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**Suitability of lateritic soils in the construction/development of sustainable housing in Africa: A Geological Perspective.**

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Lateritic soils have been described as highly weathered tropical or sub-tropical residual soils with varying proportions of particle sizes ranging from clay size to gravel, usually coated with sesquioxide rich concretions. It is sometimes referred to as brick earth based on its use. The use of laterite and lateritic soils have been found to promote the realization of decent housing and bridging the housing deficit, especially in Africa.

This paper attempted to establish the suitability of lateritic soils especially as it relates to its use as materials in building bricks and housing development that will meet the present challenge of sustaining the environment without costing too much and maintaining a high standard of strength, durability and aesthetics. Index properties of the lateritic soils tested revealed them as mostly well graded, comprising both cohesive (silt and clay) and cohesionless (sands and gravels) soil fraction. Mineralogical analyses equally shows the presence of sesquioxides in the clay portion which were found to be very useful in the natural binding process and in the presence of stabilizer (cement). Geotechnical analyses revealed a strong compressive strength with a relatively sound dry density which could guarantee a good durability in resulting bricks made from these soil materials.

Compressed earth bricks (CEBs) which were mainly composed of raw earth materials (lateritic soil in this case) with their cohesion due principally to the clay fraction present in both humid and dry states were made from these lateritic soils. Their compressive strength ranged between 6.33 and 15.57 MPa. In conclusion, lateritic soils proved to be good materials for CEBs with their high compressive strength and sound durability established by monitoring the bricks over a period of one year under different weather and seasonal conditions.

**Keywords:** Sustainable building, Compressed earth bricks (CEBs), laterite, lateritic soils, sesquioxides.

