



UNIVERSITI
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BUILDCON2023

**COMPILATION OF PROJECT INNOVATION IDEAS
SEMESTER MARCH – AUGUST 2023**

EMBRACING SMART CONSTRUCTION TRANSFORMATION

BUILDERS' CONVENTION DAY 2023

**Department of Built Environment Studies and Technology
College of Built Environment
Universiti Teknologi MARA Perak Branch**

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Organised by
Department of Built Environment Studies and Technology
College of Built Environment
Universiti Teknologi MARA Perak Branch
Malaysia

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COCONUT WALL TILES (COWAT)

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Coconut Wall Tiles (CoWaT)

Innovation Idea:

Malaysia, like other developing countries, is seeing a surge in garbage creation and challenges connected with trash management. Clearly, the best strategy to reduce environmental effect is either to reduce trash generation or ensure that garbage is recycled, composted, or repurposed. Every day, approximately 30,000 tonnes of municipal solid trash are generated, accounting for 83% of the total waste production in the country, including agricultural wastes like coconut waste. Approximately 95% of the total trash is disposed of in landfills. The waste is produced from many parts of the coconut, including the husk, kernel, and flesh. There are even several studies conducted to assess the environmental effect of the ceramic sector. This research examines the influence of various characteristics such as sintering, smoke, and CO₂ emissions. Hence, this study aims to investigate the harmful effects of ceramic waste on lifeforms and to invent tiles infused with coconut coir, made from eco-friendly materials. The use of coconut coir waste as the base components to produce this new innovative eco-friendly product leads to the idea of creating Coconut Wall Tile (CoWaT). To achieve these aims, further research is done based on the limited previous studies related to the compatibility of coconut coir as tile products. Specific experiments were conducted to assess the sound control capabilities of CoWaT compared to conventional ceramic tiles, aiming to highlight the special value of this innovative product. Through this, a promising innovation known as Coconut Wall Tile can be developed, helping to reduce coconut waste and serving as an alternative to traditional tiling products.

Surat kami : 700-KPK (PRP.UP.1/20/1)

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim
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Cawangan Perak



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Setuju.

27.1.2023

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