

**UNIVERSITI TEKNOLOGI MARA
PERAK BRANCH**

**LIGHTWEIGHT WALL USING
CERAMIC WASTE IN CONCRETE MIXTURE**

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AUTHOR'S DECLARATION

I declare that the work in this innovation project report was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This topic has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

In the event that my innovation project report, be found to violate the conditions mentioned above, I voluntarily waive the right of conferment of my degree and agree be subjected to the disciplinary rules and regulations of Universiti Teknologi MARA.

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ABSTRACT

In general, the construction industry in Malaysia is developing rapidly. It can be said that every year, the construction rate in Malaysia is very encouraging, especially in state capitals such as the big cities of Kuala Lumpur, Johor Bahru and Penang. With this construction progress, it can upgrade a country to be seen by other countries. Indirectly, it can open the eyes of other countries that Malaysia is also not left behind in the construction industry sector. Therefore, the material that has been selected is to use recycle aggregate. Aggregate is a particle aggregation of non-metallic materials that can be processed and used in civil and highway engineering projects (Mahmud, 2019).

Basically, aggregates are mainly classified into two categories which is Fine Aggregate and Coarse Aggregate. The most widely available natural Fine Aggregate is sand. While for coarse aggregates, suitable rock types are crushed to the desired particle sizes. Originally, recycle aggregate was based on concrete that is no longer used. However, the proposal to carry out this innovation project is to convert the concrete to ceramic to be used as recycle aggregate. The main aims to use ceramic is because ceramic has some special features that are not found in ordinary concrete. Although the original recycle aggregate material is changed, but other materials are not changed and are still used to produce structure components such as walls.

So that, there are two methods of data collection for methodology in this study which is by doing experimental and document review. By doing these two methods, it can be easily identified the proposal for innovation project which is by using a recycled ceramic material. Indirectly, it can give a exact value of strength by running a test.