

## Eco-Design Concepts: Application in Ayer Hitam Forest Reserve

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### EXTENDED ABSTRACT

In the interest of development, human has interfered with the natural environment within nature. As a result of the interference, two environments have evolved which are the human-made environment, and nature environment. In the Ayer Hitam Forest Reserve for example, human activities have resulted in the evolvement of secondary forest that consists of these two environments. The flora that have naturally regenerated and fauna that have naturally survived constitute today's definition of nature environment, whereas the infrastructure that have been setup within nature and the importation of foreign flora and fauna species are human-made environment. Ayer Hitam Forest has long experienced the impact of development activities. It is inevitable that development will continue to occur as human have equate prosperity with development which in a one way or another will encroached on nature's privacy. The task for the conservationists is to exhibit the importance of nature and its contributions to human environment. When the importance and the contributions of nature are enjoyed and appreciated by human, then will only the conservation of nature be protected or prolonged. In development activities, the environmentally responsible human has to balance the development and conservation of the nature. In other words, if development is to

coexist with nature, human has to implement the concepts of Eco-design.

Eco-design is a way of designing within nature in an environmentally responsible way. In general, Eco-design is made up of two different categories of design. These are the passive and active designs. In passive design, the aim is to utilise nature to the designer's advantage. This design concept includes maximisation of daylighting, natural ventilation, solar generated energy source, recycling, and natural methods of bio-waste management. In an active design, the use of nature is reduced; however, it can be considered in an Eco-design development by reducing its impact on nature environment. In the development plan of a nature site, three considerations have to be given prior thought. These are either to leave nature alone, or develop with minimal impact within nature, or sacrifice selective area within nature. The choices have to relate well to the sensitivity and functions of the resources.

As for Ayer Hitam Forest Reserve, considerations will be heavily based upon its importance as the only lowland dipterocarp forest in the state of Selangor. As with many other forest reserves, this forest functions as a reserve, research and development forest, recreation forest, and undeniably a source of food and income to the Temuan community.