

## ABSTRACT

Wall structure plays important roles in supporting the superstructures, separates spaces in buildings into sections and delineates a space in open air. The cement and bricks manufacturing process will contribute to a high emission of carbon dioxide (CO<sub>2</sub>) which may lead to global warming. Therefore, objective of this paper is to find an alternative solution to reduce this environmental problem. The alternative way that can solve the problem is by replacing the use of bricks in building construction by plastic bottles filled with sand as we called it plastic bottle green house. Reuse of these non- biodegradable plastic bottles not only can solve the environmental problem, but it can also reduce the pollution. The main concern of this project is the strength of bottle bricks. Therefore, the experiments was used to evaluate the properties of bricks and plastic bottle filled with sand which are compression test. The compression test is prepared for 250ml bottle brick and common clay brick. As a results, the strength of 250ml bottle brick 4 times stronger compare to common brick. From these result it can be concluded that plastic bottle green house have a potential as a wall construction material and further study on its other properties such as its lifespan and ratio between water, cement and sand usage as a mortar should be carried out.