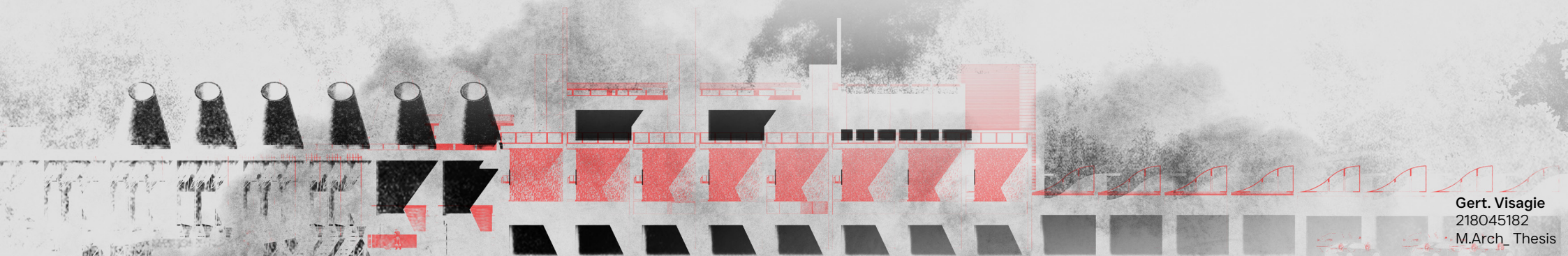


+ Mining The Poetic Depths of an Industrial Landscape:
Automating a Fish Market Narrating Trawling along the
Lagoon Promenade of Walvis Bay



DECLARATION OF INVENTION

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

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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.

THANK YOU!

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+ ABSTRACT

Walvis Bay, a town deeply intertwined with Namibia's fishing and industrial heritage, is a pivotal economic hub along the Namibian coast. Despite its historical significance and bustling fishing sector, the town lacks a dedicated fish market, creating a notable gap in its cultural and economic landscape. This thesis addresses this shortfall by proposing the design of a fish market that bridges this void while resonating with the town's unique industrial heritage and cultural identity.

The chosen site for the fish market, located on the southern edge of the new container terminal within the lagoon promenade of Walvis Bay, offers a strategic and historically rich location. This site is adjacent to the cruise ship terminal and the Walvis Bay Lagoon, a prominent ecological and tourist attraction known for its diverse avian population. The lagoon's serene environment contrasts with the surrounding industrial activities, providing a backdrop for a meaningful architectural intervention.

Based on the principles of poetic post-phenomenology, the thesis explores how architectural design can evoke sensory and emotional connections between users and their environment. The market is conceived not merely as a functional space but as an evocative architectural experience that reflects Walvis Bay's industrial character. By incorporating the town's industrial rhythm, order, and materiality, the design aims to enhance the connection between the space and its users, thus enriching the town's identity.

The industrial heritage of Walvis Bay, characterised by robust structures and repetitive forms, serves as a critical reference point. This thesis abstracts these elements and recontextualises them within the fish market's design to create a practical and resonant space with the town's maritime and industrial ethos. The project also considers the broader implications for the town's urban fabric, aiming to revitalise the promenade and provide a dynamic public space that integrates seamlessly with the existing "poetic journey."

Addressing the town's infrastructure gap and enhancing the promenade's appeal, the fish market is envisioned as a cultural and architectural intervention that reconnects Walvis Bay's past with its present. This design offers a profound and immersive experience for locals and tourists, fostering a deeper appreciation of the town's heritage and creating a vibrant destination within the lagoon promenade.

“The **art challenges** the technology, and the **technology**
Inspires the art...”

John Lasster

01

+ FOUNDATION

+ THE POETIC JOURNEY

In this document, the Lagoon Promenade of Walvis Bay, the poetic journey, serves as the public spine, connecting the town to its natural and cultural surroundings. Stretching along the serene lagoon, this promenade acts as a connector and provides a pathway for locals and visitors, binding together various aspects of Walvis Bay's identity (see Figure 1). Figure 1 illustrates a map outlining the poetic journey of the lagoon promenade, which extends to my site, where a proposed intervention—a fish market—will be located. This site marks the end-point of the promenade, a key area envisioned to foster a deeper connection between the community and the surrounding environment.

The term poetic journey refers to the experience or narrative that unfolds as one strolls along the lagoon promenade. It is not merely a literal journey but a symbolic exploration that evokes a more profound meaning and emotionally connects with the user. Acting as the public spine of Walvis Bay, it links people to the surroundings and serves as a continuous thread weaving together diverse spatial and experiential aspects of the town. Due to its geographical location, it is uniquely integrated into the town's surroundings. The striking industrial backdrop dominates the scene, showcasing the town's identity through a distinctive image that stays with visitors long after walking along the promenade. Furthermore, poetic elements such as juxtaposing artificial infrastructure and nature elicit an emotional resonance. Various designated spaces along the promenade feature unique characteristics, allowing users to self-appropriate the spaces and providing a variety of intriguing and memorable experiences.

Walvis Bay is also well known for its unique weather conditions due to its location in the heart of the Namib Desert. The cold Benguela Current often meets the hot desert air, creating fog that can transform the atmosphere from sunny, clear skies to an overcast shroud. This dynamic weather adds another dimension to the promenade experience, with residents and visitors adapting their activities to the changing conditions. When it's sunny, residents may kayak in the lagoon or have picnics on the open grasslands, while on foggy days, people may jog or exercise along the promenade. These varying weather conditions add a dynamic and ever-changing perspective to the poetic journey.

The poetic journey embodies Walvis Bay's essence, serving as a public spine that brings people together and connects them to the town's natural and cultural environment. It ties together the activities people enjoy, their cherished experiences, and the memories they look forward to creating again.

Figure 1
The Poetic Journey



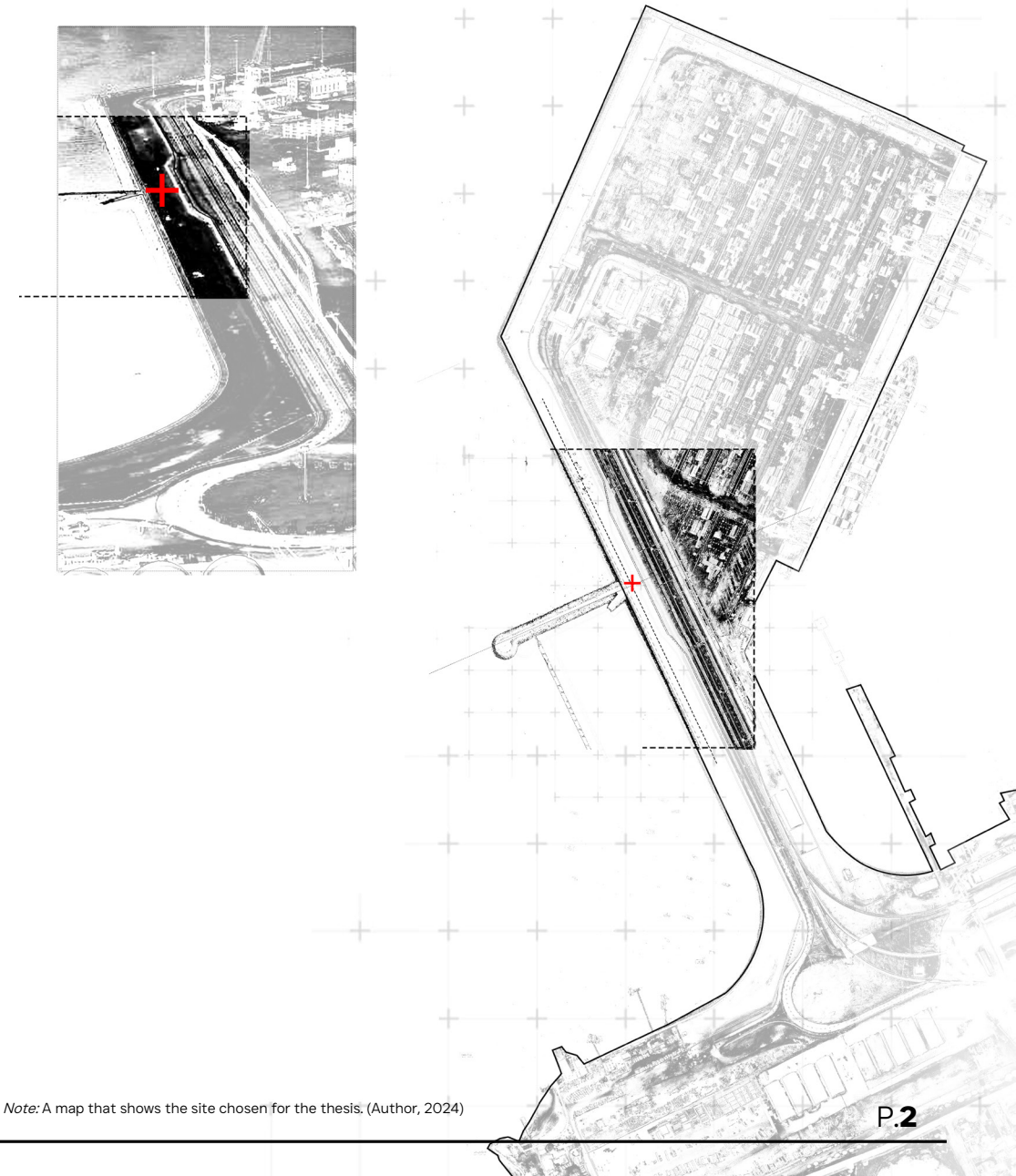
Note: The Poetic Journey/ Public Spine Situated along the Walvis Bay Lagoon (Google Earth, 2024; online edited by Author)

+ SITE

The selected site for this project in Figure 1.2 is strategically positioned on the southern edge of the new container terminal in Walvis Bay. This area is central to Namport’s development initiatives. This expansion by Namport has not only bolstered the economic infrastructure but also made the peripheral regions accessible to the public, extending the Lagoon Promenade—a path referred to as a “poetic journey” in this document due to its unique characteristics. The creation of this promenade has opened a vast, open space ideal for architectural intervention, transforming it into a critical node for urban development.

What makes this site particularly compelling is its role as a “borderland” between the industrial activities of the port and the public waterfront area/lagoon promenade. This unique positioning presents a tremendous opportunity for redevelopment, allowing for a harmonious blend of public space and industrial activities. By introducing a program that touches on both, the proposed architectural intervention for this thesis can enhance a sense of urban cohesion, integrating the port’s industrial activities and character with the town’s community life. The site's viability fosters urban cohesion and becomes economically viable for Namport. Still, it also enriches the public experience, providing a dynamic space that encourages industry and community interaction, thus creating a balanced, vibrant urban environment.

Figure 1.2
The Site



Note: A map that shows the site chosen for the thesis. (Author, 2024)

+ BACKGROUND

Walvis Bay, rich in fishing and industrial heritage, is essential to Namibia’s coastal economy. Despite this, the town lacks a centralised fish market—an infrastructure gap significant to its cultural and economic identity. This thesis proposes a design for a fish market that reflects Walvis Bay’s industrial and cultural landscape. As shown in Figure 3, the industrial backdrop of fishing vessels and port activity emphasises the town’s economic roots.

Strategically positioned on the southern edge of the new container terminal along the lagoon promenade, the selected site connects with Walvis Bay’s maritime history and its ecological landmark, the Walvis Bay Lagoon. Adjacent to the cruise ship terminal, the site offers a blend of natural beauty and industrial intensity, providing an immersive space where the serenity of the lagoon contrasts with the port’s functionality (McIntyre, 2019).

Rooted in poetic post-phenomenology, this thesis explores the interplay between users and the environment, showing how architectural design can evoke sensory and emotional connections. By abstracting Walvis Bay’s industrial rhythm, materiality, and form, the fish market design reinforces a sense of place, enhancing the community’s bond with its surroundings. This market aims to revitalise the lagoon promenade and enhance Walvis Bay’s identity as a cultural and economic centre through a design that marries functionality with industrial poetics.

The project also examines the wider implications of the new market on the town's urban landscape. By placing the market along the lagoon promenade, the design enhances the "poetic journey" of the waterfront, providing both locals and tourists with a meaningful experience that connects them to the town's maritime and industrial heritage. This fish market is envisioned as a cultural and architectural intervention that bridges the gap between Walvis Bay's past and present, creating a space that is deeply rooted in the local context and reflects the town's unique character.

Figure 1.3
Port Activities



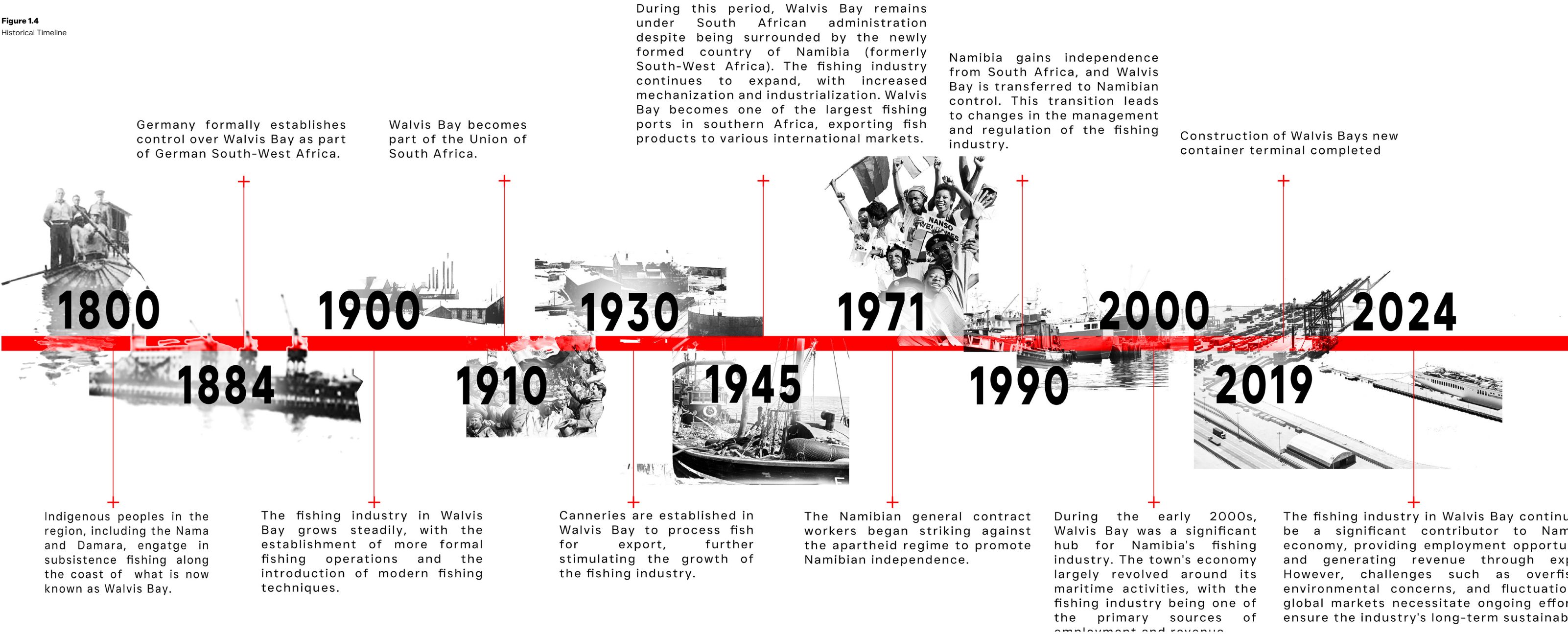
Note: A collage showcasing the industrial activities dominating the Walvis Bay scene. (Author, 2024)

+ WALVIS BAY HISTORICAL TIMELINE

Walvis Bay’s history is intrinsically tied to its fishing and industrial heritage, significantly influencing its economic and cultural development. The evolution of Walvis Bay as a fishing hub began in the late 19th century, driven by its natural harbour and abundant marine resources. The rise of commercial fishing from the early 1900s catalysed its growth, bringing prosperity and an influx of settlers and industry. However, this expansion also had ecological and societal implications, as overfishing and unsustainable practices gradually strained the region’s marine ecosystem, prompting regulatory responses in the mid-20th century (McIntyre, 2019).

Furthermore, Walvis Bay's economic landscape was notably transformed by industrialisation, especially during the 1960s, when factories and canning facilities began to flourish. This era marked the town’s establishment as Namibia's primary entry port for imports and exports, solidifying its role in the nation’s economy. However, the rapid growth of industry also led to various environmental challenges, particularly overfishing, prompting concerns from both local and international bodies (ICIJ, 2020). As indicated in Figure 1.4, which shows a timeline of this industrial progression, the development of Walvis Bay reflects both significant economic advancement and modern sustainability issues tied to its industrial and ecological impact. Today, companies like Etosha Fishing focus on sustainable practices to address these challenges while maintaining the port's historical connection to fishing and trade (Etosha Fishing, 2024).

Figure 1.4
Historical Timeline



Note: A historical timeline showing the growth and change that happened in Walvis Bay over the years. (Author, 2024)

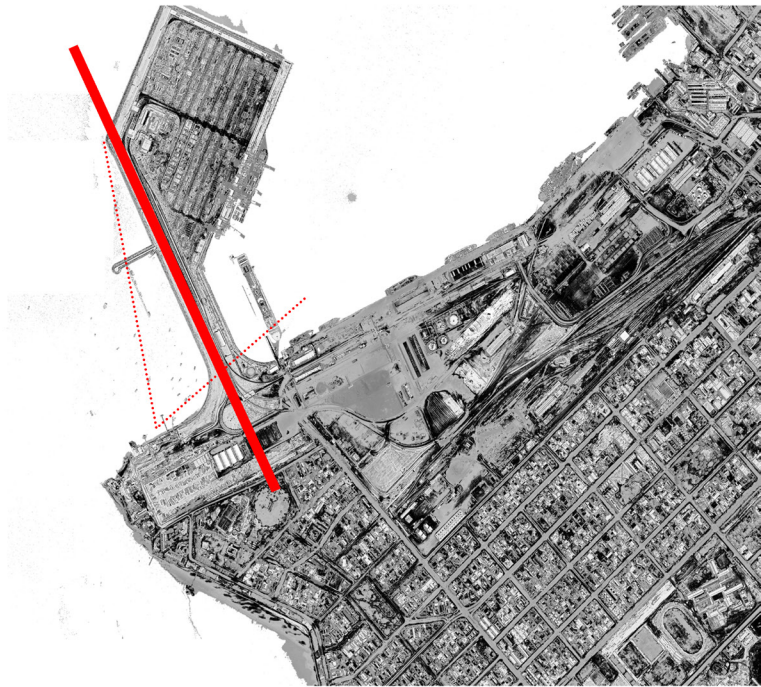
+ IDENTIFYING THE PROBLEM

Walvis Bay, Namibia, is a town grounded in fishing and industrial heritage, establishing itself as a vital economic hub along the coast. However, the town lacks a dedicated public fish market, a critical gap that diminishes its cultural identity and economic appeal. Currently, most fish products are sold in industrial zones, far removed from the town’s central areas. As shown in Figure 1.6, these remote locations are inconvenient for locals and tourists, limiting their engagement with Walvis Bay’s fishing culture.

Additionally, industrial port activities are largely disconnected from the public realm. Since Namport constructed the new container terminal in 2019, there has been a significant obstruction to the once-open views over the harbour (see Figure 1.5). Previously, visitors and residents could view the ocean and harbour activities, but this connection has been severed, creating both a physical and visual barrier. This situation disrupts the experience of Walvis Bay’s coastal character, isolating the public from its waterfront heritage.

Nevertheless, this barrier also presents an opportunity: By reimagining the terminal as part of a strategic design intervention, a new public fish market can establish urban cohesion between the industrial port and public spaces. Integrating the market along the public spine of Walvis Bay would not only enhance accessibility but also strengthen the town’s identity, transforming this challenge into a potential catalyst for social and economic revitalisation.

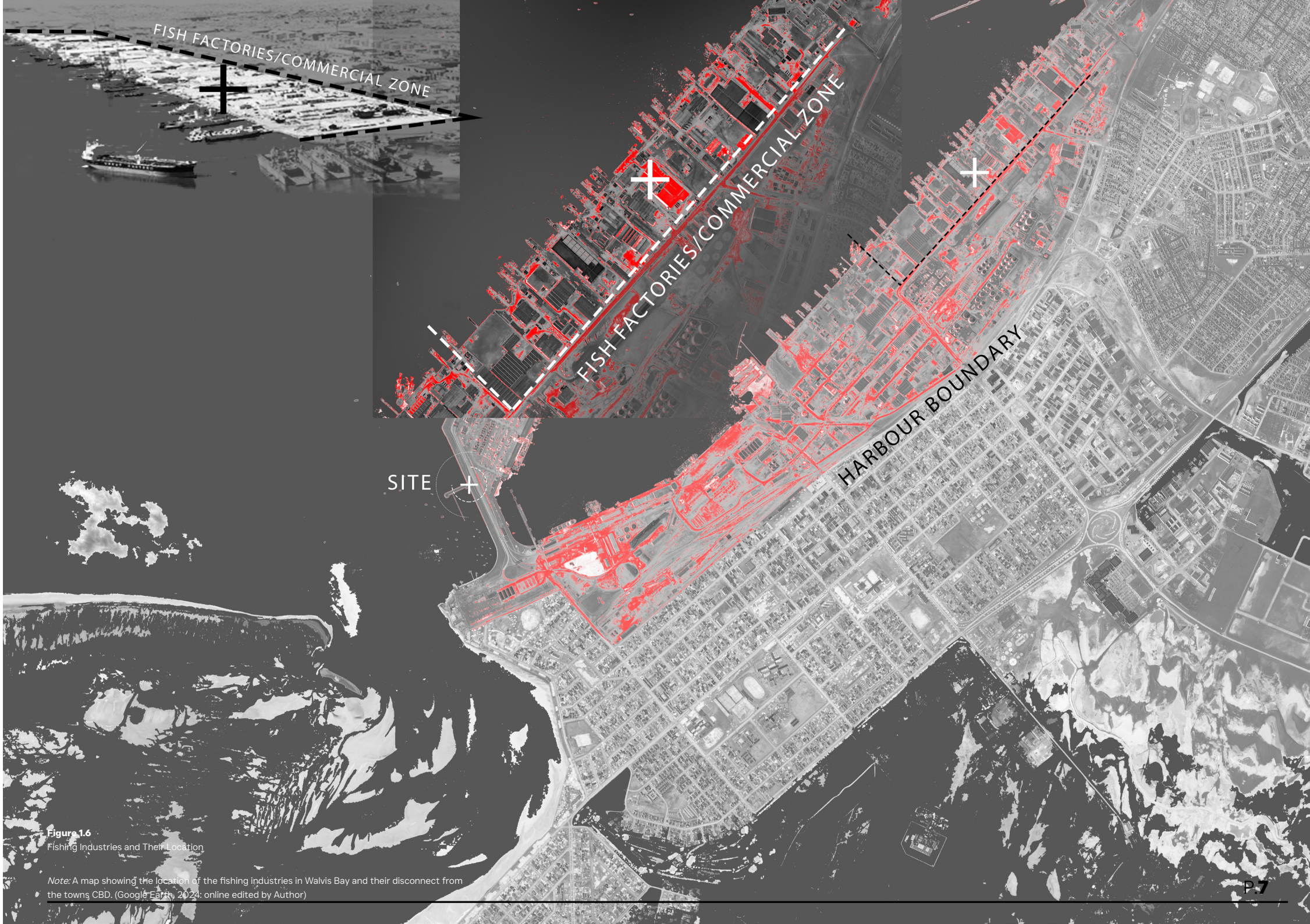
Figure 1.5
Obstructed Harbour Views



Note: A map showing the view over harbour activities being blocked off ever since the construction of the new container terminal in 2019 (Google Earth, 2024; online edited by Author)

Figure 1.6
Fishing Industries and Their Location

Note: A map showing the location of the fishing industries in Walvis Bay and their disconnect from the town’s CBD. (Google Earth, 2024; online edited by Author)



+ ESTABLISHING A PROJECT AIM

This project aims to seamlessly connect the proposed fish market to the existing spine of the lagoon promenade, extending the “poetic journey” that this space offers. Envisioned as a continuation of this journey, the market will integrate itself into the promenade, reeling in key architectural elements from the industrial landscape of Walvis Bay. As illustrated in Figure 7, which depicts an old mine shaft elevator, this concept of trawling industrial motifs reflects the project’s approach to drawing inspiration from industrial elements and transforming them into an architectural intervention that fosters urban cohesion. The design will create a unique and immersive experience for users, merging the industrial character with the serene environment of the lagoon.

Furthermore, the building aims to function as a sophisticated machine, incorporating automated high-tech systems to transport goods efficiently within the market. This approach is grounded in the theory of post-phenomenology, ensuring that the design serves practical needs and enhances the sensory and emotional connections between the space, its users, and the surrounding environment.

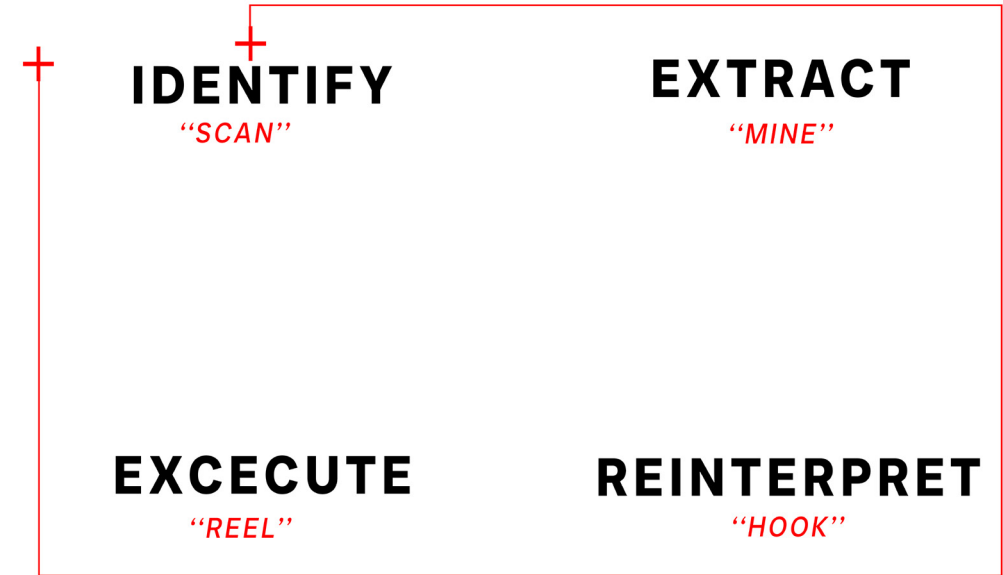
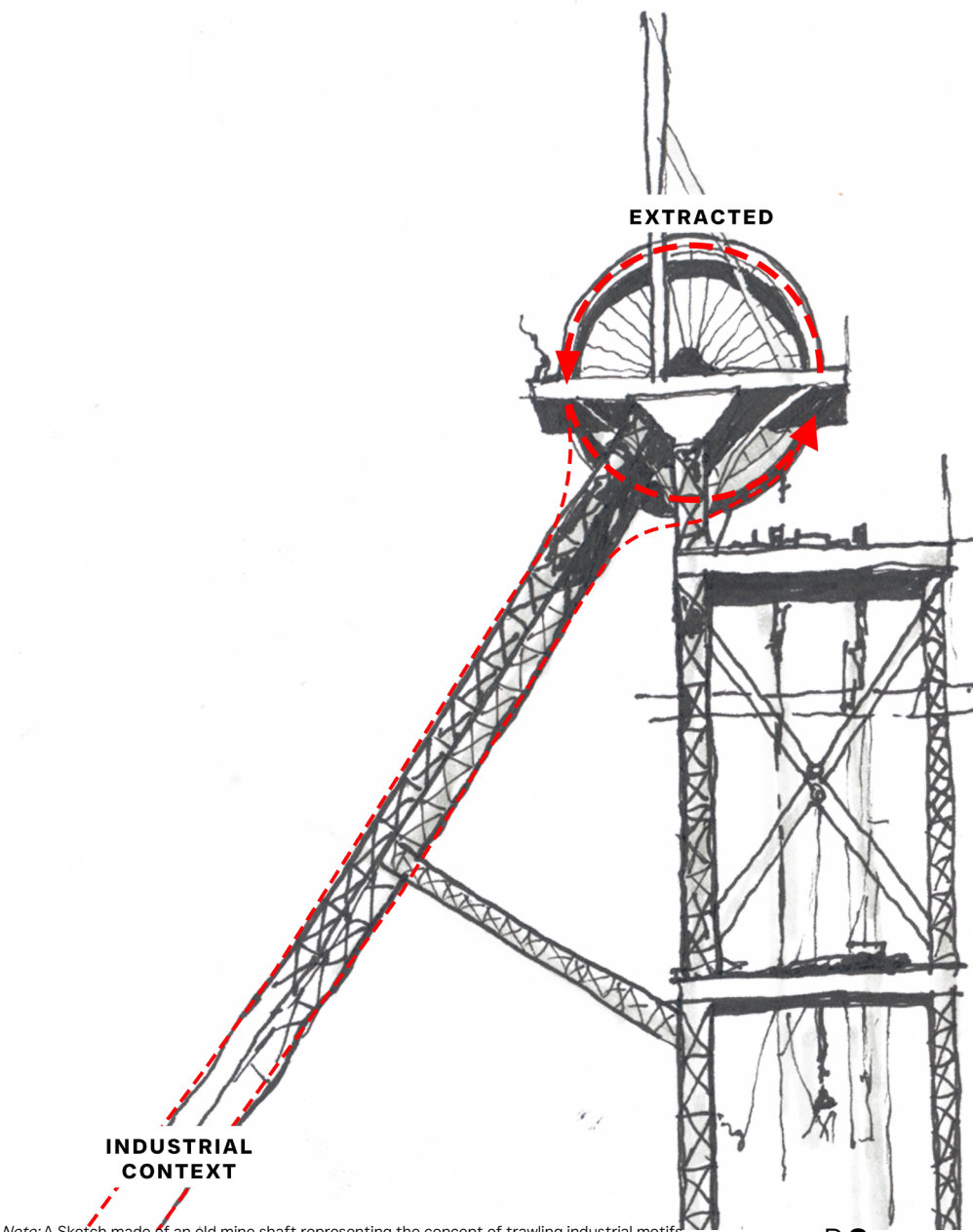


Figure 1.7
Trawling Industrial Motifs



Note: A Sketch made of an old mine shaft representing the concept of trawling industrial motifs for design inspiration (Author, 2024).

+ RESEARCH QUESTION

1. What elements in the industrial scene of Walvis Bay can be mined to inform architecture that evoke emotion and memory within the user to foster a deeper connection between people and place?
2. What catalysts in the spatial conditions of Walvis Bay negatively affect the poetic journey experienced within the waterfront precinct and how can these factors be addressed to promote a more connected and meaningful experience to users?
3. How can the poetic journey experienced along the Lagoon promenade of Walvis Bay trawl a spatial narrative for an architectural intervention fostering a connected experience to users on a physical and transcendental level?

+ RESEARCH OBJECTIVE

1. To identify and mine key industrial elements in Walvis Bay that have the potential to evoke strong emotional and mnemonic responses in users to inform architectural design strategies that foster a deeper connection between people and place.
2. To investigate and address the spatial catalysts within Walvis Bay’s waterfront precinct that influence the poetic journey of users, aiming to promote a more connected and meaningful spatial experience
3. To develop an architectural intervention along the lagoon promenade of Walvis Bay that automates the concept of a poetic journey to trawl a spatial narrative, fostering a connected experience for users on both physical and transcendental levels.

+ CONCLUSION

In conclusion, Chapter 1 has established the foundational significance of the poetic journey as it manifests in the Lagoon Promenade of Walvis Bay. This promenade is a physical pathway and a symbolic spine that binds the town's natural beauty, cultural identity, and industrial character into a cohesive experience for residents and visitors alike. Positioned along this poetic journey, the site mentioned on page 2 can be developed as it provides an opportunity to celebrate Walvis Bay's industrial heritage while enhancing the connection between the community and its surroundings.

The concept of the poetic journey, as outlined on page 1, is transformative. It reinterprets the town's industrial and maritime essence into a narrative that moves beyond mere functionality, encouraging emotional resonance. This transformation is essential, as it addresses the gap in Walvis Bay's infrastructure. This gap has left the town without a dedicated fish market, limiting its economic and cultural potential. With the fish market at the promenade's end, I aim to propose a space that is a vibrant public hub and a landmark connecting people to the town's industrial character. Through this strategic placement, the fish market extends the promenade's narrative by merging industrial forms with the serenity of the lagoon, creating a space that reflects Walvis Bay's unique character.

Moreover, this chapter underscores the potential for harmonising public space and industrial activities by considering the site's position between the industrial container terminal and the public spine (the lagoon promenade). This connection promotes a sense of urban cohesion that will, in essence, enable the fish market to function as an interface where the industrial port complements the public spine seen on page 1. In this way, the market will serve as a dynamic space for community interaction and economic activity, bridging the physical and cultural divides that have historically separated industry from public life. Ultimately, the poetic journey epitomises a holistic design approach that interweaves history, culture, and environment—values central to the fish market's role in enriching the town's urban fabric and enhancing the lagoon promenade's experiential narrative.



02

+ MINING INFORMATION

+ INTRODUCTION

This chapter develops the background on which the architectural narrative and theoretical positions are based. It starts with a critical literature review, drawing from various sources, about which the research will set its place in the existing architectural discourse. In analysing the relevant literature, this section discusses the intellectual path that informs the theoretical and methodological approaches taken in the project.

At the core of this study lies a theoretical perspective that integrates Gaston Bachelard's "Poetics of Space" with the modern conceptualisation of post-phenomenology. This amalgamation, as I call it, poetic post-phenomenology, offers a bifocal approach to examining the relationship between technology (machines), space, memory, and experience. By the fact that Bachelard's research into the close connection between spatiality and the human mind provides the backbone for the poetic aspects of the project, while post-phenomenology represents a significant viewpoint about the material and technological facets of the architectural experience. Furthermore, this chapter also discusses the theoretical and methodological underpinnings of a broad investigation, providing ground for the exploration and development of the design discussed in the following chapters.

+ NETTING INSIGHTS - THEORETICAL STANCE

Understanding Port Cities

Most port cities are similar because their harbours are spatially separated from their surroundings. Security and safety concerns often prohibit public access to these cities’ harbours. The complexities of rules and policies present problems for urban planning and development projects in port city waterfront districts, making it a daunting task to develop and revitalise the area for public use. In the last few decades, regeneration and transformation projects have made revitalising waterfront regions a fascinating and well-known topic (Giovinazzi & Moretti, 2010). According to Barrera-Fernández et al. (2020), in recent years, many cities have implemented strategies to foster a connection between the ports and their surrounding contexts by introducing tourist spaces and making the port more accessible to the public. This resulted from the increasing demand for new consumption spaces.

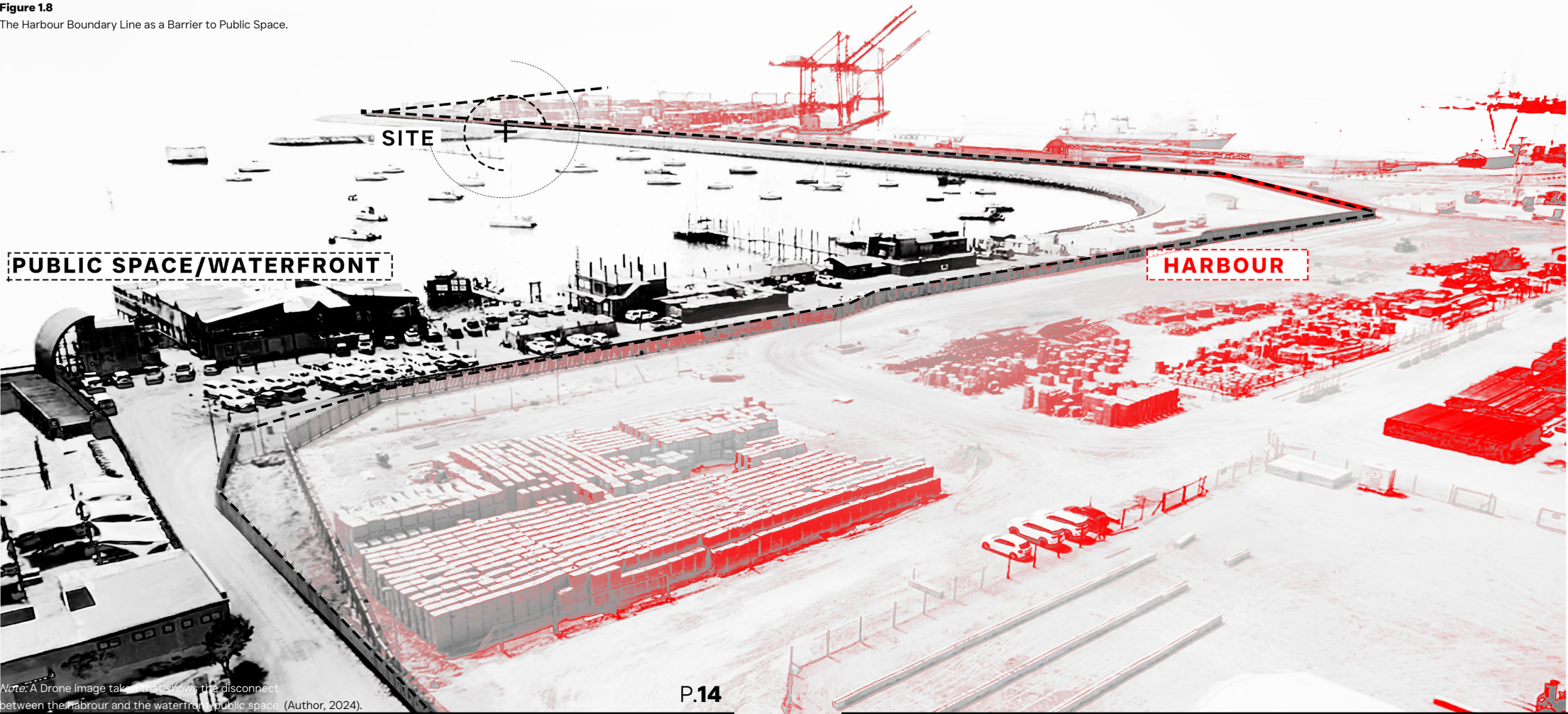
Old industrial ports have unique qualities and are frequently characterised by historical significance that attracts tourists. As such, there are limitations in the attempt to reimagine and adapt existing ports to current demands. Repetitions have occasionally resulted from previous renovations of former industrial ports relying on similar concepts and strategies. In response to this problem, innovators have investigated the inclusion of intangible and public values into the port, providing a new approach (Giovinazzi & Moretti, 2010).

Furthermore, addressing the balance between industrial activity and public accessibility is a central challenge in port city development. As highlighted by Zhao et al. (2017), the economic relationship between ports and urban areas requires a balanced approach that supports port activities and enhances accessibility for public use, thus fostering a symbiotic relationship between the port and its host city. This balance can lead to a more integrated urban experience, where the port serves both functional and recreational roles, ultimately enriching the social and economic dynamics of the city (Zhao et al., 2017).

The spatial configuration in Figure 1.8 directly relates to Walvis Bay's challenges and opportunities. Walvis Bay’s industrial sector dominates the waterfront, limiting access and breaking the continuity of public spaces along the promenade. Industrial activities in Walvis Bay currently act as a barrier, effectively separating the town’s economic core from the surrounding community and visitors.

Although there are safety concerns about separating the two, observing this layout once more recognised the critical need for thoughtfully designed public spaces that coexist alongside industrial areas. Such a design approach would allow Walvis Bay’s local culture and economy to thrive together, preserving the town’s functionality and accessibility.

Figure 1.8
The Harbour Boundary Line as a Barrier to Public Space.



Urban Waterfront Redevelopment

The city of the 21st century is transforming into spaces that respond to the rise of social and cultural phenomena that are modifying the economic processes and the spatial configurations of places. This can be understood as a combination of “pieces,” intricate networks of connections, and a wide range of elements woven together in a recurrent pattern that permits the coexistence of historical and modern components (Giovinazzi & Moretti, 2010). Urban development strategies could consider implementing principles where “new” places can interpret historical values whilst creating a contemporary identity when transforming or developing vacant areas within port cities. Hoyle (2001) wrote an article on urban renewal in postcolonial cities, stating that urban waterfront redevelopment projects formerly confined to more advanced countries are now starting to grow in post-colonial coastal towns due to rapid urbanisation. Developing nations realised in the late 19th and early 20th centuries that these old ports needed to be revived as waterfronts and other coastal development projects could significantly increase the socio-economic value of the town and its surrounding communities.

Historically, the working waterfront in Walvis Bay was a place where maritime-related activities such as trading, fishing, and shipping would take place. It represented a complex intersection between socio-economic and cultural dynamics. There was a need for social disciplinary actions to address certain issues by allowing designated areas for specific maritime uses, but working waterfronts are often contested spaces where different groups have competing interests and priorities; for example, real estate developers would want a space for luxury housing whereas local fisherman would prefer to leave the space as is to protect their livelihood and maintain the cultural heritage (Hein et al., 2021). In many cases, waterfront redevelopment projects have become successful, and urban designers have experimented with innovative ways of creating spaces that preserve historical and cultural identities to correlate with urban contexts' economic and social dynamics (Hochhalter, 2013). This provides opportunities for new urban forms that foster relationships between diverse landscapes and symbolise market dynamics and social needs while maintaining the local identity and respecting the existing conditions. Waterfront developments are often mixed-use as they offer a diverse range of uses. Hochhalter (2013) states in her thesis that many waterfronts that were thriving in the past with industrial activities are being transformed and re-imagined into spaces for leisure, recreation, and consumption.

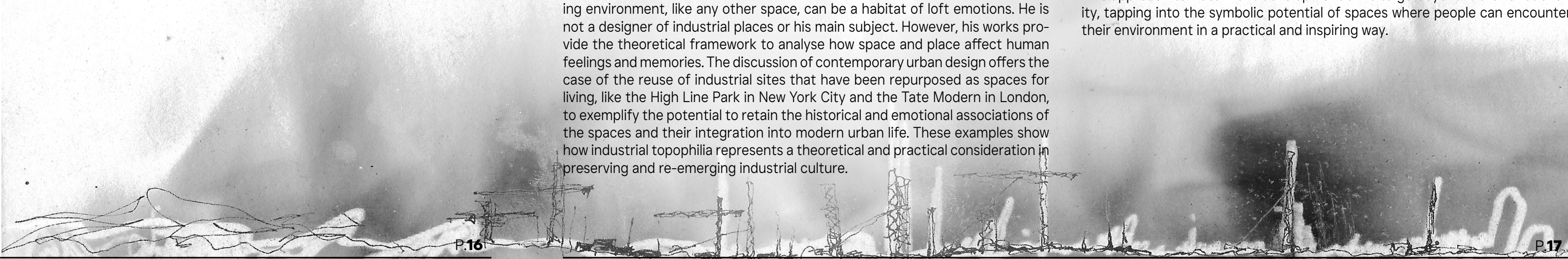
While waterfronts need to be publicly accessible, developments within port districts are strictly regulated due to policies and rules, making it challenging to reinvigorate the area. Post-industrial planners and designers are embracing the concept of being able to see the water again, as many cities have had decades of visual barriers to the water due to infrastructure and manufacturing buildings (Hochhalter, 2013). Contemporary urban planning strategies enforce the creation of public/private partnerships to generate equilibrium between both realms. Waterfronts within port districts frequently soften the heavy industrial activities by providing a unique experience to the public, which attracts locals and tourists. Examples of this could be waterfronts located in proximity to harbours. The location of the waterfront allows a unique experience of juxtaposing activities where the port and its activities are integrated into the human experience of the waterfront.

Integrating Gaston Bachelard’s Poetics of Space to Waterfront development

Integrating these activities and the beautiful natural surroundings creates a gap or opportunity where designers and developers could rethink the basic norm of redeveloping waterfronts by linking it to Gaston Bachelard’s philosophy, the poetics of space. The poetics of space serve an essential purpose in understanding how the built environment can influence human thoughts, emotions, and behaviours (Warang, 2024). The connection lies in the potential to redevelop the waterfronts into a space deeply rooted in creating meaningful and emotionally resonant places for people. This could involve designers crafting spaces that evoke emotions, feelings, memories, and a connection with the surrounding environment. Welsh (1996) wrote an article on rethinking urban conservation, mainly focusing on the Southern African context. The article investigates the phenomenological approach to connecting people to their surrounding environments while maintaining cultural values and fostering a strong sense of belonging. While “phenomenology” focuses on studying consciousness and first-hand experiences, “introspection” refers to examining your thoughts and feelings. All of these contribute to our understanding of the conscious and subconscious aspects of the human mind. Our conscious mind is guided by the subconscious, which creates fundamental memories and detects patterns. Bachelard (1958) examined how humans interact with their surroundings through design and physical environments.

He also investigated how people attach emotions to specific places and architecture, questioning why we feel certain ways in different spaces (Warang, 2024). Martin Heidegger’s phenomenological approach to architecture compares to Bachelard’s views on the poetics of space as it forms a foundation to investigate the existential meaning and role of the environments that people interact with. German philosopher Martin Heidegger (1889 – 1976) produced a wide range of theoretical investigations on existentialism and phenomenology that continue to influence contemporary academia, providing a philosophical framework for understanding the relationship between people and the built environment. Urban designers and architects could implement these concepts to foster a greater connection between people and the built environment. Re-vitalizing and development projects would be able to produce interventions that foster a sense of belonging to the people, create a multi-sensory experience, add cultural value, and create economic opportunity. Instead of looking into their immediate surroundings and the relationships between people and the built environments, scholars and professionals in Southern Africa have historically emphasised concepts more appropriate for the environment of the Northern Hemisphere. However, times have changed, and scholars and professionals are now moving toward a more context-based approach that could deal with specific challenges within their context.

Figure 1.9
The Industrial Backdrop of Walvis Bay



Note: A illustration made depicting the industrial image one receives upon enetring Walvis Bay (Author, 2024).

Industrial Topophilia

Topophilia, meaning ‘love of place,’ was a term coined by a geographer named Yi-Fu Tuan, and it used to express a kind of emotional attachment towards an industrial landscape and structure. Tuan (1974) states that industrial spaces can make a spectator recognise feelings of nostalgia and pleasure gained from touching, along with respect for these places’ unusual natural beauty. The notion of associative desire is further discussed by Edensor (2005), who investigates the power of industrial ruins as shared remnants of industrial might and the simultaneously evocative nature of the physical decay of such ruins. Edensor further posits that these spaces are typically considered eyesores; on the other hand, they are considered evocative– spaces that produce the viewer’s reflection and imagination. Here, it is to be understood that Reyner Banham’s (1986) emphasis on the architectural qualities of industrial buildings also contributes significantly to the cultivation of this topophilia. Banham’s discussion of industrial architecture is an excellent example because it shows how industrial architecture is based on the aims and features of a building and the use of materials to construct them. He remarks that the beauty of industrial buildings lies in their simplicity and magnitude, thereby causing awe in all exposed to their magnificence. Figure 9 illustrates this perspective by depicting the industrial backdrop of Walvis Bay, showcasing structures that evoke a sense of awe and emotional resonance through their stark, utilitarian forms.

Additionally, Bachelard (1964), in his discussion of space, explains how the working environment, like any other space, can be a habitat of loft emotions. He is not a designer of industrial places or his main subject. However, his works provide the theoretical framework to analyse how space and place affect human feelings and memories. The discussion of contemporary urban design offers the case of the reuse of industrial sites that have been repurposed as spaces for living, like the High Line Park in New York City and the Tate Modern in London, to exemplify the potential to retain the historical and emotional associations of the spaces and their integration into modern urban life. These examples show how industrial topophilia represents a theoretical and practical consideration in preserving and re-emerging industrial culture.

Towards a connected city.

Connecting the port and surrounding public spaces is crucial in shaping vibrant and inclusive urban environments. While traditionally utilitarian, ports have unique potential as communal and cultural engagement sites. As Campbell (2016) illustrated, ports can serve as spaces where the economic and public spheres intersect, facilitating social interactions and enhancing civic life through their phenomenological impact. This connection brings industrial activities into dialogue with the city and enables a form of poetic engagement with space that resonates deeply with people’s lived experiences.

This intersection of the industrial and the public is especially relevant to the port town of Walvis Bay, where a sense of place is intertwined with its fishing heritage. Rogers (2012) discusses how waterscapes contribute to towns’ cultural and social identity, emphasising that integrating public access to waterfront areas can enrich urban life. In Walvis Bay, establishing a fish market along the harbour could serve as a focal point, transforming an otherwise industrial setting into a space where locals and tourists alike can experience the town’s maritime character. The juxtaposition of active port facilities and public spaces preserves the town’s industrial essence. It fosters a deeper connection between people and place, imbuing the waterfront with functional and emotional significance.

This approach to waterfront development aims to go beyond mere functionality, tapping into the symbolic potential of spaces where people can encounter their environment in a practical and inspiring way.

+ REELING IN THEORY

I have selected concepts that resonate with the design’s core objectives to craft a solid theoretical foundation for this project. Architecture has always captivated me, particularly its ability to spark emotions, conjure memories, and engage in a wordless dialogue between the built environment and its inhabitants. This fascination naturally led me to Gaston Bachelard’s Poetics of Space as my primary theoretical anchor. Bachelard’s work delves into the intimate relationship between people and their spaces, examining how these environments can stir profound emotional and imaginative responses. This approach aligns perfectly with my goal of designing a fish market in Walvis Bay that serves a functional role and creates a genuine sense of place and belonging for its users.

Beyond Bachelard’s perspective, I ventured into post-phenomenology as a complementary theoretical lens. Considering the industrial setting of Walvis Bay and the market’s utilitarian purpose, post-phenomenology provides a valuable framework for exploring how technology mediates human experiences within architectural spaces. This theory allows the design to function not merely as a gathering space but as an intricate machine, embodying the industrial essence of the town. By thoughtfully incorporating technology, the market can elevate the user experience, bridging the town’s gritty industrial character with a sense of connection and purpose for those who use the space.

+ POETICS OF SPACE

+ POST-PHENOMENOLOGY

+ POETIC POST-PHENOMENOLOGY

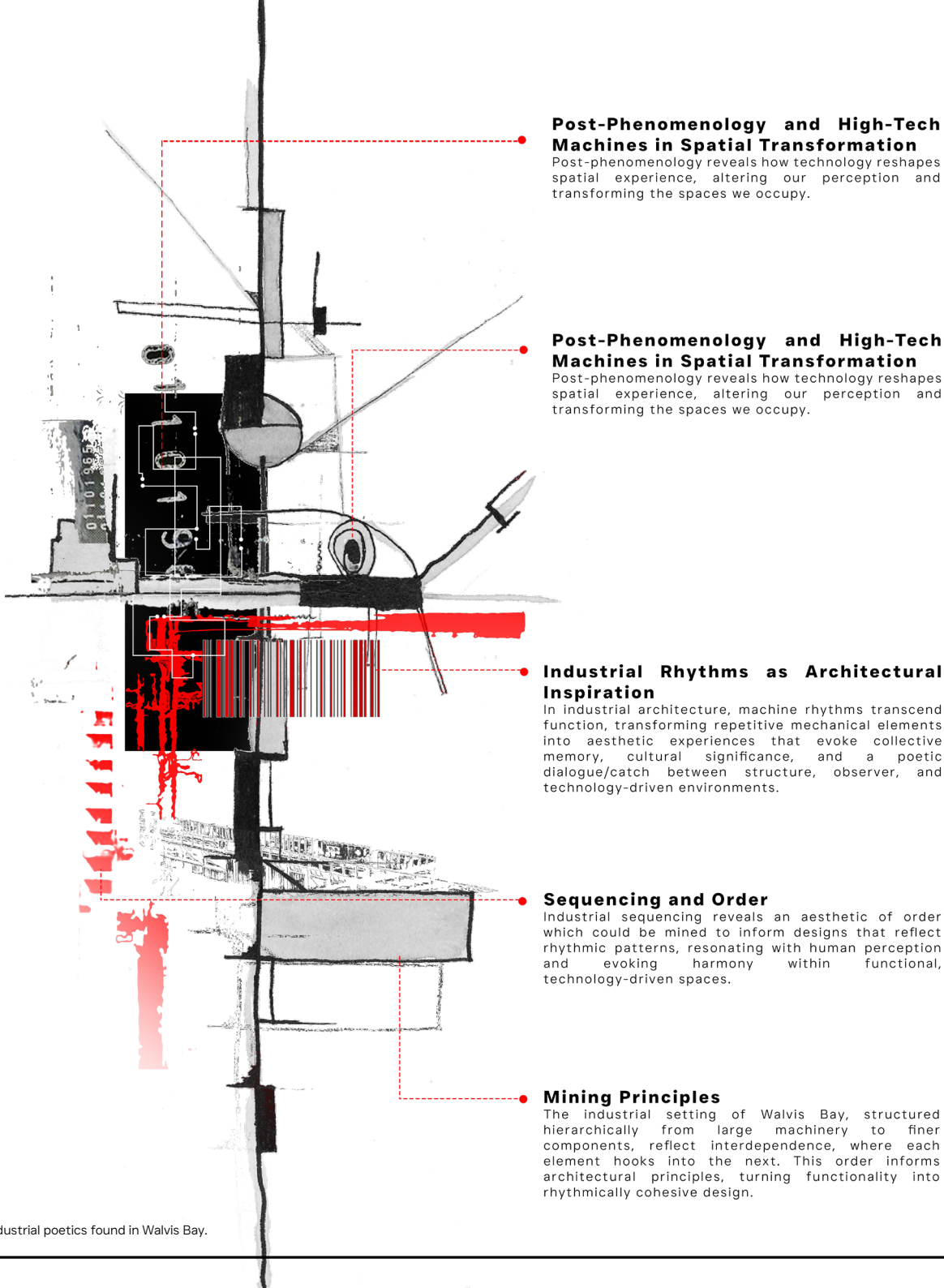
Industrial Poetics

“Industrial Poetics” can be viewed as a bold transformation of industrial zones into sources of emotional and artistic expression, moving beyond traditional perceptions of these spaces as merely functional or unappealing. Elements like hard materials or repetitive motions in industrial settings are typically considered utilitarian and uninviting; however, I contend that these features imbue the environment with a unique aesthetic and inspirational depth, evoking a spectrum of emotions and thoughts. When viewed through the lens of historical and aesthetic resonance, these industrial landscapes transcend their practical functions, becoming realms for creative exploration and human interaction, as depicted in Figure 10, a sketch capturing the poetics of Walvis Bay’s industrial landscape.

This view aligns with Gaston Bachelard’s observations on architectural environments, which he believed could evoke profound feelings and serve as repositories of memory and creativity (Bachelard, 1994). Bachelard says such spaces allow us to form strong, emotional connections to our built environment. This connection is particularly salient in industrial settings, where the tangible traces of labour link to historical narratives, as Walter Benjamin suggested in his discussions of mechanised forms and their emotional resonance (Benjamin, cited in Li, 2019). Li further argues that these spaces preserve signs of human labour and reanimate memories through sensory experiences, highlighting societal resilience.

In this context, post-phenomenology encourages us to see these industrial zones not as mere structures for utility but as sensory spaces for experiencing and reflection.

Figure 1.10
Unveiling Industrial Poetics



Note: A collage of sketches made revealing the industrial poetics found in Walvis Bay.
(Author, 2024).

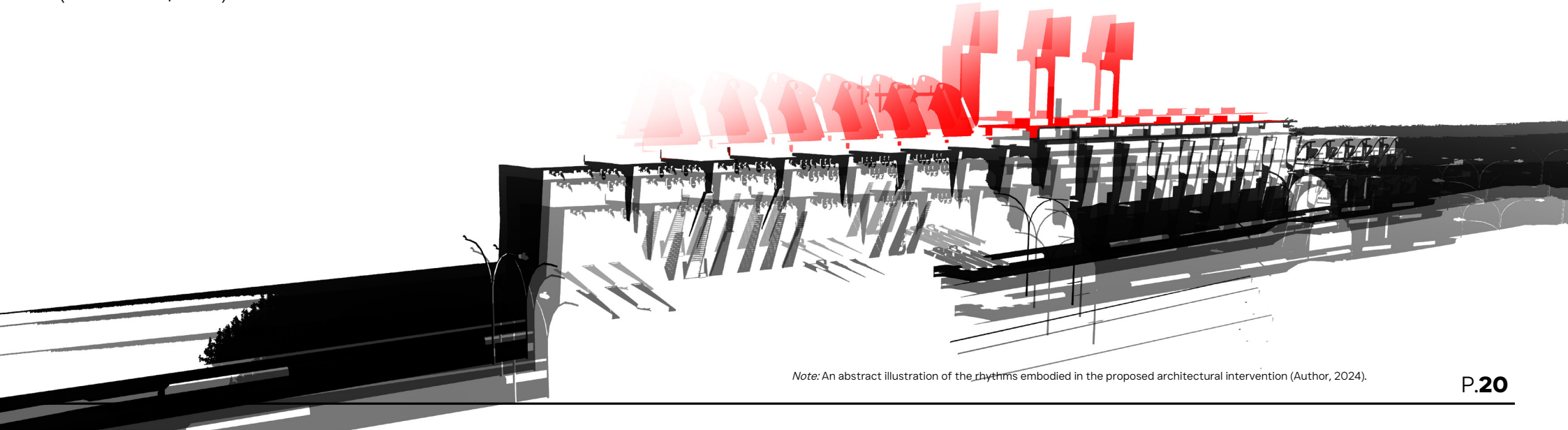
Rhythms of the Machine

The concept of rhythm in industrial architecture arguably transcends pure functionality, contributing instead to an immersive aesthetic that resonates deeply with the observer. Industrial structures, characterised by the repetitive hum of engines, the pulse of conveyor belts, and the geometric symmetry of facades, elicit a rhythm akin to that found in musical compositions. This rhythmic experience is visually encapsulated in mechanical structures, which embody an orchestrated cadence that mirrors productivity’s relentlessness in these environments (De La Fuente, 2018). Moreover, the rhythmic structure in industrial spaces fosters a cultural connection, prompting viewers to perceive these spaces as sites of historical continuity and communal labour, as they encapsulate human exertion and the symbiosis between man and machine (Wunderlich, 2013).

Contrary to the notion that industrial architecture is solely utilitarian, factory layouts' systematic, recurring elements create a spatial harmony that can be understood as an "architectural melody" (Laemmli, 2022). This interplay between form and function results in a sensory dialogue, where viewers are invited to experience the space on both a practical and emotional level. The recurrence of visual forms — such as linearity, bold colours, and symmetry — initiates a perceptual rhythm that enhances the sensory engagement of the viewer. This spatial rhythm embodies the machinery’s mechanical functionality and evokes an enduring legacy, representing the industrious beat that defines modern urban life (Wunderlich, 2013).

Thus, rhythm in industrial architecture not only defines but enriches these spaces, transforming them into domains of both productivity and aesthetic resonance. This rhythmic dimension exemplifies how architecture can create an experiential bond between viewers and the built environment, engaging them in an ongoing dialogue about the cultural and historical significance embedded within these industrial forms.

Figure 1.11
Rhythms of The Machine



Note: An abstract illustration of the rhythms embodied in the proposed architectural intervention (Author, 2024).

Integrating Post-Phenomenology

Post-phenomenology offers a robust framework to explore how technology mediates human experiences within architectural spaces, which is highly relevant to the Walvis Bay fish market design. This theory, developed by Don Ihde, shifts traditional phenomenology toward understanding how technologies alter and extend human perceptions and interactions with their environment. Unlike classical phenomenology, which typically emphasises the individual’s direct experience, post-phenomenology acknowledges that technology shapes and even transforms our experiences (Ihde, 1991; Scharff, 2012). This perspective is particularly applicable to the industrial setting of Walvis Bay, where the fish market is envisioned as more than a gathering space—it becomes a sophisticated “machine” that merges technology with sensory and emotional experiences.

In the context of my thesis, post-phenomenology is implemented to rethink the market as a space where technology is not merely a tool but an active mediator that enhances users' interactions with the environment. Ihde’s work highlights how architectural spaces can foster unique perceptual experiences through technological mediation. By integrating automated systems within the fish market’s design, the building will interact with users in a multi-sensory and immersive way, evoking the industrial character of Walvis Bay. Through this, the market becomes a site where the industrial landscape's functionality and poetics are brought to life, facilitating an environment that resonates with the town’s heritage and identity (Ihde, 2006; Project MUSE, 2012).

Furthermore, post-phenomenology emphasises the relational nature of technology, which is particularly compelling for a project rooted in industrial poetics. By embedding technology in the fish market’s fabric, the design reflects Walvis Bay’s industrial identity and enables users to experience the space dynamically and interactively. This approach supports the market’s role as a cultural and sensory extension of the lagoon promenade, reconnecting the community to the natural and industrial elements of the town's landscape (Scharff, 2012; Ihde, 1991).

Reflecting on theory

Exploring industrial poetics, architectural rhythm, and post-phenomenology reveals a profound approach to reimagining Walvis Bay’s identity through architectural design. Central to this thesis is the notion that architecture, especially within industrial settings, can move beyond its functional role to become a sensory and emotional experience that resonates with cultural history. By embracing the repetitive, mechanical nature of industrial elements, we uncover unexpected beauty and harmony—qualities that, while often overlooked, have the power to evoke a deep connection to place and memory.

Incorporating Gaston Bachelard’s "poetic space" concept, the thesis emphasises how architecture can serve as a vessel for collective memories and emotional resonance. When designed thoughtfully, these spaces can become repositories of local heritage and identity, fostering a connection between the people and the town’s maritime history. Walter Benjamin’s insights into the rhythmic structures of mechanised forms further enrich this perspective, illustrating how industrial architecture carries a unique cultural memory that can be harnessed to create continuity within the built environment.

Post-phenomenology, particularly as articulated by Don Ihde, offers a framework to understand architecture as a mediator of human experience, influencing how individuals interact with and perceive their environment. This approach supports the view that a well-designed fish market in Walvis Bay could act as more than a commercial space. Instead, it could transform into a sensory and cultural journey that reaffirms the town’s industrial heritage, fosters urban cohesion, and enhances the public’s engagement with their surroundings. This theoretical foundation sets the stage for subsequent chapters, where these concepts will inform the design strategies for creating a fish market that is both functional and profoundly connected to Walvis Bay’s unique coastal character.

+ METHODOLOGY

The research intends to conduct qualitative research to comprehend the poetic qualities inherent in Walvis Bay’s lagoon promenade and the town’s industrial character. This involve employing techniques and methods derived from the poetics of space by Gaston Bachelard. The aim is to investigate the “poetic” spatial qualities of the lagoon promenade and the industrial scene of Walvis Bay to guide the design process and formulate context-driven design responses. The research primarily focus on Walvis’s waterfront precinct, with particular emphasis on the area closer to the harbor, where most of the current leisure and recreational activities are located. Furthermore, the research will be refined by targeting focus groups such as tourists, artisans, and residents.

The data collection carried out use various methods. Aerial imagery and maps from various periods are analysed to understand the spatial layout of Walvis Bay and comprehend its functioning and the qualities that define it. Observations and field notes were made to investigate the “poetic” spatial qualities of the lagoon promenade and waterfront, noting various points of interest and evoking emotion and memory.

- Interviews is conducted with locals to understand their experiences and perceptions of Walvis Bay, specifically focusing on the lagoon promenade and waterfront. This will provide insight into their subjective spatial experiences.
- Photographs are taken to document the different spatial qualities, and atmospheres experienced in industrial areas and at the waterfront precinct.
- Precedent analysis are conducted on architectural projects and artworks in similar contexts that create a “poetic journey” for users, aiming to inform design responses that reflect a poetic industrial language.
- Sketching and building models are done to explore various methods and concepts that accentuate industrial topophilia to evoke emotion and memory through a “poetic” lens.

All the data collected are analysed through a thematic approach to organizing the research into themes focusing on a poetic journey. The analysis will focus on understanding the industrial character of Walvis Bay that forms not only part of the experience but also influences the spatial layout of the town and the poetics inherent in the lagoon promenade to inform design responses that reflect a poetic journey with an industrial context-specific architectural language.

+ LIMITATIONS

Access to certain areas within the port and industrial areas is severely restricted due to security policies; therefore, special access is needed to enter these areas. Additionally, the site is 390km away from Windhoek, which poses logistical challenges and limits the number of site visits to the study area. Moreover, cultural differences and language barriers between myself, local stakeholders, and tourists could hinder effective communication and collaboration. To address these limitations, planning is crucial. Before site visits, I will request access to restricted areas in the port. Various methods will be used to conduct interviews and meetings to ensure effective communication.

+ ETHICAL CONSIDERATIONS

Photographing artisans, stores, and existing activities within the waterfront and harbor precinct of Walvis Bay would require consent, as not everyone would feel comfortable photographing. Before taking photos, consent will be asked.

+ RESEARCH BY DESIGN TABLE

Research objectives	Research Questions	Approach	Methods	Expected outcome
To identify and analyze key industrial elements in Walvis Bay that have the potential to evoke strong emotional and mnemonic responses in users to inform architectural design strategies that foster a deeper connection between people and place.	What elements in the industrial scene of Walvis Bay can be extracted to inform architecture that evoke emotion and memory within the user to foster a deeper connection between people and place?	Qualitative research will be conducted to understand the poetic qualities of the waterfront precinct of Walvis Bay and to find elements that could inform future design decisions.	1.Observation 2. Sketching 3. Mapping 4.Photograpghs 5. Precedent Studies	1. Photos documenting prominent industrial elements. 2. Sketching and abstractifying these elements into something that could be used architecturally. 3. Observing and Mapping various elements that could inform a vernacular architecture. 5. Precedent studies of buildings following similar design principles and guidelines within similar contexts.
To investigate and address the spatial catalysts within Walvis Bay's waterfront precinct that influence the poetic journey of users, aiming to promote a more connected and meaningful spatial experience.	What catalysts in the spatial conditions of Walvis Bay affect the poetic journey experienced within the waterfront precinct and how can these factors be addressed to promote a more connected and meaningful experience to users?		1. Precedent studies 2. Interviews 3. Observations	Precedent analysis, Interviews, and observations will be conducted to find spatial conditions within the waterfront precinct of Walvis Bay, negatively impacting the poetic journey which will be used to create an architectural response that not only solves a physical contextualised problem but also architecture that enhances the user experience on transcendental levels.
To develop an architectural intervention along the Lagoon promenade of Walvis Bay that utilizes the concept of a poetic journey to create a spatial narrative, fostering a connected experience for users on both physical and transcendental levels.	How can the poetic journey experienced along the Lagoon promenade of Walvis Bay script a spatial narrative for an architectural intervention fostering a connected experience to users on a physical and transcendental level?		1. Sketching 2. Precedent Studies 3.Observations	Sketching, Precedent Studies, and observations will help gather information and data regarding the physical and transcendental realms of place uncovering/unpacking the poetics that roots the lagoon promenade into what it is, which can then be used to script a spatial narrative in architecture that follows similar guidelines and principles to foster a deep connected experience.

+ CONCLUSION

In conclusion to chapter 2, a delicate and asymmetrical theoretical frame is constructed, interlacing Gaston Bachelard’s Poetics of Space with post-phenomenology. Thus, this framework, which combines the poetic resonance of spatial memory and the functional and experiential mediation of technology, promotes a stratified architectural vision embedded in Walvis Bay's industrial and cultural context. I call this framework, which combines the poetic resonance of spatial memory and the functional and experiential mediation of technology, ‘poetic post-phenomenology.’

This chapter has achieved its specific research objective by looking at waterfronts and industrial port cities and giving some examples of the critical challenges and potentials for developing such spaces in the case of Walvis Bay. Urban literature regarding port redevelopment emphasises how public space and industrial activities should be carried out as interconnected entities (Giovinazzi & Moretti, 2010; Barrera-Fernández et al., 2020), especially when spatial separation prevents interaction. This is an acute issue for Walvis Bay, as the existing industrial layout blocks any meaningful engagement between people and the historic fabric of the port.

The investigation into these precedents shapes the aim of the current project: to create a fish market as a building that not only performs economic activity but is also an attractive and engaging area in the context of Walvis Bay's cultural value. This theoretical emphasis will inform the design strategies employed in the subsequent chapters, which focus on the beauty of humans alongside the beauty of the working industry, creating a unique experience, a poetic journey.



03

+ TRAWLING CONTEXT

+ INTRODUCTION

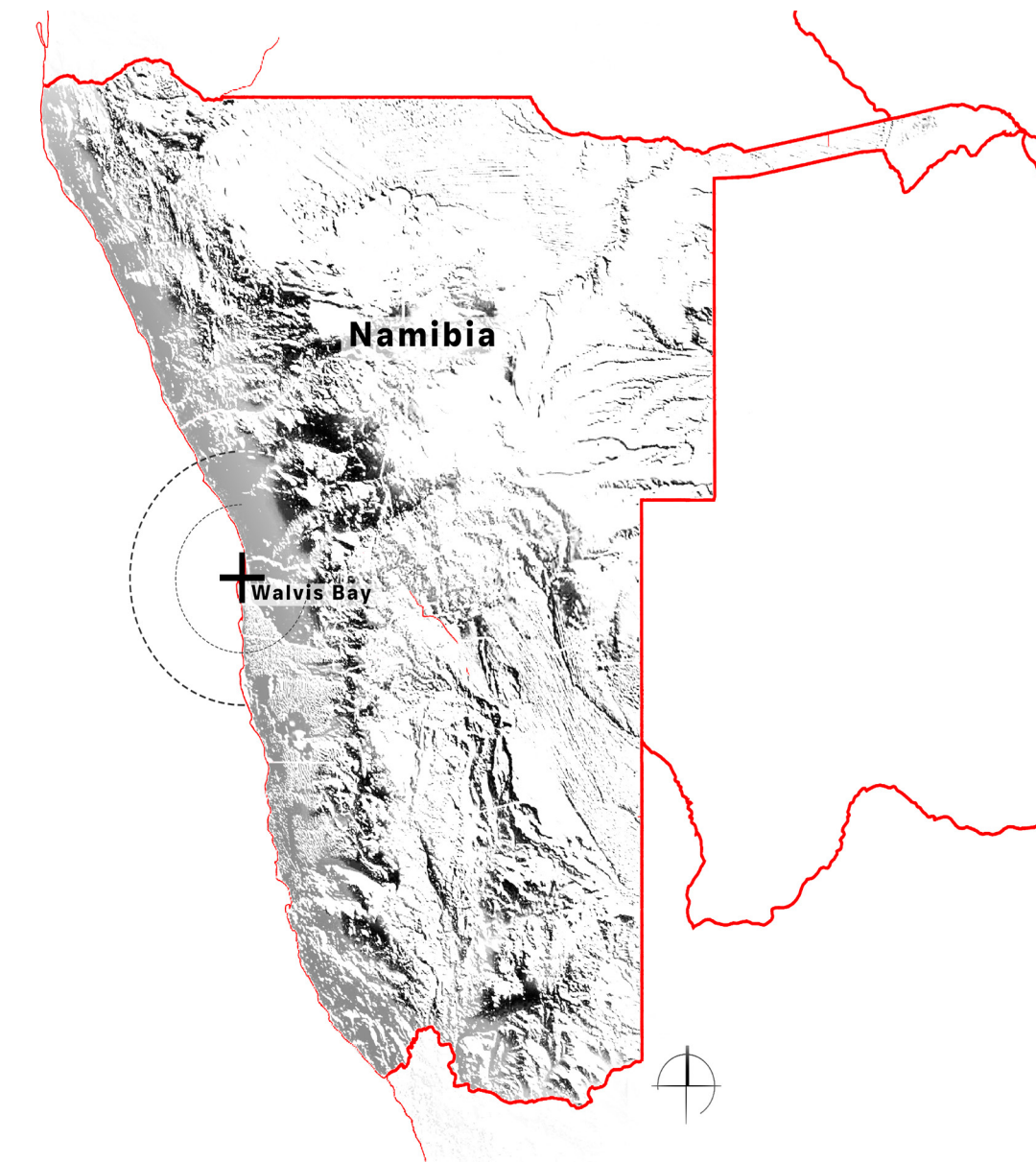
Chapter 3 outlines the critical role of detailed site analysis in the design process for the proposed fish market along the Lagoon Promenade in Walvis Bay. Figure 3 shows a map of Namibia highlighting Walvis Bay's location; the focus area lies within the industrial and maritime landscape integral to the town's economic and cultural identity.

The analysis was conducted at macro, meso, and micro levels to establish a comprehensive contextual understanding. The macro analysis considers Walvis Bay's broader geographical and infrastructural framework, focusing on how the town's development influences and supports its role as a port city.

In addition to these standard analyses, Chapter 3 introduces an experiential or alternative approach titled "being caught in the process of bait making." This metaphorical layer uncovers deeper, often overlooked aspects of the site's character that will shape the design's conceptual and functional dimensions. The chapter also includes a case study from a visit to Seaworks Fish Processing Factory, the prospective client for the project, providing firsthand insight into the fish processing workflow. This experience informed practical aspects of the fish market design, including waste management and storage systems, ensuring alignment with real-world operational standards.

Combining these analytical methods provides a nuanced foundation, ensuring the design is rooted in a multi-dimensional understanding of the site's unique context.

Figure 3
The Location of Walvis Bay in Namibia.



Note: An map of Namibia highlighting the location of Walvis Bay (Wikipedia, 2024: online, edited by Author).

+ MACRO CONTEXT ANALYSIS

For the macro site analysis, I employed a mapping focus on the spatial characteristics of Walvis Bay. With this tactic, there was a great representation of essential areas such as the Lagoon Promenade, referred to as the “poetic journey” or public spine of Walvis Bay in this document, the industrial fishing zones, and the harbour area. In this context, it becomes evident how Walvis Bay’s layout emphasises the significance of the Lagoon Promenade as an essential urban corridor linking people to the towns identity.

Figure 3.2
Urban Map of Walvis Bay



Note: A Macro scaled map showing the spatial layout of Walvis Bay (Google earth, 2024; online, edited by Author).

Figure 3.3
Macro Site Analysis of Walvis Bay



Note: Maps representing focus areas that are analyzed (Google earth, 2024; online, edited by Author).

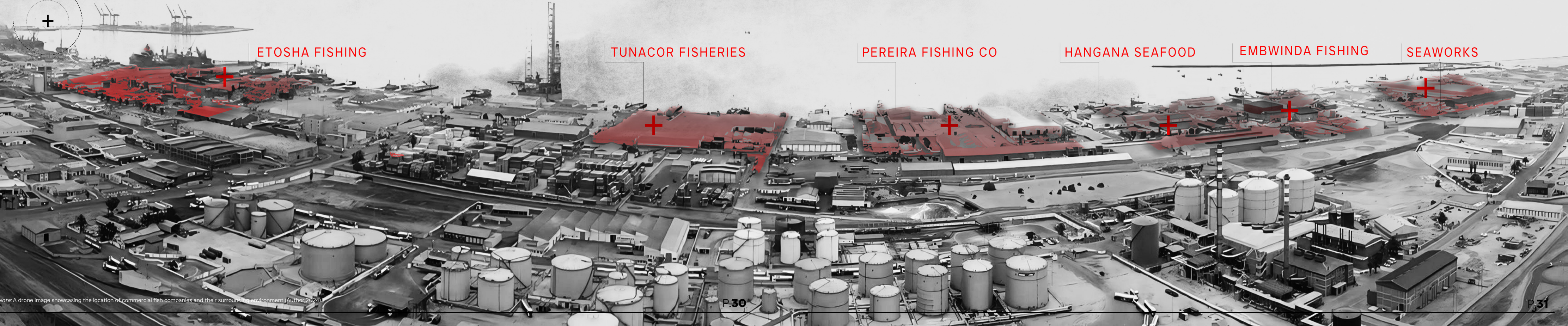
- + **Walvis Bay Town Zoning**
Map 1 Highlights the various zones within Walvis Bay, including the industrial areas, the central business district, and the harbour. The map provides insight into the town’s functional layout and the spatial relationships between key economic and industrial sectors by illustrating these zones.
- + **The Lagoon Promenade / “Poetic Journey” / Public Spine**
Map 2 shows the Lagoon Promenade's geographic location within Walvis Bay's larger context, highlighting its position within the town’s urban fabric.
- + **Fishing Industries and Their Locations**
Map 3 identifies the locations of various fishing industries in Walvis Bay, depicting both large-scale commercial operations and smaller-scale ventures, such as ski boats. The map highlights the spatial distribution and diversity of fishing activities, showcasing the range of industrial scales within the town’s fishing sector and their integration into the urban landscape.
- + **Harbour Zones**
Map 4 illustrates the functional zoning within the Walvis Bay harbour, with the northern end (highlighted in red) dedicated to fishing industries and the southern end (shaded in grey) focused on logistics and trade. The map emphasises the distinct spatial organisation within the harbour, where each zone supports specific economic activities, reinforcing the harbour's role as both a commercial fishing hub and a logistical centre for broader trade operations.
- + **Reference Map for Contextual Understanding**
Map 5 provides a comprehensive overview of Walvis Bay, situating all the previously analysed zones—town zones, the Lagoon Promenade, fishing industry locations, and harbour zones—within the larger urban context. It serves as a foundational map to support the analysis of specific areas, highlighting spatial relationships and integrating these functional zones across Walvis Bay.

In Figure 3.4, the fisheries industry in Walvis Bay is captured in a drone image I took and edited, with portions highlighted in red. All fishing companies are located in an area specially designed for industries and do not involve the general population or urban cooperation. Such orientation, best suited for industrial purposes, leaves a gap between the residents and the fishing traditions of Walvis Bay, which is so rich as these zones are topographically not easy to access and rather unfriendly for the public.

This gap is also addressed through the design where a fish market will be located within Walvis Bay's “public spine”, as shown on the left of Figure 2.4. This location, on the other hand, along Lagoon Promenade, makes it easier to bring the fishing scenes and activities to the people and tourists in a friendly and enjoyable way.

Figure 3.4
Fisheries Zone in Walvis Bay.

SITE



Note: A drone image showcasing the location of commercial fish companies and their surrounding environment (Author, 2024).

+ MESO CONTEXT ANALYSIS

In the meso site analysis, I mapped the Lagoon Promenade of Walvis Bay to understand the site context seen in Figure 3.6 and Figure 3.6. The aim is to determine the relationships and the contribution of the areas to the overall nature of Walvis Bay. By mapping the lagoon promenade of Walvis Bay, I studied the spatial planning of different land uses, such as commercial, recreational, and public zoning. This enabled a logical consideration and understanding of how these functions are related and affect each other in concentration.

I also examined the Lagoon Promenade's natural and urban character in terms of its spatial configuration and urban truncation. This part of the mapping was useful in identifying the main pedestrian and transport patterns and how users move between the promenade, the waterfront, and the rest of the urban area. It made it possible to determine places of importance where ripple effects shift the scope and use of activities and areas.

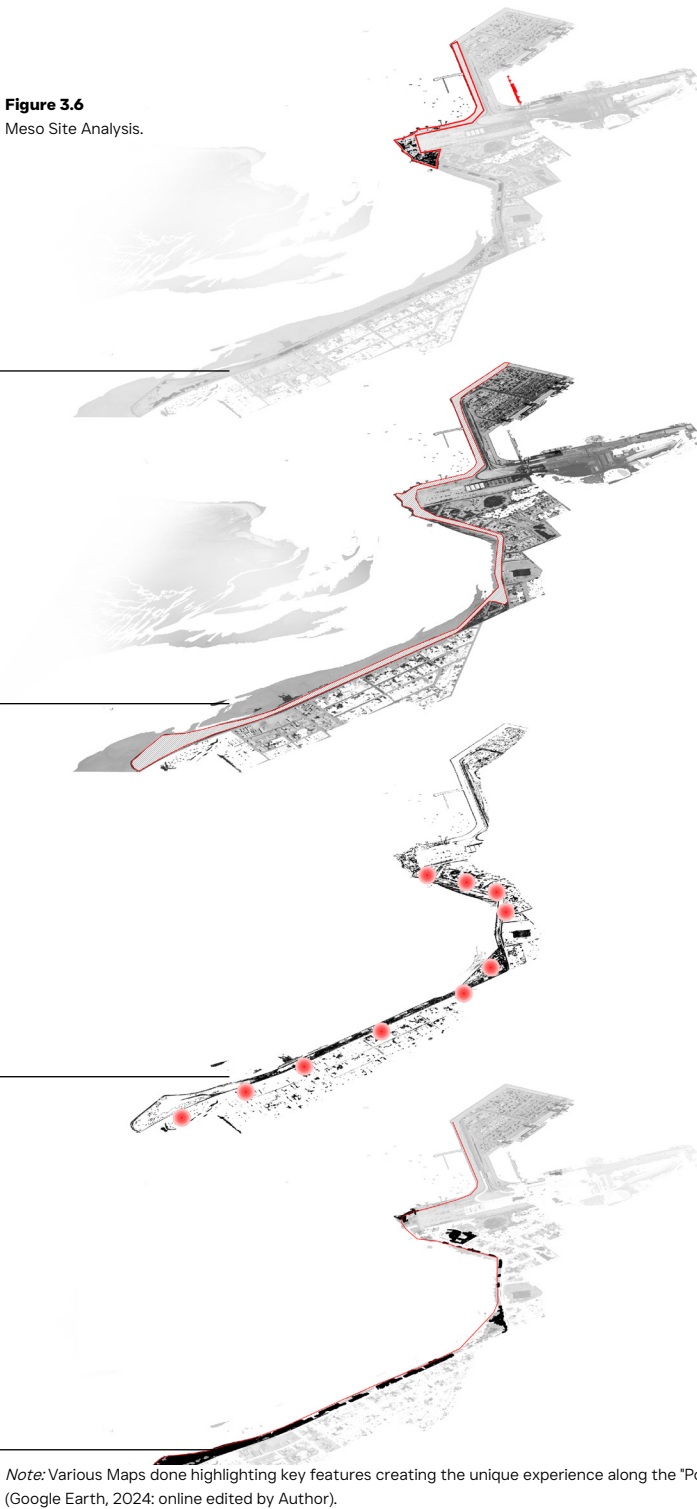
The context of the mapping also helped in the appreciation of the socio-cultural attributes of the waterfront precinct. Through understanding the spatial organisation of different activities and spaces, it was possible to understand better the purpose of the area and how the new design will work with or improve the existing activities and required needs within the community. The meso site analysis caters to the fact that the proposed fish market will be well in context and will not be an annoyance to the qualitative and functional characteristics of the region.

Figure 3.5
Meso Site Map



Note: A map of the lagoon promenade of Walvis Bay (Google Earth, 2024: online, edited by Author).

Figure 3.6
Meso Site Analysis.



Note: Various Maps done highlighting key features creating the unique experience along the "Poetic Journey" (Google Earth, 2024: online edited by Author).

+ Waterfront

Map 1 illustrates Walvis Bay's waterfront area and its spatial relationship to the surrounding harbor logistics and trade industries. The map depicts how the harbor infrastructure creates a rigid, physical barrier restricting easy access between the waterfront and adjacent public areas.

+ Lagoon Promenade

Map 2 highlights the Lagoon Promenade, showcasing its role as a critical public spine within Walvis Bay. This promenade runs along the lagoon, providing a significant public space that contrasts with the industrial zones nearby. It is an accessible corridor for residents and visitors, linking them to the town's cultural and natural landscape. The map underscores the promenade's potential as a communal space that connects people to the coastal environment, offering a sensory experience of the lagoon and creating a softer edge between urban life and nature.

+ Leisure

Map 3 highlights the accommodation and dining establishments along the Lagoon Promenade, illustrating their role in attracting locals and visitors to this vibrant area of Walvis Bay. These hotels, guesthouses, and restaurants create a lively atmosphere along the promenade, enhancing its appeal as a social and leisure destination.

+ Green Belts

Map 4 highlights the green belts and grassy areas along the Lagoon Promenade, which serve as informal gathering spots for locals and visitors. These spaces provide shaded spots and open grassy areas where people can relax, socialise, and enjoy the natural coastal ambience. These green belts enhance the promenade's appeal as a communal hub, offering recreational areas that complement the built environment and add to the promenade's function as an accessible public spine.

Figure 3.7
Aerial image of The Poetic Journey.

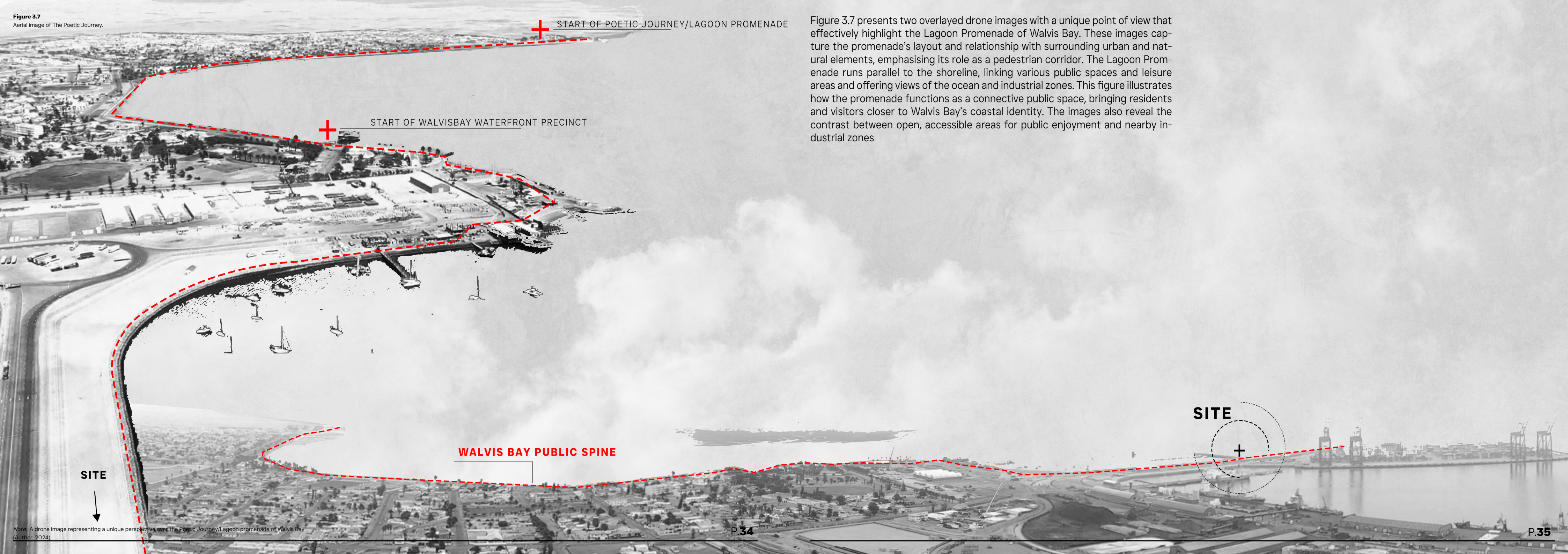


Figure 3.7 presents two overlaid drone images with a unique point of view that effectively highlight the Lagoon Promenade of Walvis Bay. These images capture the promenade's layout and relationship with surrounding urban and natural elements, emphasising its role as a pedestrian corridor. The Lagoon Promenade runs parallel to the shoreline, linking various public spaces and leisure areas and offering views of the ocean and industrial zones. This figure illustrates how the promenade functions as a connective public space, bringing residents and visitors closer to Walvis Bay's coastal identity. The images also reveal the contrast between open, accessible areas for public enjoyment and nearby industrial zones

Note: A drone image representing a unique perspective over the Poetic Journey/Lagoon promenade of Walvis Bay (Author, 2024).

+ MICRO CONTEXT ANALYSIS

The microsite analysis for the proposed fish market focuses on examining the specific characteristics of the immediate context to understand how they inform design decisions (see Figure 3.9). This in-depth analysis covers essential elements such as topography, access routes, and ambient conditions, which are crucial for seamlessly integrating the fish market into its surroundings. Key site attributes, including the adjacency to the Lagoon Promenade, proximity to the harbour, and visibility from major routes, are examined to assess how the design can enhance accessibility and user experience. This micro-site analysis optimises environmental comfort and operational efficiency within the proposed market structure by mapping sun exposure, prevailing winds, and pedestrian flow patterns.

This analysis forms the basis for tailored architectural responses that align with functional needs and the site's unique qualities, ensuring the market resonates with its industrial and maritime context.

Prevailing Wind

Much consideration has to be given to the prevailing westerly winds affecting Walvis Bay. These winds are relatively strong and consistent and serve mainly because of the South Atlantic High-pressure system, which forces strong winds along the coast of Namibia. These winds help reduce the usually high coastal temperature by blowing cool, dry air but also contain salt and fine sand, which increase erosion of building materials near the coast.

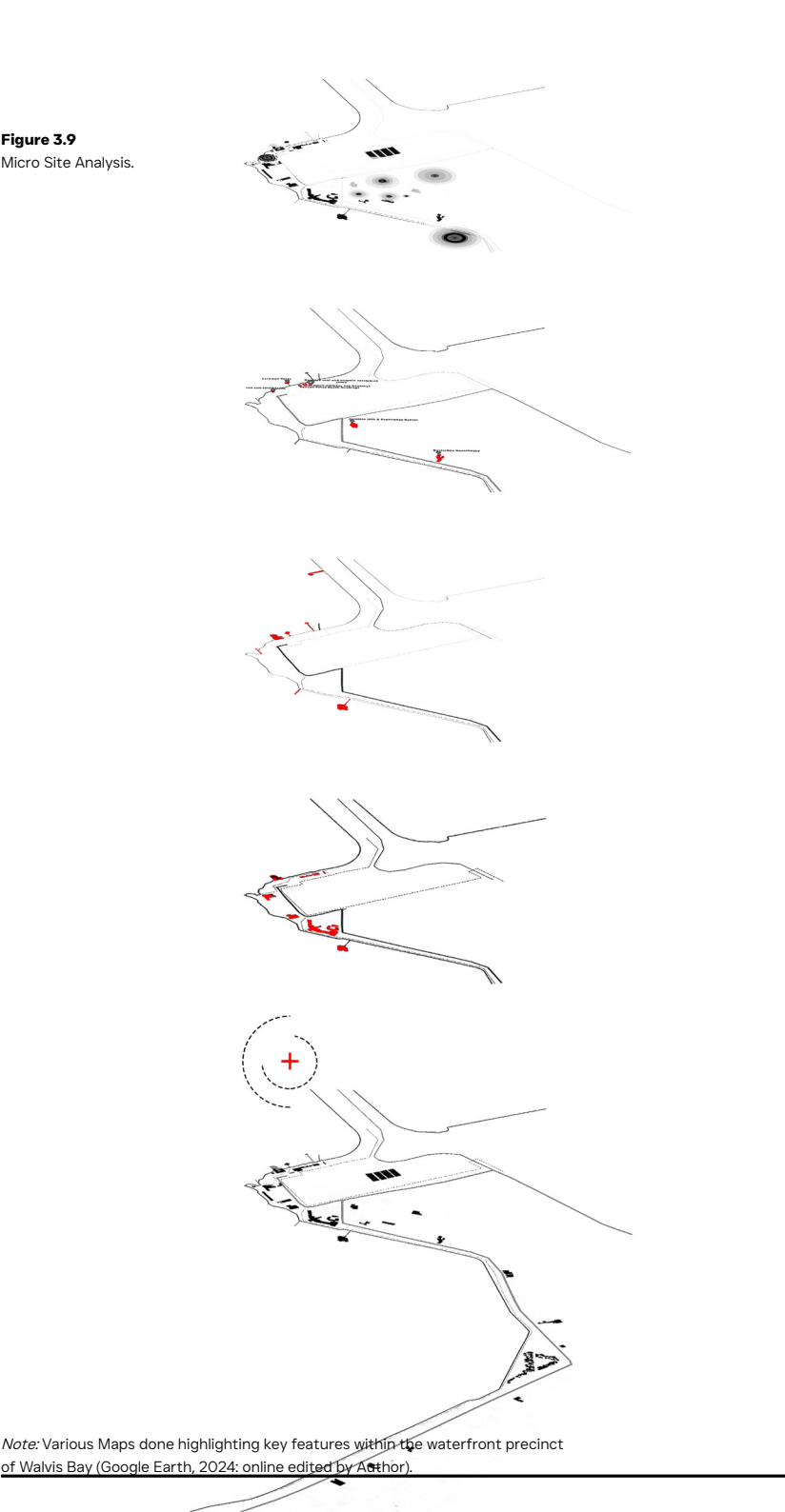
For the proposed fish market site, the southwest wind continues to pose specific characteristics that require the building's design to include elements that protect the building and improve air circulation. The use of protective louvres as well as durable and maintenance-friendly materials will be necessary.

Figure 3.8
Micro Site Map

Note: A Micro scaled map showing the spatial layout of Site.
(Google earth, 2024: online, edited by Author).



Figure 3.9
Micro Site Analysis.



Note: Various Maps done highlighting key features within the waterfront precinct of Walvis Bay (Google Earth, 2024: online edited by Author).

+ Recreation spaces

Map 1 illustrates the critical recreation nodes across the area, highlighting designated spaces for public engagement. These nodes include public spaces that foster social interaction and outdoor activities, enhancing accessibility and enjoyment for residents and visitors alike.

+ Tourist Centers

Map 2 highlights the main tourist centres that draw visitors to the area. These centres include guided tours to nature reserves, information about the area, and more, enhancing the region's appeal. Positioned strategically, they offer tourists various experiences to choose from and provide the needed information.

+ Jetty's

Map 3 showcases the jetties extending over the lagoon, offering visitors a serene and poetic experience. These structures allow individuals to engage with the tranquil waters and sweeping vistas, creating moments of reflection and connection with the surrounding environment.

+ Leisure Space

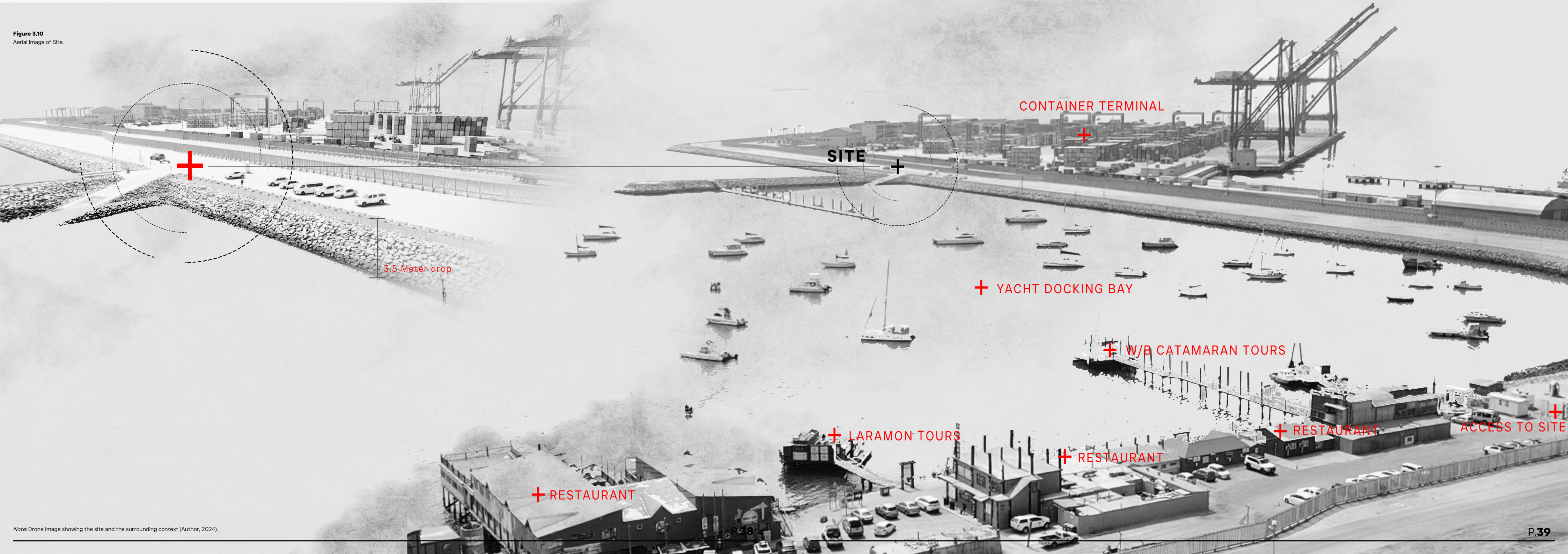
Map 4 highlights the various leisure spaces within the area, offering a range of social opportunities. These spaces are designed for relaxation and gatherings, encouraging residents and visitors to enjoy the Walvis Bay waterfront. The arrangement of leisure nodes enhances accessibility and provides scenic views, making these areas integral to the community's social and cultural life.

+ Synthesis

Map 5 provides a comprehensive reference, synthesising all the above maps into one cohesive layout. This integrated map combines the recreation nodes, tourist centres, jetties for lagoon experiences, and leisure spaces to present an overall view of the area's accessible attractions. The synthesised map aids in understanding the spatial relationships between these elements, illustrating how recreational and social spaces interconnect with tourism and natural attractions,

Figure 3.10

Aerial Image of Site.



Note: Drone Image showing the site and the surrounding context (Author, 2024).

+ MICRO SITE SCALED MODEL

The physical microsite model on a 1:1000 scale provided a more accurate image of spatial relationships on the site, improving my perceptions regarding the configuration and extent of the proposed area. The site model assisted in several ways, including presenting nearby buildings and landscape features, which guided me in the possible movement patterns and visual perspectives my design would cover.

While building the model, it became clear how the design elements could fit into the external environment so that the intended structures would not detract from the character of the surroundings. As a result, this process enabled me to make advanced design choices because the building would fit the overall spatial organisation of the site rather than oppose it.



Figure 3.11
Micro Site Model

Note: A 1:1000 scaled model representing the physical micro characteristics of the chosen site. (Author, 2024).

+ CASTING NETS: EXLORING SEAWORKS FISH FACTORY

As part of my site analysis, I visited Seaworks Seafood Factory, gaining valuable insight into the complex processes involved in fish processing. This visit provided an in-depth look at the stages of handling, sorting, and preparing seafood for market, which deepened my understanding of the technical demands and spatial organisation necessary for an efficient facility. Observing these operations has informed my approach to designing a functional, streamlined space that aligns with the unique industrial requirements of seafood processing.

The visit highlighted Seaworks' approach to efficient fish processing, emphasising their use of automated systems, waste management protocols, and adherence to strict quality standards. This experience was instrumental in understanding the structural needs and how industry practices might influence my design. The study also revealed vital spatial arrangements and workflow patterns that align with my project's goal of incorporating an industrial aesthetic while facilitating a user-friendly experience for workers and visitors.



+ DOCUMENTING THE PROCESS

01

Step 01, unloading the fish—I argue that this stage is more than just a logistical necessity; it sets the tone for the entire processing operation, impacting quality, efficiency, and, ultimately, the product's market value. In this step, the process begins as soon as the fishing vessels return to the dock (see Figure 3.14), where unloading needs to occur swiftly and carefully to maintain the freshness and quality of the catch.

The immediate challenge lies in ensuring that each fish is handled to minimise exposure to elements that could compromise its quality. In the unloading process, I have noticed that every minute matters. Delays in this stage, even for a few minutes, can introduce spoilage risks. Therefore, a well-coordinated system is essential, often involving conveyor belts, refrigerated storage, and skilled workers who understand the urgency and delicacy required in this phase.

Figure 3.14
Fishing Vessel Katrina.



Note: A Photo taken of one of the fishing vessels owned by Seaworks (Author, 2024).

Figure 3.15
Maintenance Team



Note: A Photo taken of a man doing maintenance before one of the fishing vessels depart (Author, 2024).

02

Step 02, the Receiving Room, is a crucial transition from unloading to processing, where the fish undergoes sorting and initial storage. Each species is carefully sorted into distinct, colour-coded containers (see Figure 3.16), providing an organised system that supports traceability, quality assurance, and efficiency in the following stages.

In this space, each fish species is separated according to species ensuring uniformity for downstream processing. I have found that this initial sorting stage enhances inventory accuracy and allows workers to prioritise fish handling. Once sorted, the containers are swiftly moved to a cold room to preserve freshness while they await the next step shown in Figure 3.17. The cold storage area plays a critical role in this process, as it controls the temperature to prevent bacterial growth and maintain the freshness of each batch.

Figure 3.16
Colour-Coded Fish Containers



Note: A Photo taken of ice filled fish containers inside receiving room A (Author, 2024).

Figure 3.17
Transportation of Fish Containers.



Note: A Photo taken of fish being moved into another room for further processing via forklift (Author, 2024).

03

In Step 3 of the Seawork fish processing, the fish first go through a mechanical system that efficiently removes their tails, followed by a scaling machine that cleans them of any remaining scales. After these steps, the fish move onto a conveyor system equipped with a scanning device, which accurately sorts each piece by size (see Figure 3.18). The sorted fish are then deposited into colour-coded buckets, each filled with ice to preserve freshness, as they await the next processing stage. This streamlined setup ensures that every fish is handled consistently and meets quality standards as it moves through the production line.

Figure 3.18
High-Tech Fish Sorting



Note: A Photo taken of fish being sorted via a high-tech cveyor system (Author, 2024).

Figure 3.19
Organised Fish Products



Note: A Photo taken of the fish after being sorted each within a labeled container (Author, 2024).

04

After sorting, the filleting process (Step 04) is a labour-intensive and meticulously organised phase where fish are expertly filleted along modular conveyor or belts. As shown in Figure 3.19, this stage is characterised by a high density of workers systematically positioned along the production line. Each individual performs precise cuts to remove bones and create clean fillets, all while the conveyor system continuously moves the fish forward, enabling an efficient and streamlined workflow.

Modular belt conveyors are central to this step, as they facilitate a smooth transition of each batch from one workstation to the next, reducing handling time and minimising physical strain for workers. The setup exemplifies an industrial choreography, where skilled labour meets mechanical assistance, reinforcing production efficiency and quality control. This system enhances productivity and aligns with hygiene and safety standards essential to maintaining the freshness and integrity of each fillet throughout the process.

Figure 3.20
A Series of Production Lines.



Note: A Photo taken showing the scale of the production lines located in the filleting section of the building (Author, 2024).

05

After the filleting process, Step 05 involves sorting the fillets by size and quality. Workers along another production line (see Figure 3.22) inspect each fillet at this stage to ensure consistency and adherence to quality standards. The fillets are carefully measured and assessed for any remaining bones, skin imperfections, or signs of damage. Once inspected, they are sorted according to size and quality criteria established by the processing facility, with each category directed to its respective packaging or further processing line.



06

Following the sorting process, Step 06 is the crucial phase of freezing, where the sorted fillets are flash-frozen to maintain their peak quality. Figure 3.23 shows the fresh fillets before entering the freezing machine, showcasing their natural, unfrozen state. The flash-freezing process uses industrial machinery that rapidly reduces the temperature, preserving the fillet's texture, moisture, and flavour by preventing the formation of large ice crystals that can damage cell structure. Upon exiting the machine, as shown in Figure 3.24, the fillets have undergone this rapid freezing, appearing solidified and with a light frost.



07

Step 07 focuses on carefully packaging the frozen fish fillets, conducted within a cold, climate-controlled room to preserve product quality. Here, the fillets are portioned, weighed, and sealed in durable packaging, ensuring freshness during transportation. The room's controlled environment minimises the risk of temperature fluctuations, crucial for maintaining the high standards set for the fish products. Once packaged, the products are neatly stacked on pallets and ready to be moved to the export zone, as illustrated in Figure 3.25.

Additionally, Figure 3.26 highlights a presentation table showcasing various fish products, demonstrating the range and quality the facility provides. This phase exemplifies the meticulous attention to quality control from initial unloading to final packaging, reinforcing the facility's commitment to delivering premium seafood products to local and international markets.



08

The exporting phase marks the final step in the fish processing operation. The packaged products are loaded into cold storage containers to maintain their quality during transit. Located alongside the building, these large containers are set up to be efficiently filled with fish products directly from the interior of the export warehouse. Figure 2.27 illustrates the cold storage containers aligned along the building, ready to be loaded and transported to various destinations.



+ ANALYZING THE BUILDING PROGRAMME

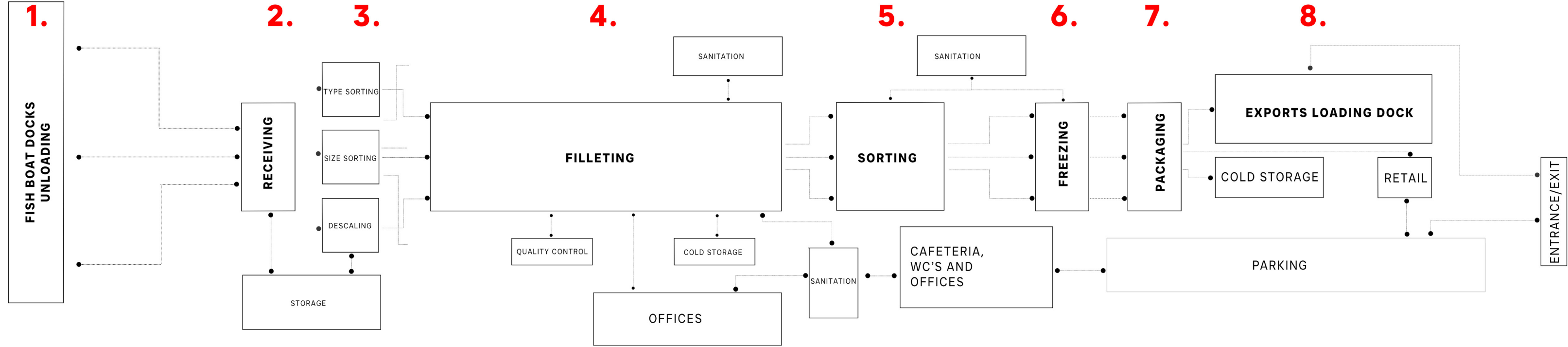


Figure 3.29
Seaworks Fish Processing Facility from Above.

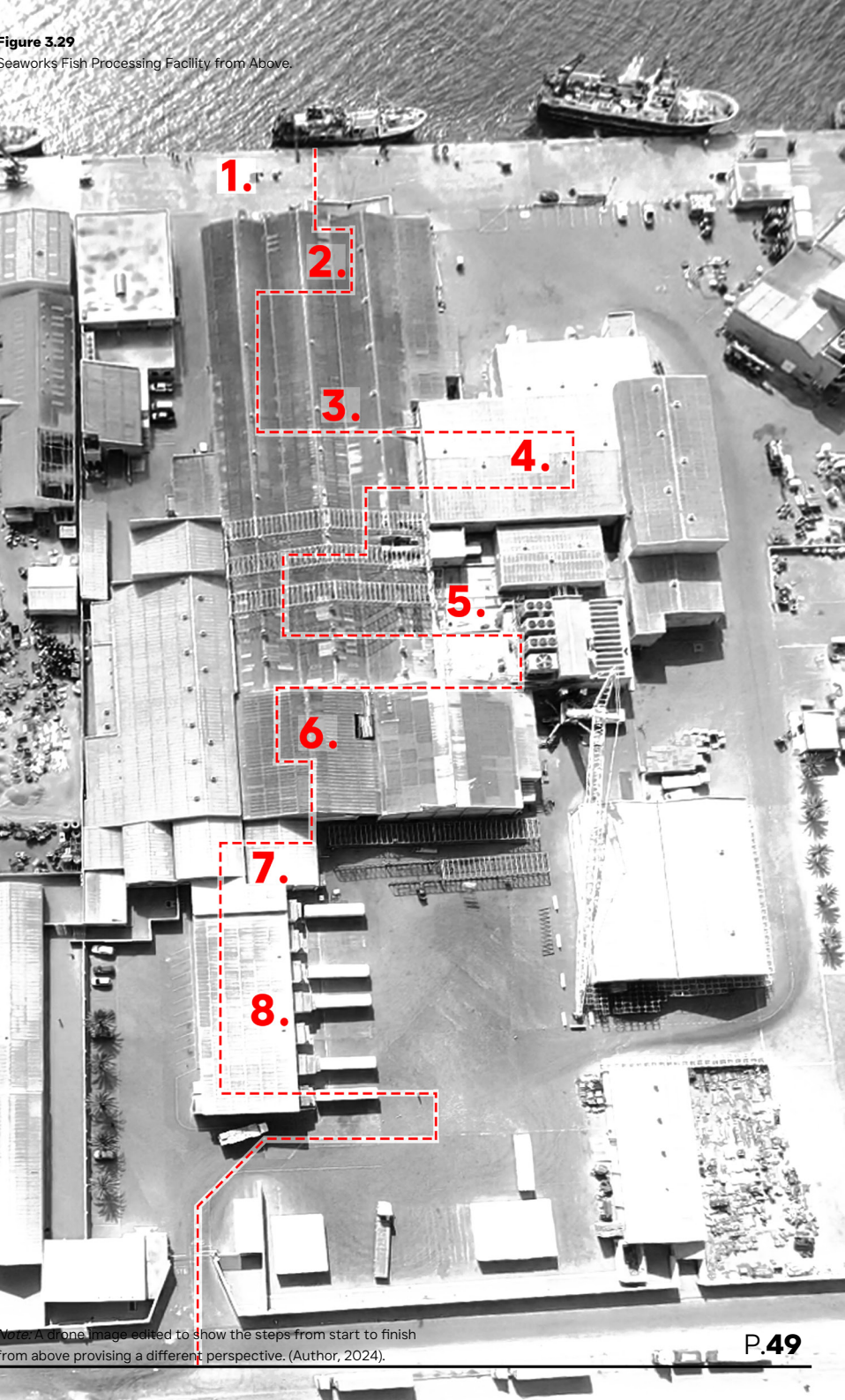


Figure 3.28
Process Timeline

Note: A timeline showcasing photographs taken from start to finish documenting my visit to Seaworks. (Author, 2024).



Note: A drone image edited to show the steps from start to finish from above providing a different perspective. (Author, 2024).

+ **ALTERNATIVE SITE ANALYSIS**

BEING **[CAUGHT]** IN THE PROCESS OF BAIT MAKING.

In this study, I explore the relationship between creator and creation through a device resembling a fish trap, central to my thesis on the poetic journey along the Lagoon Promenade of Walvis Bay. With fishing lines attached to my arms and pens to fishing lures, the device draws abstract patterns, embodying the sympathetic process. Rooted in a poetic post-phenomenology, the study focuses on the ontological significance of this device, capturing the essence of industrial topophilia. As Verbeek (2011) discusses, “Artifacts are not neutral intermediaries but actively shape human experiences,” reflecting the device’s role in connecting the industrial port and urban town, evoking memory and emotion, and fostering urban cohesion. Objects and tools we use daily do more than serve as passive conduits for our actions. Instead, these artefacts actively shape how we perceive, interact with, and understand the world around us.

Poiesisphilia

In the context of my thesis on the Lagoon Promenade of Walvis Bay, creating a device transforms the process into a moment of measuring. The device—a fish trap with fishing lines connected to my arms and pens attached to fishing lures—serves as a tool to draw beings from there into nearness, participating in unpredictable and abstract ways. This device safeguards against imposing my own will, ensuring that the process remains a revelation rather than an imposition. By constructing this device, I envision conducting an on-site study, illuminating the problem statement, and revealing the site as a region of concern. This approach embodies poiesisphilia, fostering a deep, empathetic connection to the site’s unique industrial and emotional characteristics. The device facilitates a poetic and insightful exploration, transforming measuring into an engaging and resonant interaction with the environment.

Sympoiesis

To achieve symbiosis in my study, I designed a fish trap with fishing lines attached to my arms and pens connected to fishing lures, allowing the site to participate actively in the creative process. As I built a bait, the device responded to my movements, translating them into abstract patterns drawn. This interaction embodied the idea of symbiosis, where the site and I co-created the outcome rather than imposing a predetermined form.

Making sense

By using the device, I allowed the process of bait-making to influence and shape the creative outcome. This approach highlighted the active role that [place] and [context] play in architectural design, moving beyond traditional metrics to embrace a more poetic, ontological understanding.

The patterns generated by the device captured the essence of the site’s unique character, providing a visual and experiential narrative. This process of symphy-sis—co-creation with the site—offers a new way of thinking about architectural design, where the environment is not just a backdrop or silhouette but an active participant in shaping spaces that resonate with those who inhabit them.

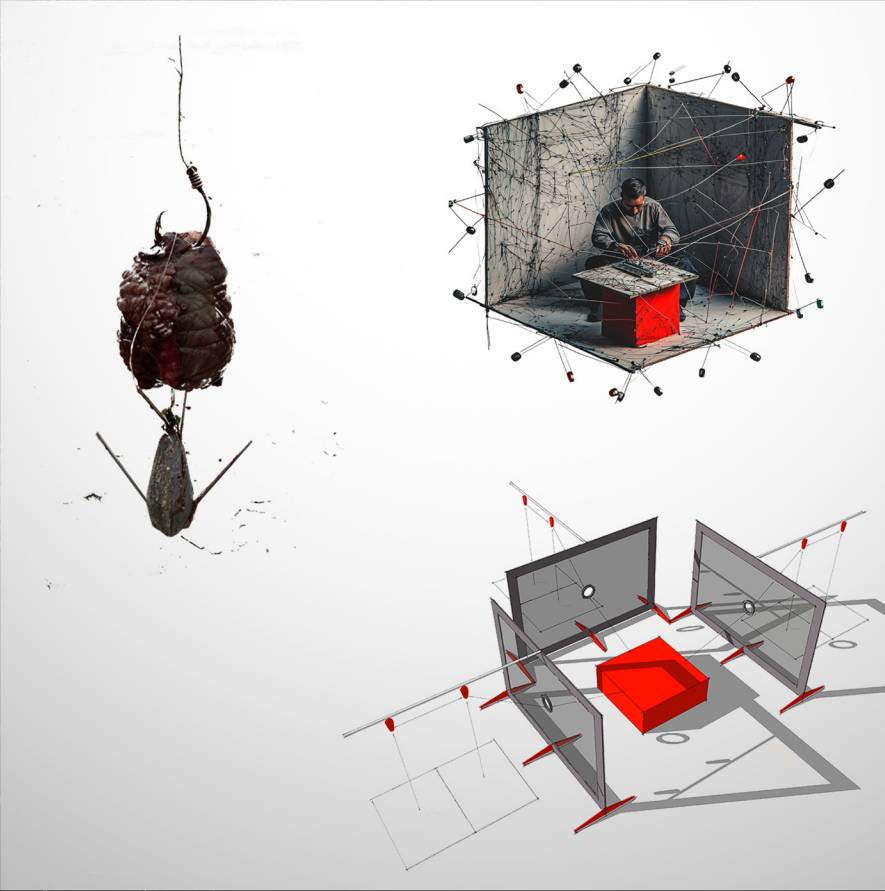
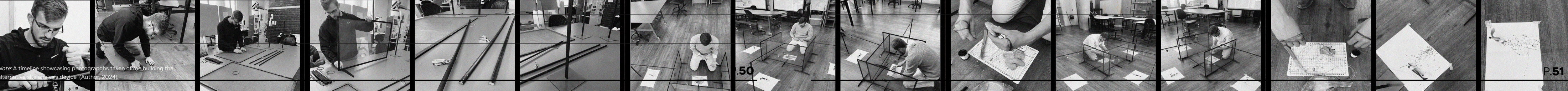


Figure 3.30
Making the Device



Note: A timeline showcasing photographs taken of me building the alternative site analysis device (Author, 2024).

+ CONCLUSION

In conclusion, the site analysis chapter offers a comprehensive understanding of Walvis Bay’s unique environmental, cultural, and economic context, which is crucial for shaping a design that aligns with this project's practical and poetic goals. Through an in-depth study of the site, the analysis highlights the challenges and oppertunities the focus area for the porposed design has to offer. Additionally, the town’s rich industrial heritage and role as a fishing hub under-score the need for a design that respects and reflects its identity.

The spatial organisation, with recreation nodes, tourist centres, and industrial zones, has guided decisions about site integration, orientation, and public accessibility. Each element analysed—from the waterfront views to local circulation patterns—serves as a critical component in designing a structure that ful-fils functional requirements and reinforces Walvis Bay’s unique character and community connectivity. This analysis provides a solid foundation for a site-re-sponsive design that enhances urban cohesion and cultural relevance, ensuring the project aligns seamlessly with its environment and purpose.



04

+ NARRATING PRECEDENTS

+ INTRODUCTION

In this chapter, I delve into the analysis of the three significant precedent studies that impact the fish market design located along the Lagoon Promenade of Walvis Bay, as developed from the historiography of basing design on precedent. The analysis is presented under three themes: form, program, and technical, all of which provide essential information for design development. The first precedent is on form, and this one uses the artistic works of Iskra Johnson. The industrial aesthetics and rhythmic forms in her artworks help determine the architectural form of the fish market.

The third precedent investigates programmatic elements related to Östermalm's Temporary Market Hall, designed by Tengbom. This precedent informs how a market area can be utilised regarding the arrangement of spaces and the activities performed in a market area. The precedent study's lessons on flexibility and varietal efficiency in space usage will inform the plan of the proposed fish market to serve business purposes and society's needs.

The third of these precedents dives into technical resolution, devoted to Thomas Rowntree's transport logistics market. The study takes innovative approaches to managing logistics and the movement of goods and seeks technical solutions that can be applied to improve the operational mode of the fish market. These precedents contribute to a comprehensive design perspective encompassing aesthetic, practical, and technological aspects to ensure a seamless and effective architectural design linked to this thesis's theoretical stance and project brief.

+ PRECEDENT 01

FORM

The industrial imagery by Iskra Fine Art offers a compelling case study for my architectural thesis, which explores the poetics of space, architectural metaphor, and sensory experiences within Walvis Bay's urban fabric. Iskra Johnson's artistic practices, shaped by her background in Asian calligraphy and Western design, resonate with my goal of creating an architecture deeply intertwined with its surroundings to enhance urban cohesion between the port and the town.

Johnson's innovative approach to printmaking and mark-making, particularly in her construction site and urban street series, evokes themes of nostalgia, change, and the relationship between structure and emotion. These themes align with my vision of a fish market that embodies a poetic connection to Walvis Bay's industrial heritage, reflecting the town's identity and fostering a meaningful spatial experience for users.

The proposed architectural form for the fish market draws inspiration from Johnson's work's industrial aesthetics, particularly her exploration of tectonic elements and rhythmic patterns. This design approach mirrors the port's industrial essence, establishing a dynamic visual language that connects Walvis Bay's industrial port with its urban landscape. By integrating these visual textures, my project seeks a poetic resonance that celebrates the town's industrial character and nurtures a profound connection between people and place, enriching the "poetic journey" along the Lagoon Promenade.

Specifically, Figure 4 illustrates the rhythm in industrial structures, echoing the repetitive and ordered forms in the port's surroundings. Figure 4.2 captures a tower crane's mechanical movement and dynamic interplay, embodying the motion integral to the port's industrial activities. Finally, Figure 4.3 emphasises the unique form, scale, and proportion of the tower crane within the landscape, underscoring the tension between the structure and the vast open space that defines Walvis Bay's industrial backdrop. These elements collectively inform the architectural language of my design, blending industrial topophilia with poetic spatial experiences.

Figure 4
Industrial Rhythm.



Note: An illustration highlighting rhythm and order found within port cities. (Johnson, 2024: online, edited by Author).

Figure 4.2
Mechanical Movement of Tower Cranes



Note: An illustration highlighting the dynamic moving sections of tower cranes (Johnson, 2024: online, edited by Author).

Figure 4.3
Scale and Proportion.



Note: An illustration highlighting scale and proportion of tower cranes in relation to their surroundings (Johnson, 2024: online, edited by Author).

+ PRECEDENT 02

PROGRAMME

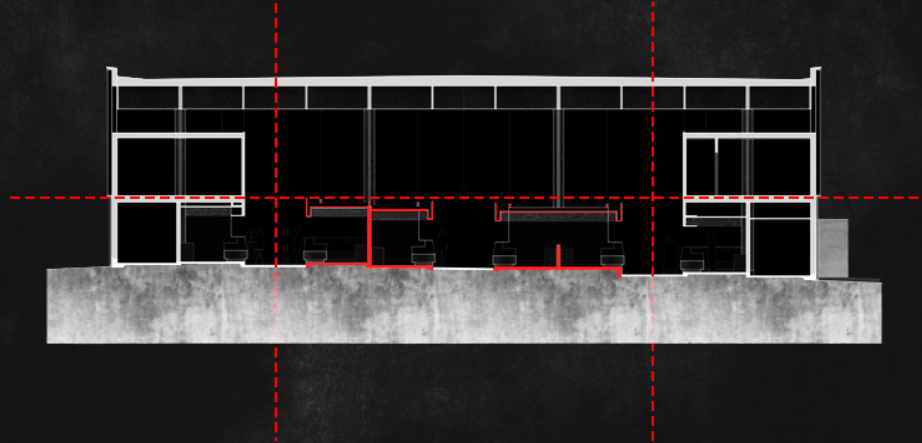
The Östermalm Market Hall, initially built in 1888 in Stockholm, exemplifies a well-executed urban intervention that modernises a traditional public market space. This intervention was necessitated by health regulations that required the historic Market Hall's renovation, during which a temporary market structure was created by Tengbom Architects, ensuring continuity of public and economic activity. Constructed with sustainable materials, such as pine battens, translucent polycarbonate sheeting, and glazing, the temporary structure embodies an environmentally conscious and aesthetically engaging contemporary design approach. The building houses market stalls, eateries, and storage spaces on the primary level, while essential facilities, including kitchens and technical areas, occupy intermediate floors. Figure 4.4 illustrates the prominent axial walkway lined with market stalls, promoting user flow and engagement from all square sides.

The architectural design demonstrates spatial efficiency and functionality, with Figure 4.6 showing a plan layout where markets occupy the central space and support areas are arranged around the periphery. Additionally, Figure 4.5 depicts a sectional view of the structure, where the ground floor is dedicated to market activities, while the upper level provides views over the bustling space below. This design strategy, allowing unrestricted access from all sides, has invigorated public engagement and re-established the square's role as a dynamic urban and social centre. This precedent informs my building program by underscoring the importance of flexible, accessible design in enhancing community interaction and revitalising public spaces, even within temporary or transitional structures.



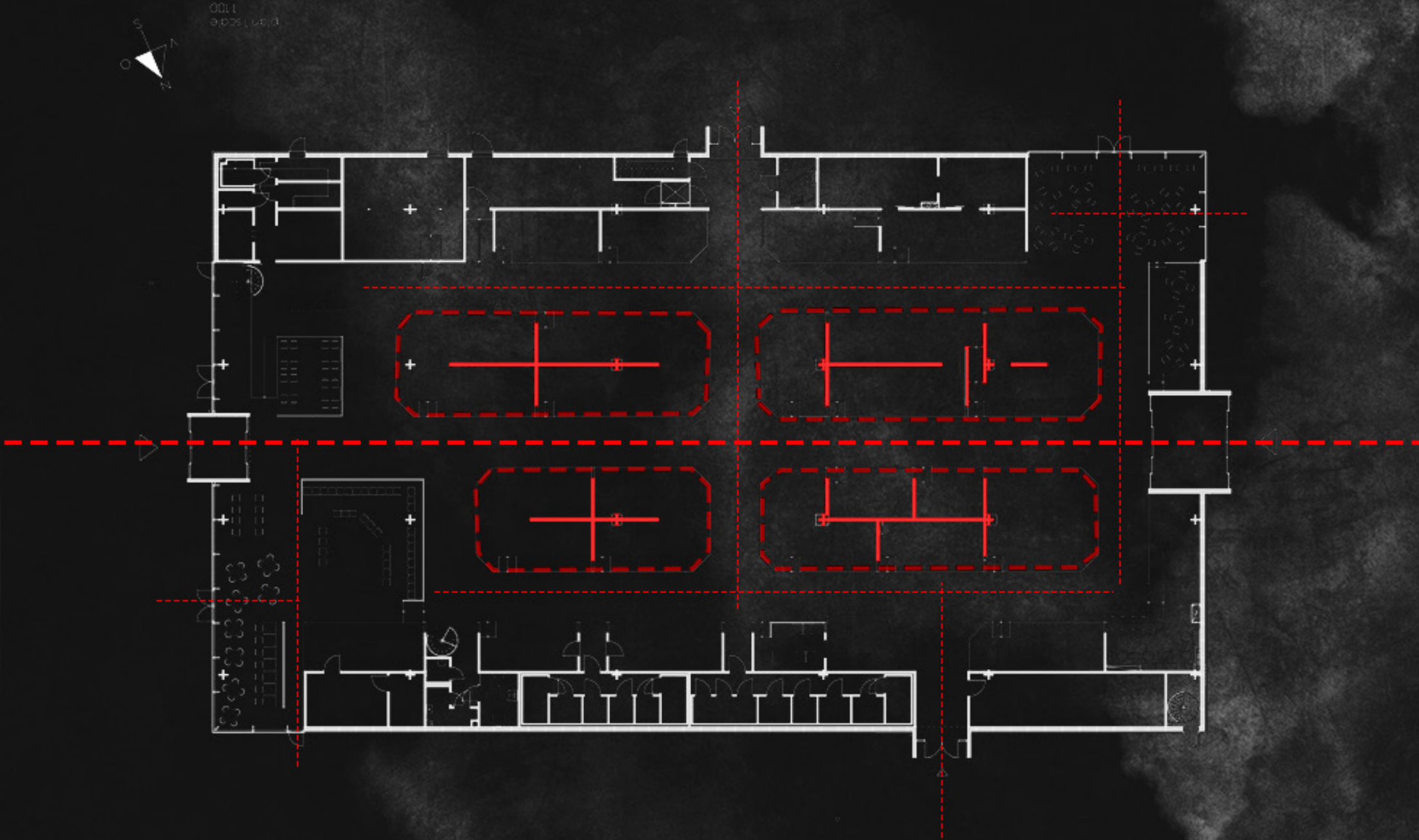
Note: An Photograph of the walkways along the markets (Gerlach, 2016: online, edited by Author).

Figure 4.5
Building Section



Note: Section through the building showing the relationship between different spaces of the building (Gerlach, 2016: online, edited by Author).

Figure 4.6
Building Plan



Note: Building Plan representing the relationship between spaces (Gerlach, 2016: online, edited by Author).

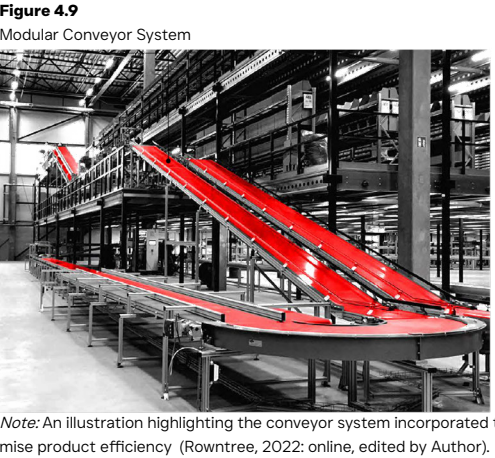
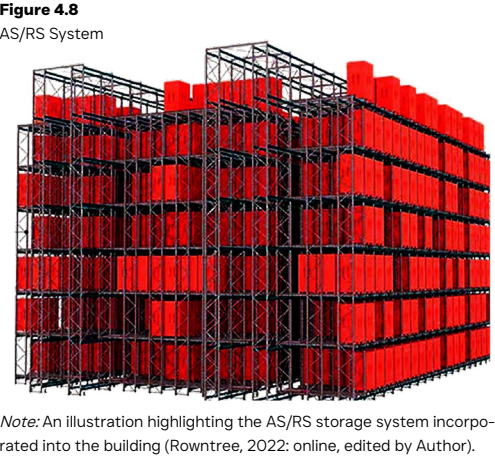
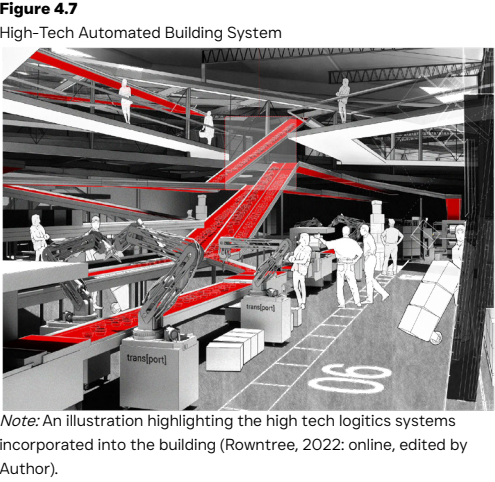
+ PRECEDENT 03

TECH

The Transport Hub of Thomas Rowntree is yet another instance of blending modern logistics solutions into the architecture and construction of the building, especially concerning the automated Conveyors and AS/RS systems. Advanced conveyor systems also ensure that goods can be transported across the facility with as little manual effort as possible, which also helps to increase the throughput as products can be moved from one stage of the process to another more easily. This arrangement, shown in Figure 4.8, describes how engineered systems can be integrated into the process workflows in industrial activities to enhance their efficiency. This is consistent with the features of effective logistics, as this concept has significantly advanced modern resource management.

Also, the automated systems present in the warehouse, shown in Figure 4.7, optimise inventory management and allow automated sortation and stacking tasks. These robotic systems significantly increase logistics speed and accuracy by reducing the dependence on human involvement to perform logistics tasks and ensure effective handling. This deliberate emphasis on automation is in line with modern trends. It has a close relationship with the context of the building, its industrial nature, and the requirements for advanced technologies. Key lessons can be drawn from the precedent towards creating a more effective and efficient logistics system for the proposed fish market in the following chapters. Incorporating such logistic systems with enhanced technical complexity into my design will link theory with design. In this instance, the advanced systems develop an atmosphere where visitors and users interact with industrial processes around them as an integrated part of their sensory experience by automating these functions. This multidimensional perspective helps enhance the relationship between people and the logistics space, which correlates with the phenomenological perspective.

Figure 4.10 illustrates a wider range of areas of his design strategy. It illustrates the site plan and the process flow, showing how all goods are received, processed, and packed for export in a modern logistics centre without unnecessary movement.



- 1. Container vessel arrives.
- 2. Unloading bay.
- 3. Storage.
- 4. Products are fed into production lines for processing.
- 5. Some of the goods are transported into food markets.
- 6. Processed goods storage.
- 7. Export ready storage.
- 8. Outbounded Containers Containers transported via truck to train.

+ CONCLUSION

In concluding Chapter 04, the precedent analysis has been instrumental in shaping a framework for understanding how existing architectural solutions can inform Walvis Bay’s fish market design. Examining comparable projects has offered insights into effective responses to environmental challenges, materiality choices, and structural strategies that align with the site’s unique coastal and industrial context. Furthermore, these precedents have demonstrated how architecture can embody local culture and function as a community asset, enhancing engagement while fostering economic and cultural resonance.

Each precedent analysed provided examples of integrating practical solutions with design philosophies that emphasise user experience, environmental adaptation, and the poetic use of space. These observations have not only informed the technical aspects of the design—such as spatial organisation and environmental resilience—but have also reinforced the conceptual underpinnings of poetic post-phenomenology, which seeks to deepen the sensory and emotional connection between people and their built environment. The precedent analysis established a solid foundation for a design response to Walvis Bay’s needs and reflects broader architectural discourse on sustainable and meaningful spaces.



05

+ CONCEPTUAL APPROACH

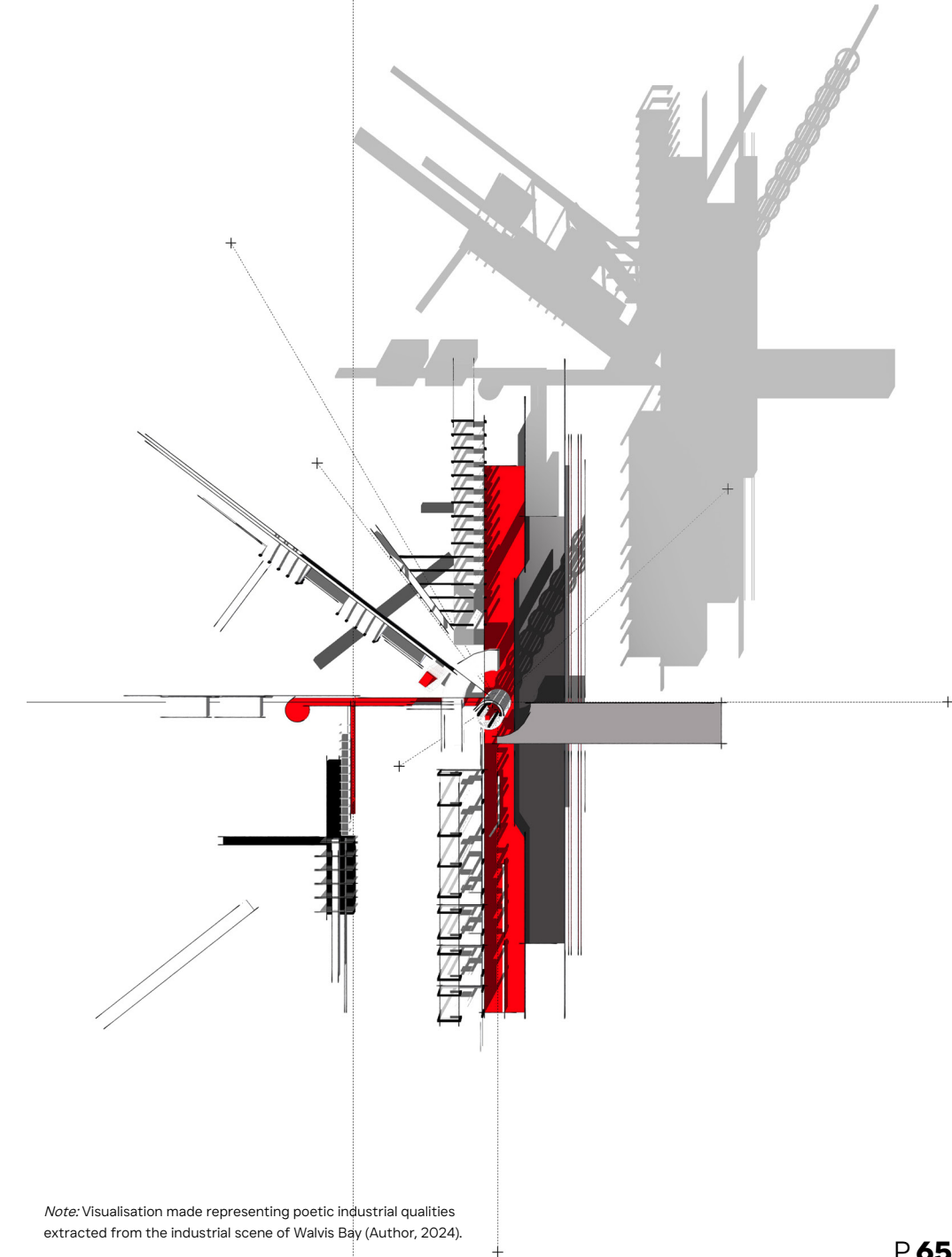
+ INTRODUCTION

This chapter delves into the conceptual framework underpinning the architectural design of the fish market, illustrating how abstract interpretations of industrial poetics inform the project's direction (see Figure 5). The first section is dedicated to anchoring the industrial poetics, wherein two abstract models were meticulously sketched and designed. These models serve as a foundation, capturing the essence of industrial aesthetics and translating them into architectural expressions.

Following this exploration, the chapter thoroughly examines three core concepts that guide the design process. The first concept, Understanding the Industrial Machine, investigates the mechanised aspects of industrial infrastructure and how these elements can be synthesised into architectural form. The second concept, The Production Line, examines the continuous, rhythmic nature of production systems, exploring how this dynamic can influence spatial organisation and functionality. Finally, resonant tectonics focus on revealing and integrating the unique tectonic characteristics of Walvis Bay into the design, ensuring that the architecture resonates with its geographical and industrial context.

Through these conceptual investigations, the chapter aims to bridge the gap between theoretical frameworks and practical design, offering a cohesive vision that aligns with the project's objectives while celebrating the industrial heritage of Walvis Bay.

Figure 5
Industrial Poetics.



Note: Visualisation made representing poetic industrial qualities extracted from the industrial scene of Walvis Bay (Author, 2024).

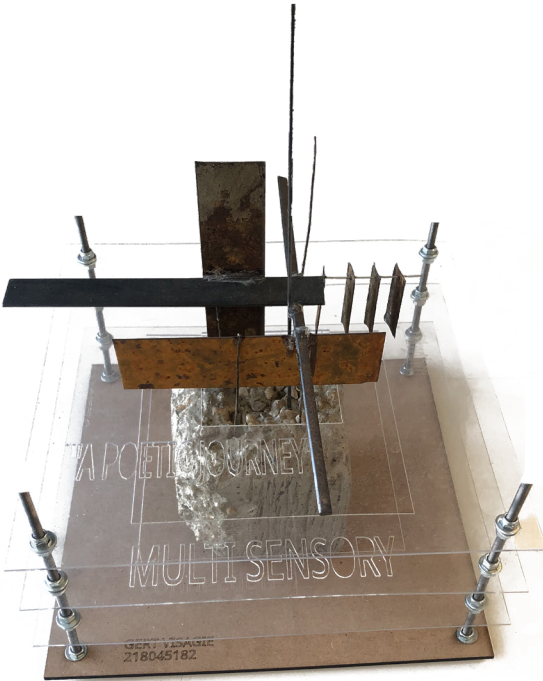
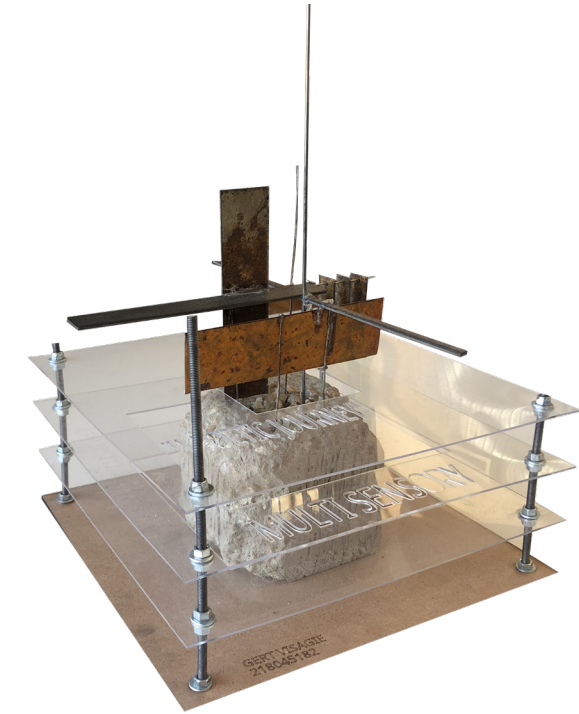
+ ANCHORING INDUSTRIAL POETICS

Casting the Net: Trawling Site- Specific Narratives

In Figure 5.2, an attempt is made to study the industrial poetics of Walvis Bay by building a model which conveys site-specific narratives in an abstract and textured manner. The model interprets the industrial character of Walvis Bay by employing rough textures to the surfaces, as though the bay is constantly subjected to rough coastal winds. This suggests that such textures depict the processes that have ‘weathered’ the industrial materials, giving the model a tactile representation of the town’s endurance against the forces of nature.

Rusted steel elements further tell a story by symbolising the natural corrosion of metals exposed to a salty, humid atmosphere, something familiar to the industrial landscape of Walvis Bay. Such choices anchor the audience's perception to a specific location and time, bringing the abstraction of the model back to the industrial landscape of Walvis Bay and its rhythms of use and decay. This way, the model accomplishes the abstraction of Walvis Bay’s rough features and pays tribute to its textures, materials and the strong character of the industrial landscape.

Figure 5.2
Touchstone model



Note: A touchstone model depicting site-specific narratives.
(Author, 2024).

Revealing the Industrial Silhouette of Walvis Bay

Figure 5.3
Industrial Silhouette of Walvis Bay.



The Namib dunes stretching along the periphery of this bustling port town. Walvis Bay gives one the feeling of being inside an urban oasis within the Namib desert.

Expressing the constant movement of goods being imported and exported via containers.

The backdrop of tower cranes upon entering the town dominating the scene.

Reflecting on the grid pattern urban layout of Walvis Bay. The grid patterns and order within the town was designed and constructed to improve the logistics and flow of goods.

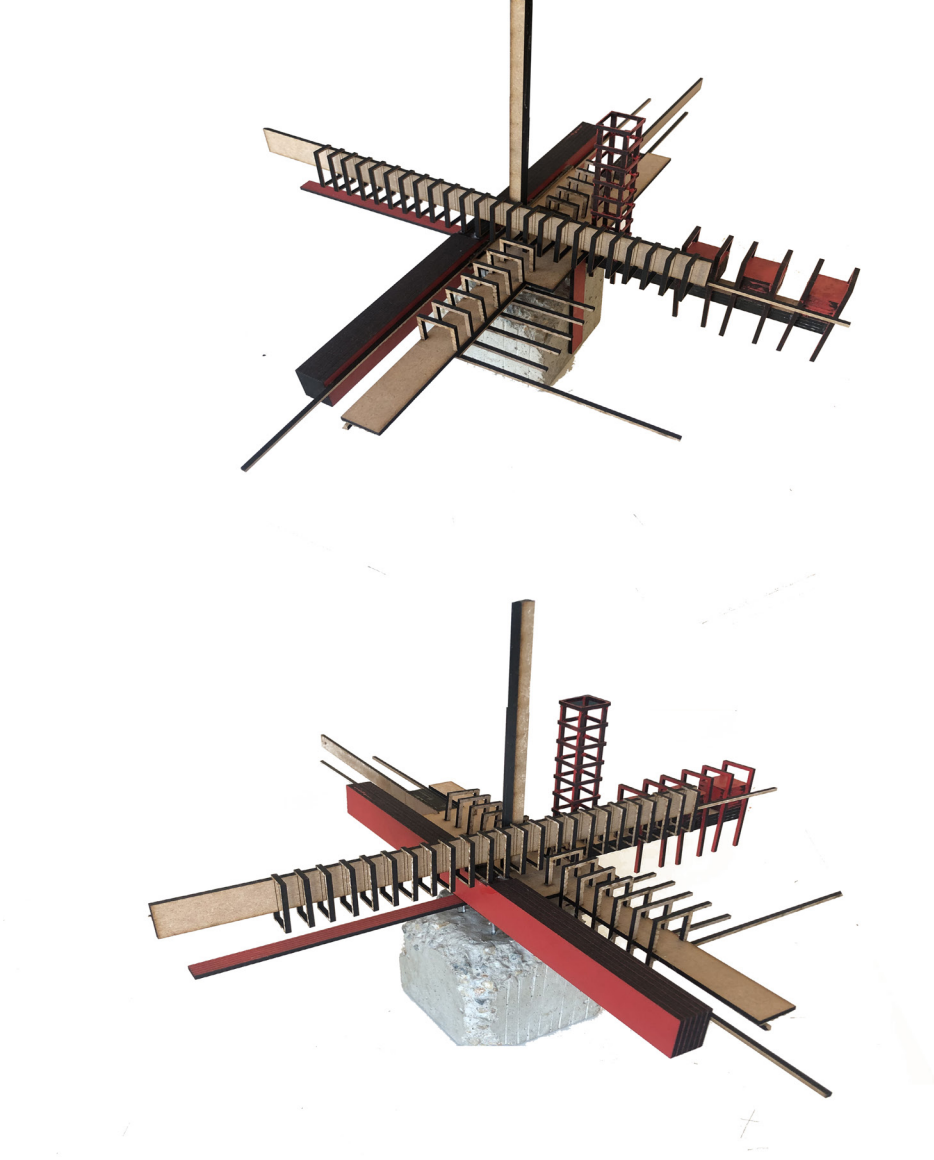
Note: A sketch made illustrating the identity and revealing the silhouette of Walvis Bay (Author, 2024).

Reeling the details: Synthesising industrial an Poetic Elements in Design

In developing Model Two, I synthesised architectural qualities that i have observed in Walvis Bay's industrial landscape, translating them into an abstract, poetic architectural form (Figure 5.4). This model draws from the rugged, utilitarian aesthetic of the town’s industrial scene, capturing the rhythm, repetition, and structure inherent in Walvis Bay's active port and maritime industries. By abstracting these industrial elements, the model expresses a sense of movement and raw materiality while embodying a tactile, poetic presence that speaks to the town’s identity.

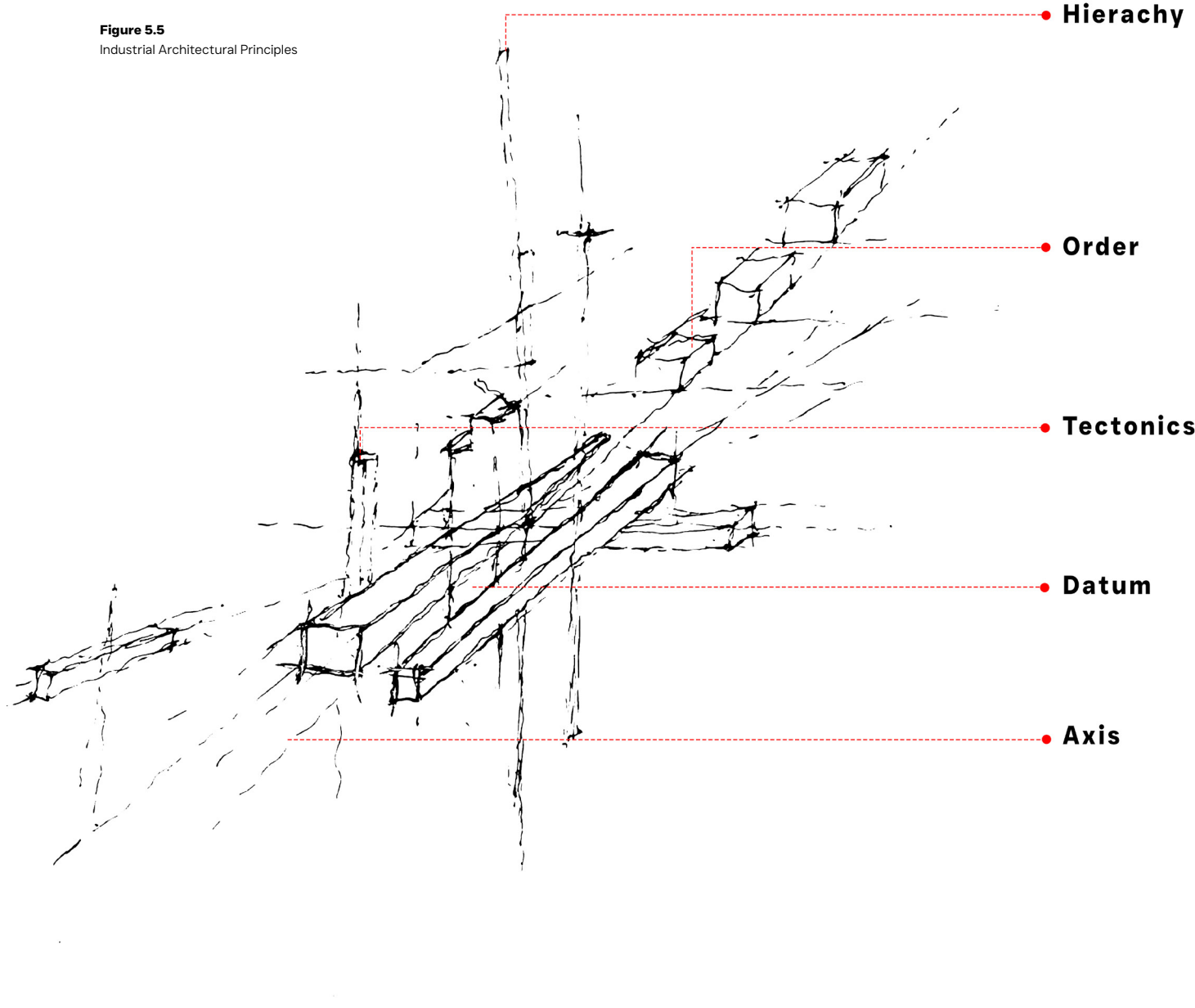
The foundation for Model Two was inspired by Figure 5.5, an initial sketch that explores the architectural principles extracted from the industrial setting of Walvis Bay. This sketch served as a conceptual framework, guiding the model's design by focusing on specific industrial characteristics—such as robust structural forms, repetitive linear elements, and textural contrasts—that evoke the physicality and the experience of Walvis Bay’s maritime activities. By analysing these principles, I developed the model (see Figure 5.4) that integrates industrial scale and proportion with a spatially immersive form, capturing the essence of industrial poetics.

Figure 5.4
Synthesizing Industrial Qualities.



Note: A model made synthesising the Industrial qualities extracted from the Industrial scene of Walvis Bay (Author, 2024).

Figure 5.5
Industrial Architectural Principles



Note: A sketch made of architectural principles extracted from Walvis Bay's Industrial scene (Author, 2024).

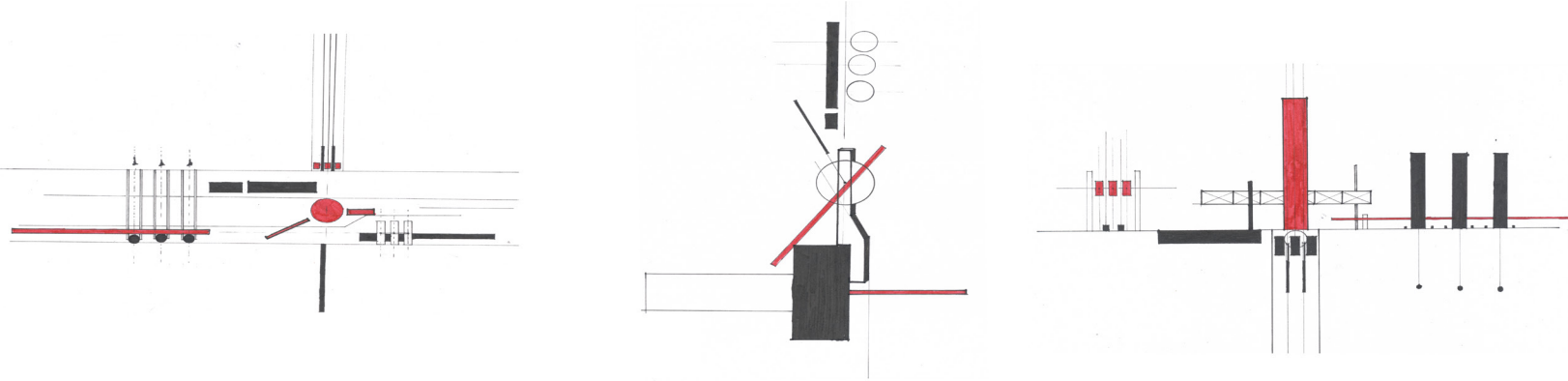
+ UNDERSTANDING THE INDUSTRIAL MACHINE

CONCEPT 01

I designed this model to dissect and display industrial machinery's inner workings, mirroring the port's processes. The concrete base and linear forms represent structural integrity and motion, akin to the conveyor belts and cranes seen in Walvis Bay's bustling port environment. Dynamic parts in the model emphasise movement and fluidity, capturing the repetitive, task-oriented motions of loading and transporting goods. This motion is not merely functional but also reflects the “withdrawal” of technology into the background, as Ihde (1993) described, where machines seamlessly become part of the environment and operate almost invisibly to support daily life.

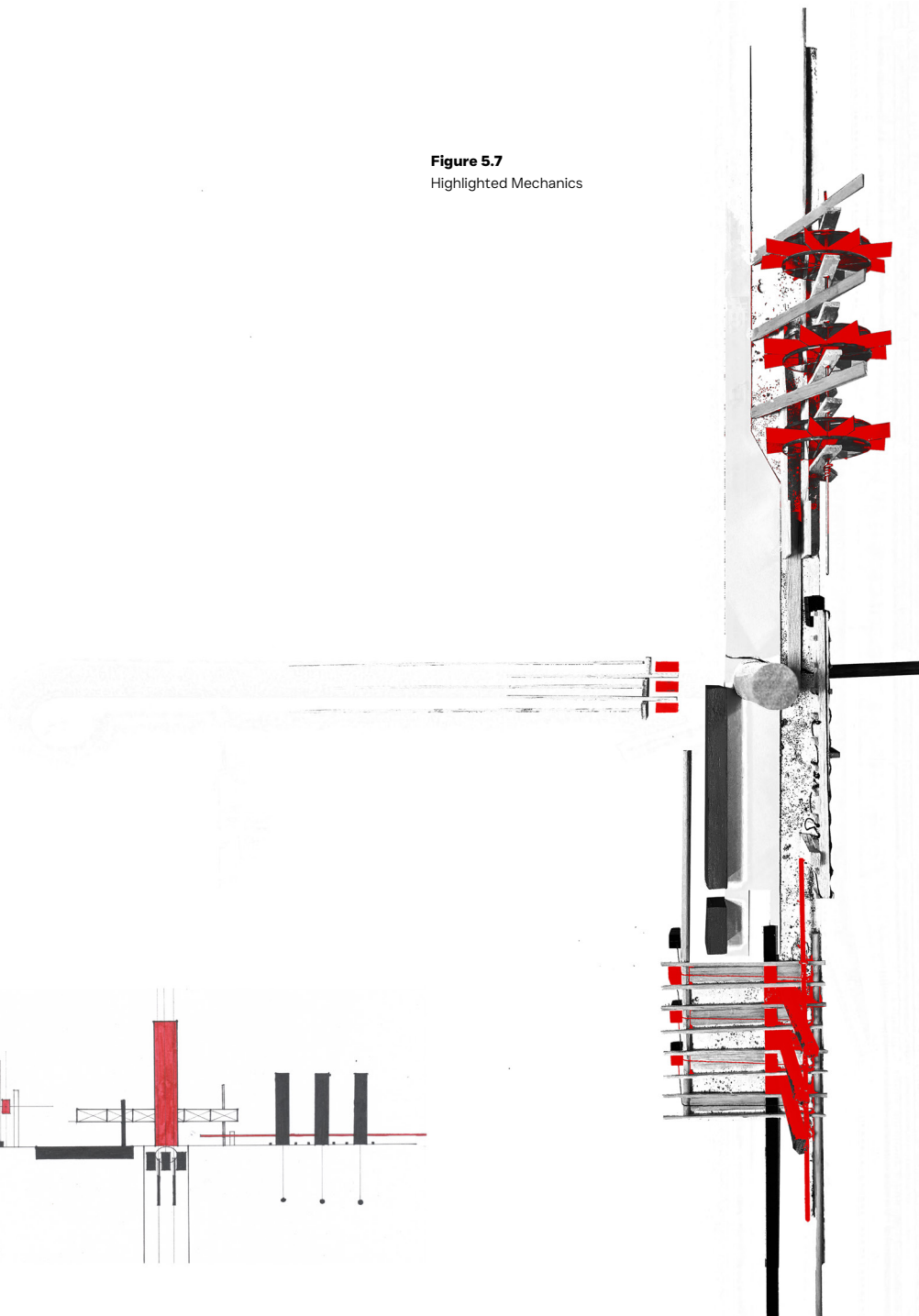
Each model component captures the physicality and modularity of port machinery, with parts that can pivot or slide, much like the mechanisms involved in loading and unloading cargo. The dynamic nature of these parts allows the model to mimic the flow of operations at a working port. This interactive quality engages viewers, who can perceive how the model captures the cyclical nature of port activity, in which items are caught, processed, and dispatched continuously. The forms create a sense of time and movement, evoking an industrial “poetry” where machines and architecture work in harmony, reflecting the utilitarian and transformative aspects of Walvis Bay's port environment.

Figure 5.6
The Process



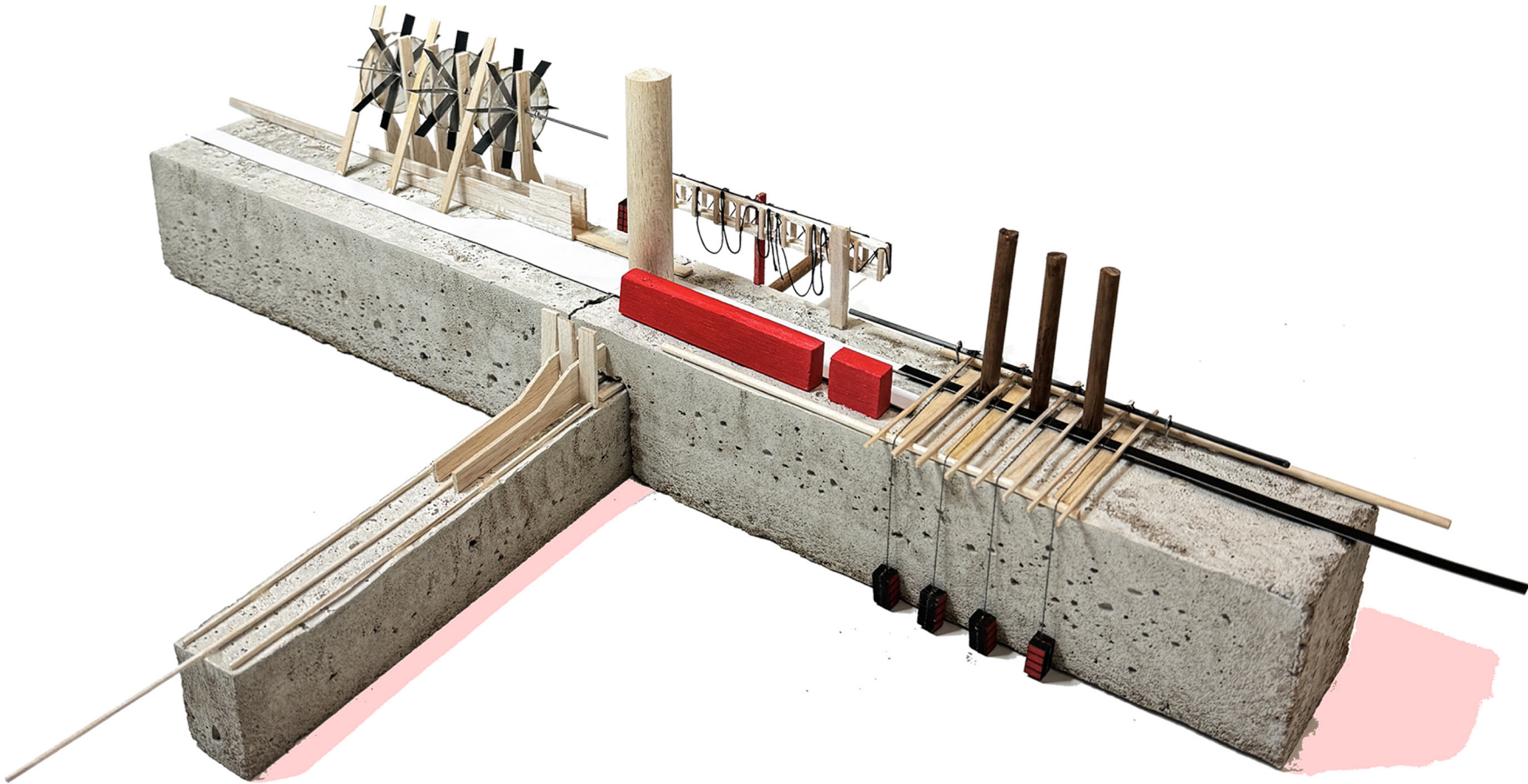
Note: Process sketches of the model (Author, 2024).

Figure 5.7
Highlighted Mechanics



Note: A top down view highlighting the mechanical elements of the model (Author, 2024).

Figure 5.8
Concept Model 01



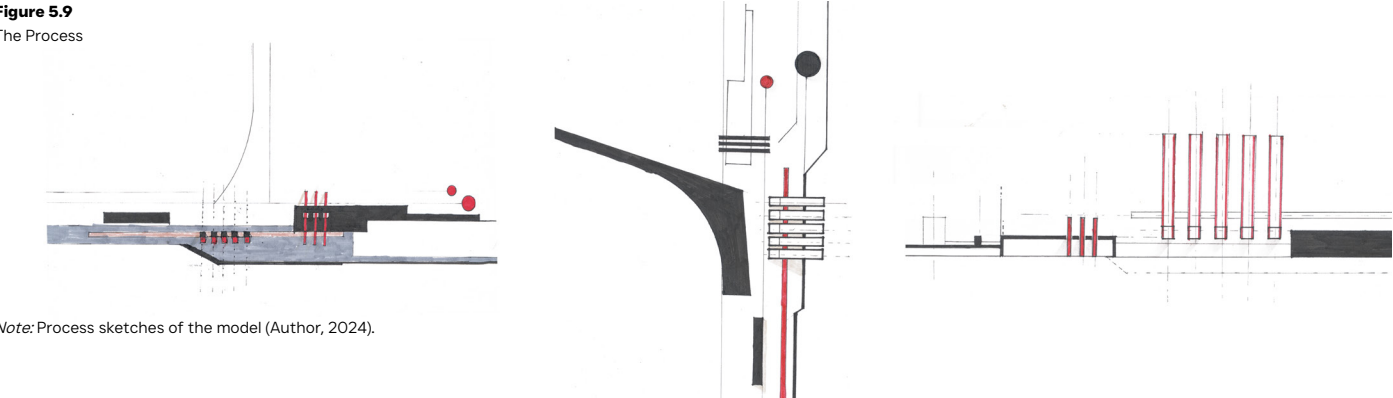
Note: An photograph showing concept model 01 (Author, 2024).

+ THE PRODUCTION LINE

CONCEPT 02

They are designed to visually capture the essence of the industrial processes integral to Walvis Bay's fishing and maritime culture. Using linear elements, structured sequences, and repetitive forms, the model evokes the systematic nature of a production line, much like the methods of processing fish in a bustling market setting. The concrete base, with its linear components extending outward, resembles the movement of fish along a conveyor belt, symbolising the catch as it is hauled in, sorted, and prepared for market. By organising elements along a single axis, the model emphasises the rhythm and flow of a working fish market, where efficiency, order, and the repetitive actions of filleting, cleaning, and packing define the space. The dynamic parts introduce a sense of motion, echoing the fishing process's constant activity and ongoing nature.

The sequential layout also reflects the journey from sea to market, capturing the transformation of raw fish into consumable products ready for sale. The design draws inspiration from the surrounding industrial landscape; the tower-like structures within the model mimic the top sections of the nearby tower cranes, rotated 90 degrees to emphasise a horizontal flow, much like the process of casting nets and reeling in catches. This rotation brings an industrial aesthetic into the fish market setting, grounding it within the port's visual language while reimagining the cranes as symbolic fish-cleaning tables or sorting stations. The modularity of the design reflects the adaptability required in fish markets, where spaces and structures shift to meet varying demands. This concept portrays a space alive with purpose, much like the port, continually casting, hauling, and reshaping its environment in response to the rhythms of industry and the sea.



Note: Process sketches of the model (Author, 2024).

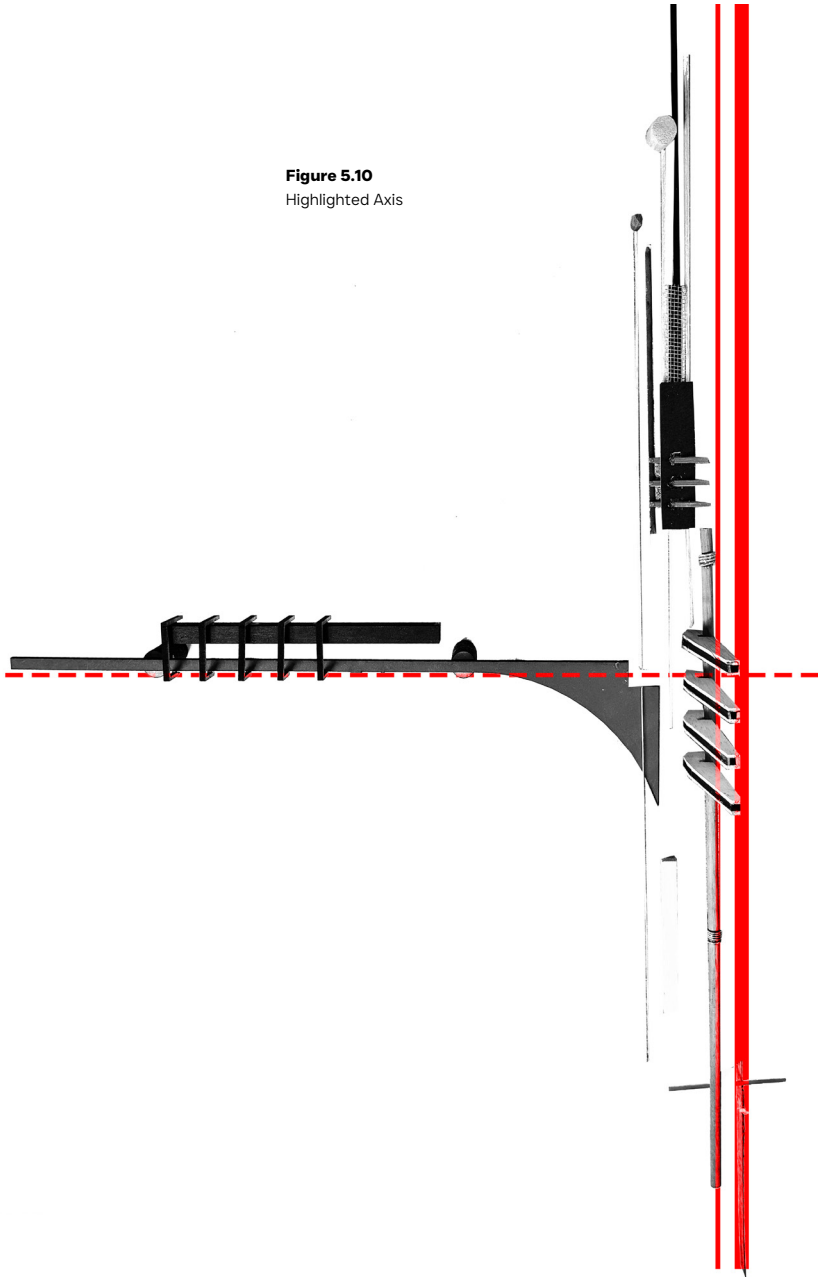


Figure 5.10
Highlighted Axis

Note: A top down view highlighting linear axis of concept model 02 (Author, 2024).

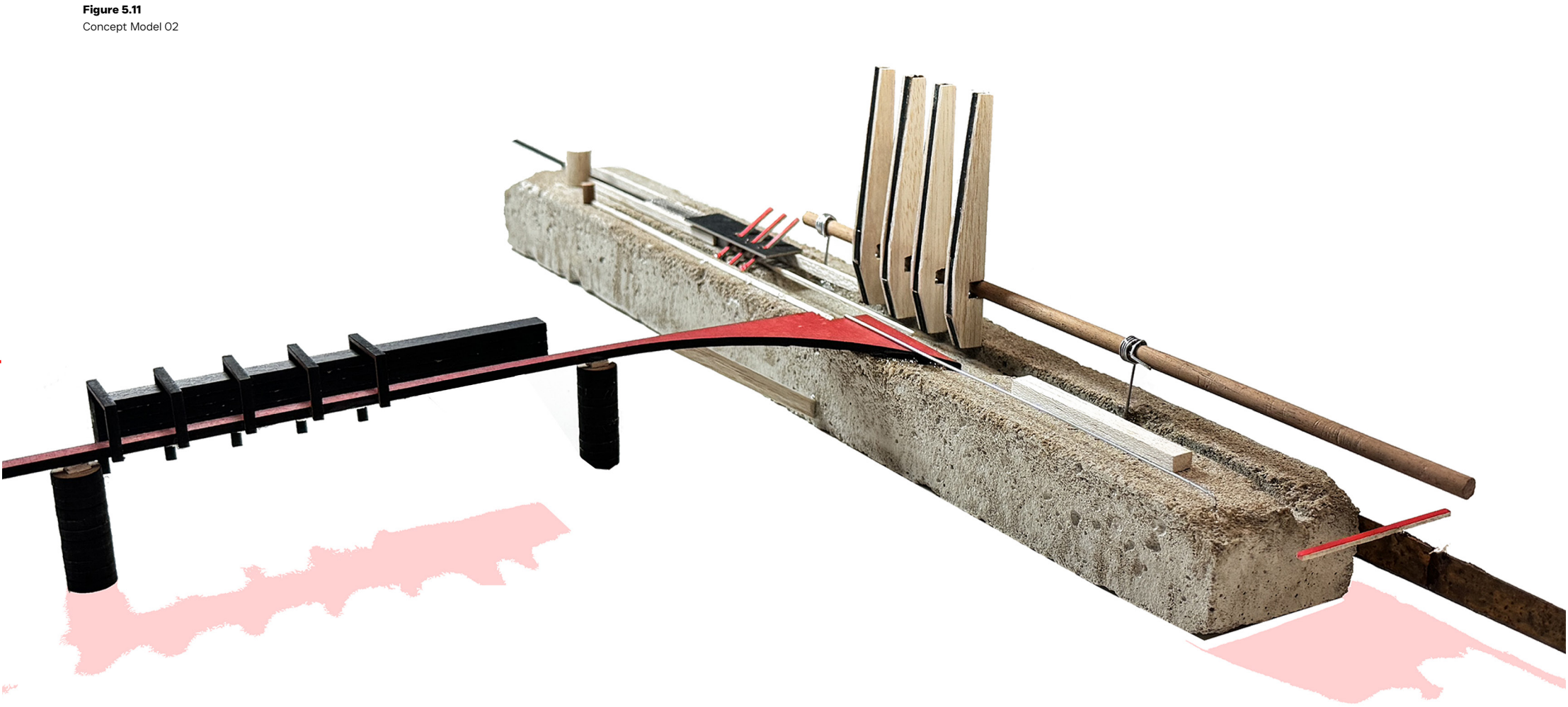


Figure 5.11
Concept Model 02

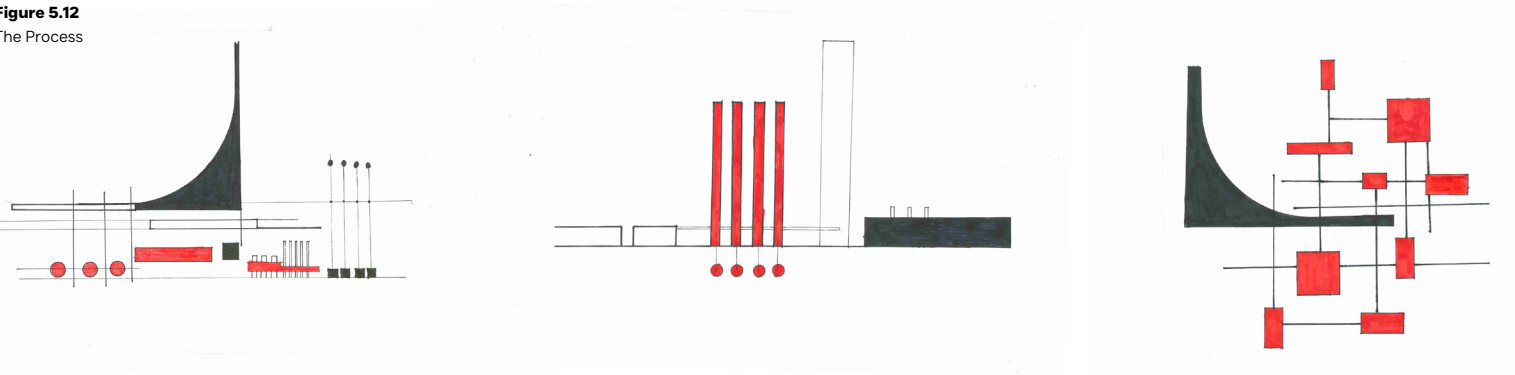
Note: An photograph showing concept model 02 (Author, 2024).

+ RESONANT TECTONICS: A POETIC UNVEILING OF WALVIS BAY’S INDUSTRIAL HERITAGE

CONCEPT 03

The concept “Resonant Tectonics: A Poetic Unveiling of Walvis Bay’s Industrial Soul” delves into the layered complexities of industrial forms, accentuating rhythm, structure, and symbolism within the urban landscape of Walvis Bay. The architectural composition uses intersecting lines, bold colour contrasts, and rhythmic patterns to evoke the site's industrial character and historical significance. The overlapping rods and panels reflect the structural framework of ports, symbolising the industrial rhythm that defines the landscape (Seamon, 2018). Moreover, the colour scheme, particularly the interplay between red, black, and neutral tones, captures industrial aesthetics' raw intensity and subtle refinement. This resonates with Gaston Bachelard's theory of poetic spaces, where the architecture transcends its physicality to evoke emotional and historical memories (Bachelard, 1994).

The concept’s spatial composition suggests a post-phenomenological approach, treating architecture as a dynamic, machine-like entity with the capacity to resonate with its users. This aligns with post-phenomenological perspectives, which interpret architectural forms as conduits for interaction between the physical environment and personal experience (Ash, 2016). The work transforms Walvis Bay’s industrial essence into an evocative architectural narrative, merging tectonic elements with poetic spatiality.



Note: Process sketches of the model (Author, 2024).

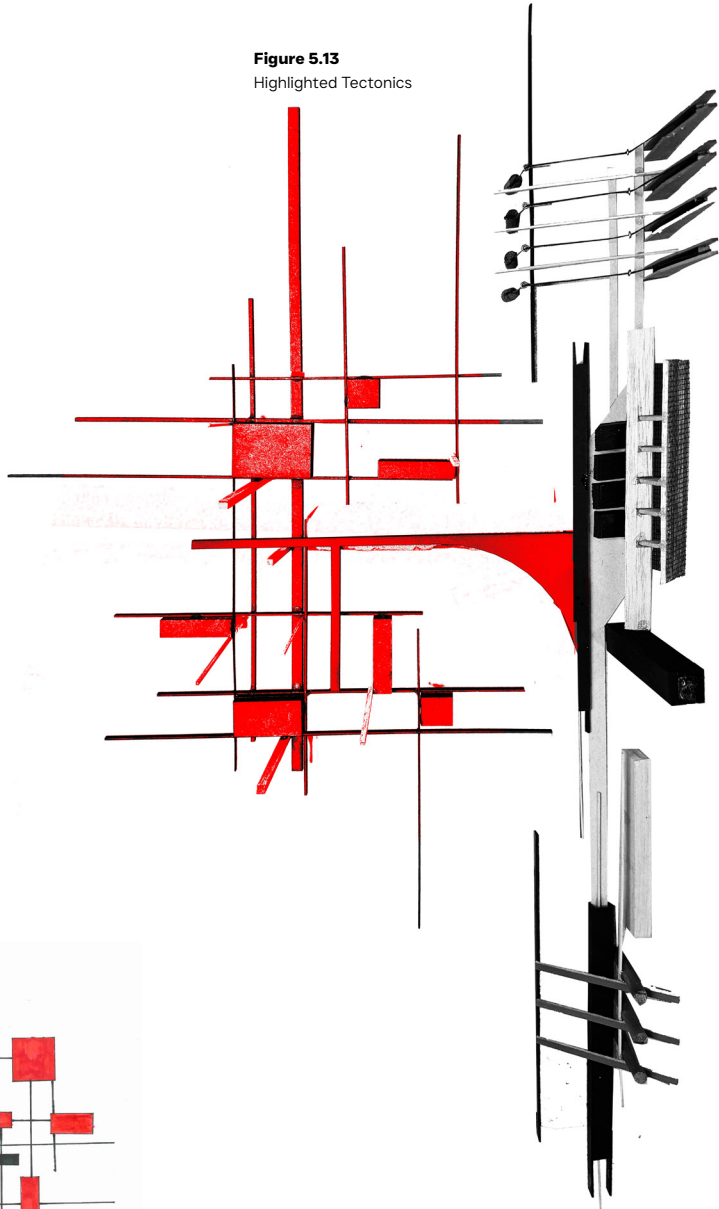
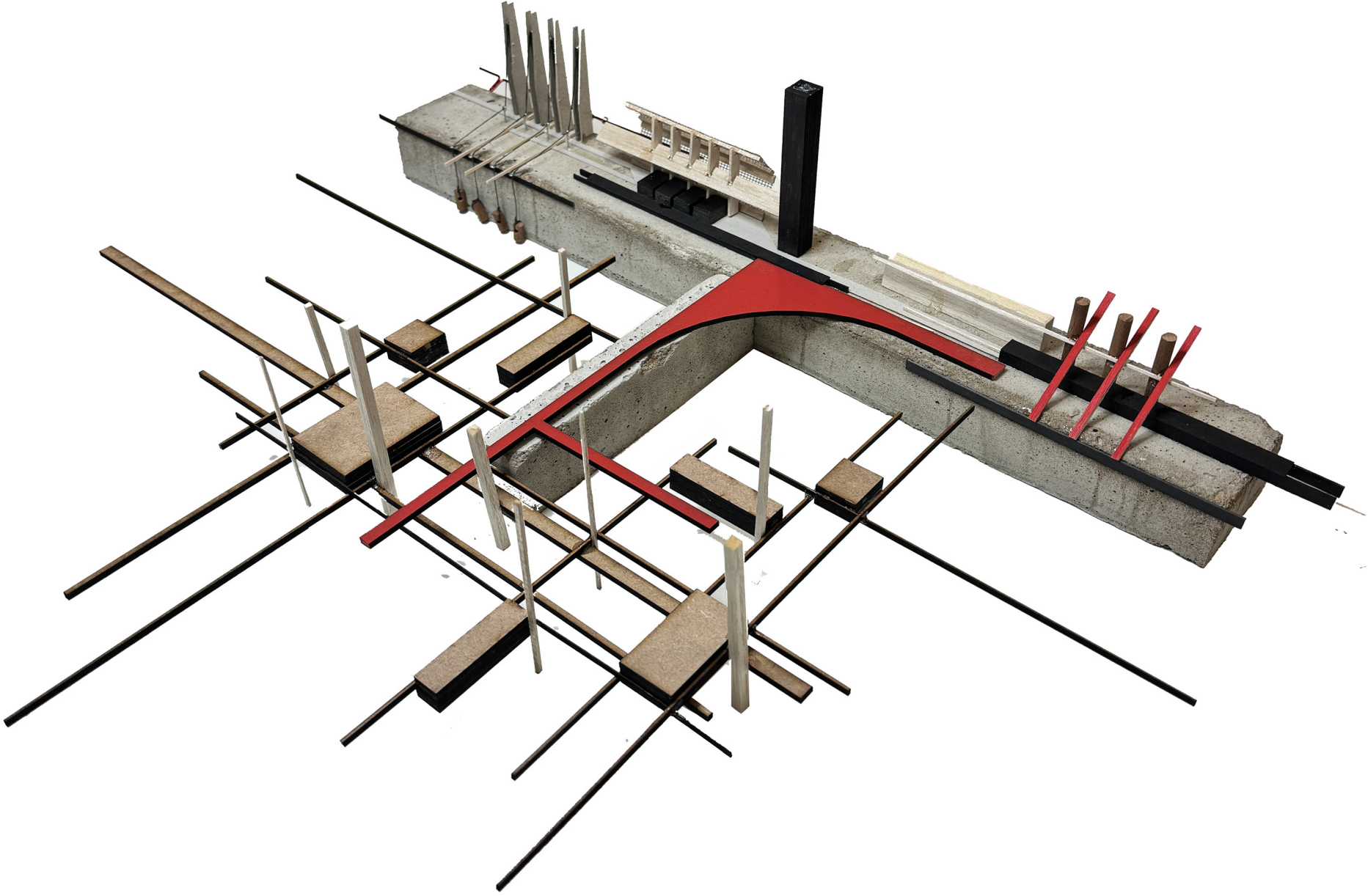


Figure 5.13
Highlighted Tectonics

Note: A top down view highlighting the tectonic elements of the model (Author, 2024).

Figure 5.14
Concept Model 03



Note: An photograph showing concept model 03 (Author, 2024).

+ CONCLUSION

Concluding Chapter 5, the conceptual approach provides a cohesive exploration of how industrial poetics is synthesised to inform the design development in the following chapter. By analysing Walvis Bay’s industrial landscape, this chapter lays a foundation for translating abstract qualities—such as rhythm, repetition, and materiality—into the physical structure. The initial models serve as a conceptual base, seen in Figure 5.2, where rough textures and weathered materials reflect the town’s resilience and the transformative effects of time and environment. These models informed the design’s direction by establishing a sensory connection to the industrial heritage of Walvis Bay, grounding the project in its cultural and physical contexts.

Each core concept—Understanding the Industrial Machine, The Production Line, and Resonant Tectonics—builds on this foundation, bringing together functional and poetic elements. This way, the model balances utility and sensory experience, as depicted in Figures 5.4 and 5.5. The final concept, resonance tectonics, aligns with theories of poetic post-phenomenology by emphasising the connection between space, user experience, and the industrial surroundings. Thus, Chapter 5 closes with a synthesised architectural vision that blends technical functionality with an immersive, poetic response to Walvis Bay’s unique industrial heritage.



06

+ DEVELOPING THE MACHINE

+ INTRODUCTION

The Design Development chapter comprehensively explores the architectural journey, translating the conceptual framework established in previous chapters into a tangible, spatial form. This chapter begins by establishing the design brief, which defines the proposed fish market's functional requirements, aesthetic goals, and broader objectives. Understanding the specific needs of the client and user groups—from local fish vendors to tourists and the local community—was essential in shaping a program that is both functional and resonant with Walvis Bay's fishing and industrial heritage.

The building programme then outlines the spatial requirements and functions of the market, considering various operational and experiential aspects drawn from both the market's commercial purposes and the theoretical underpinnings of poetic post-phenomenology. This program informed the synthesis model, a critical design milestone that integrates insights from the concept models developed in Chapter 5. Here, valuable architectural elements identified earlier—such as rhythm, materiality, and scale—are harmonised into a cohesive form that reflects both the project's aesthetic intentions and practical needs.

Progressing through the plan development, the spatial arrangements are refined to embody the desired dynamic interactions and poetic qualities. The design process is visualised through an evolving scale model at 1:1000, demonstrating the relationship between the proposed structure and the surrounding industrial landscape of Walvis Bay. Finally, the plan development phases (Take 01 and Take 02) show the iterative adjustments made to achieve the best alignment with the project's objectives, linking to the central theory. Here, the building's form begins to manifest an architectural language that celebrates the industrial character and the sensory experience intrinsic to Walvis Bay's cultural identity.

+ DESIGN BRIEF, CLIENT AND USER

Design Brief

Design Objectives

- Cohesion between Port and Town:
This objective focuses on creating a seamless connection between Walvis Bay's port and town, merging industrial functions with public spaces to enhance accessibility and foster community engagement.
- Poetic Industrial sense of place:
The Design aims to capture the aesthetic essence of Walvis Bay's industrial heritage. It emphasises a spatial narrative that conveys the town's industrial past through form, materiality, and sensory experiences.
- High-Tech Automation:
Incorporating advanced automated systems for logistics and processing to ensure efficiency, mirroring industrial rigour while integrating contemporary technology to enhance user experience linking to the projects theoretical stance.
- Poetic Post-Phenomenology:
This objective grounds the design in a theoretical framework that treats architecture as an immersive experience, inviting users to connect with the environment through sensory and spatial interactions.
- Industrial Inspiration
The design draws directly from industrial structures' robust aesthetics and functionality, abstracting elements to echo Walvis Bay's industrial identity.
- Connect to “Poetic Journey”
Building upon the conceptual “Poetic Journey,” the design aligns with Walvis Bay's unique narrative, guiding visitors through spaces that reflect the town's coastal and industrial essence.

Client

Seawork Fish Processors is an ideal client for the proposed fish market due to their commitment to sustainable fishing practices, high-quality product standards, and customer-centred approach. Based in Namibia, Seawork adheres to stringent sustainability measures, such as area and time restrictions on fishing, to protect juvenile fish stocks and ensure ecosystem health (Seawork et al., 2024). These practices align with my thesis goals to create a fish market that emphasises environmental responsibility and sustainable sourcing, enhancing consumer trust in seafood products.

Furthermore, Seawork's focus on quality throughout its processing—from strict adherence to EU compliance standards to advanced packaging solutions—makes it an excellent partner for a project highlighting premium seafood (Seawork et al., 2024). Their dedication to transparency in sourcing and customer involvement in product development also reflects the values my market design aims to promote, fostering an interactive space where consumers can engage with the seafood industry firsthand.

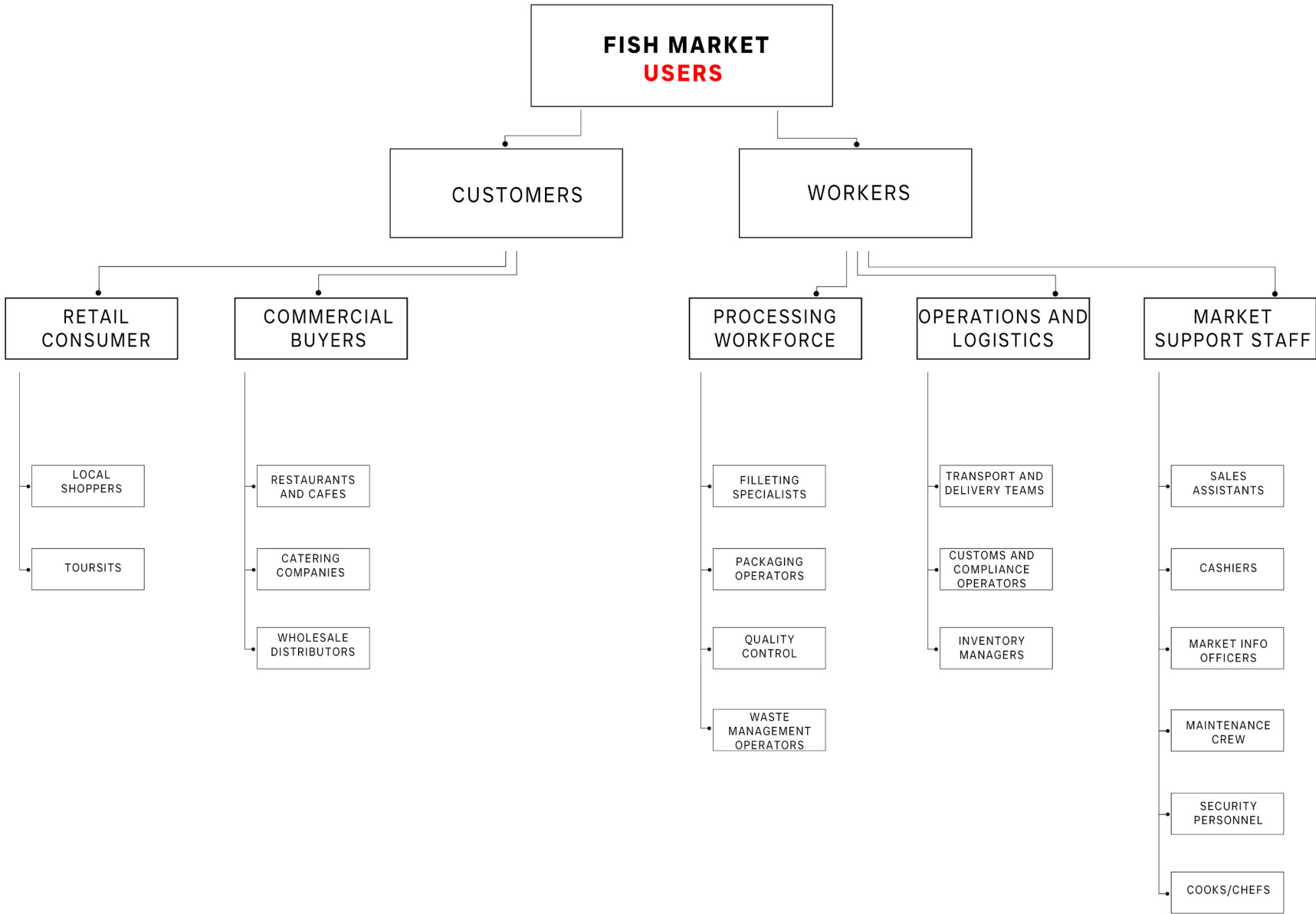
Figure 6
Client



Note: A logo of the proposed client (Seaworks, 2024: online, edited by Author).

User

Figure 6.2
User Diagram



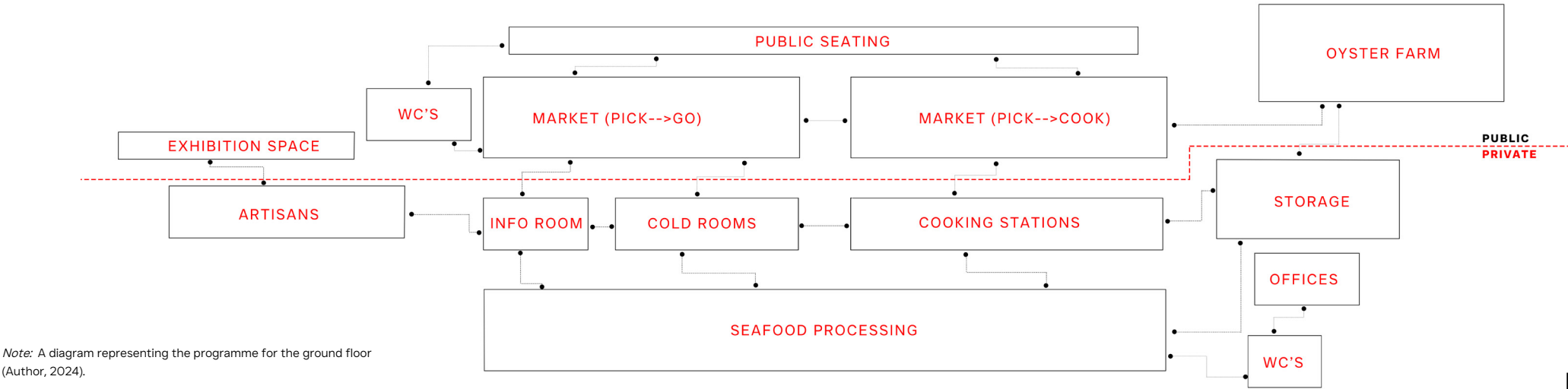
Note: A diagram representing the users of the building (Author).

+ PROGRAMME

Introduction

The building programme for my thesis project incorporates two primary components: a fish processing facility and an adjoining market space designed to establish a seamless cohesion between industrial activities and the public realm/waterfront precinct of Walvis Bay. This mechanised fish market aims to offer a unique experience different from the conventional fish market, allowing visitors to observe and engage with the advanced processes involved in fish processing and market transactions. The building integrates advanced technology with a market environment, and the design facilitates an authentic encounter with the working mechanisms behind the fishing industry, fostering a deeper connection between the community and the industrial character of Walvis Bay. Through its architectural expression and programmatic arrangement, the space aims to celebrate industrial poetics, transforming the market into a vital, interactive hub where the public can witness and appreciate the intricacies of modern fish processing and distribution within Walvis Bay.

Figure 6.3
Ground Floor Programme



Note: A diagram representing the programme for the ground floor (Author, 2024).

Ground Floor

Features:

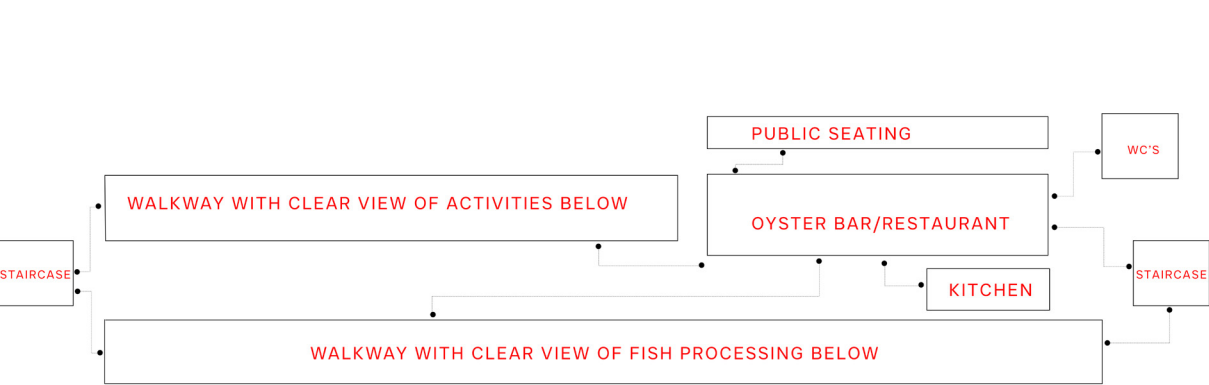
- Market (Pick-Go):
- Market (Pick-Cook):
- Artisans:
- Seafood Processing:
- Oyster Farm
- Services:

1st Floor

Features:

- Restaurant:
- Walkways/Viewpoints:
- Services:

Figure 6.4
First Floor Programme



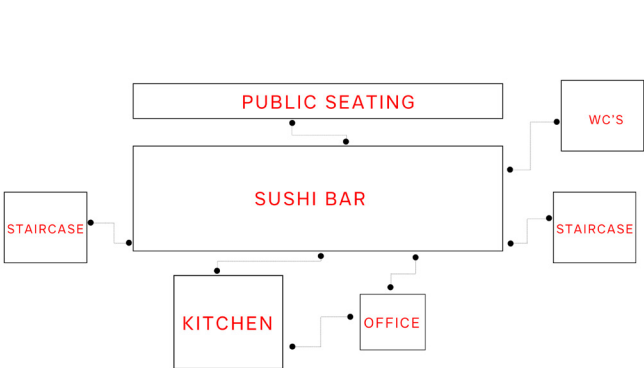
Note: A diagram representing the programme for the First floor (Author, 2024).

2nd Floor

Features:

- Sushi Bar:
- Services:

Figure 6.5
Second Floor Programme



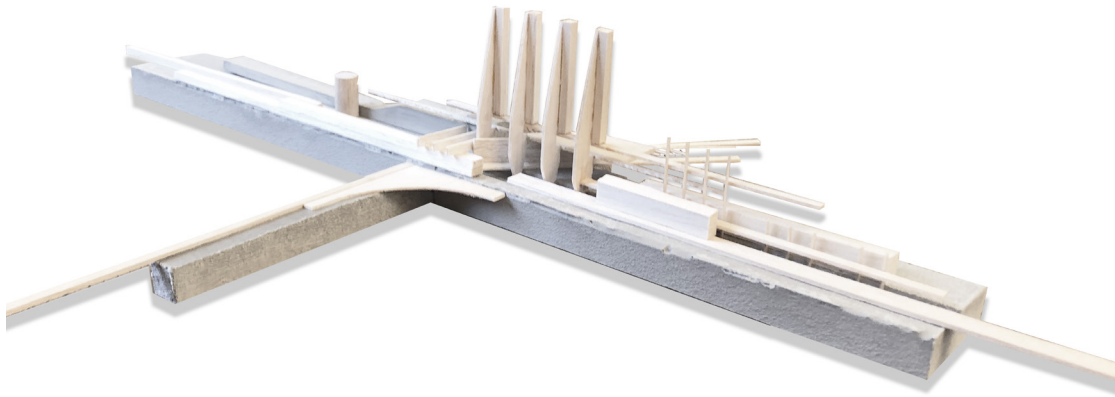
Note: A diagram representing the programme for the Second floor (Author, 2024).

+ REELING IN THE CONCEPT

As a starting point for my design development, I needed to articulate the conceptual approach defined in Chapter 5 into a model that met the central idea of poetic post-phenomenology. In particular, the preliminary models from Chapter 5 were developed upon poetical aspects – rhythm, reiteration, material empathy – which I could elaborate on and bring together in a unity that embodied my design intention. Figure 6.6 shows the synthesised model I made as I experimented with the repetition of industrial poetics and primary forms to suggest a spatial rhythm that would be sympathetic to the industrial area of Walvis Bay.

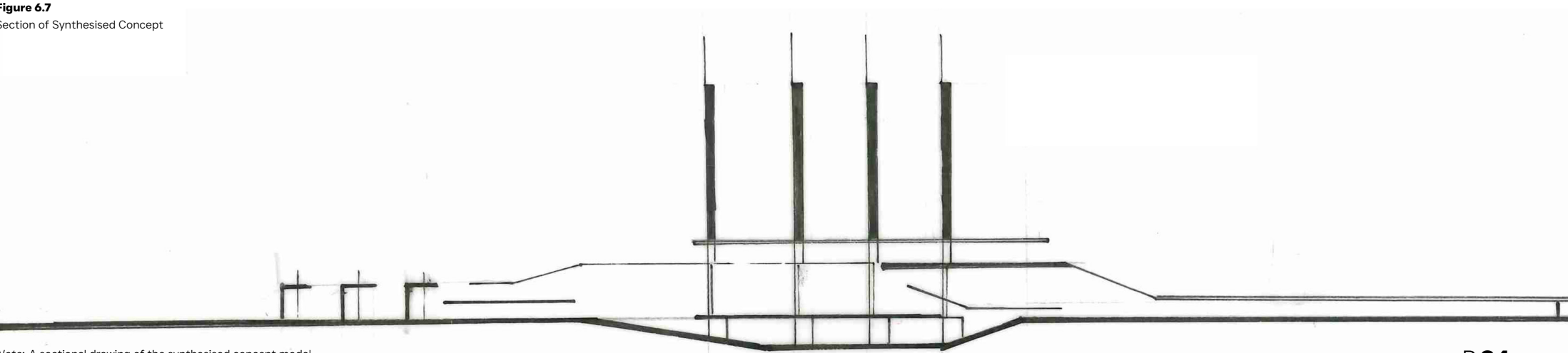
The industrial character of the building was defined by a sectional hand drawing shown in Figure 6.7 which examined the structure's scale, proportions, and layered spatial dynamics. This drawing depicts the strategy involved in arranging the voids and the levels, which enhances the hierarchy and order of the building, reflecting how industrial buildings relate to people. The final composed model shown in its site context is depicted in Figure 6.8. This model depicts the embedding of the structure into its context with design articulation that considers the immediate context, the scale and the features of the surrounding urban fabric; hence, the context of Walvis Bay is harmoniously created while industrial poetry is accentuated. This method reinforces my objective to create a purposefully resilient building well embedded within the cultural and industrial

Figure 6.6
Physical Model of Synthesised Concept.



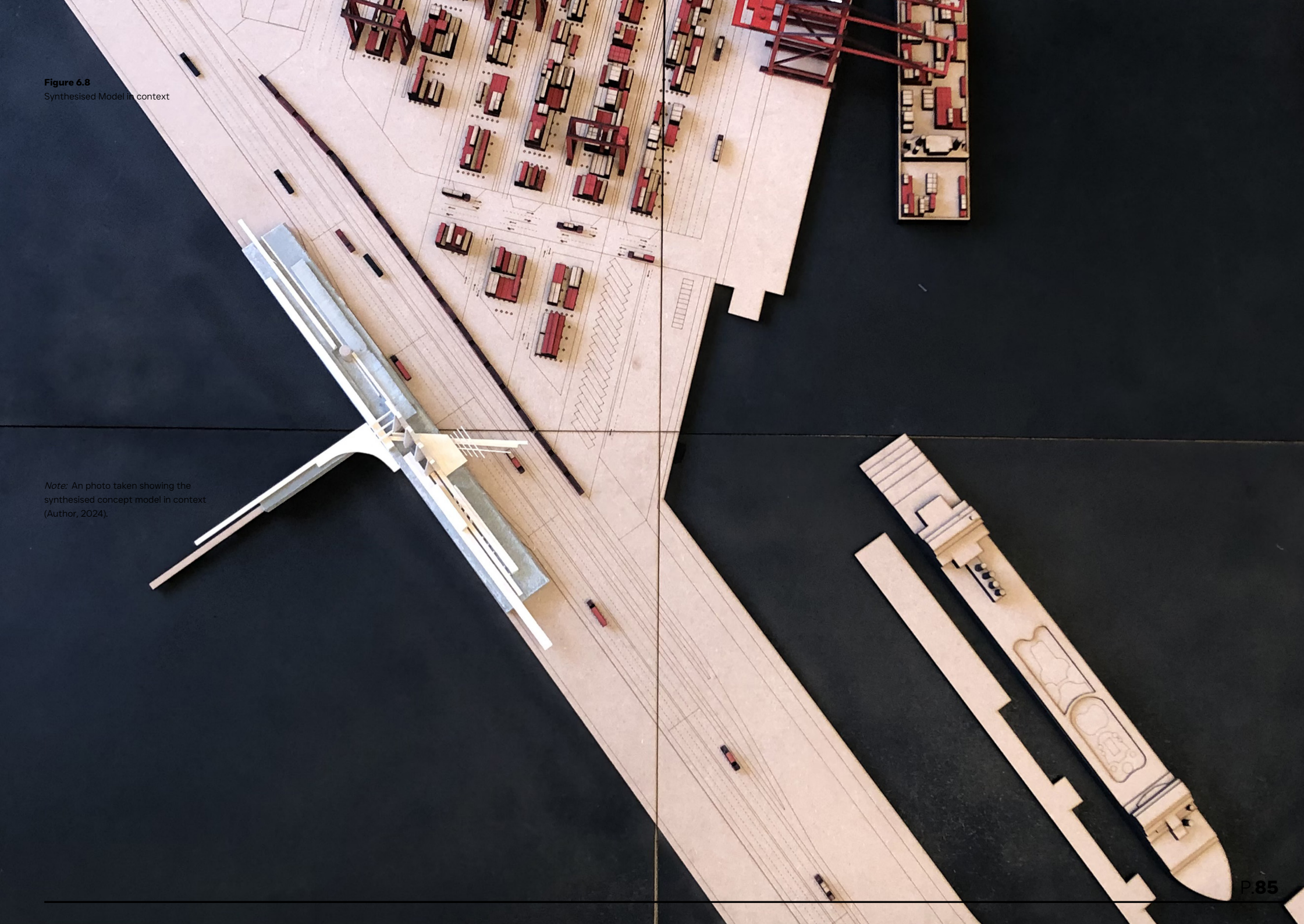
Note: A scaled model 1:500 representing a synthesis of the concepts for design development (Author, 2024).

Figure 6.7
Section of Synthesised Concept



Note: A sectional drawing of the synthesised concept model (Author, 2024).

Figure 6.8
Synthesised Model in context



Note: An photo taken showing the synthesised concept model in context (Author, 2024).

+ ANCHORING THE LAYOUT

In anchoring the layout, my goal was to create a plan that profoundly reflects the theoretical foundation of my thesis—anchored in poetic post-phenomenology within an industrial landscape. Beginning with an abstract approach, as shown in Figure 6.9, the plan progresses through iterative developments, capturing the evolving spatial rhythm and functionality central to my theory. The initial abstract layout emphasises openness and fluidity, prioritising an intuitive connection with the industrial atmosphere of Walvis Bay.

Each successive iteration refines this spatial concept into more technically grounded configurations, reflecting the practical requirements and phenomenological qualities I aim to evoke. In the final plan iteration, these abstract concepts mature into a cohesive, immersive layout that harmonises poetic resonance with functional structure. Here, Figure 6.10 becomes crucial, depicting a sectional view that reveals potential variations in levels, scale, and form, aligning the building's spatial presence with its industrial surroundings. This section showcases how the design engages its context, balancing robust industrial elements with spaces inviting sensory and experiential engagement, drawing the eye and the user into a deeper connection with the surrounding port landscape.

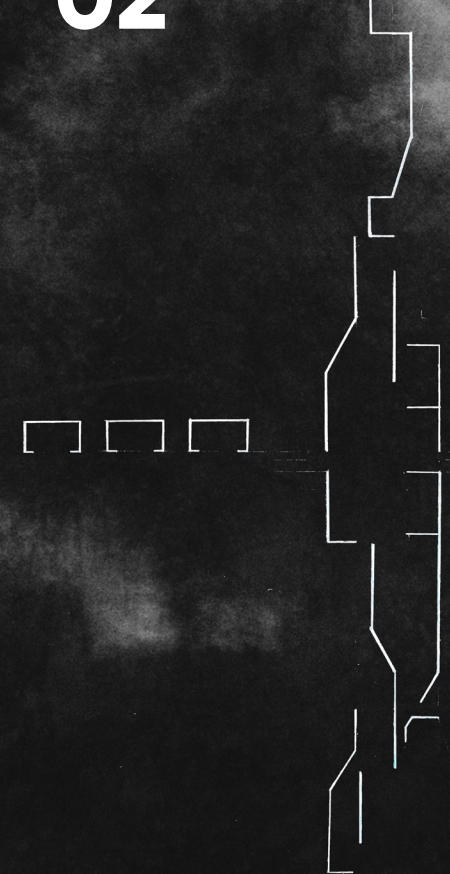
01

Figure 6.9
Plan Iterations.

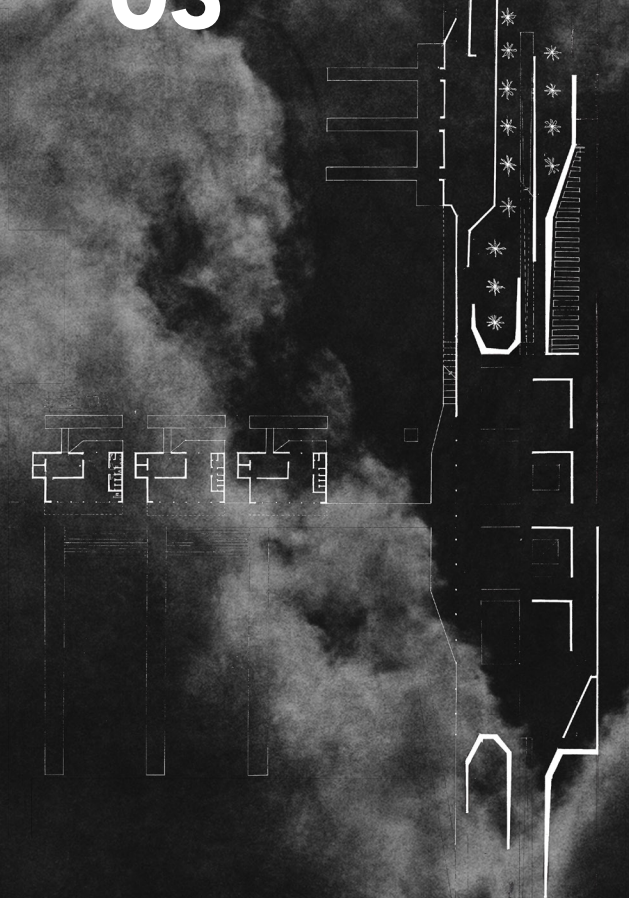


Note: Hand drawings of iterations made to develop a plan for the proposed design (Author, 2024).

02



03



04

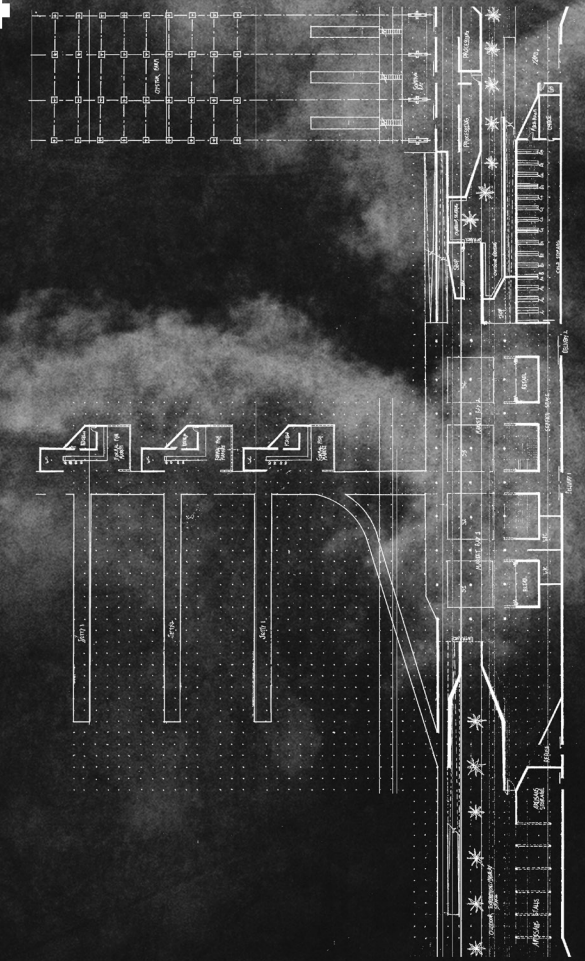
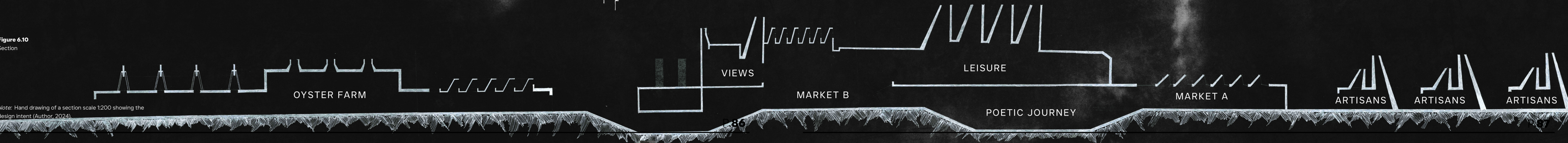


Figure 6.10
Section



Note: Hand drawing of a section scale 1:200 showing the design intent (Author, 2024).

VIEWS

LEISURE

MARKET B

MARKET A

ARTISANS

ARTISANS

ARTISANS

POETIC JOURNEY

OYSTER FARM

+ DOCKED IN CONTEXT

The Docked in Context model, represented at a 1:1000 scale, visually integrates the design within Walvis Bay's industrial surroundings, showcasing how it interacts spatially with its immediate and larger context. Figure 6.11 is the site model previously introduced in Chapter 03 for the micro-site analysis. By contextualising the design within the broader port area, the model reveals how the structure anchors itself and complements the dynamic industrial landscape that defines Walvis Bay's coastal edge.

In Figure 6.13, a distinctive approach was taken to display the architectural relationship between the new design and its environment: the central section of the site model was replaced with a white mass model that allows the design development model to slide directly into the site. This method emphasises the building's scale, orientation, and proximity to key landmarks, such as the nearby container terminals and industrial zones, reinforcing the building's role within the port's vibrant infrastructure.

The positioning and scale of the model reinforce the thesis's intent to merge industrial functionality with poetic post-phenomenology, as the design draws on the rhythm, materiality, and scale of its surroundings to create a building that resonates with the industrial landscape.



Note: Close up photo taken of urban model representing the large scale of the Tower cranes in relation to the surroundings (Author, 2024).

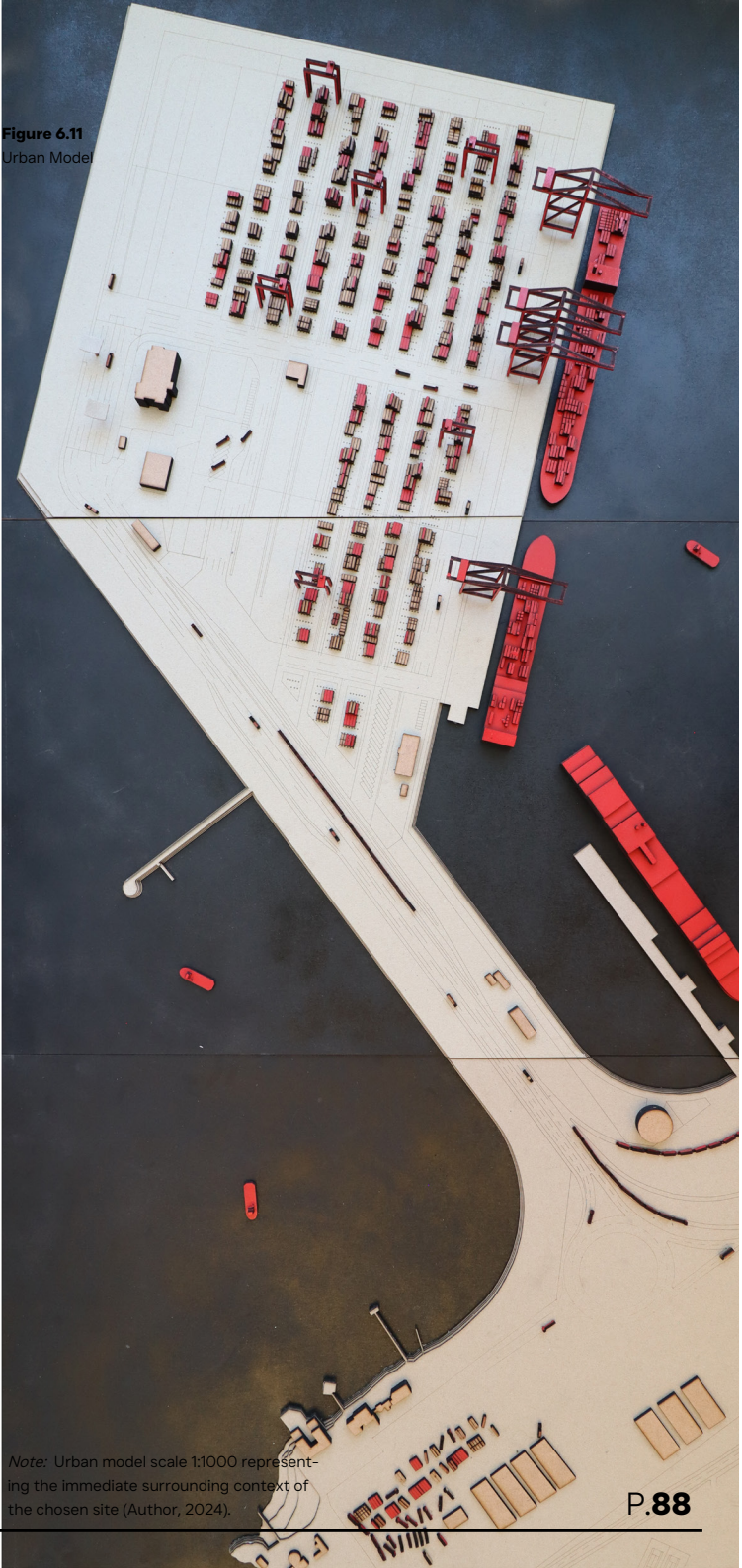


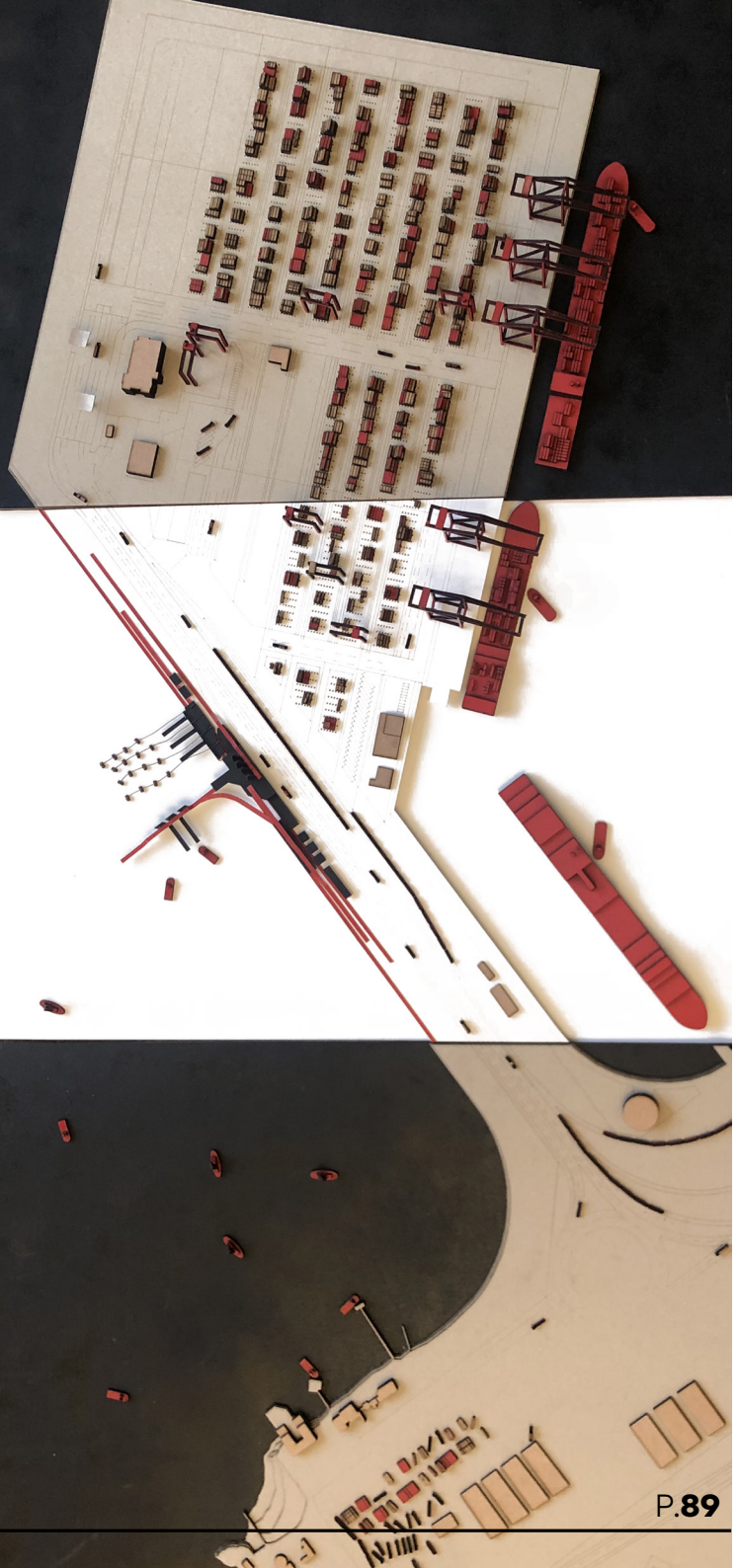
Figure 6.11
Urban Model

Note: Urban model scale 1:1000 representing the immediate surrounding context of the chosen site (Author, 2024).

Figure 6.13
Design Development Model



Note: Design development model scale 1:1000 representing the design in context (Author, 2024).



+ REELING IN THE SPATIAL LAYOUT

Take 01

Figure 6.14
Ground Floor Plan.



Figure 6.15
First Floor Plan.

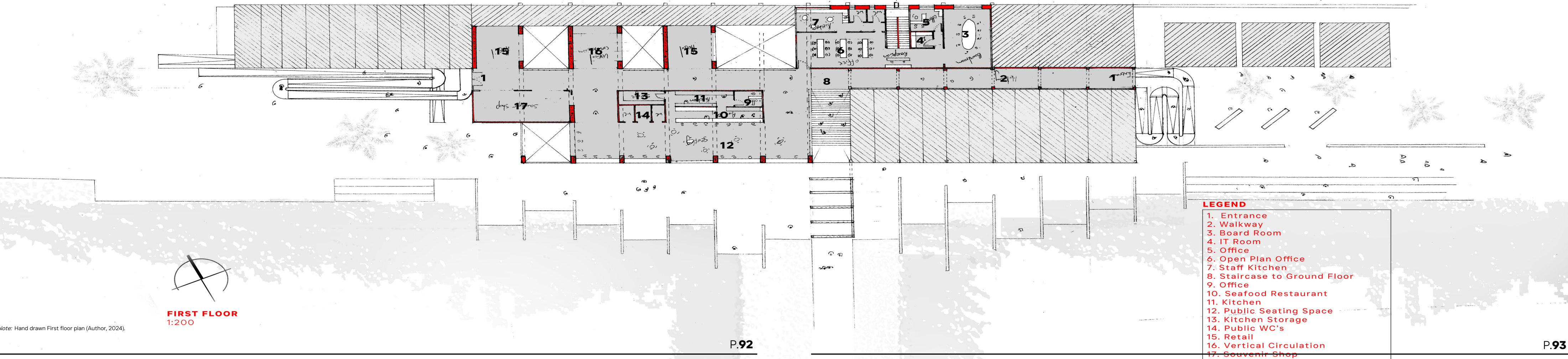
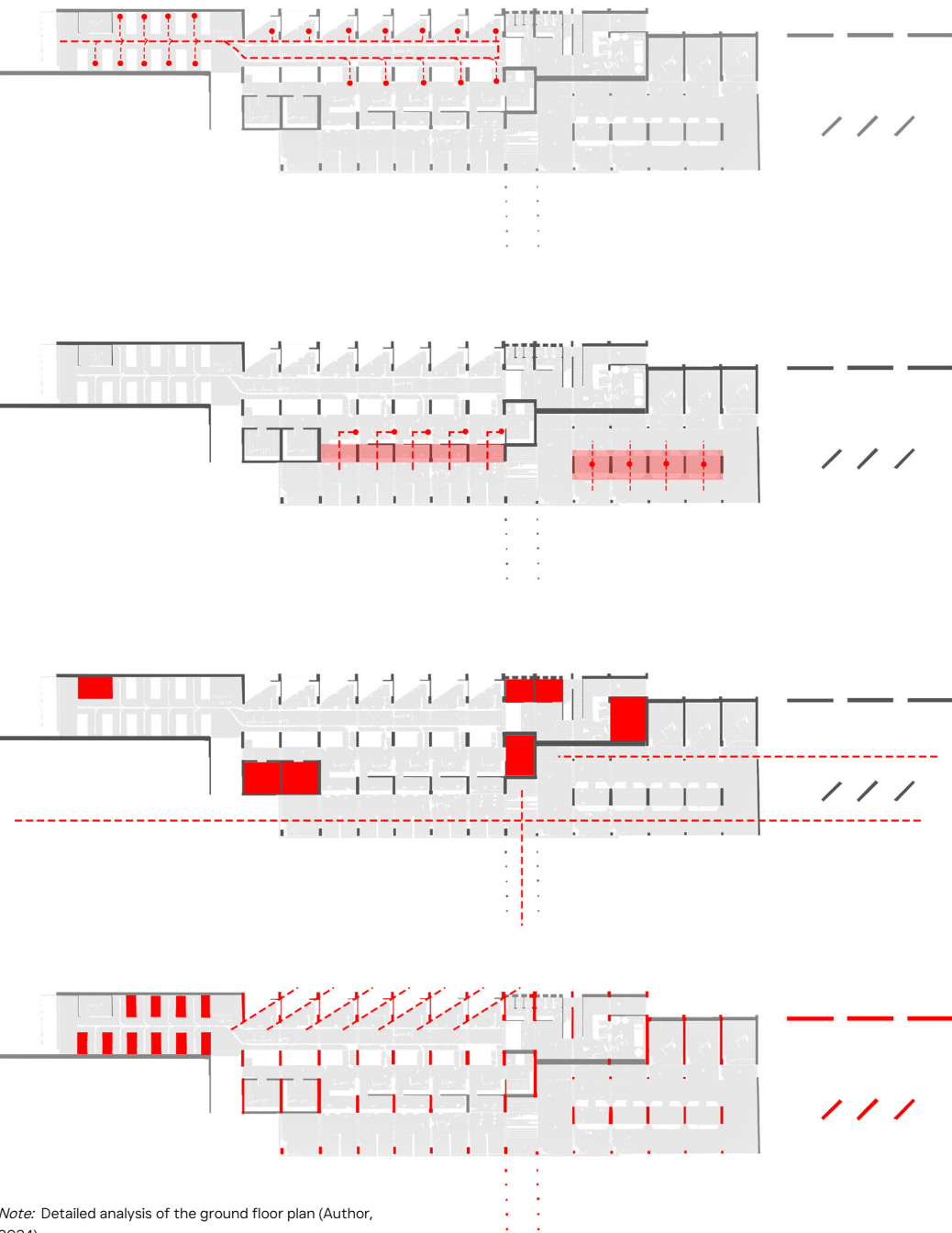


Figure 6.15
Ground Floor Plan Analysis.



Note: Detailed analysis of the ground floor plan (Author, 2024).

Automated Flow: Mapping Conveyor Routes

showcases the automated conveyor system routes running throughout the building, supporting streamlined delivery of goods directly to market stalls. By automating product transport, the design enhances efficiency, reduces labour demand, and ensures a seamless experience for users. This layout aligns with the theory of poetic post-phenomenology by offering a visually accessible, dynamic flow that enriches user interaction with the industrial process.

Market Stalls

Highlights two distinct zones for market stalls, fostering varied consumer interactions with the fish market. Market Stall A provides a "pick and go" option, allowing customers to purchase fresh fish to take home. Adjacent, Market Stall B offers a "pick and cook" experience, where customers select fresh fish and have it prepared on-site to enjoy immediately. This configuration encourages diverse visitor engagement, creating a multi-layered experience that aligns with the project's goal of enriching market culture through accessible and dynamic user interactions, blending high-tech systems with sensory appeal.

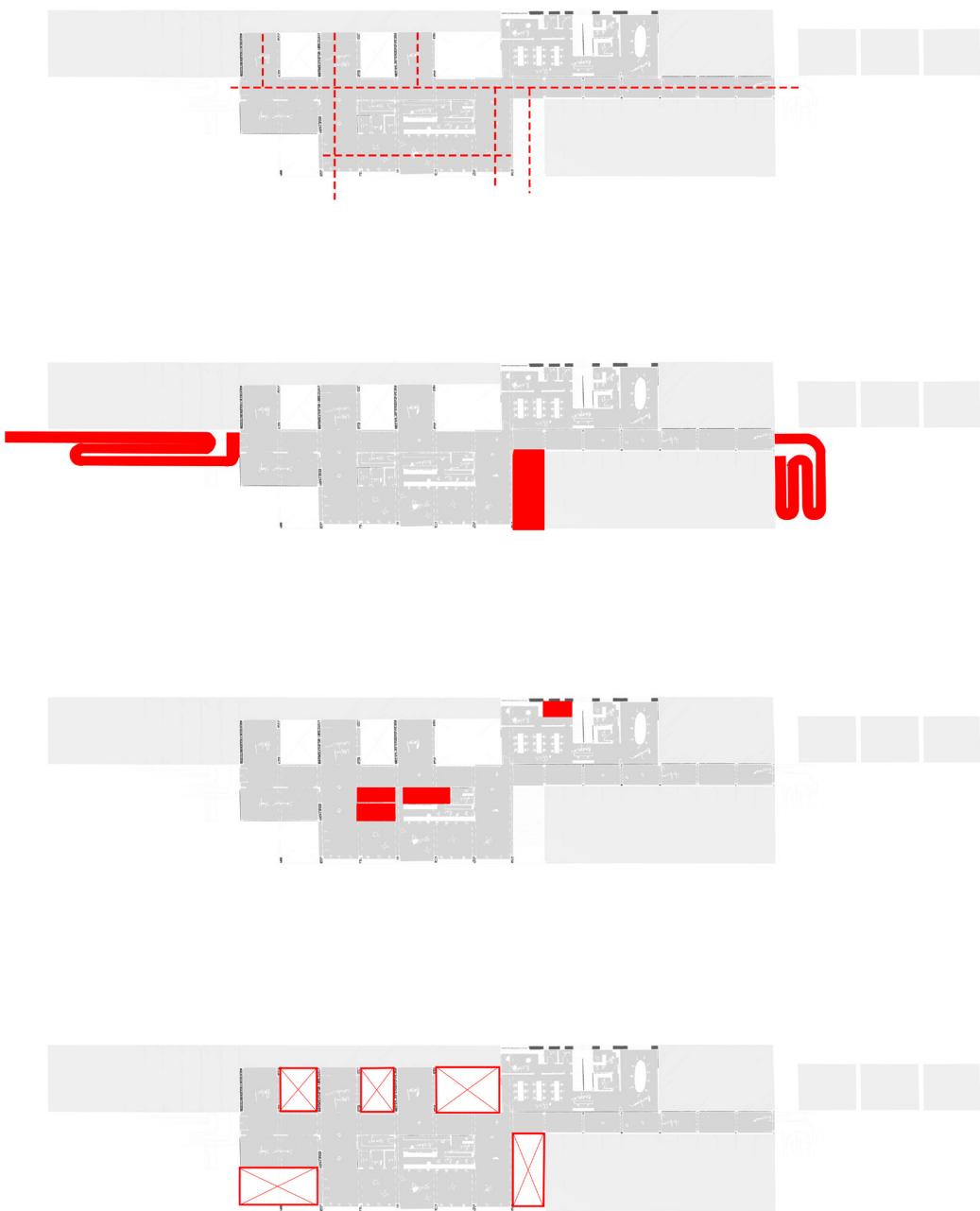
Service Spaces

Highlights the arrangement of essential service spaces along the building's perimeter. These areas support market operations maintaining an uninterrupted workflow from goods intake to consumer sales.

Structural Rhythm

Illustrates the structural rhythm of the building, reflecting Walvis Bay's industrial aesthetic. This repetitive structural layout draws from the rhythmic patterns of industrial machinery, emulating the repetitive movements within the port environment. This rhythm provides structural integrity and enhances the building's poetic connection to the industrial landscape.

Figure 6.16
First Floor Plan Analysis.



Note: Detailed analysis of the first floor plan (Author, 2024).

Pedestrian Circulation

Highlighting The elevated pedestrian walkways on the first floor are designed to create immersive, poetic experiences as visitors observe the bustling market activities below. These elevated paths offer unique vantage points, enhancing the connection between visitors and the industrial processes within the building. The design reinforces the project's theoretical aim, aligning with post-phenomenology by allowing individuals to experience the dynamic environment of the market through sight, sound, and motion.

Vertical Circulation

Highlighting the building's vertical circulation and strategically placing stairs and elevators to connect the ground-floor market with elevated walkways seamlessly, this layout encourages smooth movement between levels, inviting users to experience different spatial perspectives as they navigate.

Service Spaces

Highlights the arrangement of essential service spaces on the first floor along. These areas support market operations maintaining an uninterrupted workflow from goods intake to consumer sales.

Voids/Viewpoints

Illustrates the strategic placement of voids on the first floor, enabling visitors to observe market activities below from unique vantage points. These openings create a layered experience, visually linking the ground and first floors while enhancing spatial connectivity. This approach aligns with the design's aim to deepen user engagement by fostering a multisensory environment that reveals industrial rhythms and processes, reinforcing the building's poetic post-phenomenological concept.

Southern Elevation

The southern elevation in Take 01 highlights the design’s harmonious relationship with Walvis Bay’s industrial backdrop, reflecting the site’s surrounding structures in form, shape, and scale. The building’s proportions and angular elements echo the utilitarian aesthetics of port facilities, while its structural rhythm mirrors the repetitive, mechanical rhythms inherent in the area’s industrial activity. This elevation captures the project’s intent to blend with and pay homage to Walvis Bay’s industrial identity while maintaining a unique, modern architectural language.

Figure 6.17
Southern Elevation

Note: Hand drawn Southern elevation (Author, 2024).



Take 02

The plan development in Take 2 builds upon the foundational characteristics of Take 01, maintaining the industrial-inspired spatial rhythm and overall layout but with increased technical precision. This iteration refines the spatial organisation of the building. Adjustments to the spatial layout reflect a more deliberate zoning of activity areas, with enhanced detail in the placement of service spaces, pedestrian circulation, and functional zones, ensuring they align closely with the design's architectural goals and technical needs.

Figure 6.18
Ground Floor Take 02

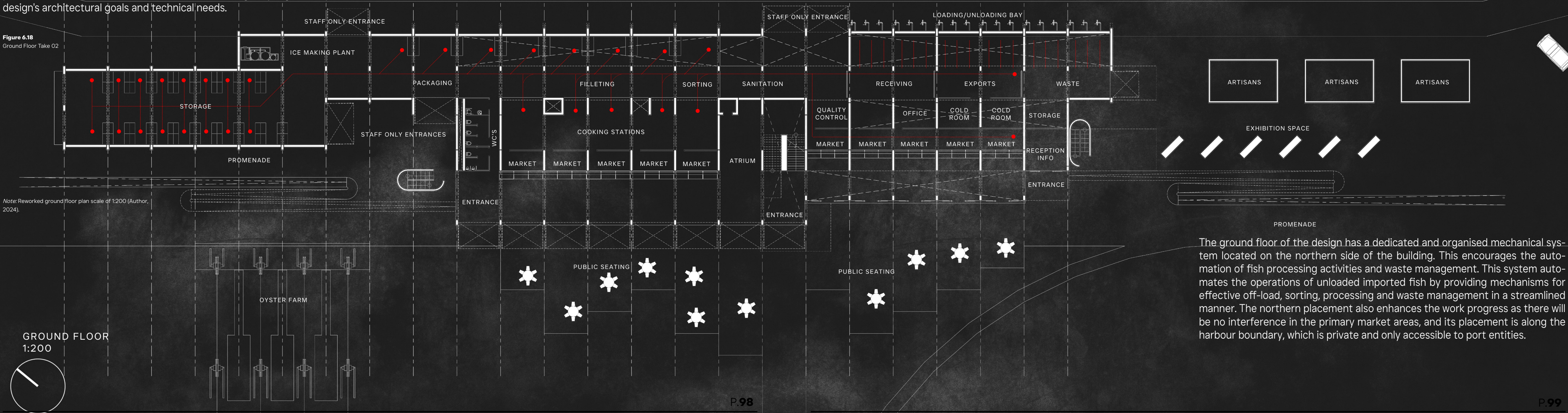
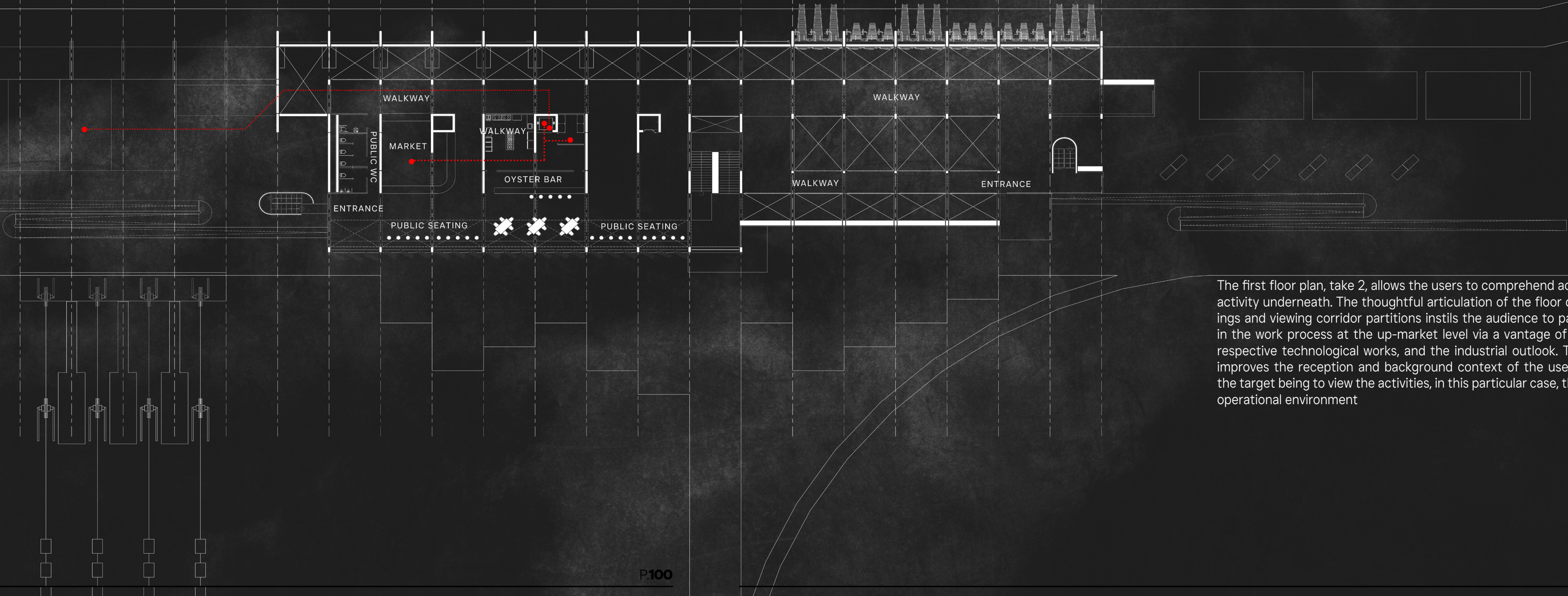


Figure 6.19
First Floor Take 02

Note: Reworked first floor plan scale of 1:200 (Author, 2024).

FIRST FLOOR
1:200



The first floor plan, take 2, allows the users to comprehend actively the flowing activity underneath. The thoughtful articulation of the floor design with openings and viewing corridor partitions instils the audience to participate actively in the work process at the up-market level via a vantage of the markets, the respective technological works, and the industrial outlook. This configuration improves the reception and background context of the user's activities, with the target being to view the activities, in this particular case, the market with its operational environment

Figure 6.20
South Eastern Perspective

Note: 3D visualization representing the relationship of the proposed building design to the surrounding context (Author, 2024).



Figure 6.21
Long Section

Note: A longitudinal section through the building showing the newly added light shafts creating a poetic interior experience for users and resembling the rhythmic patterns of Walvis Bay's industrial scene (Author, 2024).

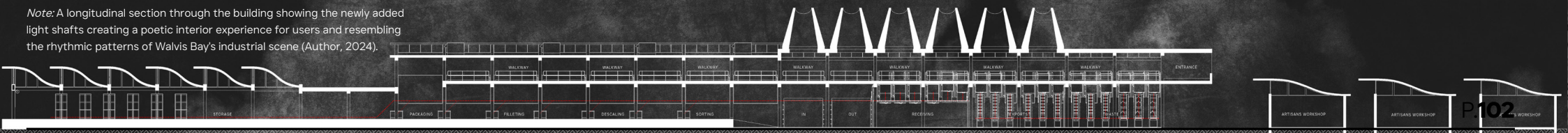


Figure 6.22
Northern Elevation

Note: A Northern elevation of the design take 2 (Author, 2024).



Figure 6.23
Southern Elevation

Note: A Southern elevation of the design take 2 (Author, 2024).



Figure 6.24
Western Elevation

Note: A Western elevation of the design take 2 (Author, 2024).



+ CONCLUSION

The conclusion of the Design Development chapter reflects the journey from initial conceptual frameworks to a refined spatial and technical design that balances practical function with the project’s theoretical underpinnings. Beginning with the design brief and client/user needs, each development step was meticulously aligned with the project’s objectives, leading to an integrated layout. Throughout the chapter, critical design choices were informed by the poetic post-phenomenological approach, ensuring that high-tech systems enhance user experience and foster a sensory connection to Walvis Bay’s industrial heritage.

In “Docked in Context,” the 1:1000 model demonstrated how the building interacts with its industrial surroundings, establishing a cohesive form that resonates with the site’s scale and character. The iterative plan development (Take 01 and Take 02) shows the refinement from abstract ideas to spatially precise configurations. Technical advancements, such as the northern mechanical system and elevated walkways on the first floor, create visual connections and interactive experiences that invite users to engage with the market’s dynamic processes. Ultimately, this chapter illustrates the design’s evolution as it bridges the theoretical and practical aspects of the project, presenting a building that celebrates Walvis Bay’s unique industrial and cultural landscape.

07

+ THE FINAL MACHINE

+ INTRODUCTION

The final machine chapter encapsulates the culmination of iterative planning, technical refinement, and theory-driven adjustments made throughout the project. This phase consolidates the conceptual and spatial ideas developed in the Design Development chapter, bringing them to fruition as a cohesive architectural solution for the Walvis Bay fish market. Here, the building's form, systems, and material choices are realised with precision, showcasing the integration of poetic post-phenomenology into a high-tech, user-centric space that resonates with its industrial context.

The chapter details how the building's structural rhythm, circulation, and views of operational processes embody both functional efficiency and an evocative sense of place. Plans, sections, elevations, and detailed visuals illustrate how the building's layout facilitates seamless workflows while engaging the senses, enhancing the visitor experience through carefully framed views, interactive pathways, and mechanical systems. Each design element speaks to the project's aim of harmonising technology and place-making, creating a marketplace that pays homage to Walvis Bay's fishing heritage while serving the community's economic and cultural needs.

Figure 7
Site Plan 1:500

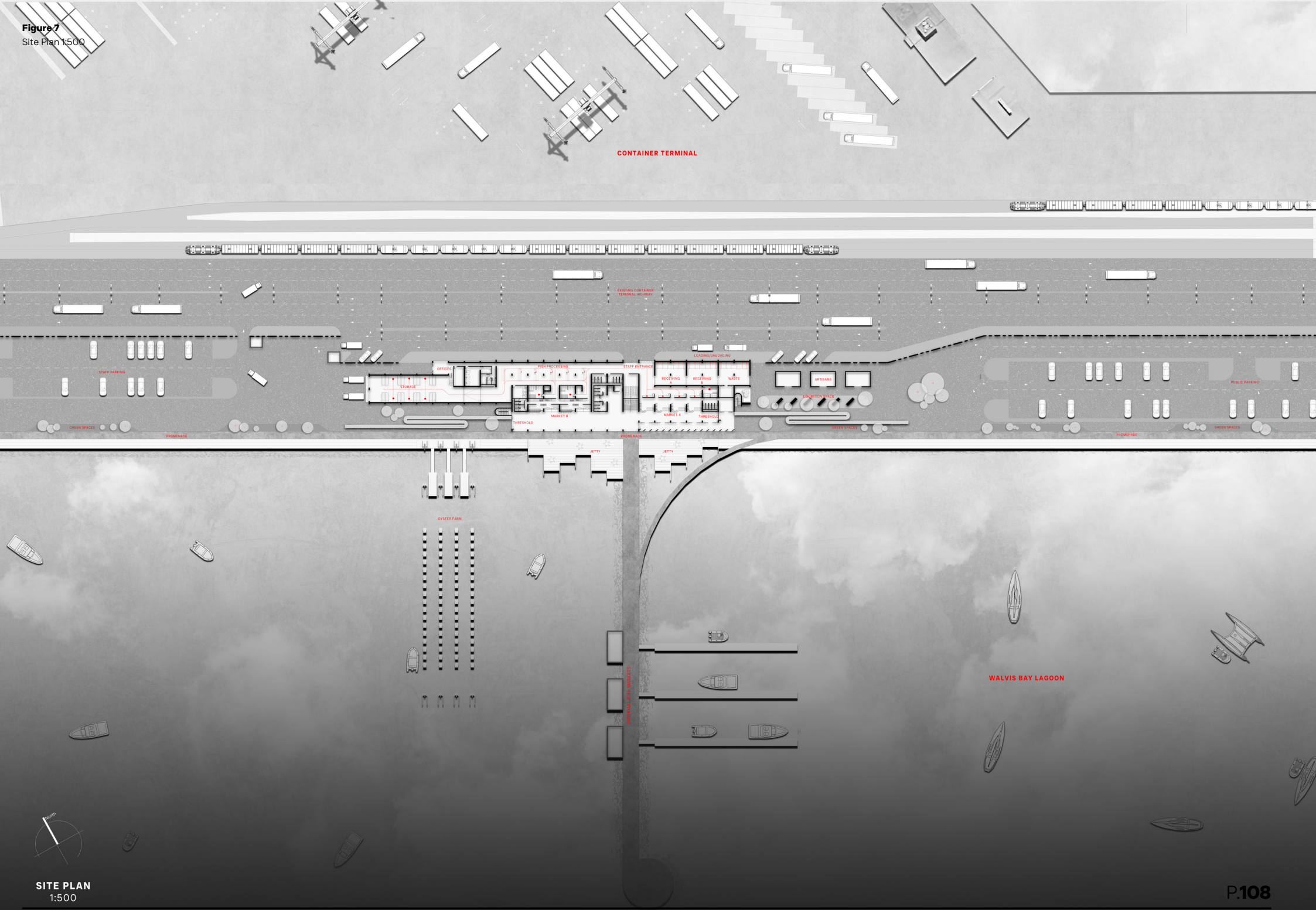
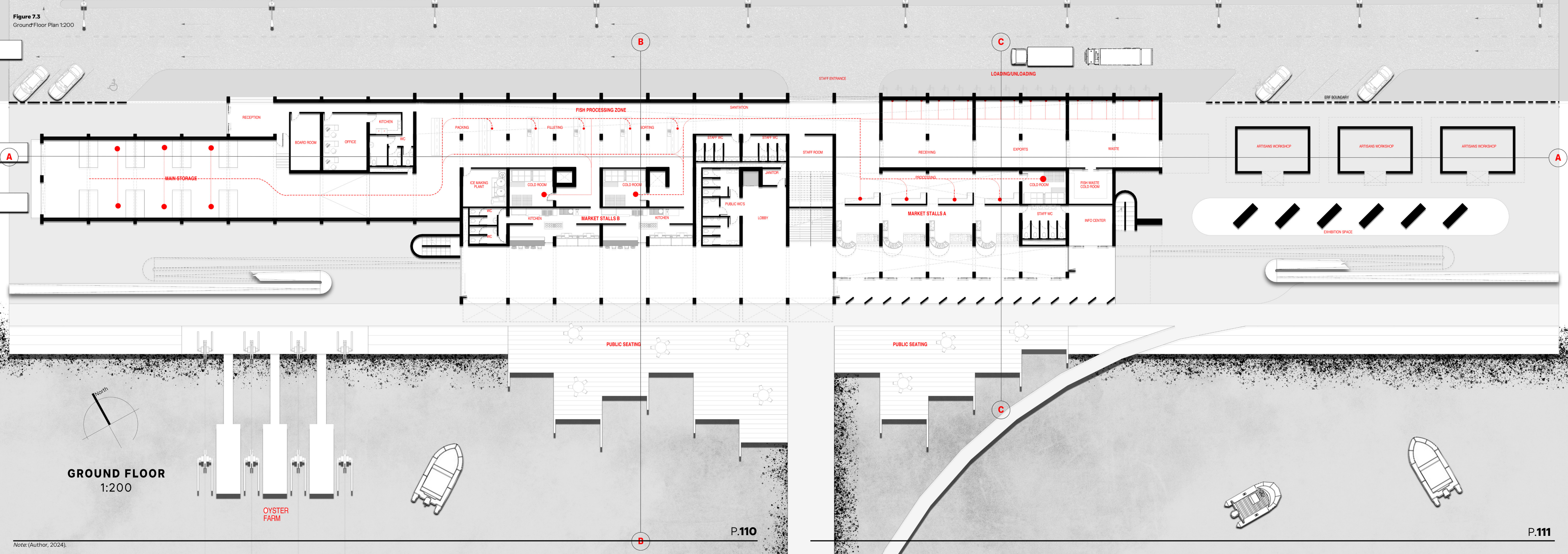


Figure 7.2
South-Western Perspective



Figure 7.3
Ground Floor Plan 1:200



GROUND FLOOR
1:200

OYSTER
FARM

P.110

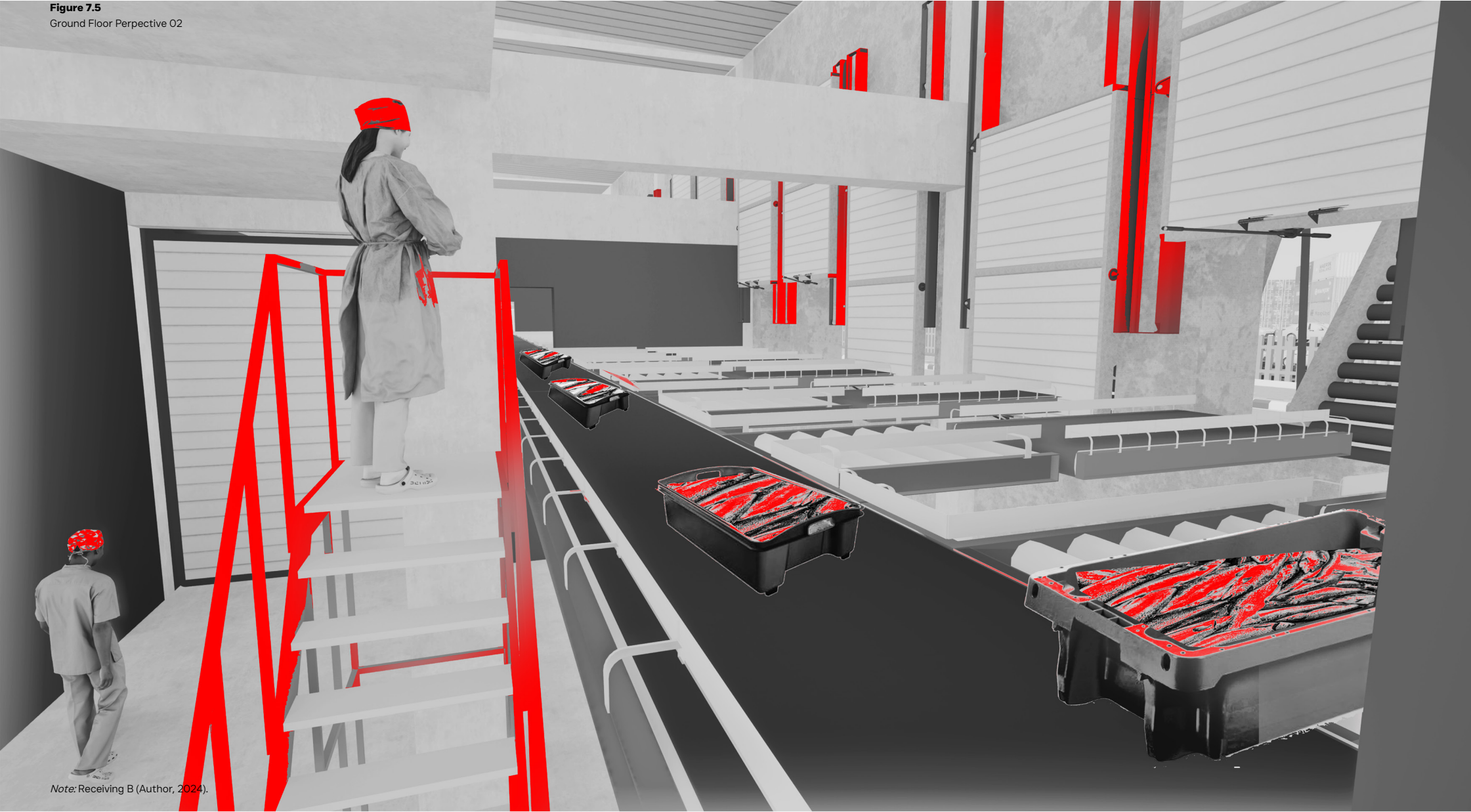
P.111

Figure 7.4
Ground Floor Perspective 01



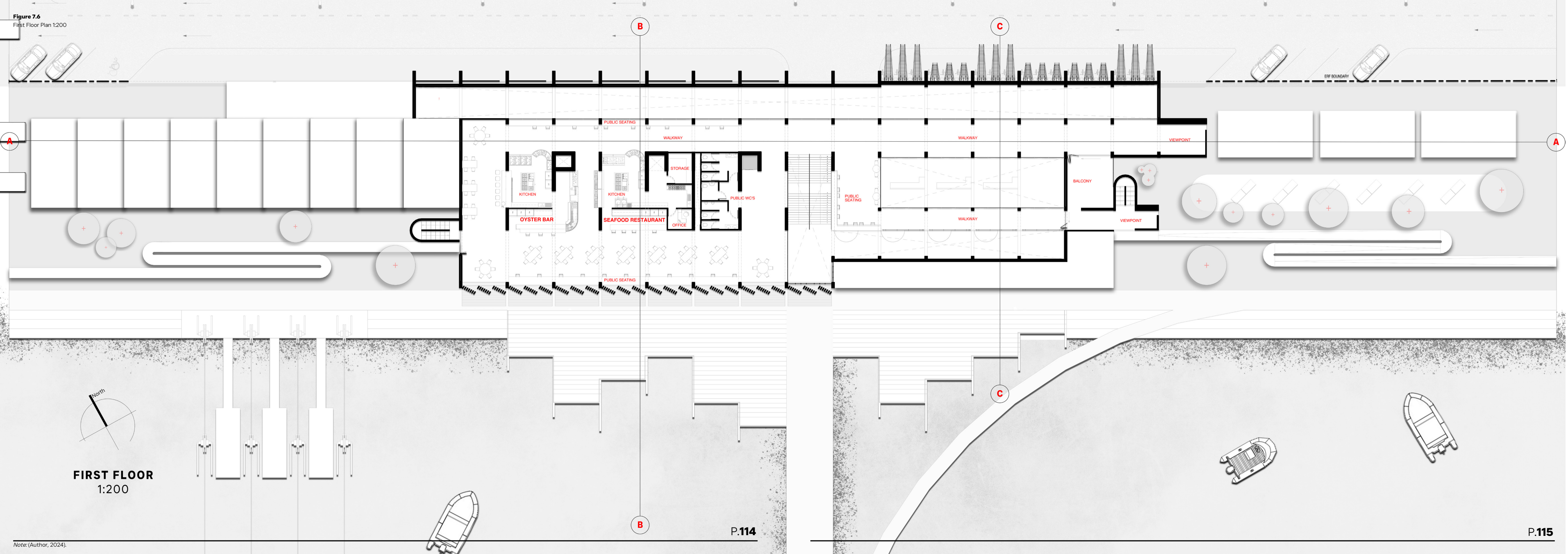
Note: Market stalls A (Author, 2024).

Figure 7.5
Ground Floor Perspective 02



Note: Receiving B (Author, 2024).

Figure 7.6
First Floor Plan 1:200



FIRST FLOOR
1:200

Figure 7.7
First Floor Perspective 01



Note: (Author, 2024).

Figure 7.8
First Floor Perspective 02



Note: (Author, 2024).

Figure 7.9
Second Floor Plan 1:200

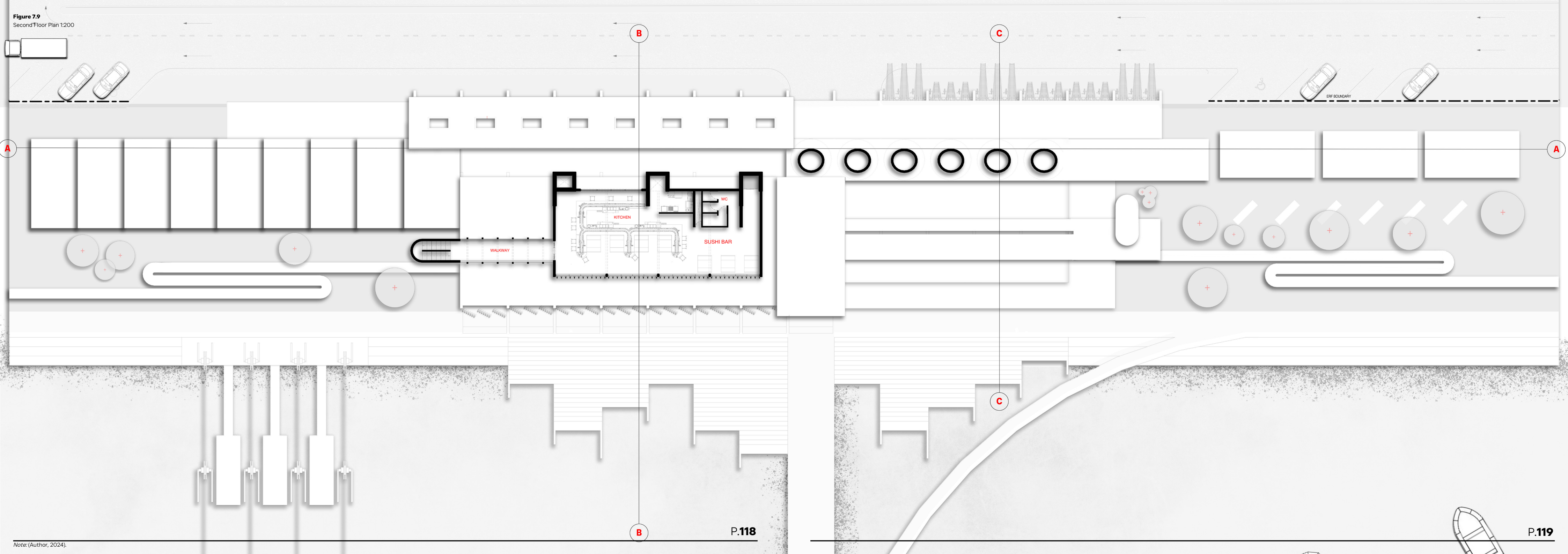


Figure 7.10
Second Floor Perspective 01



Note: (Author, 2024).

Figure 7.11
Second Floor Perspective 02



Note: (Author, 2024).

Figure 7.12
Northern Elevation 1:200

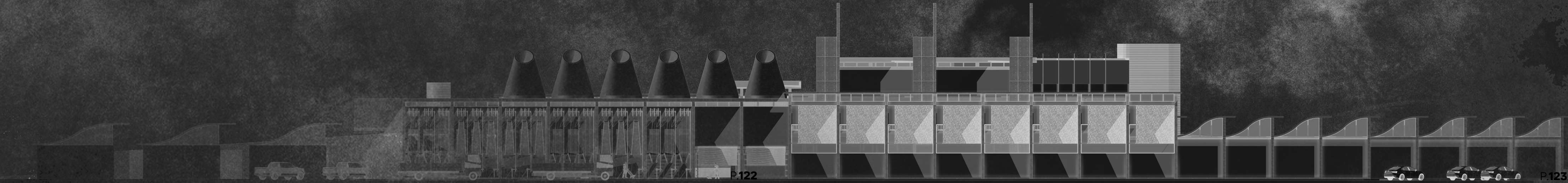


Figure 7.13
Southern Elevation 1:200



Figure 7.14
Section A-A 1:200

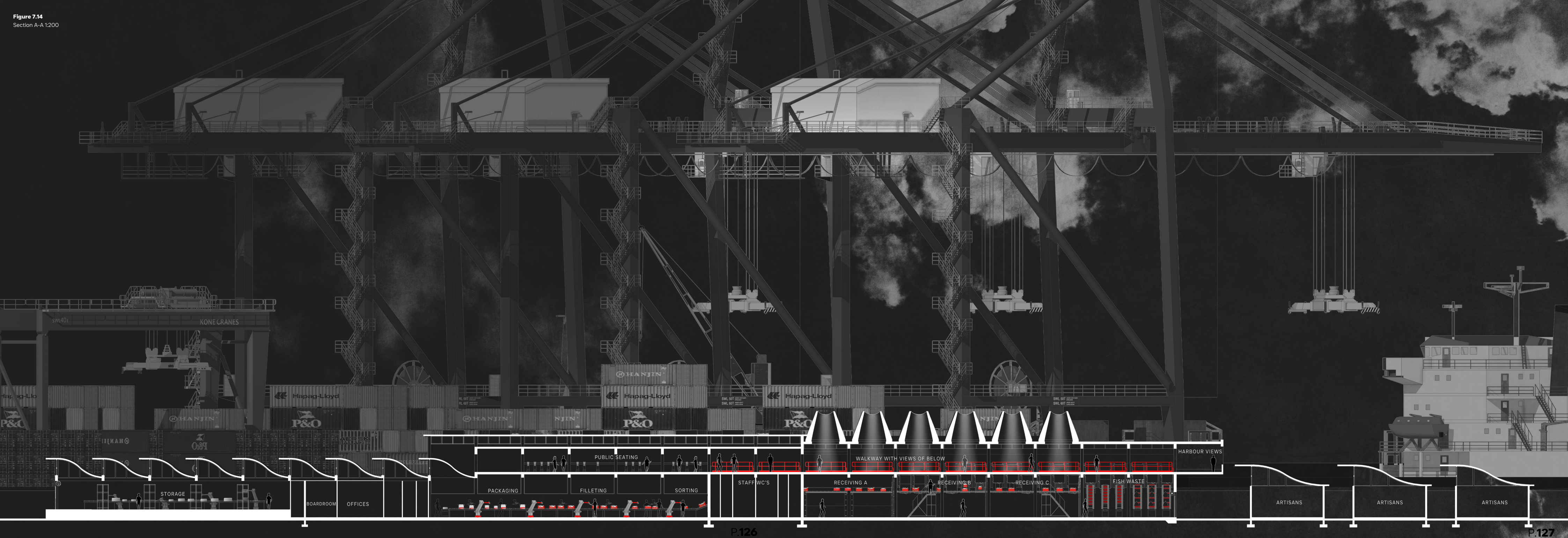


Figure 7.15
Exterior Perspective.

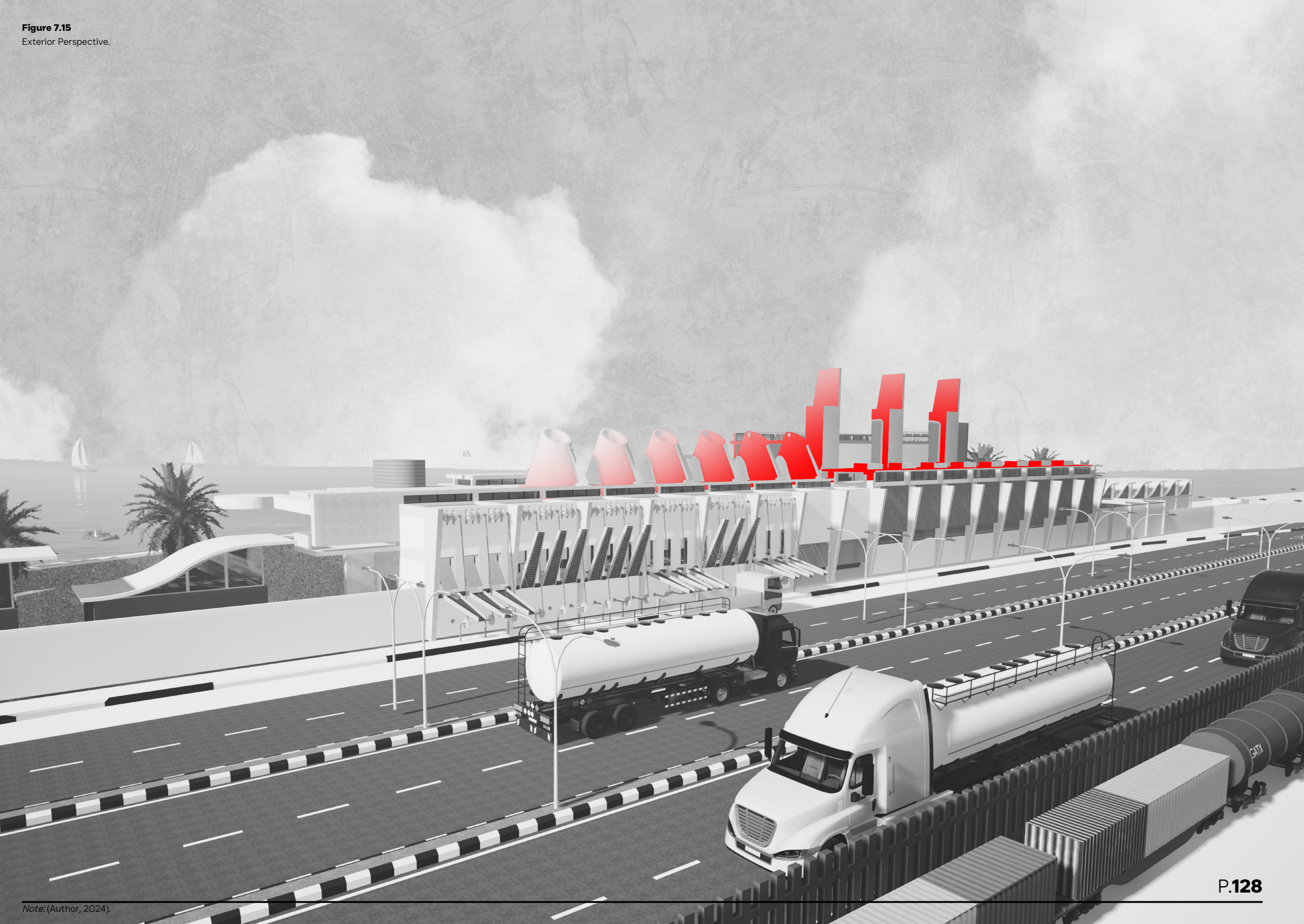


Figure 7.15
Exterior Perspective



Figure 7.16
Eastern Elevation 1:200



Figure 7.17
Section C-C 1:200



Figure 7.18
Eastern Elevation 1:200



Figure 7.19
Section B-B 1:200



+ CONCLUSION

The final design for the fish market embodies the convergence of Walvis Bay’s industrial character, creating a functional and poetically resonant space. Grounded in the principles of poetic post-phenomenology, the design integrates high-tech systems to enhance operational efficiency while providing a unique experiential quality for visitors. Through strategic site orientation and cohesive layout, the building seamlessly connects Walvis Bay's public and industrial sectors, fostering a sense of urban cohesion. Structural and spatial rhythms within the architecture draw inspiration from the surrounding industrial landscape, re-inforcing the building’s sense of place and enhancing the relationship between structure and community.

Overall, the final design fulfils its goal of integrating Walvis Bay's heritage into a modern market structure that celebrates local industry while enriching the town's public and urban fabric.

Figure 7.20

Exterior Perspective.



Note: (Author, 2024).

08

+ TECHNICAL

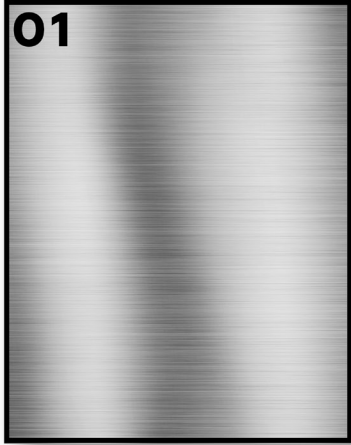
+ INTRODUCTION

Technical resolutions regarding the building are detailed in this chapter, where materiality and building systems come together to meet functional demands and their theoretical basis in poetic post-phenomenology. The environmental challenges are addressed using robust, climate-adapted materials: locally sourced timbers, marine-grade stainless steel, and specialised coatings that enable the immersive experience of Walvis Bay's coastal surroundings. This approach will feature the materials with a hands-on and visual emphasis by using the unique combination of the industrial and natural heritage of the town.

Also, advanced systems, such as the waste management system and automatic fish processing facility within the building, push the theory further with superior user experience and operating efficiency. Other than being only functional, these systems become ontological mediators of human experience, central to the theory of post-phenomenology. Finally, the chapter closes with the detailed technical documentation of plans, sections, and construction details, showing, through each technical decision, how the building reinforces the experiential qualities and is in concomitance with the theoretical vision of the project.

+ MATERIALITY

Figure 8
Materiality



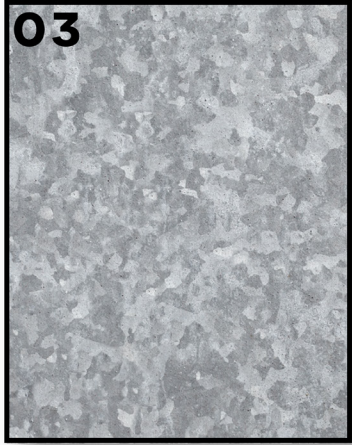
+ Marine-Grade Stainless Steel
(Grade 316)

- **Description:** Containing molybdenum, 316-grade stainless steel offers greater resistance to chloride corrosion compared to 304-grade stainless steel, making it ideal for use in Walvis Bay. The alloy is particularly effective for railings, window frames, and exposed metal components that experience frequent contact with saltwater or salty air.
- **Source:** Steel Force Namibia



+ Tamboti (*Spirostachys africana*)

- **Description:** Tamboti offers natural resistance to decay, and weathering, making it suitable for exterior applications in humid and salty environments like Walvis Bay.
- **Source:** Namibia Timber Supplies
- **Coating:** Marine-Grade Varnish



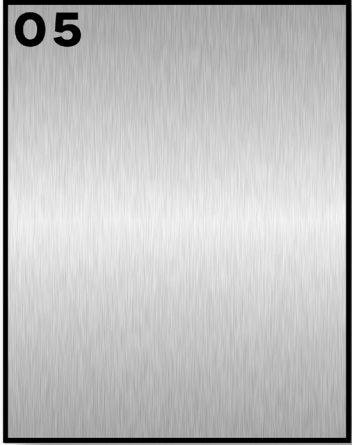
+ Galvanized Steel

- **Description:** This material will be for outdoor and structural applications in Walvis Bay’s salty and humid climate due to its superior resistance to rust and corrosion compared to untreated steel.
- **Source:** Steel Force Namibia
- **Galvanization:** Hot-dip galvanized coated with a layer of zinc to protect against corrosion. The steel is submerged in molten zinc, which creates a durable barrier.



+ Concrete

- **Description:** Concrete is a highly durable and versatile construction material, ideal for structures exposed to Walvis Bay's humid, salty environment. It offers good resistance to corrosion, weather, and impact, especially when mixed with proper additives to improve salt resistance.
- **Source:** Suremix Ready-Mix Concrete
- **Additives:** Penetron



+ Aluminium

- **Description:** Aluminum’s natural oxide layer gives it excellent corrosion resistance, but it can be further enhanced with anodizing or powder coating, making it ideal for the Walvis Bay climate.
- **Source:** Namibia Aluminium & Glass Solutions



+ Epoxy Floor Coatings

- **Description:** Epoxy water-proof floor coatings are highly durable and protect concrete and other surfaces from moisture
- **Source:** BUCO Namibia
- **Application:** Used for fish processing area within the building to protect the concrete.

+ BUILDING SYSTEMS

Wate Management

The waste management at the fish market incorporates an automated procedure for collecting and storing fish waste in a sanitary way. Fish waste is removed and transferred to a cold room immediately to protect the waste fish until it needs further processing. This automated system enables the hygienic environment to be maintained, helps reduce smell efficiently handle waste, and promotes sustainable development by permitting safe and effective recycling of fish wastes.

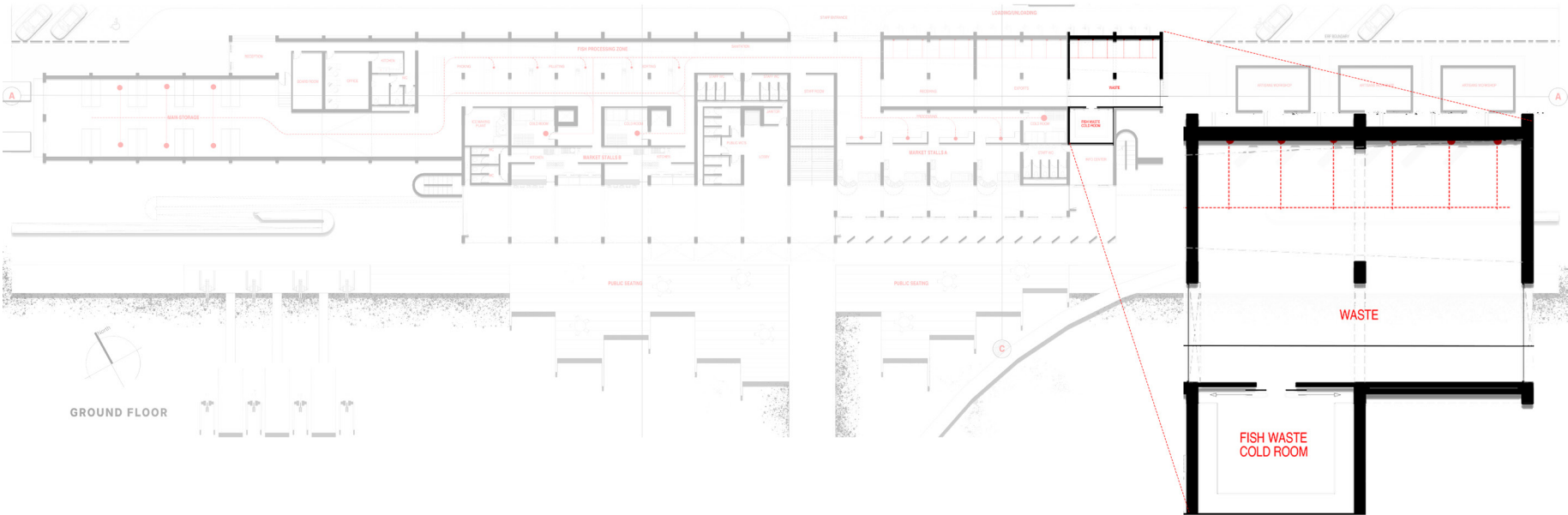
The proposed fish model needs a fish waste management system in light of the economic and ecological challenges associated with fish waste in industrial enterprises. To achieve a reasonable and environmentally friendly option, the suggestion of developing a fish waste storage and processing system is advantageous and must be done. Yadav (2024) states that poor management enormously contributes to environmental insult, as nearly 66% of the fish biomass is regarded as waste. Fish waste disposals could be well preserved using cold waste storage, which would prevent the rapid decomposition of the material and escape odours and pollution, Yadav found.

This strategy is consistent with the circular economy paradigm, which regards fish waste as a resource rather than a liability. Arvanitoyannis states that industries can reduce pollution and profit by replacing fish tallows and bio-oils (Kassaveti, 2008). For example, fish waste can be transformed into valuable protein powders or collagen for the plastic industry, providing a direct boost to the economy of Walvis Bay. Cold storage further enhances these products' quality, strengthening a high-value supply chain that satisfies the global demand for responsibly sourced commodities (FAO, 2018).

Additionally, with such a system in place, Walvis Bay will be among the leaders in sustainable aquaculture practices in Namibia. This model addresses environmental concerns and encourages economic development by creatively and smartly addressing the garbage issue. This approach complements the town's industrial activities and contributes to broader environmental objectives, making Walvis Bay an excellent case of resource efficiency.

In my building design, I have also included a complete fish waste treatment system on the ground level, which is represented in Figure XX. Due to the cold room's configurational feature, fish by-products are preserved for external preparation facilities. It is paramount to preserve fish waste and not discard it on the spot but rather use it as raw materials, which complies with the concepts of a circular economy (Yadav, 2024).

Figure 8.2
Waste zone.

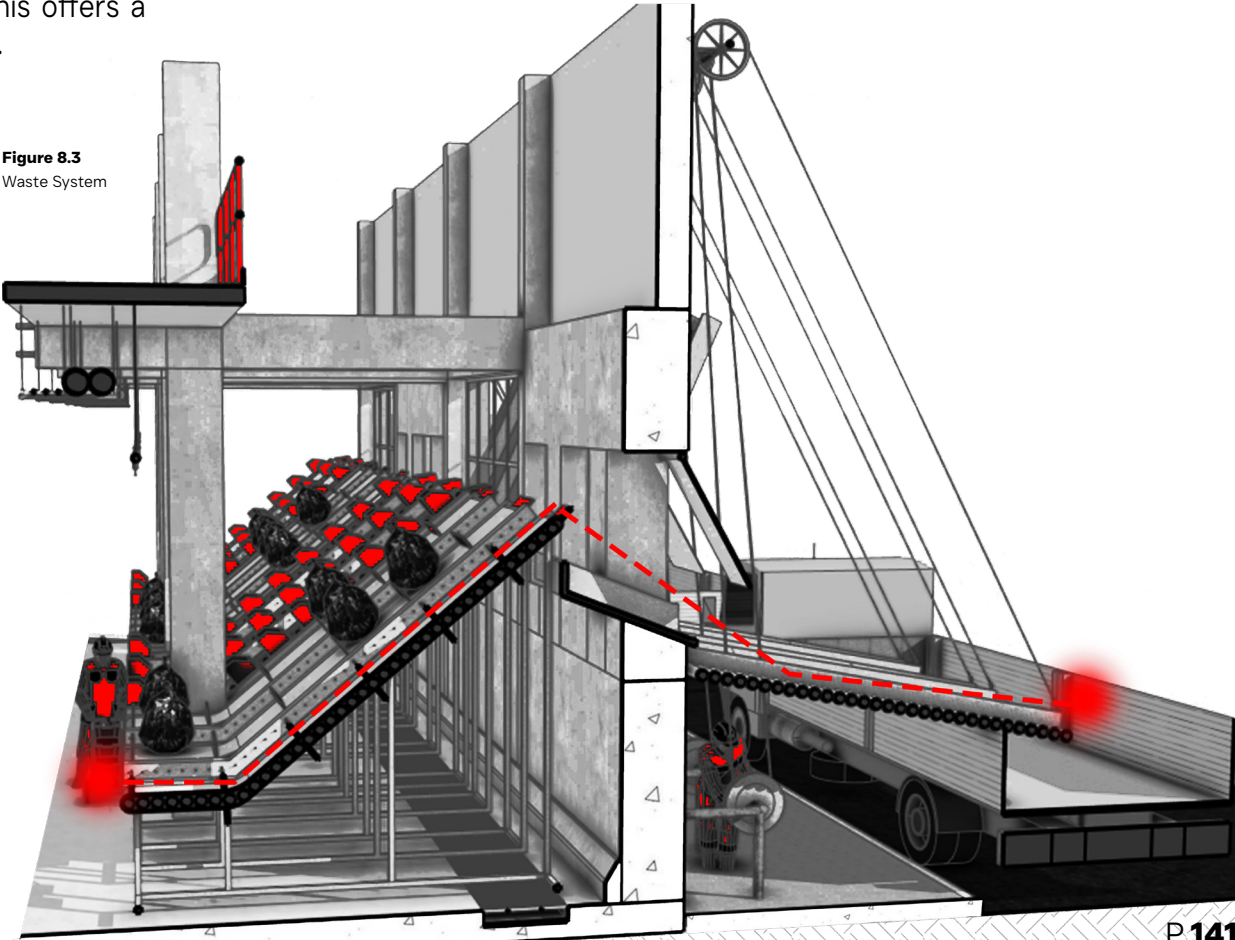


Note: Highlighted waste zone on ground floor. (Author, 2024).

The system reduces human effort, while waste disposal is handled considerably more efficiently by fish by-product conveyance between the processing sections and the waste storage. To manage fish offal, overhead conveyor systems help mitigate the possibility of cross-contamination and the hazard of intense odour by limiting the geographical displacement of offal and enabling the storage of the offal in frozen conditions. The infrastructure represents a significant step in the right direction towards enhancing waste management and the efficiency of the processing environment. (Arvanitoyannis & Kassaveti, 2008)

All these factors work together to create a sustainable approach to fish processing that minimises its environmental impacts in Walvis Bay. This offers a solution for enhancing high-value resource use in the fishing sector.

Figure 8.3
Waste System



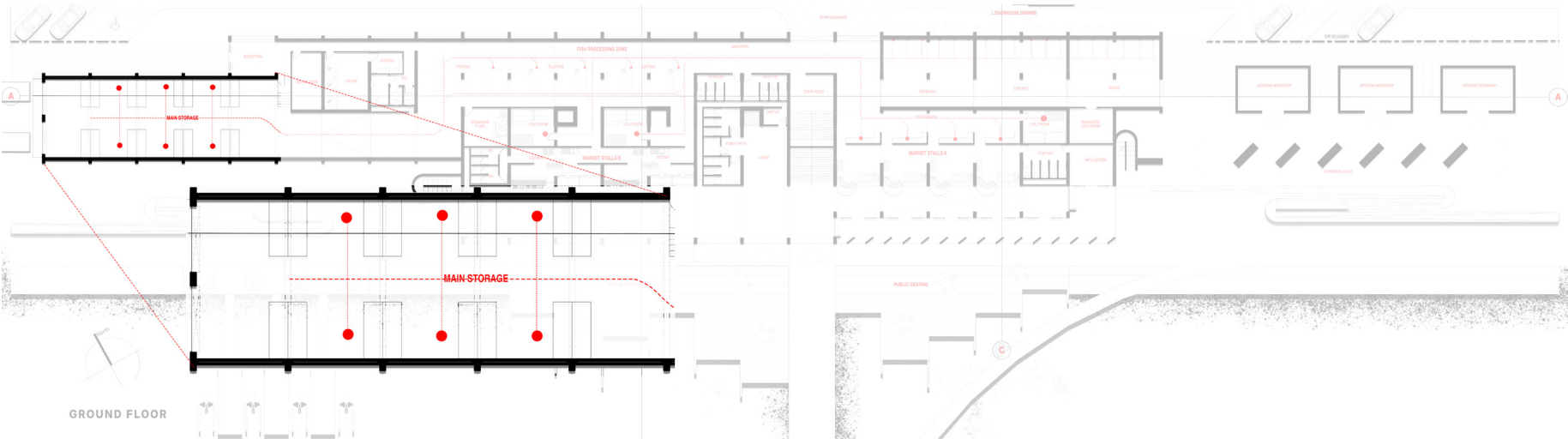
Note: Mechanical system designed to handle fish waste (Author, 2024).

AS/RS STORAGE SYSTEM

A Mini Load AS/RS installation is incorporated into the design as it increases storage utilisation in the fish market. In this regard, I researched and found that Mourral and Lesaffre believe that the AS/RS is a promising technology for the storage of AS/RS and could improve the stock handling systems even further, especially in the fish market ASRS case. Getting automated systems in place reduces manual handling, which increases the chances of spoilage in stock, thereby maintaining stock that can quickly be delivered at all times to ensure freshness and compliance with the industry's quality standards. Mourral & Le-saffre, 2020

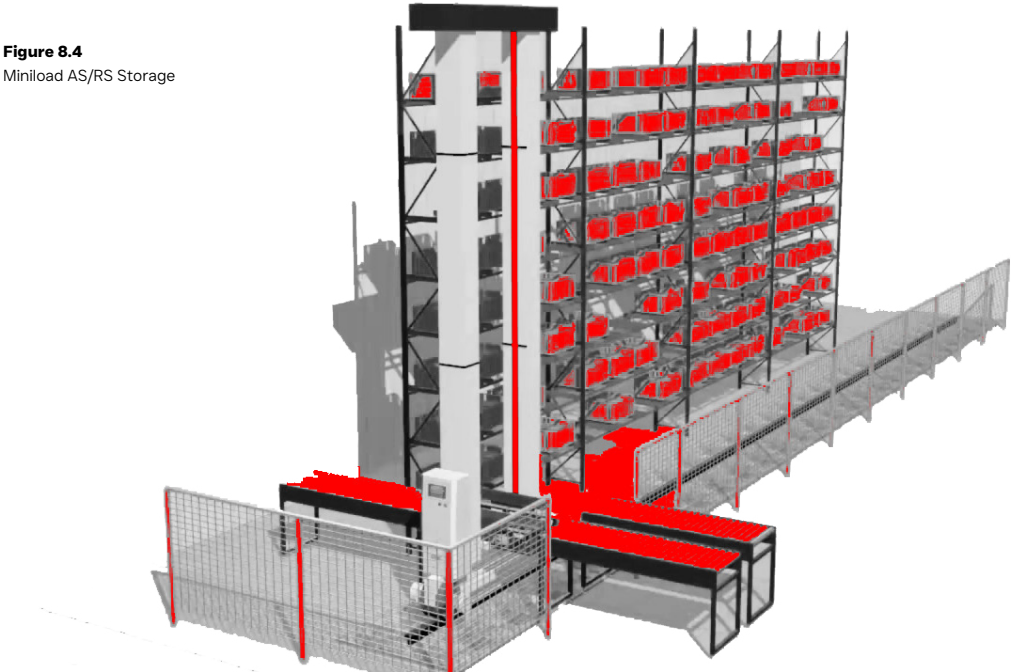
As Gotlih et al. (2015) put it, AS/RS, when supplemented with advanced control systems like swarm intelligence of swarm systems, increase the flexibility and responsiveness of the storage system to dynamic market demand. Such flexibility is even more pertinent in the fish market, where the supply and demand change every other day. Therefore, quick access to stock becomes essential. Figure xx represents the strategic positioning on the ground floor, which makes it easier to bring products into and out of the market area. Figure yy represents visualising the AS/RS system I implemented into my building.

Figure 8.5
Main Storage on Ground Floor



Note: Highlighted main storage zone where the AS/RS system will be implemented on ground floor. (Author, 2024).

Figure 8.4
Miniload AS/RS Storage



Note: Visualisation of a mini-load AS/RS storage system (Centrix, 2024: online, edited by Author).

Fish Processing Conveyor Systems

In designing an Automated Conveyor system for the fish market’s processing zone, I designed a system encompassing receiving, sorting, filleting, packaging, storing and eventually distributing to various places, including the markets and cold storage rooms. This plan makes it possible for the conveyor to assist in the movement of fish through various processing stages with minimal handling of fish by workers, thereby increasing the efficiency and quality of the end products. Figure XX indicates that the selected conveyor system is a modular belt conveyor, suitable for the fish processing sector where cleanliness, strength and versatility are essential features. As shown in chapter 3, page 45, where I included images of the fish factory I visited the use, Modular belt conveyors are used due to their unique characteristics that align with the intent being used.

A primary consideration in most fish processes is the system design. The modular belt conveyor provides an advantage by being easy to clean, preventing contamination, and can be used in the processing of fish in risky environments (Vidaček & Bugge, 2016). These conveyors are manufactured using plastic modules that are food-safe and can be detached for easy cleaning, thus making them fit for use even in places where frequent deep cleaning is mandatory. A modular belt system is suitable for use in almost all stages of operation without loss of functionality, be it sorting, filleting, packaging, or even cold storage transfer.

Subsequently, the selection of this system also helps the facility to achieve its objective of 'minimum manpower' because the configuration and the degree of automation of the conveyor lessen the manual lifting need, as seen in the case of the system developed by Giske et al. (2019) where the conveyors clean themselves. This is part of our plans and desires for what we want to do in order to create an automated, highly effective, and clean production line. Linking a conveyor to cold storage and directly to market stalls means quick movement of fish products, improving the quality and speed of operation. This level and type of mechanisation allow the ‘working’ period from receipt of fish until the sale of the last product to be shortened significantly, a significant benefit in the competitive fish market with a strong focus on product freshness.

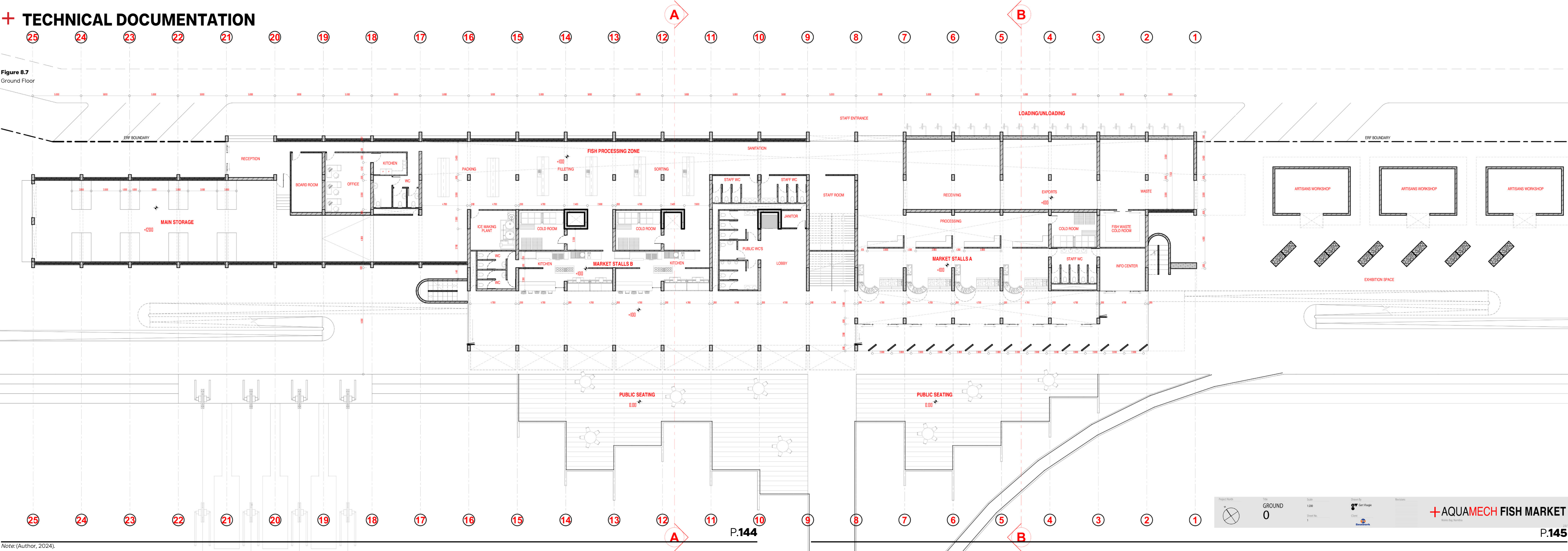
Figure 8.6
Modular Belt Conveyor



Note: Highlighted in red a modulate belt conveyor system used in fish processing facility (Author, 2024).

+ TECHNICAL DOCUMENTATION

Figure 8.7
Ground Floor



Note: (Author, 2024).

Figure 8.8
First Floor

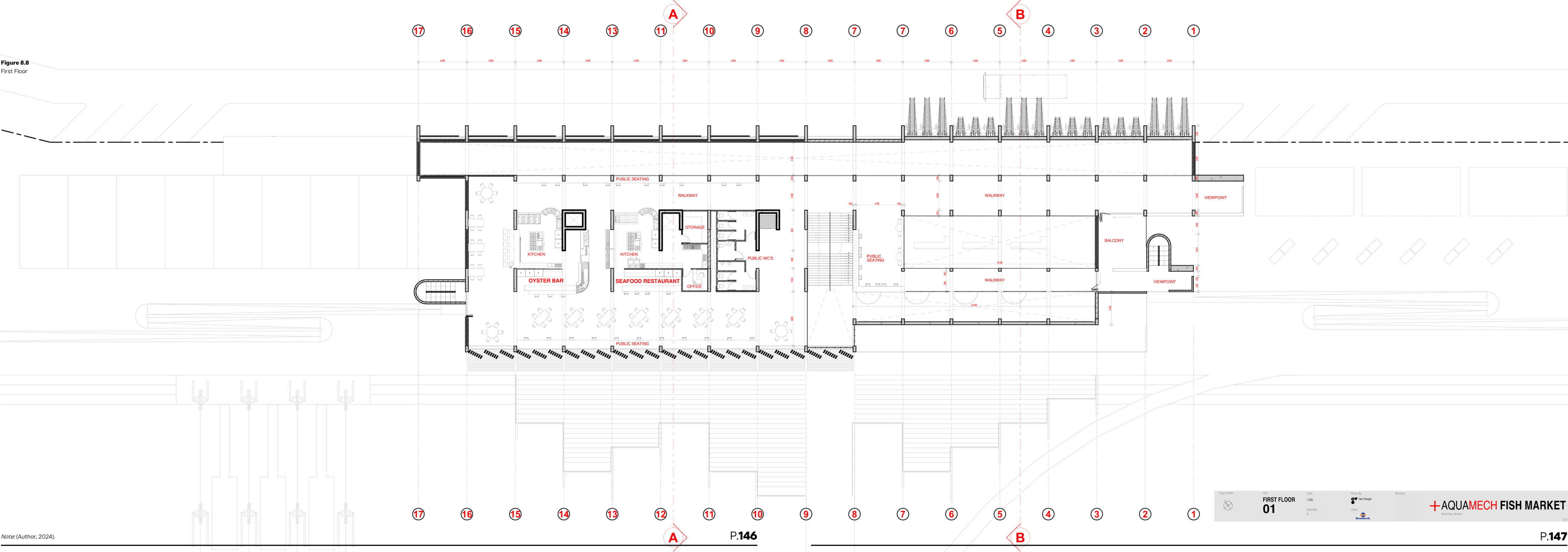
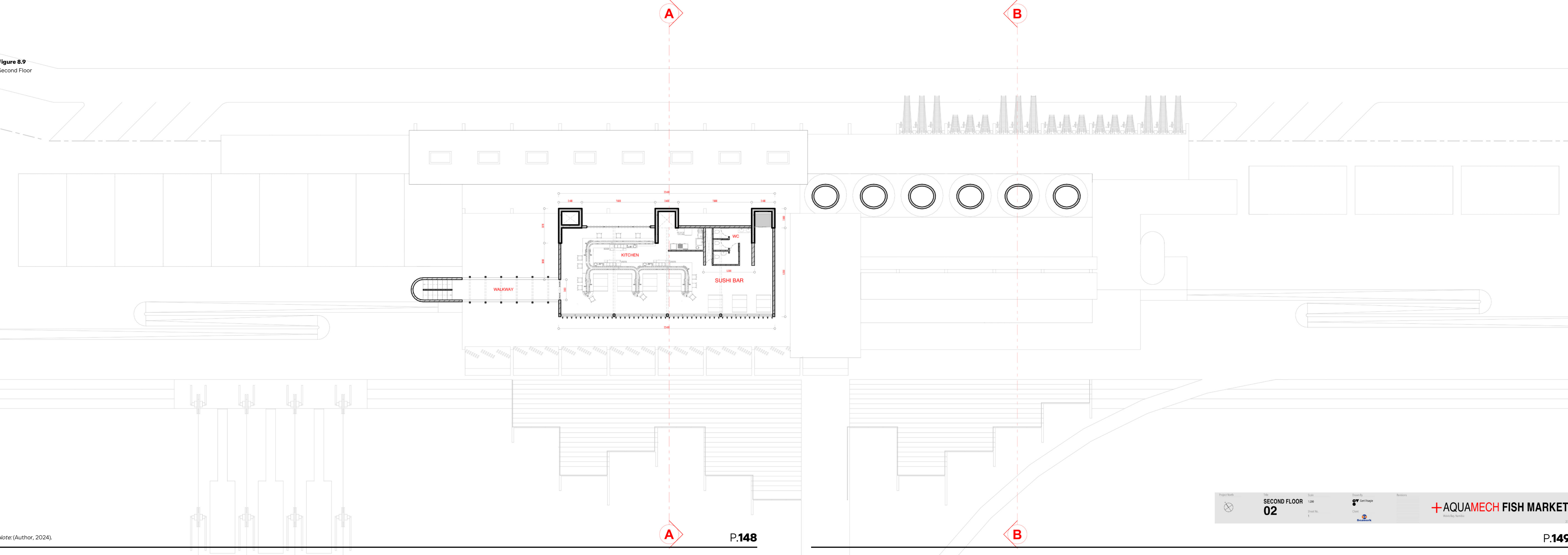


Figure 8.9
Second Floor



Note: (Author, 2024).

Figure 8.10
Section A-A

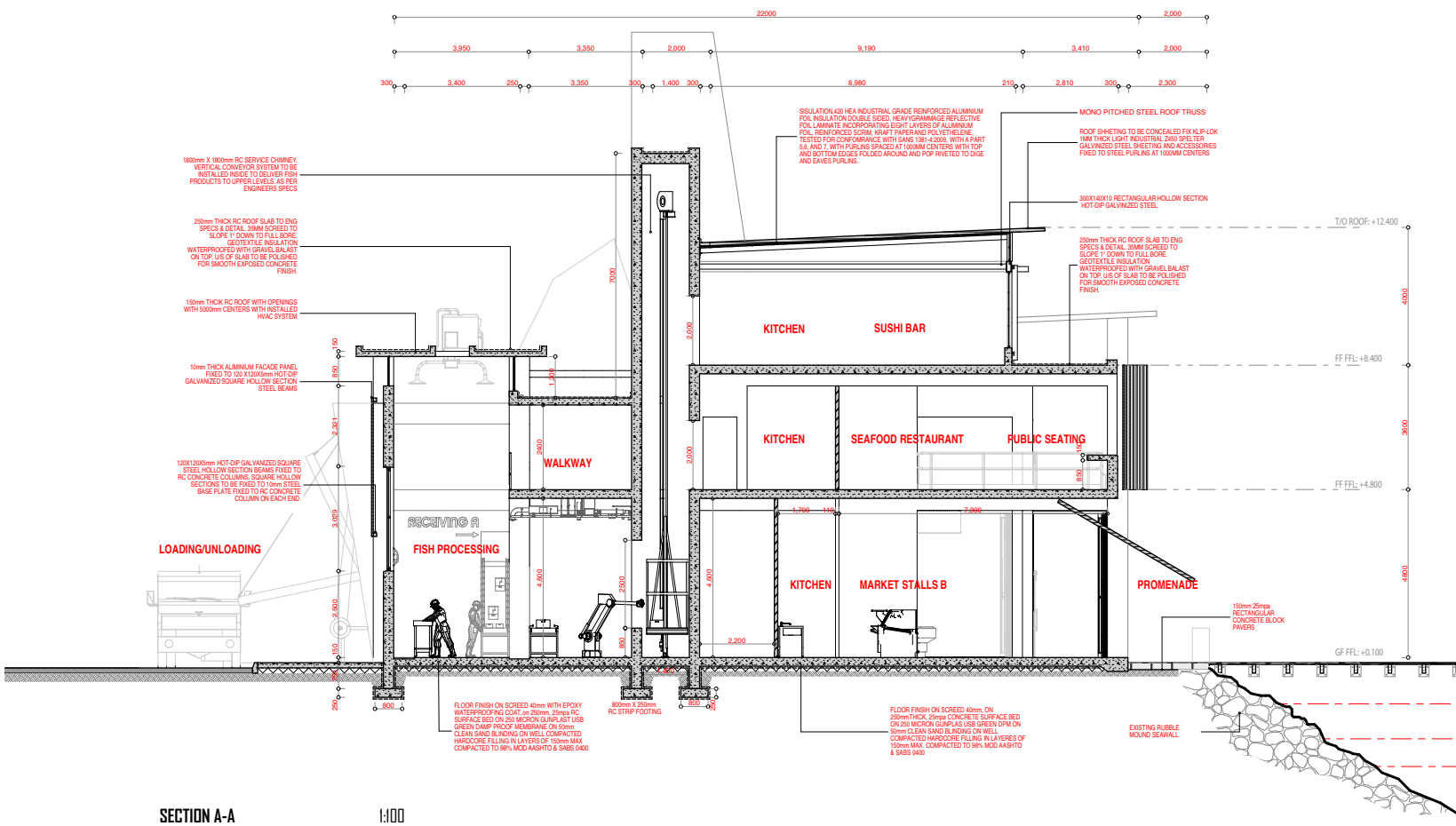
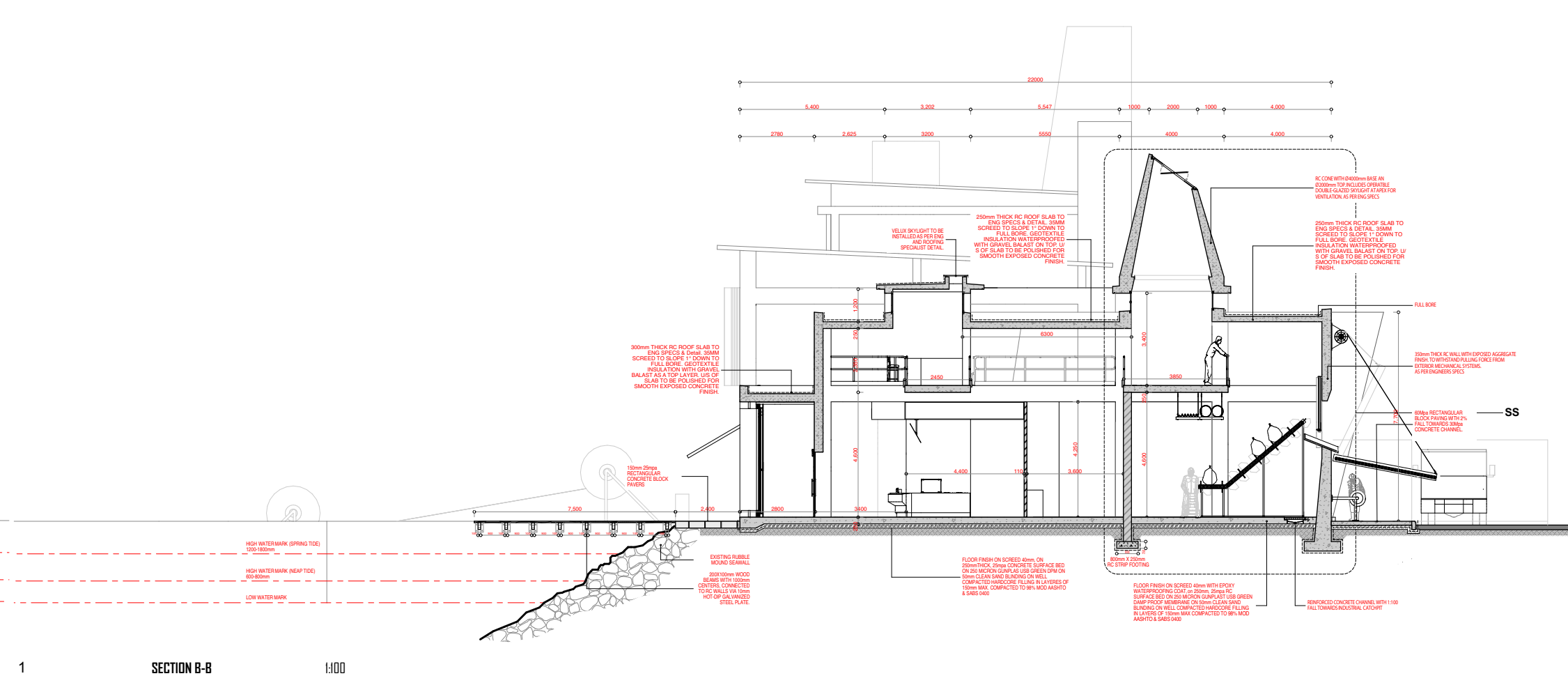


Figure 8.11
Section B-B



Note: (Author, 2024).

Project North	Title	Scale	Drawn By	Revisions
	SECTION A-A	1:100	 Gert Visagie	
		Sheet No.	Client	
		1	 Seawork	

+ AQUAMECH FISH MARKET

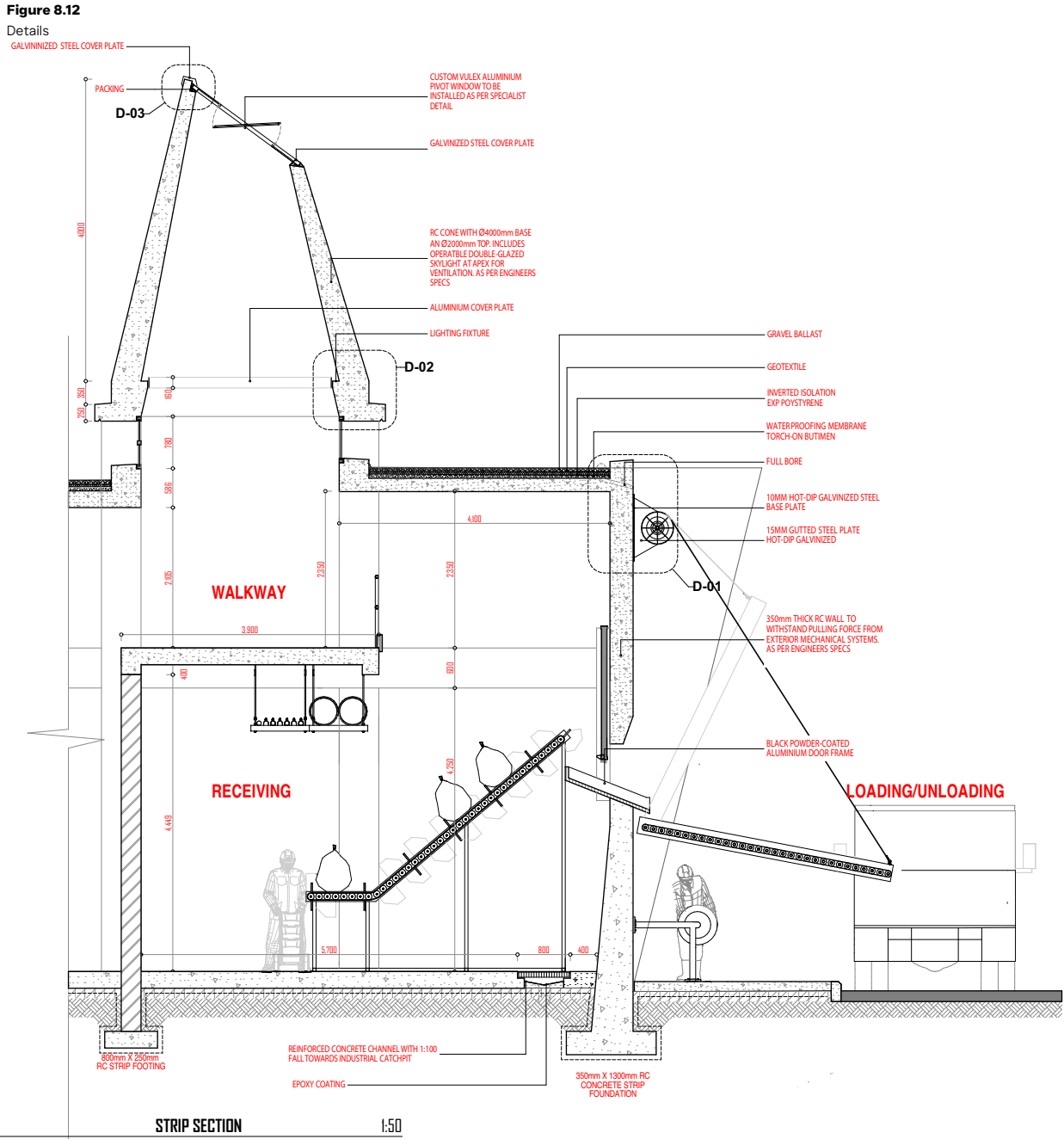
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Note: (Author, 2024).

Project North	Title	Scale	Drawn By	Revisions
	SECTION B-B	1:100	 Gert Visagie	
	Sheet No.		Client	
	1		 Seawork	

+ AQUAMECH FISH MARKET

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+ CONCLUSION

The Technical Resolution chapter outlines the essential material selections, building systems, and technical details that anchor the design's durability, functionality, and theoretical foundation. By selecting materials specifically responsive to Walvis Bay's coastal conditions, the design addresses the need for resilience against a humid, salty environment while embracing local resources. These materials enhance both the longevity of the building and its tactile relationship to the surroundings, resonating with the project's aim to create a sensory experience.

High-tech building systems contribute to operational effectiveness and connect users to the production process—directly reflecting the project's poetic post-phenomenological approach. Lastly, the technical documentation illustrates how each technical decision supports the design's spatial and sensory aspects. Altogether, this chapter has established a robust technical foundation that balances the functional demands of a fish market with the cultural and experiential objectives of the project.



09

+ SHUTTING DOWN THE MACHINE

+ CONCLUSION

To sum up, this thesis offers a complete design project concerning a fish market that reflects the view about the industrial strength of Walvis Bay and the strong local culture. Set against the theoretical context of poetic post-phenomenology, the design synthesis integrates sophisticated industrial techniques to enhance Walvis Bay's unique identity. Further, the core research focused on changing the landscape's industrial features into the elements that hold to the carnality and social integration of the space, blending two mighty opposites – the heavy industry and the people. The design achieves a dual purpose through deliberate site selection, and thoughtfully organised spatial configurations, optimising operational efficiency while providing a culturally engaging platform, thereby addressing the absence of a dedicated fish market in Walvis Bay.

This work highlights architecture's profound capacity to evoke a place-based identity, aligning spatial forms with the essence of community heritage and the evolving needs of a modern populace. The proposed market goes beyond mere functionality, emerging as a site of architectural expression that amplifies locals' and visitors' cultural and sensory experiences. In doing so, it aspires to cultivate a dynamic, immersive environment firmly rooted in the maritime legacy that defines Walvis Bay. Drawing on these local narratives, the fish market serves as a commercial hub and a cultural landmark that integrates Walvis Bay's industrial character into a broader social and urban fabric.

+ REFLECTION

Completing my thesis has profoundly transformed me, both intellectually and personally. Designing a fish market in Walvis Bay was more than an academic task; it was a rich, engaging experience that i truly enjoyed. Although the process was tough the challenges helped me grow and adapt, reinforcing the idea that significant lessons often arise from difficulties. I gained insights into architecture as a bridge between the environment and its users, realizing the importance of designing spaces that resonate meaningfully with people. This experience not only enhanced my analytical and practical skills but also shaped my understanding of architecture as art.. I look forward to applying these lessons in future projects, balancing tradition with innovation and ambition with practicality.

+ REFERENCE LIST

Arvanitoyannis, I. S., & Kassaveti, A. (2008). *Fish industry waste: Treatments, environmental impacts, current and potential uses. International Journal of Food Science & Technology*, 43(7), 726–745. <https://doi.org/10.1111/j.1365-2621.2006.01401.x>

Bachelard, G. (1994). *The poetics of space*. Beacon Press.

Barrera-Fernández, D. (2020, October 1). *Tourist transformation of ports: Cases from Spain and UK. Journal of Tourism, Hospitality and Recreation*, 2(1). <https://www.jthr.es/index.php/journal/article/view/227>

Edensor, T. (2005). *Industrial ruins: Space, aesthetics and materiality*. Berg Publishers.

Etosha Fishing. (2024). *Etosha Fishing remains confident about Namibia’s fishing industry*. <https://www.etoshafish.com.na>

FAO. (2018). *The state of world fisheries and aquaculture 2018*. FAO.

Giovanazzi, O., & Moretti, M. (2010). *Port cities and urban waterfront: Transformations and opportunities. Tema. Journal of Land Use, Mobility and Environment*, 2(3). <https://doi.org/10.6092/1970-9870/123>

Giske, L. A. L., Bjørlykhaug, E., Løvdal, T., & Mork, O. J. (2019). *Experimental study of effectiveness of robotic cleaning for fish-processing plants. Food Control*. <https://www.ntnu.no>

Gotlih, J., Brezovnik, S., Balič, J., Gotlih, K., & Brezočnik, M. (2015). *Optimization of an automated storage and retrieval systems by swarm intelligence*. Procedia Engineering. Elsevier. <https://www.sciencedirect.com>

Hein, C., Luning, S., & Van De Laar, P. (2021). *Port city cultures, values, and maritime mindsets: Defining what makes port cities special. European Journal of Creative Practices in Cities and Landscapes*, 4(1), 7–20. <https://doi.org/10.6092/issn.2612-0496/13378>

Hochhalter, A. (2013, May 24). *Waterfront spectacular. University of Illinois at Urbana-Champaign IDEALS Repository*. <https://www.ideals.illinois.edu/items/44167>

Hoyle, B. (2001). *Urban renewal in East African port cities: Mombasa’s Old Town waterfront*. *GeoJournal*, 53(2), 183–197. <https://doi.org/10.1023/a:1015704101663>

Ihde, D. (1991). *Instrumental realism: The interface between philosophy of science and philosophy of technology*. Indiana University Press.

Ihde, D. (1993). *Postphenomenology: Essays in the postmodern context. Northwestern University Press*. <https://archive.org/details/postphenomenolog0000ihde>

International Consortium of Investigative Journalists (ICIJ). (2020). *Spain’s hake appetite threatens Namibia’s most valuable fish*. <https://www.icij.org/investigations/namibias-fishing-industry/>

McIntyre, K. (2019). *The ecological importance of the Walvis Bay Lagoon. Journal of Coastal Conservation*, 23(4), 567–578. <https://www.bradtguides.com/walvis-bay-lagoon-a-bleak-future/>

Mourral, E., & Lesaffre, C. (2020). *Benefits and challenges of an automated storage and retrieval system: A theoretical study on food and pharmaceutical automated storage and retrieval systems*. DiVA Portal.

Seamon, D. (2015). *Life takes place: Phenomenology, lifeworlds, and place making*. Routledge. <https://www.taylorfrancis.com/books/mono/10.4324/9781351212519/life-takes-place-david-seamon>

Seawork Fish Processors. (2024). *About us*. <https://www.seawork.com.na/about-us>

Scharff, R. C. (2012). *Ihde’s philosophy of technology. In Postphenomenology and technoscience: The Peking University lectures* (pp. 1-19). State University of New York Press.

Tuan, Y. (1974). *Topophilia: A study of environmental perception, attitudes, and values*. Prentice-Hall.

Verbeek, P.-P. (2011). *Moralizing technology: Understanding and designing the morality of things*. University of Chicago Press.

Vidaček, S., & Bugge, E. (2016). *Hygienic design of fish processing equipment*. In *Handbook of hygiene control in the food industry*. <https://www.sciencedirect.com/science/article/abs/pii/B9780081001554000261>

Warang, R. (2024, December 12). Book in focus: *The poetics of space by Gaston Bachelard. Rethinking the Future*. <https://www.re-thinkingthefuture.com/architectural-styles/book-in-focus-the-poetics-of-space-by-gaston-bachelard/>

Welsh, C. (1996). *Making place for South Africans: Rethinking urban conservation*. University of Pretoria Repository. <https://repository.up.ac.za/handle/2263/14585>

