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Prefabrication Technology as an Option for Accelerated Sustainable Social Housing Delivery in South Africa

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Abstract : In South Africa, provision of housing to the growing population has been described as one of the greatest challenges facing the government. Between 1994 to 2015, more than 2.5 million housing units were provided by the government for the poorest households and the low-income earners under the Reconstruction and Development Programme (RDP). Yet, the latest census figure revealed that about 2.1 million households still live in shacks and informal dwellings. Human settlements patterns remain dysfunctional across in South Africa because of rapid urbanisation. The housing backlog is growing at a rate of 178 000 units a year. The aforementioned predicament calls the need for innovative approaches to address the issue in a sustainable way and this need not be overemphasized. Aside from the issue of cost, the delivery of more housing units comes with environmental and sustainability issues. The prefabrication building technology has resulted into accelerated housing delivery to a satisfactory level in some countries such as Nigeria and Malaysia that are facing similar issue. It is therefore expected to be a foremost option to address the social housing backlog in South Africa and within the country housing sustainability agenda. This paper appraises the factors responsible for the limited implementation of prefabrication technology in South African housing projects. The objective is to recommend the method and materials that can be best sustained in the country in terms of local availability, cost effectiveness and environmental friendliness. It presents empirical data to support the hypothesis that a wider implementation of prefabrication technology in the social housing projects will be of significant benefit, by providing fast turnaround, cost-effective and sustainable solution that will dent the housing backlog, as well as improving the quality of the social housings. It was found that only 17 000 units of the RDP housings provided were constructed using alternative building technologies. Furthermore, there are variety of prefabricated technologies in the market but mostly have limited production capacity, minimal manufacturing capacity and most materials are imported, which leads to unavailability of the technology for large scale delivery and utilization despite its obvious advantages.

Keywords : prefabrication technology, sustainable social housings, South Africa, housing delivery
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