



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**

**BUILDCON 2023**  
**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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Perpustakaan Negara Malaysia

Cataloguing in Publication Data

No e- ISBN: 978-967-2776-24-6

Cover Design: Muhammad Naim Mahyuddin

Typesetting : Siti Akhtar Mahayuddin

e ISBN 978-967-2776-24-6



## INTERLOCKING CONCRETE BRICK WITH REPLACEMENT WASTE PORCELAIN TILES

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Interlocking Concrete Brick With Replacement Waste Porcelain Tiles

### **Innovation Idea:**

In general, the construction industry in Malaysia is developing rapidly. The construction rate in Malaysia is very encouraging, especially in state capitals such as the big cities. With this construction progress, it can elevate a country to be known by other countries. Indirectly, it brings attention to other countries that Malaysia is also not left behind in the construction industry sector. Aggregate is a particle aggregation of non-metallic materials that can be processed and used in civil and highway engineering projects. Basically, aggregate is mainly classified as coarse aggregate. The most widely available for coarse aggregates which are suitable rock types are crushed to the desired particle sizes. However, the proposal to carry out this innovation project is to replace aggregate with waste porcelain tiles with a certain percentage of waste. Because porcelain has some unique qualities that are not present in regular concrete, using porcelain tiles is mostly for aesthetic purposes. Consequently, the experimental design and document review used in this study's methodology constitute the data gathering technique. This study uses the compressive strength test as its experimental approach in order to gather precise results. These techniques make it simple to identify the innovative project idea, which calls for the use of waste porcelain tiles. By conducting a test, it can indirectly provide an accurate strength value.



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

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim  
Rektor  
Universiti Teknologi MARA  
Cawangan Perak



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Kelulusan daripada pihak tuan dalam perkara ini amat dihargai.

Sekian, terima kasih.

“BERKHIDMAT UNTUK NEGARA”

Saya yang menjalankan amanah,

**SITI BASRIYAH SHAIK BAHARUDIN**  
Timbalan Ketua Pustakawan

*nar*

*Setuju.*

*27.1.2023*

PROF. MADYA DR. NUR HISHAM IBRAHIM  
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