



PAVING BLOCK USING HDPE PLASTIC

1. JOTHIGA MURUGAN
2. YUVASHALINI MATHIALAGAN
3. TIONG HUI MEE
4. MUHAMMAD ADZRI ZULFIQAR

POLYTECHNIC SHAH ALAM



PENERANGAN INOVASI (Problem Statement)

Plastic waste which is one of the non-bio-gradable material causes a lot of environment pollution, and there is the need to find solution to such menace. We often see plastic cups, plastic bags, empty water bottles on roadsides, seashores and dumpsites. Plastic waste is a serious environmental threat. It is composed of major pollutants, and has the potential to cause great harm to environment. Every year landfills getting filled with tonnes of plastic wastes. For Example, Pulau Indah – is one of many towns in Malaysia where illegal plastic recycling factories have popped up in recent months as the Southeast Asian nation became the top choice for plastic waste exporters from around the world. According to a study in academic journal *Science*, Malaysia has been rated as one of the world's worst countries for plastic pollution. It is recorded that 40% of plastics are dumped, a small portion burnt and a very tiny fraction (2%) recycled. It is estimated to produce almost one million tonnes of mismanaged plastic waste in 2010, of which 0.14 to 0.37 million tonnes may have washed into the oceans. So, sorting plastic waste and using it in construction will reduce plastic waste accumulation to a great extent.

IMPAK INOVASI (Advantages)

- Recycled plastics in pavement block is the best option for the disposal of plastic and ultimately reduces plastic pollution in the environment.
- Economical and environment-friendly. Reduces the impact to the environment and cost effective.
- Light weight. By using plastic in paver block reduces the weight up to 15%.
- Resource efficiency. Easy obtainable resources such as waste plastic and sand.

Objective

To produce paving block by using collected HDPE plastic waste (plastic bags).

To investigate the compression strength, water absorption and melting point of the paving block.

To compare the paving block with the other blocks available in the market.

BLOK DIAGRAM/CARTA ALIR OPERASI

