

# **AN INVESTIGATION INTO THE CIVIL ENGINEERING APPLICATION OF OIL PALM KERNEL WASTE**

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## **ABSTRACT**

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The title of my project is an investigation into the civil engineering application of oil palm kernel waste. The main objective of my project is to figure out whether this kind of material can be applied in civil engineering field since a large excess of shell is available annually.

For my project, I am going to divide my research into two parts: one is find out its compressive strength after partially replacing the coarse aggregate and another part is road construction. In order to find out its compressive strength, some concrete test will be carried out. In my project, I will be mixing 54 cubes which consists of  $f_{cu25}$  – original (3 cubes), 25% substitute (3 cubes), 50% substitute (3 cubes),  $f_{cu35}$  – original (3 cubes), 25% substitute (3 cubes), 50% substitute (3 cubes) for 7 days strength, 14days strength and 28 days strength. All results will be shown in table and graphs.

In road construction, I will look into the types of roads available in Malaysia which constructed by having a layer of kernel shell on top of the road. I will make a conclusion after all my research part is done.