Site planning and orientation for energy efficiency: A comparative analysis on three office buildings in Kuala Lumpur to determine a location for building shading devices

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Abstract

A well-designed energy efficient building provide long term building optimisation while minimising the energy. Site planning and orientation of the building play an important factor at the early stage of any development. Especially to determine the best location for the building opening and windows, and also the suitable materials to enhance comfort to the occupants and reduce the energy consumption. Thus, the aim of this study was to identify the site planning and orientation of the selected office building, the benchmark for the analysis will be based on the architectural and passive design components provided in MS 1525:2007 for the site planning and orientation through comparative analysis. Three energy efficient office building in Kuala Lumpur were selected in this research. This case study is important in helping to understand the relationship between site planning, building orientation, energy efficiency and cost effectiveness. © 2016 Trans Tech Publications, Switzerland

Author keywords

Building orientation, Energy efficient design, Green building

Indexed keywords


Building orientation: Comparative analysis, Energy efficient, Energy efficient building, Energy efficient design, Clever building, Passive design, Shading devices.

Engineering main heading: Energy efficiency

References (12)