

e - Proceedings



Proceeding for International Undergraduates Get Together 2024 (IUGeT 2024)

"Undergraduates' Digital Engagement Towards Global Ingenuity"



Co-organiser:

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

Bauchemic (Malaysia) Sdn Bhd

Universitas Sebelas Maret

Universitas Tridinanti (UNANTI)

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Evocation

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ABSTRACT

To enhance the aesthetics, functionality, and sustainability of outdoor furniture, timber fusion is integrated into the design of outdoor furniture. Combining the warmth and beauty of wood with the durability and flexibility of modern materials, timber fusion is a technique that can be used to solve this problem by merging these two aspects into complementary materials such as metal or composite. The study will begin by looking at the current state of indoor furniture design and its impact on our local environment. The success of using timber fusion to develop attractive, durable, and sustainable outdoor furniture solutions is illustrated in case studies and examples from a range of global projects. The paper also examines the environmental impacts of wood fusion and emphasizes its potential to reduce carbon emissions through sustainable sourcing and innovative manufacturing processes. It also addresses the importance of user-centered design. This is important in creating integrated and accessible public spaces suitable for various needs and preferences. This project will allow students and others to relax amid their busy lives.

KEYWORDS: Timber fusion, functionality, sustainability, combining, innovative

DESIGN DESCRIPTION

Evocation is where people can have the memories kept with them while visiting the place and have memorable moments together. The design mostly consists of sleek and clean lines. With the hardwood features, the design could last and help to promote the design fusion of timber with other elements. This design consists of gabions. Gabions are rectangular baskets fabricated from a hexagonal mesh of heavily galvanized steel wire. A gabion case filled with dove grey gabion stone ensures the sustainability of materials. Moreover, the roof is made of recycled polycarbonate corrugated roofing sheets for protection. With the blending of functionality with a unique aesthetic appeal the durability ensures that gabion furniture can withstand outdoor conditions and heavy use, making it suitable for indoor and outdoor seating. Merbau wood is highly resistant to rot, decay, and termites, making it a long-lasting choice for seating. This durability ensures that furniture made from Merbau wood can withstand heavy use and harsh weather conditions, reducing the need for frequent replacements.

NOVELTY AND UNIQUENESS

Evocation offers seating in a parallel way where the users can have their own space even though they are facing each other. The use of gabion walls for the furniture material is one of the special uniqueness in adding into this furniture. When stacked together, gabions will create a strong and robust structure that can support a large amount of weight. This makes gabions ideal for stabilising sloping terrain and controlling water. Due to their strong bases, it makes it incredibly difficult for gabions to be dragged away by heavy downpours or vandals.



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Figure 1: Evocation

BENEFITS TO MANKIND

Evocation offers some benefits to mankind where the use of the gabions is added into this design. Because they can store carbon and absorb airborne pollutants like carbon dioxide and methane, gabions are an excellent way to reduce CO2 emissions. Since it aids in absorbing and storing carbon in the atmosphere and keeps it from directly entering the ecosystem, this process is known as carbon sequestration. The seatings are made of merbau wood. The harvesting of Merbau wood may provide economic opportunities for local communities while promoting forest conservation and biodiversity, if it is derived from responsibly managed forests or through sustainable methods. In future generations, good forest management will help protect ecosystems, wildlife habitats and natural resources. Therefore, these materials are the best solution and can be used for the benefits to mankind.



COMMERCIAL POTENTIAL

Evocation seating was mainly using the merbau wood. It is a popular choice for the production of high-quality furniture because of its aesthetic appeal, rich colour and durability of Merbau wood. It is used in the production of tables, chairs, cabinets, beds, and a range of indoor and outdoor furniture. The beauty, durability, and ability to withstand wear and tear are prized for furniture made from Merbau wood. Due to its exceptional durability, strength and resistance against rot, decay and termites, merbau wood is highly sought after for construction purposes. It's mainly applied to construction materials, structural components, floor surfaces, decking and outdoor structures like pergolas and fence posts. It is a preferable choice for both housing and commercial construction projects because of its durability and reliability.

CONCLUSION

To summarise, merbau wood and gabion cages are effortlessly incorporated into the design, bringing together the warmth and richness of wood with the rough texture of gabion cages. This combination of materials gives the furniture item depth and a dramatic visual contrast. The main structural seating component, the merbau wood, offers stability and longevity, while the gabion cages are thoughtfully included for both practical and decorative effects. Within the furniture item, gabion cages might serve as storage areas, support structures, or even decorative embellishments. The design achieves visual harmony by balancing the natural grain and warmth of merbau wood with the industrial aesthetic of gabion cages. The combination creates a dynamic and visually engaging furniture piece that enhances the overall ambiance of any space.

ACKNOWLEDGEMENT

I would like to express my deepest gratitude to the individuals, organisations, and entities that help to succeed the Evocation. This really meant a lot to me as it is a project where I can learn a lot and gain new knowledge. Hoping this will still remain until in the next future.

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