DEVELOPMENT & FRAMEWORK OF THE GREEN BUILDING INDEX MALAYSIA

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WHY THE NEED FOR A MALAYSIAN GREEN RATING TOOL?
Why have MALAYSIAN Green Rating Tool?

• Most available tools are for temperate climates. Apart from Green Mark this will be the FIRST TROPICAL GREEN TOOL.

• Harmonise with the LOCAL PRACTICES, CULTURE and the local environment, and

• Reflect LOCAL PRIORITIES, availability of LOCAL RESOURCES and LOCAL CHALLENGES and yet

• Incorporating HIGH PRIORITY GLOBAL CHALLENGES whilst accommodating the capacity of the ecosystem at local levels.
To develop Malaysia’s own Green Building Rating Tool:

- Identify PRIORITIES & LOCAL NEEDS
- Take advantage of Local RESOURCES
- Recognize Local CHALLENGES
- Suit our local CLIMATE & CULTURE
- Reflect local PRACTICES & STANDARDS
- Include all Local STAKEHOLDERS
- Recognize GLOBAL CHALLENGES
Aug 2008

- PAM Council formed Sustainable Committee with initial funding of RM100,000
- Briefed and obtain full support from BIPC
- Invited ACEM to join Committee to develop tool

Oct/Nov 2008

- Visited BCA Singapore to study Green Mark
- Visited GBC Australia to study Green Star
Dec 2008
- Decided to draft both GBI Non-Residential & Residential buildings simultaneously

3 Jan 2009
- Introduced GBI at Green Design Forum at KLCC CEC
- Launched www.greenbuildingindex.org
- PAM/ACEM registered GREENBUILDINGINDEX SDN BHD
Briefing & Other Activities

- Briefed CIDB (QLASSIC incorporated in GBI)
- Briefed USM and UPM – to incorporate GBI into their curriculum
- Commenced regular MS1525 seminars in Feb 2009
- Detail GBI seminar commencing 31/3/09
- Briefing to KTAK, MIDA, JKR, FIABCI etc
- Launch of GBI in April/May 2009. The Prime Minister of Malaysia has been invited to officiate the launch
<table>
<thead>
<tr>
<th>RELATIONSHIP</th>
<th>BUILDING INDUSTRY SUPPORT. PUBLIC &amp; GOV SUPPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPUTATION</td>
<td>SET UP &amp; MANAGED BY PROFESSIONALS</td>
</tr>
<tr>
<td>RESULTS</td>
<td>TRANSPARENCY IN GBI TOOL DEVELOPMENT &amp; ASSESSMENT METHOD</td>
</tr>
</tbody>
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LEMBAGA ARKITEK MALAYSIA
LEMBAGA JURUTERA MALAYSIA

GREENBUILDINGINDEX SDN BHD

GBI A PANEL
GREENBUILDINGINDEX SDN BHD

- GBI Accreditation Panel
- GBI Certifiers
- GBI Facilitators
- GBI Registration Fees
- 2 stages of Design Assessment and Completion & Verification Assessment Verification Assessment before awarding GBI rating
- Training courses for GBI Facilitators & Certifiers
GBI ACCREDIATION PANEL

• Accept applications for GBI certification
• Issue GBI certification for Buildings
• Maintain a Register of GBI certified Buildings
• Register GBI Certifiers & Facilitators
• Maintain the register of GBI Certifiers & Facilitators
• Offer training courses for GBI Facilitators & Certifiers
GBI CERTIFIERS

• Accept appointment for GBI certification of building from GBI Panel

• Evaluates and recommends issuance of GBI certification for Buildings

• Maintain certification by attending CPD courses for GBI Facilitators & Certifiers as required by GBI Panel
The prerequisites to take the GBI Certifier examinations are as follows:

1. Professional Architect or Professional Engineer registered with the Board of Architects or Board of Engineers,
2. Minimum 7 years relevant working experience
3. Undergone GBI Certifier course OR must have worked on a Green Building project through to at least GBI Gold level or equivalent.

Upon compliance with items 1 to 3, the individual may sit for the GBI Certifier examinations. Upon passing he/she can be registered as a GBI Certifier.
GBI FACILITATORS

• Accept appointment from Building Owners in assisting to obtain GBI certification

• Advice Building Owners on the Cost-Benefits of the application of Green Features in achieving GBI rating

• Lead the Consultant Team in working together to achieving the Green Goals set
GBI FACILITATORS

The prerequisites to take the GBI Facilitator examinations are as follows:

1. A registered member of the Board of Architects, Board of Engineers or Board of Quantity Surveyors,

OR

2. A recognized degree in architecture, engineering, surveying or other building-related disciplines as approved by the GBI Accreditation Panel and a minimum of 3 years relevant working experience acceptable to the Accreditation Panel,

OR

3. Other Building practitioners with a minimum of 5 years relevant working experience acceptable to the Accreditation Panel,

AND

4. Undergone the GBI Facilitator course.

Upon compliance with items 1 to 4, the individual may sit for the GBI Facilitator examinations. Upon passing he/she can be registered as a GBI Facilitator.
<table>
<thead>
<tr>
<th>MODULES</th>
<th>AIMS / COMPETENCIES</th>
<th>DESCRIPTION</th>
<th>HRS</th>
</tr>
</thead>
</table>
| 1. GBI Rating Tools and Concepts     | Understand Concepts and able to complete a building rating.                         | Principles of Sustainability for Buildings  
GBI Framework and Rating Tools  
GBI Non-residential and GBI Residential  
GBI for Existing Buildings and future developments                                                                                     | 2   |
| 2. Energy Efficient Envelopes        | Understands OTTV and RTTV and able to evaluate and advice.                         | OTTV and RTTV key elements and computation.  
U-values and Shading coefficients. Applications under MS1525  
Strategies for lowering OTTV and RTTV and the capital and LCC. Innovative façade systems                                               | 2   |
| 3. Air Conditioning Systems          | Understands basic systems available and evaluate impact on EE.                     | Energy codes, ASHRAE standards and baseline efficiencies.  
Methods of optimizing EE in Air conditioning                                                                                               | 4   |
| 4. Indoor Environmental Quality and Natural Ventilation | Understand standards applicable and impact on EE                                | Good Indoor Air Quality and standards  
Control of VOC and Formaldehyde emissions  
Mould control.                                                                                                                                                                                                 | 2   |
| 5. Energy Efficient Lighting and Daylighting | Lighting Standards and EE impact.  
Daylight design                                                                          | Lighting sources and control. Luminance and EE.  
LCC of lighting installations  
Daylight design and glare control                                                                                                            | 2   |
<table>
<thead>
<tr>
<th>PROPOSED TRAINING MODULES</th>
<th>PV technology available and LCC</th>
<th>Understanding PV and BIPV and module specifications. PV system design considerations. Energy yield and economics</th>
<th>2</th>
</tr>
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<tr>
<td>9. Computer Simulation</td>
<td>Basic understanding of available technologies and when to apply</td>
<td>Airflow, thermal and solar simulation for buildings introduction. Benefits, cost and strategies for implementation.</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>24</td>
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Draft for Final Check
# Green Building Index Registration Fees

<table>
<thead>
<tr>
<th>Size of Project</th>
<th>Total Gross Floor Area m²</th>
<th>Registration Fees RM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Residence</td>
<td>Below 2,000</td>
<td>5,000.00</td>
</tr>
<tr>
<td>Small</td>
<td>2,001 to 4,000</td>
<td>8,000.00</td>
</tr>
<tr>
<td>Intermediate</td>
<td>4,001 to 10,000</td>
<td>10,000.00</td>
</tr>
<tr>
<td>Medium</td>
<td>10,001 to 30,000</td>
<td>20,000.00</td>
</tr>
<tr>
<td>Large</td>
<td>30,001 to 50,000</td>
<td>32,000.00</td>
</tr>
<tr>
<td>Extra Large</td>
<td>50,001 to 100,000</td>
<td>45,000.00</td>
</tr>
<tr>
<td>Mega Project</td>
<td>Above 100,000</td>
<td>Assessment fee will be determined on a project-by-project basis</td>
</tr>
</tbody>
</table>

**Project Assessment**
Fee as per prescribed includes:
- 1 Design Rating Assessment
- 1 Assessment Upon Completion
- 1 Verification Assessment

**Appeal**
A flat rate of RM1,000.00 per credit point

* Rates shown are as of the date of the application and registration and may be revised from time to time as appropriate.
* Rates shown are excluding Government Service Tax (GST).
THANK YOU