EFFECTIVENESS OF PASSIVE BUILDING TECHNIQUES IN DRY ZONE: A CASE STUDY OF AN ECO-LODGE

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Degree of Master of Business Administration in Project Management

Department of Civil Engineering

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Department of Civil Engineering

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ABSTRACT

Human beings utilize the natural environment to fulfill the basic needs for survival. The sole responsibility of protecting the natural environment for present and future generations is upon us.

Built environment is a basic need of humans but most of these needs are catering to the '*wants*' exceeding the actual '*need*'. The consequences we are facing due to over consumption of resources is an 'eye-opener', which conveys an alarming message that we should minimize the destruction to the natural environment.

Understanding the environmental aspects and having the knowledge to practice them is the key for an environmental friendly and healthy development. Appreciation of such moves and approaches will influence other building sectors and stakeholders to become more environmental friendly in all aspects of the industry.

The case that is looked at in this research is one of such attempts to understand the natural environment and creating an environment friendly building. This is a small step towards much larger goals, we need to achieve in terms of environment friendly building construction. The dry zone of Sri Lanka did not have much attraction due to its harsh climatic conditions throughout the year. But some Architects have been bold enough to face the challenge of creating innovative yet comfortable buildings with minimum environmental and social impacts.

Selected building for the case study is designed by a reputed local architectural practitioner, Archt. Wijitha Basmnayake. The building known as Galkadawal Forest Lodge, is located 20km off Habarana, in the North Central Province of Sri Lanka, which falls into the dry zone. This is a fine example of manipulating built environment with minimum resources to suite the local climate with minimum environmental and financial costs.

Key words – Global Environmental Issues, Climate Change, Eco Tourism, Passive Thermal Controlling, Cost Benefits, NPV

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UNWTO	: World Tourism Organization
WWAP	: World Water Assessment Programme
EIA	: Energy information admiration (United States)
IT	: Information Technology
LCC	: Life Cycle Costing
EE	: Embodied Energy
WTTC	: World Travel & Tourism Council
ESSL	: Ecotourism Society of Sri Lanka
SLTDA	: Sri Lanka Tourism Development Authority
IUCN	: International Union for Conservation of Nature
ENSO	: El Niño–Southern Oscillation
HVAC	: Heating, ventilation and air conditioning
AC	: Air Conditioning
NPV	: Net Present Value
WWAP	: World Water Assessment Programme
EIA	: Energy information admiration (United States)
IT	: Information Technology