

# ARCHITECTURE'S INTENT: Beyond green rating tools in form and aesthetics in green architecture

## INTRODUCTION

The modernists believed in the heuristic of "form-follows-function", loosely explained to mean that a building should take its shape and form from its program or intended use. In the emerging practice of green architecture guided by green rating tools, "form-follows-performance" seems to be evolving as the new ethos. In the pursuit of recognition through maximum ratings under the green rating tools, some critical fundamentals of architecture seem to have been side-lined and has thus resulted in buildings which are an exhibition of green technologies or the characteristic "glass box" with no real cultural, philosophical or artistic meaning that architecture represents.

## OBJECTIVE

The objective of the poster is to study the intent of architecture and how it aligns with the five target issues for sustainable construction. The poster studies how the incorrect or "blind" application of rating tools, Green Star in particular, has engendered the apparent bifurcation in architecture. Two case studies, Council House 2 in Melbourne Australia and Eastgate Centre in Harare Zimbabwe, form the basis for the argument that architecture has a deeper obligation than utilitarian concerns. One other case study, Santos Headquarters in Adelaide Australia, illustrates architecture that is highly utilitarian and is guided by rating tools with minimal progressive and socio-cultural aspect of architecture.



(a)

**COUNCIL HOUSE 2  
MELBOURNE, AUSTRALIA  
&  
SANTOS HEADQUARTERS - FLINDERS  
LINK DEVELOPMENT  
ADELAIDE, AUSTRALIA**



(b)

**EASTGATE CENTRE  
HARARE, ZIMBABWE**

## ARCHITECTURE'S INTENT

From Vitruvius' theory that architecture is simply good planning, sound construction and a pleasing appearance, to Ledoux's expressionist's theory that a building is something symbolic, to Durand's theory that the aim of architecture is the public and private usefulness and the happiness and preservation of mankind, it is evident that architecture has always aspired to a 'higher goal' beyond the immediate utilitarian demands or specifics of a given project in terms of program, client or site. In particular, its aspiration to remain as society's channel of enquiry (a way of understanding or knowing) into space and form has often found expression in the term and concept of aesthetics. It is this 'transcendence' dimension which transforms any architectural project from a solution-delivery service or activity into an act of social provocation (ETHICAL STANDARDS & SOCIAL EQUITY) in the way we comprehend space and form.

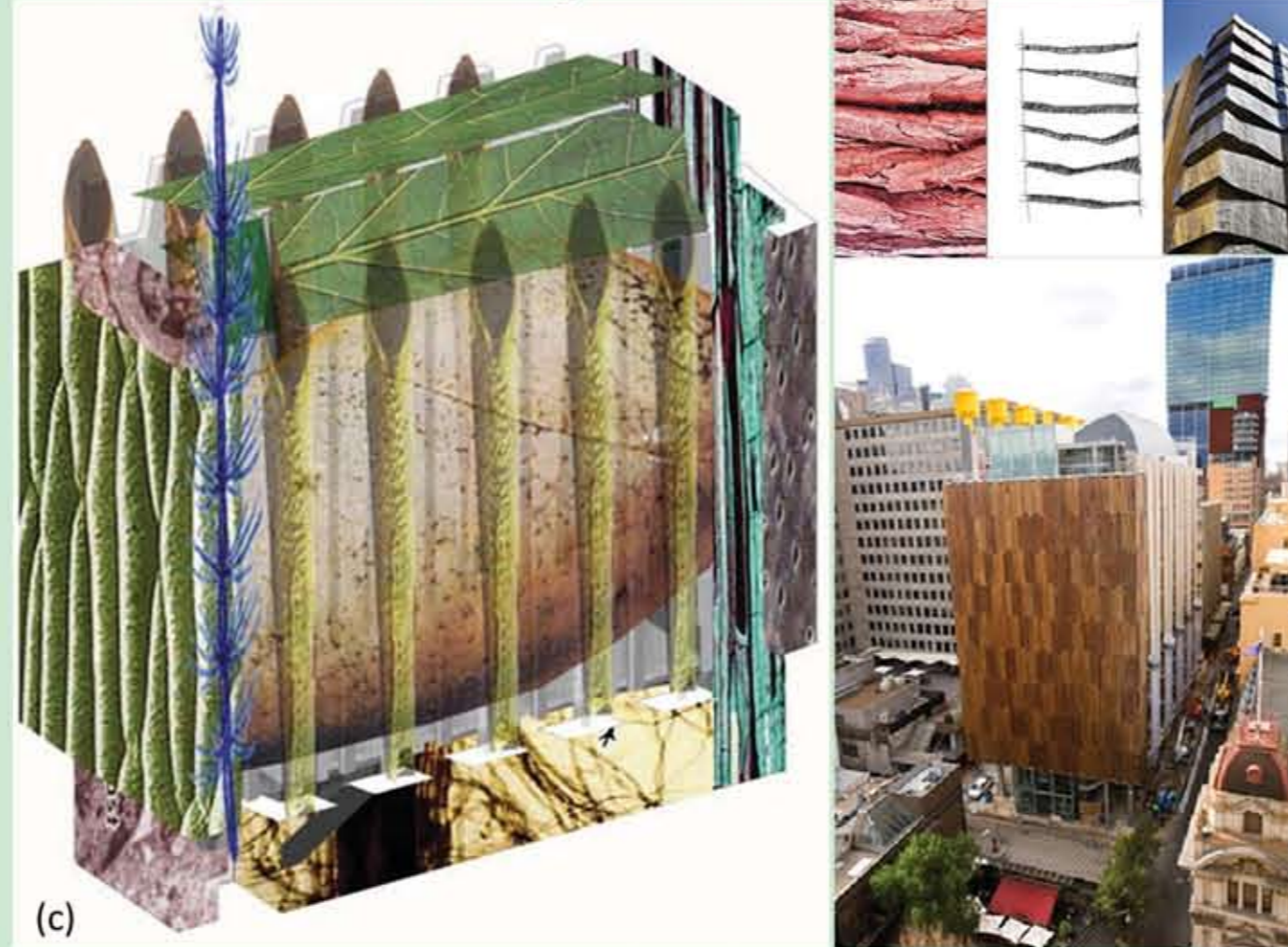
This also explains to a large extent why architecture shuns formulaic as well as heuristic solution-templates which attempt to subvert the originality and creativity goal in a project. This serves to explain the bifurcation which architecture is currently experiencing, signified by the highly awarded mainstream architecture on the one hand and the highly green-rated architecture (often denoted as green-rated buildings) which arise out of a formulaic application of green rating tools in practice. Such formulaic application of the tools in the design process easily stifles the creative endeavour and aspiration of architecture.

However there is limited but growing evidence that in the hands of an inspired architect, the aesthetic and green agendas in architecture could be mutually achieved. This poster contrasts two projects by the African architect, Mick Pearce, with a highly green-rated project in Adelaide Australia, which is viewed as rarily utilitarian, to substantiate this view of co-evolution between aesthetics and green and how to mitigate against the looming bifurcation-risk in architecture as it embraces the green agenda.

## REFERENCES & SOURCES

- (a) TOPNEWS.IN. Floods hit Australia's north-east corner. INTERNET. <http://www.topnews.in/floods-hit-australia-northeast-corner-2120070>. Cited 2010-02-14  
 (b) TRAVELPOD. Zimbabwe. INTERNET. <http://www.travelpod.com>. Cited 2010-02-14  
 (c) CITY OF MELBOURNE. (2007). Research. INTERNET. <http://www.melbourne.vic.gov.au/Environment/CH2/aboutch2/Pages/Research.aspx>. Cited 2009-10-02  
 (d) INHABITAT. (1996). Green building in Zimbabwe modeled after termite mounds. INTERNET. <http://www.inhabitat.com/2007/12/10/building-modeled-on-termites-eastgate-centre-in-zimbabwe/>. Cited 2010-10-29  
 (e) WIKIPEDIA. Green Star. INTERNET. [en.wikipedia.org/wiki/Green\\_Star\\_\(Australia\)](http://en.wikipedia.org/wiki/Green_Star_(Australia)). Cited 2010-02-15  
 (f) FIELDERS. (2009). Big developers combine in steel to connect Flinders Link. INTERNET. [www.fielders.com.au/asp/px/pdf/Flinders%20Link%20-%20Steel.pdf](http://www.fielders.com.au/asp/px/pdf/Flinders%20Link%20-%20Steel.pdf). Cited 2010-02-15  
 (g) CITY OF MELBOURNE. (2007). Council House 2. INTERNET. <http://www.melbourne.vic.gov.au/Environment/CH2/aboutch2/Pages/AboutCH2.aspx>. Cited 2010-01-08  
 (h) ARCHI ENVIRONMENTAL. (1996). Eastgate Centre in Zimbabwe: Modelled after termite mounds. INTERNET. <http://www.nat-environment.com/2007/12/eastgate-centre-in-zimbabwe-modeled.html>. Cited 2010-01-08  
 (i) MILLER-MCCUNE. (1996). Termite and Climate Control. INTERNET. <http://www.miller-mcune.com/science-environment/termite-and-climate-control-3503/>. Cited 2010-02-15  
 (j) CM ID HISTORY. (1996). Termite mounds as models for building ventilation. INTERNET. <http://cassandramauer.blogspot.com/2008/11/termite-mounds-as-models-for-building.html>. Cited 2010-02-15  
 (k) ECFRIEND. (1996). Eastgate, termite-inspired air-conditioning. INTERNET. <http://www.ecofactory.es/2008/03/eastgate-climatization-termites.html>. Cited 2010-02-14  
 (l) TOP BOX DESIGN. (2009). Flinders Link Development - Santos headquarters. INTERNET. [www.topboxdesign.com/search/design/page/14/](http://www.topboxdesign.com/search/design/page/14/). Cited 2010-02-07  
 (m) DADANCO. (2009). Milestone Projects. INTERNET. [www.dadanco.com.au](http://www.dadanco.com.au). Cited 2010-02-15

## COUNCIL HOUSE 2, MELBOURNE AUSTRALIA



The concept for CH2 was for it to behave as a living organism that's environmentally sustainable (ECOLOGICAL QUALITY & ENERGY CONSERVATION), requires no effort by its users to maintain comfortable internal temperatures and expresses these issues in its aesthetics while arousing the public's interest (ETHICAL STANDARDS & SOCIAL EQUITY).

## EASTGATE CENTRE, HARARE ZIMBABWE



The form for Eastgate Centre is reminiscent of an ant-hill (CONTEXTUAL & AESTHETIC IMPACT) from which the concept for its design was conceived. The internal atrium, wind turbines and various other external elements express (ETHICAL STANDARDS & SOCIAL EQUITY) a sustainable environment. Eastgate was completed in 1996 & was short-listed for the Aga Khan award in 1999. The Aga Khan Awards recognise, among other social & utilitarian needs, architecture which stimulates people's spiritual and cultural expectations. All of which were recognised in Eastgate.

## SANTOS HEADQUARTERS ADELAIDE, AUSTRALIA



The glass box which comprises the form for Santos Headquarters fails to express any sustainability issue which the rating tools have set out and its aesthetics fail to provoke any interest from society (ETHICAL STANDARDS & SOCIAL EQUITY). This direct application of the tool and no consideration for the socio-cultural aspects of architecture have left this building mute (CONTEXTUAL & AESTHETIC IMPACT).

## RATING TOOL - GREEN STAR AUSTRALIA

Green star's objectives are to promote sustainability and encourage innovative strategies of achieving sustainability. Some architects have used rating tools such as Green Star as a design tool and have applied it literally in an attempt to make the building environmentally sustainable and unintentionally ignored the socio-cultural aspect of architecture which has left the building void of any cultural or artistic reference. It neither uplifts society nor arouse enquiry about innovation or contemporary issues.

In terms of these three buildings' environmental sustainability, green star has rated CH2 and Santos headquarters as six and five stars respectively. Eastgate was completed before the inception of rating tools.

## COUNCIL HOUSE 2, MELBOURNE AUSTRALIA



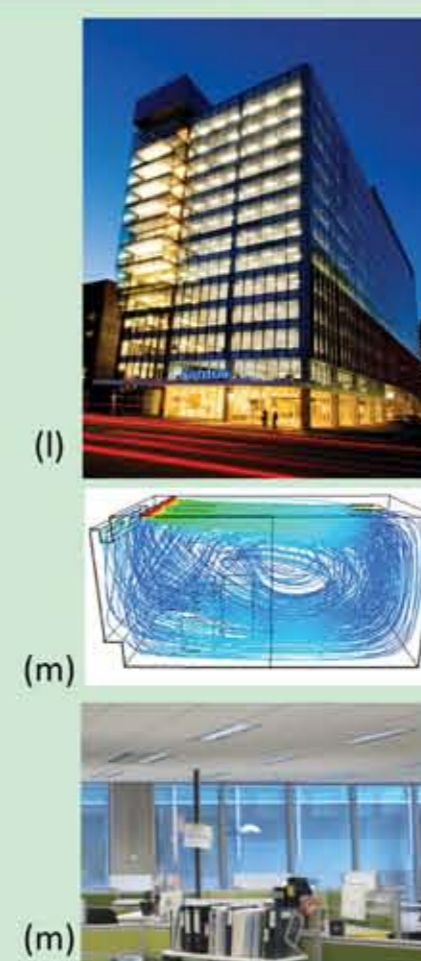
CH2 was designed to stimulate a response from passers-by, have an impact through its location within the greater city context and have a reference to its neighbours (CONTEXTUAL & AESTHETIC IMPACT). Radiant cooling, balcony plants, shower towers, chilled ceiling panels, thermal mass, re-useable resources and night purge (QUANTUM CHANGE & TRANSFERABILITY) as well as educating the users on energy conservation habits have contributed to the reduced running costs and long-term financial returns (ECONOMIC PERFORMANCE & COMPATIBILITY) in CH2 along with the technical and environmental performance of CH2.

## EASTGATE CENTRE, HARARE ZIMBABWE



The stack-effect ventilation strategy taken from termite mounds (QUANTUM CHANGE & TRANSFERABILITY) in Eastgate have reduced the running costs of Eastgate to less than 10% of that of a normal building thus enabling the lower rents for its tenants as opposed to the building next-door (ECONOMIC PERFORMANCE & COMPATIBILITY). Bio-climatic strategies such as an atrium to aid stack-effect, balcony plants and large top openings are technical strategies that are employed in Eastgate to achieve environmental sustainability (ECOLOGICAL QUALITY & ENERGY CONSERVATION).

## SANTOS HEADQUARTERS - FLINDERS LINK DEVELOPMENT ADELAIDE, AUSTRALIA



Floor-by-floor air handlers, active chilled beams throughout the building and water chillers were used to maintain a low-energy comfortable internal environment (ECOLOGICAL QUALITY & ENERGY CONSERVATION).

## CONCLUSION

Each of these three buildings offer society different experiences when inside the buildings, walking past them or even from looking at a picture of either of them. In, CH2 & Eastgate Centre, one is left intrigued by the innovation in the forms & the unusual elements expressed on the facades thus provoking important questions. The Santos Headquarters seem too similar, aesthetically, to many other surrounding buildings. One could easily walk past and not be intrigued or understand that it is an environmentally sustainable building as no sustainability element is expressed. This type of architecture fails to inspire. Is it indeed sustainable architecture or simply a sustainable building?

POSTER AUTHOR: Lomile Mokoka

e-mail: mokokalomile@gmail.com

cell: +27723747040

UNIVERSITY: University of the Witwatersrand, South Africa

PROGRAM: Master of Architecture (Professional)

SUPERVISOR: Dr Daniel K. Irurah