

Green Architecture in Built Environment

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ADAPTABILITY AND MODULARITY IN HOUSING: A CASE STUDY OF RAINES COURT AND NEXT21

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ABSTRACT

Adaptable buildings are widely recognized as intrinsic to a sustainable built environment. The term adaptable architecture describes an architecture from which specific components can be changed in response to external stimuli, for example the users or environment. Further, if the parts that do change over time are designed for assembly, disassembly and reuse, if not recycling, this is an additional benefit in the service of a sustainable future. The paper presents idea to transform and industrialized the Malaysian construction industry to be more innovative in architectural design towards adaptability and modularity. The modular housing of Raines Court in London and adaptable housing of NEXT21 in Osaka was selected as a case study to assess the stage of modularization and adaptation of the building. The cross-sectional case study was carried out by semi-structured interviews and observation. They are used to evaluate the level and method of adaptation for the cases. Different levels of adaptation are determined to pinpoint the relations between the different connotations of adaptable. To generalize the outcome of the analyses the different components of the building are categorized. As a conclusion, the studies suggested the series of specific design strategies such as integrated building design, and concept of recyclability and adaptability, as well as green effect to be carried out in Malaysia. Then it would meet the requirement of new techniques and a new level of adaptability for Malaysia as can be concluded as Architectural Programming.

Keywords: **Adaptable Housing, Modular Housing, Industrialized Building System (IBS), Support & Infill, Innovative Architectural Design**