**ECO-LITECRETE : FROM WASTE TO WEALTH**

**MARKET SURVEY**

- **Product of palm oil in Malaysia**
  - Graph showing production of palm oil from 2001 to 2016.

- **Malaysia sand mining production**
  - Graph showing sand mining production from 2001 to 2016.

- **Malaysia coal production**
  - Graph showing coal production from 2001 to 2008.

- **Production of ready mixed concrete, Malaysia**
  - Graph showing production of ready mixed concrete from 2011 to 2016.

**NOVELTY**

- A sustainable lightweight concrete containing waste from palm oil and coal industry as total granite aggregate replacement and partial sand replacement.
- Utilization of OPS has made this product to be lighter than conventional concrete.
- Use of fly ash as partial sand replacement enhances strength and durability of concrete.

**PUBLICATIONS**

- 2 Scopus Proceedings
- 1 Conference Paper

**BENEFITS**

- Sustainable green building construction.
- Lighter and reduce the structure dead load.
- Saves building construction cost.
- Sustainable and cleaner environment for healthier community.

**PRICE**

<table>
<thead>
<tr>
<th>Concrete Type</th>
<th>Price per m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional Concrete</td>
<td>RM250</td>
</tr>
<tr>
<td>Eco-LiteCrete</td>
<td>RM200</td>
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</tbody>
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**PATENT**

PI 2018400016

**COLLABORATOR**

CCA Systems Sdn Bhd (S06860-V)

**AWARDS**

Gold Medal Awards in CITREX’ 18

**MARKETABILITY**

- Ready-mix concrete producer
- Local contractors

**ECO-LITECRETE ADVANTAGES**

- Higher Strength
- Better Durability

**ENVIRONMENTAL ISSUES**

- OPS + FLY ASH = ECO-LITECRETE

“Let’s Change our Waste to Wealth By Using ECO-LITECRETE”

**MARKETABILITY**

- Malaysia’s sand and gravel production

**PRODUCT BACKGROUND**

- Malaysian palm oil industry and coal industry generates huge amount of wastes causing environmental pollution.
- Oil palm shell (OPS), the solid waste from palm oil mill when disposed consumes large landfill area, pollutes the environment and requires huge cost for waste management.
- Fly ash from the coal industry when dumped at the landfill causes contamination of water, soil and underground aquifers resulting in imbalance ecosystem.
- ECO-LITECRETE is produced to solve industrial wastes problems to create a cleaner environment for healthier community.
- ECO-LITECRETE which is a green lightweight aggregate concrete is produced by using both palm oil and coal fire plant waste as mixing ingredient, consist of zero granite and low amount of river sand supports the idea of sustainable construction.
- This affordable ECO-LITECRETE exhibit higher strength and durability than plain concrete is suitable for building construction.