

The Cream of BEAM Plus (Jan 2023)

A General Sharing of BEAM Plus Certification Data

(This paper provides a **gist** of the CPD Training Video “Dissemination Seminar on Recent Trends of BEAM Plus NB – 31 January 2023”. For further details, readers are advised to view the training video on HKGBC On-line Training Portal.)

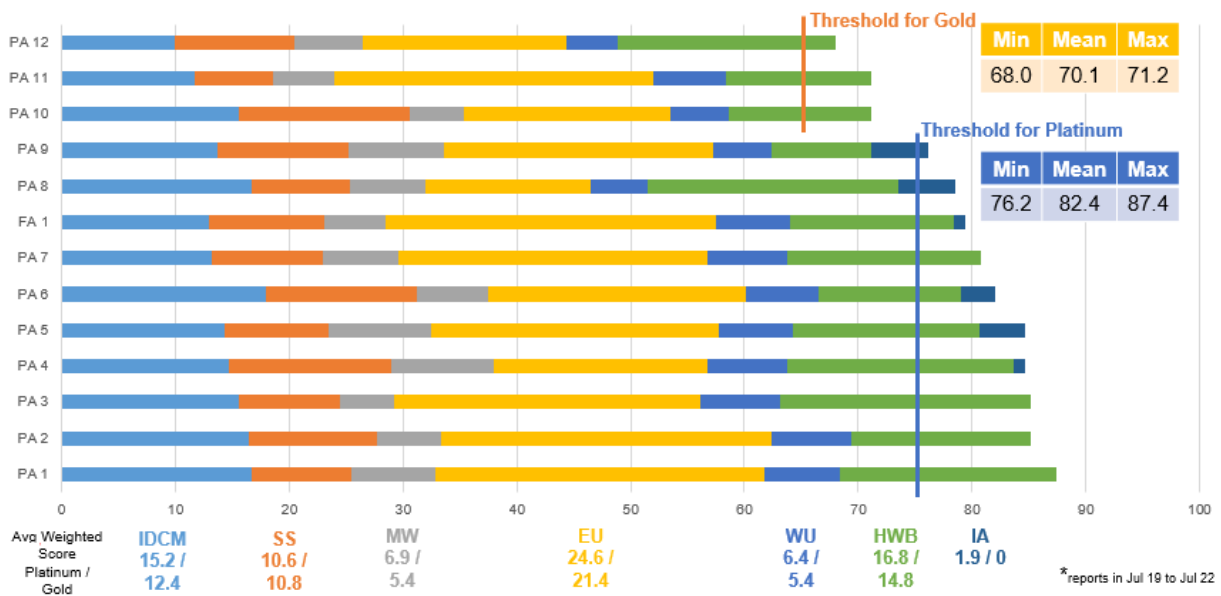
INTRODUCTION

“The Cream of BEAM Plus” is a paper published regularly to disseminate the performance of BEAM Plus-certified green buildings. In this paper, the study focuses on NB v2.0 projects. There are 13 of them in this study.

SCORES OF 13 PROJECTS

The scores of these 13 NB v2.0 projects are listed below in the form of a bar chart:

Projects Studied – 10 Platinum and 3 Gold



CREDIT SUBMISSION STATISTICS

The credit submission statistics about these 13 NB v2.0 projects are given below, illustrating how popular each of the NB v2.0 credits are, and how often they are contested:

Credit Head	Aspect Names	Total Submitted	Not Submitted	Submission Rate	NA Rate	Contested Rate
IDCM01	Sustainability Champions - Design	11	2	85%	0%	0%
IDCM01B	Sustainability Champions - Design (Bonus)	7	6	54%	0%	0%
IDCM02aB	BEAM Plus Neighbourhood (ND) (Bonus)	0	13	0%	0%	No Submission
IDCM02bB	BEAM Plus Interiors (BI) (Bonus)	1	12	8%	0%	0%
IDCM02cB	BEAM Plus Existing Buildings (EB) (Bonus)	1	12	8%	0%	0%
IDCM03a1	Early Consideration(s) of Integrated Building Design Process	3	10	23%	0%	0%
IDCM03a2	Early Consideration(s) of Integrated Building Design Process - multi-disciplinary design charrette	1	12	8%	0%	100%
IDCM03b	Early Design Consideration of Buildability/ Constructability	3	10	23%	0%	33%
IDCM03c	Design Consideration of Operation and Maintenance	11	2	85%	0%	9%
IDCM04	Life Cycle Costing	8	5	62%	0%	0%
IDCM05	Commissioning	6	7	46%	0%	0%
IDCM06	Sustainability Champions - Construction	13	0	100%	0%	0%
IDCM07a	Minimisation of Air Pollution	13	0	100%	0%	0%
IDCM07b	Minimisation of Noise Pollution	12	1	92%	0%	0%
IDCM07c	Minimisation of Water Pollution	12	1	92%	0%	0%
IDCM07d	Minimisation of Light Pollution	13	0	100%	0%	0%
IDCM08a	Demolition Waste Recycling	6	2	75%	38%	0%
IDCM08aB	Demolition Waste Recycling (Ad Bonus)	6	2	75%	38%	0%
IDCM08b	Construction Waste Recycling	9	4	69%	0%	33%
IDCM08bB	Construction Waste Recycling (Ad Bonus)	8	5	62%	0%	25%
IDCM09	Construction IAQ Management	11	2	85%	0%	0%
IDCM10	Considerate Construction	10	3	77%	0%	0%
IDCM11	Building Management Manuals	13	0	100%	0%	0%
IDCM12	Operator Training plus Chemical Storage Room	10	3	77%	0%	0%
IDCM13B	Digital Facility Management Interface (Bonus)	1	12	8%	0%	0%
IDCM14B	Occupant Engagement Platform (Bonus)	1	9	10%	23%	0%
IDCM15a	Project Team Document Management	9	4	69%	0%	0%
IDCM15b	Facility Management Team Document Management	3	10	23%	0%	0%
IDCM16a	Coordinated Use of BIM within Design Teams	10	3	77%	0%	30%
IDCM16bB	Coordinated Use of BIM within Design and Construction teams (Ad Bonus)	10	3	77%	0%	40%
IDCM16cB	BIM for time (Bonus)	4	9	31%	0%	0%
IDCM16dB	BIM for Facility Management Use (Bonus)	8	5	62%	0%	0%
IDCM17	Design for Engagement and Education on Green Buildings	8	5	62%	0%	0%
IDCM17B	Design for Engagement and Education on Green Buildings (Ad Bonus)	1	12	8%	0%	0%
SS01a	Accessibility to Public Transport	10	3	77%	0%	0%
SS01b	Pedestrian-oriented Access	9	4	69%	0%	0%
SS01bB	Pedestrian-oriented Access (Ad Bonus)	1	12	8%	0%	0%
SS01cB	Cycling Facilities and Network Integration (Bonus)	0	13	0%	0%	No Submission
SS01dB	Charging Facilities for Electric Vehicle (EV) (Bonus)	7	6	54%	0%	14%
SS02a	Amenities for Building Users	9	4	69%	0%	0%
SS02b	Shared Amenities for Neighbourhood	3	10	23%	0%	0%
SS03a	Sustainable Urban Design	13	0	100%	0%	0%
SS03aB	Sustainable Urban Design (Ad Bonus)	11	2	85%	0%	27%
SS03bB	Conservation of Cultural Heritage (Bonus)	1	12	8%	0%	100%
SS04	Neighbourhood Daylight Access	8	5	62%	0%	0%
SS05	Noise Control for Building Equipment	12	1	92%	0%	8%
SS06a	Control of Obtrusive Artificial Light	12	1	92%	0%	8%
SS06b	Control of External Light Reflection from Building	5	8	38%	0%	40%
SS07a	Reduction of Ecological Impact	0	5	0%	62%	No Submission
SS07aB	Reduction of Ecological Impact (Ad Bonus)	0	5	0%	62%	No Submission
SS07bB	Enhancement of Biodiversity (Bonus)	1	7	13%	38%	100%
SS08a1	Urban Design Guidelines Chapter 11	3	2	60%	62%	0%
SS08a2	Sustainable Building Design Measures	1	9	10%	23%	0%
SS08a3	Sustainable Building Design Measures - Prescribed Requirements	8	2	80%	23%	0%
SS08a4B	Sustainable Building Design Measures - Enhanced Performance (Ad Bonus)	0	9	0%	31%	No Submission
SS08bB	Tree Coverage (Bonus)	1	9	10%	23%	0%
SS08bB2	Tree Coverage (Ad Bonus)	0	10	0%	23%	No Submission
SS08c1	Air Ventilation Assessment (AVA) - Annual wind condition	9	1	90%	23%	0%
SS08c2	Air Ventilation Assessment (AVA) - Summer wind condition	9	1	90%	23%	0%

Credit Head	Aspect Names	Total Submitted	Not Submitted	Submission Rate	NA Rate	Contested Rate
SS08dB	Intra Urban Heat Island Study (Bonus)	0	10	0%	23%	No Submission
SS09	Immediate Neighbourhood Wind Environment	11	2	85%	0%	0%
SS10a	Shaded or Covered Routes	2	8	20%	23%	0%
SS10b	Passive Open Spaces with Thermal Comfort	2	8	20%	23%	0%
SS11	Stormwater Management	2	8	20%	23%	50%
SS11B	Stormwater Management (Ad Bonus)	0	10	0%	23%	No Submission
SS12B1	Design for Climate Change Adaptation (Bonus)	3	10	23%	0%	0%
SS12B2	Design for Climate Change Adaptation (Ad Bonus)	2	11	15%	0%	0%
MW01B	Building Reuse (Bonus) + (Ad Bonus)	1	12	8%	0%	0%
MW02	Modular and Standardised Design	4	9	31%	0%	0%
MW02B	Modular and Standardised Design (Ad Bonus)	1	12	8%	0%	0%
MW03	Structural Elements/ Façade Elements/ Architectural/ Internal Building Elements	7	6	54%	0%	14%
MW03B1	Structural Elements/ Façade Elements/ Architectural/ Internal Building Elements (Ad B1)	6	7	46%	0%	17%
MW03B2	Structural Elements/ Façade Elements/ Architectural/ Internal Building Elements (Ad B2)	3	10	23%	0%	0%
MW03B3	Structural Elements/ Façade Elements/ Architectural/ Internal Building Elements (Ad B3)	5	8	38%	0%	40%
MW04a	Building Material Selection Appraisal	4	9	31%	0%	0%
MW04bB	Protecting Vulnerable Parts of the Building from Damage (Bonus)	3	10	23%	0%	33%
MW04cB	Protecting Exposed Parts of the Building from Material Degradation (Bonus)	0	13	0%	0%	No Submission
MW05	Sustainable Forest Products	12	1	92%	0%	0%
MW05B	Sustainable Forest Products (Ad Bonus)	9	4	69%	0%	0%
MW06	Outside Surface Works and Structures/ Building Façade and Structural Components/ Interior Non-str.	4	9	31%	0%	0%
MW06B1	Outside Surface Works and Structures/ Building Façade and Structural Components/ Interior Non-str.	1	12	8%	0%	100%
MW06B2	Outside Surface Works and Structures/ Building Façade and Structural Components/ Interior Non-str.	3	10	23%	0%	33%
MW07a	Ozone Depleting Substances - Refrigerants	10	3	77%	0%	0%
MW07b	Ozone Depleting Substances - Ozone depleting materials	13	0	100%	0%	0%
MW08	Regional Materials	10	3	77%	0%	10%
MW08B	Regional Materials (Ad Bonus)	9	4	69%	0%	11%
MW09a	Certified Green Products	3	10	23%	0%	0%
MW09aB	Certified Green Products (Ad Bonus)	2	11	15%	0%	0%
MW09bB	Rapidly Renewable Materials (Bonus) + (Ad Bonus)	0	13	0%	0%	No Submission
MW10	Life Cycle Assessment	7	6	54%	0%	14%
MW11	Spatial Adaptability/ Flexible Engineering Services/ Structural Adaptability	2	11	15%	0%	0%
MW11B	Spatial Adaptability/ Flexible Engineering Services/ Structural Adaptability (Ad Bonus)	0	13	0%	0%	No Submission
MW12a	Additional Recyclables Collection	13	0	100%	0%	0%
MW12b	Additional Facility Provisions to Enable enhanced Municipal Solid Waste (MSW) Charing Scheme	0	12	0%	8%	No Submission
MW12cB	Waste Treatment Equipment (Bonus)	3	10	23%	0%	0%
MW12dB	Alternatives to Recycling Facilities (Bonus)	0	13	0%	0%	No Submission
EU01	Low Carbon Passive Design	12	1	92%	0%	0%
EU02	Reduction of CO2 Emissions	13	0	100%	0%	0%
EU02B	Reduction of CO2 Emissions (Bonus)	9	4	69%	0%	22%
EU03	Peak Electricity Demand Reduction	13	0	100%	0%	0%
EU04a	Fundamental Metering and Monitoring	6	7	46%	0%	17%
EU04aB	Fundamental Metering and Monitoring (Bonus)	3	10	23%	0%	0%
EU04bB	Metering for Tenanted Area (Ad Bonus)	2	11	15%	0%	0%
EU05a	Solar Energy Feasibility Study	11	2	85%	0%	0%
EU05b	On-site Renewable Energy Application	10	3	77%	0%	0%
EU05bB	On-site Renewable Energy Application (Bonus)	7	6	54%	0%	14%
EU06a	AirConditioning Units - Compliance with Manufacturer's Recommendation	10	1	91%	15%	10%
EU06b	AirConditioning Units - Performance Verification	0	11	0%	15%	No Submission
EU07a	Clothes Drying Facilities - Provision of Clothes Drying Facilities	1	4	20%	62%	0%
EU07bB	Clothes Drying Facilities - Demonstration of Effectiveness (Bonus)	0	6	0%	54%	No Submission
EU08	Energy Efficient Appliances	3	2	60%	62%	0%
WU01a	Further Potable Water Saving	13	0	100%	0%	0%
WU01bB	Exemplary Potable Water Saving (Bonus)	11	2	85%	0%	0%
WU02a	Water Efficient Irrigation	11	2	85%	0%	9%
WU02bB	Water Efficient Irrigation (Ad Bonus)	3	10	23%	0%	33%
WU03	Water Efficient Appliances	3	2	60%	62%	0%
WU04	Water Leakage Detection	11	1	92%	8%	0%
WU05	Twin Tank System	12	1	92%	0%	0%
WU06	Cooling Tower Water	2	0	100%	85%	0%
WU07	Effluent Discharge to Foul Sewers	13	0	100%	0%	8%
WU08a	Harvested Rainwater	6	7	46%	0%	0%
WU08b	Recycled Grey Water	0	13	0%	0%	No Submission
WU08cB	Exemplary Water Recycling (Bonus)	6	7	46%	0%	0%
HWB01B	Healthy and Active Living (Bonus)	8	5	62%	0%	13%
HWB02B	Biophilic Design (Bonus) + (Ad Bonus)	4	9	31%	0%	25%
HWB03a	Universal Accessibility	10	3	77%	0%	0%
HWB03bB	Weather protection and family friendly features (Bonus)	0	13	0%	0%	No Submission
HWB04a1	Fresh Air Provision - Fresh air provision in normally occupied spaces	8	5	62%	0%	0%
HWB04a2	Fresh Air Provision - Fresh air provision in not normally occupied spaces	4	9	31%	0%	0%
HWB04a3B	Fresh Air Provision - On-site measurements (Ad Bonus)	4	9	31%	0%	0%
HWB04b	Fresh Air Provision - Exhaust air	12	1	92%	0%	8%
HWB05	Waste Odour Control	7	5	58%	8%	0%
HWB06a1	Room Acoustics - landlord's controlled area	6	7	46%	0%	0%
HWB06a2	Room Acoustics - non-landlord controlled area	2	8	20%	23%	0%

HWB06b	Noise Isolation	4	9	31%	0%	0%
HWB06bB	Noise Isolation (Bonus)	1	8	11%	31%	0%
HWB06c	Background Noise	8	5	62%	0%	0%
HWB07	Indoor Vibration	10	3	77%	0%	20%
HWB08a	Indoor air quality in occupied spaces	13	0	100%	0%	0%
HWB08aB	Indoor air quality in occupied spaces (Ad Bonus)	5	8	38%	0%	20%
HWB08b	Air Quality in Car Park	3	0	100%	77%	0%
HWB09a	Thermal Comfort Analysis	5	8	38%	0%	0%
HWB09bB	Thermal Comfort Measurement (Ad Bonus)	1	12	8%	0%	0%
HWB10a	Artificial lighting in normally occupied spaces	7	6	54%	0%	14%
HWB10b	Artificial lighting in not normally occupied spaces and unoccupied spaces	8	5	62%	0%	0%
HWB11B	Daylight	2	9	18%	15%	0%
HWB12	Biological Contaminations	10	3	77%	0%	0%
IA	Innovations	8	5	62%	0%	25%

INNOVATIONS (IA1)

The innovations discussed in the webinar include:

- Digital works supervision system (DWSS)
- GPS concrete truck tracking system
- Porous drain cover (PDC) for surface channels
- Underground storm water detention system (in the form of StormTech chambers)
- Top of soil stacks – UV vent guard to cope with COVID-19 virus
- Biochemical deodorizing system for refuse collection points
- Comprehensive energy metering inside residential flats
- Occupant engagement platform for residential buildings
- Sustainability information system for residential buildings

CONCLUSIONS

The study draws the following conclusions:

- In terms of 3-year moving average, the proportion of NB projects obtaining Gold or above ratings has risen to 50%.
- The contemporary trends of NBs are: Healthy, Smart and Low-carbon.
- NB v2.0 allows a maximum of 10 points for Innovations. It appears that these 10 points have not been fully utilised. There is room for future projects to do more in Innovations.

FURTHER INFORMATION

The above information gives selected key statistics of the training webinar. If readers want to appreciate the full findings of the study, they are advised to watch the concerned training video, which is available on the following On-line Training Portal:

<http://onlinecpdtraining.hkgbc.org.hk/>