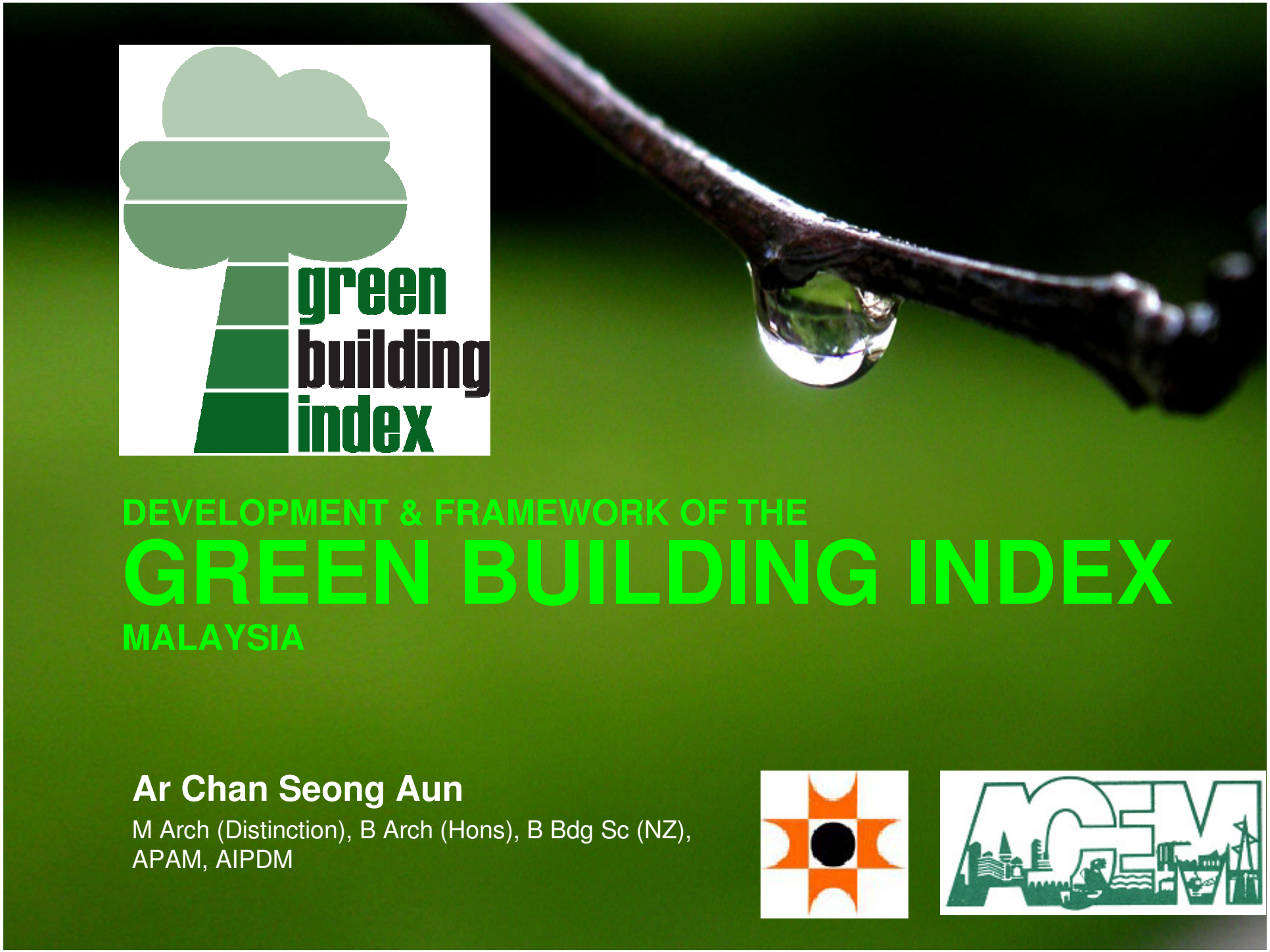

DEVELOPMENT & FRAMEWORK OF THE

GREEN BUILDING INDEX

MALAYSIA

Ar Chan Seong Aun

M Arch (Distinction), B Arch (Hons), B Bdg Sc (NZ),
APAM, AIPDM

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

GREENBUILDINGINDEX SDN BHD

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

GREEN BUILDING INDEX
FRAMEWORK

PUBLIC TRUST

RELATIONSHIP	BUILDING INDUSTRY SUPPORT. PUBLIC & GOV SUPPORT
REPUTATION	SET UP & MANAGED BY PROFESSIONALS
RESULTS	TRANSPARENCY IN GBI TOOL DEVELOPMENT & ASSESSMENT METHOD

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

GBI CERTIFIERS

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.

PROPOSED TRAINING MODULES

MODULES	AIMS / COMPETENCIES	DESCRIPTION	HRS
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

PROPOSED TRAINING MODULES

6. Renewable Energy, PV and BIPV	PV technology available and LCC	Understanding PV and BIPV and module specifications. PV system design considerations. Energy yield and economics	2
7. Water Efficiency	Water conservation and Strategies	Water efficient equipment and fittings. Water design guides and standards. Rainwater treatment and re-use Bio-retention systems	2
8. Sustainable Site, Materials & Construction Management	Site selection and planning and its impact on EE. Recycling & recycled materials. Efficient Construction technologies	Site selection, planning, transport and EE strategies. Landscaping and its impact. Recycling and available technologies IBS and waste reduction in Construction Quality Construction and QLASIC	4
9. Computer Simulation	Basic understanding of available technologies and when to apply	Airflow, thermal and solar simulation for buildings introduction. Benefits, cost and strategies for implementation.	2
10. Building Economics & Green Features	Understanding Green Building Cost and Economics	Life Cycle Costing and payback analysis Carbon Cost, Triple Bottom Line and Post Occupancy Evaluation Total Performance Approach to Building Design	2
TOTAL			24

VERSION 2.0

APPLICATION & REGISTRATION FORM

1 OWNER INFORMATION

* The Owner of the project must be as it appears on the title deed.

OWNER'S NAME

COMPANY

ADDRESS

POSTCODE | TOWN/CITY | STATE | COUNTRY

PHONE | FAX | EMAIL

2 PROJECT CONTACT

* The Project contact will be the only point of contact with the GBIAP. Generally this is the person who puts together the submission.

NAME

DESIGNATION/JOB TITLE

COMPANY

ADDRESS

POSTCODE | TOWN/CITY | STATE | COUNTRY

PHONE | FAX | MOBILE

EMAIL

3 PROJECT INFORMATION

PROJECT NAME

* This name will appear on the Green Building Index Certificate, if certification is achieved.

PROJECT SIZE
Gross Floor Area _____ m²

PROJECT ADDRESS

POSTCODE | TOWN/CITY | STATE | COUNTRY

CONSTRUCTION TYPE
○ Residential ○ Non-Residential

DESIRED GREEN BUILDING INDEX RATING
○ Platinum ○ Gold ○ Silver ○ Certified

BRIEF DESCRIPTION OF PROJECT & MAJOR DESIGN FEATURES *Attach on a separate sheet if space provided is insufficient.

EXPECTED CONSTRUCTION START DATE | EXPECTED COMPLETION DATE

* Please indicate if this project is confidential and should not be discussed outside of the GBIAP.
THIS PROJECT IS CONFIDENTIAL ○ YES ○ NO

4 GREEN BUILDING INDEX REGISTRATION FEES

SIZE OF PROJECT	TOTAL GROSS FLOOR AREA m²	REGISTRATION FEES RM
SINGLE RESIDENCE	Below 2,000	5,000.00
SMALL	2,001 to 4,000	8,000.00
INTERMEDIATE	4,001 to 10,000	10,000.00
MEDIUM	10,001 to 30,000	20,000.00
LARGE	30,001 to 50,000	32,000.00
EXTRA LARGE	50,001 to 100,000	45,000.00
MEGA PROJECT	Above 100,000	Assessment fee will be determined on a project-by-project basis

* 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)

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

5 SUPPORTING DOCUMENTATION

○ Certificate of Title ○ Project Brochure (if available)

○ Others _____

6 APPLICATION SUBMISSION

* The Application will not be processed unless this form is completely filled-in and all the required documentation is attached.
* The Applicant will be informed of the Registration Fee payable upon acceptance of the Application & Registration Form.
* The Invoice and Certification Agreement will be issued once the Application has been approved by the GBIAP.

SIGNATURE OF APPLICANT

NAME

DESIGNATION

COMPANY STAMP

DATE

COMPANY

BILLING ADDRESS

POSTCODE | TOWN/CITY | STATE | COUNTRY

PLEASE SEND THE COMPLETED FORM TO
GREENBUILDINGINDEX SDN BHD
4 & 6 Jalan Tangsi, 50480 Kuala Lumpur, Malaysia

FOR OFFICIAL USE

GBI REGISTRATION NO. | DATE OF SUBMISSION

4 GREEN BUILDING INDEX REGISTRATION FEES

SIZE OF PROJECT	TOTAL GROSS FLOOR AREA m^2	REGISTRATION FEES RM
SINGLE RESIDENCE	Below 2,000	5,000.00
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- 1 Assessment Upon Completion
- 1 Verification Assessment

APPEAL
A flat rate of RM1,000.00 per credit point

GBI TERMS & CONDITIONS

APRIL 2009 | VERSION 1.0

THANK YOU