RECONNECTING THE WETLANDS THROUGH NON-DISCRETE ARCHITECTURE

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Abstract

This design study explores non-discrete architecture as a form of architecture that connects nature and the built environment. Architecture often separates itself and its users from the natural setting, leading to environmental neglect and the gradual loss of the natural environment. The idea of non-discrete architecture focuses on how the relationship between humans and nature can be reconstructed by creating spatial layers that can actively participate in living processes. This study focuses on the neglected wetland environment in Banjarmasin, South Kalimantan. The inquiry begins by documenting the various experiences of nature in the area, from the abundance presence of wilderness and the dynamic water reflections of the wetlands. The study explores how such experience is captured through spatial boundaries such as roof structures and floor gaps. This study develops a form of low-tech pavilion that reconsiders the boundaries and how it is situated amidst the wetland landscapes. The project aims to bring a connection between the inside and the outside and captures the landscape dynamics, creating an animated interior of the space. In doing so, it fosters awareness of environmental beauty and renews appreciation for the wetland architecture that has been neglected.

Keywords: non-discrete architecture, wetland, low-tech, pavilion, animated

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Introduction

This study explores the idea of non-discrete architecture as the basis of recreating a relationship with nature, especially amidst the wetlands of South Kalimantan. In this Anthropocene era, architecture tends to separate itself from its local context—to be a form of iconic or spectacular architecture (Hensel, 2013; Hensel & Turko, 2015). Despite consumption of a vast amount of ground, such architecture may lack spatial richness (Hensel & Turko, 2015), creating a greater separation between the interior and exterior, as well as between humans and nature. Such an approach can overlook the complexity, beauty, and potential of architecture adaptable to the natural environment (Hensel, 2013; Titman, 2013).

The study focuses on exploring the context of the wetlands of Banjarmasin, South Kalimantan. Exploring wetlands becomes particularly interesting due to the initial understanding that the separation of land and water shaped how humans perceive their environment (Mathur & Cunha, 2020). The expansion of urban zones and the drainage of wetlands as water bodies for agriculture have become factors that not only reinforce the separation between humans and nature but also lead to the loss or degradation of the wider environment, a phenomenon that has occurred widely across the globe (Convention on Wetlands, 2025).

This study started by understanding how non-discrete architecture creates ways of reconnecting with nature. It is started by developing an environmental observation of the wetlands, highlighting how the various presence of nature connects with the spatiality of the built environment. A design proposition of non-discrete architecture is then created to generate reconstruction between the wetlands and the built environment.

Non-discrete architecture as a layered continuity between nature and the built environment

Separation from original environmental conditions can diminish human awareness of nature's animated capabilities and ultimately reduce the adaptiveness of buildings to their surroundings (Yodsurang et al., 2022). Architecture in such discourse exists discretely, creating a dominance of the architectural object and enforcing a strict separation between nature and architecture. In contrast, a non-discrete architecture establishes relationships between the built environment and nature on spatial, material, and temporal levels (Hensel, 2013). It produces spaces composed of multiple layers—like an onion peel—that can participate in various environmental and ecological processes, adapt to changing conditions, and respond to the ongoing decline in biodiversity, natural resources, and the challenges of climate change (Davidova & Rakova, 2018).

Through such layeredness, non-discrete architecture connects exterior and interior spaces continuously and gradually. The relationship extends beyond the visual; it engages all senses and creates a multi-layered atmosphere (Davidova & Rakova, 2018). There are several approaches to achieving non-discrete architecture. For example, the importance of creating

continuity between the landscape and the building to eliminate the boundary between the spatial figure and the ground around it, to carve out the interior within the ground or vegetation, to create a transitional space from the exterior to the interior, or to design buildings that directly respond to the surrounding climate (Hensel, 2013).

Semi-interior spaces represent one strategy of such transitional space that bridges exterior and interior realms. These in-between spaces possess varying degrees of openness—ranging from closed, semi-closed, semi-open, open, to transformable—allowing the exchange of light, air, and interactions between humans and their surrounding biotic and abiotic environments. Such spaces function as adaptive transitional zones that respond to climate while offering opportunities for cohabitation and co-performance among different living species (Davidova & Rakova, 2018).

This study is particularly interested in how transitional space can exist non-discretely and capture the presence of nature in everyday life. Architecture is not about the spectacular, but about the experiences and memories accumulated from everyday life (Ashraf, 2012). Nature also offers pleasure, joy, and looseness for people in a world filled with rigid rules and stress (Cannon & Gianvanni, 2013; Langenheim & Yu, 2023; Titman, 2013). It is therefore crucial to raise awareness that humans exist within a natural context (van Schaik, 2015b).

The non-discrete architecture forms a narrative in which humans are neither completely inside nor outside, protected, but still feel the nature enclosing (Musfy et al., 2021). A good dialogue between the spatial elements and the outside environment produces what Heidegger (1971) calls a boundary: not something that blocks, but something that gives presence—between humans and nature. A boundary is different from separation; it creates a platform that introduces a new dimension for humans to engage with the natural environment (Utzon, 1962). Openings in the wall, such as windows, can connect humans with nature by drawing the outside space into the inside through a horizontal axis (Kellert, 2018). The boundaries of non-discrete architecture focus on providing the experience of insideness and outsideness like "in the womb yet out-of-doors" (Kite, 2023, p. 37).

The connection between humans and the environment generates an animated interior, spontaneously presenting dynamics of natural objects (Atmodiwirjo & Yatmo, 2021), enriching the experience of the presence of time through changing environmental conditions (Nute, 2016). For example, through enabling reflection of water to be captured across spatial boundaries, the experience of water is not limited within the water body, but spreads to all corners of space (Musfy et al., 2021). The animation of the natural objects that transcends beyond its boundaries creates the illusion of space that seems to drown the observer, forming an immersive experience with nature (van Schaik, 2015b).

The wetlands, as the focus of this study, exist as an area with minimal human intervention that allows for a sense of wildness

directly underfoot (Schneekloth, 2006). Wetlands are rarely discussed as part of urban nature, despite their importance for carbon storage, particularly peatlands, which account for approximately 30% of land-based carbon (Ramsar, 2021). This amount is twice as much as that stored in all the forests worldwide (Ramsar, 2021). Additionally, wetlands in urban areas can mitigate the urban heat island effect by reducing temperatures by 3 °C to 10 °C (Jain & Carpay, 2020).

For centuries, humans have coexisted with wetlands, as seen in regions such as Peru, Iraq, and Benin, as well as in India and Java during the 20th century. These areas demonstrate traditional practices that reflect sustainable ways of living in these ecosystems (Watson, 2019). Wetland areas also hold great potential for producing bio-based materials that support the principles of circularity, thus providing a foundation for architectural practices that are in harmony with nature (Material Cultures & Bauhaus Earth, 2023).

This study focuses on exploring the stilt house structure, as one of the forms of spatial adaptation developed by communities living in wetland areas. The construction of stilt houses preserves the natural landscape and avoids landfilling by enabling communities to live above water (Nyssa et al., 2021). The stilt structure is a form of low-tech construction, which utilises vernacular architecture principles, emphasising the use of natural, renewable, or easily accessible materials to minimise embodied energy and provide a relationship rooted in the surrounding context (Paramita & Yatmo, 2023; Salihbegovic & Salihbegovic, 2020).

Beyond merely shaping space to connect architecture and nature, resource scarcity and the urgent need for carbon reduction demand a leaner architecture, leading to the need to embrace low-tech as a critical discourse (Fowles, 2021). Low-tech offers tactility and simplicity in construction, operation, and maintenance but still provides well-being (Haselsteiner, 2023; Titman, 2013). Low-tech design utilises fewer components, uses natural materials, and reduces reliance on mechanical systems, resulting in a simpler built environment (Fowles, 2021; Haselsteiner, 2023). Low-tech construction limits activities that lead to excessive consumption of resources, without significantly restricting well-being or quality of life (Haselsteiner, 2023).

Low-tech design not only fosters a connection to nature through our senses but also links us to nature through the traditional building practices and cultural heritage passed down from our ancestors. A deep understanding of the local context—including the natural environment, geology, climate conditions, and available materials—influences how buildings are constructed (Haselsteiner, 2023; Paramita et al., 2022).

Structures are not merely supporting elements of buildings, but also play a role in shaping the composition of architectural spaces. Through their form, structures convey decorative and expressive qualities that contribute to the shaping of a space's atmosphere (Zhang & Wang, 2022). The interaction between the body and space, mediated by movement, opens up the possibility

for diverse spatial perceptions and experiences (Zhang & Wang, 2022). This bodily interaction evokes sensory memories that ultimately create a meaningful atmosphere (Cordua, 2015). The separation from the natural environment or exterior spaces that negatively impact health can be addressed through low-tech design, which embodies the principles of biophilia and regeneration (Haselsteiner, 2023). This approach aims to enhance both human health and the health of our planet, as healthy individuals cannot thrive on a sick planet (Guenther, 2017).

As discussed, essentially, stilt structures were designed to coexist harmoniously with wetlands. However, over time, this relationship has gradually diminished. Communities no longer depend on wetlands as sources of food or clean water and water-based transportation has been replaced by land vehicles. As a result, the wetland areas are abandoned and the stilt structure has become a mere architectural convention—perceived as a 'typical' form of construction in wetland areas without carrying its original ecological significance. Occupation of abandoned wetlands through the creation of temporary public spaces can be done through low-tech design due to the speed, affordability, and simplicity of construction (Römer & Aït-Sidhoum, 2013). This study further explores how the idea of non-discrete architecture can enrich such low-tech forms of architecture, reconnecting its dweller with the natural experience of the wetlands.

Methodology

Context of study

This study is situated in the stilts houses of South Kalimantan, particularly in the city of Banjarmasin. Situated within a swamp landscape, the city has experienced extensive land conversion for residential and infrastructural development (Hadinata, 2021). In rural areas, oil palm plantations have caused peatlands to dry out. Activities like opening and draining peatlands release carbon into the atmosphere, which significantly contributes to the climate crisis (Ramsar, 2021).

Figure 1. Neglected areas under the stilt house used as dumping grounds (Photographs by authors)

With the increasing rate of urbanisation, the surrounding land of the wetlands is often filled in, with buildings constructed closely together, leaving behind small fragments of wetlands beneath the structures. These residual spaces are frequently neglected or even used as dumping areas, as they are perceived merely as leftover or unusable land (Figure 1). This study explores how non-discrete architecture may re-establish a meaningful

relationship between humans and wetlands as a response towards such neglect.

Data collection and analysis

This paper aims to enhance awareness of the presence of nature, particularly wetlands, through observation of everyday experiences, which is then reimagined through a design study. This investigation begins with everyday life photography as a method for capturing phenomena and activities that occur. Photography offers new possibilities for understanding and documenting buildings and natural environments, serving as a tool for identifying and framing visual and sensory references to construct narratives (Meninato, 2023). Exploring the everyday becomes intriguing as it challenges spectacular architecture, which divides image and reality. Observation plays an important role in this stage and demands creativity in revealing aspects that seem ordinary in everyday life (Enia & Martella, 2019). By bringing awareness to daily life, architecture cannot be fully controlled; instead, it emerges and adapts within the everyday (Wigglesworth & Till, 1998). The visual analysis of the collected photographs is then used as a basis to reimagine a transitional non-discrete space that can connect humans with nature.

Everyday experiences of the wetlands

This section describes various everyday findings that reveal connections with the wetland environment.

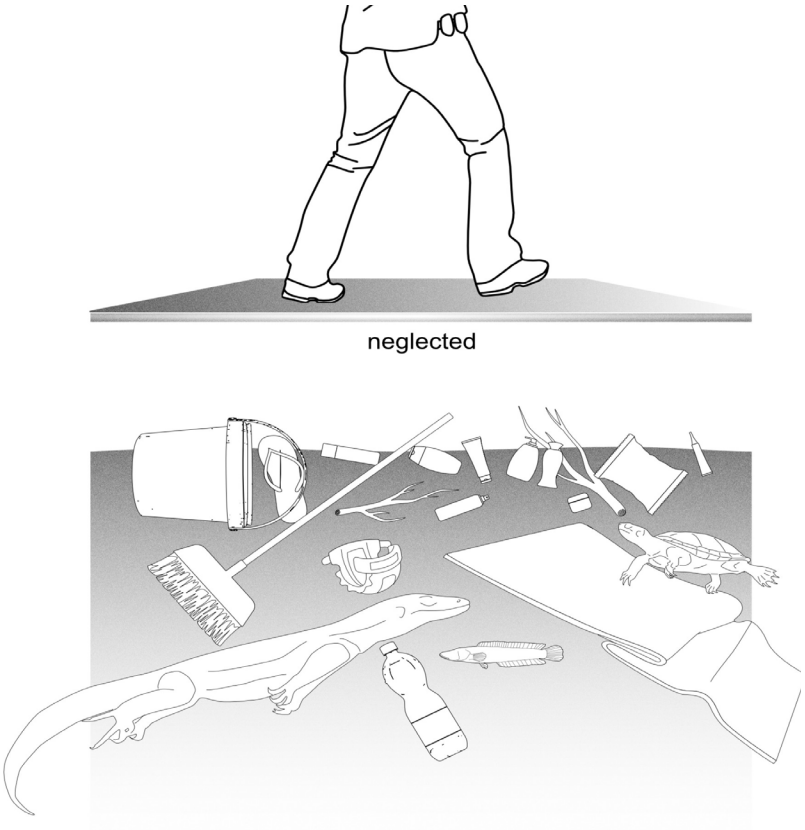


Figure 2. Turtles, monitor lizards, and fish can be found under the buildings despite the polluted water conditions (Image by author)

Dynamic presence of wilderness

Nature demonstrates its resilience by surviving even in degraded environments. For example, Figure 2 illustrates the discovery of various animals such as monitor lizards, turtles, and fish living beneath the existing stilt houses, despite the polluted water conditions. These creatures do not need to be hunted or searched for—they are easily found because they live so close to humans, often alongside them.

The absence of human activity also provides looseness for a species of tall grass plants called reed (*Phragmites karka*) to grow and spread across the wetlands, as seen in Figure 3. Its ability to reduce pollutants in water (Ni'mah et al., 2019; Yunandar, 2014) and its abundance create further potential to be developed into natural materials in architecture. In various parts of the world, reed has been used as a building material for thousands of years (Watson, 2019), be it as roof coverings, structural elements, or walls (Bacchetta et al., 2023).

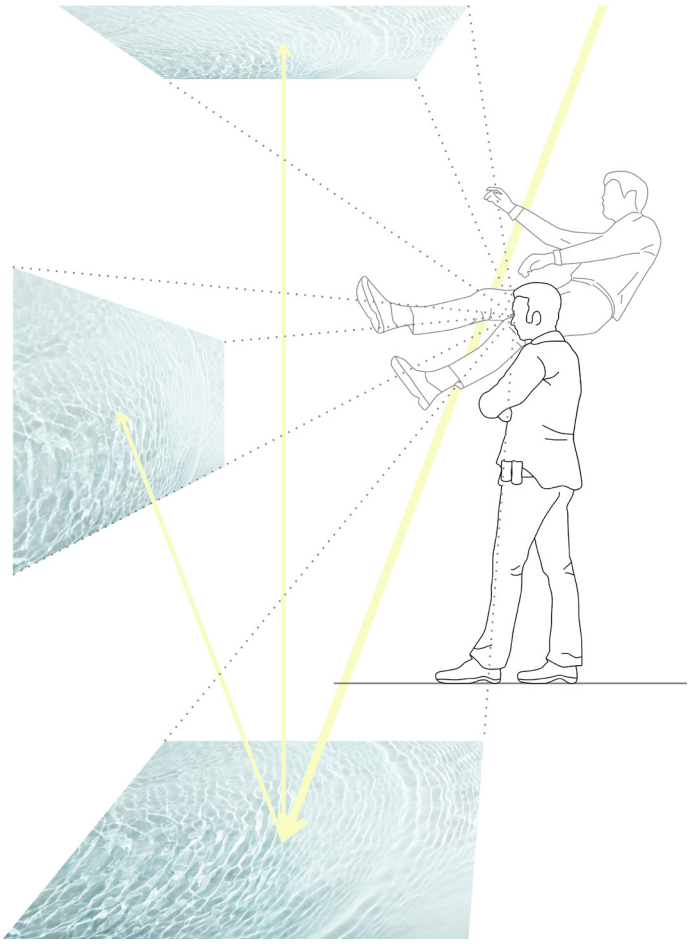
Figure 3. Extensive reed growth on neglected areas of the wetlands (top); exploration of reed material for simple structures (bottom) (Photographs by author)

There are differences in the types of local reed in Kalimantan and the reed commonly used in construction. Reed in Kalimantan is known as *Phragmites karka*, while the more commonly used type is *Phragmites australis*. Both have morphological differences, especially in the length of the glume and rachilla hairs, where Phragmites karka has a longer size (Weedbusters, n.d.). A simple design experiment was done to explore the potential of reeds as a natural and locally sourced material (Figure 3, bottom). Some reeds were harvested from untended land, then dried, stripped of their leaves, and bundled together using rope. The result is a modest structure that can provide the possibility of its potential as an environmentally friendly

material. While not as strong as bamboo, when tied together, reeds still offer a surprising degree of strength and flexibility.

Apart from the abundance of wild animals and plants, the experience of wetlands was also influenced by how water bodies create dynamics that are reflected in their surroundings. During the day, the sunlight hitting the water surface reflects the light and is captured by architectural elements such as walls and ceilings—water caustic effects. Figure 4 shows how water reflections are captured through architectural features, like walls, ceilings, or other surfaces. These reflections constantly change with the movement of sunlight and water, turning static architectural forms into animated surfaces that mirror the natural rhythms of the wetlands. This interplay between light, water, and architecture creates an immersive spatial experience where water appears to coexist with humans—visible in reflections on walls or on the ceiling.

Figure 4. The reflections of water captured by architectural elements give movement to inanimate objects, creating an immersive environment (Image by author)



Spatial boundaries of the wetland's stilt house

The stilt structure has long been used as an adaptation to wetland environments, establishing a connection between the building and its surroundings. However, anthropocentrism has altered this relationship; spatially, these structures have become disconnected as the water beneath them is often ignored—either covered or turned into a dumping site. Buildings have thus become discrete objects detached from their context.

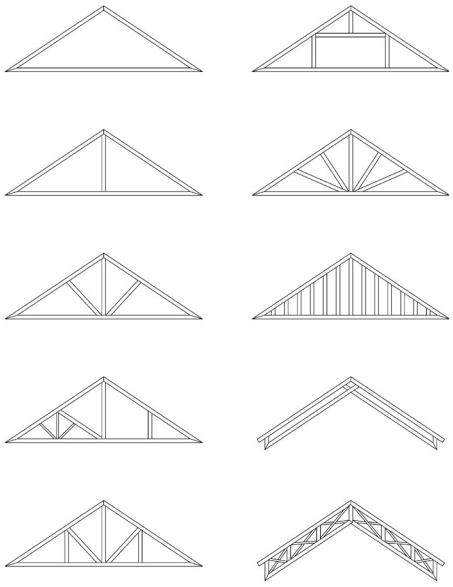


Figure 5. Identifying 10 different types of trusses from observation of 54 local houses' roofs (Photographs from Google Maps; image by authors)

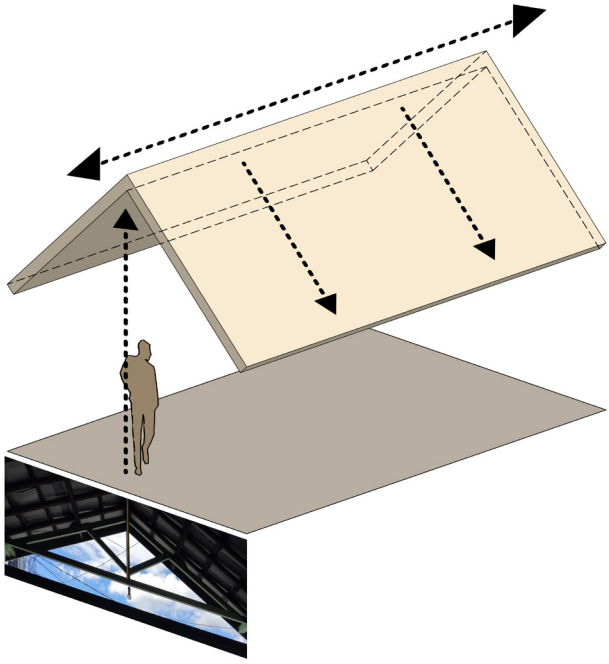


Figure 6. Spatial quality of the gable roof through its vertical, horizontal, and diagonal axes (Image by author, redrawn from Thiis-Evensen (1987))

In Banjarmasin and its surrounding areas, many houses still use gable or triangular roofs. Observations in residential areas revealed at least 10 different structural forms out of 54 gable roofs collected (Figure 5). The roof is an important spatial element to protect humans and the interior from the harshness of the outside environment, and its slope allows rainwater to continue flowing to the ground (Ching, 2019).

The gable or triangular roof represents the house itself (Thiis-Evensen, 1987), which becomes an identity of the area without making it identical (Joy, 2012) with various alterations done by the local dwellers. In this sense, the gable roof represents an important spatial element that becomes a part of the wetlands' dwellers' collective memory. The gable roof also offers ways of opening up the connection between the interior and exterior space (Thiis-Evensen, 1987). Figure 6 illustrates how a gable roof creates such a connection. The sloping surface of the roof encloses the sides, cutting off outside-inside relations along the ground and ridge lines. The roof expresses upward movement of the space before expanding horizontally, creating a diagonal descent along its slopes.

Other than the roof, the floor can also provide a connection between the inside and outside. The wooden floors in the stilt house are arranged with small gaps, providing an extension of the view towards the water bodies downward, connecting nature vertically—from top to bottom. This kind of spaced arrangement is often used in the terrace area of the house, aiming to speed up the falling rainwater and dry it. Figure 7 illustrates the spaced arrangements of the wooden floor, creating a solid-void rhythm that offers a glimpse of the downward view, where its humid atmosphere can be felt.

Based on the above paragraphs, it has been identified that there are various non-discrete ways to build narratives of connection between humans and the wetlands. The observation highlights multiple presences of nature, from the abundance of wild animals and plants that live and grow in the area, to the reflection of water and movement of the sun and wind that enter and animate the interior. The study identifies spatial elements of the stilt houses, such as the sloping gable roof structure and the gaps in the wooden floor provide identity and express the relationship between exterior and interior, creating a visual and atmospheric relation between the two.

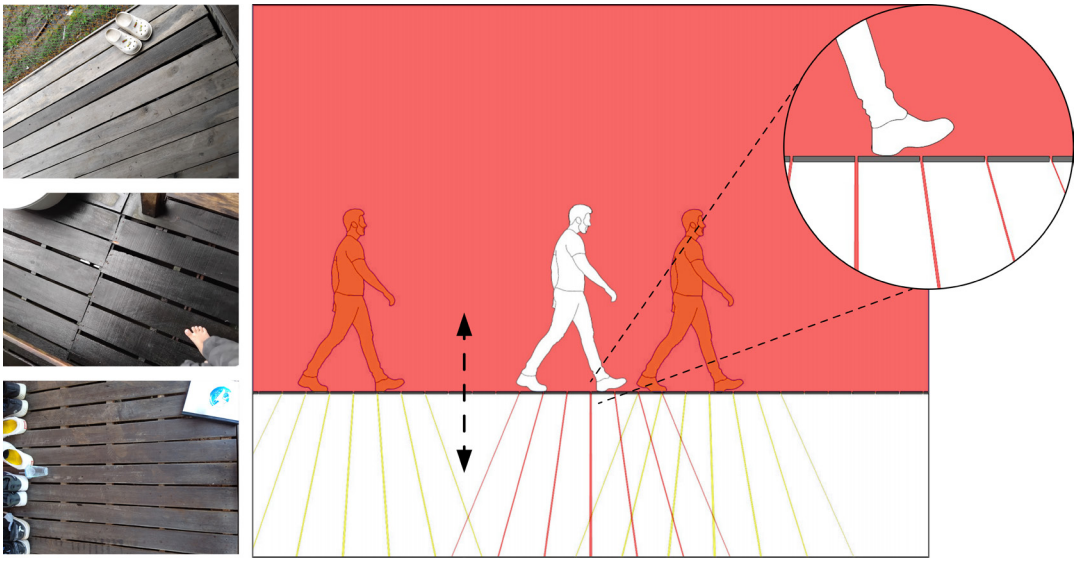


Figure 7. Wooden floor in the terrace area with gaps, allowing for some downward visibility (Image by author)

Creating a non-discrete architecture of the wetlands

The findings regarding the everyday experience of wetlands serve as a medium for re-establishing the connection between nature and architecture in the context of Banjarmasin and its surroundings. In this study, the design is situated within the wetland areas, creating a low-tech construction of a non-discrete architecture, reconnecting humans and the wetland areas.

Figure 8. Between the oil palm plantation and the rice fields (Photograph by author)

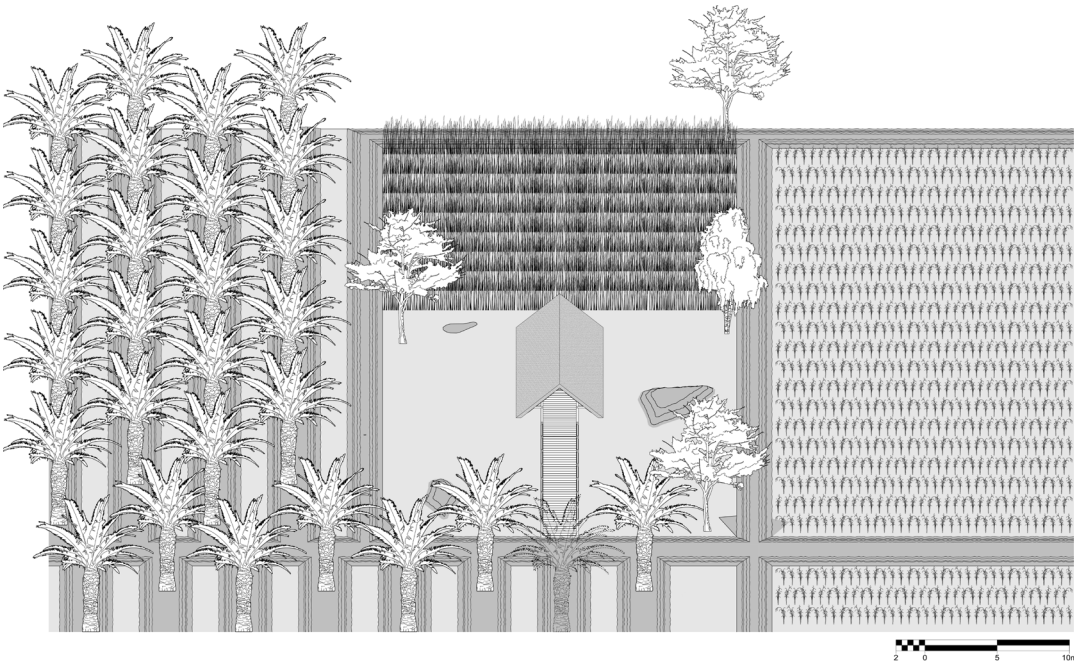


Figure 9. Pavilion between two different landscapes—an oil palm plantation and a rice field (Image by author)

This project explores the pavilion as a design typology. Pavilions are often considered unimportant and unnoticed because they are not very significant, made without ideas, and are only temporary (Baker, 2014). Simple buildings have a substantial impact on the surrounding environment and humans, as simplicity may embody complexity (Ramella, 2019). Pavilions are bridges that poetically connect nature and culture, trigger memories, and serve as a refuge from daily routines (Le Festival des Cabanes, n.d.; van Schaik, 2015a). A pavilion provides shelter from the sun while feeling the breeze and the rapidly

changing weather conditions, enriching and evoking the overall experiences (Bevan, 2015).

The pavilion in this design study is situated in a rural area, set within a landscape of rice fields and directly adjacent to oil palm plantations (Figure 8). This site has undergone contrasting changes from rice fields managed by local farmers to the oil palm plantations owned by multinational corporations. The presence of oil palm plantations raises awareness of ongoing environmental change, as the process of land clearing for oil palm plantations potentially creates the risk for the carbon in the soil to be released into the atmosphere (Ramsar, 2021). This situation is in contrast with the farmers' daily struggle to maintain their livelihoods through their everyday agricultural practices. Figure 9 illustrates the position of the pavilion amidst such contrasting conditions. The site is an open wetland area that is intentionally selected to enhance to provide a nature experience of its visitors to different landscapes around it. The left side shows the oil palm plantation areas, while the right side shows a rice field.

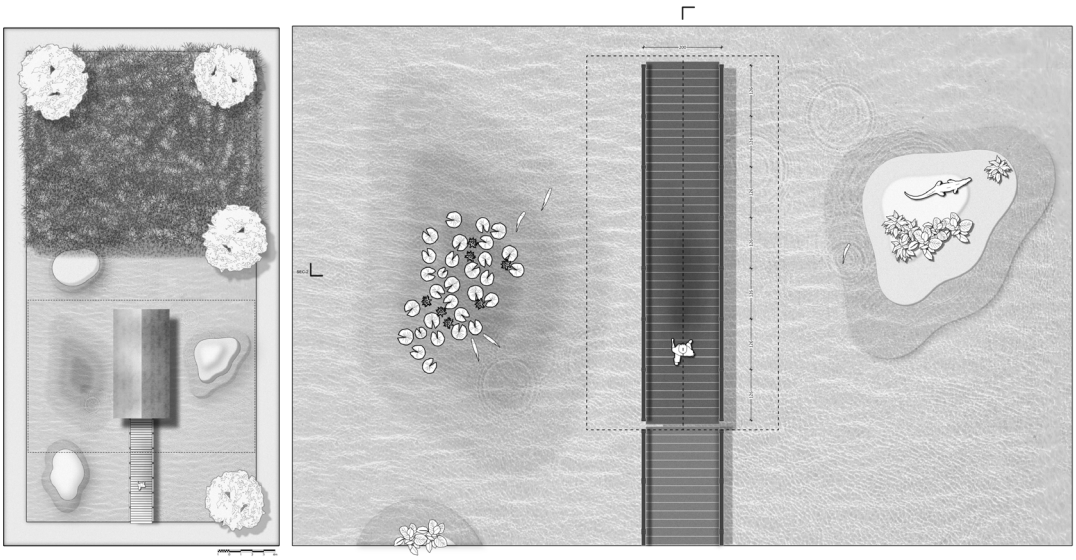


Figure 10. The site plan of the pavilion (left); the floor plan of the pavilion (right) (Images by author)

The pavilion measures a total of 17.64 metres in length, with an 8.82-metre roofed section and an open area of 8.82 metres (Figure 9 and Figure 10). Figure 10 illustrates the building's elongated, open form, positioned above the water, creating a direct connection with the surrounding nature. Behind the pavilion is an area covered in wild reeds. The section drawings in Figure 11 illustrate how the relationship between architecture and nature can be experienced by humans through spaces that simultaneously bring the outside in and the inside out.

Each section demonstrates a direct connection to the surrounding landscape, but from a different perspective. In the longitudinal section (Figure 11, top), a rice paddy landscape appears in the background, with a stretch of reeds showing at the rear of the building. The open gable roof at both ends of the pavilion provides a broad, open view. Meanwhile, in the cross-section (Figure 11, bottom), it can be seen that the view focuses

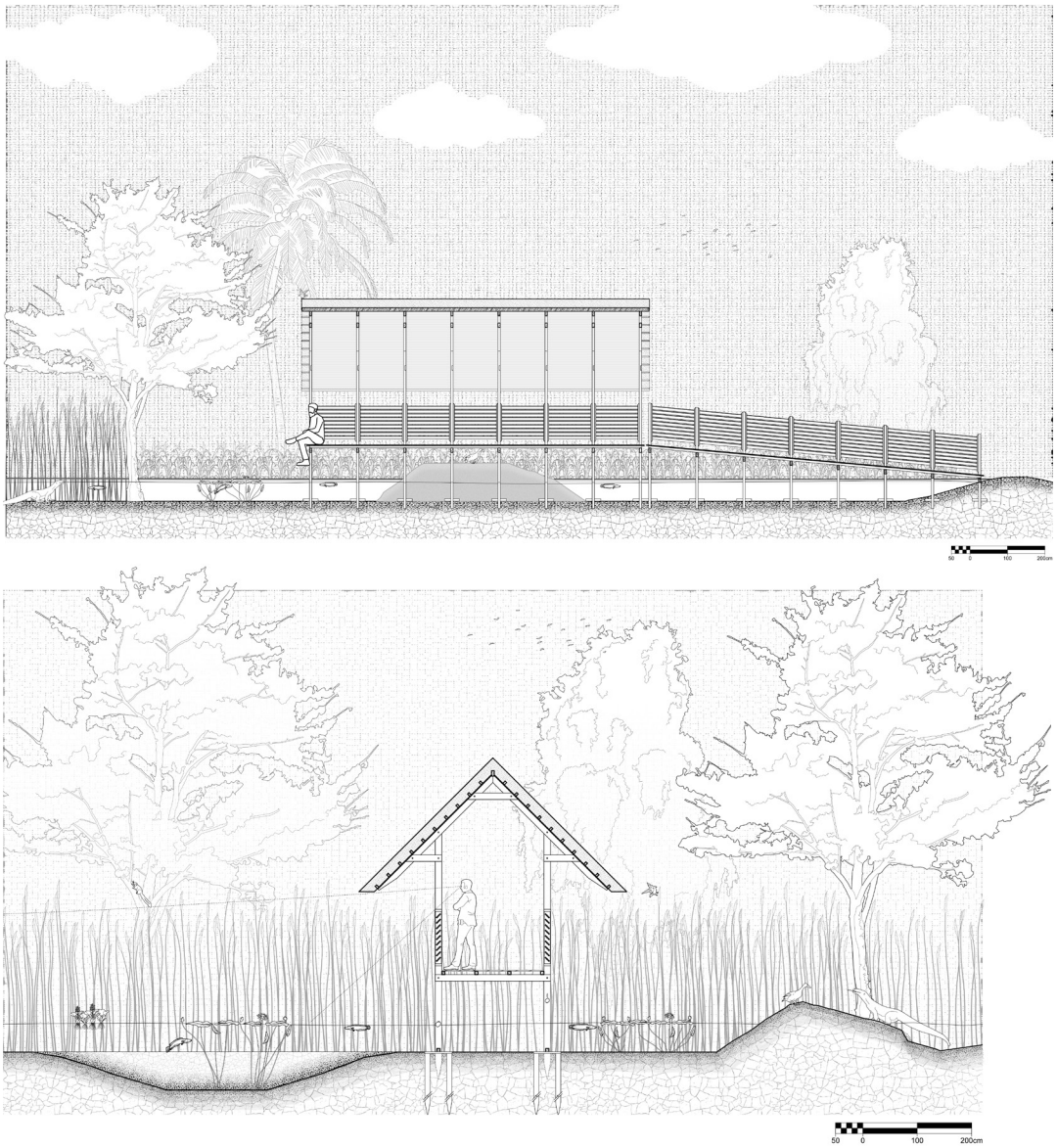


Figure 11. The longitudinal section (top); the cross-section (bottom) (Images by author)

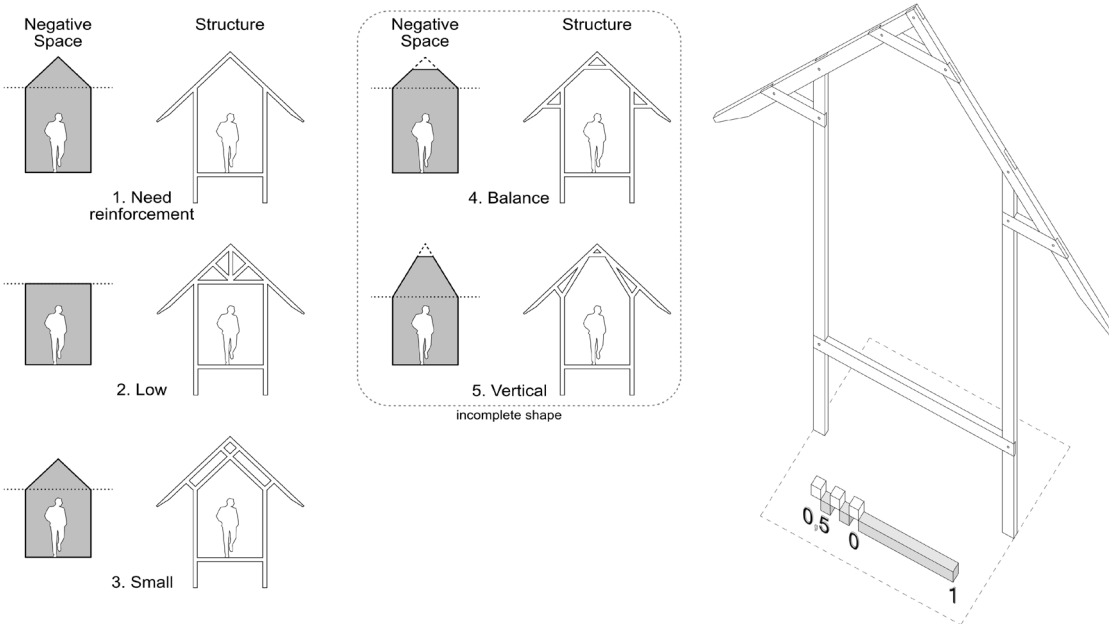
Figure 12. Pavilion as a permeable building, creating an outside-inside-outside relationship with contrasting light and shadow (Images by author)

Figure 13. An extended roof structure to focus the view towards the wetlands (Images by author)

more on the wetlands below the building, with the densely growing reeds in the background, creating a more intimate and enclosed sense of closeness to the landscape. Figure 12 shows a linear and permeable building nestled within nature, creating an outside-inside-outside experience. The interior captures the landscape and creates an atmosphere with its contrasting presence between light and shadow. The structure, with its natural materials, is arranged with views of the oil palm plantation (Figure 13).

As discussed, this study focuses particularly on how the sloped roof on the side can reduce visibility toward the sky and generate more focus on the wetland. Figure 14 illustrates the roof design where its length has been extended to eye level, to limit upward views and redirect attention toward the lower part of the wetland. The intention is to enhance awareness and reveal the beauty of the landscape. With a focus on the wetlands, it reflects the sky. This is reminiscent of Claude Monet's (1919) painting *Water Lilies*, which focuses on a pond filled with

Figure 14. The iterations of the overall pavilion structure design (Image by author)



water lilies while also presenting the sky through the water's reflection—creating a juxtaposition between what is below and what is above.

To develop the structure of the roof, at least six iterations were explored, creating variations to the truss structure and the negative space created by the structure. Each iteration is shown in Figure 14, which also illustrates the character of the resulting spatial qualities: forms that create low spaces (iteration 2), small spaces (iteration 3), and spatial geometries that appear incomplete, as shown in iterations 4 and 5. However, the fourth iteration shows a quality of balance between the negative space form and its physical structure, particularly through the addition of reinforcing elements on the sides and top. Therefore, the roof structure form in the fourth iteration was chosen as the most optimal form (Figure 14).

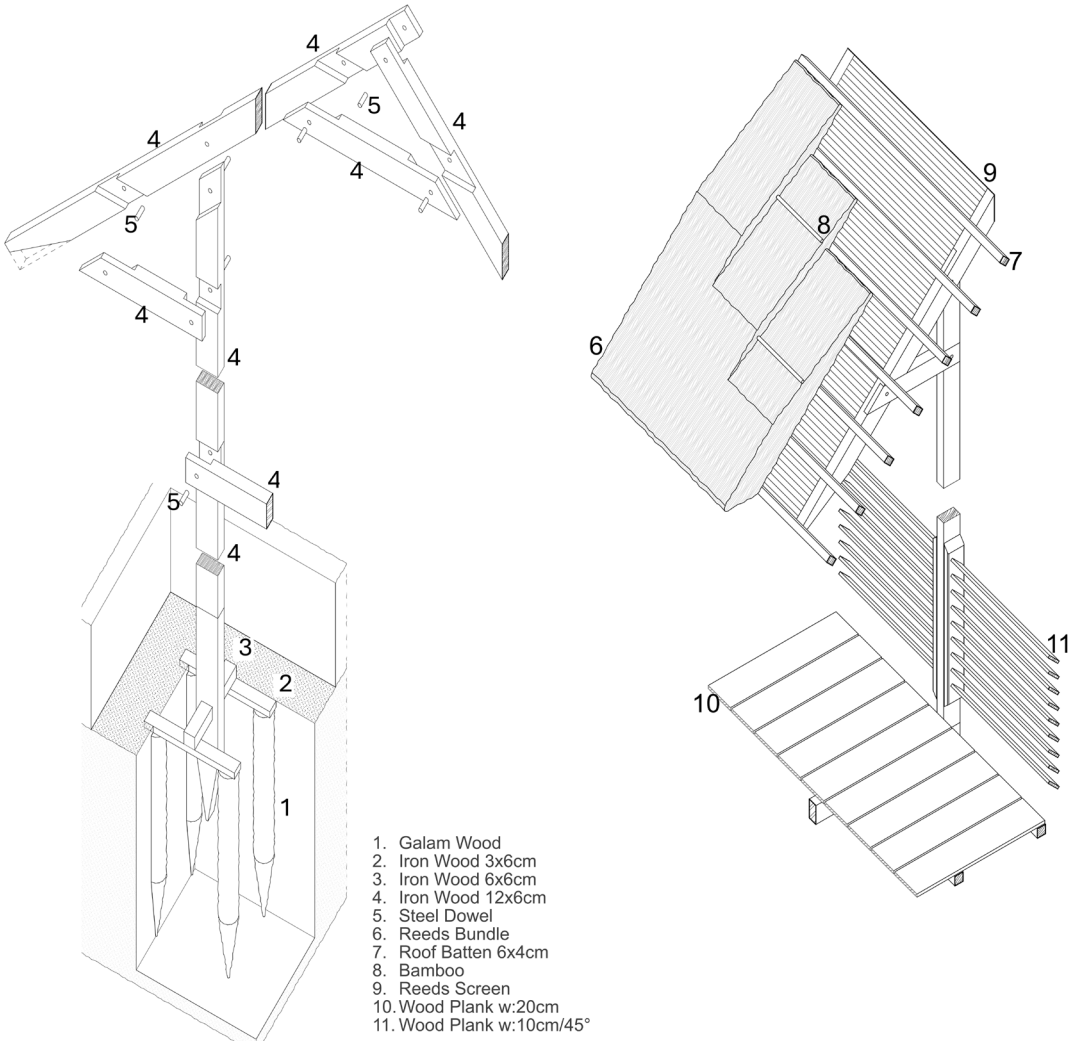


Figure 15. Detail of the structure (left); detail of the roof and floor (right) (Images by author)

The roof is made primarily of reeds due to their abundance in the surrounding environment. The reeds are installed by tying bundles to wooden battens, with bamboo elements added to reinforce the bindings. The ceiling features a reed screen, adding rich natural texture to the interior. The floor consists of wooden planks arranged with deliberate gaps, allowing views to

pass through and maintain a visual connection with the wetland landscape below. The railing is made of wooden planks that are rotated 45 degrees to direct the view outwards. Construction details of the roof and floor are presented in Figure 15.

The construction method adheres to the principles of vernacular architecture, specifically the stilt houses commonly found in the wetlands of Kalimantan. The pavilion structure uses ulin or ironwood as its primary material due to its local availability and durability in wetland conditions. The foundation consists of galam wood piles driven into the ground to stabilise the ulin posts. The tectonic details, including how the wooden elements are connected and how the building relates to the surrounding landscape, are illustrated in Figure 15.

Non-discrete performance of nature in the pavilion

This section reflects on the non-discrete performance of the pavilion, using various ways to visualise how the dynamic nature of the wetlands can be experienced in its interior. This design reflection uses isovists to understand the visual range within the pavilion, CFD simulations to understand exposure to wind, and video observation to demonstrate wetlands water reflection.

As seen in Figure 16, the grey area represents the viewpoint experienced by the observer in the specified position. The roof provides a horizontal view towards the wetland and limits the vertical view of the sky. The slanted wooden railing design also influences the view, focusing the experience towards the lower area of the wetlands' surface.

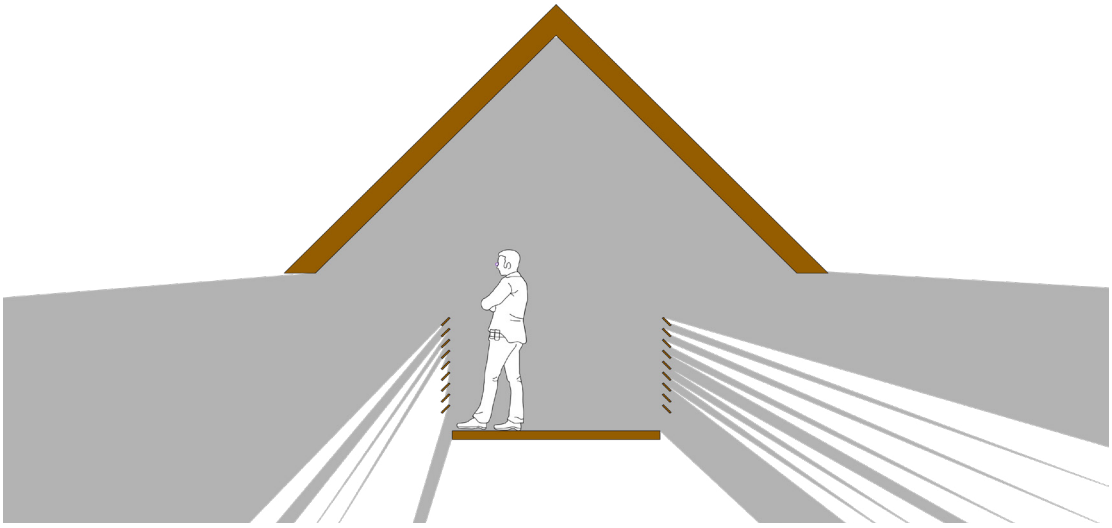


Figure 16. The results of the isovist simulation of the building show limitations on views utilising the roof and railing design (Image by author)

The CFD simulation seeks to observe whether nature—in this case, the wind—can enter the interior space and whether its breeze can be experienced. In the conducted CFD simulation (Figure 17), the incoming wind at a speed of 1.6 m/s can be slowed down as it enters the interior space and can be felt more gently (0.2–1.0 m/s). It is evident that the design of the railing significantly influences how the wind is directed and perceived.

These water reflections of the pavilion create an important connection with the wetland landscape. The roof, which extends beyond the building's footprint, aims to capture more water reflections. Instead of separating, the roof serves as a shading element, providing a deeper connection with the water. Figure 18 shows a physical study model with water bodies underneath, capturing water reflections in the architectural elements such as columns and roofs. A video demonstrating the animated space can be accessed online at Aulia ur Rahman Studio (2025). These reflections on how the experience of dynamic nature show how the pavilion exists non-discretely, reconnecting the wetlands and humans through an animated interior.

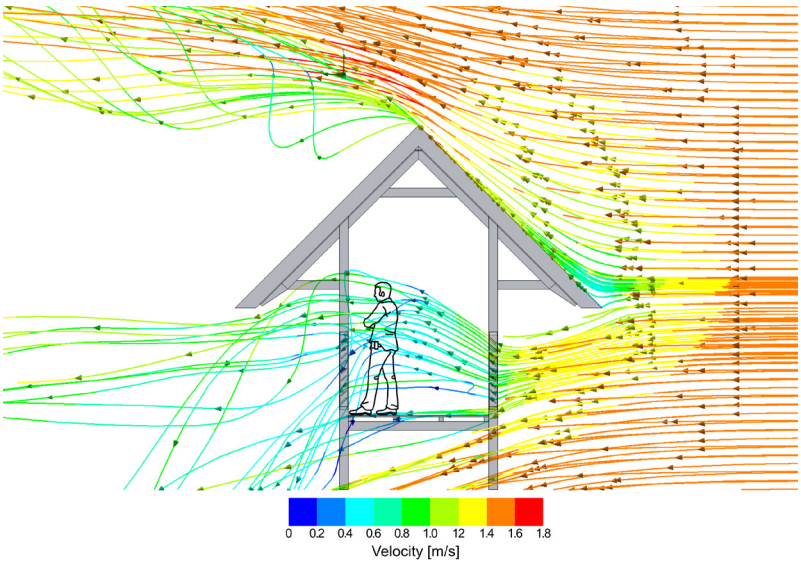


Figure 17. Wind simulation using CFD describes the movement of wind entering the interior (Image by author)

Figure 18. Constantly changing water reflections captured by the pavilion roof (Image by author)

Conclusion

This project demonstrates an effort to reconnect with the neglected and degrading wetlands as part of the urban nature. The search for connection begins through identifying everyday experiences of nature, in constructing a narrative that offers better awareness of the existing landscape. The study proposes the creation of non-discrete architecture using low-tech methods of a vernacular wetland architecture, as a reimagination of everyday wetland experiences.

The study highlights how non-discrete architecture creates layered continuity of natural experience through reconsideration of its boundaries. This multi-layered experience enables non-discrete architecture to connect interior and exterior spaces, immersing the built environment with the landscape around it. This study proposes a pavilion that occupies neglected wetlands located in the changing local landscape due to oil palm plantations by large corporations in the city of Banjarmasin. The pavilion demonstrates an effort to reconnect with wetlands and, most importantly, to encourage locals to preserve and restore the beauty of wetland landscapes due to their ecological benefits.

The spatial and structural boundaries of the pavilion serve as a medium for connecting humans with nature. The arrangements of railings and the extended roof bring a connection between the indoor and outdoor space, creating contrasting experiences and atmospheres that present a nature experience of the wetlands in diverse ways. Finally, the study creates reflections towards the performance of the pavilion as non-discrete architecture, to simulate further how it creates an experience in connection with the wetlands.

This research is limited by the scale and type of building being constructed. This research could be further developed to explore how non-discrete principles can be applied to various typologies, including houses and public buildings. It can be concluded that a non-discrete architecture project creates various potentials as a medium to connect nature and humans on spatial, material and temporal levels. In doing so, the space animates and is in dialogue with humans (Atmodiwirjo & Yatmo, 2021; Todd, 2020), providing a close relationship through their changing presence.

References

Ashraf, K. (2012). Reading the wind and weather: The meteorological architecture of Studio Mumbai. *Architectural Design*, 82(6), 78–83. https://doi.org/10.1002/ad.1498

Atmodiwirjo, P., & Yatmo, Y. A. (2021). Animated Interior. *Interiority*, 4(2), 135–138. https://doi.org/10.7454/in.v4i2.176

Aulia ur Rahman Studio. (2025, July 12). *Water caustic effect in architecture [Video]. Youtube.* https://youtu.be/eH7PUh8qcng

Bacchetta, E., Charbon, A., Grossenbacher, L., & Nadas, E. (2023). *Reed:* Phragmites Australis. Material Cultures. https://materialcultures.org/eth-reed/

Baker, L. (2014). *Temporary architecture*. Braun.

Bevan, R. (2015). In the pursuit of pleasure: The not so fleeting life of the pavilion and its ilk. *Architectural Design*, 85(3), 16–25. https://doi.org/10.1002/ad.1896

Cannon, M., & Gianvanni, M. (2013). Quit the grey limbo and return to paradise. *Architectural Design*, 83(3), 68–73. https://doi.org/10.1002/ad.1592

Ching, F. D. K. (2019). *Building construction illustrated* (6th ed.). Wiley.

Convention on Wetlands. (2025). *Global wetland outlook 2025: Valuing, conserving, restoring and financing wetlands.* https://doi.org/10.69556/GWO-2025-eng

Cordua, C. H. (2015). Conviction into tectonics: The work of Rintala Eggertsson. *Architectural Design*, 85(2), 76–81. https://doi.org/10.1002/ad.1879

Davidova, M., & Rakova, D. (2018). Biodiversity and climate change adaptation through non-discrete architectural spaces and architectures: Systematic approach to traditions for sustainable futures. *FormAkademisk - Forskningstidsskrift for Design Og Designdidaktikk*, 11(4), 1–31. https://doi.org/10.7577/formakademisk.2287

Enia, M., & Martella, F. (2019). Reducing architecture: Doing almost nothing as a city-making strategy in 21st century architecture. *Frontiers of Architectural Research*, 8(2), 154–163. https://doi.org/10.1016/j.foar.2019.01.006

Fowles, E. (2021, July 15). *Make low-tech our mantra and design clean and simple*. The RIBA Journal. https://www.ribaj.com/intelligence/low-tech-reset-climate-emergency-feilden-fowles

Guenther, R. (2017). Transforming hospitals: Building restorative healthcare. *Architectural Design*, 87(2), 128–133. https://doi.org/10.1002/ad.2162

Hadinata, I. Y. (2021). Transformasi ruang rawa Kota Banjarmasin [Transforming the swamp in Banjarmasin]. *Sustainable, Planning and Culture (SPACE): Jurnal Perencanaan Wilayah dan Kota*, 3(1), 33–40. https://doi.org/10.32795/space.v3i1.1727

Haselsteiner, E. (2023). *Robust architecture. Low-tech design*. Detail Architecture.

Heidegger, M. (1971). *Poetry, language, thought* (A. Hofstadter, Trans.). Harper & Row.

Hensel, M. (2013). *Performance-oriented architecture: Rethinking architectural design and the built environment*. Wiley. https://doi.org/10.1002/9781118640630.ch3

Hensel, M., & Turko, J. P. (2015). *Grounds and envelopes: Reshaping architecture and the built environment*. Routledge.

Jain, N., & Carpay, S. (2020, December 8). *Urban wetlands for cooler and climate-proof cities*. Wetlands International. https://www.wetlands.org/publication/urban-wetlands-for-cooler-and-climate-proof-cities

Joy, R. (2012). Identity through the grounding of experience in place. *Architectural Design*, 82(6), 40–45. https://doi.org/10.1002/ad.1491

Kellert, S. R. (2018). *Nature by design: The practice of biophilic design*. Yale University Press.

Kite, S. (2023). 'In the womb yet out-of-doors': Penumbra and the spaces in-between. *Architectural Design*, 93(4), 30–37. https://doi.org/10.1002/ad.2951

Langenheim, N., & Yu, K. (2023). The Mega-Eco-38 Garden City: Stories of rewilding and ecodystopia. *Architectural Design*, 93(1), 38–45. https://doi.org/10.1002/ad.2892

Le Festival des Cabanes. (n.d.). *Introduction*. https://www.lefestivaldescabanes.com/en/introduction

Material Cultures, & Bauhaus Earth. (2023). *Wetlands and construction: An opportunity for Berlin-Brandenburg*.

Mathur, A., & da Cunha, D. (2020). Wetness is everywhere: Why do we see water somewhere? *Journal of Architectural Education*, 74(1), 139–140. https://doi.org/10.1080/10464883.2020.1693843

Meninato, P. (2023). Theory follows photography: The evolving gaze of Denise Scott Brown. *Interiority*, 6(1), 5–20. https://doi.org/10.7454/in.v6i1.233

Monet, C. (1919). *Water lilies* [Painting]. The Met Museum, New York, NY, United States. https://www.metmuseum.org/art/collection/search/438008

Musfy, K., Sosa, M., & Ahmad, L. (2021). The public interior space within Louvre Abu Dhabi Dome: A visual reflection. *Interiority*, 4(2), 159–180. https://doi.org/10.7454/in.v4i2.154

Ni'mah, L., Anshari, M. A., Saputra, H. A., Rahmadi, A., & Fitriati, U. (2019). Utilization of Parupuk plants (*Phragmites Karka*) to reduce mercury levels in waters former of diamond and golden mining. *MATEC Web of Conferences*, 280, Article 05012. https://doi.org/10.1051/matecconf/201928005012

Nute, K. (2016). The presence of the weather. *Architectural Design*, 86(1), 66–73. https://doi.org/10.1002/ad.2003

Nyssa, A. R., Susanto, D., & Panjaitan, T. H. (2021). Sustainable construction of wetland stilt house in Indonesia. In T. Kang & Y. Lee (Eds.), *Proceedings of 2021 4th International Conference on Civil Engineering and Architecture* (pp. 625–632). Springer. https://doi.org/10.1007/978-981-16-6932-3_54

Paramita, K. D., & Yatmo, Y. A. (2023). Thinking low-tech: Promoting local practices in design studio. *Jurnal Kejuruteraan*, *si6*(1), 103–111. https://doi.org/10.17576/jkukm-2023-si6(1)-10

Paramita, K. D., Atmodiwirjo, P., & Sinuraibhan, S. (2022). Learning from contextual material practices in architecture: Exploring nature-based materials in Indonesia and Thailand. *IOP Conference Series: Earth and Environmental Science*, 1098(1), Article 012040. https://doi.org/10.1088/1755-1315/1098/1/012040

Ramella, A. (2019, January 2). *Belonging - Glenn Murcutt*[Video].Youtube.https://www.youtube.com/watch?v=QYEbgU7xZHA&t=1058s

Ramsar. (2021). *Wetlands and carbon capture*. https://www.ramsar.org/sites/default/files/ramsar_50_factsheet_carbon_capture_english_as_v7.pdf

Römer, A., & Aït-Sidhoum, N. (2013). Low-tech transgression: The interventional work of EXYZT. *Architectural Design*, 83(6), 66–69. https://doi.org/10.1002/ad.1676

Salihbegovic, A., & Salihbegovic, A. (2020). Natural materials in contemporary low-tech architecture. *IOP Conference Series: Materials Science and Engineering*, 960(4), Article 042012. https://doi.org/10.1088/1757-899X/960/4/042012

Schneekloth, L. H. (2006). Unruly and robust: An abandoned industrial river. In Q. Stevens (Ed.), *Loose space: Possibility and diversity in urban life* (pp. 253–270). Routledge.

Thiis-Evensen, T. (1987). *Archetypes in architecture*. Universitetsforlaget. https://doi.org/10.18261/9788215046419-2020-5

Titman, M. (2013). Dualism is dead; long live the pastoral. *Architectural Design*, 83(3), 14–19. https://doi.org/10.1002/ad.1584

Todd, A. (2020). Plant consciousness: Towards an architecture of expanded kinship. *Architectural Design*, 90(6), 100–109. https://doi.org/10.1002/ad.2638

Utzon, J. (1962). Platforms and plateaus: Ideas of a Danish architect. *Zodiac*, 10, 113–140.

van Schaik, L. (2015a). Pavilions, pop-ups and parasols: Are they platforms for change? *Architectural Design*, 85(3), 8–15. https://doi.org/10.1002/ad.1895

van Schaik, L. (2015b). *Practical poetics in architecture*. John Wiley & Sons.

Watson, J. (2019). *Lo–TEK: Design by radical indigenism*. Taschen.

Weedbusters. (n.d.). *Phragmites*. https://www.weedbusters.org.nz/what-are-weeds/weed-list/phragmites/

Wigglesworth, S., & Till, J. (1998). *The everyday and architecture: 134 (Architectural Design)*. John Wiley & Sons.

Yodsurang, P., Uekita, Y., & Shimizu, I. (2022). Water-based settlement and the loss of community water resilience. *Interiority*, 5(2), 179–196. https://doi.org/10.7454/in.v5i2.210

Yunandar, Y. Z. (2014). Model instalasi biofilter dengan pemanfaatan parupuk (*Phragmites karka*) dan kiambang (*Salvinia molesta*) [Biofilter installation model with the utilisation of parupuk (*Phragmites karka*) and kiambang (*Salvinia molesta*)]. *Jurnal Bumi Lestari*, 14(1), 53–62. https://jurnal.harianregional.com/blje/full-11244

Zhang, R., & Wang, S. (2022). Experiencing structure: Structural design as the making of a spatial artistic expression. In M. F. Hvejsel &

P. J. S. Cruz (Eds.), *Structures and architecture. A viable urban perspective?* (pp. 1161–1168). CRC Press.