

DESIGN OF A SEASIDE MUSEUM USING TIMBER

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ABSTRACT

The usage of timber as building material dwindles down the centuries. Contemporary building design focus more on Reinforced Concrete or Steel as material, which is more economical and available yet, not sustainable. This design project will bring back traditional ideas with addition of modern technologies concept of timber design building.

The project revolves around architectural and structural design of a museum located seaside of a forestry island, Pulau Ubin Singapore. By using timber as material in this museum, it gives benefits and limitation to the design. Pulau Ubin, the only island left undeveloped in Singapore, remains the challenge in this project as there is no access to electric and water infrastructure. Thus, leads the museum to adapt sustainability building concept as solution to support its need of energy and water. This approach can be referred as “Net Zero Energy Building” in sustainable building concept. For the structural design part in this project, the timber structured museum is designed according to BS 5268-2 Structure use of timber — Part 2, and BS 6399 Live load for Building.