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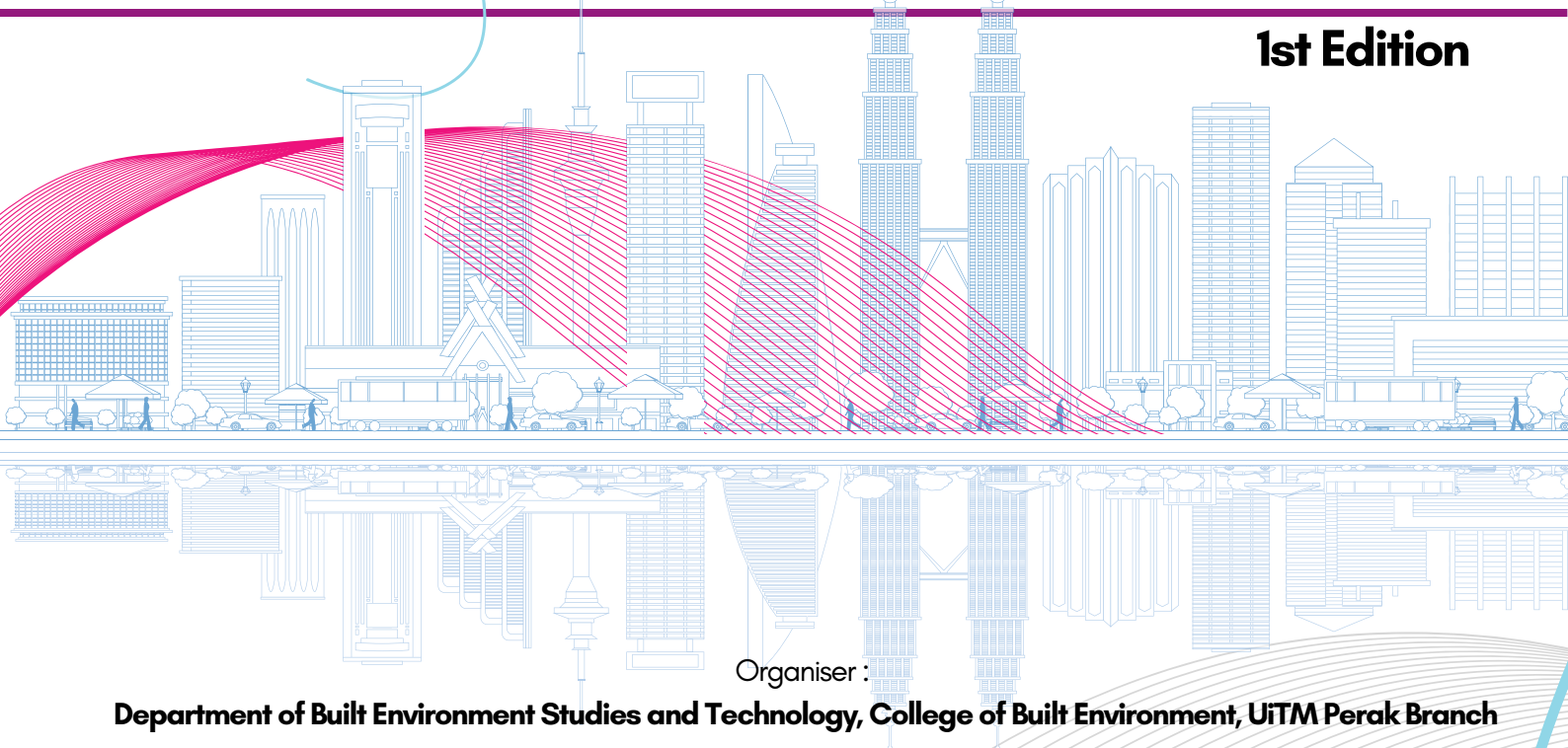
Cawangan Perak

e - Proceedings



Proceeding for International Undergraduates Get Together 2024 (IUGeT 2024)
"Undergraduates' Digital Engagement Towards Global Ingenuity"

1st Edition



Organiser :

Department of Built Environment Studies and Technology, College of Built Environment, UiTM Perak Branch

Co-organiser :

INSPIRED 2024. Office of Research, Industrial Linkages, Community & Alumni (PJIMA), UiTM Perak Branch

Bauchemic (Malaysia) Sdn Bhd

Universitas Sebelas Maret

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Susun Tunggal Pop-up Exhibition

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ABSTRACT

Susun Tunggal reimagines the pop-up pavilion as a space for cultural rediscovery. Inspired by the traditional floral mural known as the “Bunga Susun Tunggal”, this biophilic design seamlessly integrates nature with interactive exhibits to educate visitors about Malay Royal Town history. The architecture itself embodies the concept of the “Bunga Susun Tunggal” Motif through its form and other architectural elements such as light, shadow, wind, and timber. The glulam timber structure as a sustainable material blends with the parametric design to celebrate Malay Royal Town culture. This sustainable pavilion fosters a deeper appreciation for the environment and cultural heritage, serving as a catalyst for community engagement and a potential cornerstone for local tourism, subsequently creating a reimagining of a new node in the city itself.

KEYWORDS: Urban park pop-up pavilion, pop-up pavilion, pavillion, student, UiTM, bunga susun tunggal, interactive, sustainable

DESIGN DESCRIPTION

Susun Tunggal is an urban park pop-up or pavilion that is located near UiTM Cawangan Perak, Seri Iskandar lake. It is designed to provide a shaded retreat for students to relax at the same time while exposing them to interesting facts about Malay Royal History, specifically the art of craft in the Malay Royal Town. The issue is Malay Royal History, once the epicentres of Malay culture, tradition, and governance, is now facing a crisis of identity and preservation. The Public, especially the young generation, is unaware of the historical and cultural significance of local crafts and how it affects the bigger picture of Malay history. Thus, our idea is to create a welcoming, informative and interactive pop-up pavilion focusing on Malay Royal History specifically on the formation of UiTM, which is based on the motif of Bunga Susun Tunggal. It features an integration of craft-making designs such as anyaman and traditional floral motifs to stimulate the visitors’ sensibility and sense of belonging towards the Malay Royal Town. It refers to the growing shape of the Bunga Susun Tunggal flower which is integrated through the circulation of the pop-up pavilion itself, creating an ambience that visitors can experience and appreciate the art of crafts in Malay Royal Town. The ramp is used throughout the pop-up pavilion circulation to create an immersive experience where the visitors will go through volume-changing spaces inside. Spaces in this pop-up pavilion are designed for various activities such as Photobooth Area, Informative Game Area, Information Area, Demonstration Area and Seating Area. All of these spaces will act as a gathering space for the visitors to truly appreciate the beauty of crafts integrated into the design whilst enjoying the demonstration done by local traditional craftsmen while seated in the sunken space of the Demonstration Area. The target users are focused on People UiTM students and young audiences but without neglecting other groups, therefore the pop-up pavilion is designed to be fully accessible including people with disabilities. The pop-up pavilion also features groundbreaking architectural concepts which are biophilic

design and parametric design. It is to manipulate natural lighting and ventilation from the environment. Solid and void were introduced to create repetition and pattern throughout the parametric design. This makes the pop-up pavilion design responsive towards the site and local climate of Malaysia. Lastly, this pop-up pavilion utilises glulam timber as the core material to reflect the Malay Royal Town Identity with modular construction as a sustainable approach.

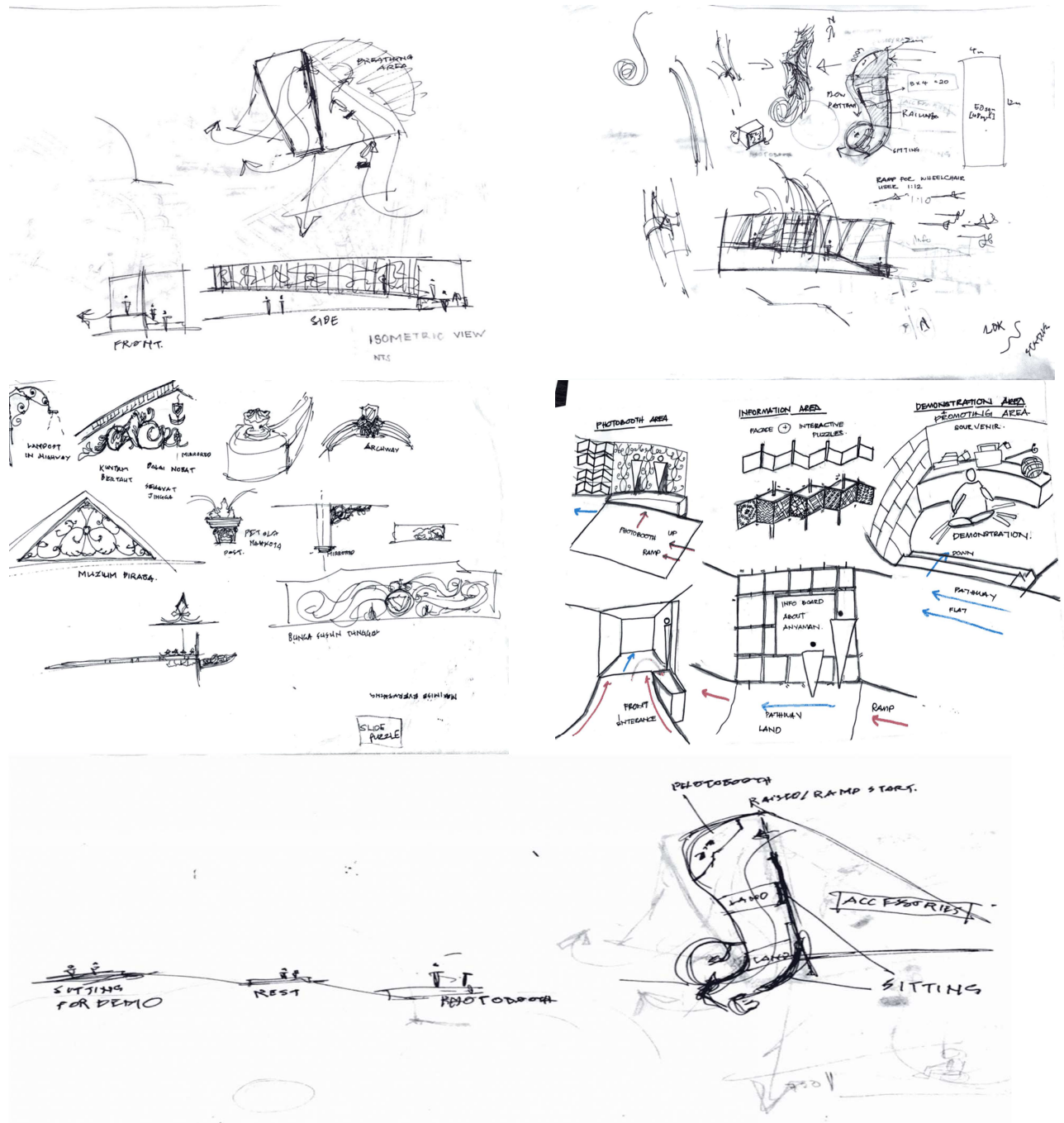


Figure 1: Design developments of Susun Tunggal Pop-up Exhibition

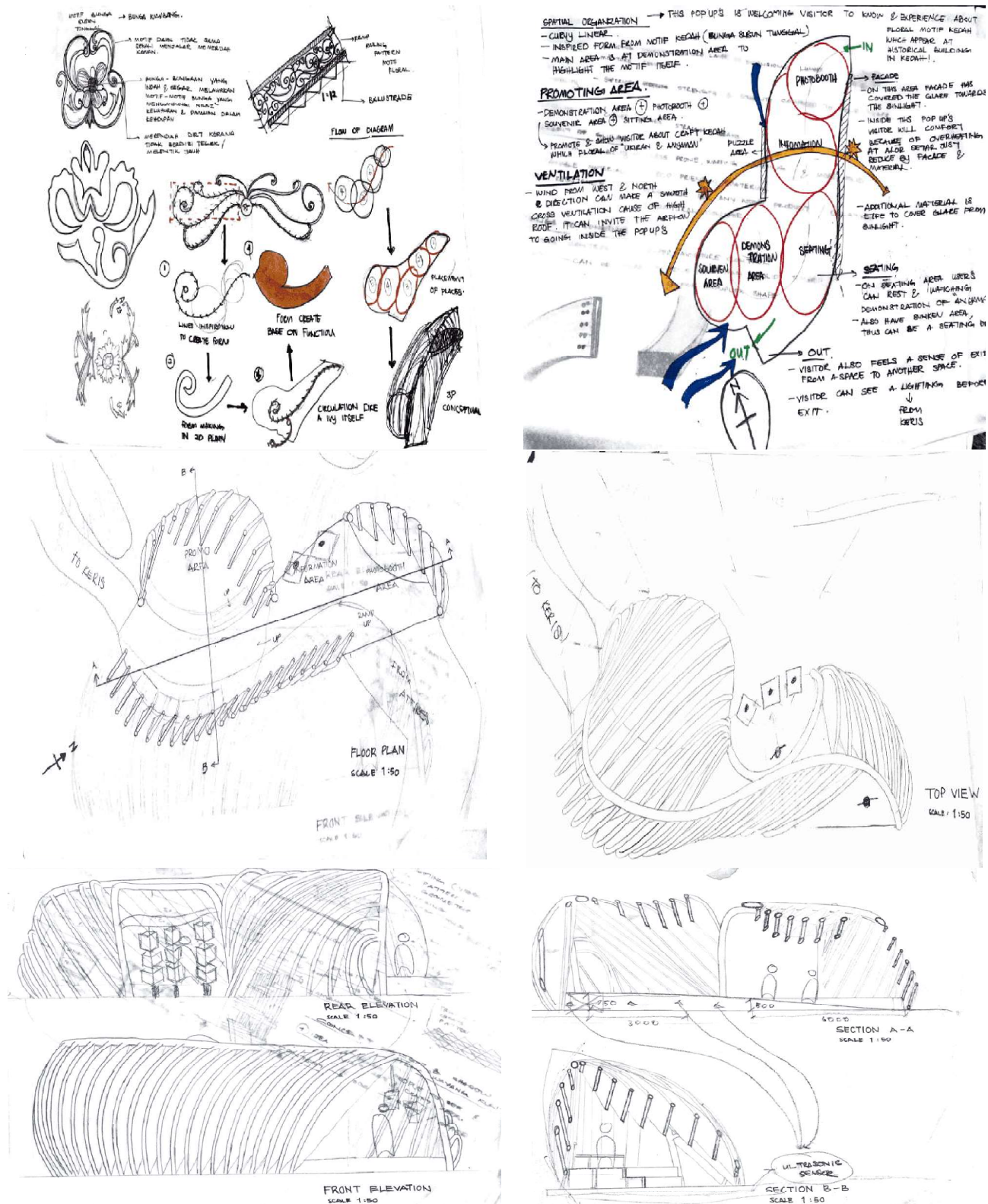


Figure 1: Design developments of Susun Tunggal Pop-up Exhibition (cont'd)

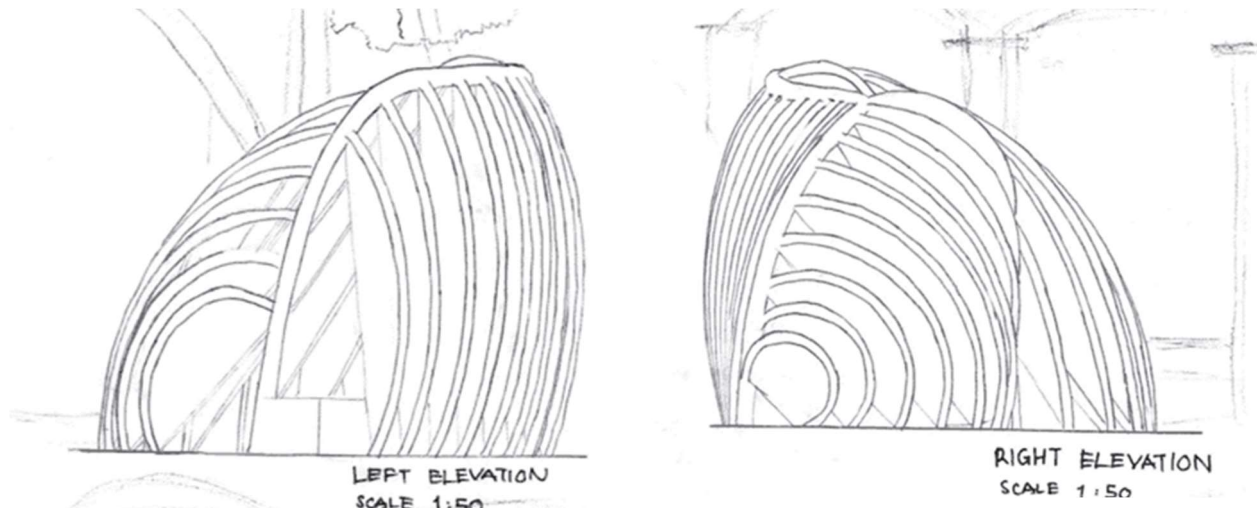


Figure 1: Design developments of Susun Tunggal Pop-up Exhibition (cont'd)

NOVELTY AND UNIQUENESS

Susun Tunggal is a biophilic magnum opus introducing a new idea of harmoniously integrating light, wind, and timber through embodying the growing concept of Bunga Susun Tunggal with Parametric design to create the essence of crafts in Malay Royal Town and striking the sense of belonging towards visitors. The repeated timber pipes with fabric create louvres that allow directional lighting and wind to flow in seamlessly while still covering critical points of sunlight to ensure thermal comfort and consistent lighting. The pop-up invites the natural world indoors, creating an immersive experience that rejuvenates the human spirit while optimising natural ventilation and daylighting, reducing energy consumption. Its modular timber structure creates an awe-inspiring form and space with interesting facades that harmoniously integrate the inside and the outside, culture and nature. Due to its low carbon footprint, as it is pre-made in the factory, it preserves natural habitats with minimal site disturbance. This pop-up is a testament to the power of innovation, redefining architectural possibilities through a biophilic and parametric approach. The pop-up is more than a structure, it is a living organism that responds to its environment, offering comfort and inspiration.

BENEFITS TO MANKIND

This pop-up is an educational tool to expose and inspire new generations and old ones to the identity crisis that is faced by the local Malay Culture. By utilising the spaces inside with interactive information areas and awe-inspiring forms that are full of meaning and information about Malay Royal Town, whilst optimising natural ventilation and daylighting, Susun Tunggal acts as the catalyst for learning through architectural design which contributes back to the local society of Malay Royal Town while significantly reduces energy consumption, addressing critical issues of energy efficiency and environmental impact. By connecting occupants with nature, the pop-up fosters a deeper appreciation for the environment, consequently becoming a unique and sustainable venue that can attract visitors and contribute to the local tourism industry. It offers a versatile space for taking a break and other community events, strengthening social connections. As a result, it can preserve and promote cultural heritage. The pop-up's design is rooted in the local culture and climate, demonstrating the importance of place-based architecture and thus aligns with global sustainability goals, such as reducing carbon emissions and preserving biodiversity.

COMMERCIAL POTENTIAL

Susun Tunggal, the pop-up's commercial potential lies in its unique blend of sustainability, aesthetics, and cultural heritage. Targeting luxury eco-resorts, and high-end events, the design offers a strong competitive advantage through eco-friendliness, customizability, and immersive experience. Potential business models include direct sales, licensing, and rental services. Scalability is facilitated by the parametric modular design, while profit margins can be substantial due to the premium nature of the product due to its adaptability to various sizes, configurations and places. Adherence to regulations and intellectual property protection are crucial for long-term success.

CONCLUSION

Susun Tunggal is a ground-breaking urban park pop-up pavilion designed to rekindle interest in the often-overlooked history of Malay Royal Town. This innovative structure seamlessly blends nature, culture, and education, creating a tranquil oasis for students and the public. By ingeniously incorporating natural elements like light, wind, and timber, the pavilion not only reduces its environmental impact but also offers a captivating and immersive experience through parametric modular design. Beyond its aesthetic appeal, Susun Tunggal is a testament to sustainable design with its modular construction and energy-efficient features. This visionary project not only preserves cultural heritage but also strengthens community bonds, making it a potential cornerstone for local tourism and economic development. Susun Tunggal stands as a remarkable example of how architecture can harmonise with nature, educate, and inspire, ultimately shaping a more sustainable and engaging future.

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SITI BASRIYAH SHAIK BAHARUDIN
Timbalan Ketua Pustakawan

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Setuju.

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