



UNIVERSITI
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MARA

Cawangan Perak



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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COMPILATION OF PROJECT INNOVATION IDEAS
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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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TRANSLUCENT POLYMER SHEETS FOR NATURAL LIGHTING

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Translucent Polymer Sheets For Natural Lighting

Innovation Idea:

Malaysia is a significant contributor to plastic waste generation and has been importing plastic waste since 2017. On a daily basis, each person generates an estimated 0.85 kg to 1.5 kg of post-consumer plastic waste, leading to a continuous increase in landfill accumulation. Discarded plastic waste includes items like food packaging, plastic bottles, and plastic straws, with plastic bottles being the most prevalent type produced by consumers. To address the environmental concerns associated with plastic waste, several studies have been conducted to understand its negative effects, namely carbon dioxide emissions, the greenhouse effect, and global warming. This research specifically focuses on tackling the adverse impacts of discarded plastic waste, particularly plastic bottles, and aims to promote the production of environmentally friendly products by utilising plastic bottles as the primary material for creating translucent polymer sheets for natural lighting. The study explores the compatibility of plastic bottles as a replacement for traditional glass blocks, and specific experiments were conducted to assess the innovative ability of polymer sheets to transmit sunlight, like glass blocks. The goal of this innovation project approach is to reduce plastic waste, especially plastic bottle waste in landfills, and to decrease dependency on natural resources. By adopting such practices, Malaysia can make strides toward a more sustainable future.

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

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim
Rektor
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Sekian, terima kasih.

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Saya yang menjalankan amanah,

SITI BASRIYAH SHAIK BAHARUDIN
Timbalan Ketua Pustakawan

nar

Setuju.

27.1.2023

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