

Abstract

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Environmental Performance Of Construction Materials – An Appraisal Of Sustainability Assessment Rating Systems

With the rising environmental problems there are huge concerns around our activities towards the environment. One of the most important & common issues is affecting the environment during building construction phase. Starting from ground clearing, grading, excavation & reaching the use of non environmental finishing materials. These construction activities have impacts on the environment such as affecting the air quality, acoustics (noise), cultural & ecological resources, hazardous materials, human health & safety, land use, transportation & water quality. The main aim of the research is to propose suitable strategies for the upgrade of our GREEN PYRAMID rating system for buildings by imbedding special grading points for construction phase & the use of environmentally friendly construction materials. This paper will first study an international worldwide known assessment rating system which the LEED rating system then compare it with the GREEN PYRAMID rating system. It will study the sustainable measures & weighting of the two systems generally & the measures & weighting related to construction materials specifically. Examples of LEED certified construction materials will be studied, their characteristics, manufacture, economic value to see whether they can be used in our Egyptian community not. Furthermore, these sustainable construction materials could be implemented as points for reaching sustainability in the GREEN PYRAMID rating system. Finally a checklist will be produced as a proposal for the upgrade of the GREEN PYRAMID rating system concerning the category of materials & resources.