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Green Building Rating of High-Rise Buildings in Sri Lanka

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Abstract

As a result of urbanization, constructions of high-rise buildings become a major component of urban development. Constructing high-rise buildings contributes to social, economic and environmental development as well. There are many stages of construction including planning, designing, procurement and implementation. There is a wide range of sustainability practices which can be implemented in each stage of construction. In leading Sri Lanka to Sustainable Development, the green building rating system was introduced by National Green Building Council of Sri Lanka in 2002. This rating system has 100 total points and minimum of 40 points is required for green building certification. The rating system has different components. Among them sustainable sites category includes 25% of total points in green building rating system. This research study highlights the significance of sustainable sites category in order to award the green certification in green building rating system. For this research five major high-rise building construction sites in Colombo were selected and existing site selection practices of each site were investigated. Each site was visited and in-depth discussions were carried out with the planning engineer and other people in the construction site. The structured questionnaire was filled and scores were given accordingly where they have met the sustainable sites criteria. Two sites out of five could not earn single point as they did not fulfill the prerequisites of the site section category. The rest of the sites (three) earned 20, 19, and 18 respectively out of 25 points. In this study, lack of awareness in sustainable site selection practices has dropped the chances of being eligible for the green building certification. Since the minimum points required for green building certification is 40, buildings which are under planning or pre-construction stage have higher chances of obtaining silver, gold and platinum awards for green building certification. Therefore, sustainable sites category of the green building rating system contributes significantly to increase the score and therefore it is highly important in green certification & sustainable construction.

Keywords: Green concept, Gigh-rise buildings, Gustainable development, Sustainable site selection