Dimensions of sustainability: Case study of new housing in Adelaide and Hanoi

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Thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

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April 2004
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Abstract

Since the 1970s, it has been repeatedly argued in literature and public forums that humans are living in a way that is rapidly depleting the Earth’s natural resources and causing environmental degradation. The concept of sustainability that entered the discourse in the late 1980s, points to the interrelationships that exist between the social/cultural, economic, and environmental dimensions of the development issue. Many authors describe housing projects to be sustainable architecture but focus mainly on some individual aspects such as energy conservation, or respect for the site, and do not consider the multiple dimensions of sustainability. This thesis suggests that projects conceived in this one-dimensional approach will not ensure true sustainability.

This study proposes the development of a comprehensive and adaptable framework to evaluate the sustainability of housing projects. This framework has multiple dimensions, multiple instruments and takes into account the involved actors. The multi-dimensions include the social, economic, and environmental aspects of the project. The technological, social, and economical instruments of project implementation define the opportunities and barriers for sustainable solutions. The study suggests that to ensure a sustainable housing project the interactions between these instruments must be considered along with taking into account the collaborations between different actors involved in the project including housing industry stakeholders and the users (householders).

Case studies of housing projects in two very different cities Adelaide, Australia and Hanoi, Vietnam are compared to investigate the contextually dependent character of sustainable housing and to build up the evaluation framework. The result shows that because of the very different social, economic and environmental condition of each locality, the elements within the evaluation framework and their values are different in Adelaide and Hanoi. The implication is that the nature of sustainable housing can only be defined contextually and is subject to change with changing socio-economic and political conditions over time.

The application of the analysis framework is illustrated by developing guidelines for sustainable housing in Hanoi. This gives an example of how a sustainable housing project could be promoted in other areas of the world.