

# Building Materials from Stabilized Soils

## *The use of under-utilized resources for Low Cost Building*

<sup>1</sup>Boniface O. Kwach,

<sup>1</sup>School of Mathematics and Actuarial Science

<sup>1</sup>Jaramogi Oginga Odinga University of Science and Technology

<sup>1</sup>P.O.Box 210, Bondo, Kenya

<sup>1</sup>brokwach@yahoo.com,

### **Abstract**

This paper presents a new approach in building to help various target groups in need of building low cost housing. The building materials considered here are stabilized soil bricks using the locally available under-utilized resources. Firing these bricks makes them hard, strong, dense and durable. Over-firing leads to the formation of Zhama bricks. Clay/Lime bricks give the best results when left un-watered during setting and then fired at 1073K for 10 hours. Clay/Lime ratio supplemented with some sand gives even a better result