

TITLE OF ARTICLE: Appraisal of Timber as Structural Members for Residential Buildings in Nigeria

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ABSTRACT:Concrete and sand crate blocks are the most common construction materials adopted for residential buildings in Nigeria. They are used in the form of reinforced concrete frames and sand crate block walls. These heavy weight materials are mostly assembled on site by bricklayers or masons. The high demand for these construction materials and the intensive labour required for site placement have led to high cost of these materials and consequently to general high cost of construction in Nigeria. These facts contribute to making the access to good housing by common man very difficult. It therefore becomes very obvious that alternative means of construction should be explored and implemented in order for the average and below average Nigerian citizen to have a decent roof over their heads.

Based on the rapid advances in the construction materials technology over the recent years, civil engineers have been enabled to produce new solutions of built structures to serve the common needs of society. In that line, this research work seeks to provide an alternative solution in timber as a load bearing member for affordable residential buildings in Nigeria. A case study of 5-bedroom duplex is presented. A concrete design with Orion R16 software and a manual timber design are produced for the building with the corresponding bill of quantities. The comparative studies show that the application of timber as a structural members will help to drive down the cost of residential buildings in Nigeria and make them affordable to common man.