

# **A STUDY INTO THE DESIGN AND COSTING FOR THE CONSTRUCTION OF A HOUSE USING BAMBOO AS THE MAIN MATERIAL**

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## **ABSTRACT**

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Bamboo is one of the fastest growing wooding plants. It has attracted the attention of not only biologists but also engineers and architects. Bamboo is a green material that can help in reducing environmental impacts in the future. Bamboo is used in various areas such as construction, furniture as well as textiles. Different species of bamboo have different usage. Guadua bamboo is suitable used in construction area as structures due to its high tensile strength and compressive strength. Bamboo has to be treated before it becomes a construction material. This is to ensure bamboo is free from insect attack and have longer life span. Different types of bamboo preservation will be discussed.

A simple bamboo house will be discussed in the following chapters. This bamboo house uses bamboo poles, bamboo mat boards, and bamboo mat corrugated sheets as main material. Grade 25 concrete is used for foundation of the bamboo house.

The cost for the bamboo house will also be included in this project report. With the unit rates and taking of quantities, a complete Bills of Quantities will be produced using Builsoft. The descriptions of the quantities are according to the clauses stated in Standard Method of Measurement 2. The unit rate of each item includes profit and overhead, wastages and shrinkages.