

INTRODUCTION

In view of present global crises - population expansion, natural resource depletion and ecological disasters - there is an urgent need to align development and architecture with the concept of *sustainability*. In South Africa there is an unprecedented call for a leveling within society with the provision of housing and development infrastructure. With environmental understanding being particularly lacking within our local building industry, this paper sets out to unravel the concepts behind *Green Architecture* under the umbrella of the following six broad issues:



SOCIO-ECONOMIC

Promoting social, economic & cultural upliftment.



LAND

Respectful and in symbiosis with the local environment and its resources.



WATER

The protection, conservation, efficiency and re-use of water.



ENERGY

The conservation, efficiency, and renewable use of energy.



HEALTH

Non-polluting environments and healthy materials.



HOLISM

Holistic and intrinsically recyclable.

Green Architecture is not a style, trend or a vernacular and neither is it new. It is a climatically, geographically and culturally appropriate way of architecture and building, combining the best of both old and new technology. At its core is the principle of *respect and caring for the earth*. The issues of environmental responsiveness, resource efficiency, community and cultural sensitivity and healthy, non-polluting environments manifest in many different ways, and often reinforce each other. While safeguarding the future of generations to come, green design also results in:

- Reduced operating costs for both buildings and landscapes.
- Better health and productivity for building inhabitants.
- Increased occupancy rates.
- Higher property values.
- Low environmental impact.
- Sustainable development.

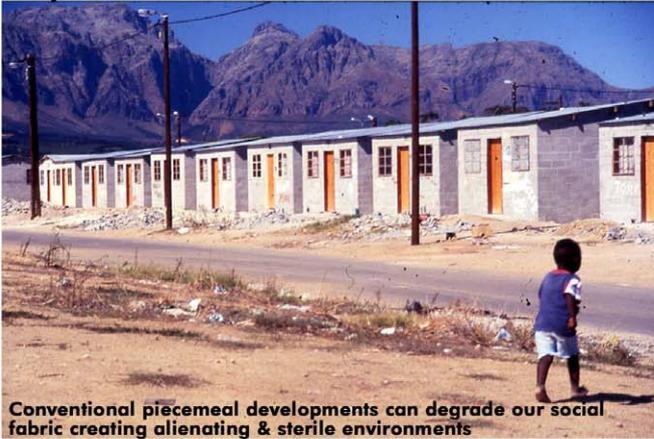
Indeed, sustainable construction is one of the major turnkeys for survival into the 21st century.

MANIFESTO - 6 BROAD PRINCIPLES OF ECOLOGICAL DESIGN

1. Socio-Economic Promoting Social, Economic & Cultural Upliftment



Duty of care



Conventional piecemeal developments can degrade our social fabric creating alienating & sterile environments

Consensual & Consultative



Design charrette with community

Respecting and promoting of a sense of place



Street market in Laos - Pedestrian friendly spaces

Engaging Community



Owners father & volunteer mixing cob for straw bale owner built house

Students & clients son mixing clay plaster for straw bale owner built house

Providing for local job opportunities



Proud trainees receive certificates



Harvesting local timbers creates additional jobs & builds local self-reliance

Capacity Building



Skill transfer enhances entrepreneurial opportunities for locals & encourages craftsmanship



Stone construction workshop participants



SOCIO-ECONOMIC - Promoting Social Economic and Cultural Upliftment

Development needs to take into consideration the effects and opportunities on local peoples and their communities before, during and after the construction phase. *Green Architecture* and planning is:

- **Consensual and consultative.** Being sensitive to local community needs and concerns. Involving affected peoples in the decision-making processes. Recognizing the importance of all the people involved and affected by a development.
- **Sensitive to local history and culture.** Respecting of local materials, skills and vernacular designs. Sensitivity to the existing built environment of the given location. Prioritize the conservation and preservation of old buildings as cultural beacons in the history of a place.
- **Respecting and promoting of a sense of place.** Imparting a sense of uniqueness and diversity that helps instill a sense of identity and community.
- **Providing for mixed-use, pedestrian-friendly neighbourhoods.** Promoting a safer, more integrated multi-functional use of land. Provide greater diversity of activity and employment opportunities.
- **Respecting the health of builders & occupants.** Using only healthy, non-polluting processes and materials. This also improves builders and occupants' rates of productivity as well as resulting in higher property values.
- **Supporting environmentally responsible suppliers and contractors.** Avoids putting money into the pockets of businesses that are polluting the environment.
- **Minimize high running costs & respect user's finances.** Design for efficiency of services. This avoids cutting initial costs to the bone at the expense of future tenants, who are often left to carry the on-going financial burdens imposed by inefficient services i.e. air conditioning, dependence on artificial lighting etc.
- **Duty of care.** Designers have an overriding responsibility to protect local and global planetary systems. Place community interests over and above any short-term, profit-motivated developer interests.
- **Providing for local job opportunities.** In the construction process as well as in the choice of products. This ensures that a significant amount of any funds invested in a building remains and circulates in local hands, to the benefit of local populace. For instance:
 - *Labour-based processes are to be preferred over machine processes. Costs cannot be taken at face value, as they need to be assessed according to labour vs. machine-based processes.*
 - *Enhance the transfer of skills thereby providing for local self-reliance and the development of local human resources.*
 - *Support locally manufactured products over imported products.*