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Feasibility Study and Economic Assessment in Green Building Projects

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Abstract

The purpose of this paper is to explore the concept of a feasibility study and economic assessment in Green Building Projects. The benefits of preparation of financial feasibility study enable the client to decide with considerable confidence whether or not the project is feasible and worth pursuing. The completion of the evaluation and the decision to proceed further with the project is a significant milestone in the development. The methodology used is a direct observation that appropriate in this study. Therefore, the research outcome the project proposed in green building is feasible to continue at Lot 5647, Meru Road, Klang, Selangor, Malaysia.

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Keywords: Green building; market analysis; financial analysis; direct observation

1. Introduction

A feasibility study is importance part of the preparation at a stage of pre- contract. In any development, the clients would appoint the valuer or quantity surveyor to prepare the market and financial feasibility study. The

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crucial need for a feasibility study for the clients can evaluate the development has the potential return on investment and viable to develop for the proposed project. Confirmed by Katharina Bause (2014) agreed that the definition of feasibility study in economic sense are investigations that tend to determine whether a product development is a profitable and viable for a client to proceed the proposed development or not. Other than these definition, Corrie,(1991) explain in detail the definition of feasibility study that the assessment of evaluation for proposed project in terms of economic assessment, financial assessment, risk assessment, social and environmental issue. The results of the overall assessment should enable the clients to decide with considerable confidence whether or not the project is feasible and worth pursuing. In green building project, it is vital for the clients to investigate in depth for the market and financial feasibility prepared by the professional consultant. The environment, demand and cost related to green building would base on the criteria stated by Green Building Index (GBI) as follows;

- Energy Efficiency (EE)
- Indoor Environmental Quality (EQ)
- Sustainable Site Planning & Management (SM)
- Material and Resources (MR)
- Water Efficiency (WE)
- Innovation

1.1. Energy Efficiency (EE)

Improve energy consumption by optimizing building orientation, minimizing solar heat gain through the building envelope, harvesting natural lighting, adopting the best practices in building services including use of renewable energy, and ensuring proper testing, commissioning and regular maintenance.

1.2. Indoor Environment Quality (EQ)

Achieve good quality performance in indoor air quality, acoustics, visual and thermal comfort. These will involve the use of low volatile organic compound materials, application of quality air filtration, proper control of air temperature, movement and humidity.

1.3. Sustainable Site Planning & Management (SM)

Selecting appropriate sites with planned access to public transportation, community services, open spaces and landscaping. Avoiding and conserving environmentally sensitive areas through the redevelopment of existing sites and brownfields. Implementing a proper construction management, stormwater management and reducing the strain on existing infrastructure capacity.

1.4. Materials & Resources (MR)

Promote the use of environment-friendly materials sourced from sustainable sources and recycling. Implement proper construction waste management with storage, collection and re-use of recyclables and construction formwork and waste.

1.5. Water Efficiency (WE)

Considering a suitable method of rainwater harvesting, water recycling and water-saving fittings in project development.

1.6. Innovation (IN)

An innovative design and initiatives that meet the objectives of the Green Building Index. Achieving points in these targeted areas will mean that the building will likely be more environment-friendly than those that do not

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