

Spatial design parameters for residential extensions: the case of Buru Buru estate in Nairobi, Kenya

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ABSTRACT

This study investigates the relationship between the spatial design parameters of plots with extension and the size of the extension in Buru Buru housing estate within Nairobi City County in Kenya. The spatial design parameters are defined by the physical and structural characteristics of the main houses and the plots and include the area (size) of the main house, number of rooms in the main house, plot size, plot width and length, among other factors. The study identifies the design parameters with significant contribution hence greater influence in the decision on the size of the extension. The methodology employed is a questionnaire survey, oral interviews and physical observation of the main houses and the plots with extension within Buru Buru estate. A sample of 59 plots with extension is selected and both factor analysis and stepwise linear regression methods are employed in data analysis. The results show that the number of functional rooms designed for the extension, the area around the main house, and number of adjacent streets to the plots with extension are critical design parameters in the decision on the size of the extension accounting for 66.3% of the variations observed in the size of the extension. The study recommends that the home owners and their designer architects should consider these spatial parameters among other factors as input in the extension design to alleviate overcrowding and congestion within residential housing estates in Kenya.

KEYWORDS: Spatial design parameters, residential extensions, building standards, enforcement, Kenya

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