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Title : INTEGRATED DESIGN PROCESS MODEL FOR GREEN DESIGN BUILDING REFURBISHMENT PROJECTS

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Improving the green design of refurbishment projects plays a key role in reducing the impact of buildings on the economic and environment of a country. However, to achieve that is not easy since the greater part of building refurbishment projects suffers from uncertainty. Furthermore, incorporating green design measures into the design of refurbishment projects is difficult since it requires the input of specialised knowledge of various members of the design team. The design team members need communicate effectively, have the right attributes and perform as a team. The integration of the design process in refurbishment projects can mediate the negative impacts of uncertainty on the green design performance. Therefore, the aim of this research is to develop an Integrated Design Process Model for green building refurbishment projects. The research objectives are: (1) to measure the level of uncertainties during the design process of building refurbishment projects, (2) to measure the extent to which green design measures are integrated into the design of building refurbishment projects, (3) to measure the level of integration in design process of refurbishment building projects and, (4) to establish the extent to which integration in the design process mediate the effects of

uncertainty on the green design performance. The data were collected through pilot questionnaire survey on thirty (30) respondents and followed by online final questionnaire survey that involved one hundred- twenty-two (122). The respondents were Architects and Consulting Engineers. The response rate of the final questionnaires survey was 18 per cent. The study applied descriptive analysis using the Statistical Package for Social Sciences (SPSS) and the Structural Equation Modelling (SEM) with Partial Least Square (PLS) Approach Version 3.0. It was found that in general, refurbishment projects were moderately uncertain. The refurbishment projects were also moderately green. The level of integration in the design process was moderate. It was also found that the integration of the design process fully mediated the effects of uncertainty on the green design performance. Thus, it is recommended that in order to produce green buildings in refurbishment projects; the design process should be integrated.