Integrating Sustainable Development into Briefing and Design Processes of Buildings in Developing Countries: An Assessment Tool

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Submitted in partial fulfilment of the requirements of the degree of Philosphiæ Doctor in Architecture
In the Faculty of Engineering, Built Environment and Information Technology

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August 2003
AKNOWLEDGEMENTS

I would like to acknowledge the support of the following persons:

Professor Roger Fisher
Amanda
Bashi
My parents and sisters
The CSIR
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LIST OF ACRONYMS

BRE  Building Research Agency
BREEAM  Building Research Establishment Environmental Assessment Method
CERES  Coalition for the Environmentally Responsible Economies
CSD  Council on Sustainable Development
CSIR  Council for Scientific and Industrial Research
CICA  Confederation of International Contractors' Associations
DFID  Department for International Development
GBC  Green Buildings Challenge
GBTool  Green Building Tool
GDP  Gross Domestic Product
GEAR  Growth, Employment and Redistribution
DEAT  Department of Environment and Tourism
DFID  Department for International Development
EIA  Environmental Impact Assessment
GDI  Gender related development index
GEM  Gender empowerment measure
GRI  Global Reporting Initiative
HDI  Human Development Index
HPI-1  Human Poverty Index 1 (for developing countries)
HPI-2  Human Poverty Index 2 (for industrialized countries)
HSRC  Human Sciences Research Council
ILO  International Labour Organisations
IISD  International Institute for Sustainable Development
ISETW  Index of Sustainable Economic Welfare
LEED  Leadership in Energy and Environmental Design
NGO  Non Governmental Organisation
PPP  Purchasing Power Parity
RDP  Reconstruction and Development Programme
SBAT  Sustainable Building Assessment Tool
SOE  State of the Environment Report
UK  United Kingdom
UN  United Nations
UNCD  United Nations Conference on Environment and Development
UNDP  United Nations Development Programme
UNEP  United Nations Environmental Programme
USGBC  United States Green Building Council
WCED  International Union for the Conservation of Nature
WSSD  World Summit on Sustainable Development
ABSTRACT FOR THE THESIS

Integrating Sustainable Development into Briefing and Design Processes of Buildings in Developing Countries: An Assessment Tool

Submitted by: Jeremy Gibberd
Promoter: Roger Fisher
For the degree of: Philosphiae Doctor in Architecture
University: University of Pretoria
Department: Department of Architecture

This study proposes a specification for an assessment tool that integrates sustainable development into briefing and design processes of buildings in developing countries.

The building and construction industry have a significant role to play in supporting sustainable development in developing countries. However until the implications of sustainable development for the building and construction industry in developing countries are understood and interpreted into a plan of action, little progress can be made.

The research proposal aims to make a contribution to knowledge within the field of sustainable development and building and construction in developing countries. The study suggests that an effective way of beginning to integrate sustainable development into building and construction is to make sustainable development an explicit goal during the briefing and design process of the building. The study develops a specification for assessment tool that enables the goal of sustainable development to be interpreted into building and construction objectives and shows how this can be used in the briefing and design processes of buildings.

The study is based on both a qualitative and quantitative approach. Through critical review of literature and inductive analysis key concepts pertaining to sustainability, sustainable development, developing country contexts, assessment frameworks, and building and construction are defined. These are compared and analysed to formulate a specification for an assessment tool. In order to test and validate findings the specification is compared with an existing building assessment tool, the Sustainable Building Assessment Tool.

All hypothesis developed by the study are successfully demonstrated and the study is successful in proposing a specification for an assessment tool that integrates sustainable development into briefing and design processes of buildings in developing countries.
Key words: Sustainable development, sustainability, developing countries, assessment tools, building, construction, briefing, design.