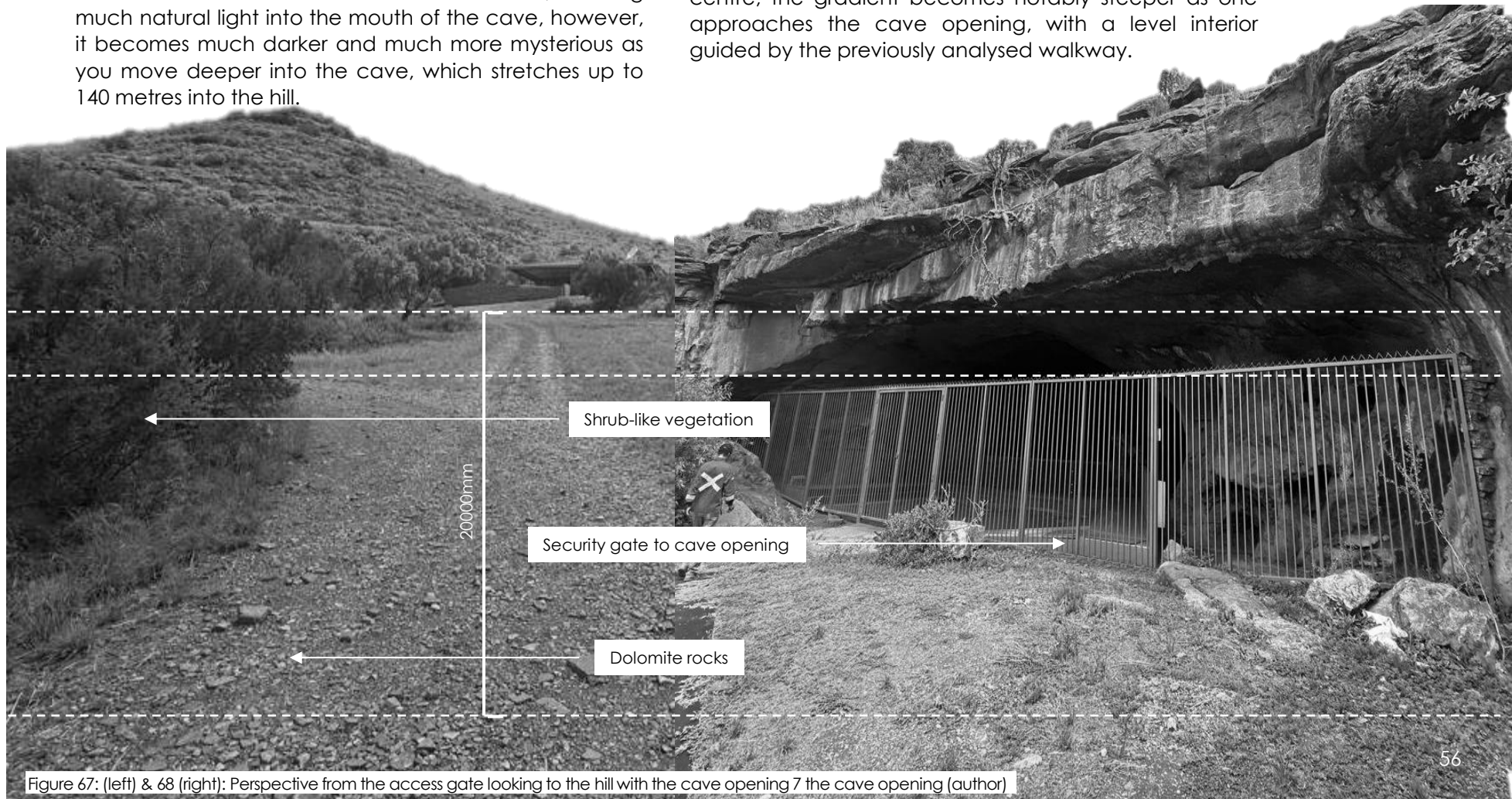


Figure 67: (left) & 68 (right): Perspective from the access gate looking to the hill with the cave opening 7 the cave opening (author)

3.5 ALTERNATIVE SITE ANALYSIS

OBSCURED PERCEPTION

To deepen the understanding of the site's archaeological significance, an alternative site analysis was conducted to challenge conventional methodologies and reshape the perceptions of participants and the propensity of the archaeological process. Visitors arrive at the site, equipped with historical context, often carrying preconceived notions—either consciously or subconsciously—about the site's importance. In contrast to traditional archaeological practices that focus on revelation and interpretation, this alternative approach intentionally embraced a strategy of concealment, thereby skewing the existing perceptions and allowing visitors to actively engage and understand the site in a completely different manner.

This deliberate departure from established interpretive methods sought to disrupt conventional frameworks, encouraging participants to explore new avenues of interpretation and gain fresh insights from their interaction with the landscape, ultimately reshaping their perceptions. Upon arrival, five distinct locations of significance were identified by the researcher (myself).

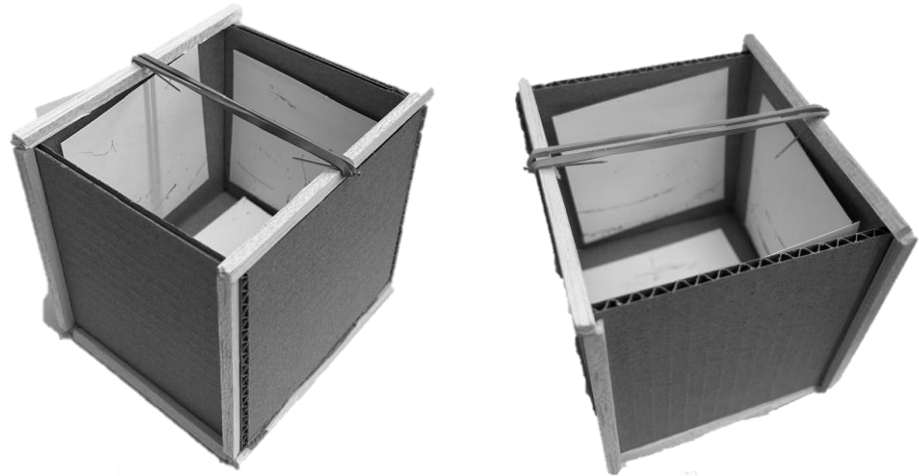


Figure 69: The boxes that were concealed on site, with paper interiors. The pens were suspended between the rubber bands to make markings on the paper (author).



Figure 70: Obscure markings made in different locations on site (author).



Figure 71: Interior space exploration (author).

At each of these key locations, a cube lined with white paper was discreetly hidden. During the concealment process, a marker, affixed to a rubber band within the cube, was allowed to make spontaneous markings. This process facilitated the creation of enigmatic inscriptions that corresponded to each significant site, generating new perceptions tied to these locations. Each marking transcended the role of simple documentation, evolving into a cryptic archaeological artefact imbued with meaning. In doing so, the process transformed the space by layering it with concealed significance.

The result produced a coming together of obscure markings, indicating and expressing the significance of the interior spaces that become a place. Not only is this true for the cave itself, but this can be true for meaningful places in architecture as well.



Figure 72: Illustration of the cave entrance (author).



3.6 MAPPING THE COORDINATES

Following the in-depth exploration and investigation into the site's mysteries, along with the uncovering of its historical and cultural significance, it becomes evident that a deeper understanding of the poetics of relational thickening and the inherent complexities of the site transforms the visitor's experience, than what might have been originally experienced before gaining such insights.

The introduction of a crypticarium on the site presents an opportunity to contextualize and amplify the site's physical attributes, archaeological discoveries, and historical narrative in a meaningful way.

This marks the conclusion of the project's practical explorations, which have laid the groundwork for an architectural approach to the development of a crypticarium at Wonderwerk Cave. This approach not only redefines the engagement with the site but also proposes a new framework for interpreting its layered histories and spatial intricacies.

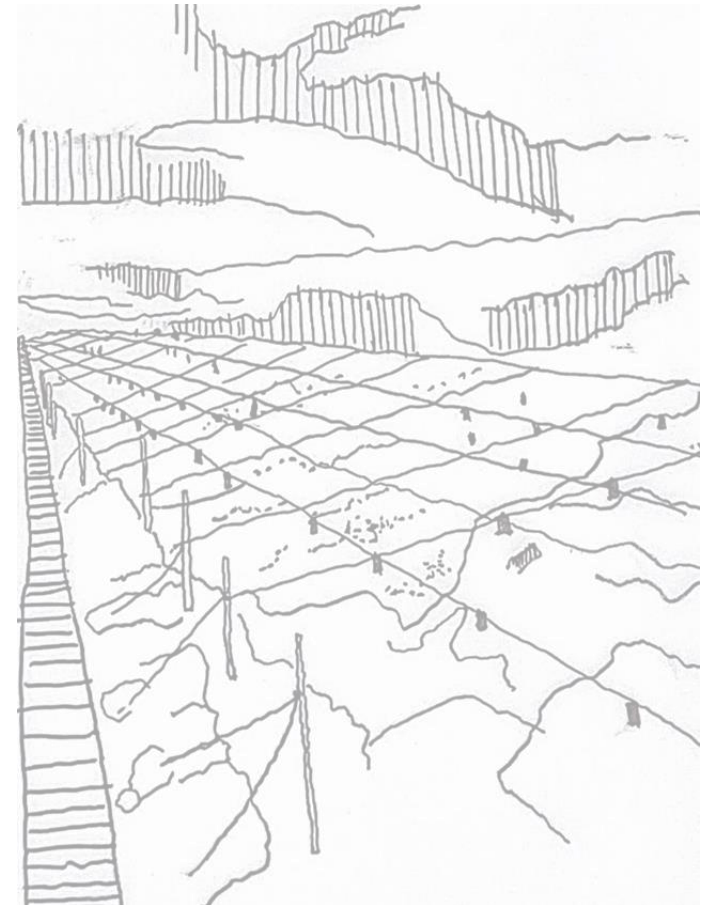
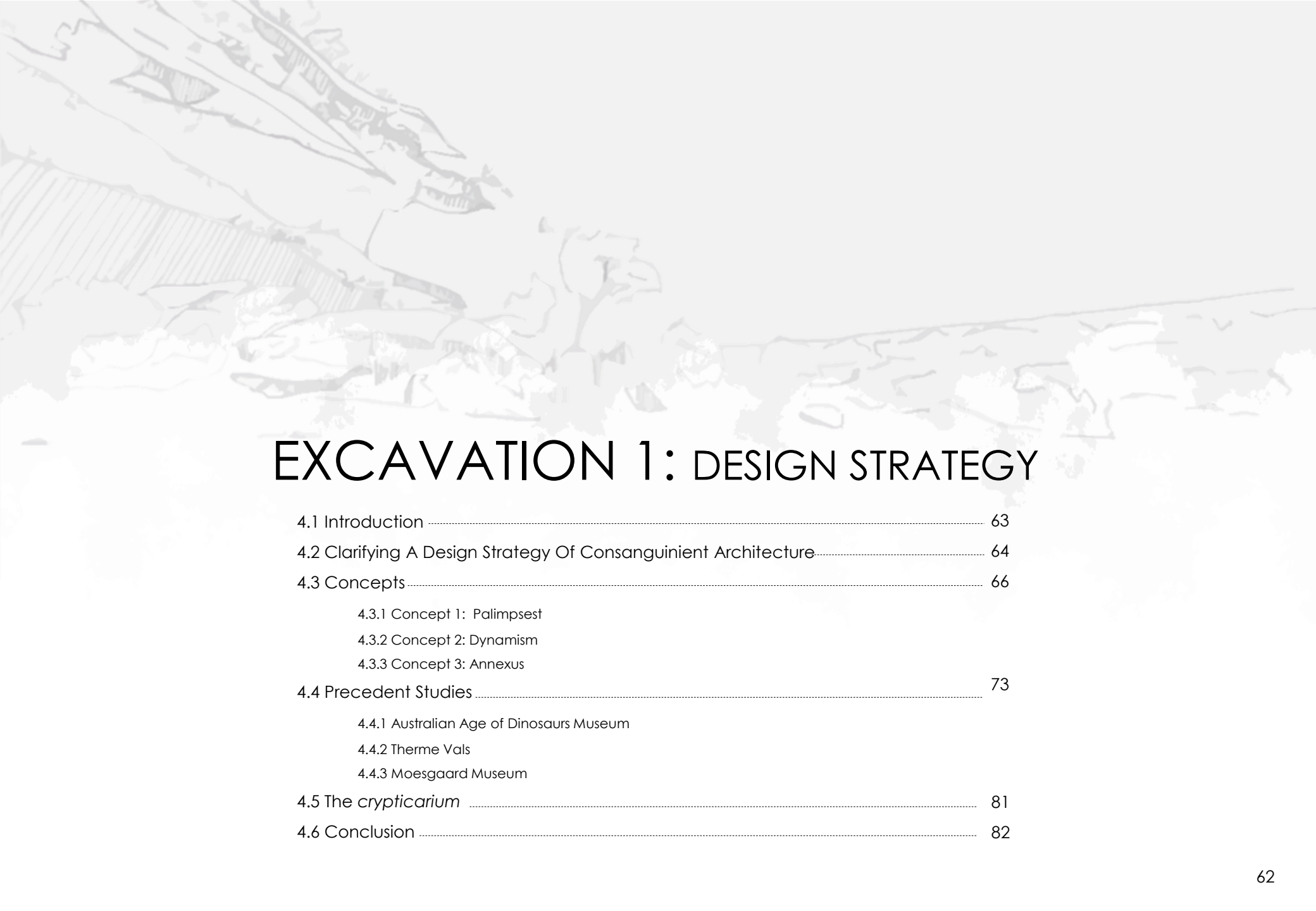


Figure 74: Illustration of the archaeological site inside the Wonderwerk Cave (author).



CHAPTER 04



EXCAVATION 1: DESIGN STRATEGY

4.1 Introduction	63
4.2 Clarifying A Design Strategy Of Consanguinient Architecture.....	64
4.3 Concepts	66
4.3.1 Concept 1: Palimpsest	
4.3.2 Concept 2: Dynamism	
4.3.3 Concept 3: Annexus	
4.4 Precedent Studies	73
4.4.1 Australian Age of Dinosaurs Museum	
4.4.2 Therme Vals	
4.4.3 Moesgaard Museum	
4.5 The <i>crypticarium</i>	81
4.6 Conclusion	82

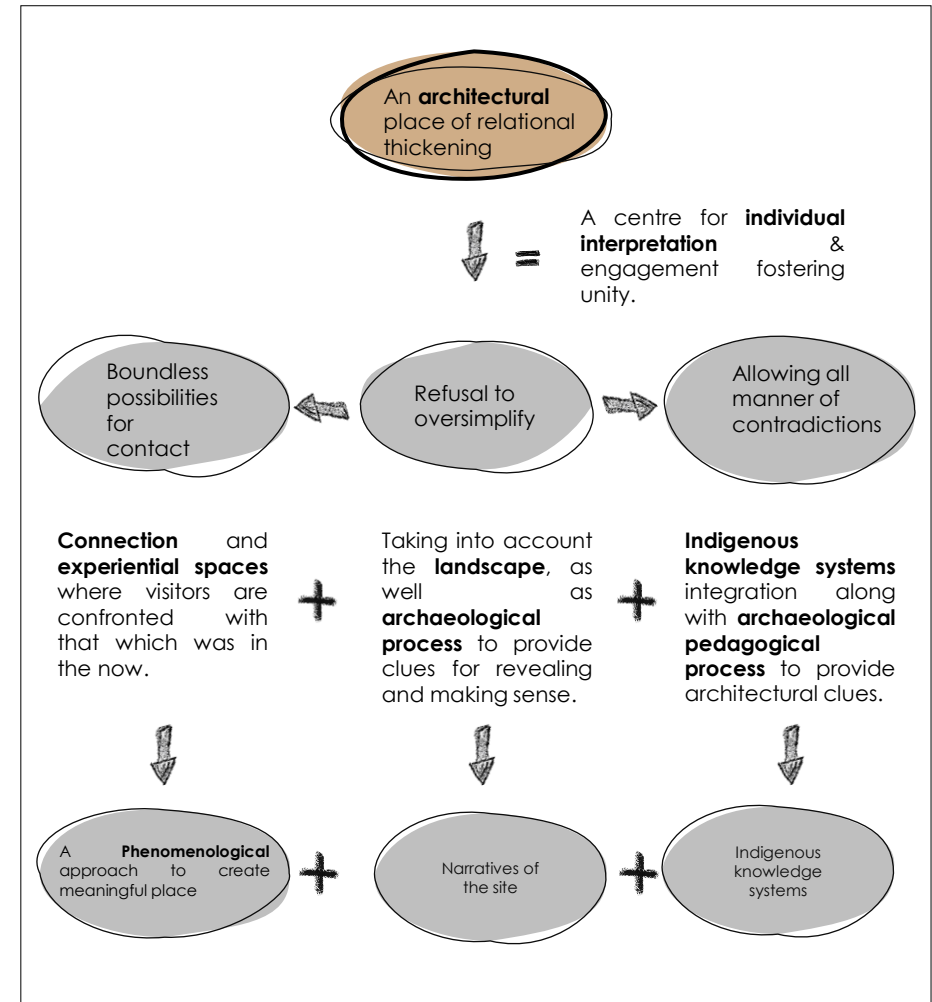
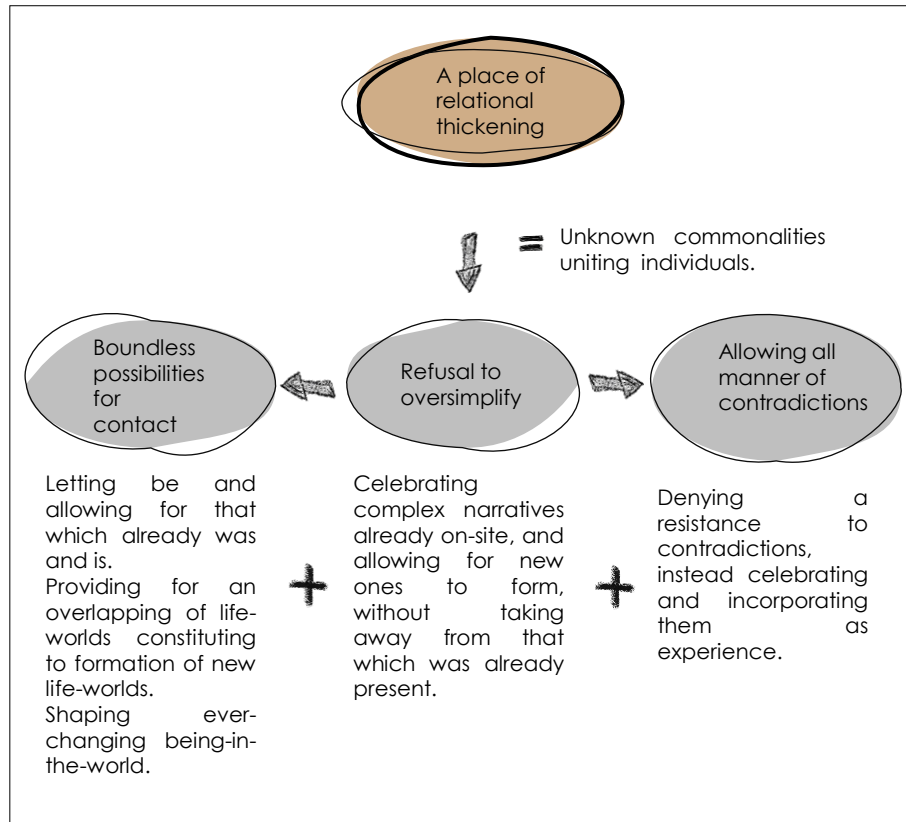
4.1 INTRODUCTION

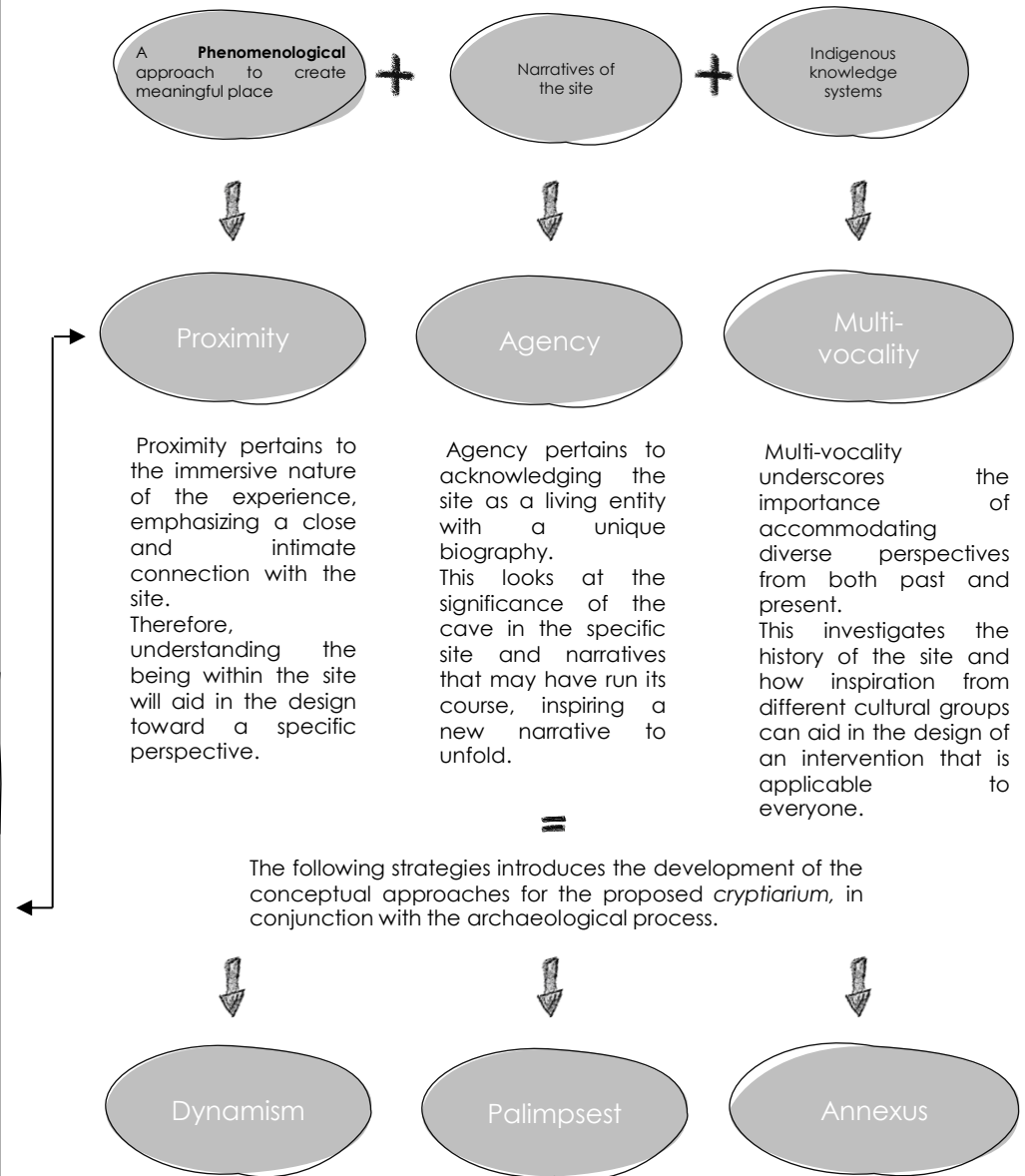
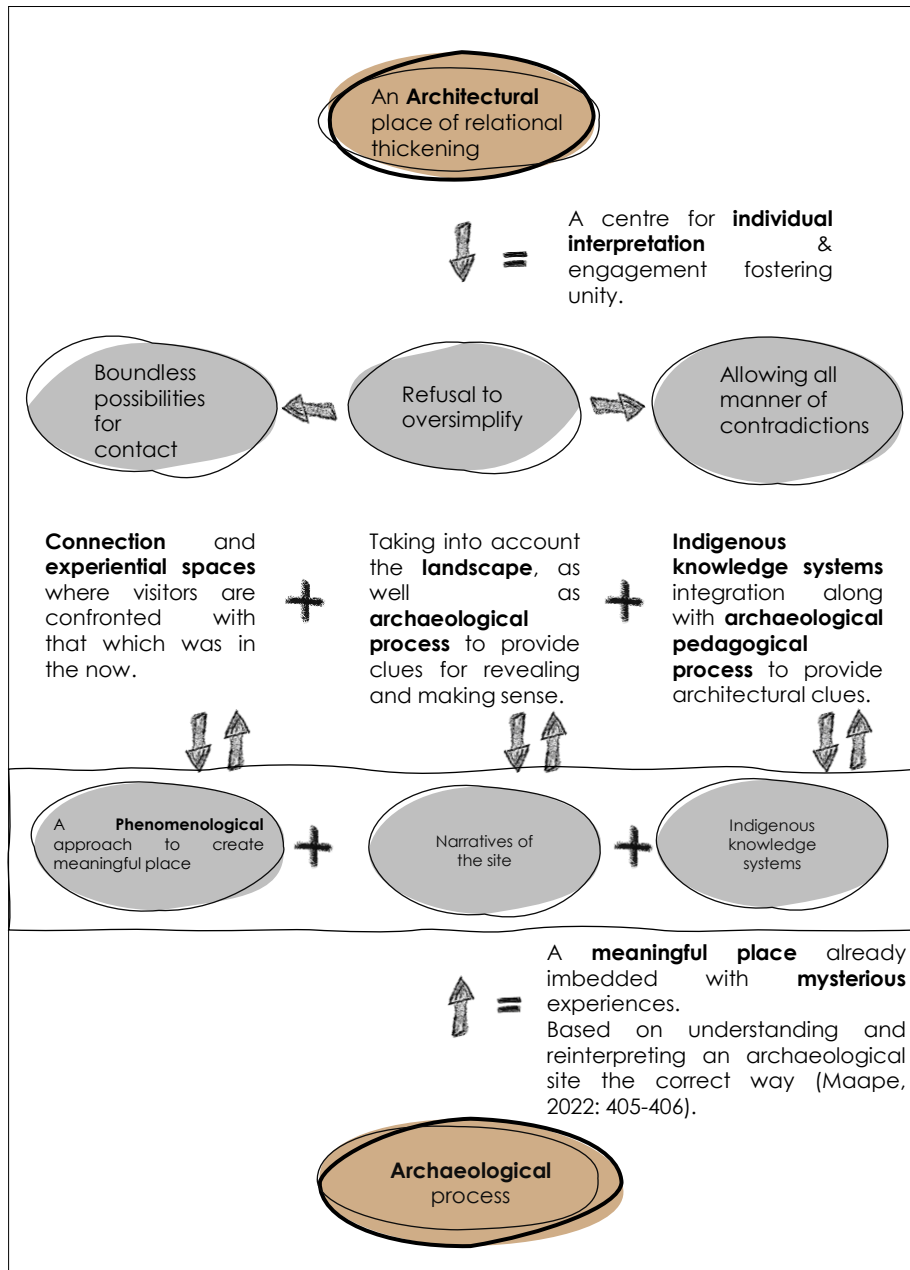
Building on an understanding of Afropolitan poetics and their potential influence on architectural possibilities, alongside an examination of the site's context and underlying complexities, this chapter seeks to explore how these poetics can become stepping stones to a design approach.

The chapter begins by examining the core ideas that shape the design proposal, establishing a clear vision for what the project aspires to achieve. This will be done by first investigating conceptual approaches, namely "Palimpsest", "Dynamism" as well as "Annexus" which will inform the development of a design strategy diagram and setting out of design guidelines. These guidelines serve as the foundation for the creation of a crypticarium typology, tailored specifically to the Wonderwerk Cave site. Rather than dominating the site, the following chapter will further propose how the design will sensitively respond to the cave's profound significance and its complex narratives.

Finally, the chapter will conclude with precedent studies, offering insights into potential design strategies and approaches that best align with the project's objectives. These studies provide critical reference points for formulating a well-considered architectural response.

4.2 CLARIFYING A DESIGN STRATEGY OF CONSANGUINIENT ARCHITECTURE





4.3 CONCEPTS

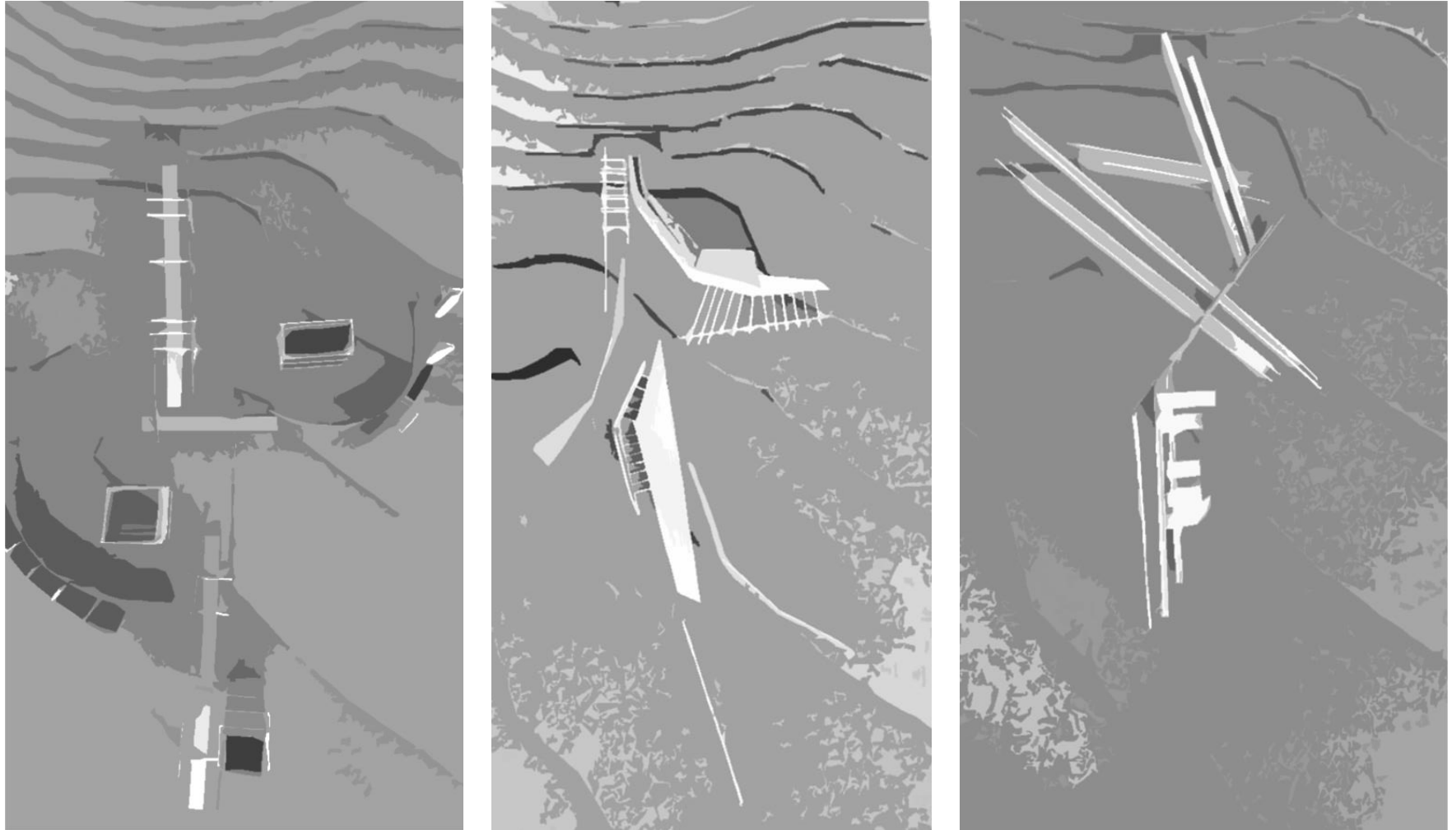


Figure 75-77 (left to right): Conceptualising the concept models (author).

4.3.1 Palimpsest

The term "palimpsest" commonly refers to instances where elements or objects overlap or are layered upon one another. This concept is particularly relevant in archaeological sites, where each strata of the earth represents a distinct period.

Such layering is evident at the Wonderwerk Cave, where artefacts are embedded in successive layers, each piercing through different epochs and preserving memories of the past.

The traces of these historical narratives, gradually obscured by earth and dust, contribute to the sense of mystery, evoking a beauty that lies in the unknown and the partially concealed.

Layering architectural experiences may contribute to the archaeological experience of moving through time in meaningful places.



Figure 78: Palimpsest, conceptual development (author).

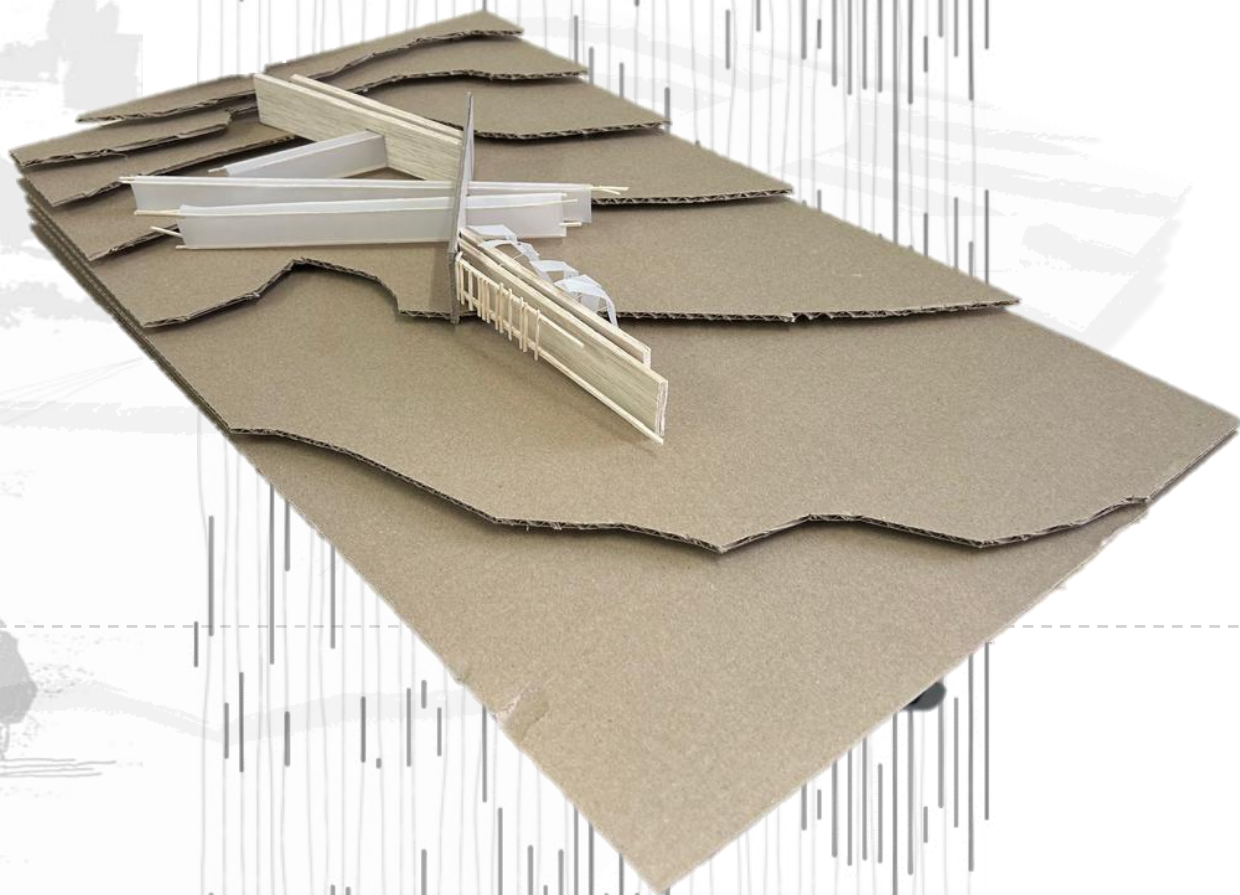
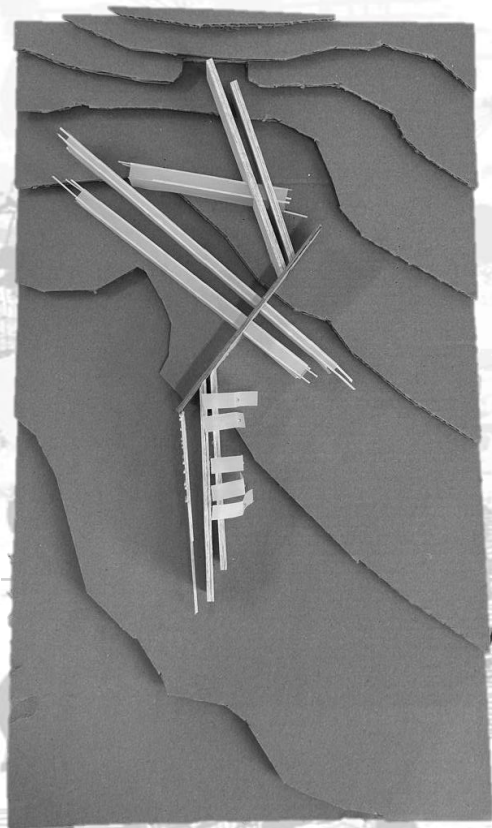


Figure 79: Palimpsest (author).

4.3.2 Dynamism

Within the cave, a discernible narrative emerges based on the mapped archaeological findings as depicted in figure 80, which inspired the creation of a route punctuated by hidden spaces. This reflects the dynamic nature of archaeological sites, with their intricate and layered histories, as highlighted by Maape (Maape, 2022: 405-406).

The architecture, in turn, can evoke moments of revelation, providing spaces for reflection and engagement with specific artefactual or individual discoveries.

Just as one follows a narrative while traversing the cave, the crypticarium can aim to offer a similar conceptual experience—a guided narrative journey through the site, encouraging exploration and contemplation while embracing mystery.



Figure 80: Dynamism, conceptual development (author).

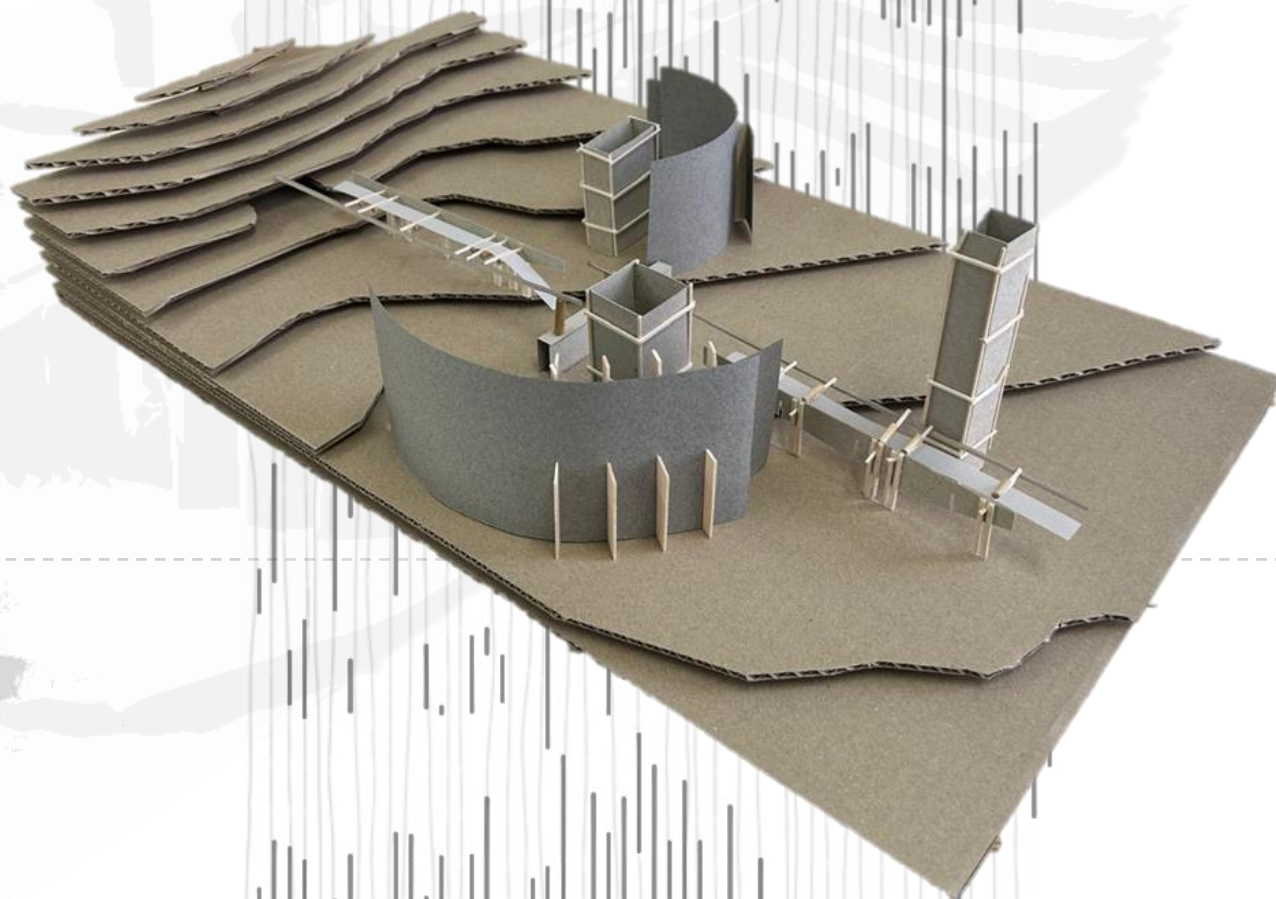
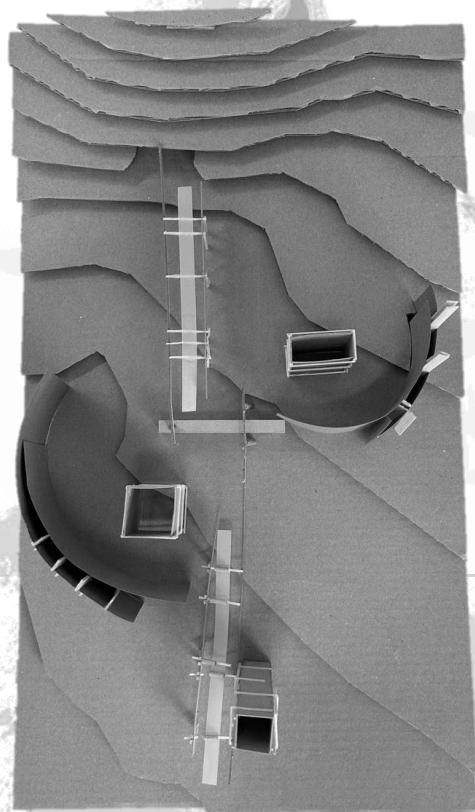


Figure 81 Dynamism (author).

4.3.3 Annexus

The concept of "annexus" reflects the inherent connectedness of the site.

Historically, various groups of people have traversed this space, and through an Afropolitan poetic lens, this relational complexity underscores the shared sense of connectedness among all who encounter it.

This notion of consanguinity is embodied in the architecture, which seeks to evoke a sense of kinship in its visitors. The architecture, rather than asserting dominance over the site, acts as a conduit to what already exists, integrating harmoniously with the surroundings.

Its purpose will be not to become the focal point but to subtly guide visitors' attention to the site's original essence—the Wonderwerk Cave itself.

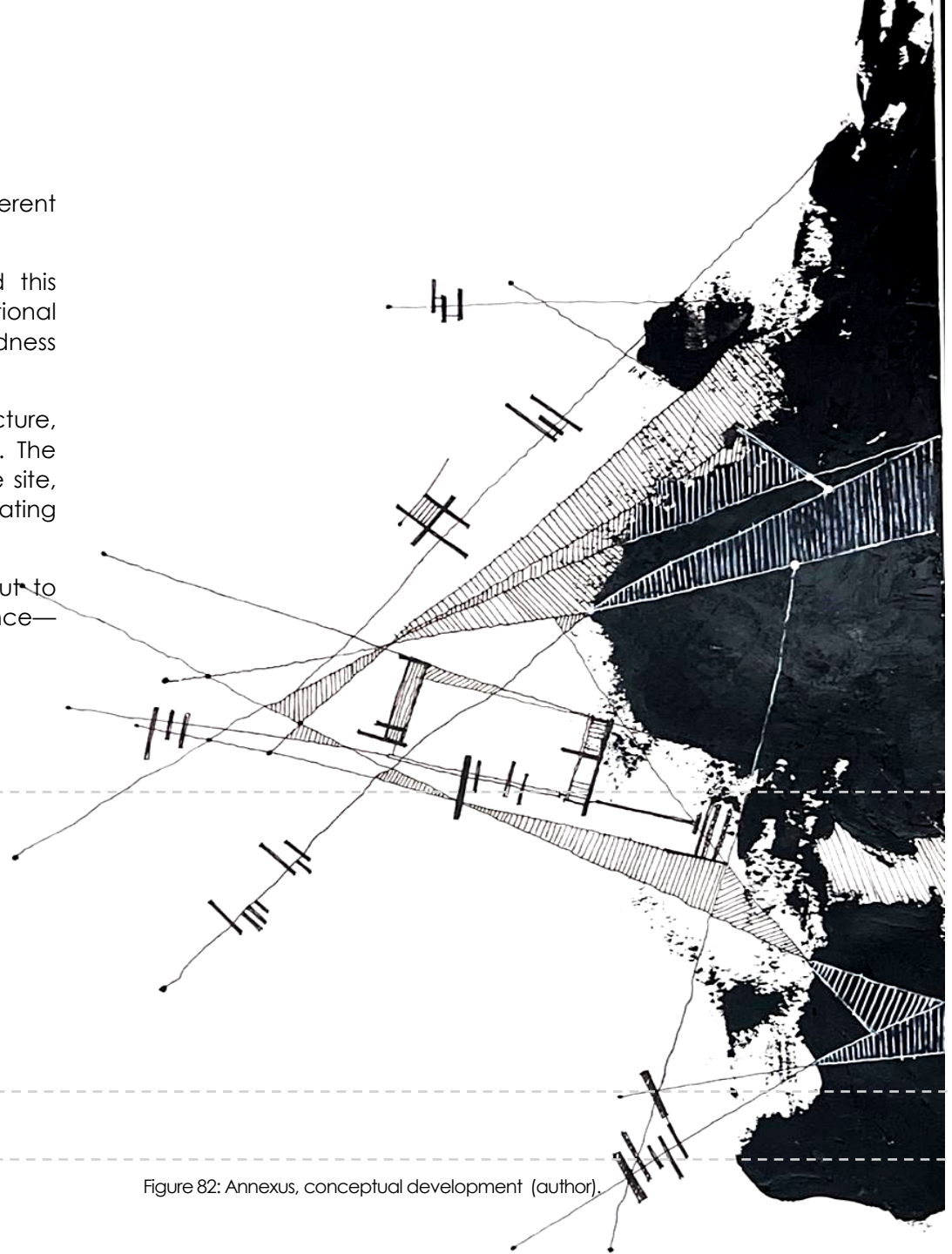


Figure 82: Annexus, conceptual development (author).

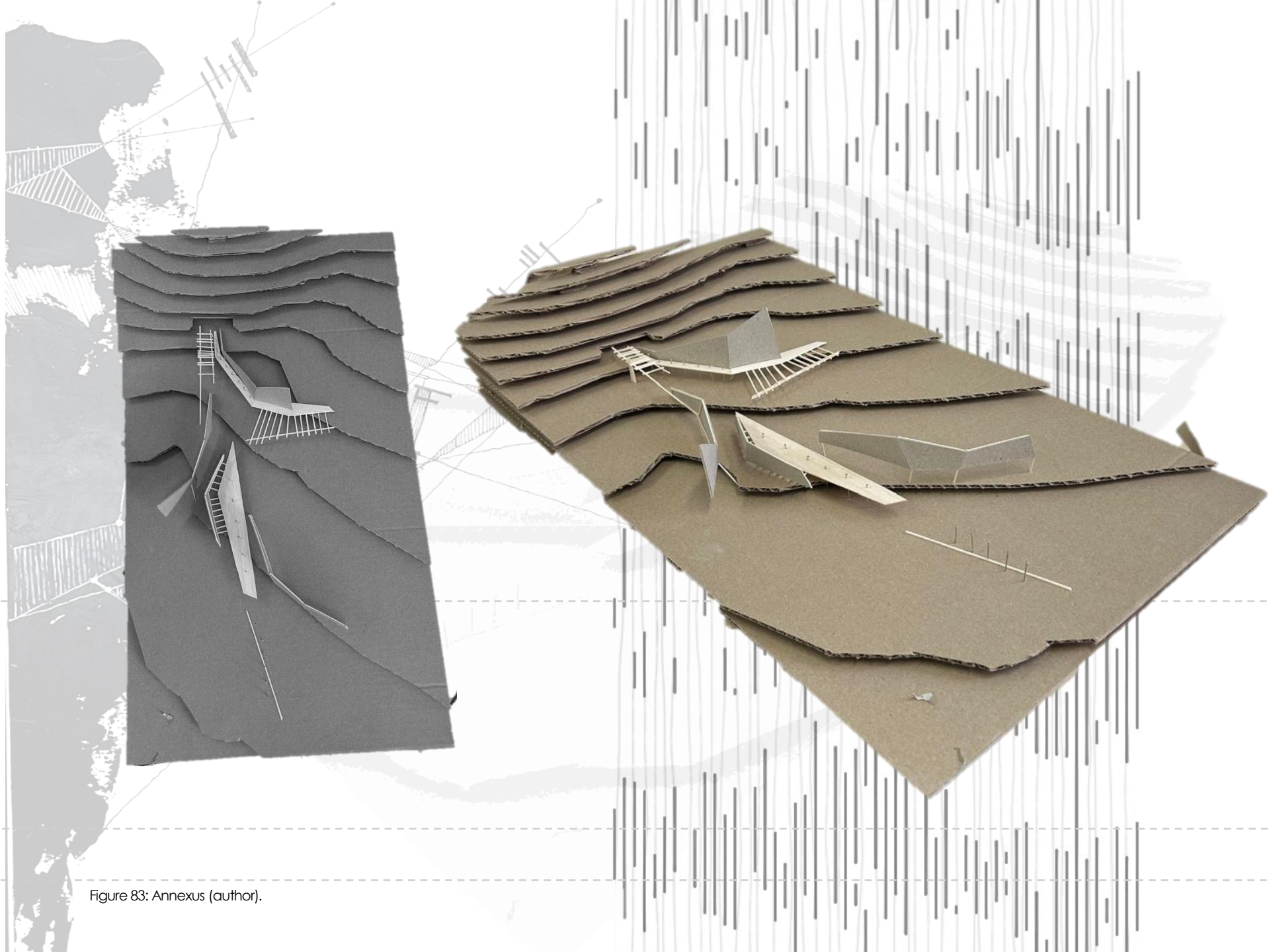


Figure 83: Annexus (author).

4.4 PRECEDENT STUDIES

4.4.1 Australian Age of Dinosaurs Museum



Figure 84: Textured walls and corten steel roof leading the visitor to the Age of Dinosaurs Museum located in Australia (Mehta, n.d.; online).

By: Cox Rayner Architects
Date of completion: 2012
Location: Outback in north Queensland.

As a conservation project of historical findings, the museum was designed to allow visitors to fully experience the rich historical context in which the project finds itself, where the world's most cohesive dinosaur collections have been discovered (Mehta, n.d.; online).

The material approach as well as design decisions stemmed from the idea of expressing the landscape, through engaging forms and spaces to attract visitors (Mehta, n.d.; online).



Figure 85: Elevation of the museum atop the hill in Outback, Australia (Mehta, n.d.; online).

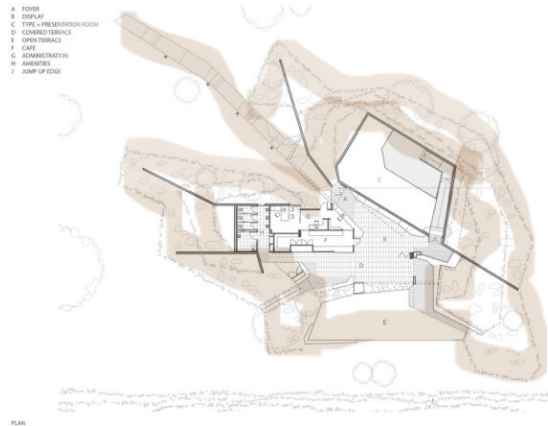


Figure 86: Floorplan design showing how the building sits seamlessly in the landscape (ArchDaily, n.d.; online).

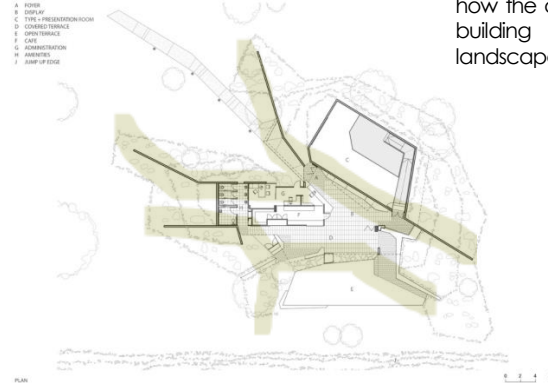


Figure 87: Floorplan design showing how angular lines guide the visitor through (ArchDaily, n.d.; online).

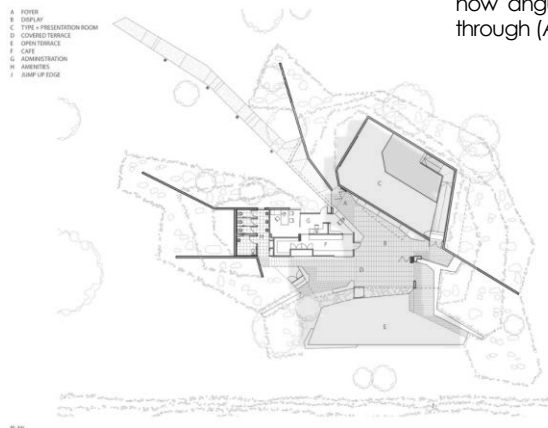


Figure 88: Floorplan design illustrating free space after guidance (ArchDaily, n.d.; online).

Seamless Integration into the Landscape:

The design approach aims to achieve a near-complete integration with the surrounding landscape, effectively camouflaging the structure with the hill upon which it is designed. This strategy enables the museum to blend with its environment, allowing visitors to experience a sense of continuity with the landscape in which the fossils were originally discovered.

Design Considerations for the crypticarium:

As the project is site-specific and holds similar significance to that of the dinosaur museum, the proposed crypticarium will also be designed to blend seamlessly into the landscape at the base of the hill where the cave is located. This approach ensures that the cave's natural opening is preserved and that architectural interventions do not compromise the site's inherent sanctity.

Angular Guidelines:

The design plan incorporates angular lines to direct visitors from the exterior into designated gathering spaces, facilitating an intuitive exploration and interpretation of the exhibits within the museum.

Design Considerations for the crypticarium:

At the Wonderwerk Cave site, the design will employ similar angular lines to guide visitors from the exterior spaces, creating a coherent relationship with the rocky contours of the hill. This approach respects the site's context while leading visitors through a thoughtfully curated experience.

Free Space Design:

While the design provides structured guidance for visitors, it also incorporates open areas that allow for free movement and personal exploration.

Design Considerations for the crypticarium:

The crypticarium design will feature a narrative framework to engage visitors, while also incorporating central areas that permit flexible circulation throughout the exhibition and dining spaces.

Materiality:

The material strategy for the design encompasses two principal elements: in-situ concrete and perforated steel elements (Mehta, n.d.; online).

Concrete:

The design strategy involved casting concrete on-site and incorporating textures and hues that reflect the local environment. Multiple moulds were created from site-specific textures, resulting in each wall presenting a distinct and individual appearance. This approach facilitates the seamless integration of the museum into its surroundings, achieved not only through colour but also through texture (Mehta, n.d.; online).

Perforated Steel:

The design incorporates handmade perforated steel screens, which are perforated to cast intricate shadows across the site. This addition enhances the visual and atmospheric qualities of the environment (Mehta, n.d.; online).

Material Considerations for the crypticarium:

The crypticarium will adopt a material approach analogous to that employed in the museum design.

Concrete:

The design will utilize in-situ cast concrete, incorporating pigments derived from the iron-rich soil of the Wonderwerk farm, similar to the approach of the museum for dinosaur fossils. This method aims to achieve a harmonious integration with the surrounding landscape, ensuring that the structure blends seamlessly into its environment.

Corten Steel:

Corten steel will be employed to evoke themes of ageing and the passage of time. Its colouration, which complements the red soil of the site, aligns with the conceptual framework of the design. This material choice enhances the thematic coherence of the crypticarium with its natural context.



Figure 89 Detail textures of the designed museum for dinosaur fossils (ArchDaily, n.d.; online).

4.4.2 Therme Vals



Figure 90: Therme Vals designed into the fall of the surrounding landscape (ArchDaily2, 2009; online).



Figure 91: Therme Vals extruding from the surrounding landscape (ArchDaily2, 2009; online).

By: Peter Zumthor
Date of completion: 1996
Location: Therm, Switzerland.

Peter Zumthor designed a spa and hotel over the only thermal existing springs in Graubunden Canton, Switzerland.

The idea behind the design approach was to create a quarry or cave-like structure, that emerges from the hills of Therm, Switzerland (ArchDaily2, 2009; online).

"Mountain, stone, water – building in the stone, building with the stone, into the mountain, building out of the mountain, being inside the mountain – how can the implications and the sensuality of the association of these words be interpreted, architecturally?" Peter Zumthor (ArchDaily2, n.d.; online).



Figure 92: Floorplan indicating circulation of visitors in the space (ArchDaily2, 2009; online; adapted by author).



Figure 93: Section of the design embedded within the landscape of Therme (ArchDaily, 2009; online; adapted by author).



Figure 94: Section showing the different spatial sizes that contribute to mystery and discovery (ArchDaily, 2009; online; adapted by author).

Integrating a space already within a spaces:

The spa was designed to remain open to the natural elements, with only a green roof structure providing a covering and minimal design intricacies.

The interior spaces spark the visitors' curiosity and instantaneously become a place of discovery as they are led throughout the design. Guiding the visitors through the design, with certain points of discovery, while allowing the visitors to believe they choose their route (Agarwal, n.d.; online).

Design Considerations for the crypticarium:

Given the importance of contemplative and intimate spaces in shaping the crypticarium experience, the design approach will incorporate enclosed interior spaces nested within larger, open areas. This strategy introduces a shifting of thresholds, offering visitors a sense of mystery and transformation as they move from one space to another, altering their initial perceptions and experiences.

Embedded within the Landscape:

The design of the spa was developed to integrate with the natural surroundings. Zumthor accomplished this by embedding the structure into the landscape and incorporating a green roof, which facilitated the seamless transition from the landscape to the design (ArchDaily, 2009; online).

Design Considerations for the crypticarium:

Similarly, the crypticarium can be designed to blend into the natural topography of the proposed site. Drawing inspiration from the approach used at Therme Vals, embedding the crypticarium within the landscape would allow for a sensitive approach to the site, avoiding the imposition of a large, intrusive mass that dominates the environment.

Spatial Mystery:

As visitors navigate through the design, they encounter spaces of varying volumes, engaging and stimulating all their senses. This variation, combined with the interplay of light, creates an immersive and captivating experience for the visitor.

Design Considerations for the crypticarium:

To enhance the visitor experience, spatial stimulation within the crypticarium should be carefully crafted to evoke a sense of obscurity and enigma. By doing so, visitors will be able to fully grasp the purpose and significance of the crypticarium, especially in the context of the Wonderwerk Cave site.

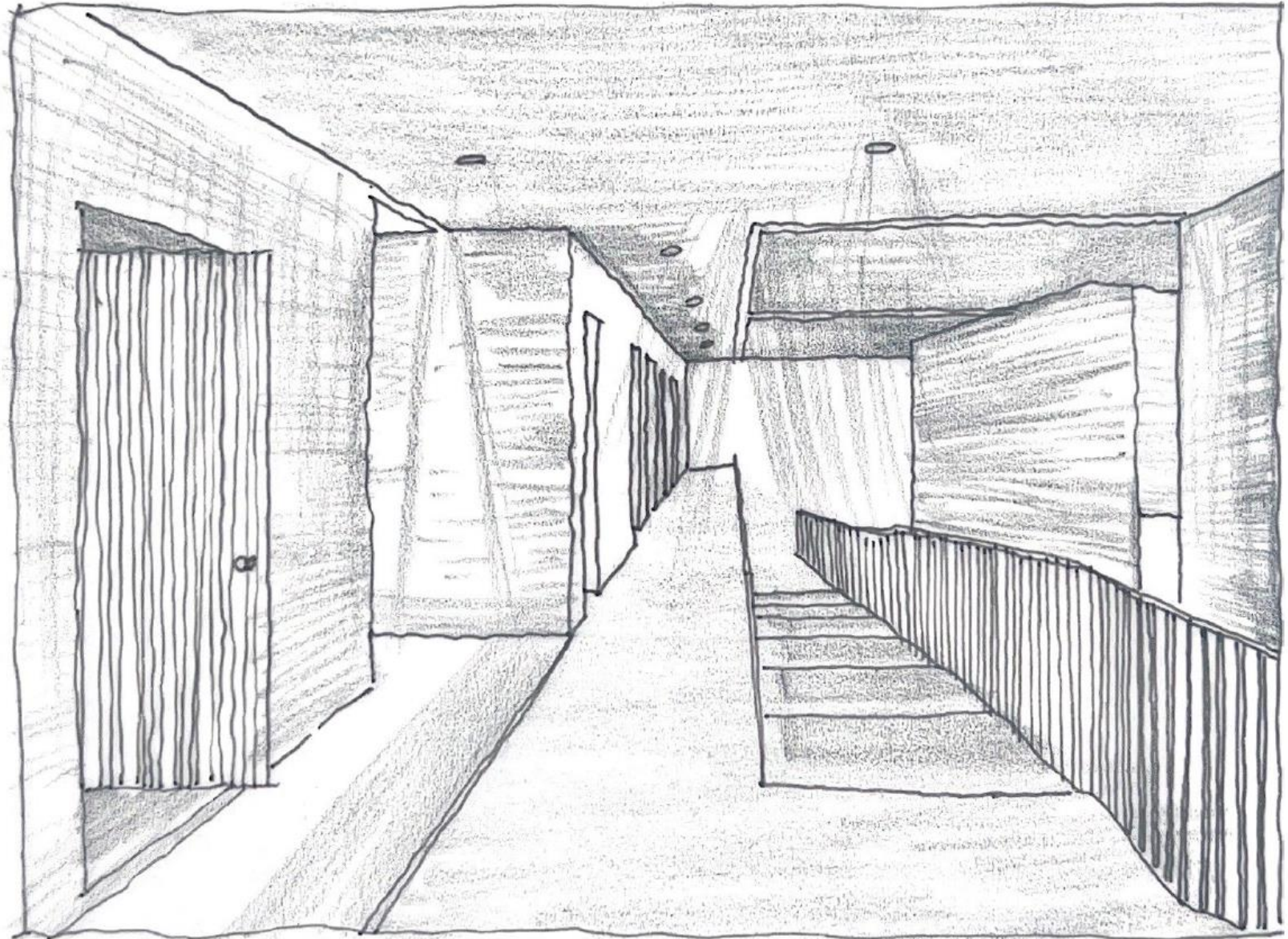


Figure 95: Interior perspective of the pathway leading to the baths, with light entering into the spaces (author).

4.4.3 Moesgaard Museum



Figure 96: Moesgaard Museum extruding from the landscape (ArchDaily3, n.d.; online).

By: Henning Larsen
Date of completion: no date
Location: Aarhus, Denmark

The design strategy for the museum involved integrating the building into the surrounding landscape. This was achieved by incorporating a rectangular green roof that blends with the natural topography, transforming it into a communal gathering space during the summer months (ArchDaily3, n.d.; online).

The elevated roof facilitated a conceptual design for the museum's interior, which is organized as a series of terraced levels, similar to the stratified layers found in archaeological sites during excavation (ArchDaily3, n.d.; online).



Figure 97: Perspective showcasing the roofscape rising from the ground (ArchDaily3, n.d.; online).

Archaeology as a Conceptual Approach:

The conceptual design was grounded in the principles of archaeology and the processes involved in archaeological excavation, as illustrated in Figure 98. This approach was seamlessly integrated into the overall circulation design, which was organized in a terraced manner to reflect the stratigraphy observed at archaeological sites. The architect aimed to create a design that harmoniously incorporates architecture, nature, culture, and history, thereby offering an inclusive experience accessible to individuals' different perceptions (ArchDaily, n.d.; online).

Design Considerations for the crypticarium:

Inspired by the archaeological method of revealing and making sense, the design concept for the crypticarium emphasizes elements of obscurity and mystery, opposing that which is traditionally held to the process.

To enhance this thematic approach, the design will incorporate a rectangular form, such as the precedent, mirroring the grid patterns typically found at archaeological sites, which is proposed for the main exhibition hub of the crypticarium.

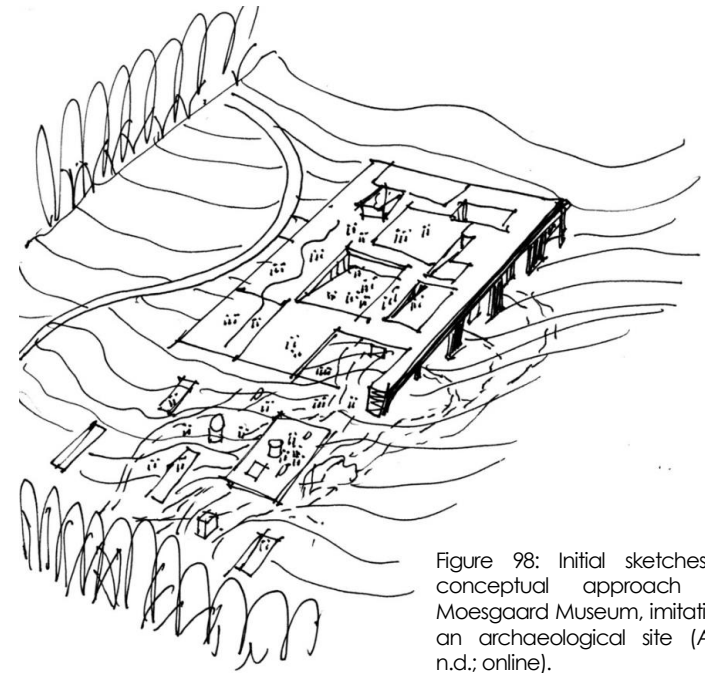


Figure 98: Initial sketches on the conceptual approach for the Moesgaard Museum, imitating that of an archaeological site (ArchDaily3, n.d.; online).

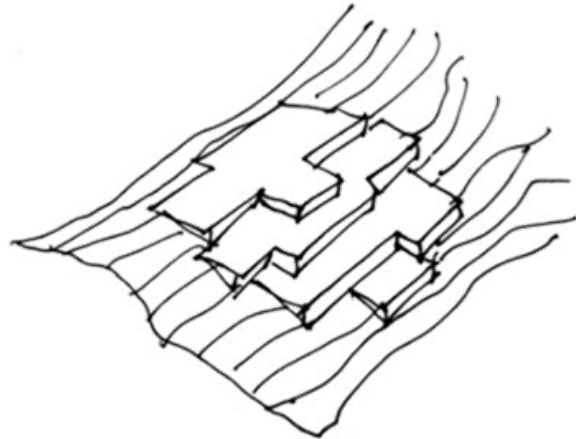


Figure 99: Initial sketches on the terraced design approach for the interior circulation of the design of the museum (ArchDaily3, n.d.; online).

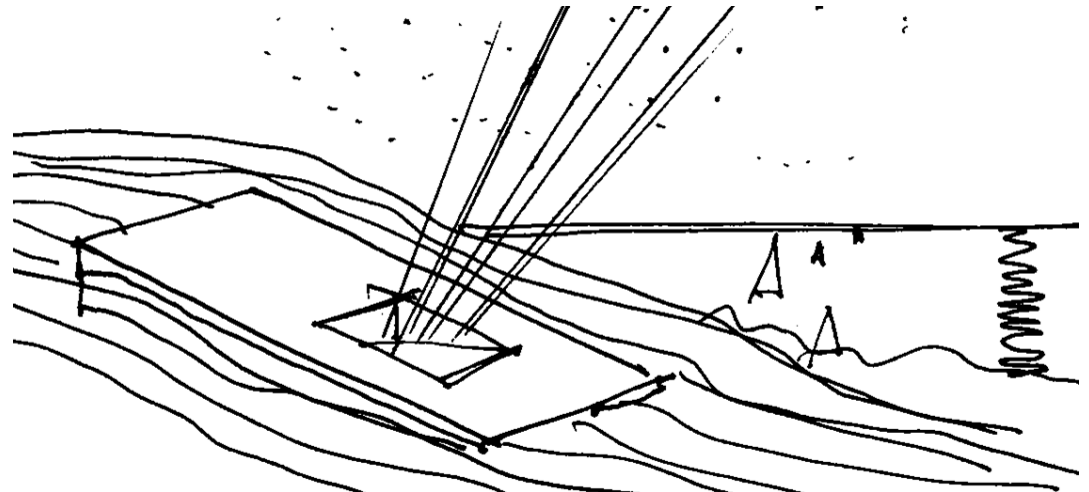


Figure 100: Initial sketches on the atrium space in the design approach for the museum (ArchDaily3, n.d.; online).

4.5 THE CRYTICARIUM

Building on a phenomenological approach and informed by Afropolitanism, the initial parti sketch for the project emerged as a tool to navigate both conceptual and contextual dimensions. This sketch, grounded in the intricacies of the proposed landscape surrounding the Cave, also draws from precedents explored in the study. As illustrated in Figure 101, the sketch represents an effort to engage the sensory experience of the site, while responding to its distinctive topography.

Simultaneously, it integrates the theoretical framework of the Afropolitan perspective to inform the design of a crypticarium inspired by an Architecture of Consanguinity.

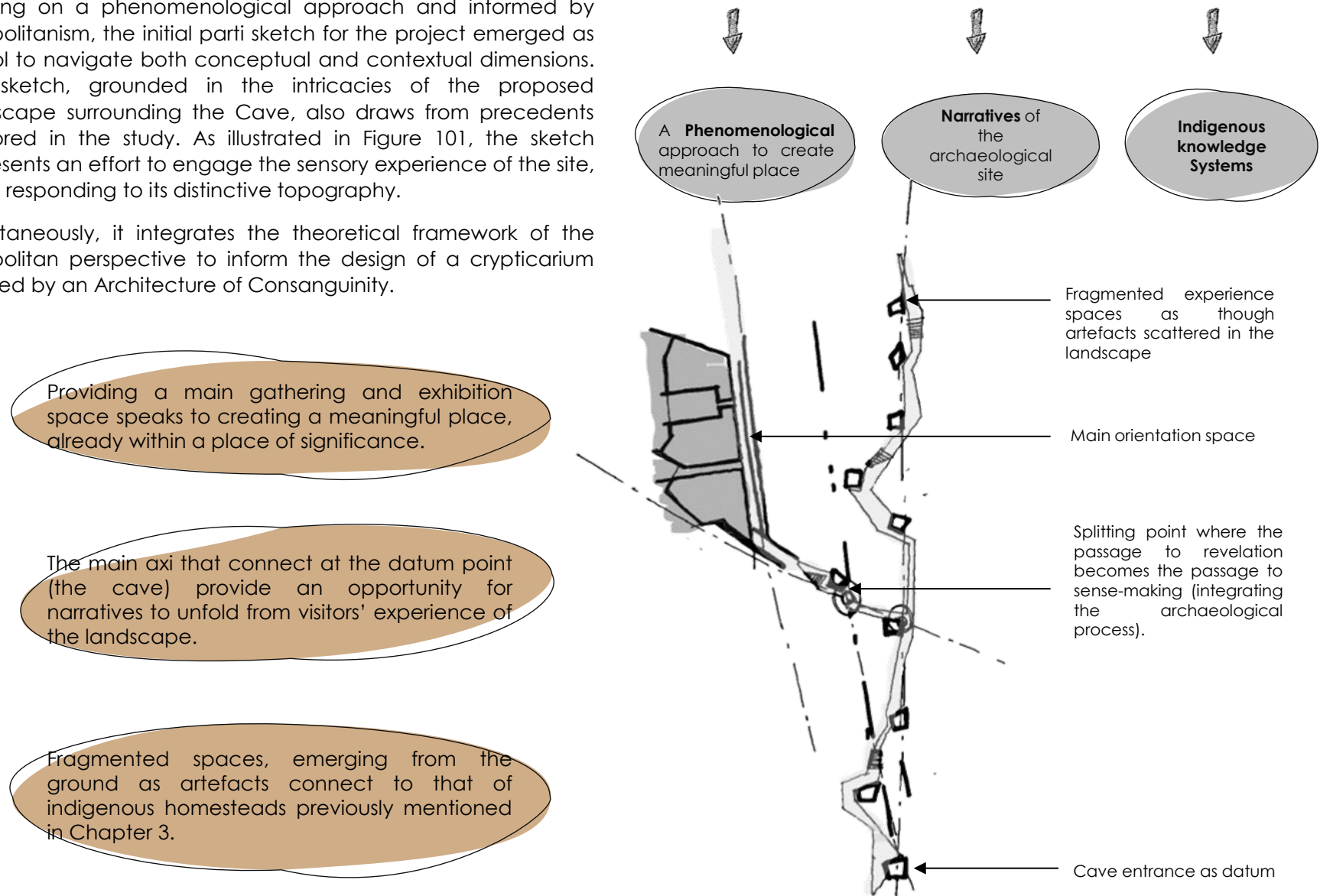


Figure 101: Initial parti reaction toward a design before exploring conceptual approaches (author).

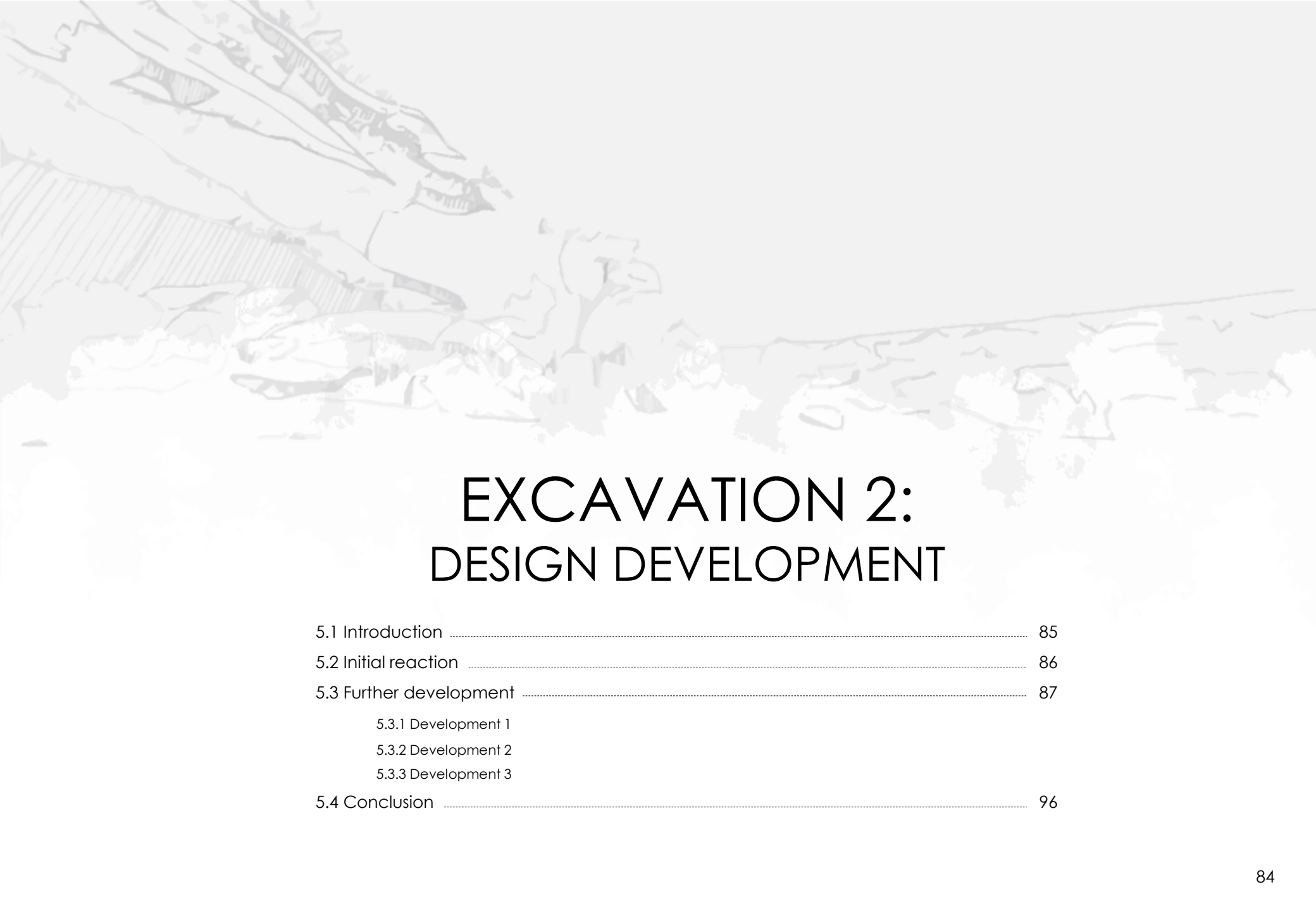
4.6 CONCLUSION

The investigation into possible design strategies based on the theoretical findings as well as the insights gained on the site has now laid the groundwork for the process of designing a crypticarium that establishes a space of inclusivity and complexity.





CHAPTER 05



EXCAVATION 2: DESIGN DEVELOPMENT

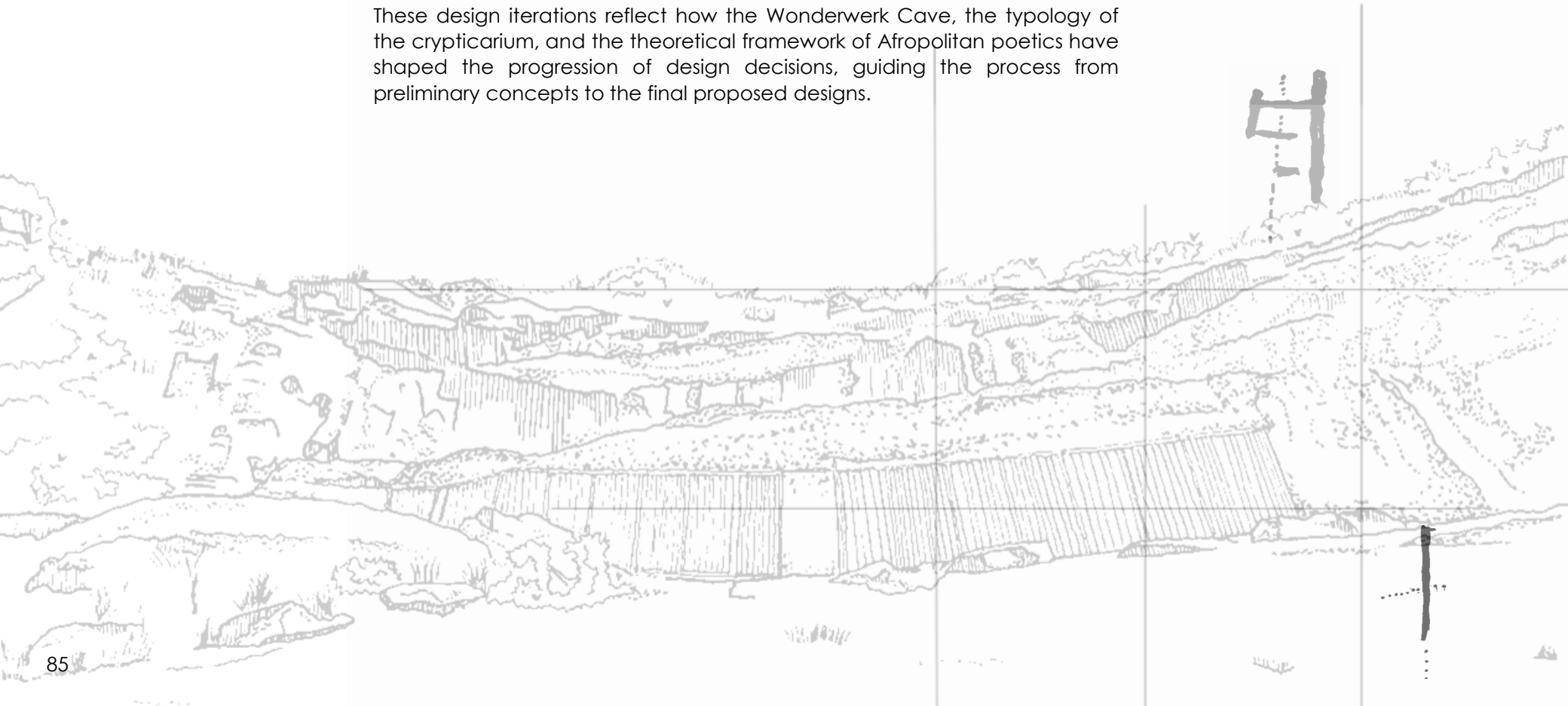
5.1 Introduction	85
5.2 Initial reaction	86
5.3 Further development	87
5.3.1 Development 1	
5.3.2 Development 2	
5.3.3 Development 3	
5.4 Conclusion	96

5.1 INTRODUCTION

Based on the conceptual strategies and design strategy established in the previous chapter, as well as insights gained from precedent studies, an initial design response was drawn up, based on the initial parti reaction.

This response informed a series of evolving design explorations, identified as 'Development 1, 2, and 3,' each representing distinct phases of experimentation and learning.

These design iterations reflect how the Wonderwerk Cave, the typology of the cryptarium, and the theoretical framework of Afropolitan poetics have shaped the progression of design decisions, guiding the process from preliminary concepts to the final proposed designs.



5.2 INITIAL REACTION

The initial reaction to the design approach involved perspective sketches derived from the conceptual models. While initial explorations were conducted to accommodate these models, the design approach underwent a significant transformation as the focus shifted from 'bulking the accommodations' to realizing what the crypticarium wants to become based on the theoretical approach of an architecture of consanguinity.

Consequently, the further development of the design deviated markedly from the initial sketches presented in Figure 102. The primary emphasis in Figure 102 was on identifying tectonic strategies and facilitating a dynamic narrative for visitors, thereby enabling them to engage with and experience the intricate complexity of the site, however, this was deemed to overpower the site, just as the conceptual models did too.

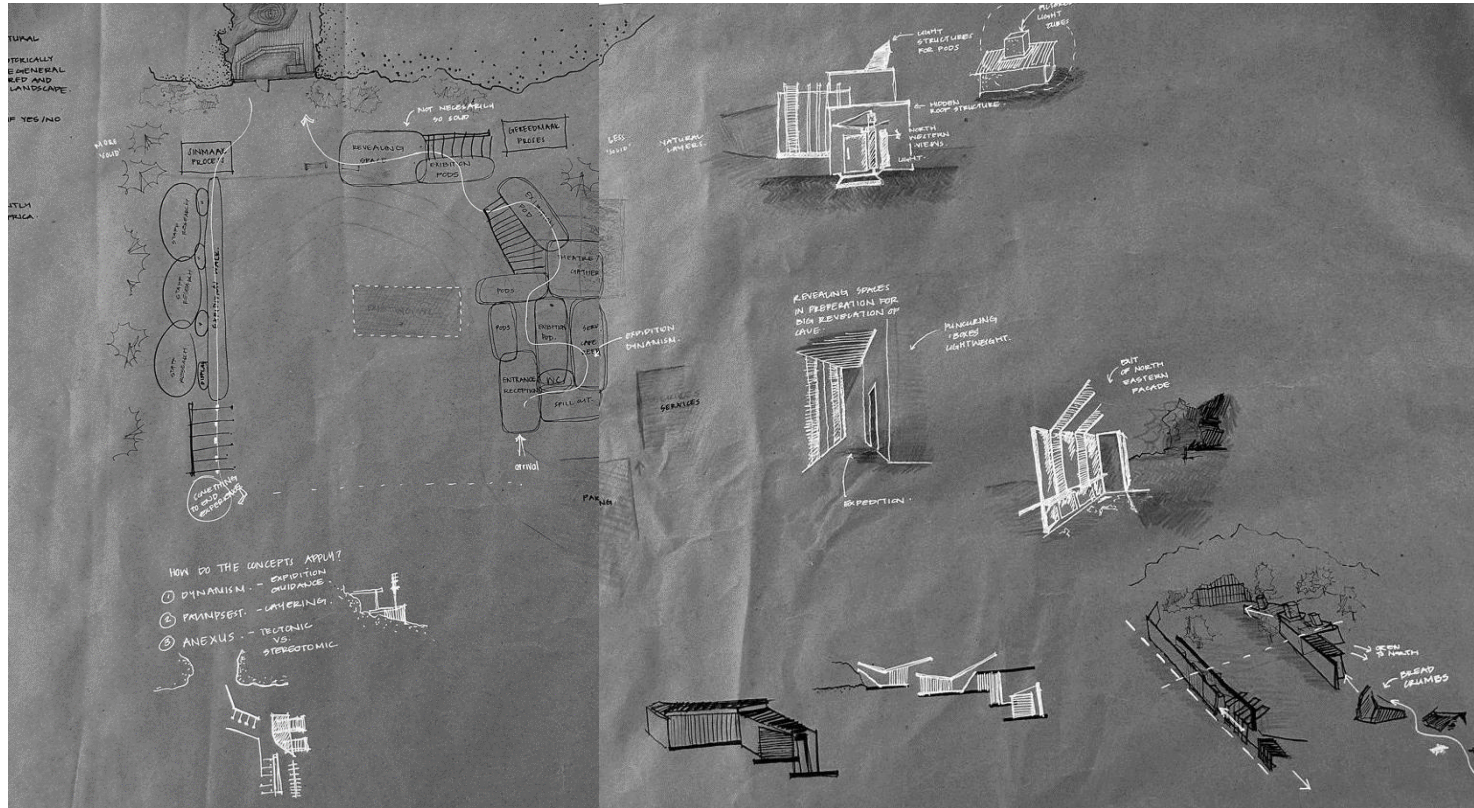


Figure 102 Initial design reaction sketches based on the conceptual models (author).

5.3 FURTHER DEVELOPMENT

Based on the history of the site and the knowledge of Indigenous groups that inhabited the site, it would be notable to add aspects of Indigenous architecture into the proposed crypticarium.

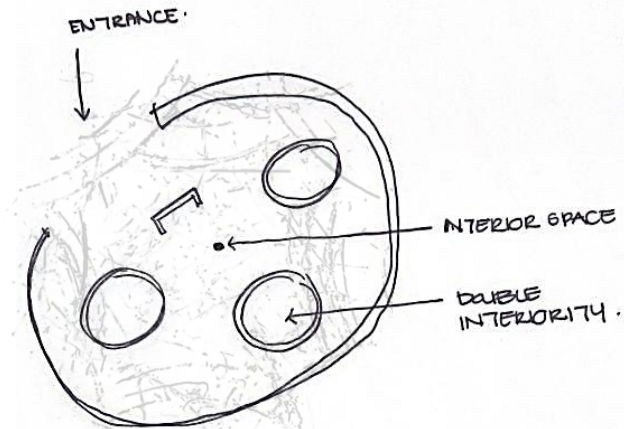


Figure 103: parti plan of Batswana family homestead based on the illustration in chapter 3 (author).

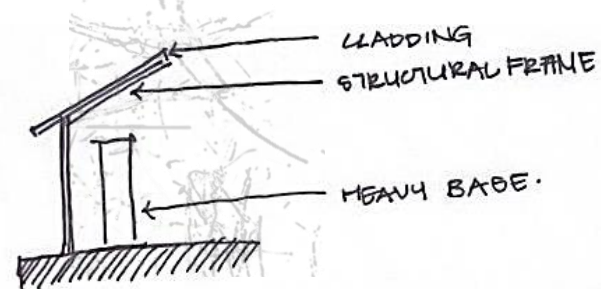


Figure 104: Illustration of a simplified section of what the Batswana homestead can look like (author).

It becomes significantly clear that interiority is the biggest part of the design on this site.

Creating spaces where interiority becomes significant, connecting to the cave itself, where the interior space becomes a meaningful place.

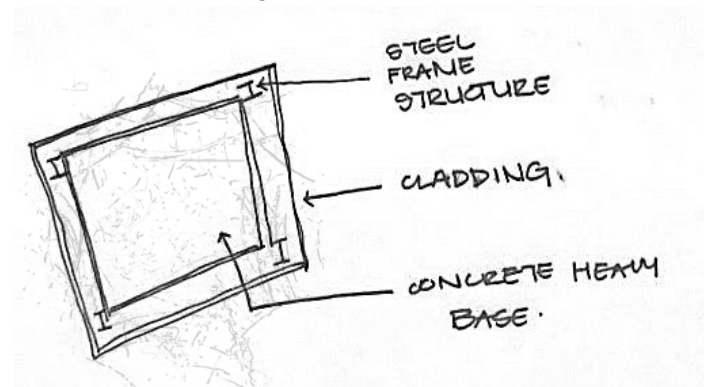


Figure 105: Plan of pods and how they could possibly be constructed (author).

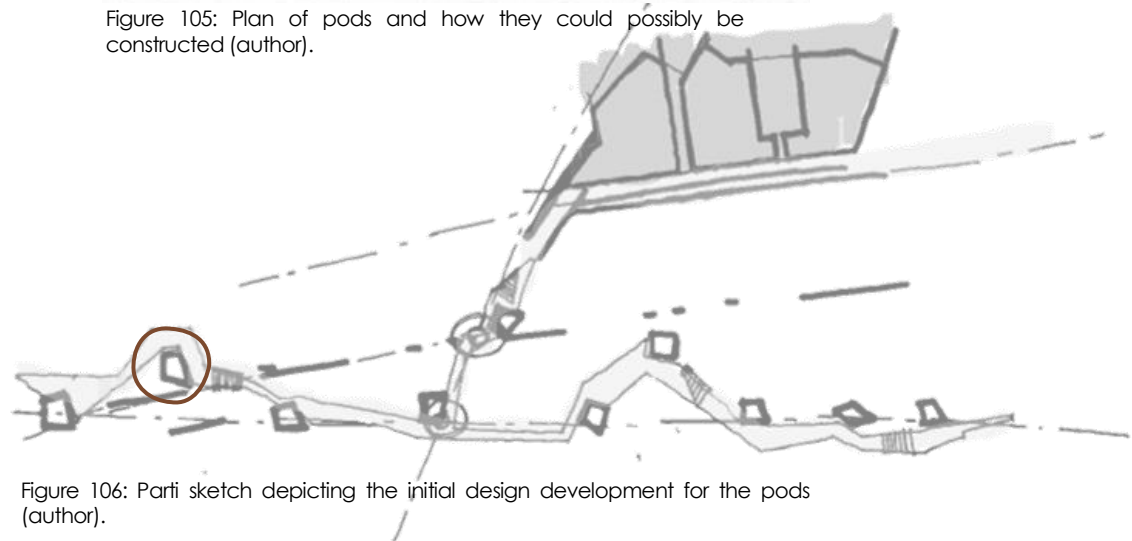


Figure 106: Parti sketch depicting the initial design development for the pods (author).

After the initial reaction was conducted and an understanding based on the initial parti sketch was gained three different phases of design development took place, with three distinctive plans:

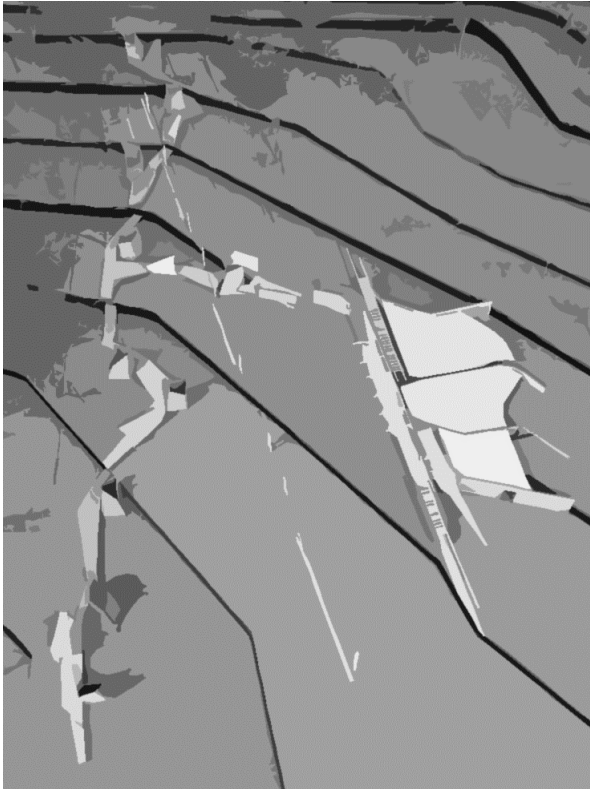


Figure 107: Obscured model exploration of design development phase 1 (author).

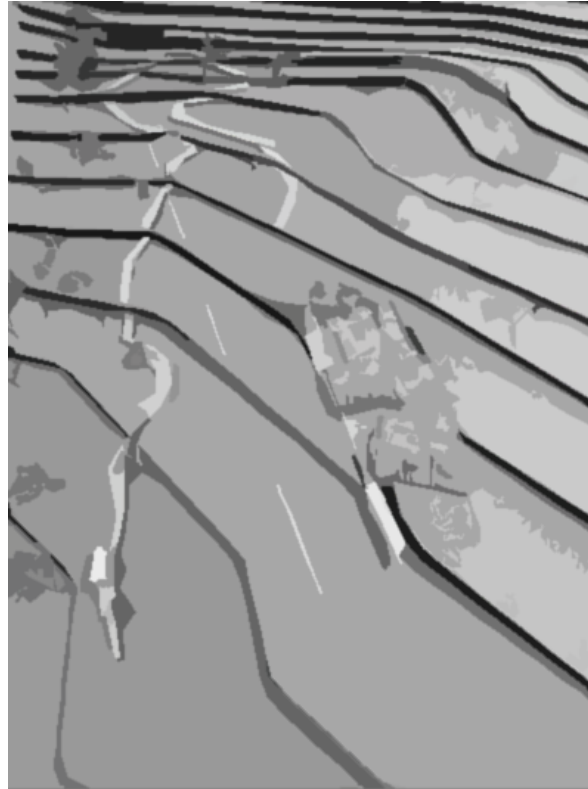


Figure 108: Obscured model exploration of design development phase 2 (author).

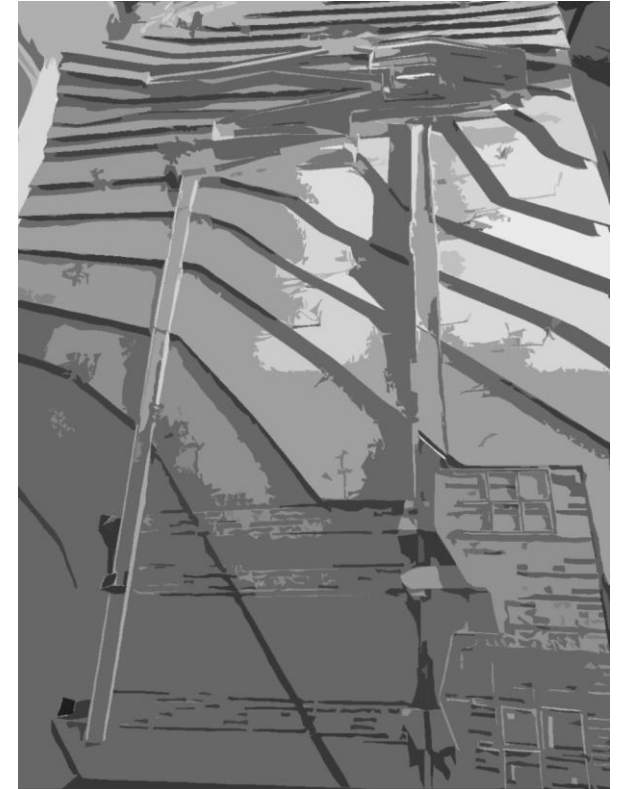


Figure 109: Obscured model exploration of design development phase 3 (author).

5.3.1 Design Development 1:

The first design iteration focused on the composition and narrative function of the crypticarium, particularly how it guides visitors through the site. Two distinct routes were proposed meeting in the centre and finally leading to the cave: one emphasizing the massing of exhibition spaces on the western side, and the other introducing contemplation pods on the eastern side, as illustrated in Figure 115.

Although further refinement of the architectural language of the exhibition hub was required, as shown in Figure 111, the primary focus at this stage was designing the structure into the landscape. Additionally, the contemplation pods, depicted in Figure 110, were strategically positioned along the pathway leading toward the cave entrance.

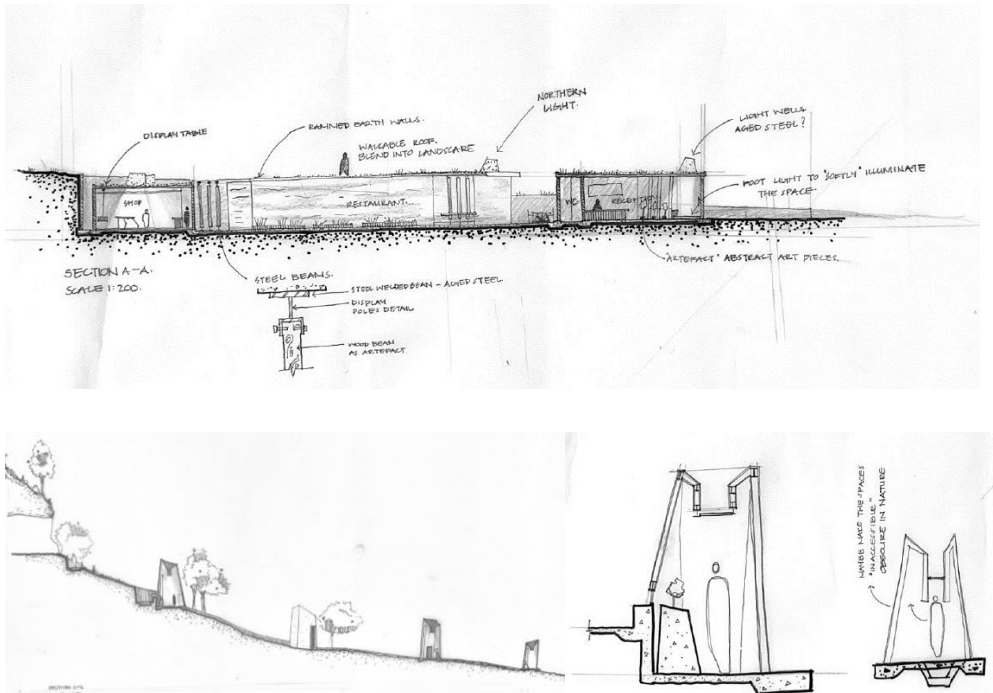


Figure 110: A series of sections portraying the design in the landscape for development 1 (author).

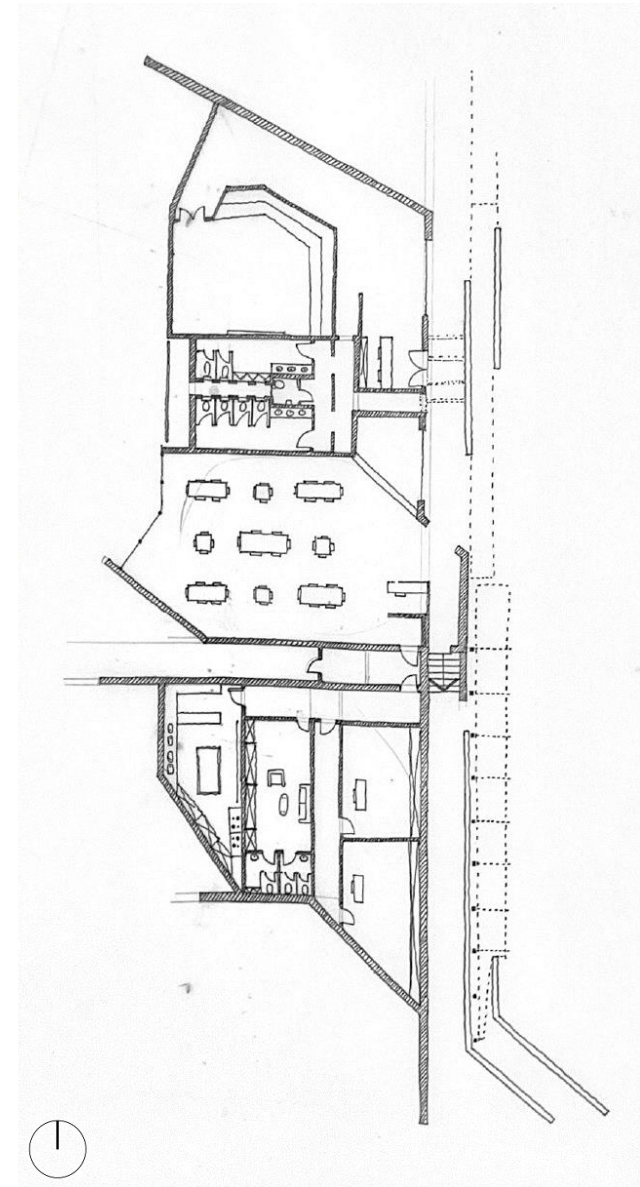


Figure 111: Rough plan iteration for development 1 (author).

3D drawing explorations:

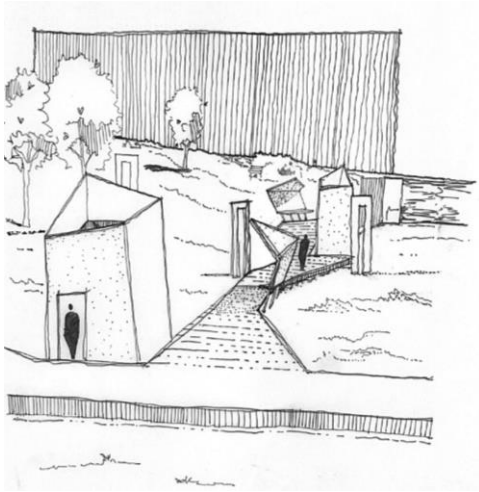


Figure 112: Illustration of the walkway exploration for development 1 (author).

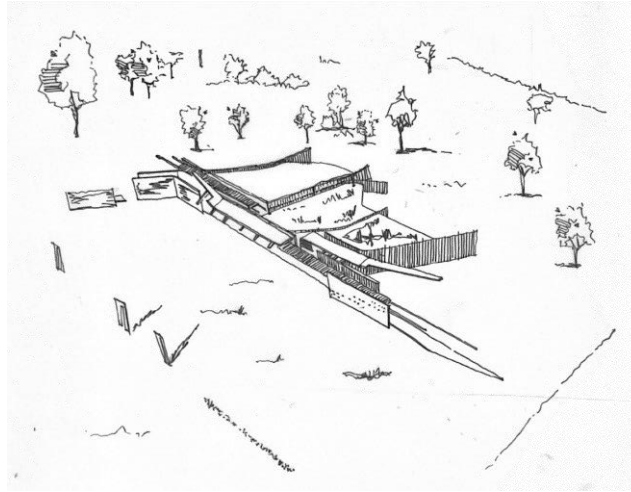


Figure 113: Illustration of the main exhibition hub 3D exploration for development 1 (author).

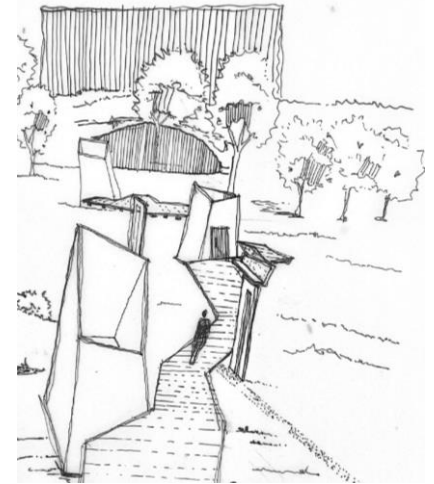


Figure 114: Illustration of the walkway exploration for development 1 (author).

3D model explorations:

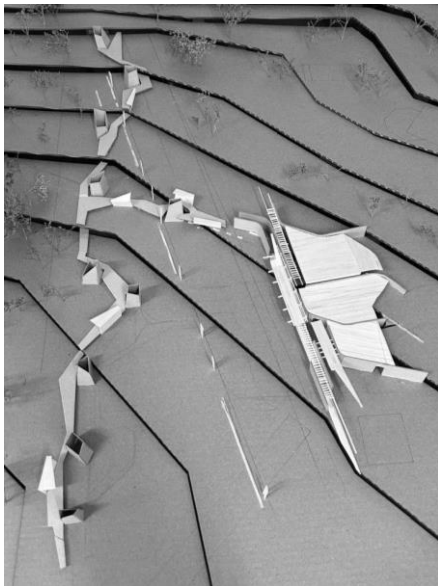


Figure 115: Aerial view of the model for development 1 (author).

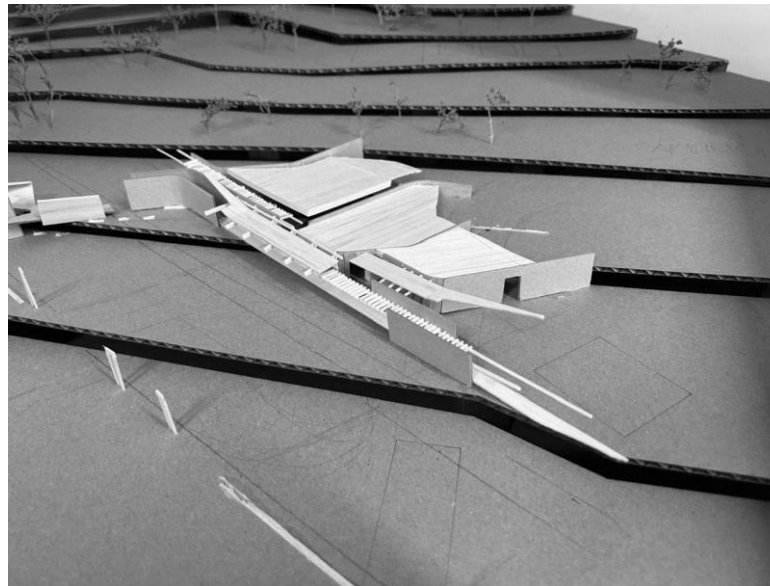


Figure 116: Perspective of the main exhibition hub model development 1 (author).



Figure 117: Pod perspective of the model for development 1 (author).

5.3.2 Design Development 2:

Design Development 2 adopted a different approach to the site by completely separating the pathway leading to the cave from the one descending from the cave entrance to the parking area, as illustrated in Figure 120.

The main exhibition space was reimagined as three distinct masses set on a terraced surface, creating a cohesive architectural language between the contemplation pods and the primary structure. The roofs were designed with light steel structures and clad in mild steel then coated with Corten paint.

However, functional challenges arose with the terraced layout, necessitating further refinement of the design to address these issues.

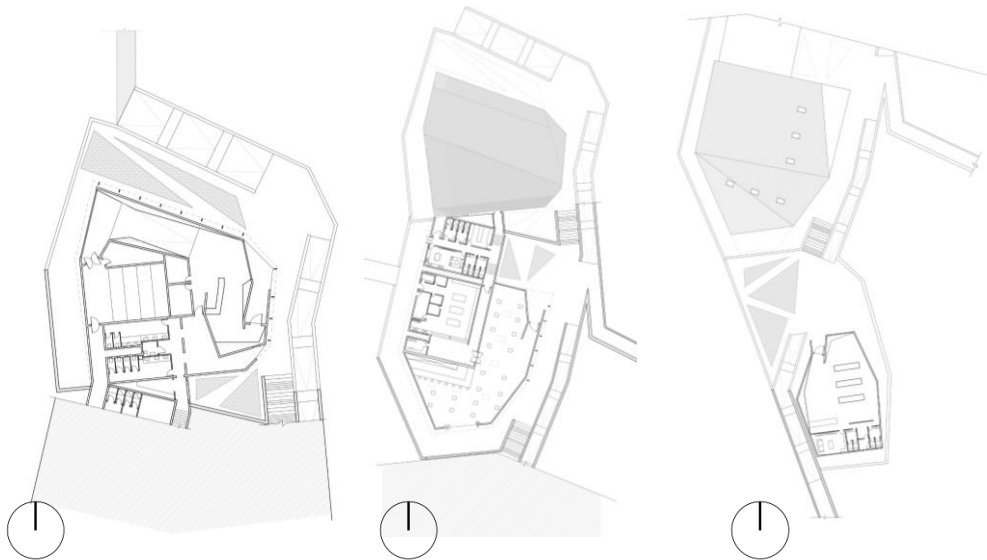


Figure 118-120 (left to right): Design drawings of the ground floor plan to the second-floor plan of design development 2(author).

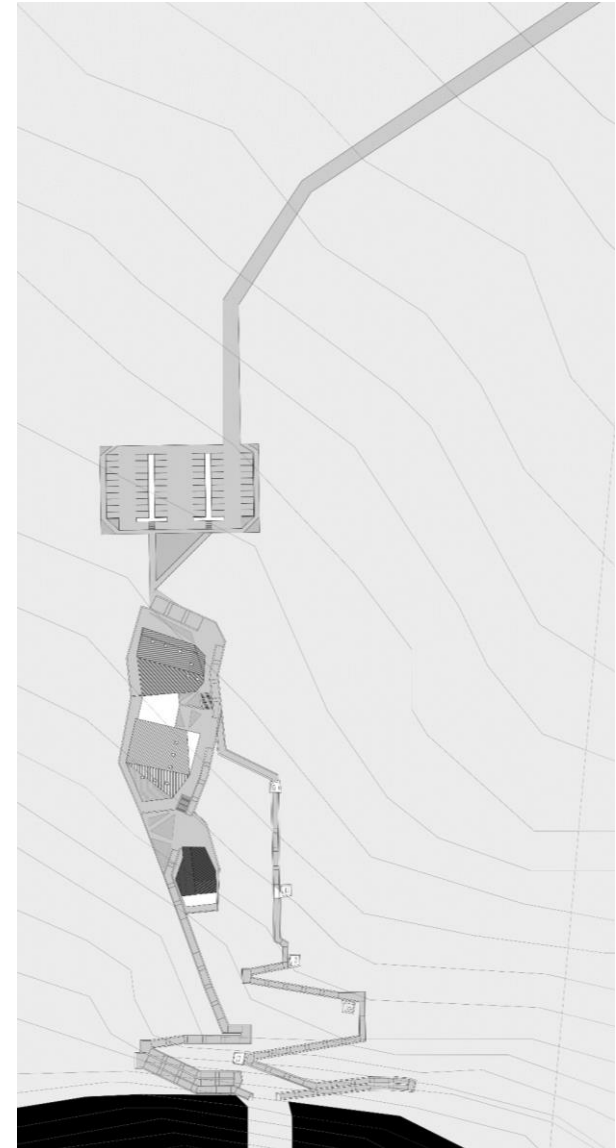


Figure 121: Site plan of development 2 (author).

Section explorations:

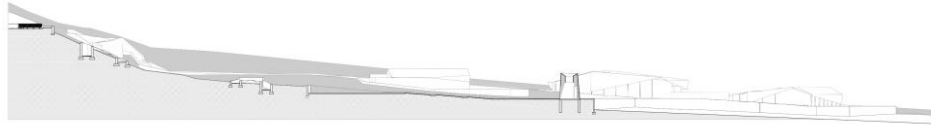


Figure 122: Long section of the proposed design for design development 2 (author).

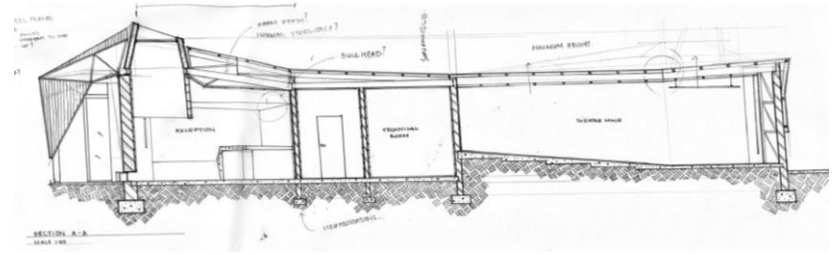


Figure 123: Detail structural sections showing the roof construction of the proposed design for design development 2 (author).

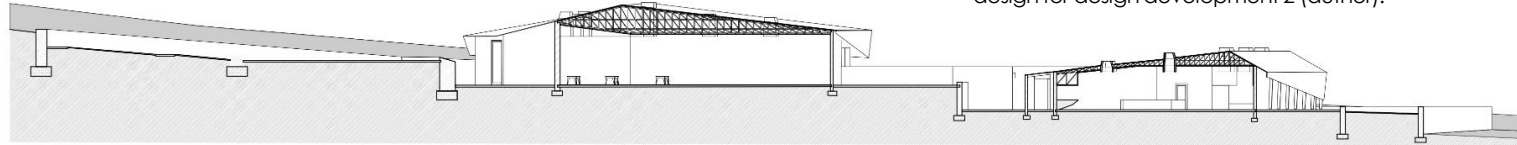


Figure 124: Structural section showing the roof construction of the proposed design for design development 2 (author).

3D model explorations:

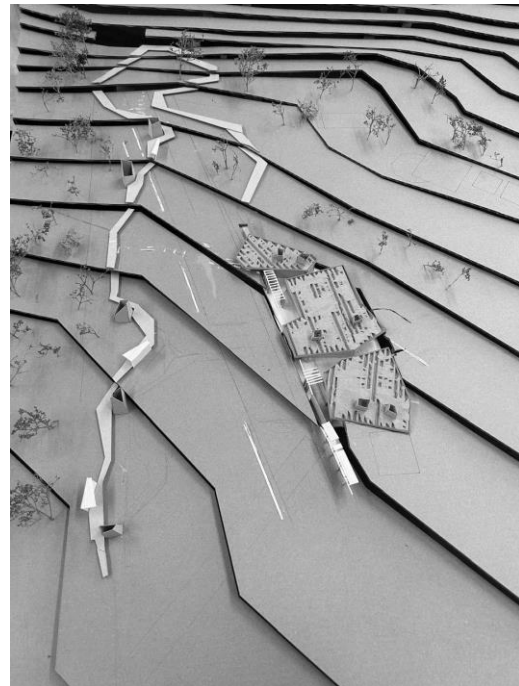


Figure 125: Model of the proposed design for development 2 (author).

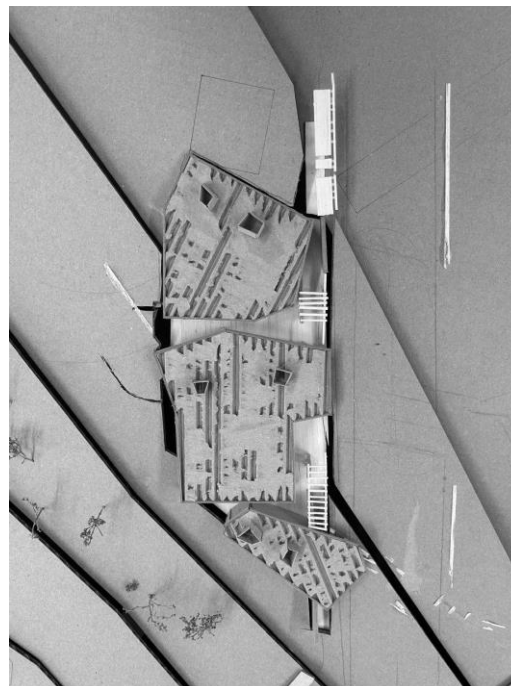


Figure 126: Roof model exploration for development 2 (author).

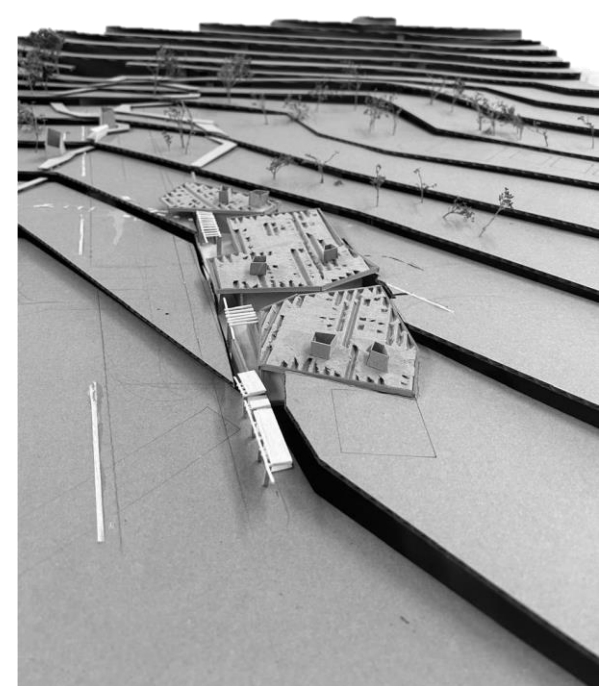


Figure 127: Aerial view of the model exploration approaching the main exhibition hub in the site for development 2 (author).

5.3.3 Design Development 3:

Development 3 returns to the initial design approach, where the central exhibition hub is designed as a unified, singular mass, in contrast to the more fragmented layout of the previous development.

This revision addressed several structural and planning challenges present in earlier iterations. The primary concern in Development 3 was the spatial relationship between the exhibition space (the sacred space) and the experiential walkway, as the placement of the restaurant (the mundane) interrupted the intended flow of the experience. Nonetheless, this iteration demonstrated a more cohesive design approach overall.

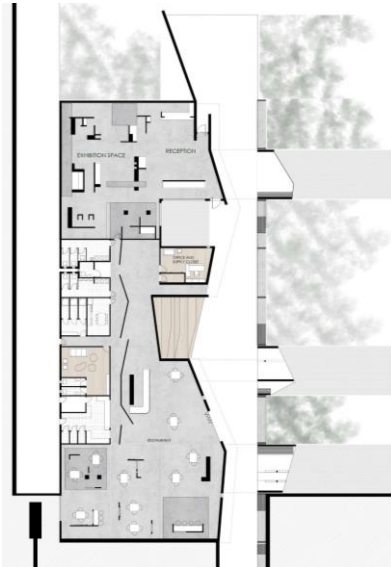


Figure 128: Floor plan of the main exhibition hub of development 3 (author).

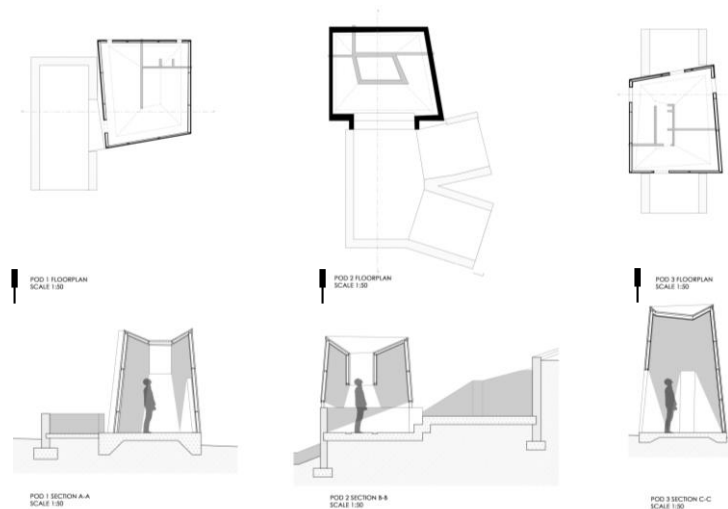


Figure 129: Contemplation pods design explorations for design development 3 (author).

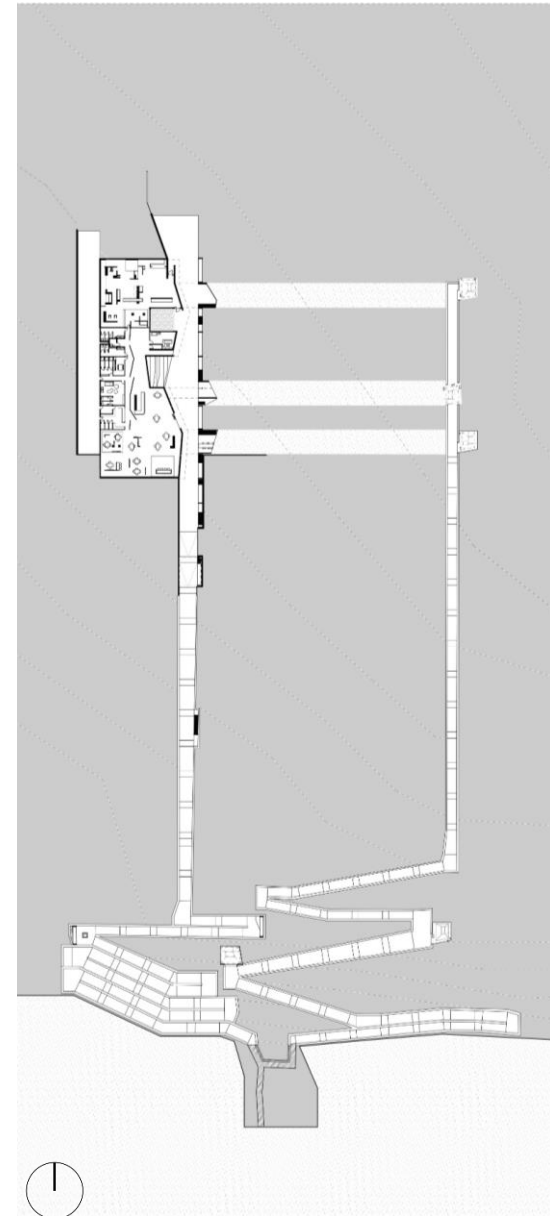


Figure 130: Site plan of development 3 (author).

Section explorations:

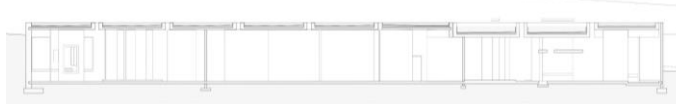


Figure 131: Section exploration for the restaurant space for development 3 (author).



Figure 132: Section exploration of the exhibition space for development 3 (author).



Figure 133: Section exploration of the landscape viewing spaces for development 3 (author).

3D model explorations:

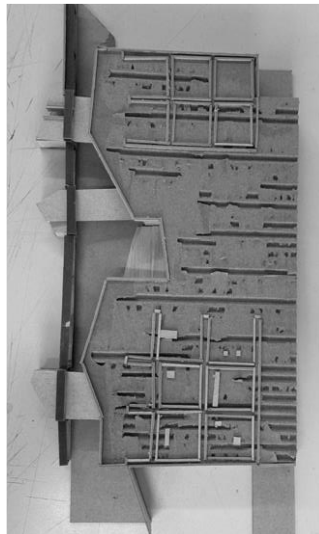


Figure 135: Roof exploration for design model for development 3 (author).



Figure 136: Model exploration for development 3 (author).



Figure 137: Model ramp exploration near the cave opening for development 3 (author).

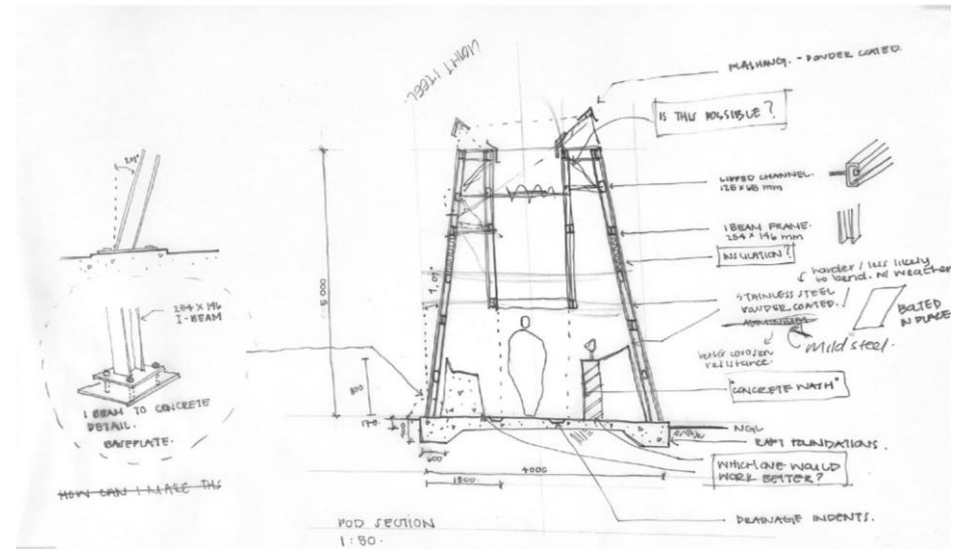


Figure 134: Illustrated structural exploration of the contemplation pods for development 3 (author).

3D Render explorations:



Figure 138: Section exploration of the *crypticarium* imbedded in the earth for development 3 (author).



Figure 139: Long section exploration of the *crypticarium*'s main exhibition hub imbedded in the earth for development 3 (author).



Figure 140: Perspective of the *crypticarium*'s main exhibition hub in comparison with the rest of the design development 3 (author).

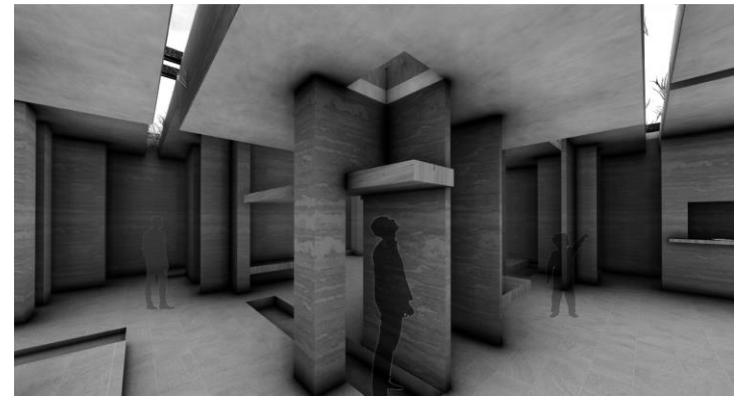


Figure 141: Interior render of the exhibition space for development 3 (author).



Figure 142: Render of the exhibition space for development 3 (author).

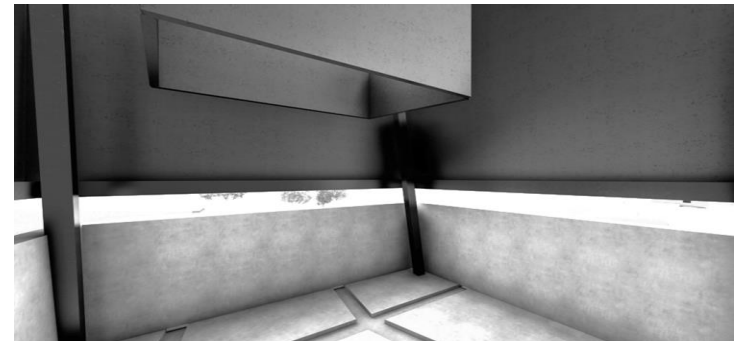


Figure 143: Render of the interior of the contemplation pod space for development 3 (author).

5.4 CONCLUSION

This chapter provided an opportunity to explore various design approaches for the crypticarium, facilitating a deeper investigation into which proposal would best integrate with the landscape. These explorations were conducted with careful consideration of both the theoretical framework and the conceptual foundations underpinning the design process.

The final design, which will be presented in the following chapter, is informed by a critical evaluation of the advantages and disadvantages identified in the three design developments discussed in this chapter.

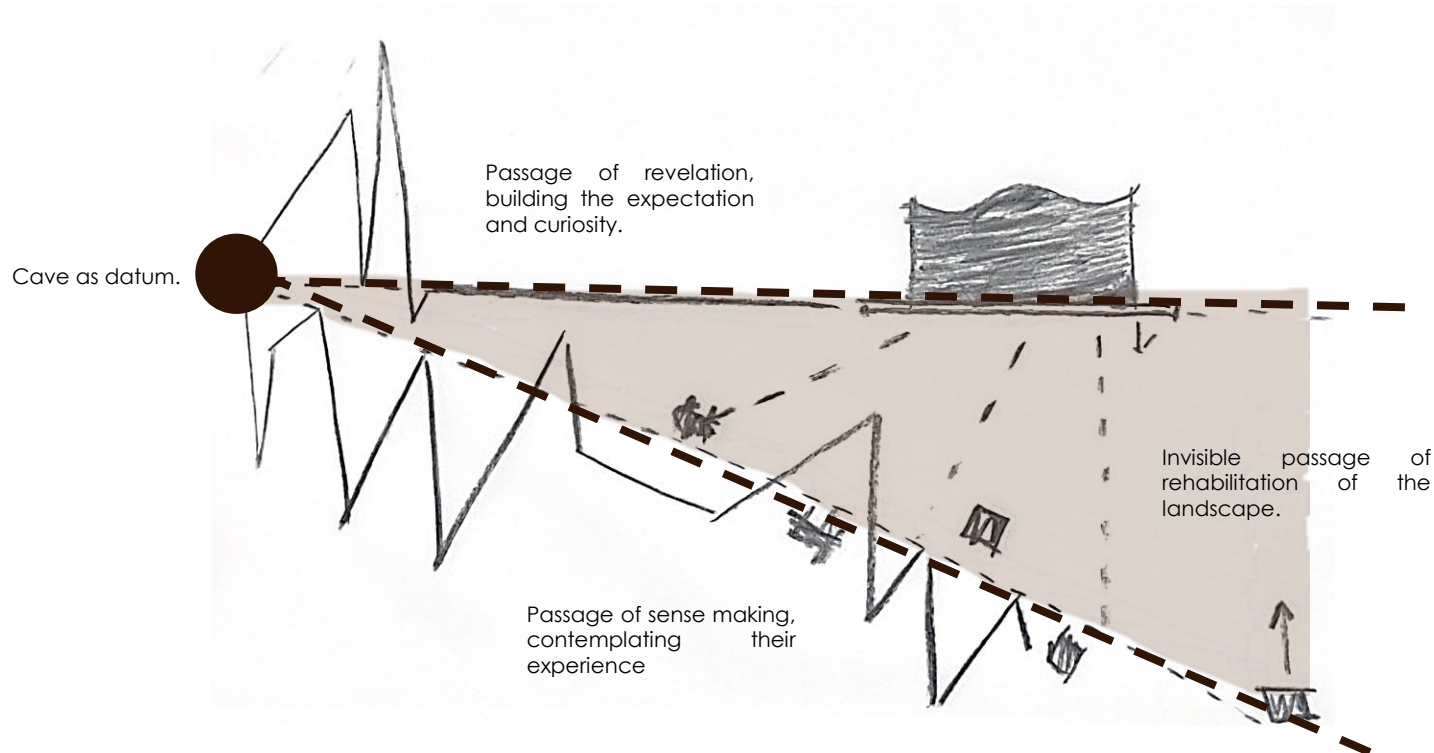
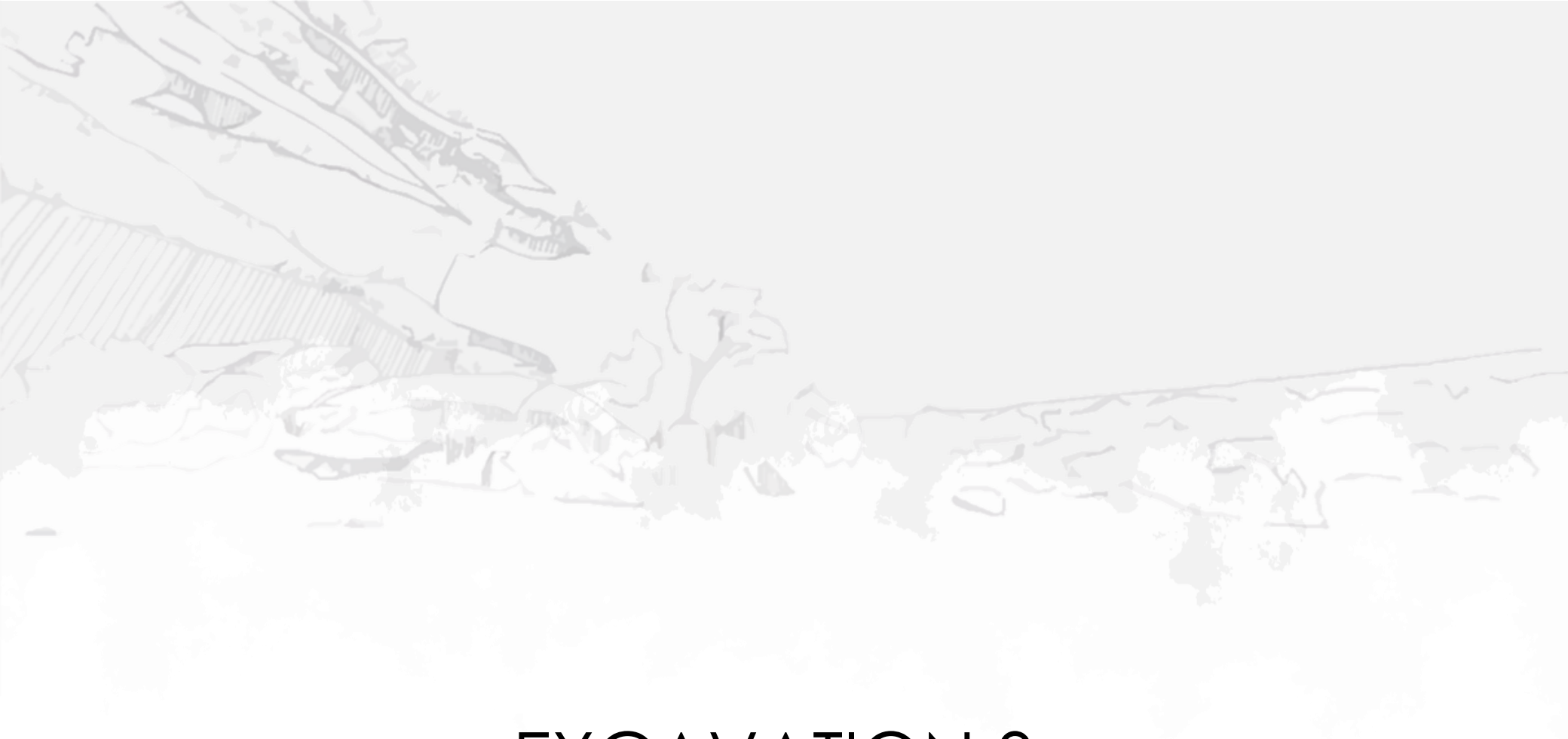


Figure 144: Developed parti sketch (author).



CHAPTER

06



EXCAVATION 3: UNEARTHING THE CRYPTICARIUM

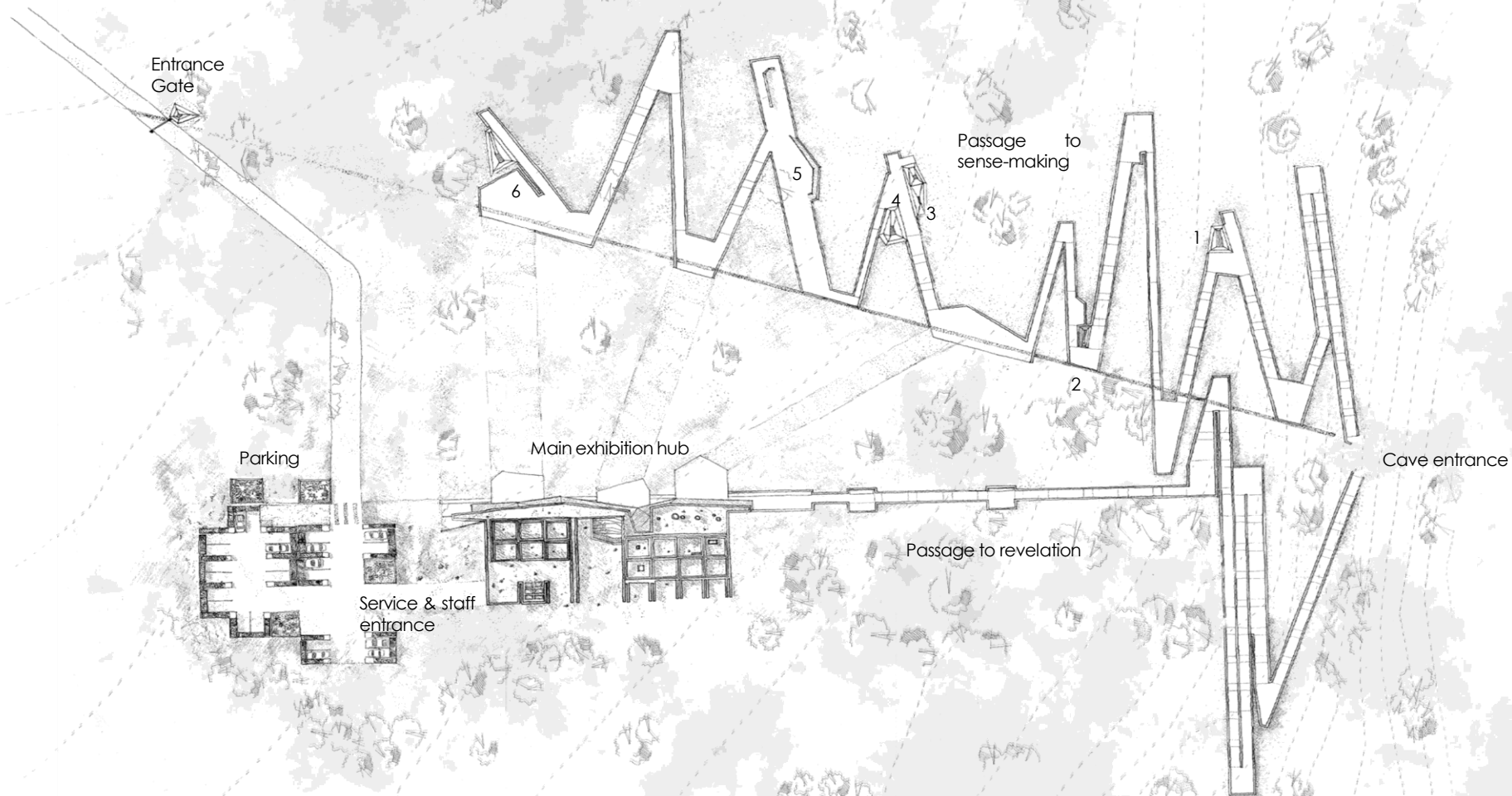
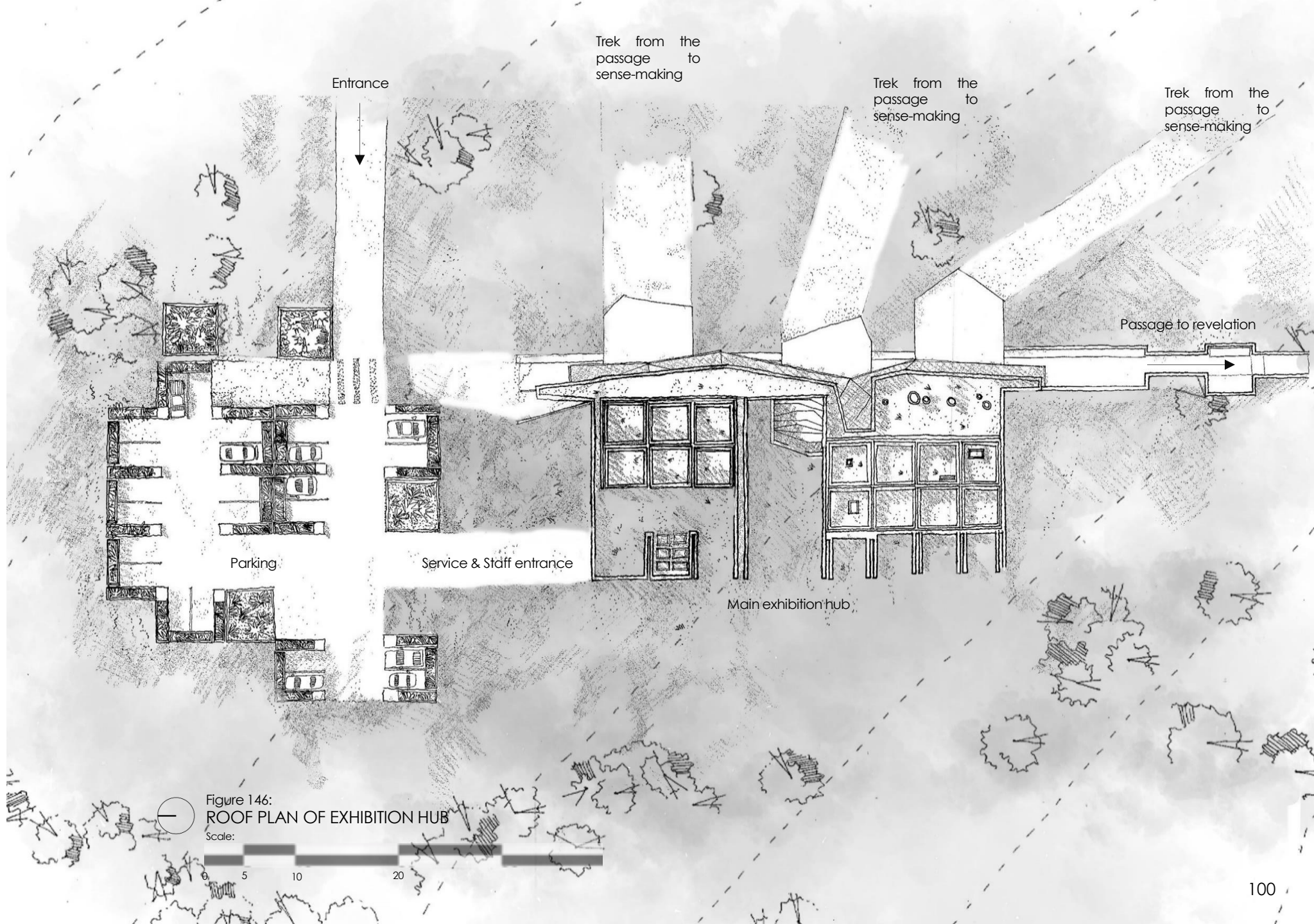


Figure 145:
SITE PLAN
Scale:
0 10 20 50



Entrance

Trek from the
passage
to
sense-making

Trek from the
passage
to
sense-making

Trek from the
passage
to
sense-making

Passage to revelation

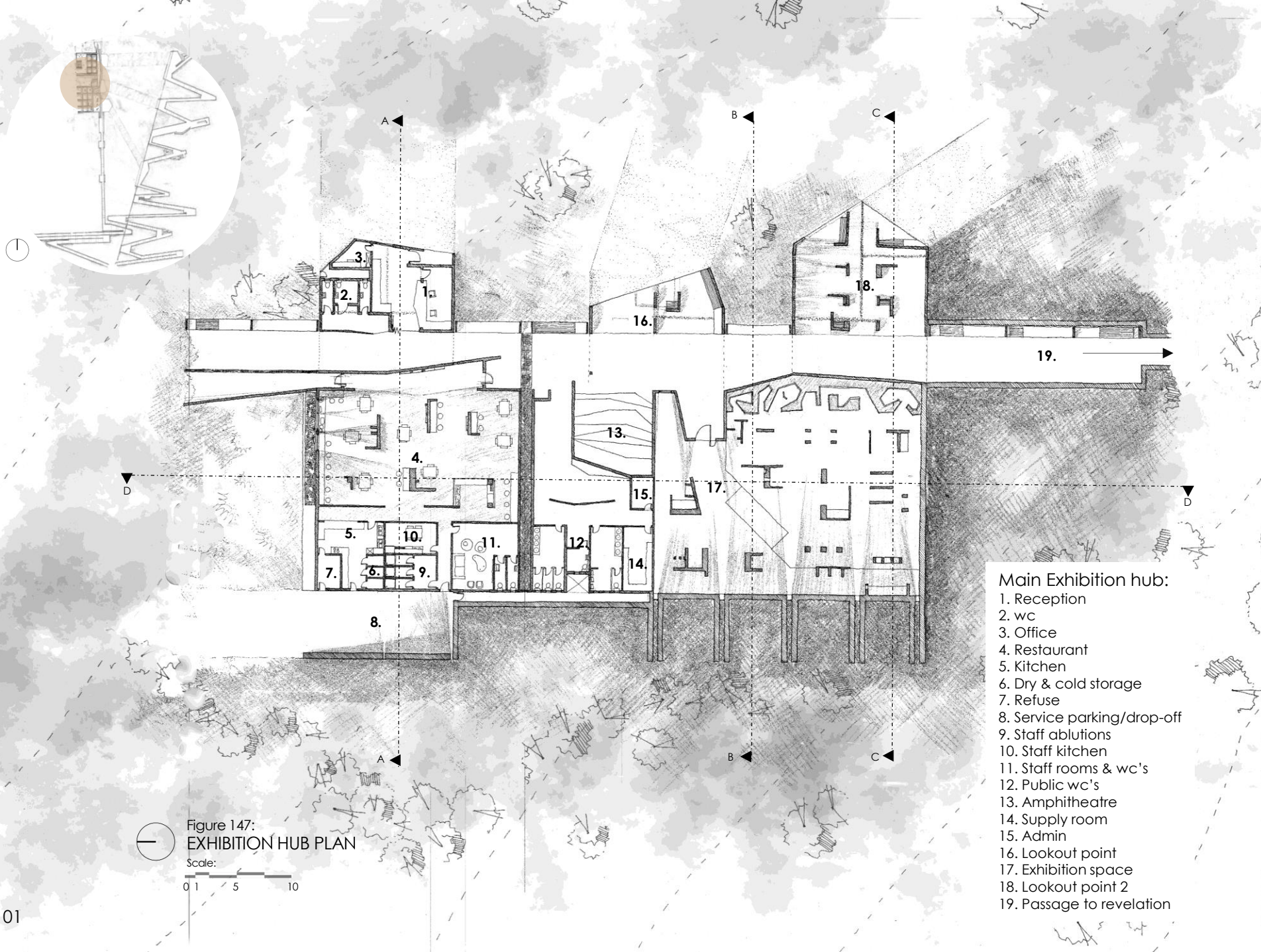
Parking

Service & Staff entrance

Main exhibition hub

Figure 146:
ROOF PLAN OF EXHIBITION HUB
Scale:





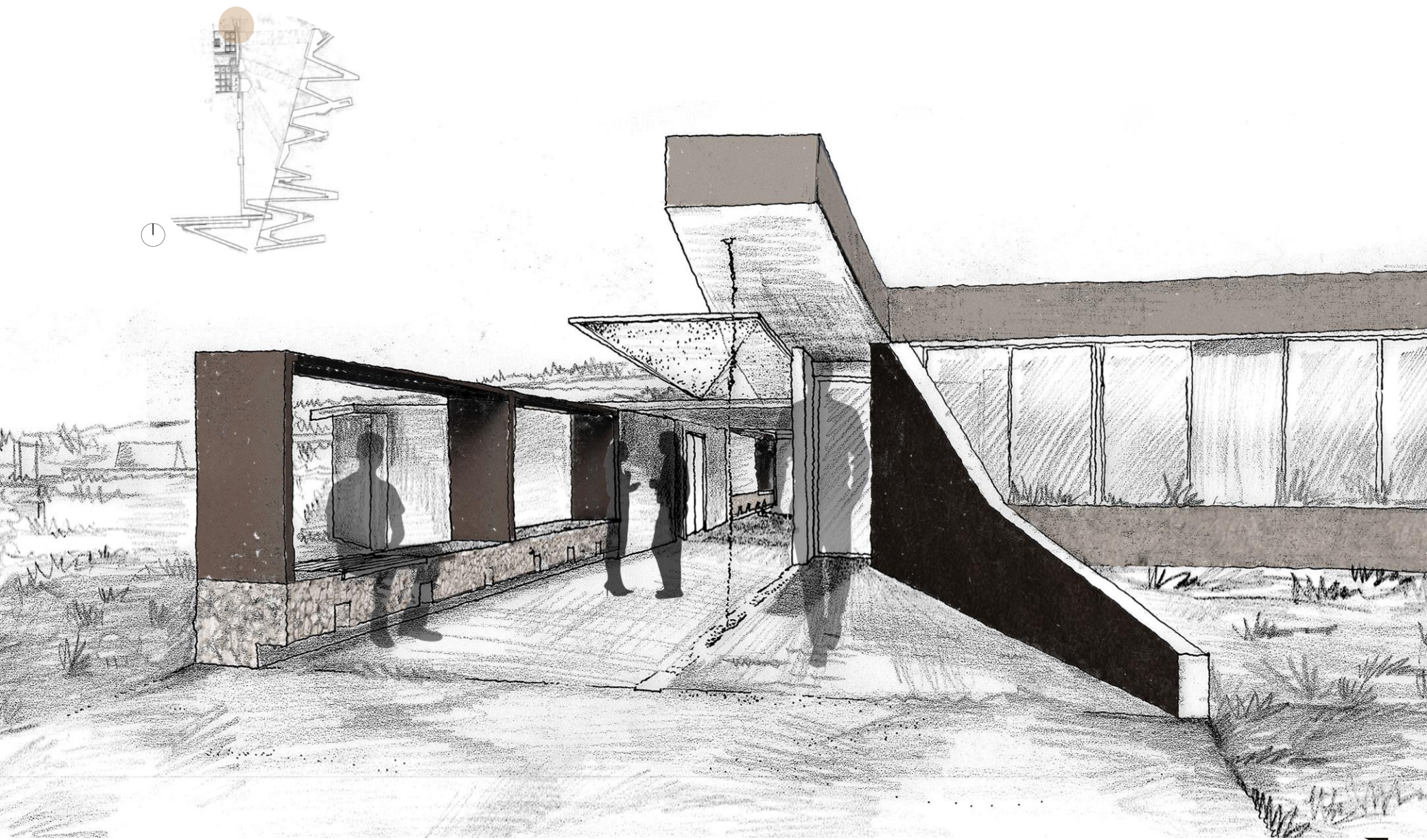


Figure 148:
PERSPECTIVE OF ENTRANCE TO MAIN EXHIBITION HUB



RECEPTION SPACE

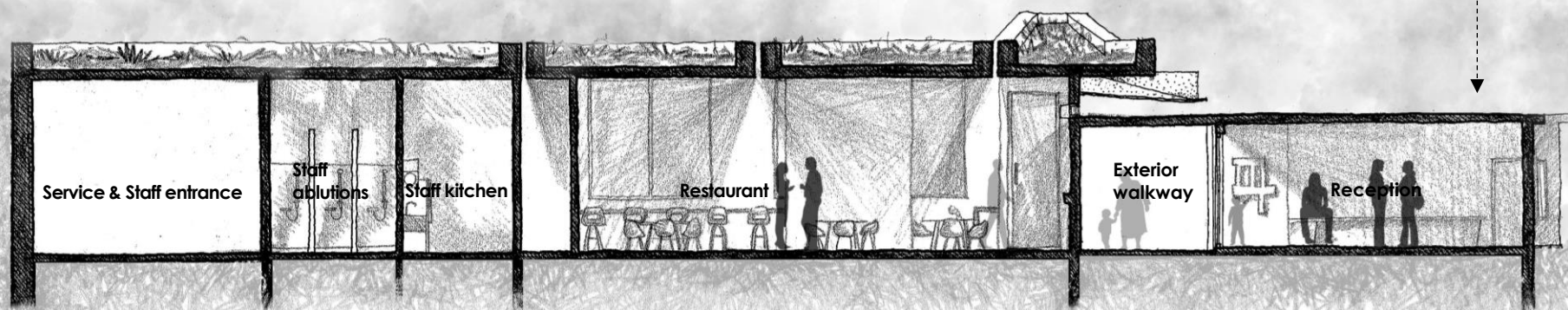


Figure 149:
SECTION A-A: Through the reception and restaurant space

EXTERIOR WALKWAY

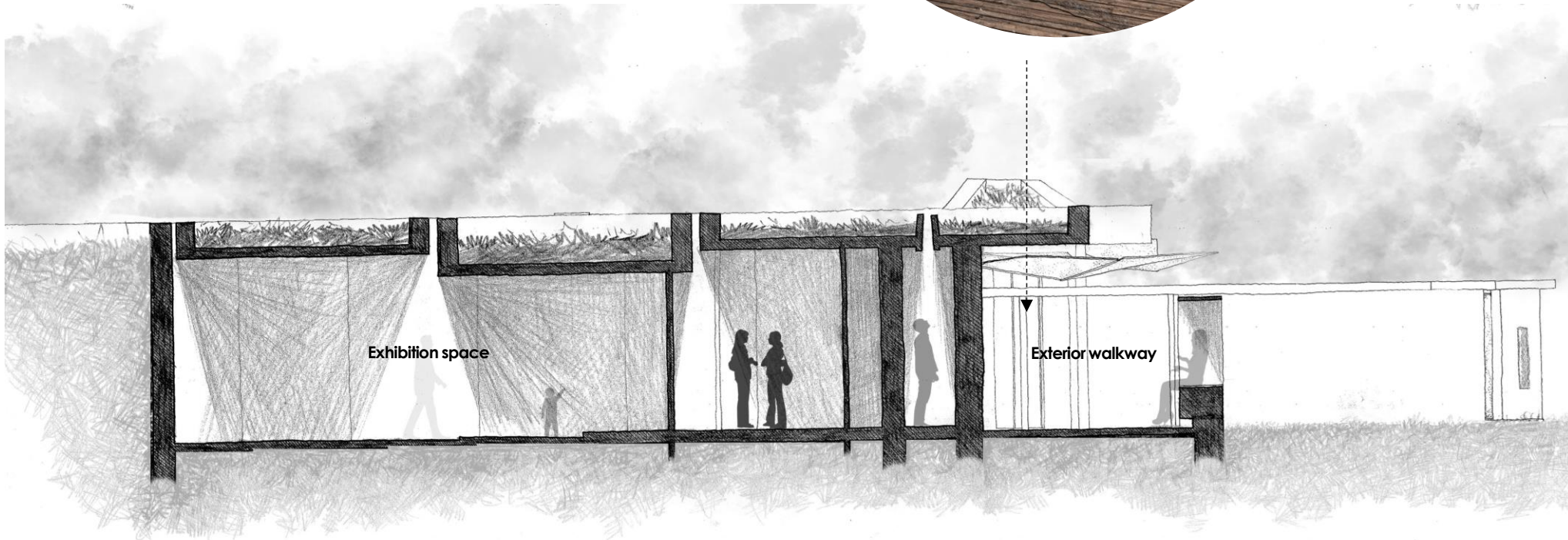
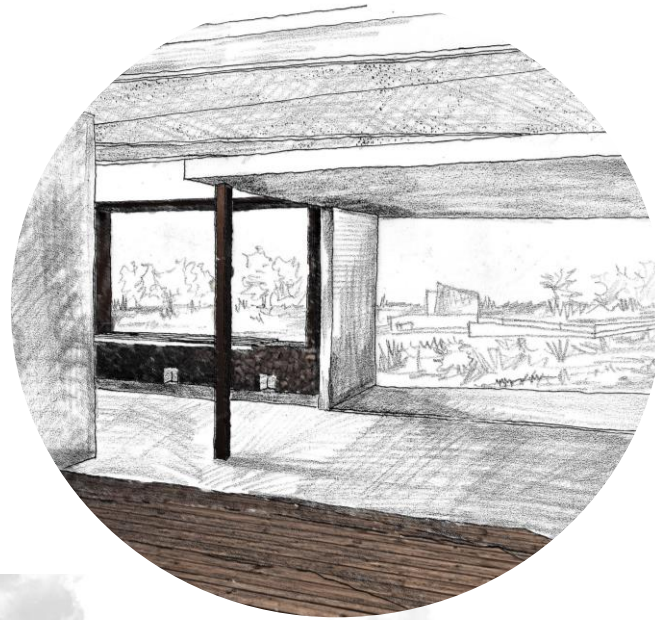


Figure 150:
SECTION B-B: Through the exhibition space

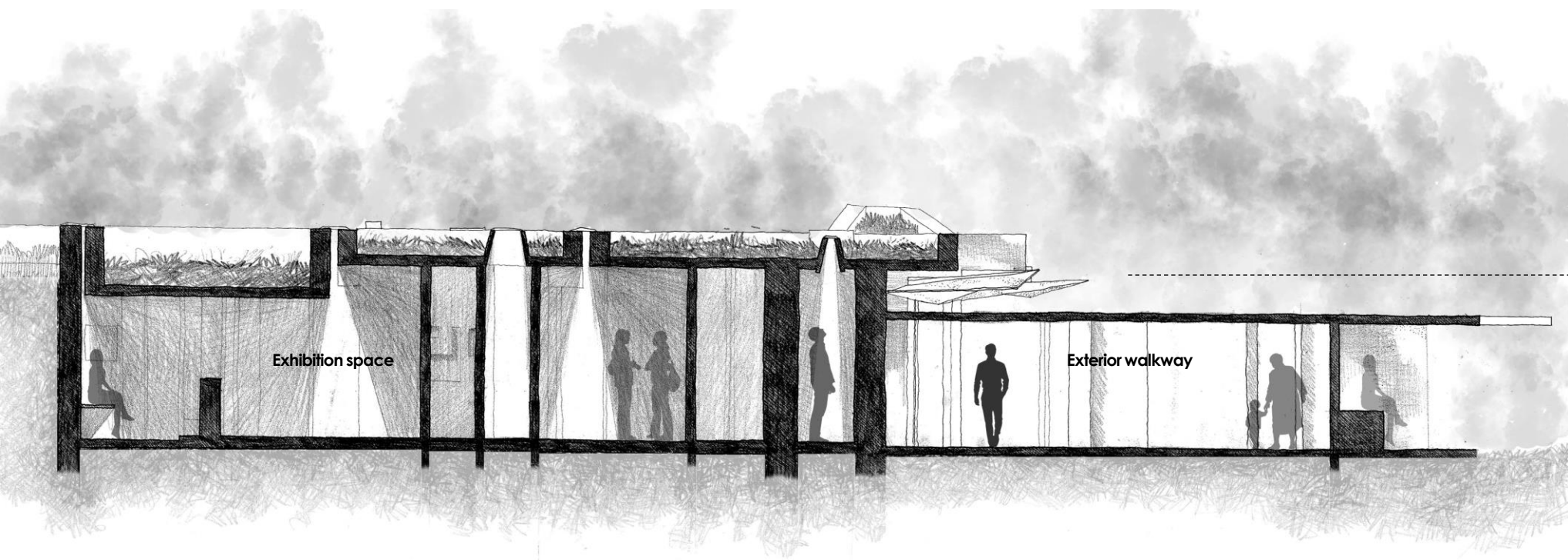


Figure 151:
SECTION C-C: Through the exhibition space & lookout point

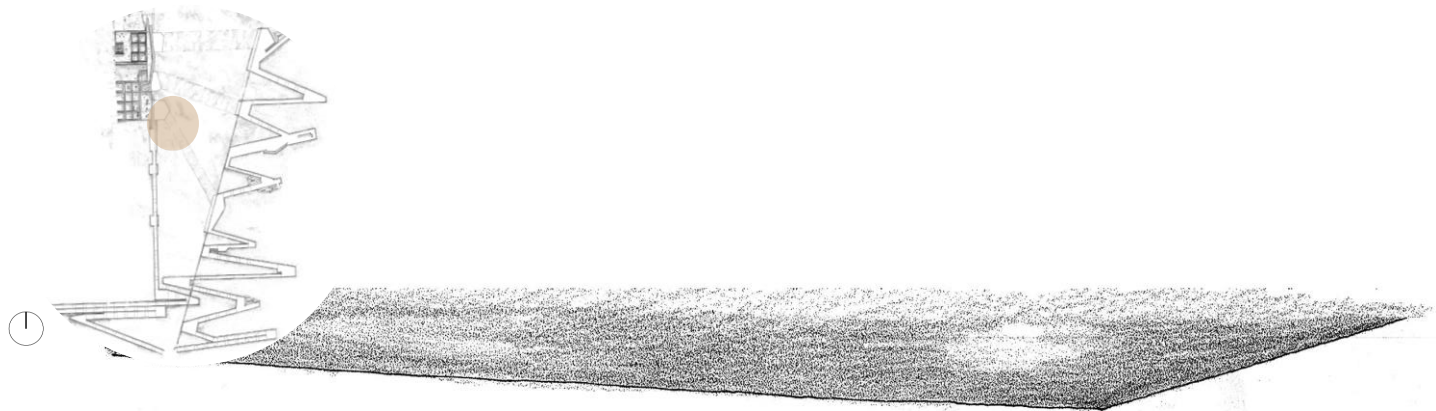
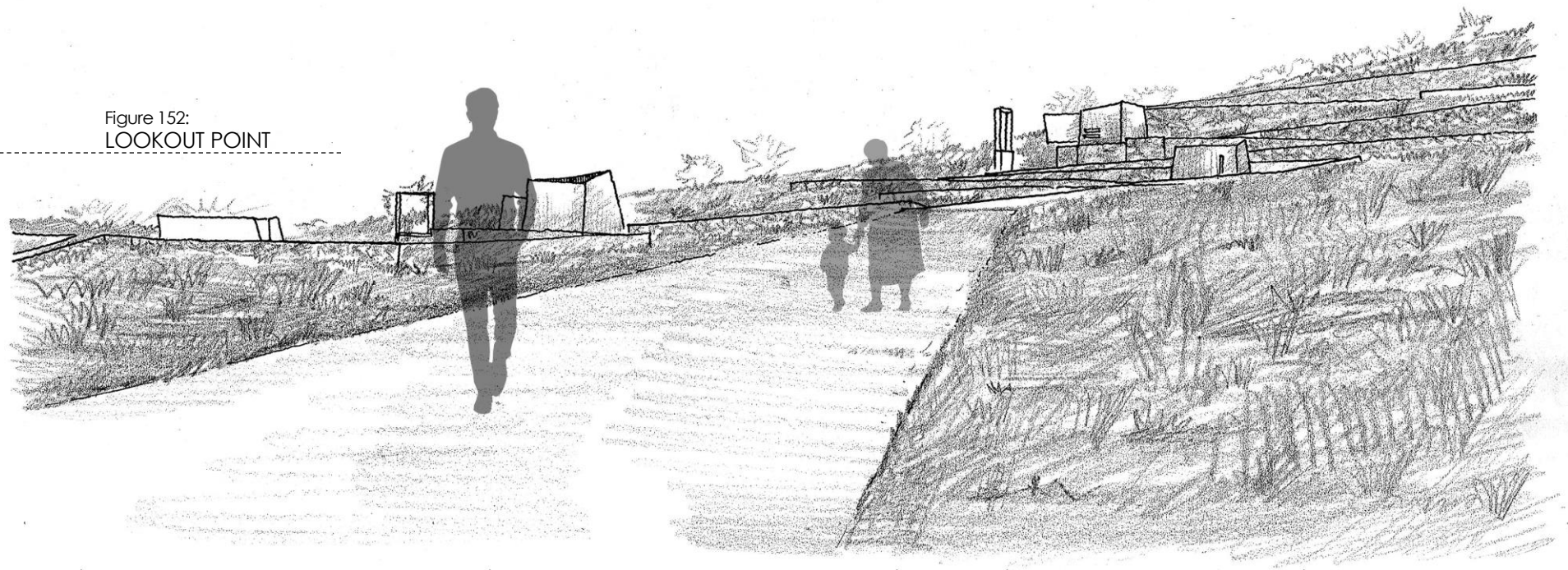


Figure 152:
LOOKOUT POINT



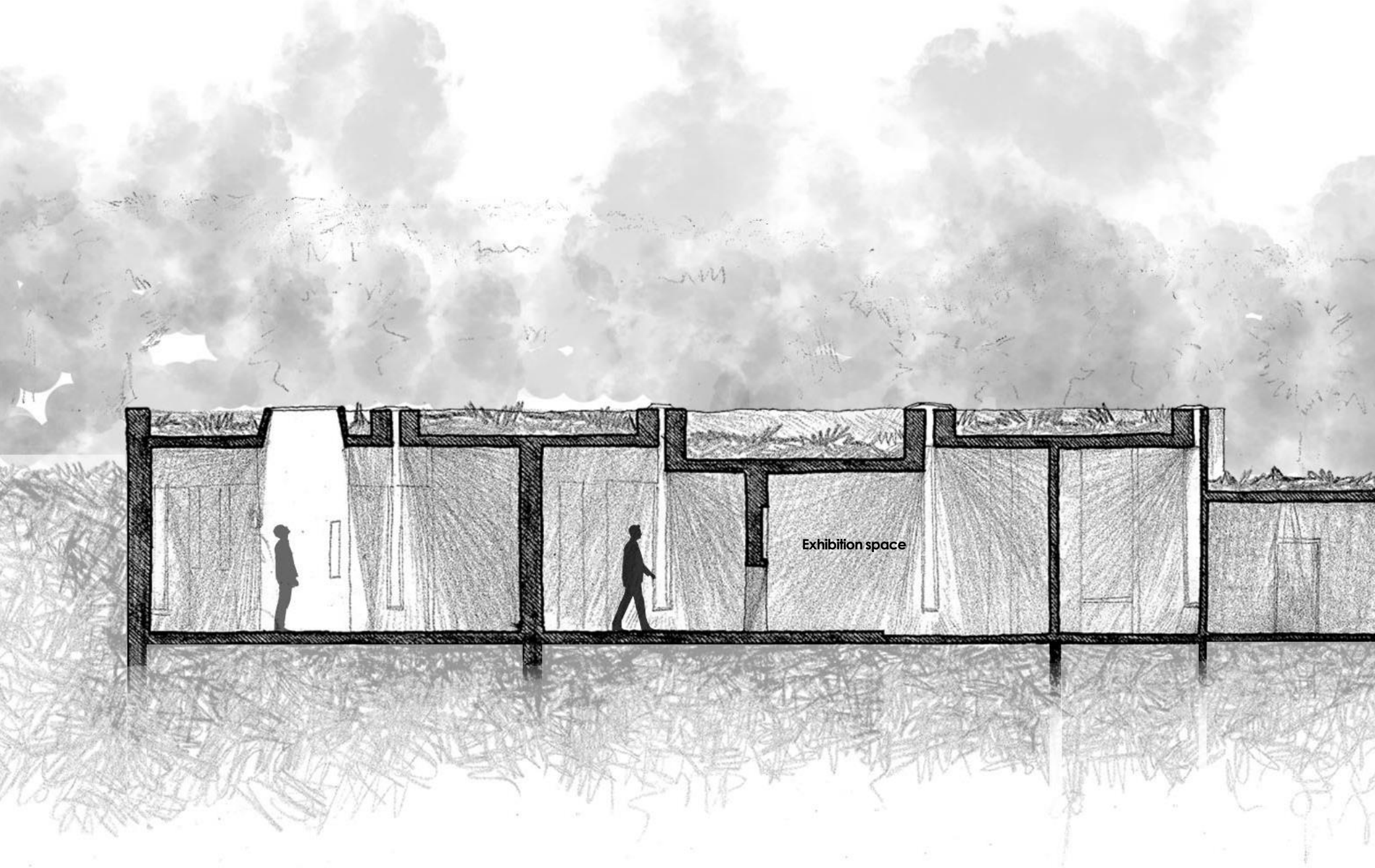


Figure 153:
SECTION D-D: Through the main exhibition hub





Figure 154:
RESTAURANT ENTRANCE INTERIOR



Figure 155:
RESTAURANT INTERIOR



Figure 156:
EXHIBITION SPACE EXPERIENCE



Figure 157:
EXHIBITION INTERIOR EXPERIENCE

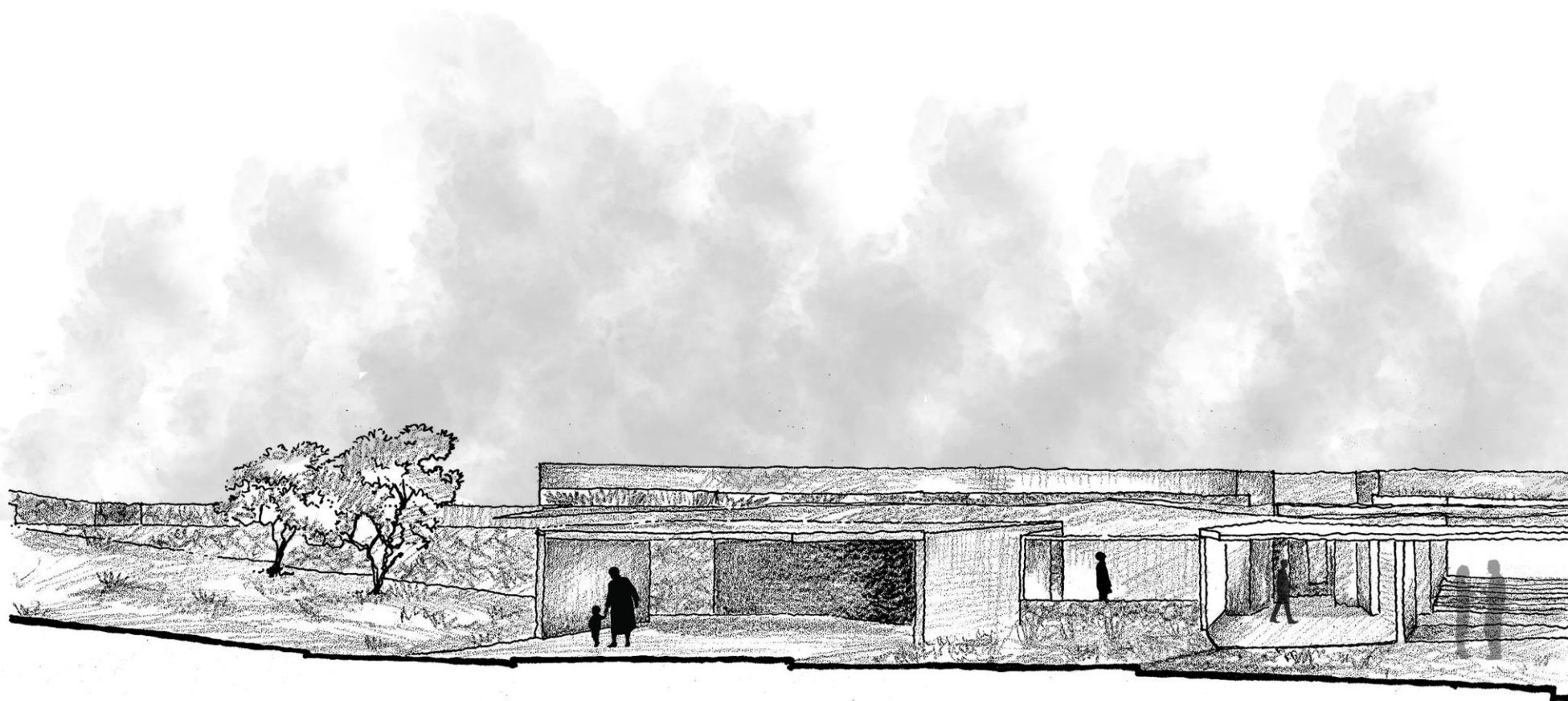
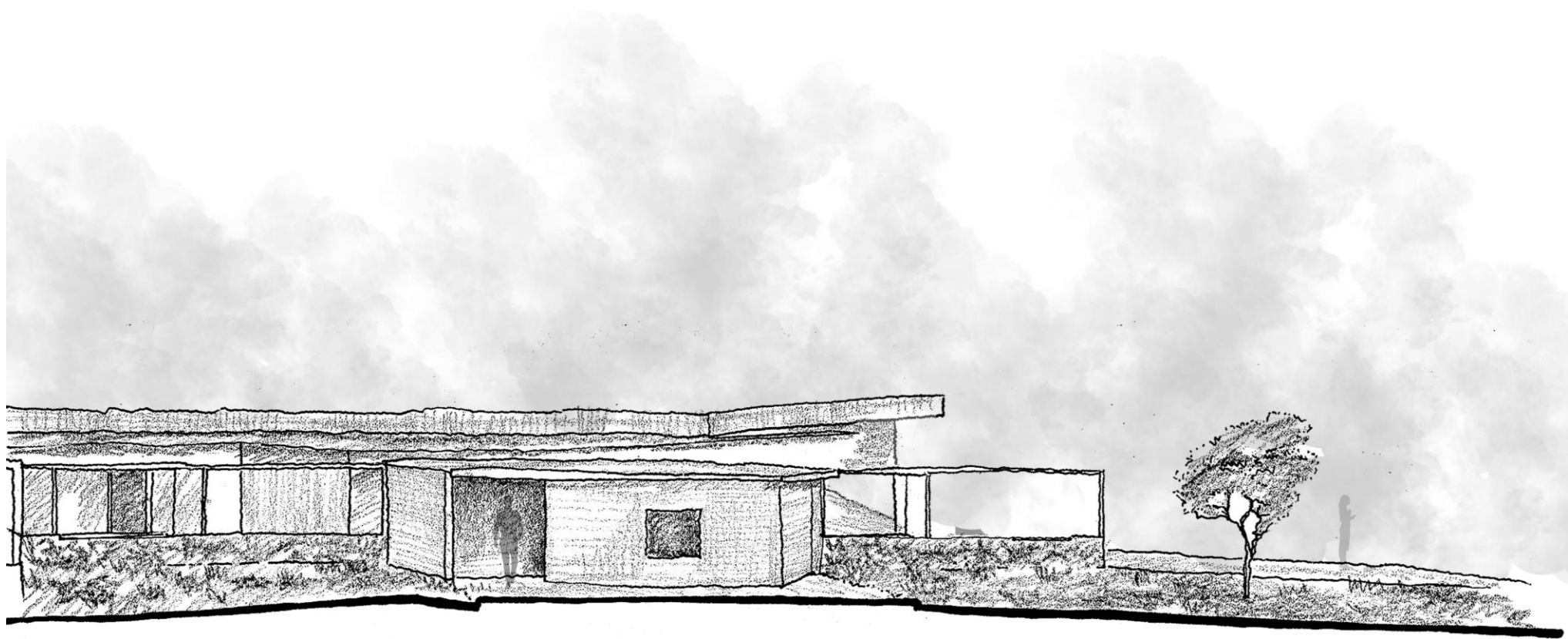


Figure 158:
EAST ELEVATION: main exhibition hub



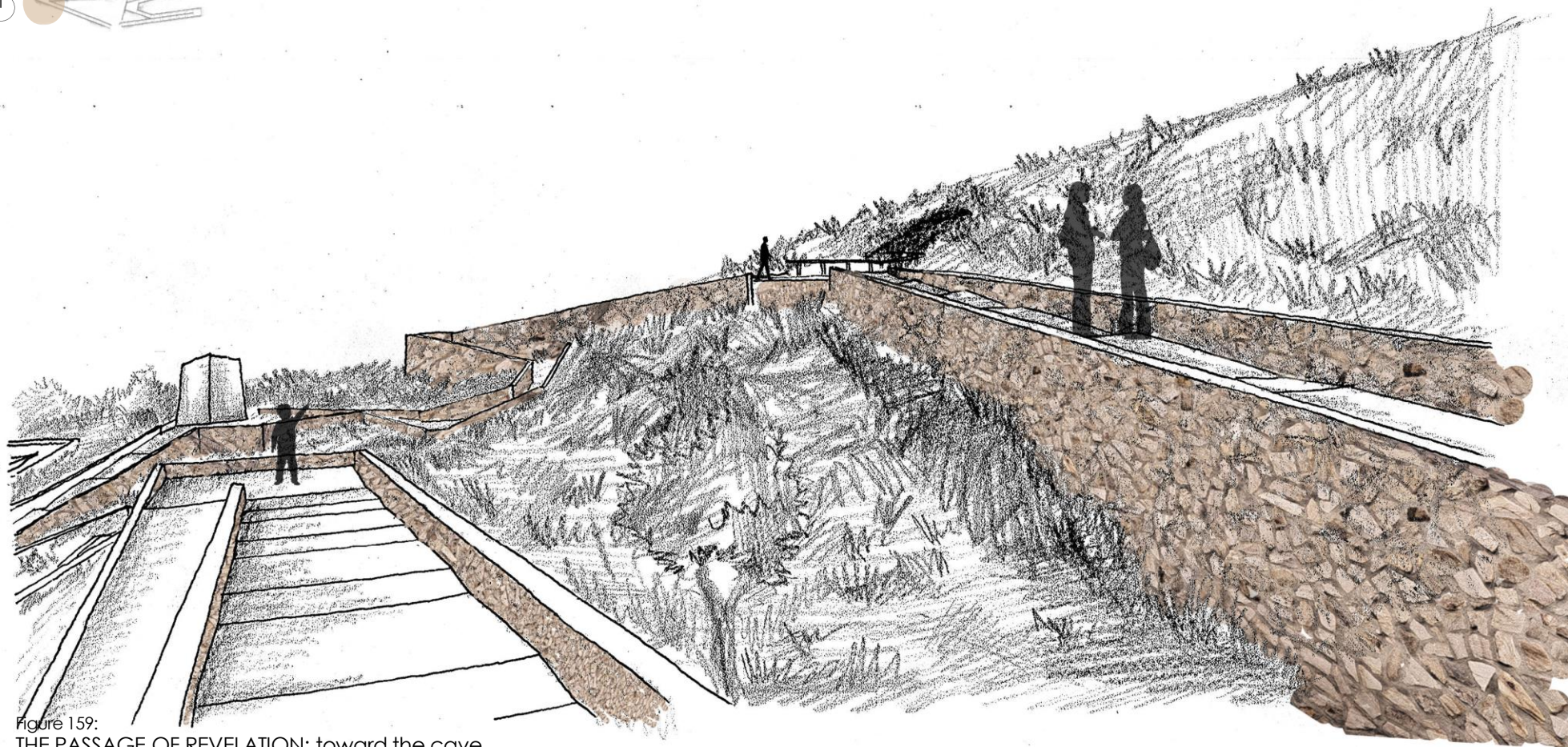
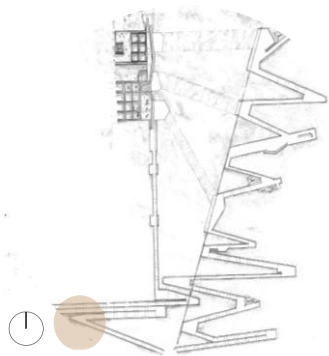


Figure 159:
THE PASSAGE OF REVELATION: toward the cave



Figure 160:
THE CAVE

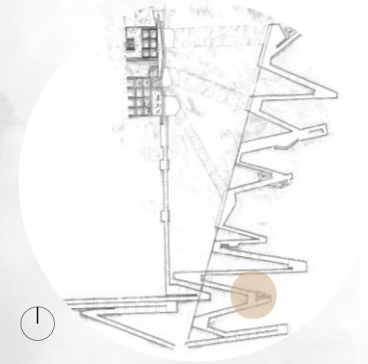
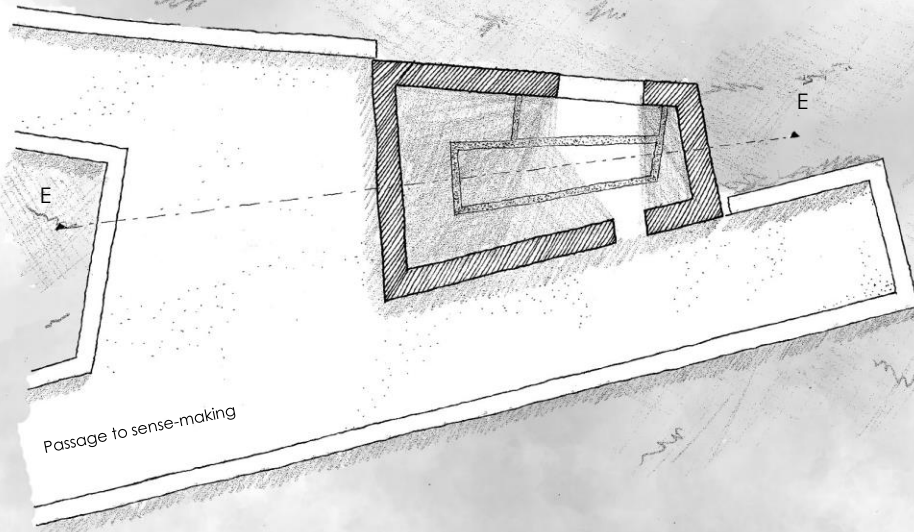


Figure 161:
PLAN OF CONTEMPLATION POD 1



Figure 162:
SECTION E-E: Contemplation Pod 1

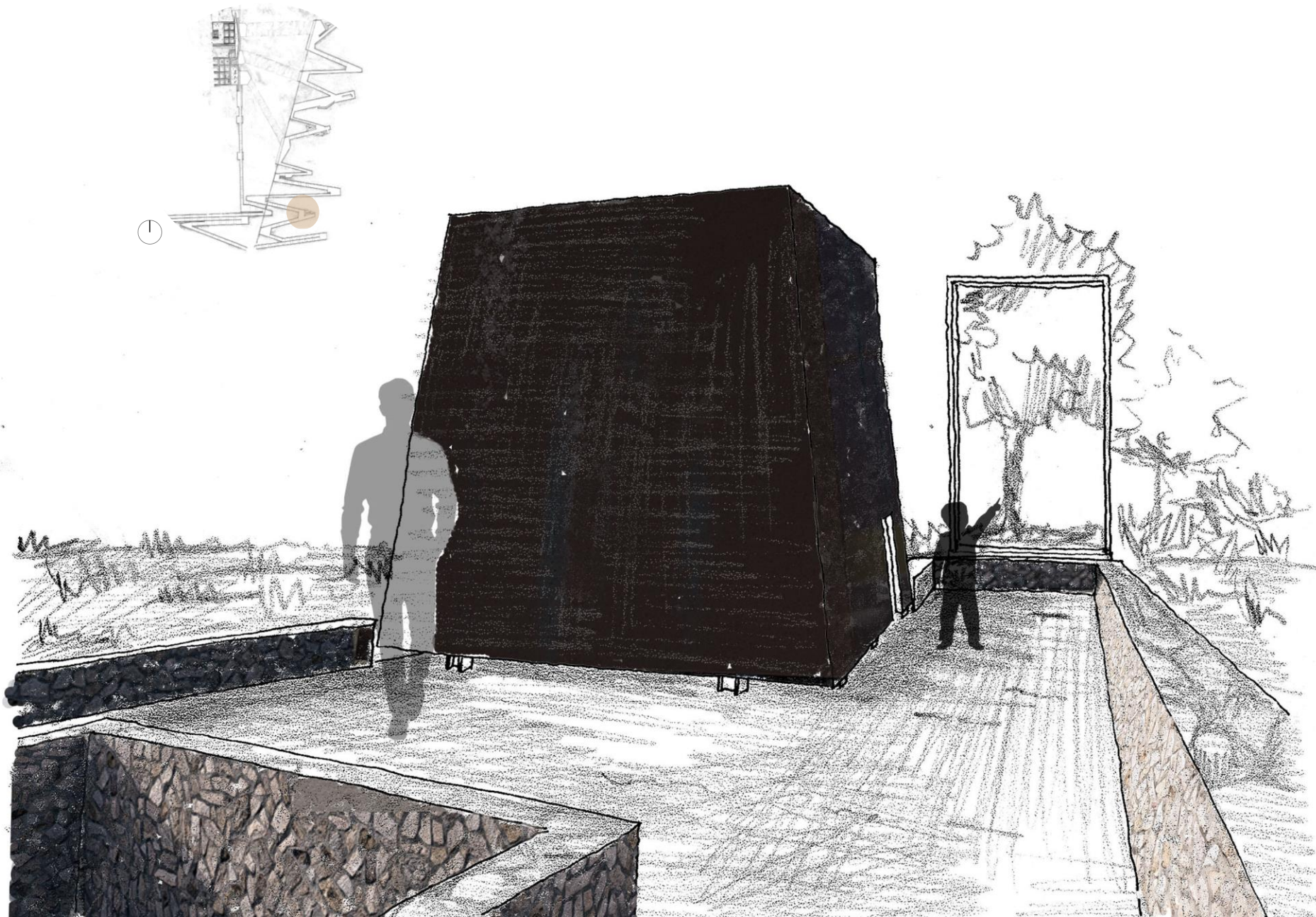


Figure 163:
THE PASSAGE OF SENSE-MAKING: toward contemplation

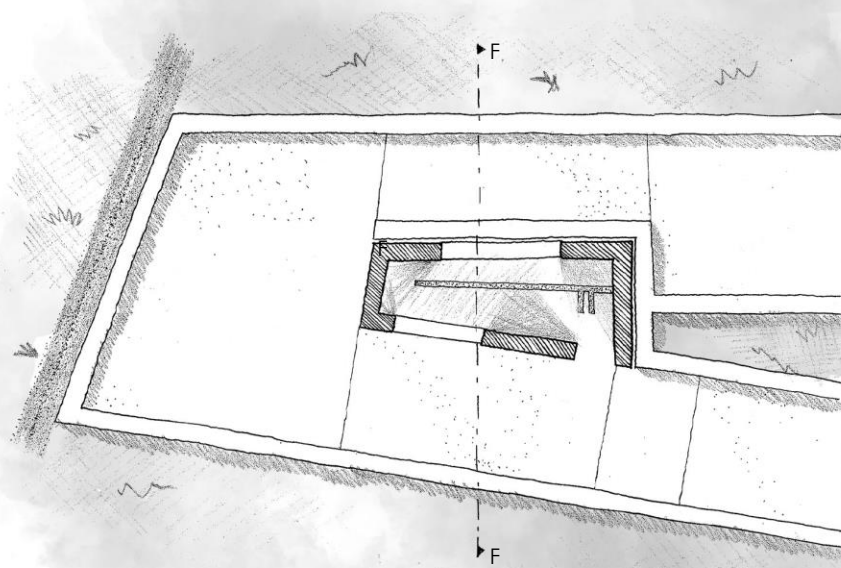


Figure 164:
PLAN OF CONTEMPLATION POD 2

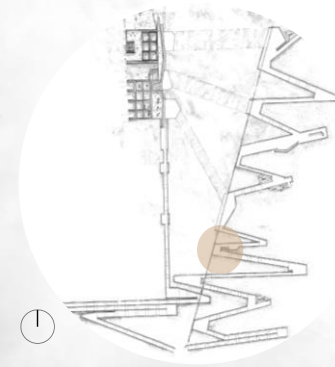


Figure 165:
SECTION F-F: Contemplation Pod 2

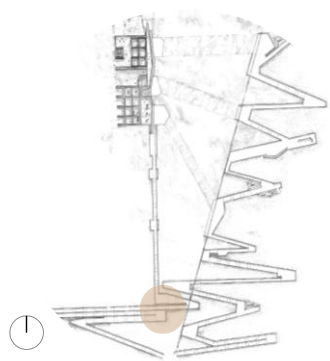


Figure 166:
PONDERING THE OBSCURE.

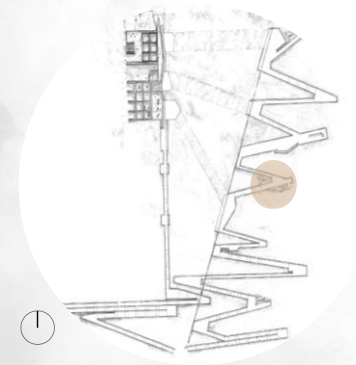
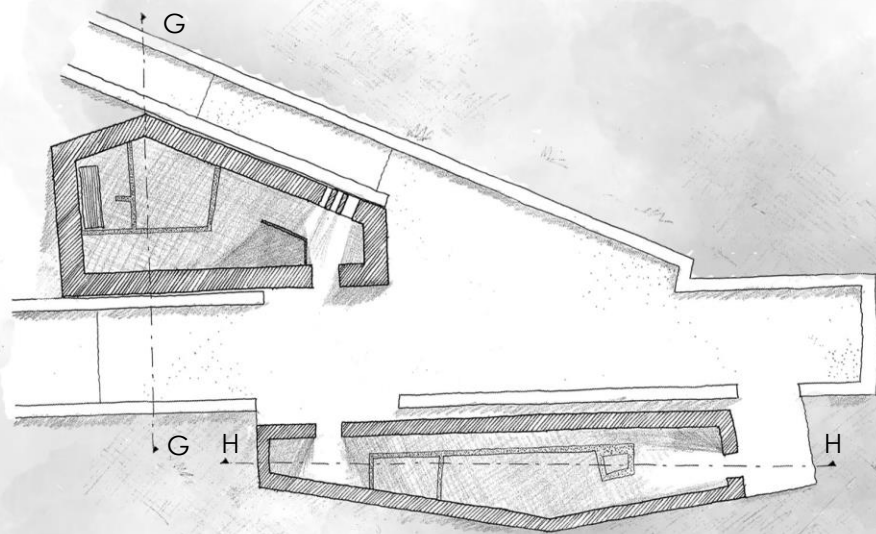


Figure 167:
PLAN OF CONTEMPLATION POD 3 & 4



Figure 168:
SECTION G-G: Contemplation Pod 3

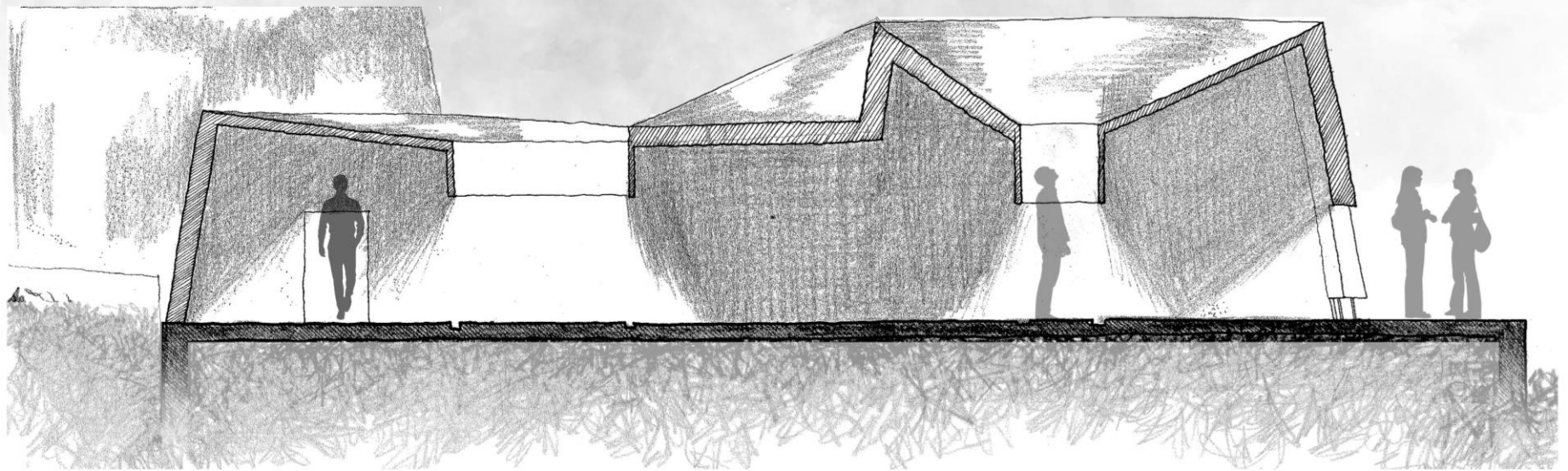


Figure 169:
SECTION H-H: Contemplation Pod 4

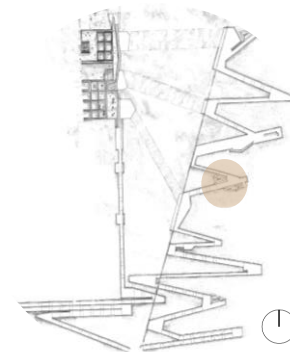
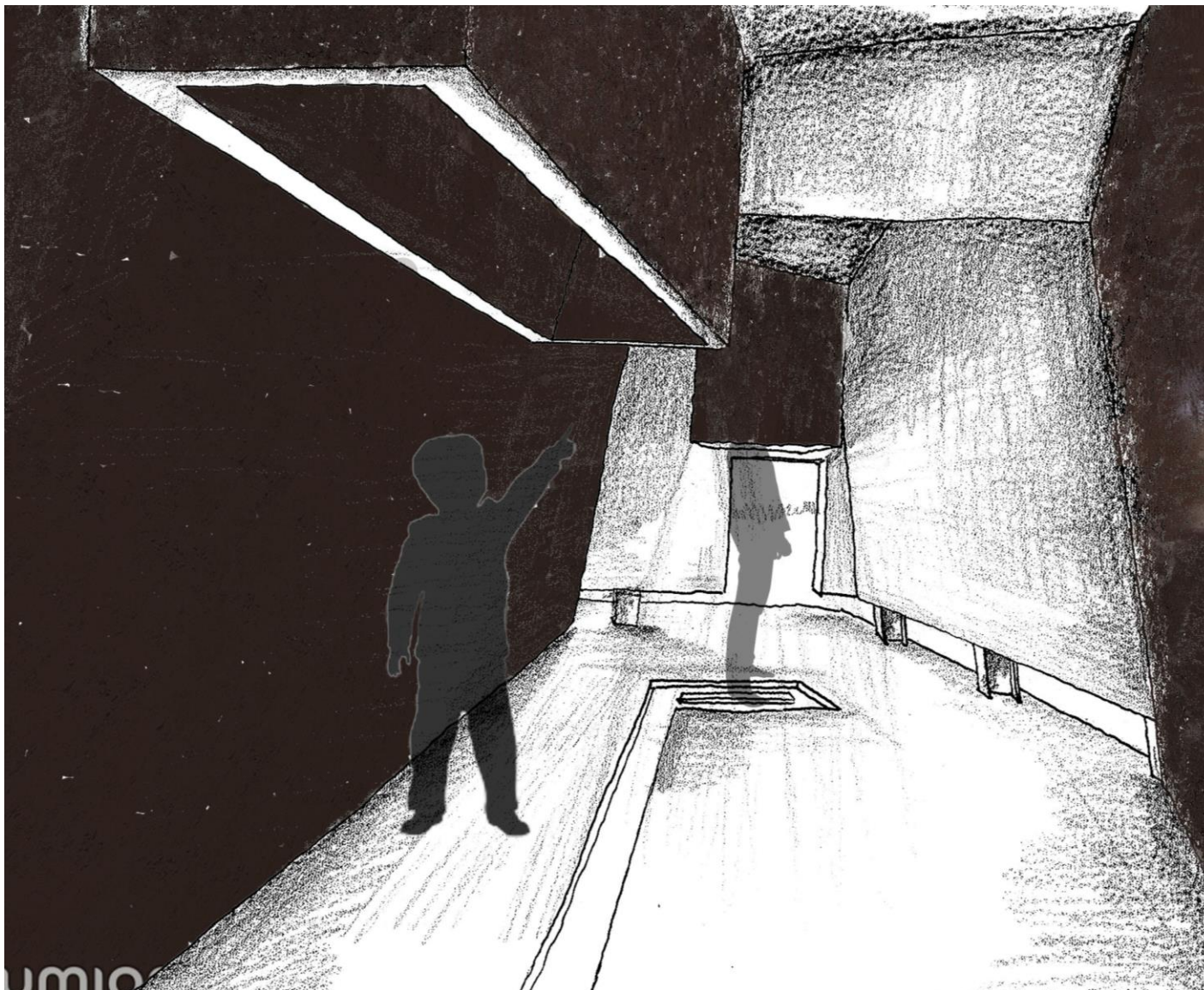


Figure 170:
FILTERING LIGHT

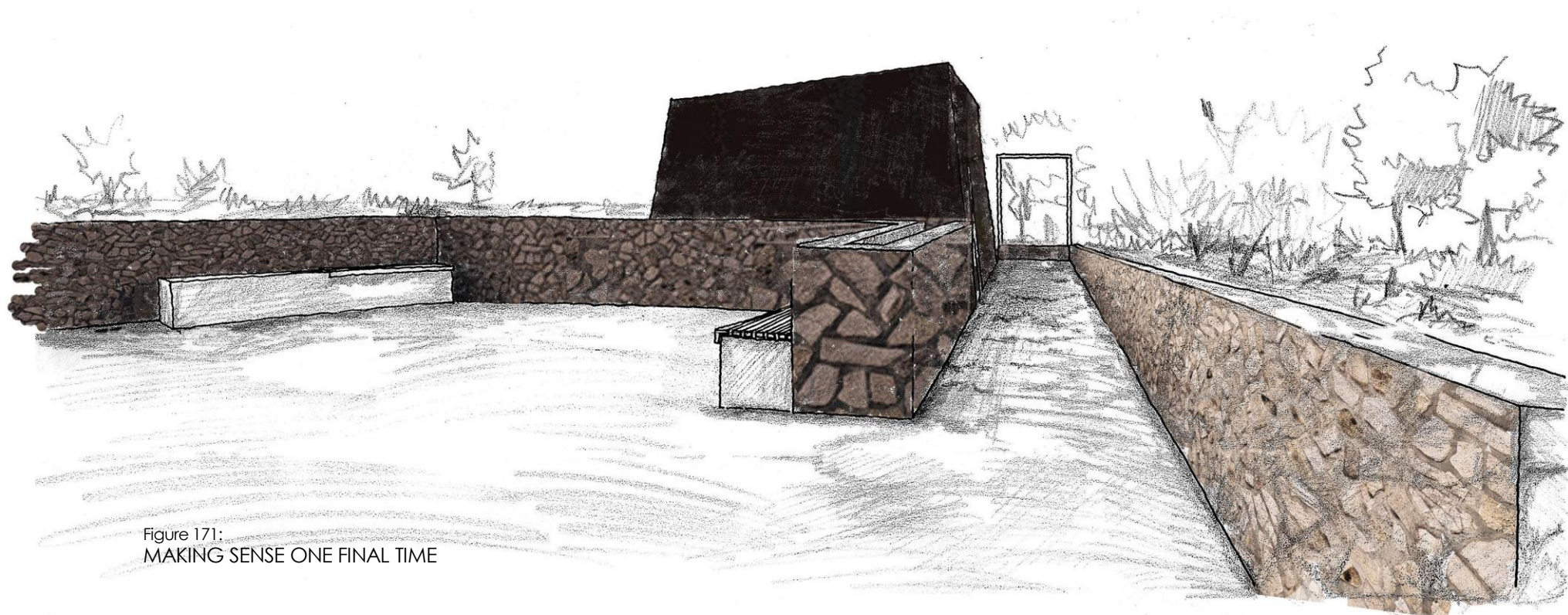
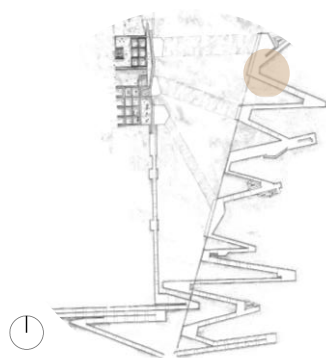


Figure 171:
MAKING SENSE ONE FINAL TIME

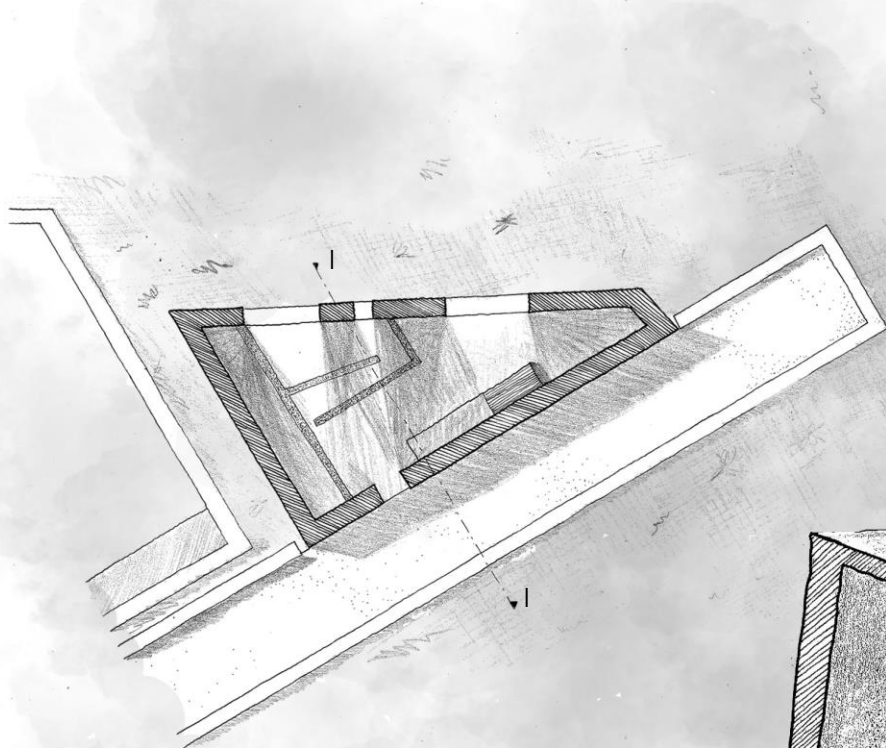


Figure 172:
PLAN OF CONTEMPLATION POD 5

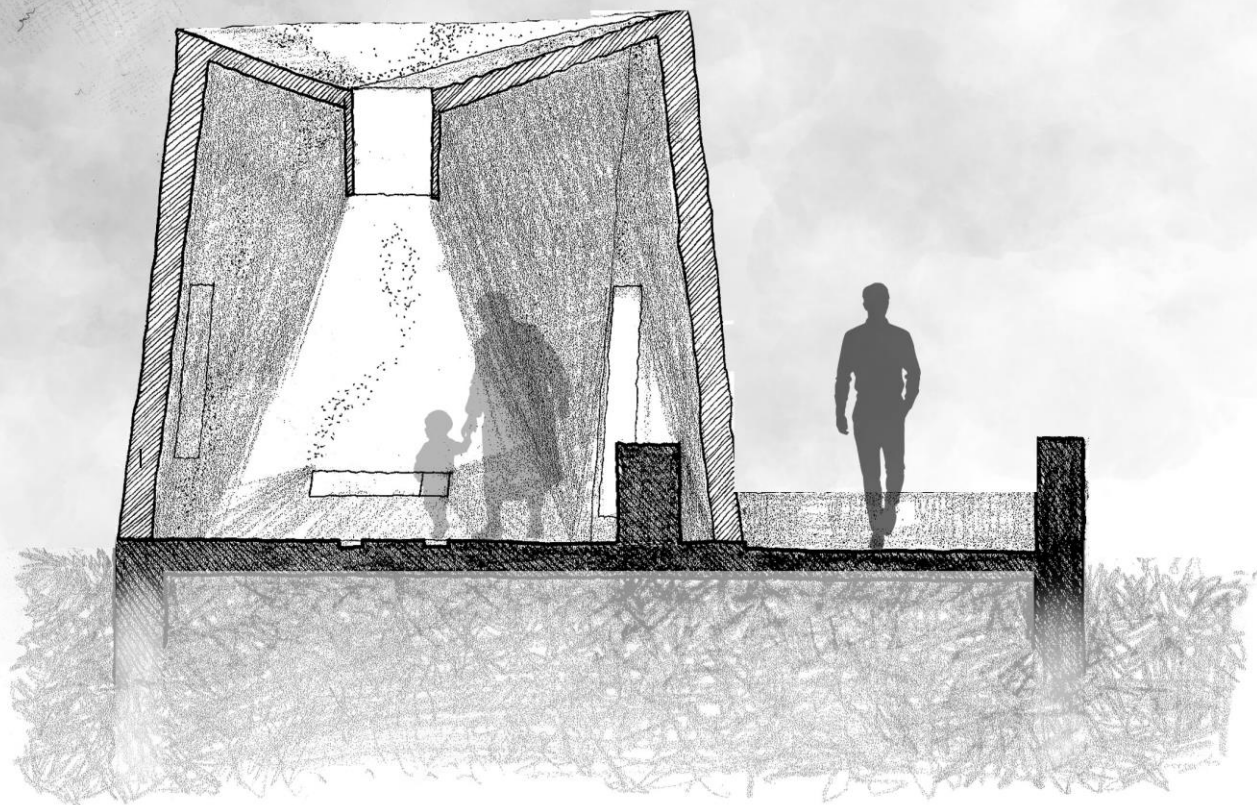
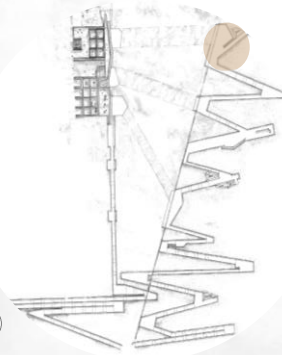


Figure 173:
SECTION I-I: Contemplation Pod 5

1

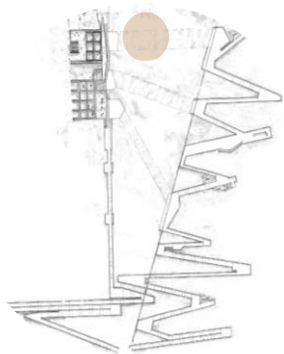
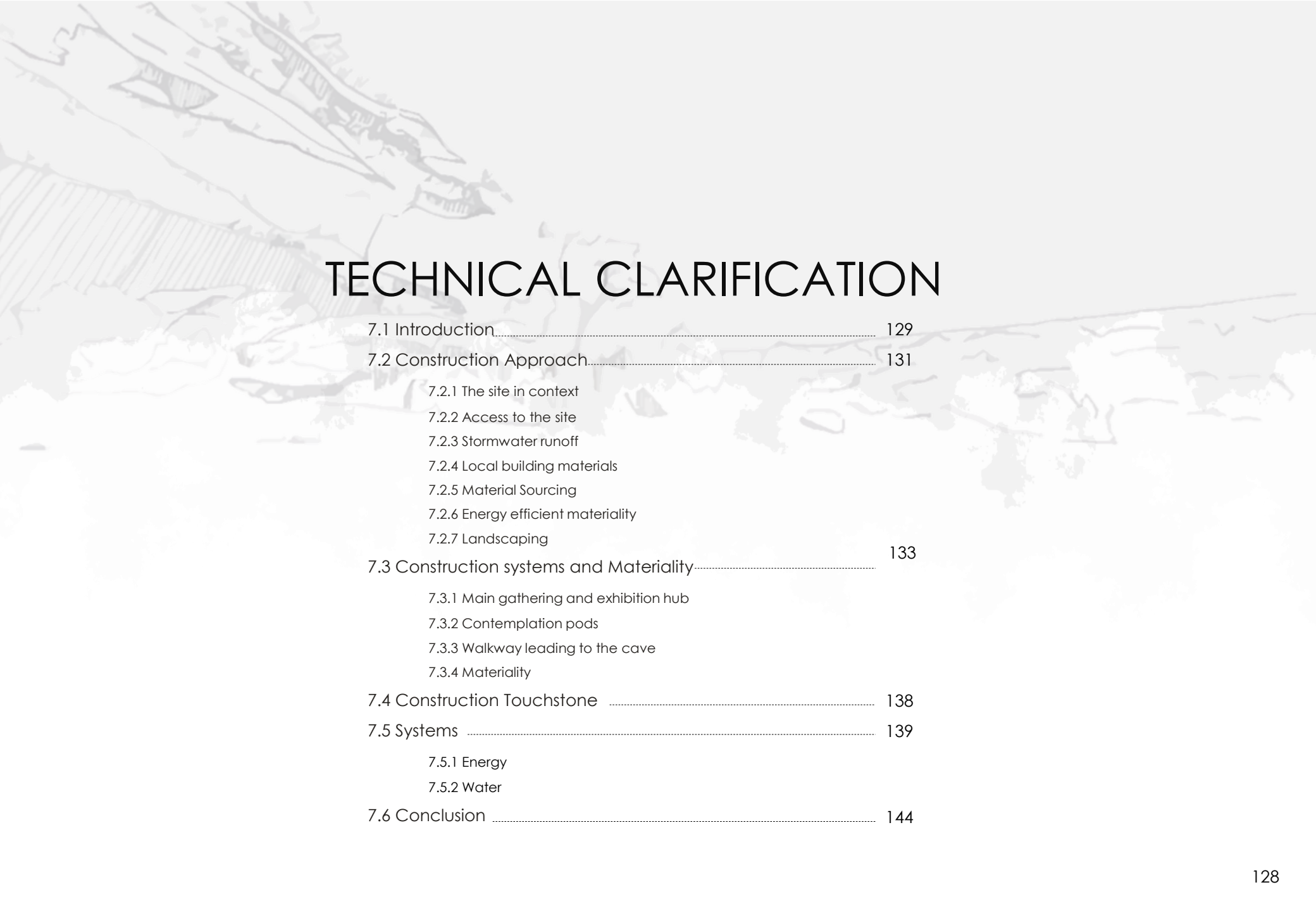


Figure 174:
BINDING THE NARRATIVE



CHAPTER 07



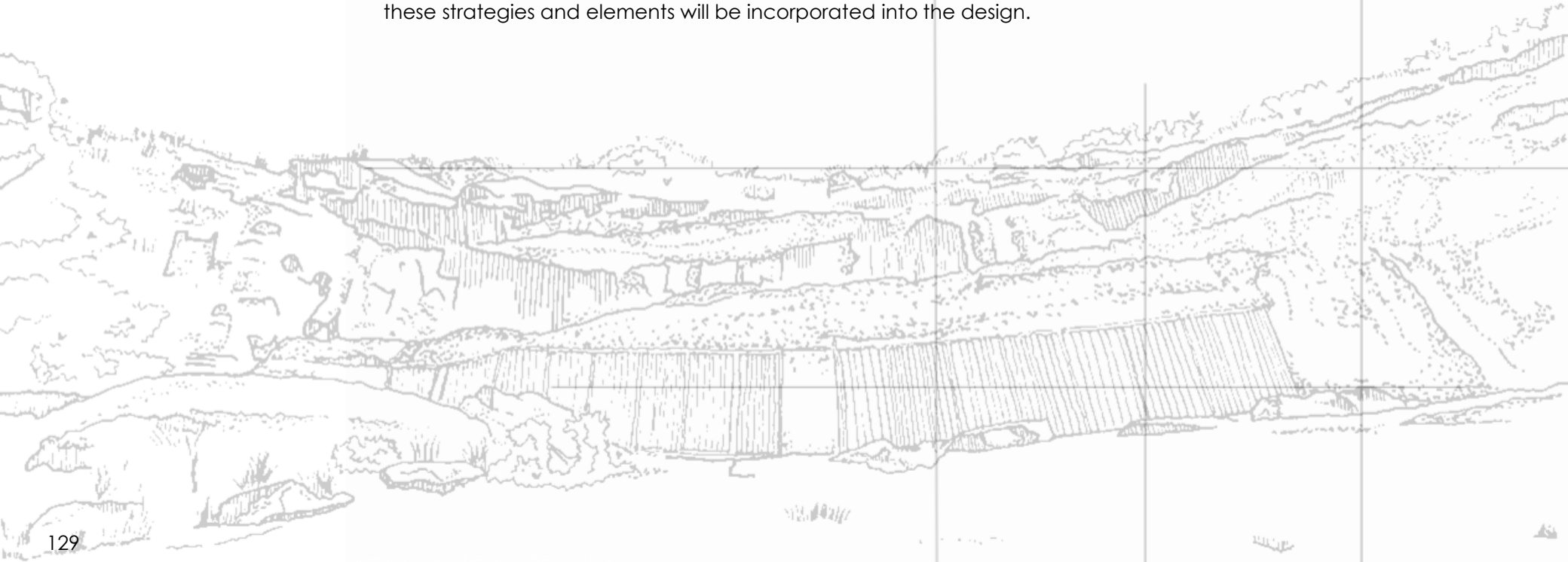
TECHNICAL CLARIFICATION

7.1 Introduction.....	129
7.2 Construction Approach.....	131
7.2.1 The site in context	
7.2.2 Access to the site	
7.2.3 Stormwater runoff	
7.2.4 Local building materials	
7.2.5 Material Sourcing	
7.2.6 Energy efficient materiality	
7.2.7 Landscaping	
7.3 Construction systems and Materiality.....	133
7.3.1 Main gathering and exhibition hub	
7.3.2 Contemplation pods	
7.3.3 Walkway leading to the cave	
7.3.4 Materiality	
7.4 Construction Touchstone	138
7.5 Systems	139
7.5.1 Energy	
7.5.2 Water	
7.6 Conclusion	144

7.1 INTRODUCTION

This chapter seeks to provide a comprehensive analysis of the technical considerations necessary for the proposed design within the context of Wonderwerk Farm, located in the Northern Cape. To achieve an optimal integration of the design into the landscape, extensive research and explorations have been conducted to identify the most energy-efficient solutions. The chapter will examine a technical strategy encompassing energy, water, and other essential systems, ensuring a thorough understanding of the integrated systems planned for the site.

Additionally, the chapter will investigate the construction methodologies for the proposed design, demonstrating the critical role of these elements. Finally, the chapter will present evidence of how and where these strategies and elements will be incorporated into the design.



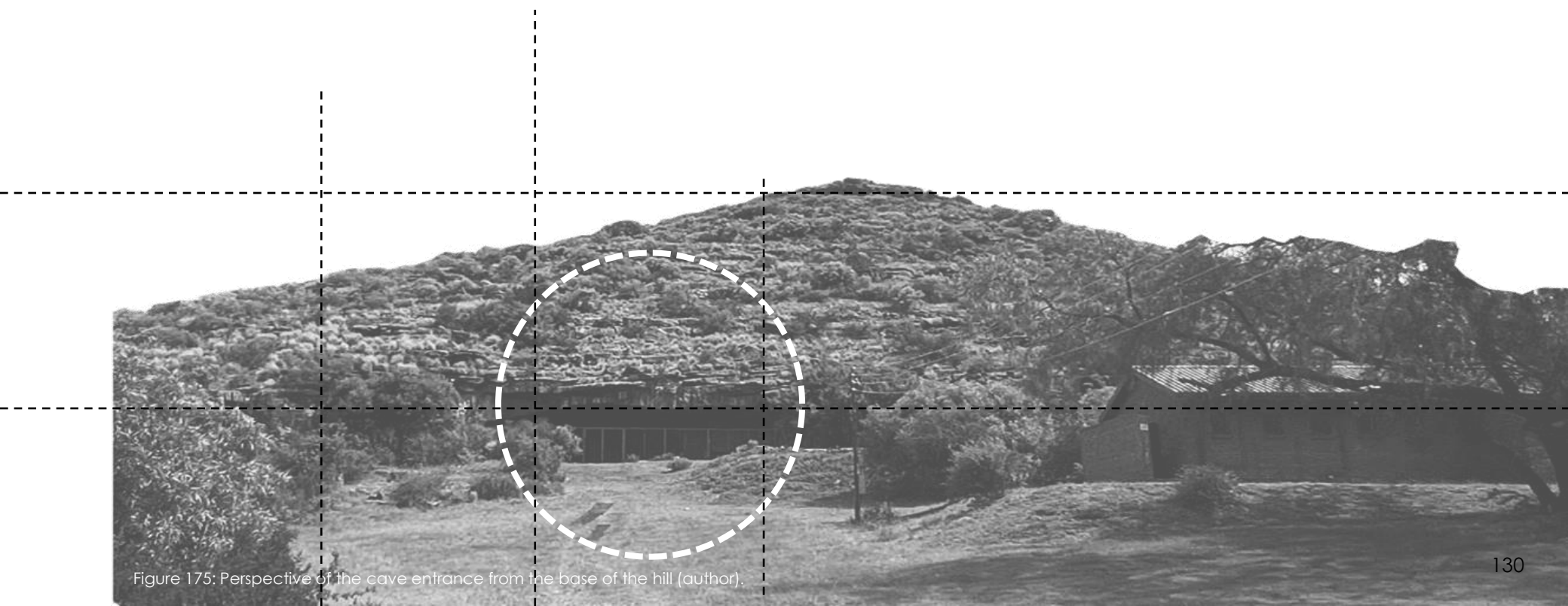


Figure 175: Perspective of the cave entrance from the base of the hill (author).

7.2 CONSTRUCTION APPROACH

7.2.1 The Site In Context

The nearest town, Danielskuil, is located approximately 41 kilometres from the farm, while Kuruman is situated about 46 kilometres away, as seen in Figure 46 on page 47. Most of the residents and workers on the farm originate from the surrounding towns and informal settlements near Kuruman.

7.2.2 Access To The Site

Access to the site, both public and private, is available from the northeastern border via the R31, which runs between the towns of Kuruman and Danielskuil. The site is not open to the public without restriction, and an entrance fee is required for entry. To enhance security, the proposed design includes a gatehouse where the entrance fee will be collected. Currently, construction is taking place on the site. The only challenge that may emerge during the construction process would be the distance to the nearest town.

7.2.3 Stormwater Runoff

The site is situated in a region characterized by low annual rainfall. However, the natural topography directs water runoff from the southern point of the hill downwards toward the northern area, where the building is integrated into the landscape. The earthen roof is designed to channel water into stormwater drains, which are incorporated into the central load-bearing columns of the concrete roof structures. This system efficiently directs the runoff into an underground reservoir located beneath the building, eventually discharging it at the northernmost edge of the site.

7.2.4 Local Building Materials

The existing structures on the site, slated for demolition, consist of masonry buildings with pitched roofs made of corrugated iron. While the area lacks a distinct vernacular architecture, dolomite is commonly used as a building material in many construction projects in and around the Kuruman region.

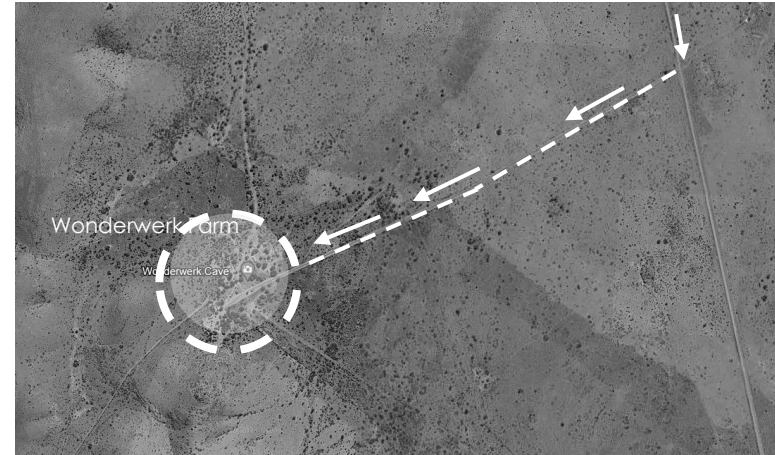


Figure 176: Aerial view of the proposed site of Wonderwerk Farm, access to the site (GoogleEarth, 2024; online; adapted by author).

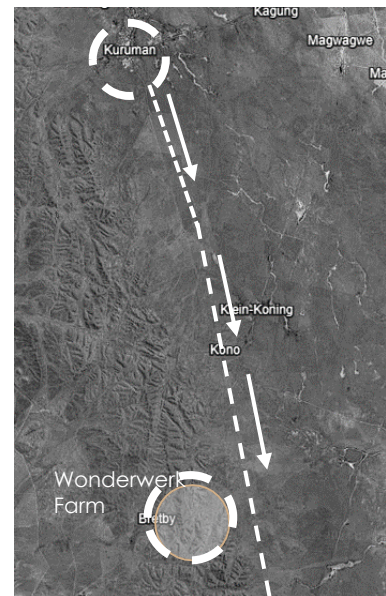


Figure 177: Aerial view of the town of Kuruman to the Wonderwerk Farm (GoogleEarth, 2024; online; adapted by author).

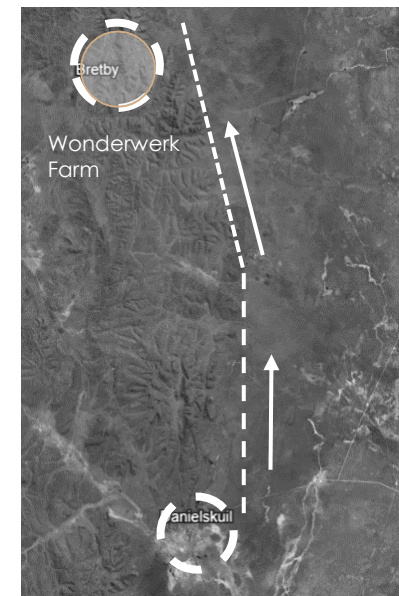


Figure 178: Aerial view of the town of Danielskuil to the Wonderwerk Farm (GoogleEarth, 2024; online; adapted by author).

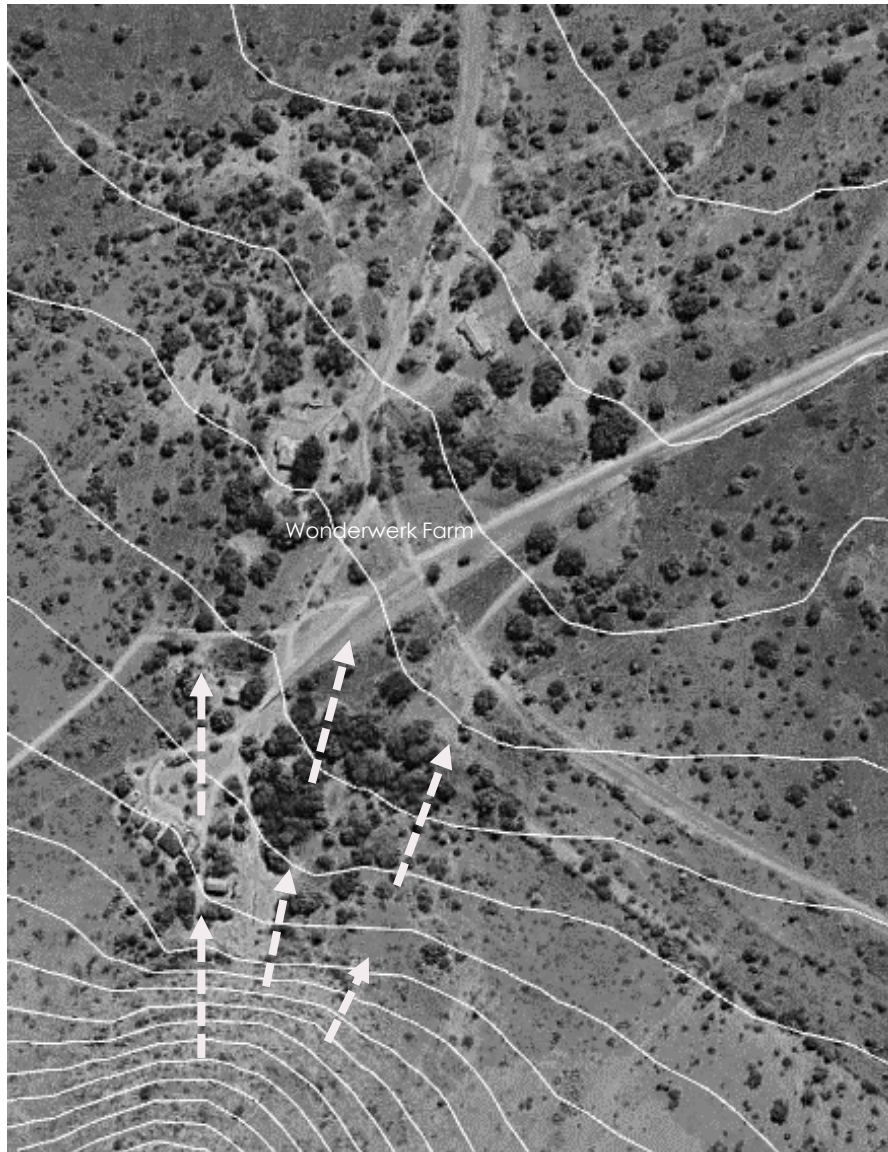


Figure 179: Aerial view of the site, indicating the stormwater runoff (GoogleEarth. n.d.; online; adapted by author).

7.2.5 Material Sourcing

The town of Kuruman supplies some of the building materials required for the construction process. The primary construction materials include concrete, masonry, and steel. In cases where additional resources are needed, the town of Kimberley, located approximately 197 kilometres from the farm, can serve as an additional source of materials.

7.2.6 Energy Sufficient Materiality

Considering the necessity for a sensitive and energy-efficient approach to the proposed site, several critical factors must be addressed in the construction process, including casting concrete and reusing wooden frameworks in the design, and utilizing excavated soil in the construction process, such as for plaster to imitate rammed earth walls.

7.2.7 Landscaping

Given the project's location on a site where the landscape holds significance, the landscaping approach focuses primarily on rehabilitating the existing vegetation after the completion of the construction phase. In select areas, where pathways or spaces are intended to guide visitors without the use of architectural interventions, gravel is introduced. This strategy ensures minimal alteration to the site, maintaining the natural balance by avoiding substantial additions or removals of existing vegetation already on site.

7.3 CONSTRUCTION SYSTEMS AND MATERIALITY

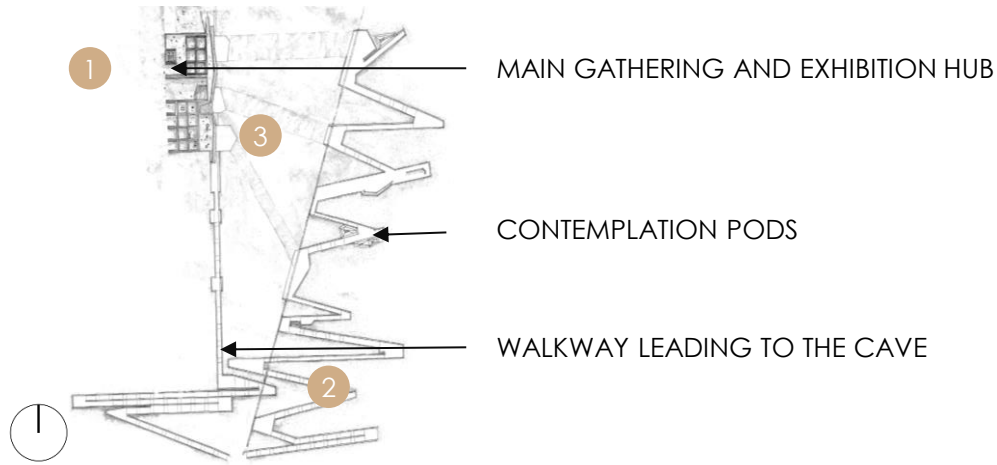


Figure 180: Site plan indicating important spaces (author).

- 1 MAIN GATHERING AND EXHIBITION HUB

Upon arrival at the site, visitors are initially greeted by the main exhibition hub, which offers various amenities including an information desk, public restrooms, a restaurant with a seating area, an outdoor amphitheatre, and an exhibition space. This exhibition space serves as the entry point to the walkway leading to the cave.
- 2 WALKWAY LEADING TO THE CAVE

The walkway traverses the site in a southward direction, winding from east to west, and culminates at the entrance of the cave. From there, a second walkway begins on the opposite side, leading northward toward the contemplation pods and ultimately ends with visitors traversing over the landscape to the reception area.
- 3 CONTEMPLATION PODS

Along the walkway leading back to the main hub or parking area, contemplation pods are strategically placed. These pods provide visitors with a secluded space to reflect on and process their earlier experiences, offering a sense of detachment from the surrounding landscape.

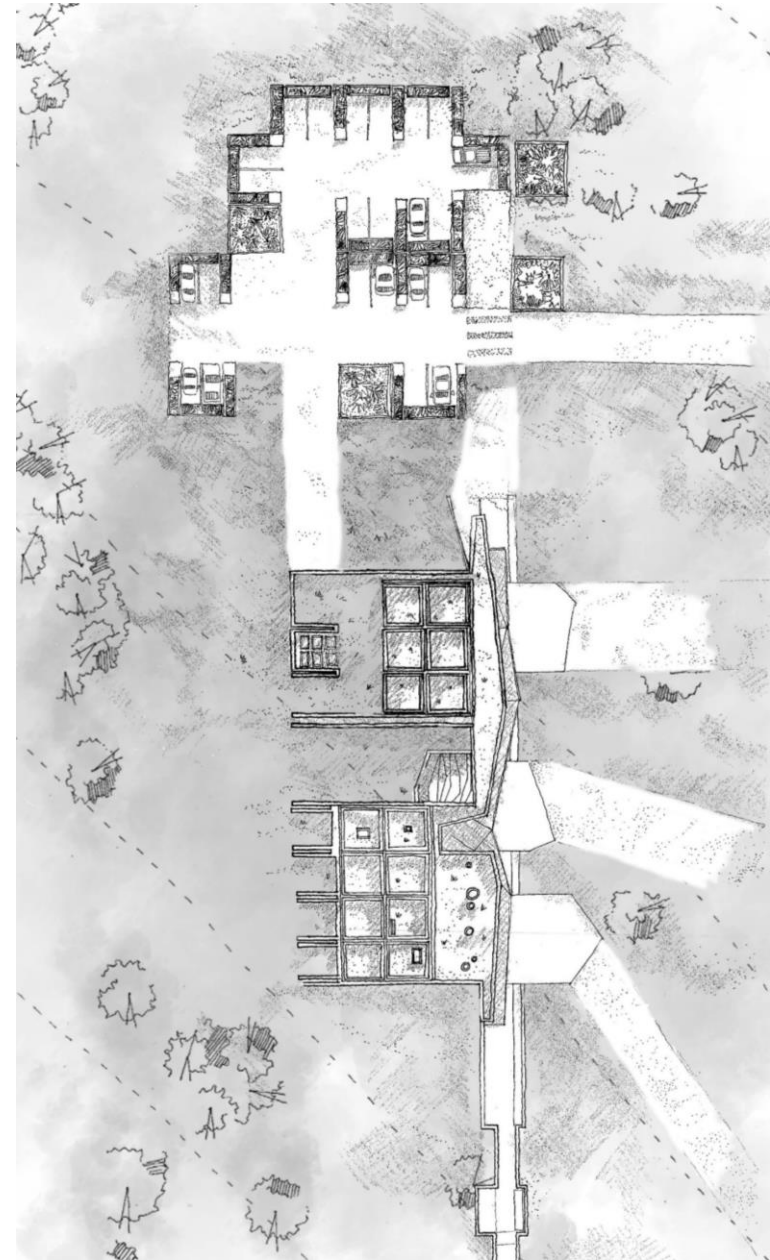


Figure 181: Roof plan of the main exhibition hub in context (author).

7.3.1 Main Gathering and Exhibition Hub

Foundations: The foundations supporting the main exhibition hub consist of reinforced strip foundations measuring 800 x 400 mm, with a depth of 400 mm, designed to carry 220 mm load-bearing walls. The retaining walls are supported by robust foundations measuring 1400 x 400 mm, with a depth of 400 mm. Interior walls are built upon reinforced strip foundations measuring 400 x 200 mm.

Floor: The interior floor comprises an 85 mm thick in-situ cast slab, finished with non-slip tiles in the main exhibition space. The exterior flooring is similarly cast in concrete, providing a non-slip surface for safety and durability.

Walls: The exterior of the exhibition hub is defined by masonry load-bearing walls approximately 220 mm in thickness, while the interior walls vary in thickness, measuring 110 mm, 300 mm, and 500 mm. The interior walls and columns are arranged non-uniformly to align with the conceptual design approach. Interior walls exceeding 220 mm in thickness are cast in concrete and finished with plaster and paint. In contrast, walls with thicknesses of 220 mm and 110 mm are constructed with brick, similarly finished with plaster and paint. The retaining walls along the western and southern perimeters of the exhibition hub are constructed from reinforced concrete, with a thickness of 300 mm.

Roofs: The planted roofs consist of 250 mm thick in-situ cast reinforced concrete slabs with parapet edges. These slabs are supported by interior load-bearing walls and columns and are designed with a gradient sloping toward the centre to facilitate water drainage through the columns to below the building structure. The roofing spans 5 800 mm.

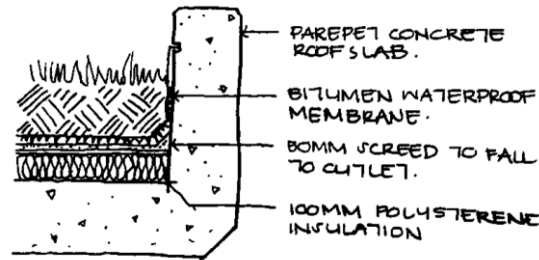


Figure 182: Section detail of earthen roof (author).

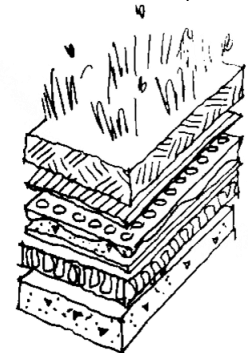


Figure 183: Axonometric depicting the layers found on the earthen roof (author).

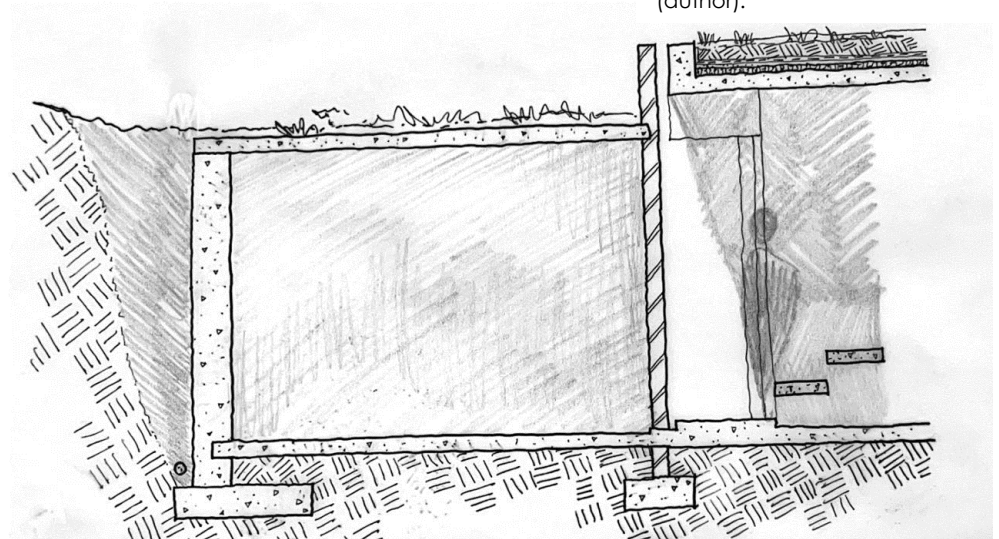


Figure 184: Section through part of the exhibition hub to show foundation and wall sections (author).

7.3.2 Contemplation Pods

Foundations: The I-beam structural bearing raft foundation, comprised of reinforced cast-in-situ concrete, features a surface bed slab with a thickness of 200 mm. The foundation itself has a depth of 400 mm and a width of 600 mm.

Floor: The interior flooring of the pods is treated with a non-slip, weather-resistant finish. Additionally, grooves are incorporated into the floor within the pods to facilitate the drainage of stormwater away from the perimeter of the contemplation pods.

Walls/Roofs: The roof and walls are supported by a steel frame consisting of 254 x 254 x 89 mm H-beams for the primary structural bearing components, complemented by 203 x 152 x 52 mm tapered flanges. The frame is clad with mild steel sheets measuring 2500 x 1200 x 6 mm, which are coated with Corten paint.

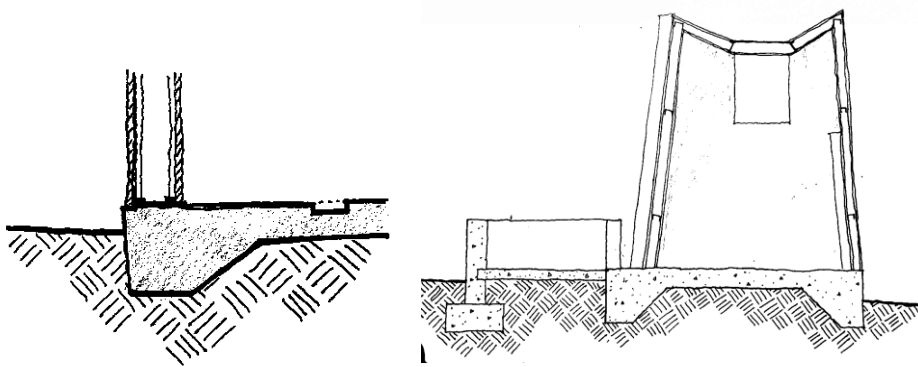


Figure 185: Detail section of steel connection to concrete base (author).

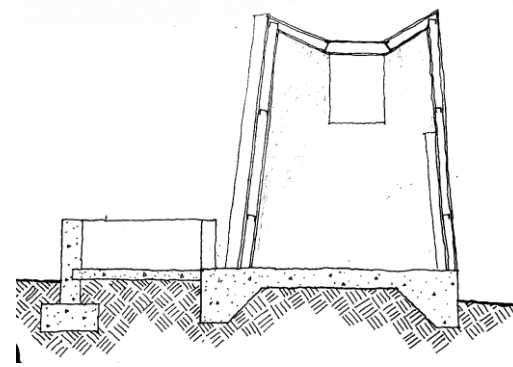


Figure 186: Section of contemplation pods (author).

7.3.3 Walkway Leading To The Cave

Foundations: The walkway ascends the hill, embedded into the surrounding soil, and is supported by reinforced concrete strip footing foundations measuring approximately 1000 x 400 mm.

Floor: The floor finish is engineered to be both weather-resistant and non-slip, with ramps with a slope of 1:12 extending 6000 mm up the hill and landings 2000 mm in width, in accordance with SANS regulations.

Walls: The perimeter walls of the walkway primarily function as retaining walls, constructed with 300 mm thick reinforced concrete cast in-situ. In areas where the soil does not extend above the height of the walkway, the retaining walls rise to a height of 500 mm above the walkway level, clad in stones gathered from the site during the construction process.

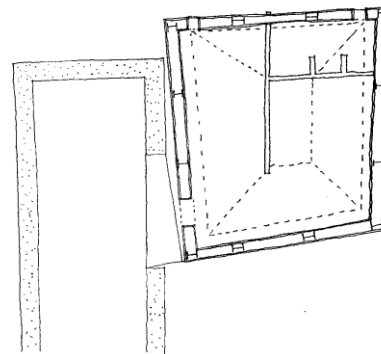


Figure 187: Plan of contemplation pod and walkway (author).

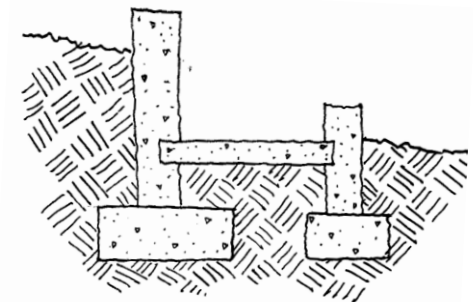


Figure 188: Section of the walkway (author).

7.3.4 Materiality

Concrete:

The primary exhibition hub and the structural components within the design are predominantly constructed using in-situ concrete. The materiality of the concrete imparts a substantial presence on the site, appearing as if it has been embedded in the ground and subtly obscured by the accumulation of dust and soil over time.

Soil Plaster Mixtures:

Certain articulated walls within the design feature distinct textures and colours that align with the aesthetic language of the contemplation pods situated at opposite ends of the layout.

Stone Cladding:

The walls of the walkway, which become retaining walls in specific sections, are constructed in concrete but finished with stone cladding sourced from the excavation materials generated during the site's construction.

Green roof:

The main exhibition hub is covered by green roofs of differing heights, covered in local grass, shrubs and red soil.

Steel Construction:

The contemplation pods are entirely fabricated from steel I-beams, which bear the structural load, while mild steel plates serve as the sheeting for both walls and roofs. These mild steel plates are to be coated with Cor-ten effect paint to simulate the appearance of Cor-ten steel. This material choice symbolizes the passage of time and the ageing of memories, enhancing the sense of the pods as ancient artefacts emerging from the landscape, thus reinforcing the thematic obscurity associated with the site's historical remnants.



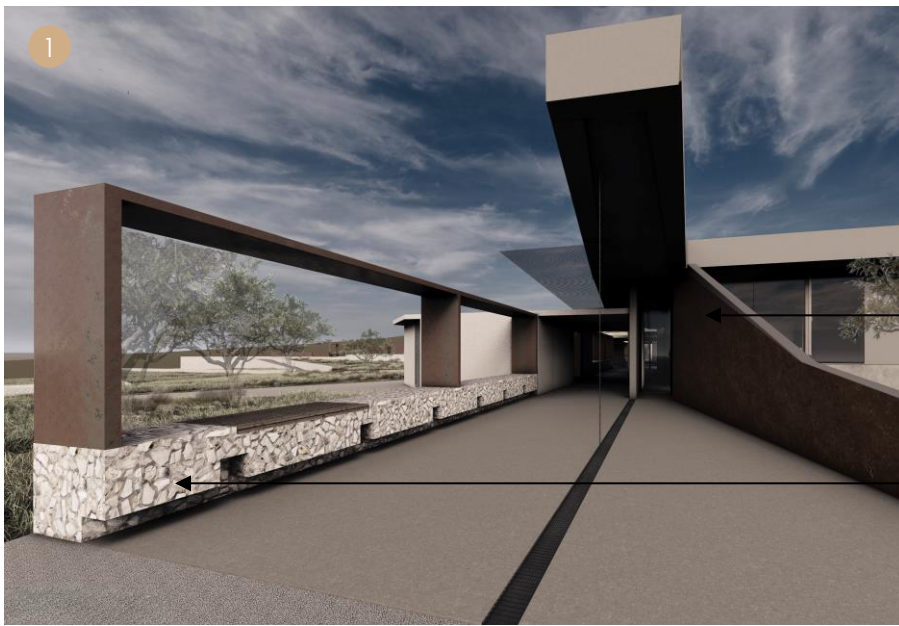


Figure 189: Main exhibition hub showing the materiality (author).

Soil plaster mixture acting as a guide to the reception and restaurant area.

Concrete cast seating spaces acting as a threshold toward the landscape from the manmade structure.
Clad in stones from the site.

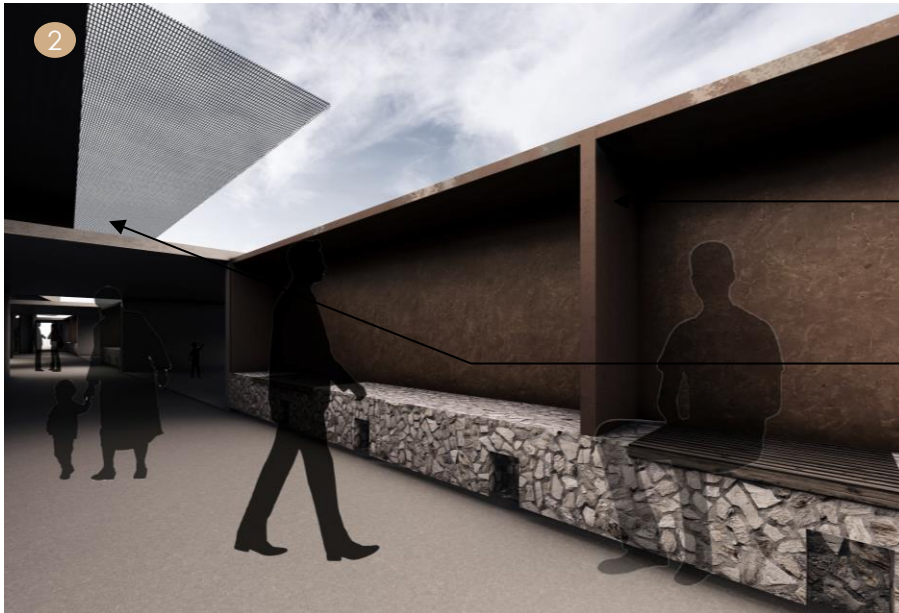


Figure 190: Main exhibition hub and walkway materiality perspective (author).

Mild steel frame structures painted treated to age like Corten steel.

Perforated steel roofing system.

Retaining wall of the walkway to the cave opening clad with stones of the site.

Wood detail on seating constructed from cast in-situ concrete framework.

Gravel texture change on the line of the site allowing visitors to make obscure markings on the floor.

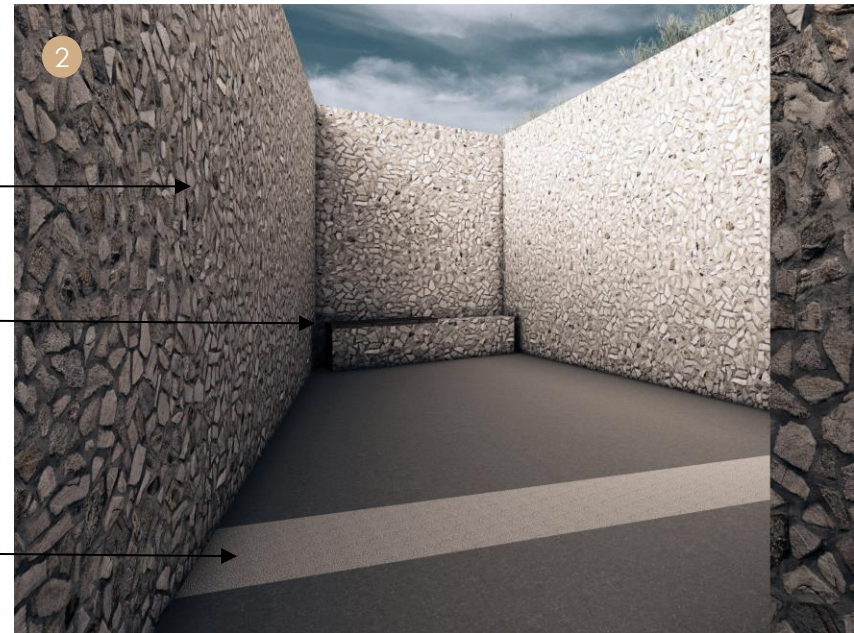


Figure 191: Walkway to the cave opening (author).

Mild steel-clad pods, treated to age like Corten Steel.

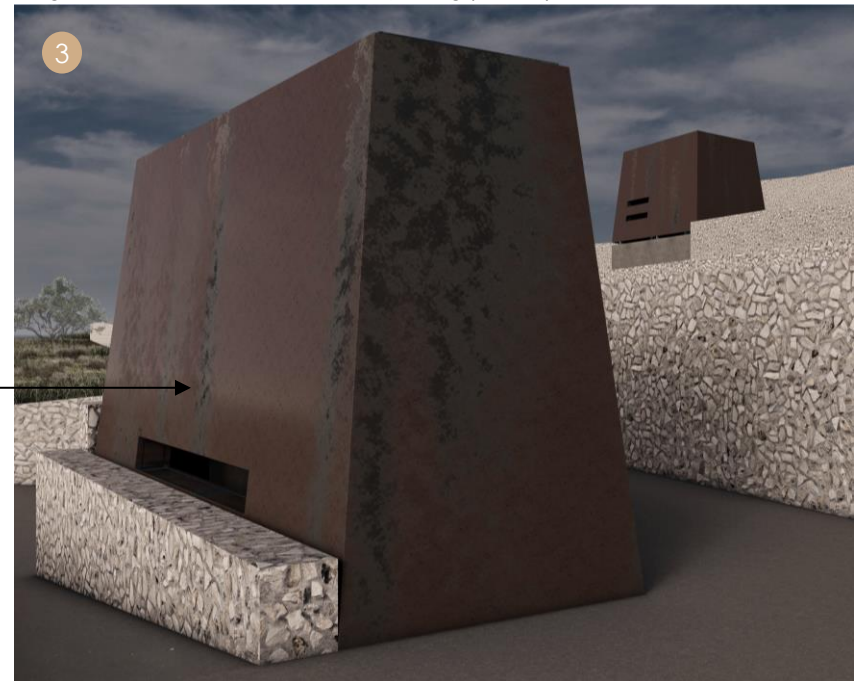


Figure 192: Contemplation pod materiality (author).

7.4 CONSTRUCTION TOUCHSTONE

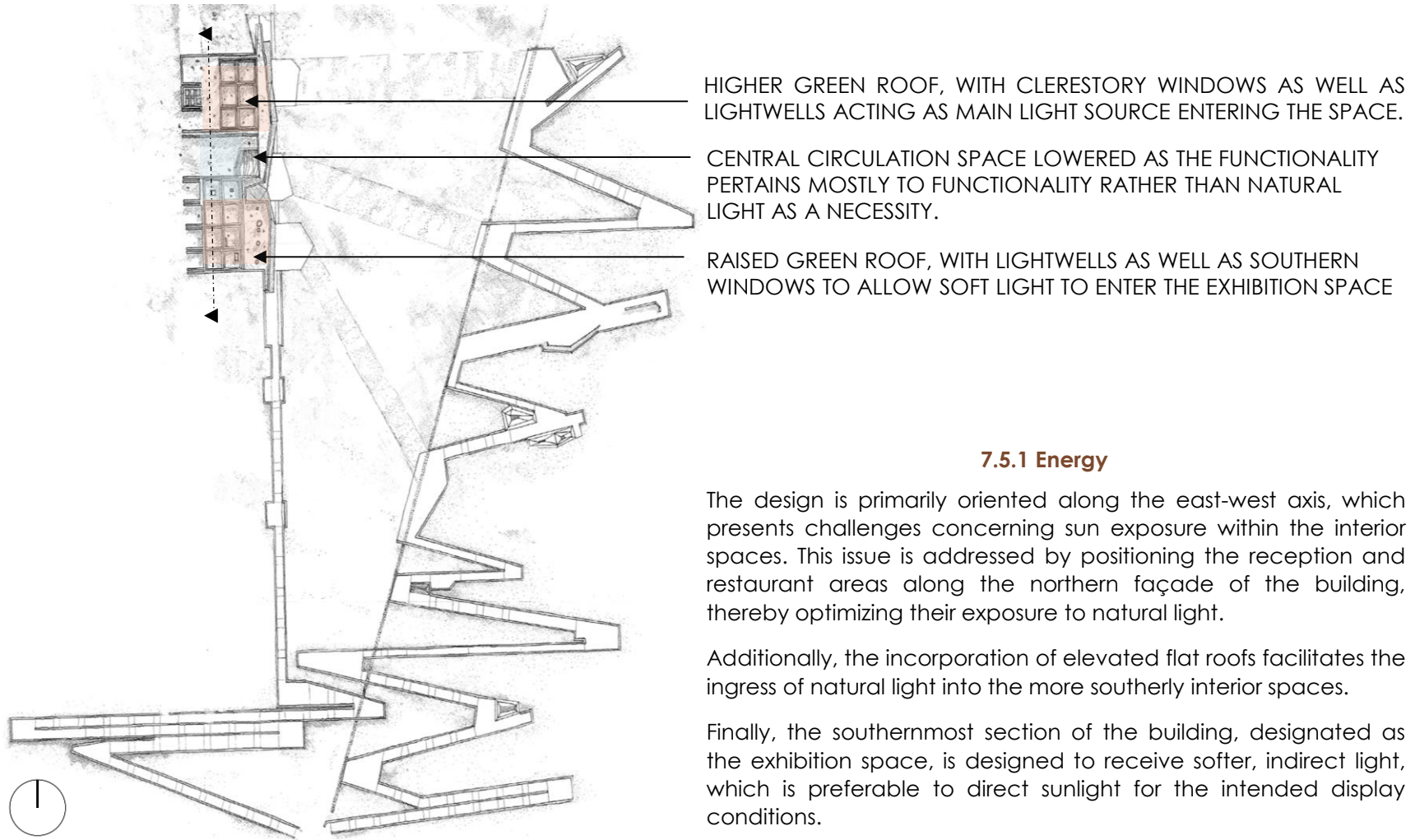
The construction touchstone focused on examining the potential methodologies for the development of the contemplation pods, with an emphasis on understanding the interaction between stereotomic and tectonic components, as well as the influence of materiality on spatial experience within these enclosed environments.

This investigation allowed for a better understanding of the integration of steel frame elements and metal cladding within and around the structural framework. Additionally, the exploration provided insights into the connectivity of steel components with the concrete flooring and seating spaces within and outside the contemplation pods.



Figure 193: Construction touchstone exploring structural approach for the contemplation pods (author).

7.5 SYSTEMS



7.5.1 Energy

The design is primarily oriented along the east-west axis, which presents challenges concerning sun exposure within the interior spaces. This issue is addressed by positioning the reception and restaurant areas along the northern façade of the building, thereby optimizing their exposure to natural light.

Additionally, the incorporation of elevated flat roofs facilitates the ingress of natural light into the more southerly interior spaces.

Finally, the southernmost section of the building, designated as the exhibition space, is designed to receive softer, indirect light, which is preferable to direct sunlight for the intended display conditions.

Figure 194: Site plan indicating the roof design to allow for energy efficient heating and cooling systems (author).

Softer light enters exhibition space from southern and eastern angle allowing for mysterious atmosphere in the interior.

Northern angle where natural light is dispersed during the day to allow for direct sunlight.

Functional spaces' roof lowered where direct sunlight is not a necessity

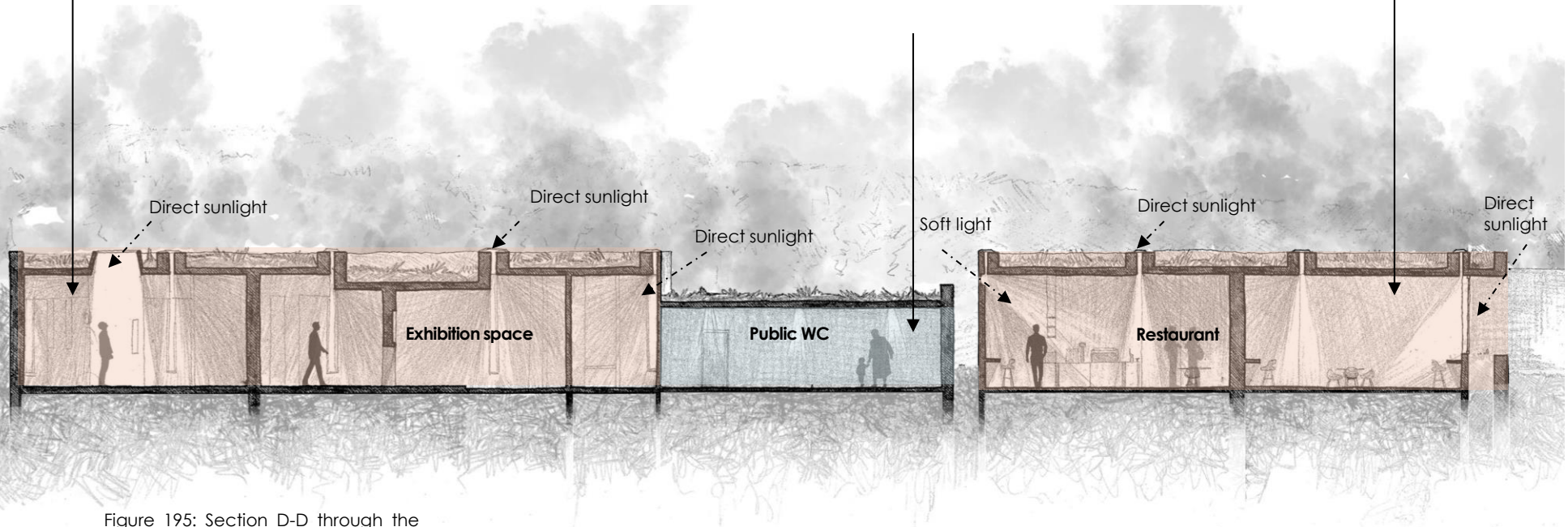


Figure 195: Section D-D through the main exhibition hub showing sun exposure into interior spaces

- Lowered roof spaces for service circulation
- Raised roof spaces for restaurant and exhibition spaces.

This also raises the issue of identifying energy-efficient methods for supplying electricity and heat to the design.

The site currently benefits from existing power and water supplies connected to buildings scheduled for demolition. Consequently, a proposal to implement solar power will be developed to meet the majority of the site's electricity and heating needs.

Solar power represents a renewable and virtually inexhaustible energy source that generates no harmful greenhouse gas emissions, provided that solar radiance persists (nationalgrid, 2023; online).

Utilizing solar power is particularly logical given the site's location. The Kalahari region, characterized by its high levels of direct sunlight and minimal annual rainfall, presents an ideal environment for harnessing solar energy.

The carbon footprint associated with solar panels is relatively minimal, given their operational lifespan of over 25 years. Furthermore, the environmental impact of solar panels is expected to diminish further as the use of recycled materials in their production increases (nationalgrid, 2023; online).

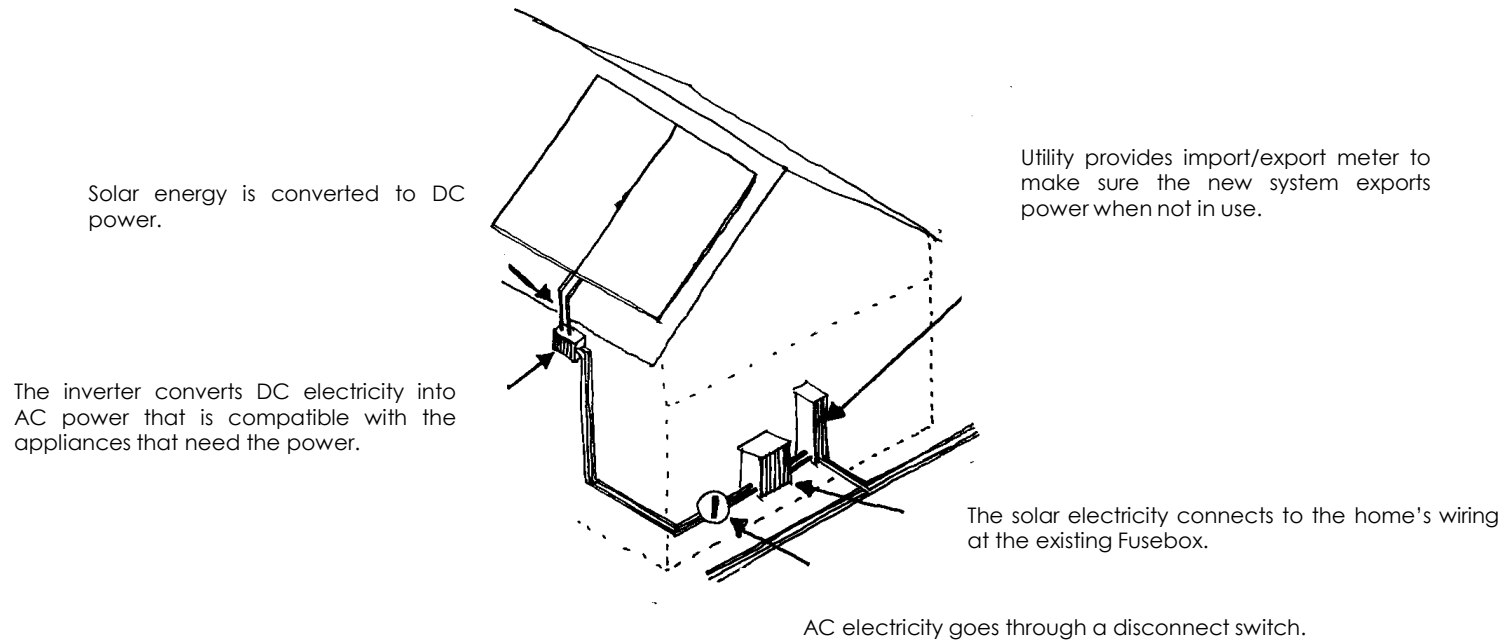


Figure 196: Drawing explaining the process of solar energy and how it is instituted into a building (SolarQuotes, n.d.: Online; adapted by author).

7.5.2 WATER

The design uses the existing municipal water infrastructure, capitalizing on pre-installed supply lines that extend to the site.

Given the region's low annual rainfall, particularly in this area of the Northern Cape, the need for a greywater storage system is deemed unnecessary. As a result, municipal water will serve as the primary and sole water source for the crypticarium.

Stormwater will be harvested from the parapet green roofs through a system integrated into the interior load-bearing columns located beneath the surface bed. This collected greywater will be directed into a subsurface channelling system, guiding it towards the northern part of the site, along the slope.

Spout guiding water from the roof to the stormwater drainage system.

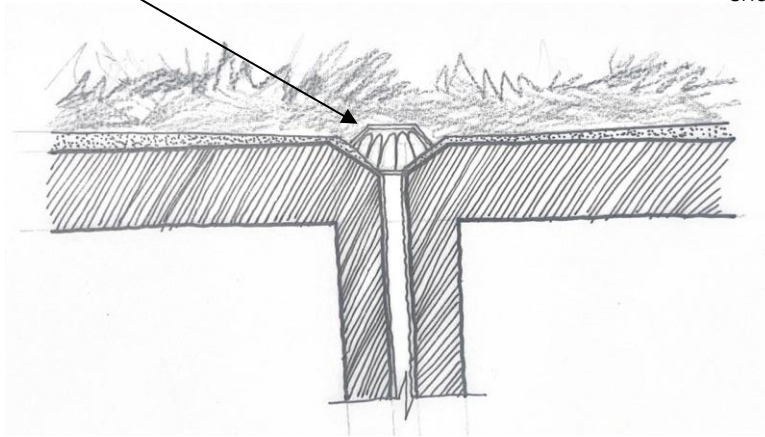


Figure 197: Sketch of possible water reticulation system in the design (author).

Internal pvc pipe to
channelling water
ground chamber.

Underground channel

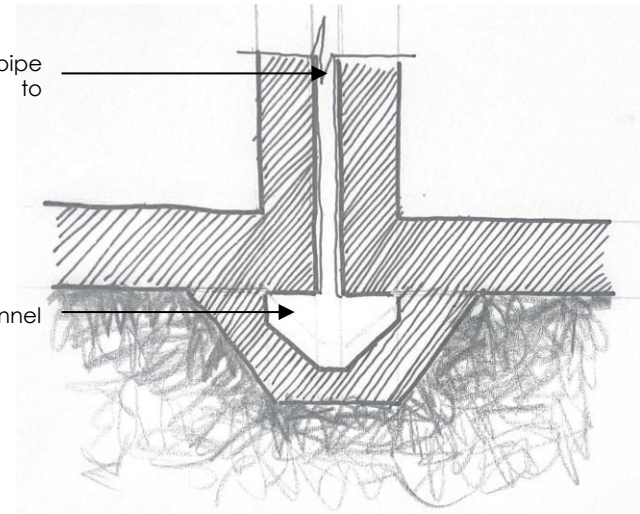


Figure 198: Section of stormwater drainage from PVC pipe to floor channel (author).

7.6 CONCLUSION

This chapter facilitated an examination of the technical aspects relevant to on-site construction processes, including the implementation of energy-efficient practices and systems.

It explored and delineated the construction approach for each element in the proposed design.

Finally, it provided a thorough exploration of integrating renewable energy solutions, such as solar power, and identified optimal materials to enhance the sustainability of the construction process.

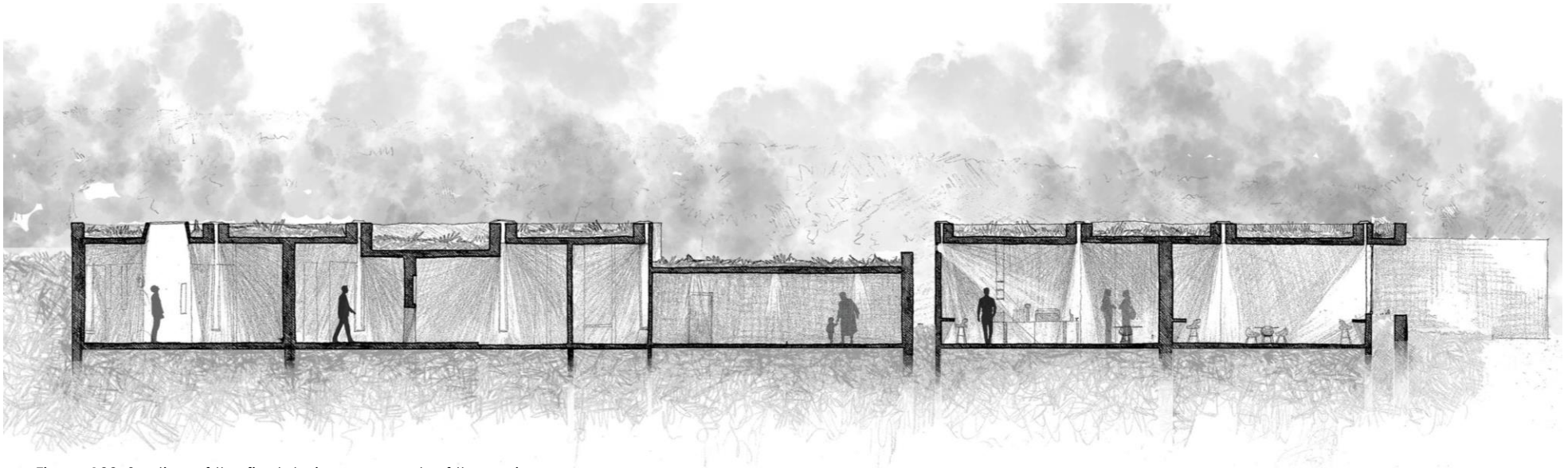


Figure 199: Section of the final design approach of the main exhibition hub (author).



CHAPTER

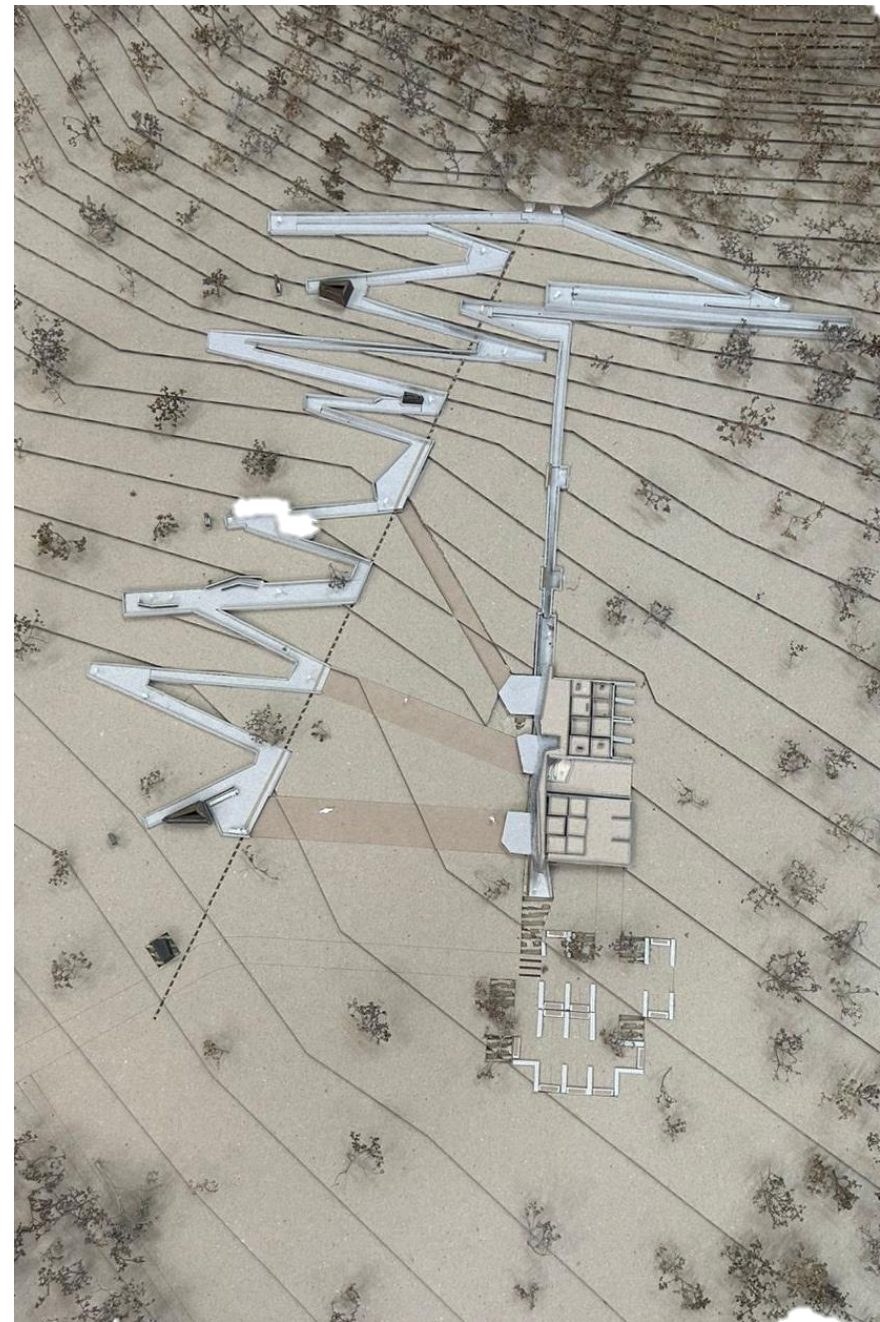
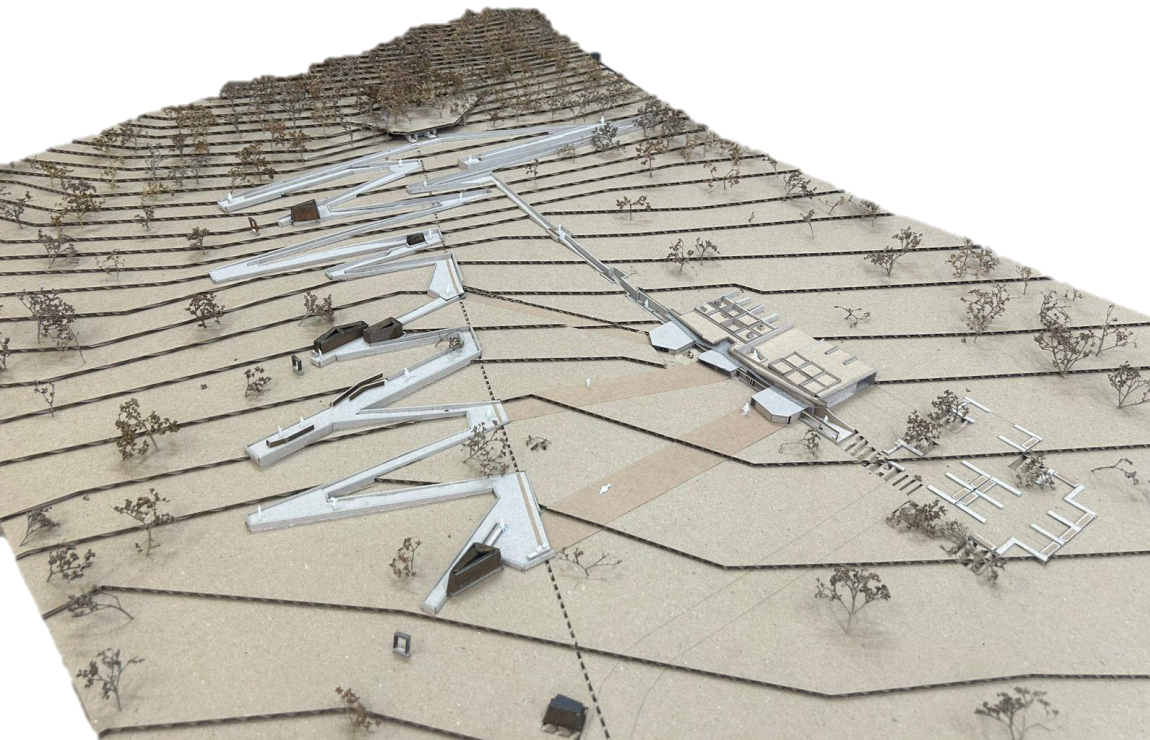
08

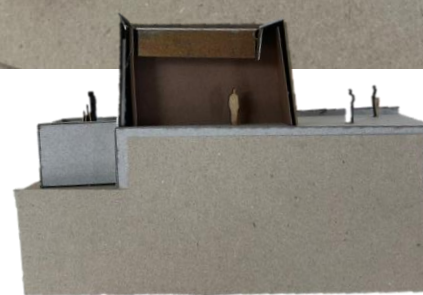
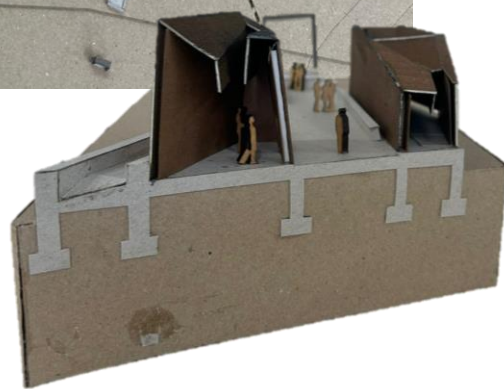
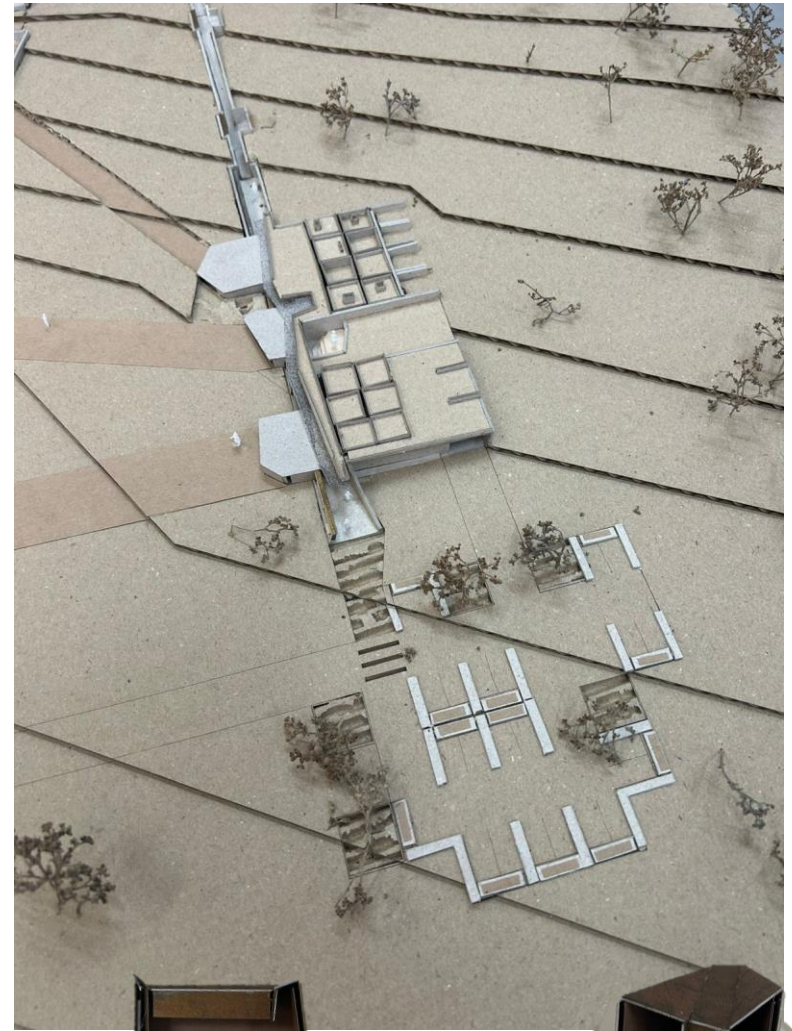


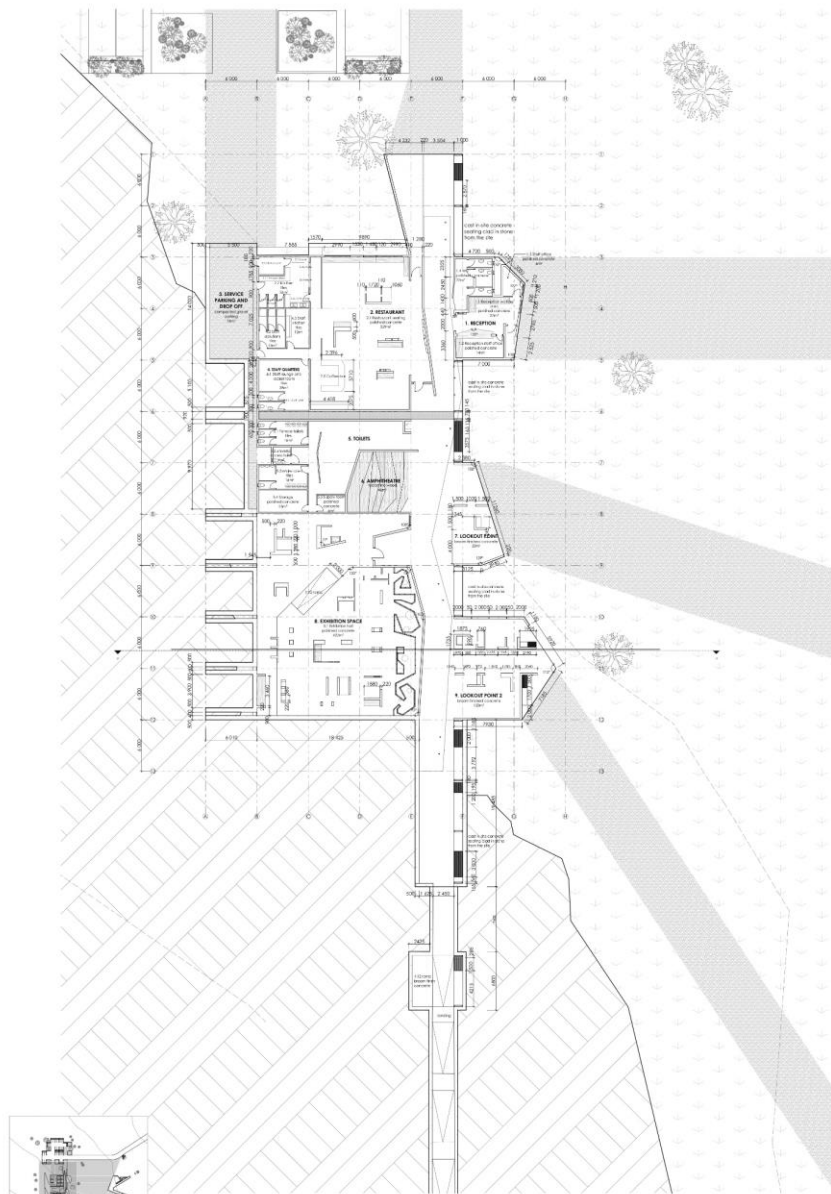
Marking the Landscape: Final Touches for the Crypticarium

8.1 Final model	147
8.2 Construction Documentation	131

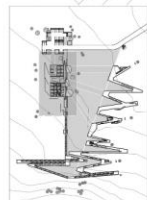
8.1 FINAL MODEL





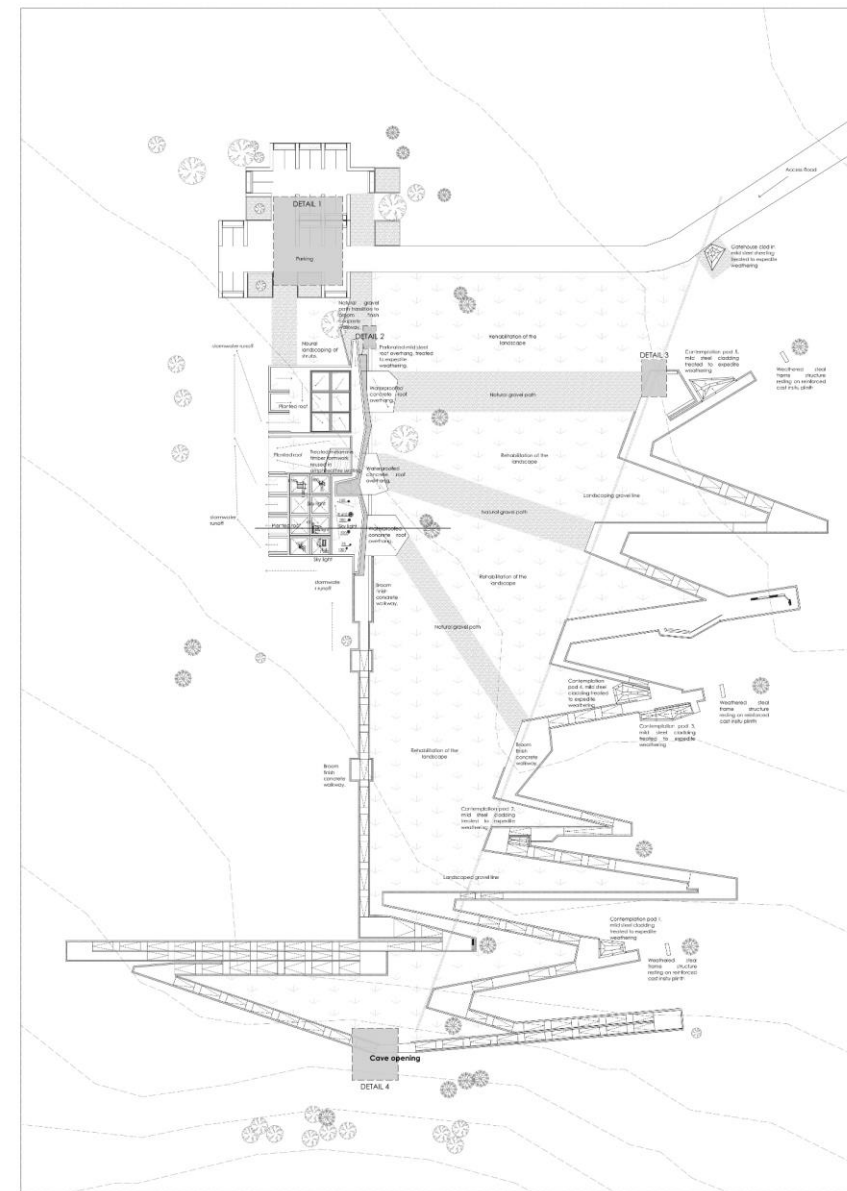


GROUND FLOOR PLAN
SCALE 1:200



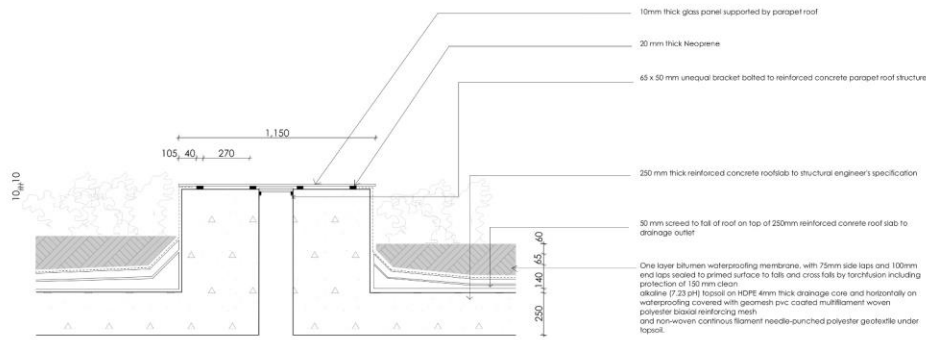
KEY PLAN
SCALE 1:1 000

WONDERWERK CAVE CRYPTARIUM			
PROJECT	CLIENT	ADDRESS	DRAWING
A cryptarium for the Wonderwerk Cave in the Northern Cape	Wageningen University	Wageningen, K11 Dijk van Dijk Wageningen, The Netherlands	Ground floor plan 1:200
Wageningen University	2019-2020	Construction documentation	



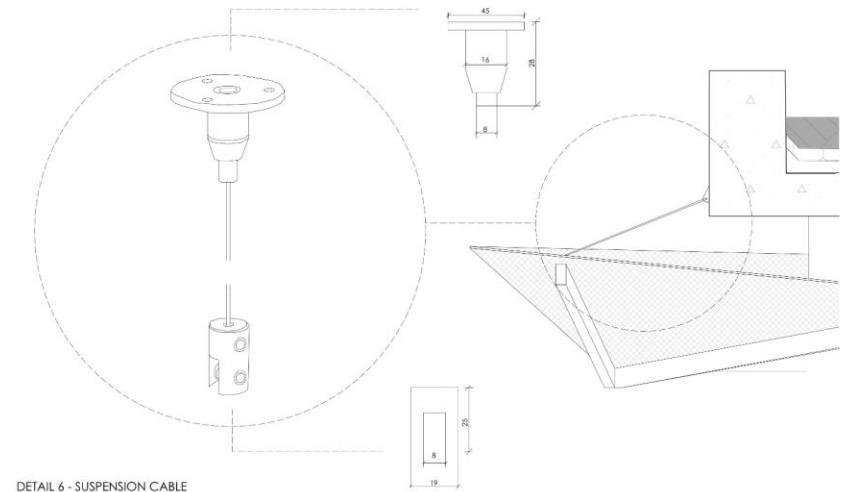
ROOF ELEVATION
SCALE 1:500

WONDERWERK CAVE CRYPTARIUM			
PROJECT	CLIENT	ADDRESS	DRAWING
A cryptarium for the Wonderwerk Cave in the Northern Cape	Wageningen University	Wageningen, K11 Dijk van Dijk Wageningen, The Netherlands	Roof elevation 1:500
Wageningen University	2019-2020	Construction documentation	



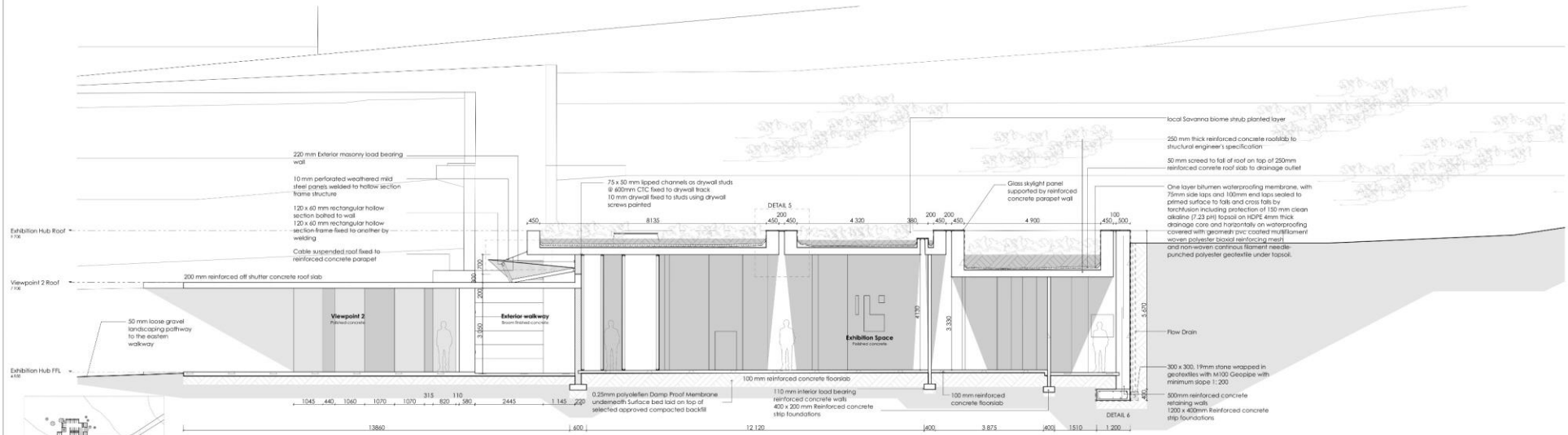
DETAIL 5 - SKY LIGHT AND PLANTED ROOF

SCALE 1: 10



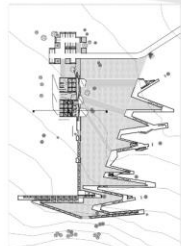
DETAIL 6 - SUSPENSION CABLE

SCALE 1: 10

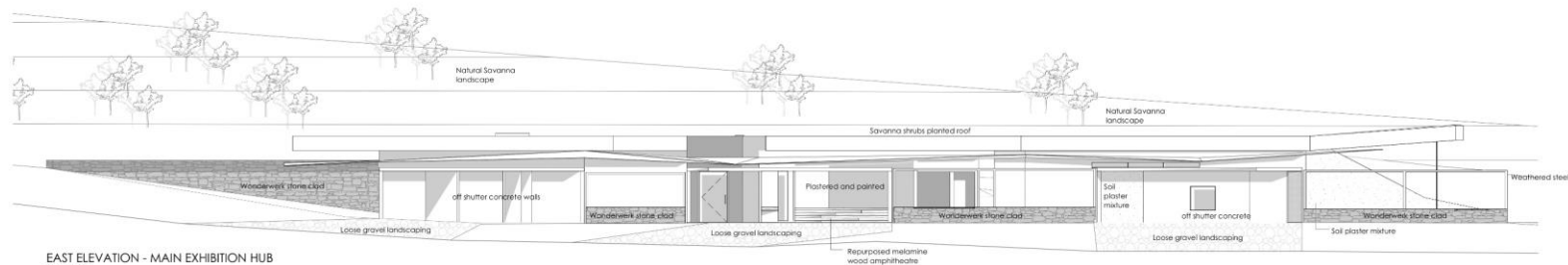
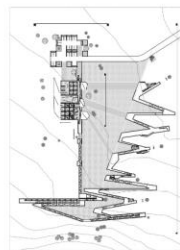
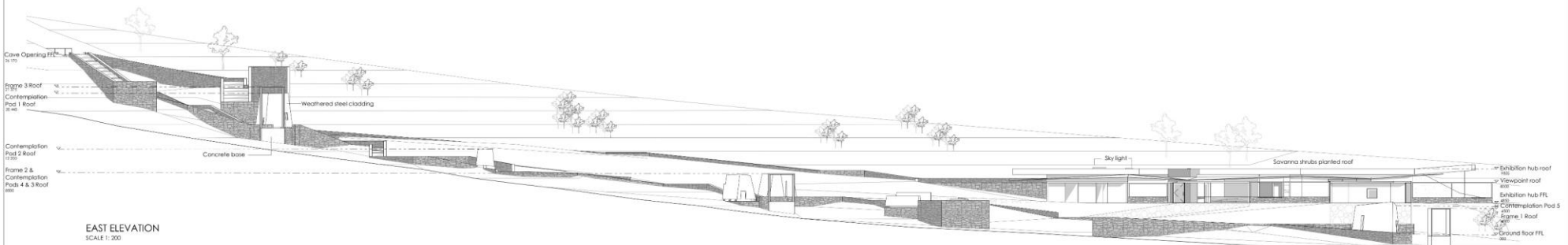
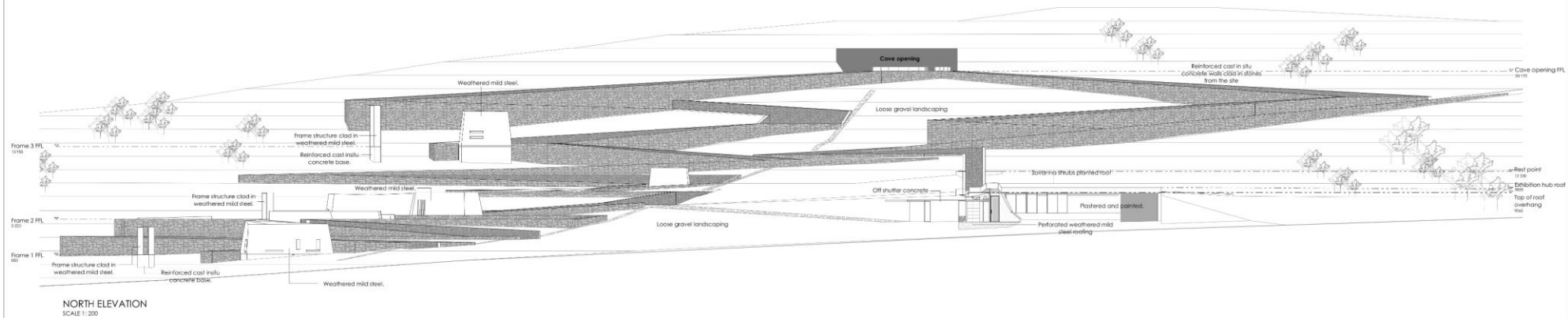


SECTION E-E - THROUGH MAIN EXHIBITION HUB

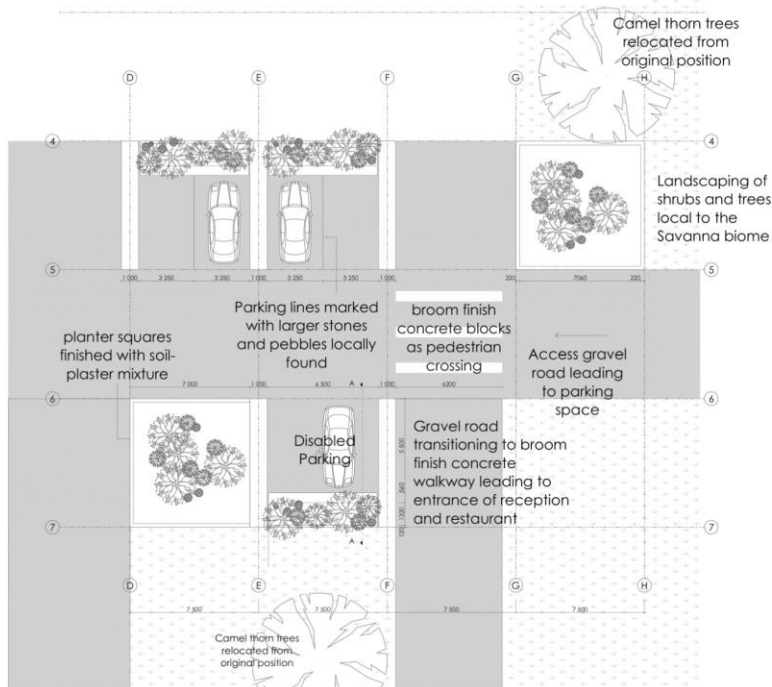
SCALE 1: 50

KEY 1:50
SCALE 1: 50

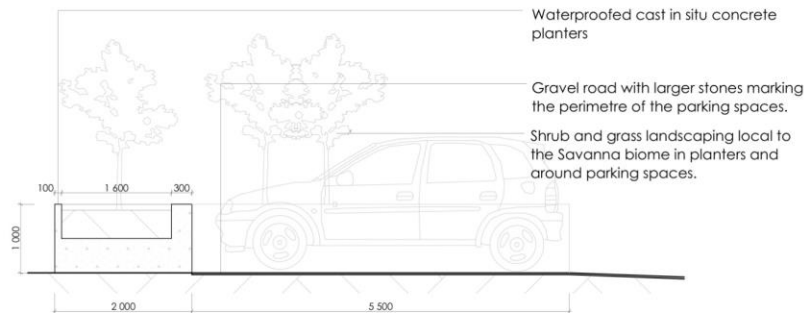
WONDERWERK CAVE CRYPTICARIUM			
PROJECT	CLIENT	ADDRESS	DRAWING
A Crypticarium for the Wonderwerk Cave in the Northern Cape	Wonderwerk Museum & Embassy	Post Address: 131 2700 Van Rensburg Drive Dordrecht, South Africa	Section E-E through the main exhibition hub
Master Architect	2019/10/10	Construction Documentation	1:30



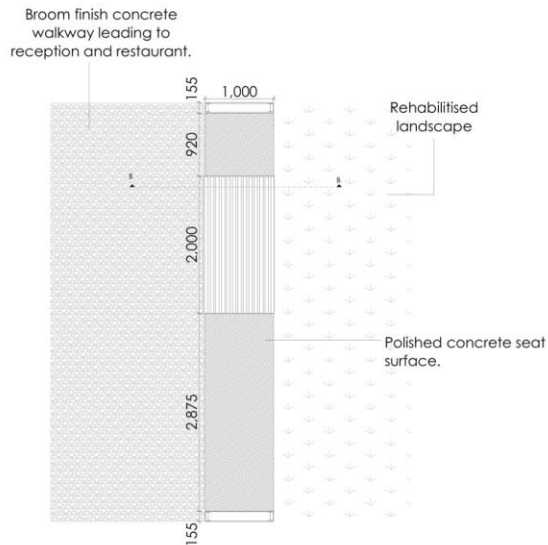
WONDERWERK CAVE CRYPTICARIUM			
PROJECT	CLIENT	ADDRESS	DRAWING
Wonderwerk Cave Crypticarium	Architectural Services	1000 Wonderwerk Cave	1000 Wonderwerk Cave
Master Builder	1000 Wonderwerk Cave	Construction Documentation	1000 Wonderwerk Cave



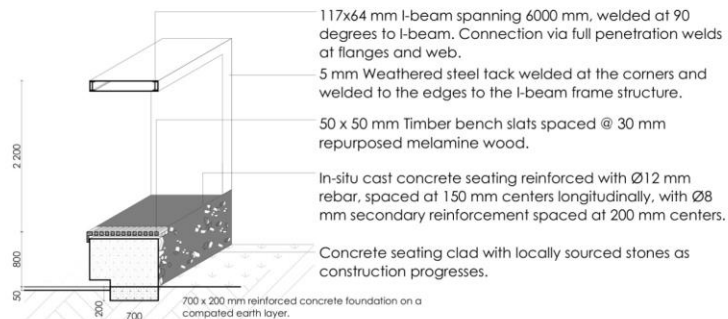
DETAIL 1 - PARKING AND ENTRANCE
SCALE 1: 200



DETAIL 1 - SECTION A-A THROUGH PARKING SPACE
SCALE 1: 50



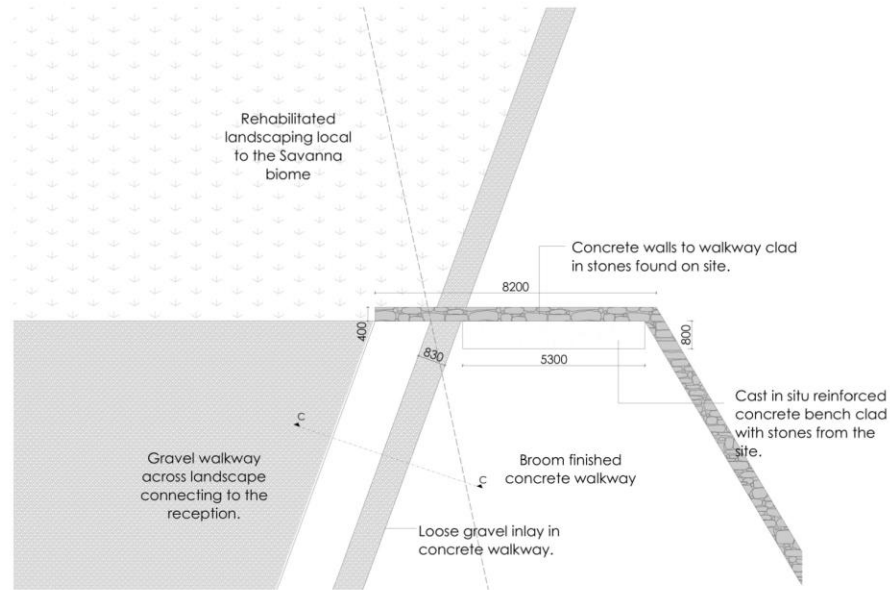
DETAIL 2 - SECTION PERSPECTIVE B-B
SCALE 1: 50



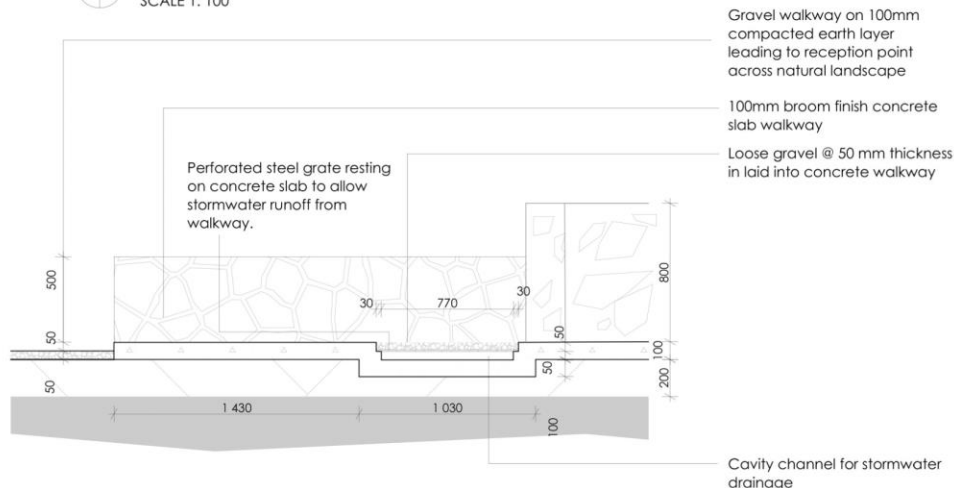
DETAIL 2 - SECTION PERSPECTIVE B-B
SCALE 1: 50

WONDERWERK CAVE CRYPTICARIUM

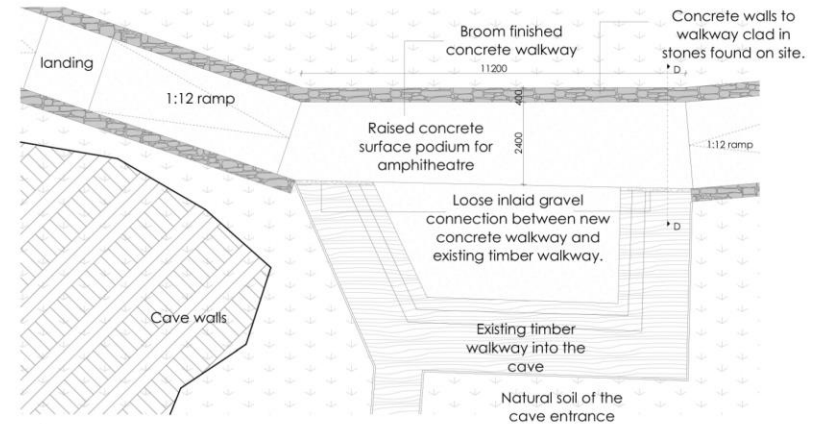
PROJECT	CLIENT	ADDRESS	DRAWING
A crypticarium for the Wonderwerk Cave in the Northern Cape	McGregor Museum Kimberley	Street address: R31 City: Kuruman Province: Northern Cape Country: South Africa	Detail 1: Plan 1: 200 Detail 1: Section A-A 1: 50 Detail 2: Plan 1: 50 Detail 2: Section perspective B-B 1: 50
Mieke Badenhorst	2019381926	Construction Documentation	



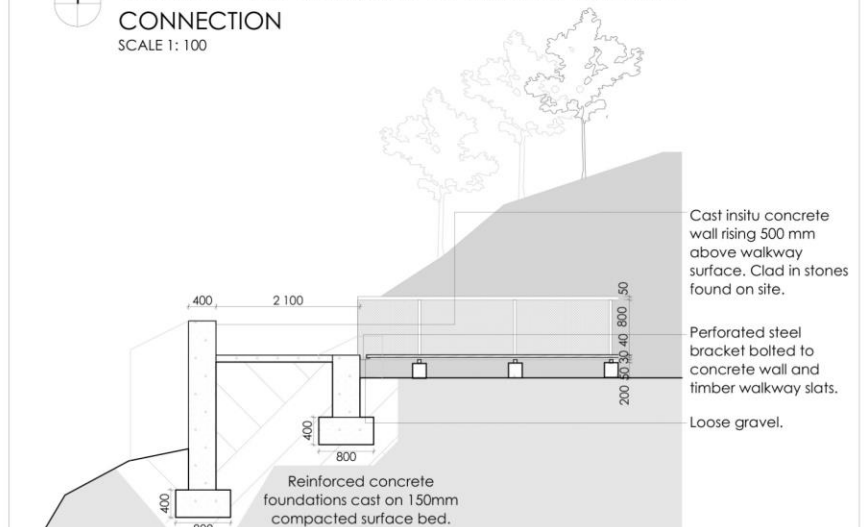
DETAIL 3 - LANDSCAPE WALKWAY CONNECTION
SCALE 1: 100



DETAIL 3 - SECTION C-C: LANDSCAPE WALKWAY CONNECTION
SCALE 1: 20



DETAIL 4 - NEW WALKWAY TO EXISTING WALKWAY CONNECTION
SCALE 1: 100



DETAIL 4 - SECTION D-D NEW WALKWAY TO EXISTING WALKWAY CONNECTION
SCALE 1: 50

WONDERWERK CAVE CRYPTICARIUM

PROJECT

A crypticarium for the Wonderwerk Cave in the Northern Cape

Mieke Badenhorst

CLIENT

McGregor Museum Kimberley

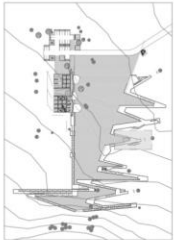
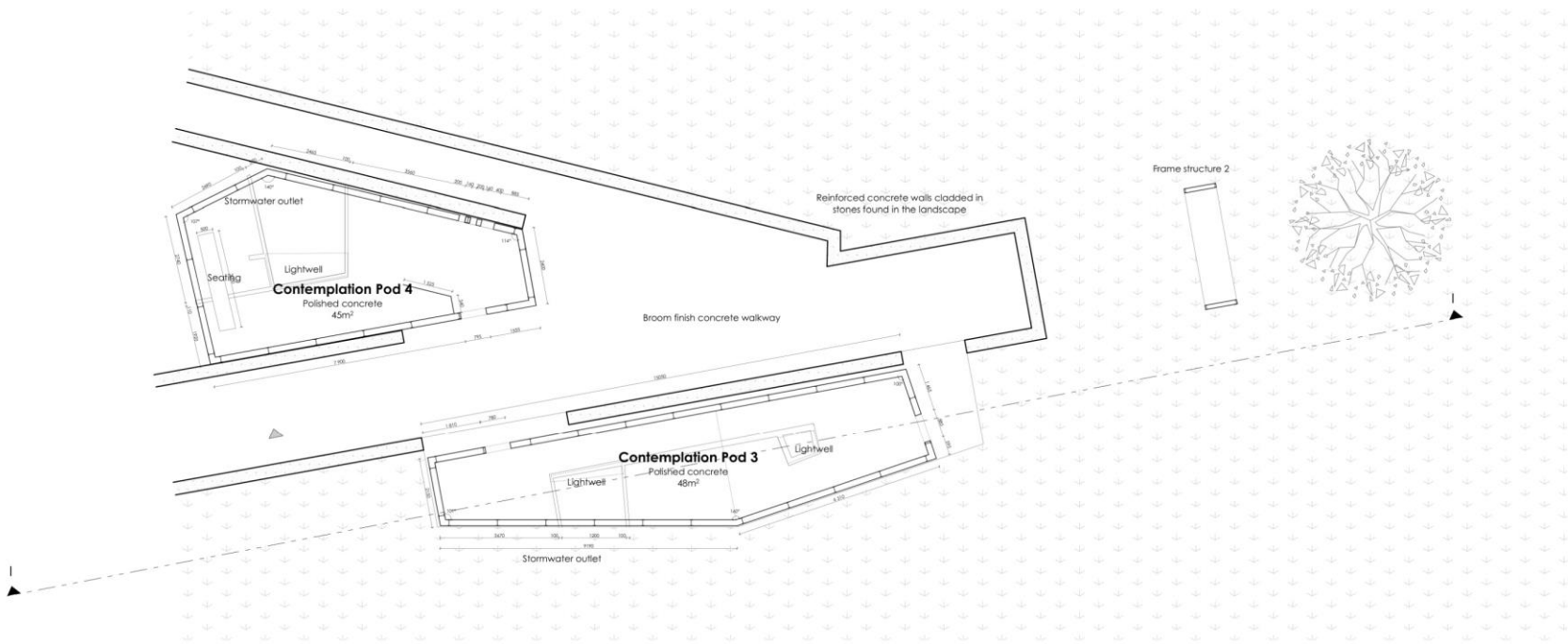
2019381926 Construction Documentation

ADDRESS

Street address: R31
City: Kuruman
Province: Northern Cape
Country: South Africa

DRAWING

Detail 3: Plan of walkway connection 1: 100
Detail 3: Section C-C: Walkway Connection 1: 20
Detail 4: New Existing walkway connection 1: 100
Detail 4: Section D-D: Existing walkway connection 1: 50

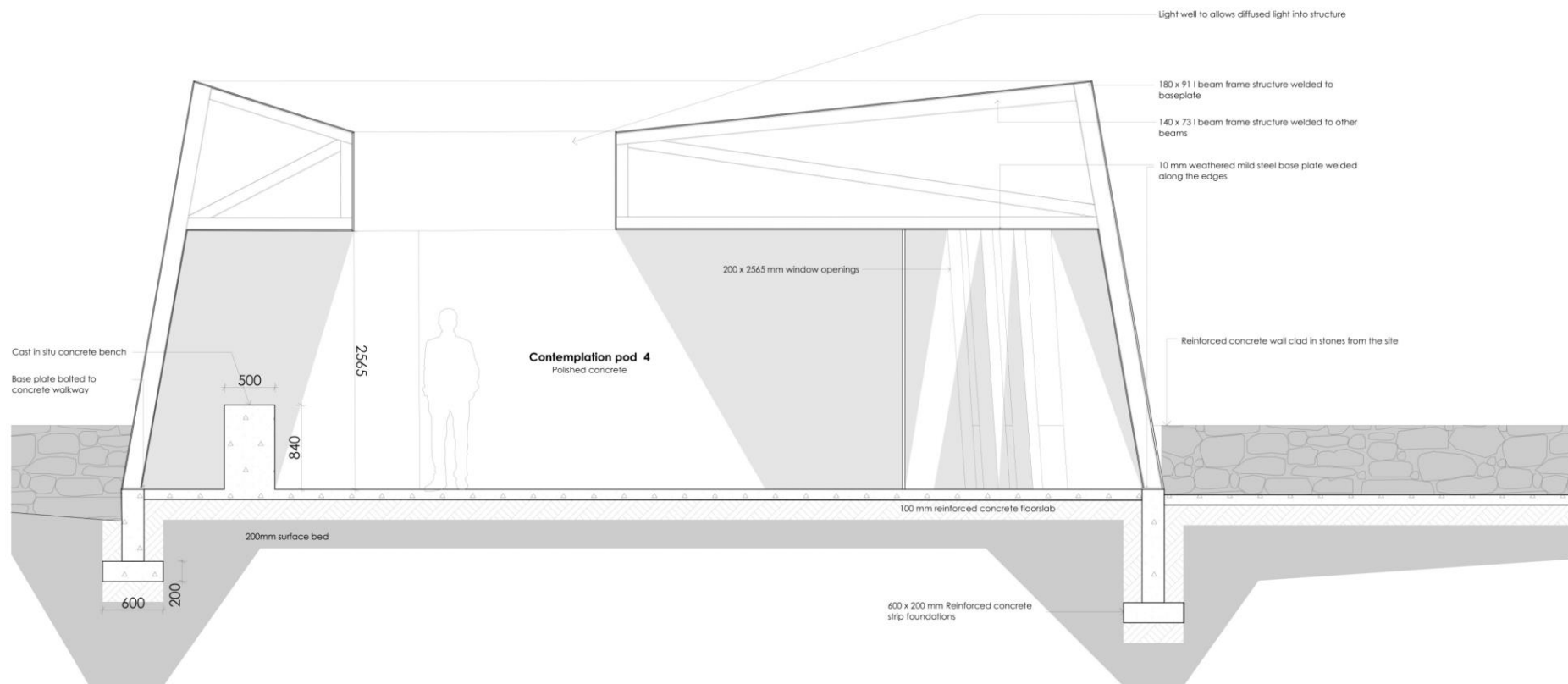


KEY PLAN
SCALE 1:1 000

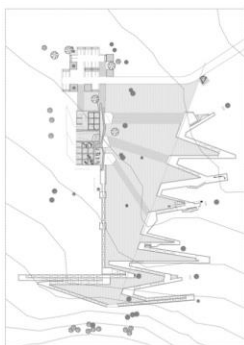


CONTEMPLATION POD 3 & 4 - GROUND FLOOR PLAN
SCALE 1: 50

WONDERWERK CAVE CRYPTICARIUM			
PROJECT	CLIENT	ADDRESS	DRAWING
A crypticarium for the Wonderwerk Cave in the Northern Cape	McGregor Museum Kimberley	Street address: R31 City: Kuruman Province: Northern Cape Country: South Africa	Contemplation pod 3 & 4 ground floor plan
Mieke Badenhorst	2019381926	Construction Documentation	1: 100



SECTION F-F - THROUGH CONTEMPLATION POD 4
SCALE 1: 20



KEY PLAN
SCALE 1:1 000

WONDERWERK CAVE CRYPTICARIUM

PROJECT

A crypticarium for the Wonderwerk Cave in the Northern Cape

CLIENT

McGregor Museum Kimberley

ADDRESS

Street address: R31
City: Kuruman
Province: Northern Cape
Country: South Africa

DRAWING

Section H - Contemplation Pod 3 1: 50

Mieke Badenhorst

2019381926

Construction Documentation

CONCLUSION

In conclusion, the proposed crypticarium serves as an introduction to a space where unity is fostered through the lens of obscurity. It establishes a meaningful environment that encourages individuals from diverse historical and cultural backgrounds to engage with and interpret the space in their unique ways. By doing so, the crypticarium promotes a sense of shared experience without prescribing a singular, imposed narrative.

The architectural intervention, conceived with an emphasis on an architecture of consanguinity, was deeply informed by the research into the phenomenological approach of the Afropolitan perspective, alongside the archaeological practices of revealing and making sense, questioning the human's need for uncovering and understanding certain mysteries.

These approaches shaped the design toward creating a space that resonates with all visitors, without imposing a Western or Eurocentric framework onto the archaeological site. This is particularly significant given the pervasive tendency to project such frameworks onto South African archaeological contexts, a practice that often undermines the multiplicity of local narratives and histories. By resisting this trend, the crypticarium aims to honour the complexity of the site and its inherent cultural richness.



REFLECTION

When I first chose to design a project on Wonderwerk Farm, I was confronted with a significant challenge. My deep appreciation for nature, with all its mysteries, inclined me toward designing a landscape-focused intervention. At the same time, I was determined to respect the existing archaeological site, aiming to leave as minimal an imprint as possible. This balance between my passion for uncovering hidden layers of meaning and my desire to honour the site's integrity presented an opportunity to challenge my own design instincts.

Through this process, I gained invaluable insights, particularly after engaging with the writings of Sechaba Maape on archaeological sites, which greatly influenced my theoretical approach rooted in the writings of Skinner, Balakrishnan and Mbembe on Afropolitanism. Their work inspired me to reflect on how to integrate local cultural perspectives while avoiding the imposition of external frameworks.

In conclusion, this project has been a deeply challenging and enriching experience. While I acknowledge that it may not be perfect, I believe I have grown significantly in both my understanding and approach to design. I hope that readers of this document will find my research and theoretical framework thought-provoking and will appreciate the complexities I sought to address.

REFERENCES

- Alamy. N.d. *Kung Bushmen* Available at: <<https://www.alamy.com/1888-bushman-encampment-family-group-image62508626.html?imageid=1A902FC9-91C8-4E0D-BACD-56E677AE070E&p=196338&pn=1&searchId=5a67c79d17e83a34841ba199de6655dd&searchtype=0>> [Accessed 14 September].
- Agarwal, M. n.d. *A Case Study on Therme Vals, Switzerland* Available at: <https://issuu.com/muskan_agarwal/docs/synopsis_design_beyond_eye_architecture_in_a_non-/s/13397759> [Accessed 14 September 2024].
- ArchDaily. n.d. *Australian Age of Dinosaurs Museum / Cox Rayner Architects* Available at: <<https://www.archdaily.com/401566/australian-age-of-dinosaurs-museum-cox-rayner-architects>> [Accessed 11 September 2024].
- ArchDaily2. n.d. *The Therme Vals / Peter Zumthor* Available at: <<https://www.archdaily.com/13358/the-therme-vals>> [Accessed 12 September 2024].
- ArchDaily3. n.d. *Moesgaard Museum / Henning Larsen* Available at: <<https://www.archdaily.com/590484/moesgaard-museum-henning-larsen-architects>> [Accessed 12 September 2024].
- Africa101lasttribes. n.d. *!Kung* Available at: <<https://www.101lasttribes.com/tribes/kung.html>> [Accessed 5 September 2024].
- Balakrishnan, S. 2017. The Afropolitan Idea: New Perspectives on Cosmopolitanism in African Studies. *History Compass*, 15, pp. 1-11.
- Botha, J. Ecker, M. Thorp, J. Piuz, L. 2015. Ostrich eggshell as a source of Palaeoenvironmental information in the arid interior of South Africa: A case study from Wonderwerk Cave. In: Jurgen (Eds.). *Changing Climates, Ecosystems and Environments within Arid Southern Africa and Adjoining Regions: Palaeoecology of Africa* 33. CRC Press, pp. 97.
- Doran, T.L. 2010. *Micromorphology and Geochemical Analysis of Carbonate Deposits from Sites of the Ghaap Escarpment, South Africa*. Thesis. University College London. Available at: <https://www.researchgate.net/publication/267810480_Micromorphology_and_Geochemical_Analysis_of_Carbonate_Deposits_from_Sites_of_the_Ghaap_Escarpment_South_Africa/download?_tp=eyJjb250ZXh0ljp7ImZpcnN0UGFnZSI6Ii9kaXJlY3QilCJwYWdlIjoieX2RpcmVjdCJ9fQ> [Accessed 17 February 2024].
- Dowling, P. 2022. *'The San People of Africa – A conversation podcast'* Available at: <<https://innovativeresearchmethods.org/the-san-people-of-africa-a-conversation-podcast/>> [Accessed 5 September 2024].
- GoogleEarth. n.d. *Wonderwerk Cave*. Available from: <[158](https://earth.google.com/web/search/Wonderwerk+Cave,+R31,+Kuruman/@-27.843942,23.555026,1630.24738717a,737.00188285d,35.00006982y,0.00000531h,0.00217443t,0r/data=CowBGi4$WAolMHgxZTlIOGZIYmM0YzZhYjUzOjB4NjAxN2UwMzBkZjM4ZjFhMxmluDmVDNg7wCEAbhYvFo43QCodV29uZGVyd2VyaYBDYXZILCBSMzEsIEt1cnVtYW4YAIAbIiYKJAnOH2Oof9U7wBEde6eBAU9s7wBmqcrc2lpQ3QCF94Z0OkIc3QEICCAE6AwoBMEoNCP_____wEQAA>https://earth.google.com/web/search/Wonderwerk+Cave,+R31,+Kuruman/@-27.843942,23.555026,1630.24738717a,737.00188285d,35.00006982y,0.00000531h,0.00217443t,0r/data=CowBGi4$WAolMHgxZTlIOGZIYmM0YzZhYjUzOjB4NjAxN2UwMzBkZjM4ZjFhMxmluDmVDNg7wCEAbhYvFo43QCodV29uZGVyd2VyaYBDYXZILCBSMzEsIEt1cnVtYW4YAIAbIiYKJAnOH2Oof9U7wBEde6eBAU9s7wBmqcrc2lpQ3QCF94Z0OkIc3QEICCAE6AwoBMEoNCP_____wEQAA> [Accessed 30 September].

</div>
<div data-bbox=)

REFERENCES

- GoogleMaps. n.d. Wonderwerk Cave. Available from: <https://www.google.com/maps/dir/wonderwerk+cave/kuruman/@-27.8413658,23.5534119,14.56z/data=!4m13!4m12!1m5!1m1!1s0x1e9e8febc4c6ab53:0x6017e030df38f1a3!2m2!1d23.555026!2d-27.843942!1m5!1m1!1s0x1e9efed9a1f66941:0x47efd3a6e90ae0a8!2m2!1d23.4359657!2d-27.4628927!5m1!1e4?entry=ttu&g_ep=EgoyMDI0MDkwMy4wIXMDS0ASAFQAw%3D%3D> [Accessed 6 September 2024].
- Horwitz, L.K., Chazan, M. 2015. Past and Present at the Wonderwerk Cave (Northern Cape Province, South Africa). *African Archaeological Review*, 32, 595-612.
- Mbembe, A. 2020. Afropolitanism. *Nka: Journal of Contemporary African Art*, (46), pp. 56-61.
- Mehta, P. n.d. *Australian Age of Dinosaurs by Cox Architecture* Available at: <<https://www.re-thinkingthefuture.com/case-studies/a8924-australian-age-of-dinosaurs-by-cox-architecture/>> [Accessed 11 September 2024].
- Michler, I. n.d. *Cultures and Traditions of Botswana*. Available at: <https://www.botswana.co.za/Cultural_Issues-travel/cultural-people-botswana.html#:~:text=Modern%20Botswana%20Culture&text=Communal%20eating%20places%20and%20smaller,cattle%20post%20for%20keeping%20livestock.> [Accessed 5 September 2024].
- MuseumsNC. n.d. 'The McGregor Museum'. Available at: <<https://museumsnc.co.za>> [Accessed 14 April 2024].
- Nasir, N.A. 1975. *Archaeology*. Available from: <<https://www.poemhunter.com/poem/archaeology-3/>> [Accessed 18 June 2024].
- Pauls E.P. n.d. *San people* Available at: <<https://www.britannica.com/topic/San>> [Accessed 5 September 2024].
- Rohr, R. 2011. Video of interview by Judy Valente for Religion & Ethics Newsweekly. Available from: <<https://www.pbs.org/wnet/religionandethics/2011/11/11/november-11-2011-richard-rohr/9902/>> [Accessed on 8 February 2023].
- SAHRA. n.d. *Background on Wonderwerk Cave*. Available at: <<https://www.sahra.org.za/wonderwerk-cave/>> [Accessed 29 September 2024].
- Skinner, R.T. 2017. Why Afropolitanism Matters. *Africa Today*, 64(2), pp. 2-21.
- SiyabonaAfrica. N.d. *San* Available from: <https://www.krugerpark.co.za/africa_bushmen.html> [Accessed 5 September 2024].
- ThePast. 2021. *Early human activity at Wonderwerk Cave*. Available at: <<https://the-past.com/news/early-human-activity-at-wonderwerk-cave/>> [Accessed 1 September 2024].
- Wessels, S., Maape, S., Schoville, B.J. et al. 2023. The Drone, the Snake, and the Crystal: Manifesting Potency in 3D Digital Replicas of Living Heritage and Archaeological Places. *Archaeologies* 19 (2) 395-429.
- WonderwerkCave. n.d. *Wonderwerk Cave*. Available from: <<https://research.wonderwerk-cave.com>> [Accessed 14 May 2024].
- WorldMonumentsFund, 2017. *Wonderwerk Cave* Available at: <<https://www.wmf.org/project/wonderwerk-cave>> [Accessed 3 September 2024].



Digital Receipt

This receipt acknowledges that **Turnitin** received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

Submission author:	Mieke Badenhorst
Assignment title:	Check for similarity here
Submission title:	ATRE_FINALDOCUMENT_MIEKEBADENHORST.pdf
File name:	ATRE_FINALDOCUMENT_MIEKEBADENHORST.pdf
File size:	34.8M
Page count:	160
Word count:	18,088
Character count:	104,128
Submission date:	01-Oct-2024 12:25AM (UTC+0200)
Submission ID:	2323722523



Copyright 2024 Turnitin. All rights reserved.



Not a lot

Not a lot of people to see