

BEAM Plus™
綠建環評

Assessment Schemes

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Platinum Projects

BEAM & BSL

What is BEAM?

BEAM =

Building Environmental Assessment Method

- Hong Kong's Green Building Rating Tool
- A **voluntary** assessment tool suitable for **high-rise** buildings and the **sub-tropical climate**

BEAM Society Limited (BSL)

- A **non-profit public body**
- Develop and implement the BEAM Plus assessment tools
- **Assess** Green Buildings
- **Train** BEAM Professional (BEAM Pro) and BEAM Affiliate



1996



2010

Vision

A sustainable community and a **green liveable built environment** in harmony with nature

Mission

To **administer and develop** the BEAM Plus assessment tools, and **build capacity** in the community through education and training to advance health and well-being

Objectives

- Improve the **environmental performance** of the built environment across their life cycle
- Provide **healthier, higher quality, more durable and efficient** working and living environments
- **Build capacity** in the industry
- **Educate** the community to embrace **eco-efficiency and sustainability**
- **Combat climate change** and contribute towards sustainable development
- **Extend sound practices** of BEAM Plus



The Vision

To help save the planet and improve the wellbeing of the people of Hong Kong by transforming the city into a **greener built environment**

The Mission

To lead **market transformation** by advocating green policies to the Government; introducing green building practices to all stakeholders; setting design, construction and management standards for the building profession; and promoting **green living** to the people of Hong Kong

BEAM Plus™ 綠建環評

Certification body



Assessment body



Why go GREEN ?

According to the **Green Building Market Report South East Asia 2014** by BCI, the reasons for engaging in green building are:

1. lower lifecycle cost

2. increased property value/marketability



Global Perspective

- Growing concerns about the **environment, climate change and GHG emission.**
- Adoption of building practices that result in efficient use of natural, sustainable and renewable resources → **Sustainable communities, smart, green and resilient cities**
- Building environmental assessment schemes are considered one of the **most potent and effective means** to improve the performance of buildings and to promote higher expectations and demand
- Governmental Mandates and/ or Incentives

Local Action



- In April 2010, BEAM is transformed to an enhanced version => **BEAM Plus v1.1 for new and existing buildings**
- BEAM Plus, **certified by HKGBC**, is its green building rating system to benchmark and enhance the performance of Hong Kong's built environment
- **Strong link to government policy and requirements** (Climate Change Report, Climate Action Plan HK2030+, Policy Address, etc.)

BEAM Plus Assessment Schemes



BEAM Plus
New Buildings V1.2

BEAM Plus
Neighbourhood V1.0

BEAM Plus
Existing Buildings V2.0

BEAM Plus
Interiors
V1.0

Scope of BEAM Plus

Stages of
Project
Development



Assessment
Tools

BEAM Plus
Neighbourhood



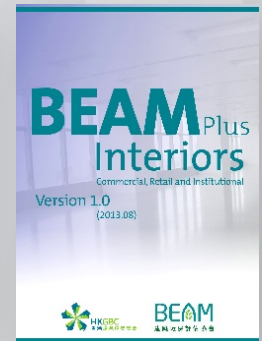
BEAM Plus
New Buildings
V1.2



BEAM Plus
Existing
Buildings V2.0



BEAM Plus
Interiors V1.0



BEAM Development



NB v1.2

- Covers the **demolition, planning, design, construction** and **commissioning**
- Early stage of project development
- Major refurbishment
- Part of the **prerequisites** for the **10% of GFA concession** under **PNAP APP-152** – Sustainable Building Guideline

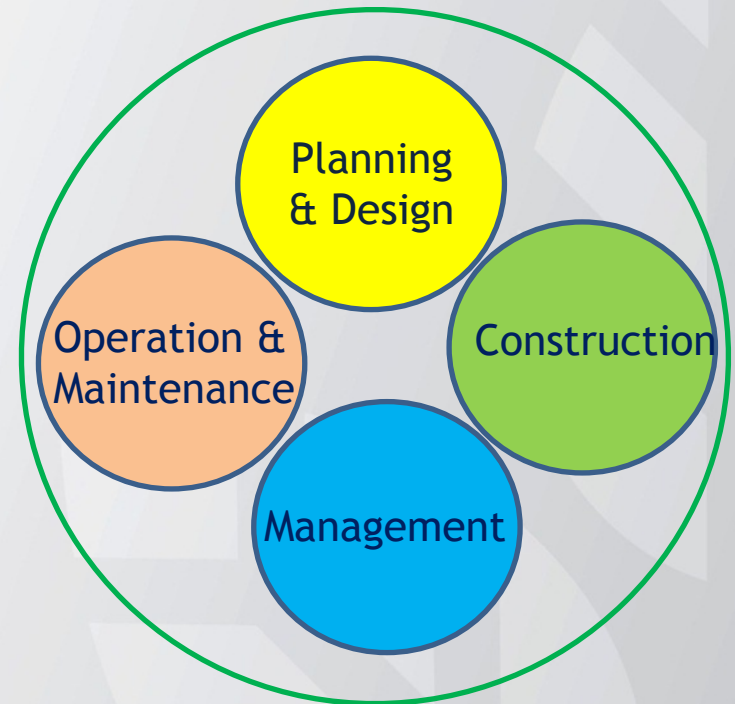


Holistic Approach for Assessing Building Performance:

- embracing good practices in planning, design, construction, management, operation and maintenance of buildings

Encouraging Passive Design:

- enable buildings to respond to the local climate and reduce reliance on active system thus reduce energy consumption



Performance Categories



Site Aspects



Material Aspects



Energy Use



Water Use



Indoor Environmental Quality



Innovations and Additions

Innovations & Additions

Provide:

- System design details
- Quantified environmental benefits

Examples:

- Better daylight factor performance
- More greenery



Different prerequisites for each performance category:

- SA P1
- MA P1, MA P2, MA P3 & MA P4
- EU P1
- WU P1 & WU P2
- IEQ P1

Every **applicable prerequisite** must be achieved, otherwise the project will be regarded as **“Cannot be Assessed”**.

NB Scoring

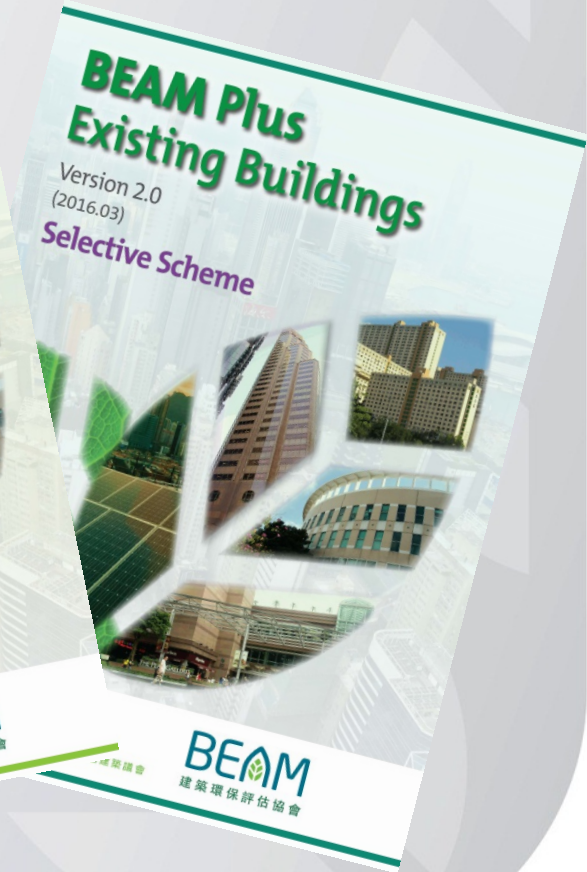
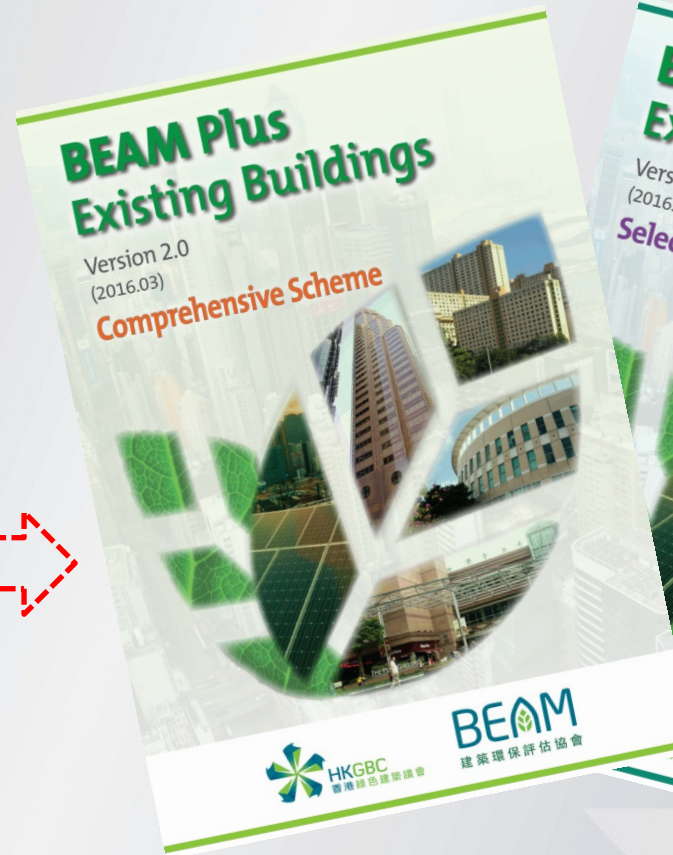
CLASSIFICATION	Overall	SA	EU	IEQ	IA (credit)
PLATINUM	75%	70%	70%	70%	3
GOLD	65%	60%	60%	60%	2
SILVER	55%	50%	50%	50%	1
BRONZE	40%	40%	40%	40%	-

Others will be '**Unclassified**' including just fulfilling all of the pre-requisites requirements

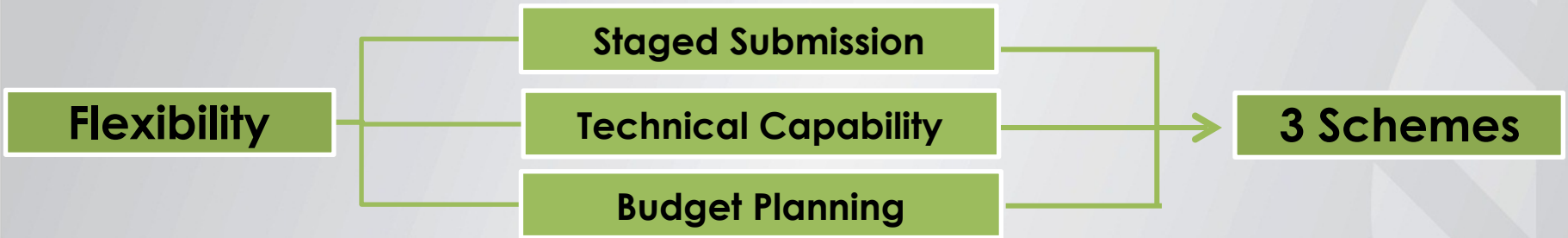
EB v2.0

Revamp of EB

Paradigm Shift

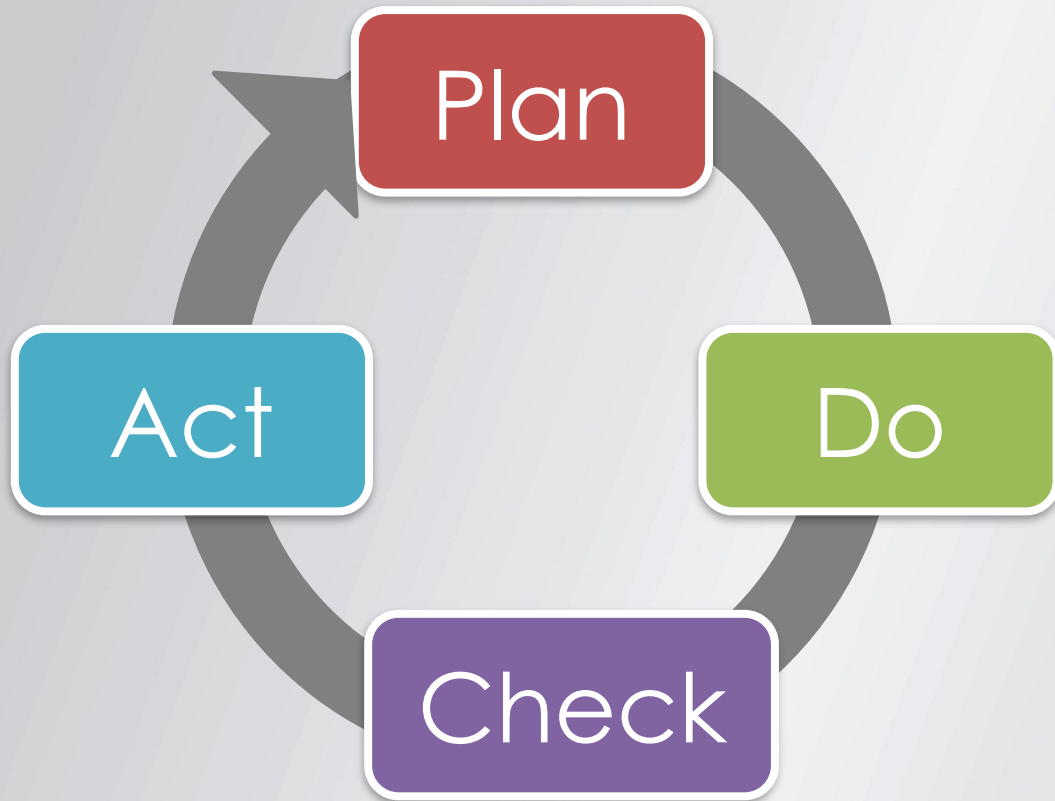


New Concept:



New Concept

Comprehensive Scheme A & B

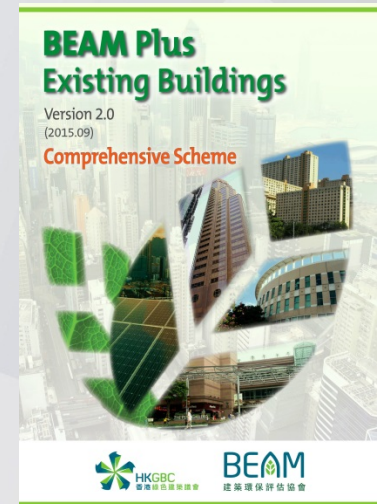
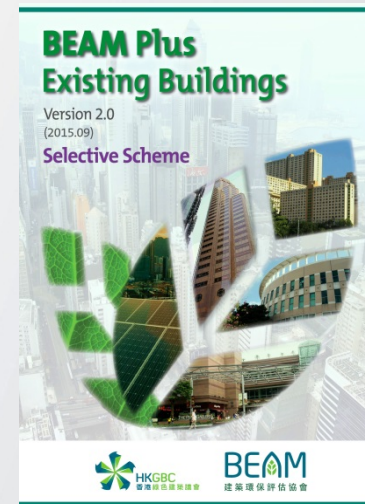


Selective Scheme

*Better than
Yesterday*

Features

- New '**Management Aspects**' to promote green practices & management
 - e.g. Green Purchasing Plan
- '**Better than Yesterday**' as practical improvement for aged building
 - Adoption of Selective Scheme (self improvement)
- **Waste Aspects** enhanced to encourage waste management
 - Promote & advocate waste management
- **Tenant participation** to induce behavioural change



Performance Categories

Version 1.2

6 main aspects

- Site Aspects
- Materials Aspects
- Energy Use
- Water Use
- IEQ
- Innovation and additions

Version 2.0

7 main aspects

- **Management 營運管理**
- Site Aspects 場地
- Materials and **Waste Aspects 用材及廢物管理**
- Energy Use 能源使用
- Water Use 用水
- IEQ 室內環境質素
- Innovation and additions 創新 (for Comprehensive Scheme only)



Grading Methodology

Version 1.2





Grade	Overall Score	SA	MA	EU	WU	IEQ	IA
Platinum	75%	70%	-	70%	-	70%	3
Gold	65%	60%	-	60%	-	60%	2
Silver	55%	50%	-	50%	-	40%	1
Bronze	40%	40%	-	40%	-	20%	-

Version 2.0

Grade	Overall	MAN	SA	MWA	EU	WU	IEQ
Platinum	75	70%	50%	50%	70%	50%	50%
Gold	65	60%	40%	40%	60%	40%	40%
Silver	55	50%	30%	30%	50%	30%	30%
Bronze	40	40%	20%	20%	40%	20%	20%

Comprehensive Scheme:

Selective Scheme:

Grade	Overall percentage (%) of credits achieved
 (Excellent)	70%
 (Very Good)	60%
 (Good)	50%
 (Satisfactory)	40%

Version 1.2

4 grades

- Platinum
- Gold
- Silver
- Bronze



Version 2.0

For Comprehensive Scheme:

- Platinum
- Gold
- Silver
- Bronze

For Selective Scheme:



BI v1.0

Official launch in August 2013

Benchmarking sustainability in the fit-out, renovation and refurbishment of **non-domestic**, occupied interior spaces



Application

Target the most frequently encountered **non-domestic interior fit-out projects**:

- office premises;
- retail premises;
- restaurants;
- hotels, functional rooms & serviced apartments;
- educational facilities and libraries;
- institutional facilities including clinics, etc.



Performance Category

8 Credits

26 Credits

6 Credits

24 Credits



TOTAL
100
Credits



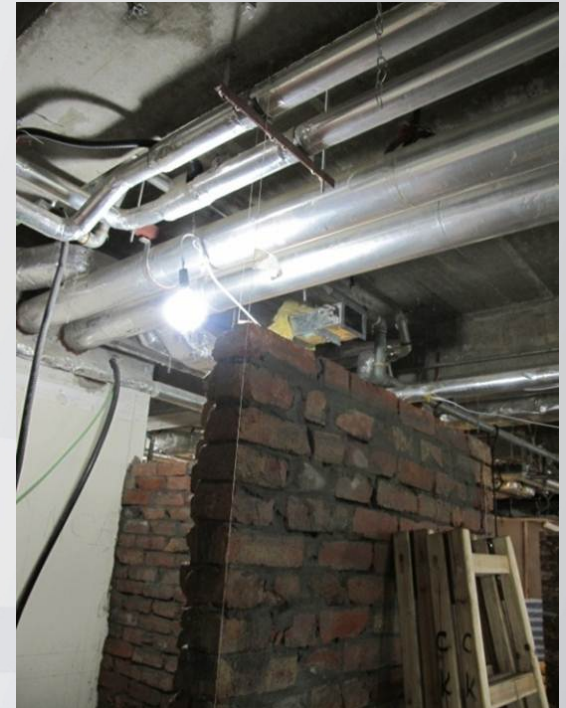
10 Credits

26 Credits

Max 10 Extra credits

BEAM Plus Interiors sets pre-requisites for several key performance aspects :

- Implementation of construction safety plan (**MAN P1**)
- Avoiding chlorofluorocarbon (CFC)-based refrigerants in any HVAC&R equipment installed for the space during the fit-out (**MA P1**)
- Providing basic facilities for effective recycling of paper, plastic and metal wastes during occupancy (**MA P2**)
- Avoiding the use of virgin timber resources during fit-out works (**MA P3**)

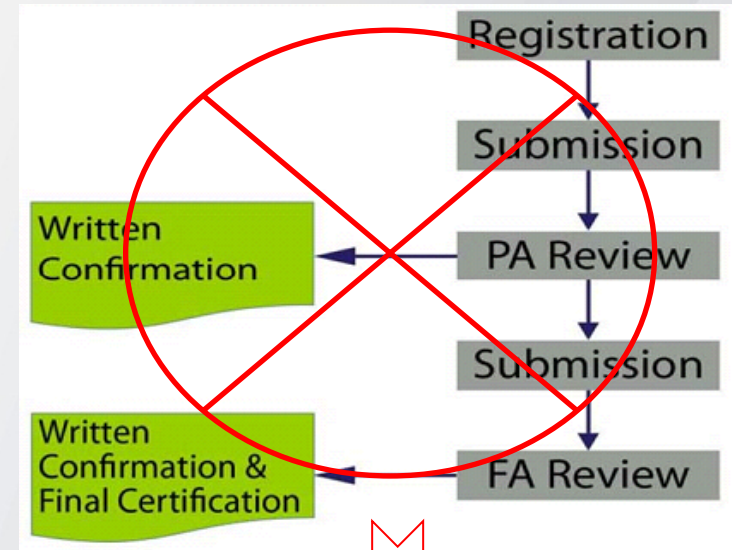


Single-stage Certification

upon completion of fit-out works and associated testing and commissioning

Emphasise the importance of “as-built” performance in addition to good design and construction practices

Applicants to indicate their achievements at the earliest opportunity



One Stage Only

BI Minimum Credit Scoring

The final certificate grading certified is conditional upon:

- Overall credits achieved;
- Meeting all specified pre-requisites;
- Obtaining a minimum credits for **Materials, Energy Use, Indoor Environmental Quality** aspects.

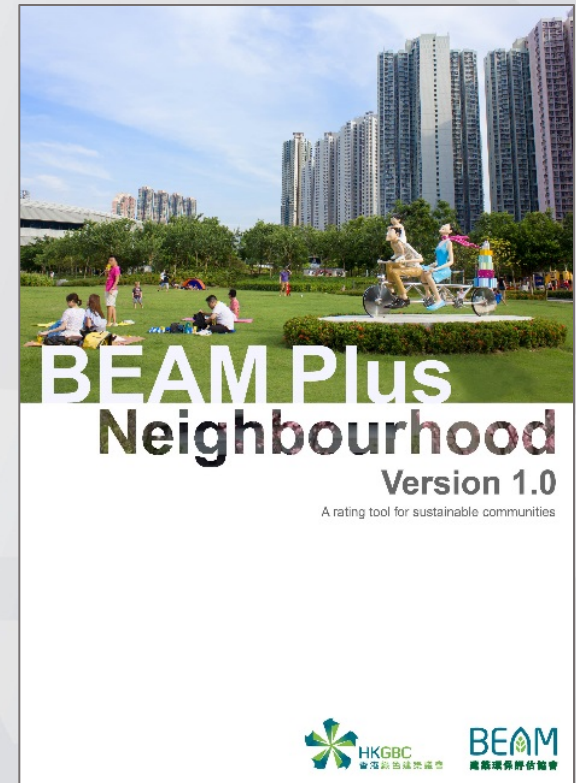
	<u>Overall</u> <u>(100)</u>	<u>Materials</u> <u>(26)</u>	<u>Energy</u> <u>(26)</u>	<u>IEQ</u> <u>(24)</u>
Platinum	75	15	18	17
Gold	65	13	16	15
Silver	55	11	12	12
Bronze	40	9	10	10

ND v1.0

ND v1.0

aims to:

- ensure that broader sustainability principles can be put in place at the early or inception stage of a development;
- encourage a more engaging development process, with emphasis on socio-economic aspects as well as infrastructural provisions of a development;
- highlight the role of a “good neighbour” to its surroundings/ community.



Eligibility and Timing

Embraces most
development types

Imposes no
restrictions on
development scale,
population or nature
of project

May be applied to
existing
neighbourhoods

Is adopted at the
planning stage of a
development
project

Fulfils two
“Prerequisites”

2 Prerequisites

CAP1

Minimum Neighbourhood Amenities

- A minimum of TWO different neighbourhood amenities (basic services or recreational facilities) within the Assessment Area.

CAP2

Minimum Functional Uses

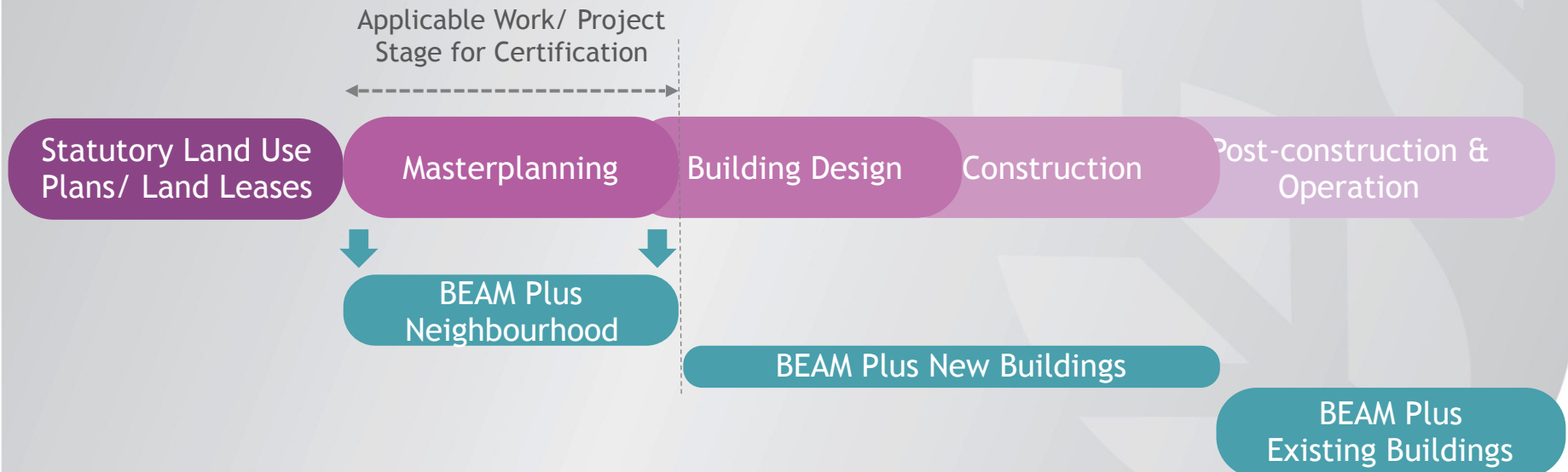
- A minimum of TWO different functional uses within the Assessment Area.
- Functional uses include Residential, office, retail, government facilities, institutional and industrial (roads and footpaths are excluded).

Within the Assessment Area

Stage and Validity

To enable the integration of the 'public realm' planning/ design at the beginning of a development process:

- One-stage certification (Final Assessment) at masterplanning stage
- No overlap with the current BEAM Plus NB scheme
- Certification valid for 5 years



6 Aspects

Community
Aspects *New!*



Site
Aspects



Materials and
Waste Aspects



Energy
Aspects



Water
Aspects



Outdoor
Environmental
Quality *New!*

Overall Grade

The final certificate grading is subject to the following conditions:

- Satisfy TWO prerequisites;
- Achieve overall percentage score required; and
- Obtain minimum percentage score for each aspect

	Overall score	CA	SA	EA	OEQ	IA
Platinum	75%	50%	70%	70%	70%	3 credits
Gold	65%	40%	60%	60%	60%	2 credits
Silver	55%	30%	50%	50%	50%	1 credit
Bronze	40%	20%	40%	40%	40%	N/A

BEAM Practitioners

- The key roles are to **integrate** the green building standards and practices into everyday building planning, design, construction & operation, and to **assist the clients** to achieve the desired green building rating level



BEAM Affiliate (BA) 綠建通才

- A person accredited by HKGBC as being competent to **support** green building design, construction and operations.
- **work under a BEAM Pro** to support the green building certification process.



- Trained and accredited by HKGBC
- **anonymous** to clients and applicants
- BSL **assign respective BEAM Assessor** to undertake project assessments based on the profile of the experts
- Could involve **more than one BEAM Assessor** in a single project

Accredited



Technical Screening by BSL (except for BI)



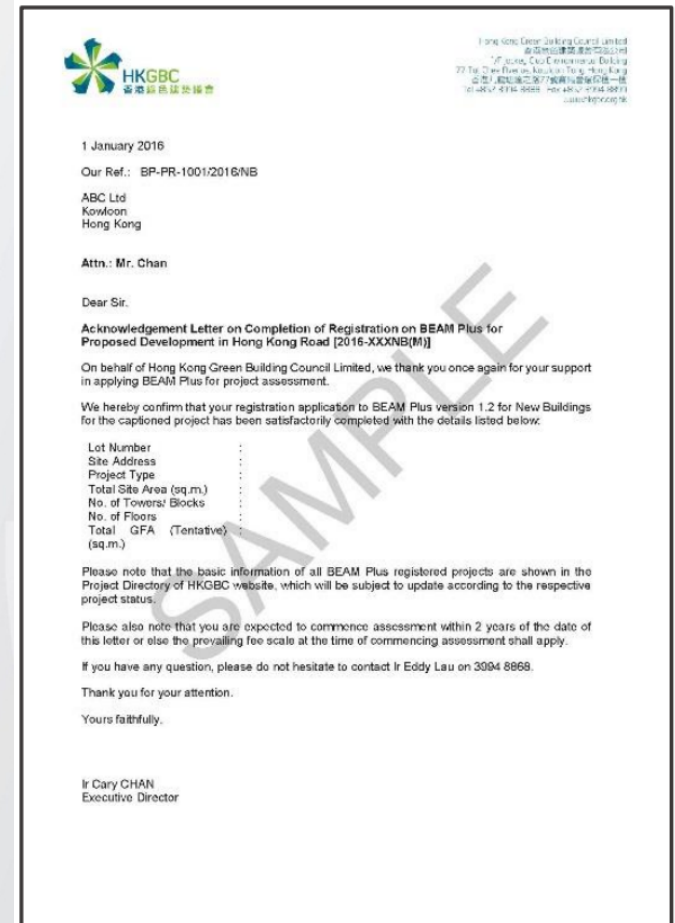
Duties

- Detailed Commenting
- Compile Assessment Report
- Present Assessment Report
- attend ASC
- Incorporate ASC's Comments

Procedures

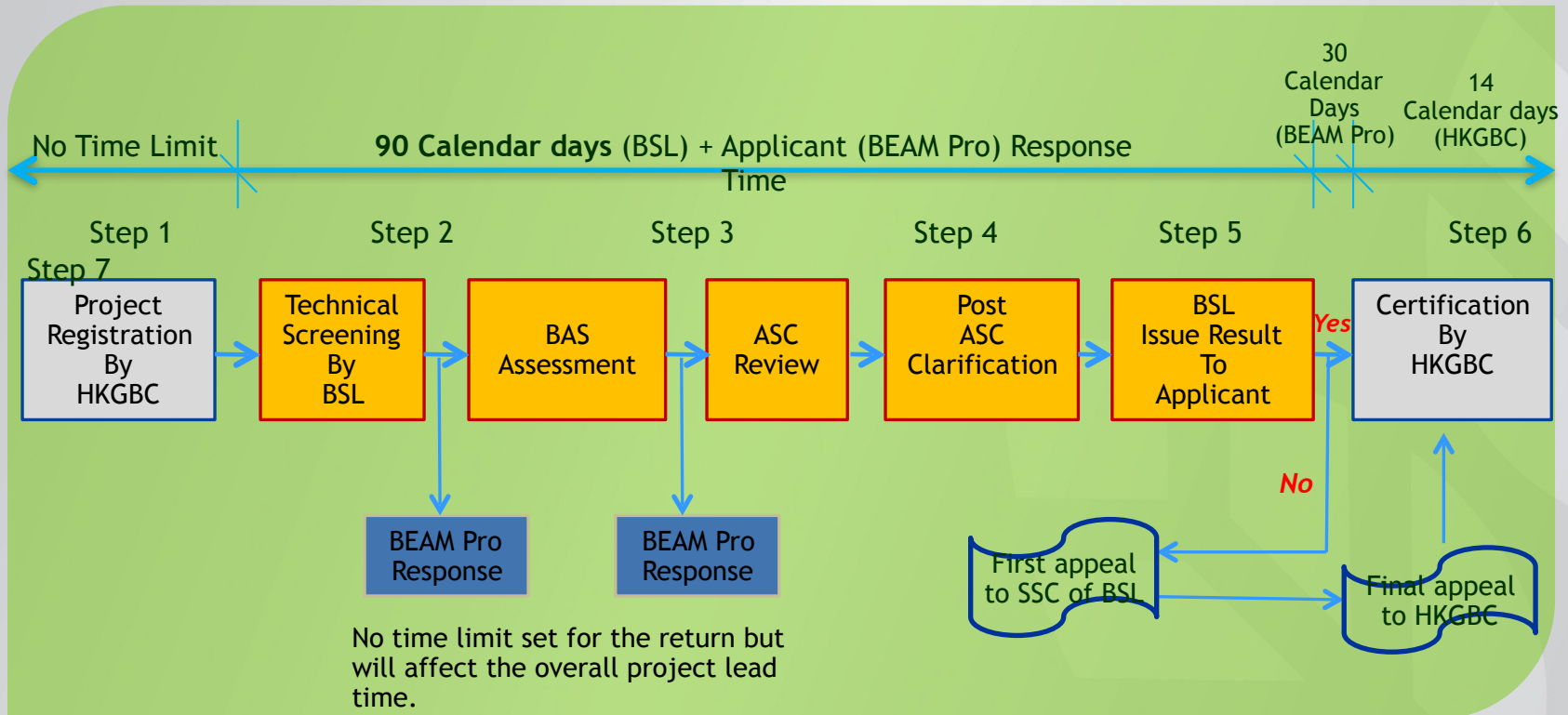
Registration

1. Online **registration forms** on HKGBC website
2. HKGBC secretariat will send a **Payment Advice** to project applicants by post and email
3. HKGBC Secretariat will issue an **Acknowledgement Letter** to notify the completion of registration



Assessment Procedures

For NB (v1.1, v1.2) / EB (v1.1, v1.2 & v2.0 Comprehensive Scheme A)



Remarks:

EB v2.0 Selective Scheme: 60 Calendar days (BSL) + Applicant (BEAM Pro) Response Time

BI: 45 Calendar days (BSL) + Applicant (BEAM Pro) Response Time

Performance Pledge

BEAM Plus Tools	Performance Pledge
BEAM Plus NB	90 calendar days
BEAM Plus EB v1.2	90 calendar days
BEAM Plus EB v2.0 (Comprehensive Scheme A)	90 calendar days
BEAM Plus EB v2.0 (Comprehensive Scheme B)	90 calendar days
BEAM Plus EB v2.0 (Selective Scheme)	60 calendar days
BEAM Plus Interiors	45 working days

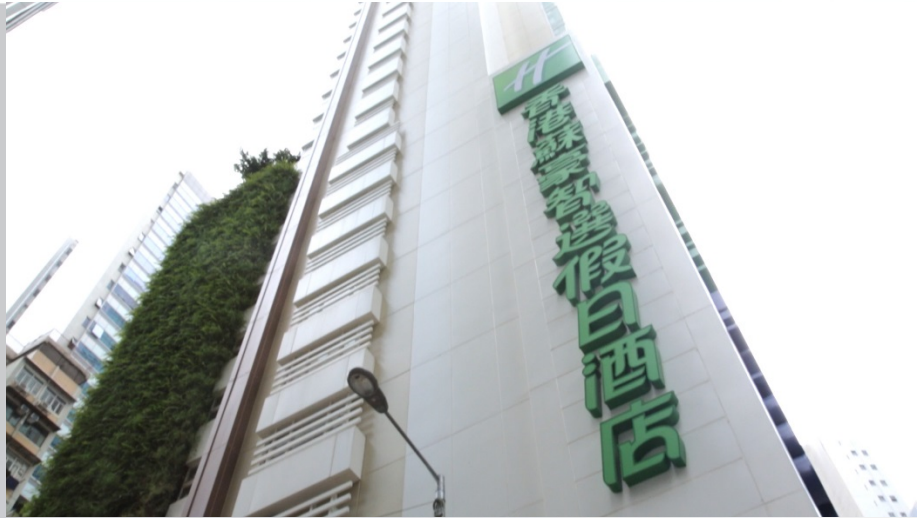
Appeal

Item	First Appeal	Final Appeal
Responsible Party	BSL	HKGBC
Appeal Forms	On BSL's website	On HKGBC's website
Documents Needed	1. Appeal Form 2. Supporting documents 3. Payment for the Appeal application	
Time Limit for Application	Within 30 calendar days after receiving the assessment result from BSL	Within 30 calendar days after receiving the result of First Appeal from BSL
Response Time	60 calendar days	90 calendar days
Review Party	SSC	Final Appeal Panel
Appeal Fee	Refer to the latest Fee Scale on HKGBC website.	

- i. Only credits (including prerequisites) can be appealed
- ii. No change to design, contract or policy will be reviewed at this time
- iii. Review of decision be based only on the information originally submitted

Platinum Projects

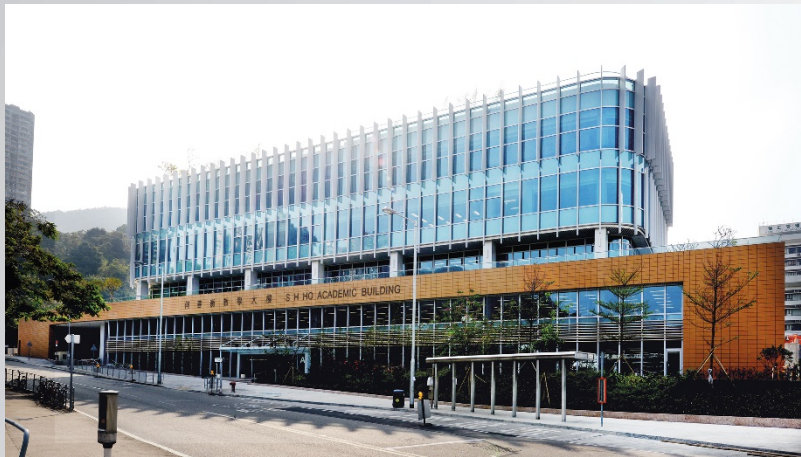
Platinum Projects



Holiday Inn Express Hong Kong SoHo



ZCB



Hang Seng Management College – SH Ho Academic Bldg



Kwai Shing West Estate (EB)

Platinum Projects (BI)

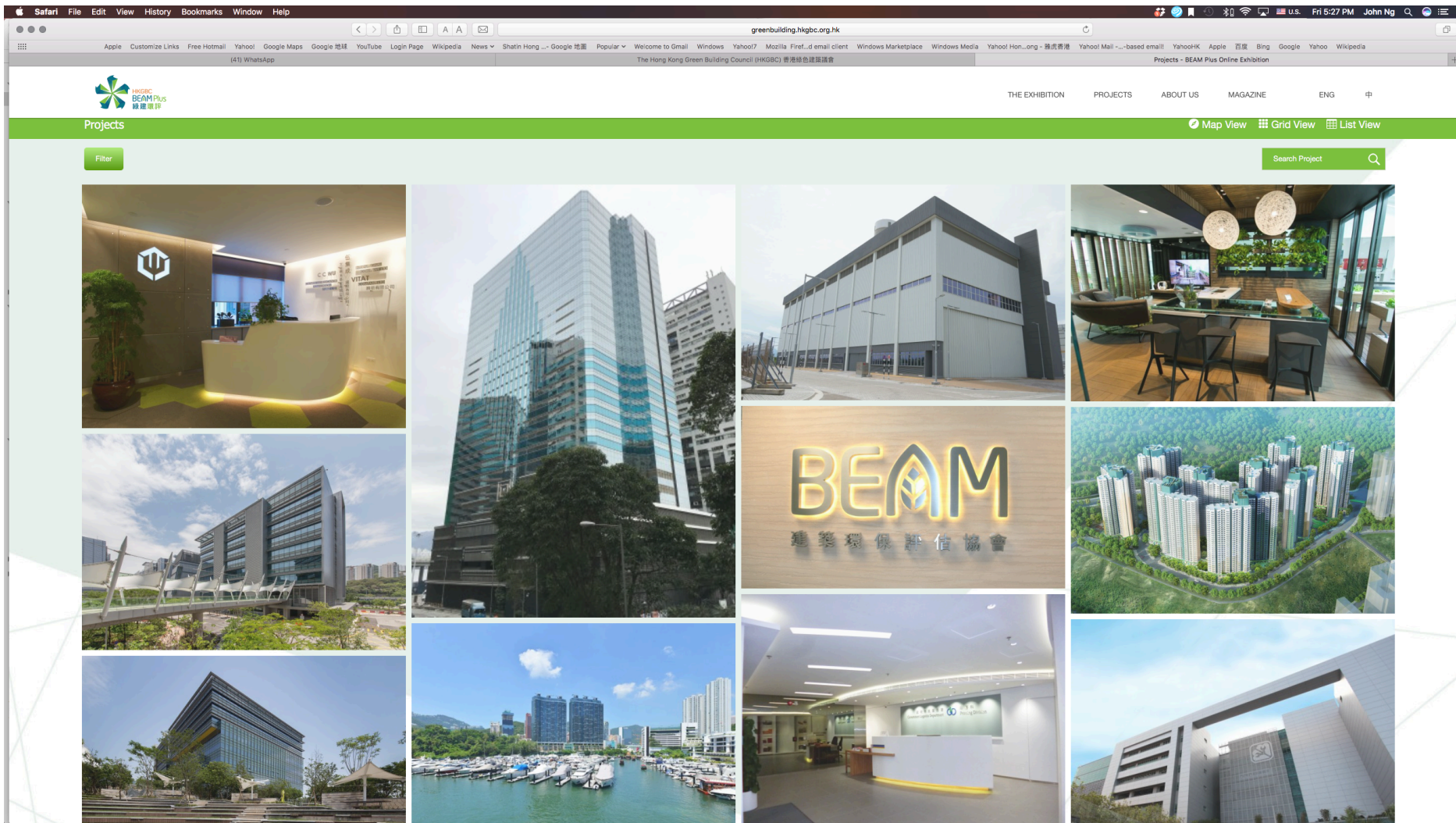


***GFEEN SKY : Conservation
International Hong Kong***



***BEAM Society Limited – Office
RenoGreen***

Final Platinum Rated Projects



www.greenbuilding.hkgbc.org.hk

Way Forward

- improve service
- capacity building
- collaboration with key stakeholders
- promote energy saving and green building



Thank you

BEAM Society Limited
建築環保評估協會

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