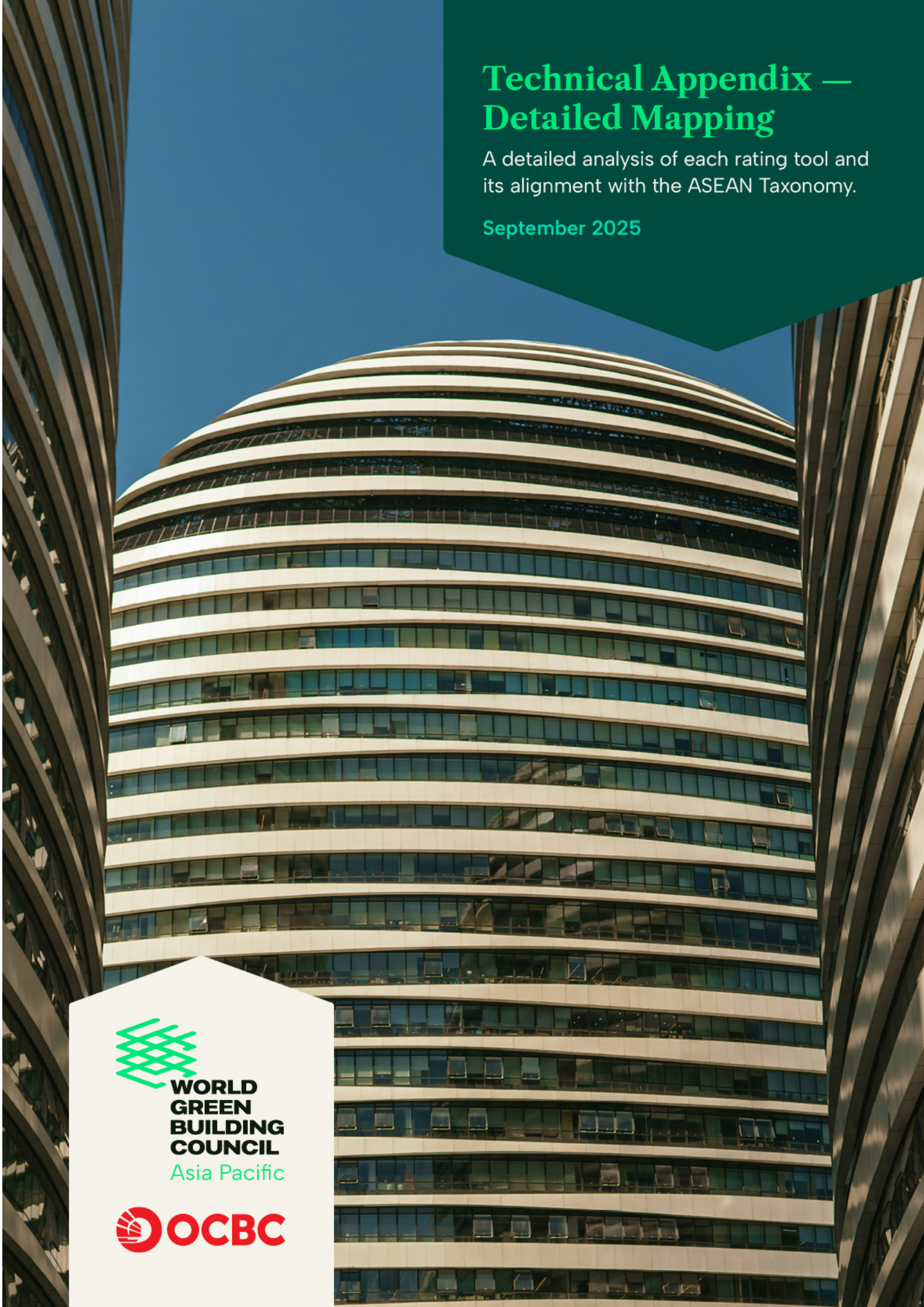
Technical Appendix — Detailed Mapping

A detailed analysis of each rating tool and its alignment with the ASEAN Taxonomy.

September 2025



WORLD GREEN BUILDING COUNCIL
Asia Pacific

OCBC

Technical Appendix: – Detailed Mapping

This Technical Appendix presents the full, detailed assessment of the alignment between each green building rating tool and the ASEAN Taxonomy. It was developed by the WorldGBC Asia Pacific Network (APN) in partnership with OCBC.

This Technical Appendix is accompanied by:

- The Insights Report, a concise summary of the analysis with distinct calls to action; and
- Alignment Analysis, an examination of how regional green building rating tools align with the environmental objectives of the ASEAN Taxonomy for Sustainable Finance.

Each participating Green Building Council (GBC) or rating tool scheme operator has provided a brief introduction to its rating tool, this is followed by the comprehensive mapping undertaken of the rating tool criteria aligned with the ASEAN Taxonomy's Technical Screening Criteria (TSC) and Do No Significant Harm (DNSH) requirements.

The tables only include criteria relevant to the ASEAN Taxonomy. The rating tools may contain additional credits addressing broader environmental and social objectives not reflected in this exercise. Furthermore, the mapping exercise does not assess the overall quality or effectiveness of a rating tool. Instead, the analysis is limited to examining the degree of alignment between rating tool criteria and the ASEAN Taxonomy, while considering the broader sustainable finance ecosystem in which these tools operate.

For full details on each rating tool, including complete criteria and credit structures, please contact the participating GBCs directly or rating tool organisation directly.

About the World Green Building Council (WorldGBC)

At the World Green Building Council (WorldGBC), we work to shape sustainable, equitable, and resilient buildings, cities, and communities.

This means enabling the right policy frameworks, financing mechanisms, and cultural shifts that support greener built environments across the globe.

Through our network of Green Building Councils and partners, we are uniquely positioned to accelerate collaboration and raise ambition across governments, businesses, and civil society. Together, we are building the momentum for a better, more sustainable future.

Learn more here.

About OCBC

OCBC is the second largest financial services group in Southeast Asia by assets, and the longest established Singapore bank, formed in 1932.

It is one of the world's most highly-rated banks, with Aa1 by Moody's and AA- by both Fitch and S&P. Recognised for its financial strength and stability, OCBC is consistently ranked among the World's Top 50 Safest Banks by *Global Finance* and has been named Best Managed Bank in Singapore by *The Asian Banker*.

Learn more here.

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The ASEAN Taxonomy criteria

Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks. The physical climate risks that are material to the Activity have been identified by performing a robust climate risk and vulnerability assessment (CRVA) in accordance with the guidance provided in ASEAN Taxonomy Annex 3; OR which may be evidenced through an advanced level of certification in the climate adaptation category of a recognised green building certificate OR (2) The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports, scientific peer-reviewed publications and open source or paying models. AND (3) The adaptation solutions implemented: i. Do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities. ii. Favour nature-based solutions or rely on blue or green infrastructure to the extent possible; iii. Are consistent with local, sectoral, regional or national adaptation plans and strategies. iv. Are monitored and measured against pre-defined indicators and remedial action is considered where those indicators are not met.

		v. Where the solution implemented is physical and consists in an Activity for which technical screening criteria have been specified, the solution complies with the do no significant harm technical screening criteria for that Activity.
Do No Significant Harm		
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy
EO3: Protection of Healthy Ecosystems and biodiversity		Environmental Impact Assessment
		(1) Impact on Water Resources. Identify and manage environmental detrimental risks associated with the Construction/ operation of the building related to water quality and/or water consumption at the appropriate level; – Water Quality Protection and Conservation Management Plans are developed, and implemented, which include tangible commitments to minimise environmental impacts through the appropriate management of water utilised during the Activities lifecycle; – Monitor the compliance and effectiveness of the mitigation measures
		(2) Impacts Related to Noise – neither the construction nor operation of the Building will cause significant harm to the environment through noise emissions. Noise emitted by the Activity must comply with maximum permissible noise levels for the area; – Noise Management Plans are developed
		(3) Impact on Air – Air Quality Management Plans are developed Possible sources of air pollution are minimised during construction and operation of the building
		(4) Impact on Soil – neither the construction nor operation of the Building will cause significant harm to the environment by impacting soil quality. Minerals and chemicals such as metals, pesticides, polychlorinated biphenyl, and total petroleum hydrocarbons contained in the soil must be within the permissible limits; – management plans such as Soil Erosion and Sediment Control Plans are developed
		(5) Impact on Biodiversity – manage environmental detrimental risks associated with the Construction or Operation of the Building related to biodiversity at the appropriate level.

	– Ensure all relevant management plans such as Biodiversity Management Plans are developed
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process. For new construction (buildings or portions of buildings), a cradle-to-grave life-cycle assessment of the projects structure and enclosure should be conducted. LCA should be conducted using the ISO 14040 and 14044 Series as a guideline.

Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks. The physical climate risks that are material to the Activity have been identified by performing a robust climate risk and vulnerability assessment (CRVA); OR which may be evidenced through an advanced level of certification in the climate adaptation category of a recognised green building certificate OR (2) The climate projections and assessment of impacts are based on best practice and available guidance and science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports. AND (3) The adaptation solutions implemented: i. Do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities.

		ii. Favour nature-based solutions or rely on blue or green infrastructure to the extent possible. iii. Are consistent with local, sectoral, regional or national adaptation plans and strategies. iv. Are monitored and measured. v. Solution complies with the do no significant harm technical screening criteria for that Activity.
Do No Significant Harm		
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy
EO3: Protection of Healthy Ecosystems and biodiversity		(1) Impact on Water Resources. Identify and manage environmental detrimental risks associated with the Construction/ operation of the building related to water quality and/or water consumption at the appropriate level; - Water Quality Protection and Conservation Management Plans are developed, and implemented, which include tangible commitments to minimise environmental impacts through the appropriate management of water utilised during the Activities lifecycle; - Monitor the compliance and effectiveness of the mitigation measures
		(2) Impacts Related to Noise - neither the construction nor operation of the Building will cause significant harm to the environment through noise emissions. Noise emitted by the Activity must comply with maximum permissible noise levels for the area; - Noise Management Plans are developed
		(3) Impact on Air - Air Quality Management Plans are developed Possible sources of air pollution are minimised during construction and operation of the Building
		(4) Impact on Soil - neither the construction nor operation of the Building will cause significant harm to the environment by impacting soil quality. Minerals and chemicals such as metals, pesticides, polychlorinated biphenyl, and total petroleum hydrocarbons contained in the soil must be within the permissible limits; - management plans such as Soil Erosion and Sediment Control Plans are developed
		(5) Impact on Biodiversity - manage environmental detrimental risks associated with the Construction or Operation of the Building related to biodiversity at the

	appropriate level. - Ensure all relevant management plans such as Biodiversity Management Plans are developed

Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria
EO1: Climate Change Mitigation	Tier 1 - Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%
	Tier 2 - Amber	(1) Building has been certified by relevant Green Building rating tool AND
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,
EO2: Climate Change Adaptation	Tier 1 - Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks. The physical climate risks that are material to the Activity have been identified by performing a robust climate risk and vulnerability assessment (CRVA) in accordance with the guidance provided in ASEAN Taxonomy Annex 3; OR which may be evidenced through an advanced level of certification in the climate adaptation category of a recognised green building certificate OR (2) The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports, scientific peer-reviewed publications and open source or paying models. AND (3) The adaptation solutions implemented: i. Do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities. ii. Favour nature-based solutions or rely on blue or green infrastructure to the extent possible; iii. Are consistent with local, sectoral, regional or national adaptation plans and strategies.

		iv. Are monitored and measured against pre-defined indicators and remedial action is considered where those indicators are not met. v. Where the solution implemented is physical and consists in an Activity for which technical screening criteria have been specified, the solution complies with the do no significant harm technical screening criteria for that Activity.
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure (including floor and roof decking) and envelope (the exterior skin and framing, excluding window assemblies and non-structural Roofing materials). Portions of buildings deemed structurally unsound or hazardous should be excluded from calculations; AND (2) Use existing interior non-structural elements (e.g., interior walls, doors, floor coverings and ceiling systems) for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building, in at least three of the six impact categories listed in the LEED v4.1 Building Lifecycle Reduction Criteria, one of which must be global warming potential.
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure (including floor and roof decking) and envelope (the exterior skin and framing, excluding window assemblies and non-structural Roofing materials). Portions of buildings deemed structurally unsound or hazardous should be excluded from calculations; AND (2) Use existing interior non-structural elements (e.g., interior walls, doors, floor coverings and ceiling systems) for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building, in at least three of the six impact categories listed in the LEED v4.1 Building Lifecycle Reduction Criteria, one of which must be global warming potential.
Do No Significant Harm		
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy
EO3: Protection of Healthy Ecosystems and biodiversity		Environmental Impact Assessment
		(1) Impact on Water Resources. Identify and manage environmental detrimental risks associated with the Construction/ operation of the building related to water quality and/or water consumption at the appropriate level; - Water Quality Protection and Conservation Management Plans are

	developed, and implemented, which include tangible commitments to minimise environmental impacts through the appropriate management of water utilised during the Activities lifecycle; - Monitor the compliance and effectiveness of the mitigation measures
	(2) Impacts Related to Noise - neither the construction nor operation of the Building will cause significant harm to the environment through noise emissions. Noise emitted by the Activity must comply with maximum permissible noise levels for the area; - Noise Management Plans are developed
	(3) Impact on Air - Air Quality Management Plans are developed Possible sources of air pollution are minimised during construction and operation of the Building
	(4) Impact on Soil - neither the construction nor operation of the Building will cause significant harm to the environment by impacting soil quality. Minerals and chemicals such as metals, pesticides, polychlorinated biphenyl, and total petroleum hydrocarbons contained in the soil must be within the permissible limits; - management plans such as Soil Erosion and Sediment Control Plans are developed
	(5) Impact on Biodiversity - manage environmental detrimental risks associated with the Construction or Operation of the Building related to biodiversity at the appropriate level. - Ensure all relevant management plans such as Biodiversity Management Plans are developed
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process. For new construction (buildings or portions of buildings), a cradle-to-grave life-cycle assessment of the projects structure and enclosure should be conducted. LCA should be conducted using the ISO 14040 and 14044 Series as a guideline.

Summary of Rating Tool Mapping

Key for interpreting the tables both here and throughout the guides.

Heat Map Key

Strong Alignment | Moderate Alignment | Limited Alignment | Not Aligned

Criteria/ Credit mapping key

●	◑	o
Aligned and a mandatory criteria / credit (prerequisite)	Aligned and a Scored criteria / credit (optional)	Partially aligned criteria / credit

Construction of Buildings Summary

			Technical screening criteria		Do no significant harm								
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Protection of healthy ecosystems and biodiversity						Circular economy
Country/region	**Rating tool**	**Overall alignment**	EE improvement plan	Projections, risks and adaptation	Carbon emissions (scopes 1,2,3)	Climate risk and vulnerability assessment	Environmental impact assessment	Impact on water	Impact on noise	Impact on air	Impact on soil	Impact on biodiversity	LCA (materials)
Australia/Pacific	Green Star Buildings		●	◑	●	●	◑	○	●	◑	◑	◑	◑
China	GB/T 50378-2019 (New Buildings)		◑		○			○	◑	○	○	◑	○
Hong Kong/Greater China	BEAM Plus New Buildings v2.0.2025		○		◑	◑	○	◑	◑	◑	○	◑	◑
India	IGBC Green New Buildings Rating System v3.0 Sep2016		○		○		●	○		◑	○	◑	○
Indonesia	Greenship New Buildings 1.2		○		○			◑	○	○		○	○
Malaysia	GBI Non-Residential New Construction		○		○			○	○	◑	◑	◑	○
Malaysia	GreenRE Non Residential v4		○		◑			○	◑	◑	○	○	○
Malaysia	MyCREST Design and Construction v2.0.1		○		◑			◑	◑	◑	◑	○	◑
Philippines	BERDE Buildings v5.0.0		◑	◑	◑	●	○	◑	◑	◑	●	◑	○
Singapore/Asia	Green Mark 2021		◑	◑	◑	◑	◑	◑	●	◑	◑	◑	◑
Sri Lanka	Green SL Rating System for New Constructions v2.1		○		◑		◑	◑	◑	◑	◑	◑	◑
Thailand	TREES - NC/CS Version 2		○		○			◑		◑	◑	◑	○
Vietnam	LOTUS New Construction v4 draft 2 (August 2025)		●	◑	◑	●	●	◑	◑	◑	◑	◑	◑
UK/International	BREEAM New Construction International V7		○	◑	◑	◑	◑	◑	◑	◑	○	◑	◑
USA /International	LEED BD+C v5		◑	◑	●	●		○	○	○	◑	◑	◑
International	EDGE v3 01.12.2024		○		○			○		○			○
International	EDGE v4 (draft)		○	○	●	●		○		○			●

Acquisition or Ownership of Buildings

			Technical screening criteria			Do no significant harm						
			Climate change mitigation		Climate change adaptation	Climate change mitigation	Climate change adaptation	Protection of healthy ecosystems and biodiversity				
Country/region	**Rating tool**	**Overall alignment**	ACMV monitoring and assessment	EE improvement plan	Projections, risks and adaptation	Carbon emissions (scopes 1,2,3)	Climate risk and vulnerability assessment	Impact on water	Impact on noise	Impact on air	Impact on soil	Impact on biodiversity
Australia/Pacific	Green Star Buildings		●	●	◑	●	●	◑	◑	●	◑	◑
Australia/Pacific	Green Star Performance		●	●	◑	●	◑	◑	◑	●	◑	◑
China	GB/T 50378-2019 (New Buildings)		●	◑		◑		◑	◑	◑	○	◑
China	GB/T 51141-2015 (Existing Buildings)		◑	◑		◑		◑	◑	◑	○	◑
Hong Kong/Greater China	BEAM Plus New Buildings v2.0.2025		◑	○	○	◑	◑	◑	◑	◑	○	◑
Hong Kong/Greater China	BEAM Plus Existing Buildings v3.0		◑	◑	◑	◑	◑	◑	◑	◑	○	○
India	IGBC Green New Buildings Rating System v3.0 Sep2016		◑	○		○		○		◑	○	◑
India	IGBC Green Existing Buildings Operations and Maintenance (O&M) v2 Nov 2023		◑	◑		○		◑	○	◑	○	○
Indonesia	Greenship New Buildings 1.2		●	○		○		◑	○	◑		○
Indonesia	Greenship Existing Buildings 1.1		◑	●		○		●	○	◑		◑
Malaysia	GBI Non-Residential New Construction		◑	○		○		◑	○	◑	◑	◑
Malaysia	GBI Non-Residential Existing Building		◑	○		○		◑	○	◑	◑	
Malaysia	GreenRE Non Residential v4		●	○		○		◑	○	◑	○	○
Malaysia	GreenRE Existing NonResidential Building v3.3		◑	◑		○		◑	○	●		○
Malaysia	MyCREST Operation and Maintenance v2.0			◑		◑		◑	○	◑	○	○
Philippines	BERDE Buildings v5.0.0		○	◑	◑	◑	◑	◑	◑	◑	●	◑
Singapore/Asia	Green Mark 2021		●	◑	◑	◑	◑	◑	◑	◑	◑	◑
Singapore/Asia	Green Mark 2021 In Operations		●	●		○		●	○	●		
Sri Lanka	Green SL Rating System for New Constructions v2.1		○	○		◑		◑	◑	◑	◑	◑
Sri Lanka	Green SL Rating System for Existing Buildings v1.0		◑	◑				◑		◑	◑	◑
Thailand	TREES – NC/CS Version 2		◑	○		○		◑		◑	◑	◑
Thailand	TREES – EB Version 1.0		○	◑		○		◑		◑	◑	◑
Vietnam	LOTUS New Construction v4 draft 2 (August 2025)		●	●	◑	◑	●	◑	◑	◑	◑	◑
Vietnam	LOTUS Buildings In Operation v1 2019		◑	◑	◑		◑	◑		◑	◑	○
UK/International	BREEAM New Construction International V7		◑	○	◑	◑	◑	◑	◑	◑	○	◑
UK/International	BREEAM In Use International V6		○	◑	○	◑	◑	◑	○	◑		◑
UK/ International	BREEAM International Non Domestic Refurbishment 2015		◑	○	◑	◑	○	○	◑	◑		◑
USA / International	LEED BD+C v5		●	◑	◑	●	●	●	○	●	◑	◑
USA / International	LEED O+M v5		●	●	●	◑	●	◑		◑	○	
International	EDGE v3 01.12.2024		◑	○		○		●		○		
International	EDGE v4 (draft)		◑	○	○	●	●	●		○		

Renovation of Existing Buildings

			Technical screening criteria					Do no significant harm								
			Climate change mitigation		Climate change adaptation	Circular economy		Climate change mitigation	Climate change adaptation	Protection of healthy ecosystems and biodiversity						Circular economy
Country/region	**Rating tool**	**Overall alignment**	EUI improvement (30%)	EUI improvement (15%)	Projections, risks and adaptation	Maintain 75% existing structure, 30% interior materials, LCA with 10% reduction	Maintain 45% existing structure, 15% interior materials, LCA with 5% reduction	Carbon emissions (scopes 1,2,3)	Climate risk and vulnerability assessment	Environmental impact assessment	Impact on water	Impact on noise	Impact on air	Impact on soil	Impact on biodiversity	LCA (materials)
Australia/Pacific	Green Star Buildings		◑	◑	◑	◑	◑	●	●	◑	◑	●	◑	◑	◑	◑
Australia/Pacific	Green Star Performance		◑	◑	◑			●	◑		◑	◑	●	O	◑	O
China	GB/T 50378-2019 (New Buildings)		O	◑		O	O	O			◑	◑	O	O	◑	O
China	GB/T 51141-2015 (Existing Buildings)		O	O		O	O	◑			◑	◑	◑	O	◑	O
Hong Kong/Greater China	BEAM Plus New Buildings v2.0.2025		O	◑	O	O	O	◑	◑	O	◑	◑	◑	O	◑	◑
Hong Kong/Greater China	BEAM Plus Existing Buildings v3.0.Beta0		◑	◑	◑			◑	◑		O	◑	◑	O	O	O
India	IGBC Green New Buildings Rating System v3.0 Sep2016		O	O		O	O	O		●	O		◑	O	◑	O
India	IGBC Green Existing Buildings Operations and Maintenance (O&M) v2 Nov 2023		◑	◑				O			◑	O	O	O	O	O
Indonesia	Greenship Existing Buildings 1.1		◑	◑				O			◑	O	◑		O	O
Malaysia	GBI Non-Residential Existing Building		◑	◑		O	O	O			◑	O	◑	◑		O
Malaysia	GreenRE Existing NonResidential Building v3.3		O	O				O			◑	O	●		O	
Malaysia	MyCREST Operation and Maintenance v2.0		◑	◑				◑			◑	O	◑	O	O	
Malaysia	MyCREST Design and Construction v2.0.1		◑	◑				◑			◑	◑	◑	◑	O	O
Philippines	BERDE Buildings v5.0.0		◑	◑	◑			◑	●	O	◑	◑	◑	●	◑	O
Singapore/Asia	Green Mark 2021		●	●	◑	◑	◑	◑	◑	◑	◑	●	◑	◑	◑	◑
Sri Lanka	Green SL Rating System for New Constructions v2.1		O	O		O	O	◑		◑	◑	◑	◑	◑	◑	O
Sri Lanka	Green SL Rating System for Existing Buildings v1.0		O	O		O	O				◑		◑	◑	◑	O
Thailand	TREES – NC/CS Version 2		O	O		O	O	O			◑		◑	◑	◑	O
Vietnam	LOTUS New Construction v4 draft 2 (August 2025)		◑	◑	◑	◑	◑	◑	●	●	◑	◑	◑	◑	◑	◑
UK/International	BREEAM International Non Domestic Refurbishment 2015		O	O	◑	O	O	◑	O	◑	O	◑	◑		◑	◑
USA/International	LEED BD+C v5		◑	◑	◑	O	O	●	●		O	O	●	◑	◑	◑
USA/International	LEED O+M v5		◑	◑	●			◑	●		O		◑	O		
International	EDGE v3 01.12.2024		◑	◑				O			O		O			O
International	EDGE v4 (draft)		◑	●	O			●	●		O		O			●

Rating Tools in Detail

1. Australia/ Pacific: Green Star

Overall Taxonomy Alignment

Green Star Buildings		Strong Alignment
Green Star Performance		Strong Alignment

About Green Star

An internationally recognised rating system that aims to create healthy, resilient, and positive places for people and the natural environment. Green Star covers new buildings (Green Star Buildings), existing buildings (Green Star Performance), new homes (Green Star Homes), new fitouts (Green Star Fitouts), and precincts (Green Star Communities).

Green Star uses a rating scale to measure and reward projects that achieve best practice or above in their sustainability outcomes. Green Star rated buildings, fitouts and precincts can achieve a Green Star certification of 4 – 6 Star Green Star. Existing building operations assessed using the Green Star – Performance rating tool can achieve a Green Star rating of 1 – 6 Star Green Star.

Green Star is the most used holistic rating system in Australia by far, with more than 4000 certifications awarded, and a further 3000 registered. Green Star is also available in New Zealand (Green Star NZ), under license to Te Kaunihera Hanganga Tautaiao | the New Zealand Green Building Council (NZGBC), and Africa (Green Star SA) under license to the Green Building Council of South Africa (GBCSA). Those two organisations manage the rating system for certification purposes, relying on GBCA for approval for changes to the standard for their local conditions.

Projects achieving 4 Star Green Star rating represent Best Practice, 5 Star represent Australian Excellence, and 6 Star represent World Leadership in sustainable design and construction.

Figure 1 The Green Star rating scale for new buildings. The rating scale for existing buildings includes a 1, 2, and 3 Star rating to encourage any building to enter the program and work towards a certified 4 star rating as a minimum.

In summary, the certification process for the rating system involves a rating applicant providing detailed information to GBCA (or NZGBC and GBCSA). GBCA then arranges an independent, third-party assessor (one or multiple experienced industry professionals) to review the information provided. The assessor review the documentation and award a score, which determines their rating.

How Green Star complies with the ASEAN Taxonomy

Environmental Objective	**Green Star Buildings**	**Green Star Performance**
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	Green Star Buildings
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	5 Star
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	4 Star
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	● Positive Credit 23: Energy Source Minimum Expectation: The building provides a Zero Carbon Action Plan. The plan must be signed off by the building owner or developer and included in any operational documents for the building.
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	◑ Resilient Credit 16: Climate Change Resilience Minimum Expectation: the project must complete a Climate Change Pre-screening Checklist Credit 16: Climate Change Resilience In addition to Minimum Expectation, the project team develops a project-specific climate change risk and adaptation assessment for the building. AND Extreme and high risks are addressed.

Do No Significant Harm		
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions	● Positive Credit 23: Energy Source Minimum Expectation: The building provides a Zero Carbon Action Plan Credit 21: Upfront Carbon Emissions Minimum Expectation: Reducing Upfront Carbon Emissions
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	● Resilient Credit 16: Climate Change Resilience Minimum Expectation: Climate Change Pre-screening Checklist
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	◑ Credit 2: Responsible Construction Environmental Management Plan (EMP) Credit 35: Impacts to Nature Protecting Ecological Values – context report: Project team must document the site's current ecological values by type and biomass. This includes terrestrial and aquatic ecological values, geologic features, and soils.
	(1) Impact on Water Resources.	○ Credit 39: Waterway Protection

		Local waterways are protected, and the impacts of flooding and drought are reduced. Credit 25: Water Use Min Expectation: the building installs efficient water fixtures, or The building uses 15% less potable water compared to a reference building
	(2) Impacts Related to Noise	● NCC outlines regulatory requirements for managing excessive noise during construction. Credit 35: Impacts to Nature Retaining High Biodiversity Values: Project must provide narrative as to how impacts to nature have been mitigated, including light and noise pollution
	(3) Impact on Air	◑ Credit 2: Responsible Construction Minimum Expectation: The builder or head contractor has an environmental management system in place to manage its environmental impacts on site Credit 10: Clean Air Credit 13: Exposure to Toxins
	(4) Impact on Soil	◑ Credit 2: Responsible Construction

		Minimum Expectation: Environmental Management System Credit 35: Impacts to Nature Protecting Ecological Values
	(5) Impact on Biodiversity	◑ Credit 35: Impacts to Nature Minimum Expectation: Site Ecological Value Credit 2: Responsible Construction – Environmental Management Plan Credit 36: Biodiversity Enhancement Biodiversity Management Plan; Exceptional Performance: landscaping includes critically endangered and/or endangered plant species native to the bioregion
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ Credit 26: Life Cycle Impacts 30% reduction in life cycle impacts Credit 21: Upfront Carbon Emissions Credit 6: Responsible Structure Credit 7: Responsible Envelope Credit 8: Responsible Systems Credit 9: Responsible Finishes

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	Green Star Buildings	Green Star Performance
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	5 Star	5 Star
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	● Responsible: Cr 3: Verification and Handover Minimum Expectation: The building must have accessible energy and water metering for all common uses, major uses, and major sources. Meters must be commissioned and validated per the most current 'Validating Non-Utility Meters for NABERS Ratings' protocol.	● Credit 3: Ongoing Verification Rating Expectation: Appropriate building metering and monitoring is provided. Targets are set for building systems.
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	4 Star	4 Star
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	● Positive Credit 23: Energy Source Minimum Expectation: The building provides a Zero Carbon Action Plan. The plan must be signed off by the building owner or	● Credit 19: Energy Source Rating Expectation: Zero Carbon Action Plan has been developed by the building owner.

			developer and included in any operational documents for the building.	
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	◑ Resilient Credit 16: Climate Change Resilience Minimum Expectation: the project must complete a Climate Change Pre-screening Checklist Credit 16: Climate Change Resilience In addition to Minimum Expectation, the project team develops a project-specific climate change risk and adaptation assessment for the building. AND Extreme and high risks are addressed.	◑ Credit 14: Climate Change Resilience Assessment of climate change risks, strategy for mitigation and adaptation, risks managed, and high risks are addressed Credit 16: Community Resilience Community resilience plan completed and implemented that responds to risks and creates opportunities for enhancement
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	● Positive Credit 23: Energy Source Minimum Expectation: The building provides a Zero Carbon Action Plan Credit 21: Upfront Carbon Emissions Minimum Expectation: Reducing Upfront Carbon Emissions	● Credit 19: Energy Source Rating Expectation: Zero Carbon Action Plan has been developed by the building owner. Credit 21: Upfront Carbon Emissions
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	● Resilient Credit 16: Climate Change Resilience	◑ Credit 14: Climate Change Resilience

		Minimum Expectation: Climate Change Pre-screening Checklist	Climate Change Risk and Adaptation Assessment
EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources.	○ Credit 39: Waterway Protection Local waterways are protected, and the impacts of flooding and drought are reduced. Credit 25: Water Use Min Expectation: the building installs efficient water fixtures, or The building uses 15% less potable water compared to a reference building	◑ Credit 25: Water Use
	(2) Impacts Related to Noise	● NCC outlines regulatory requirements for managing excessive noise during construction. Credit 35: Impacts to Nature Retaining High Biodiversity Values: Project must provide narrative as to how impacts to nature have been mitigated, including light and noise pollution	◑ Credit 34: Impacts to Nature Ecological Impact Assessment, including: – Light, noise, odour and other pollution generated by the building and mitigation measures
	(3) Impact on Air	◑ Credit 2: Responsible Construction	● Credit 6: Clean Air

		Minimum Expectation: The builder or head contractor has an environmental management system in place to manage its environmental impacts on site Credit 10: Clean Air Credit 13: Exposure to Toxins	Credit 9: Exposure to Toxins
	(4) Impact on Soil	◑ Credit 2: Responsible Construction Minimum Expectation: Environmental Management System Credit 35: Impacts to Nature Protecting Ecological Values	◑ Credit 35: Biodiversity Enhancement Biodiversity Enhancement Plan – including soil health
	(5) Impact on Biodiversity	◑ Credit 35: Impacts to Nature Minimum Expectation: Site Ecological Value Credit 2: Responsible Construction – Environmental Management Plan Credit 36: Biodiversity Enhancement Biodiversity Management Plan; Exceptional Performance: landscaping includes critically endangered and/or endangered plant species native to the bioregion	◑ Credit 34: Impacts to Nature Ecological value assessment has been undertaken Credit 35: Biodiversity Enhancement Policy developed on biodiversity enhancement Credit 36: Nature Stewardship Restore biodiversity beyond the building's boundary.

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	Green Star Buildings	Green Star Performance
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	5 Star	5 Star
		(2) reduction of Energy Usage Intensity (EUI) of at least 30%	◑ Credit 22: Energy Use Exceptional Performance level requiring building's energy use at least 30% less than a reference building	◑ Credit 18: Energy Use High Performance: 3 points = 30% reductions in energy use against the baseline
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	4 Star	4 Star
		(2) reduction of Energy Usage Intensity (EUI) of at least 15%,	◑ Credit 22: Energy Use Credit Achievement level requiring building's energy use at least 20% less than a reference building	◑ Credit 18: Energy Use High Performance: 2 points = 15% reductions in energy use against the baseline
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA)	◑ Resilient Credit 16: Climate Change Resilience Minimum Expectation: the project must	◑ Credit 14: Climate Change Resilience

		OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	complete a Climate Change Pre-screening Checklist Credit 16: Climate Change Resilience In addition to Minimum Expectation, the project team develops a project-specific climate change risk and adaptation assessment for the building. AND Extreme and high risks are addressed.	Assessment of climate change risks, strategy for mitigation and adaptation, risks managed, and high risks are addressed Credit 16: Community Resilience Community resilience plan completed and implemented that responds to risks and creates opportunities for enhancement
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	◑ Credit 6: Responsible Structure Exceptional Performance: 80% of all products in the structure (by cost) meet a Responsible Products Value of at least 10 (met by reused/retained materials). Credit Achievement: 50% of all products in the structure (by cost) meet a RPV of at least 10 Credit 7: Responsible Envelope Exceptional Performance: 60% of all products in the building envelope meet a RPV of at least 10 Credit 8: Responsible Finishes Exceptional Performance: 35% of all active building systems meet a RPV of at least 6	

			Credit 9: Responsible Finishes: Exceptional Performance: 60% of all internal building finishes meet a RPV of at least 7 Credit Achievement: 40% of all finishes meet a RPV of at least 7 Credit 26: Life Cycle Impacts The project demonstrates a 30% reduction in life cycle impacts – whole of building, whole of life comparative LCA	
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	◑ See above	

Do No Significant Harm			
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	● Positive Credit 23: Energy Source Minimum Expectation: The building provides a Zero Carbon Action Plan Credit 21: Upfront Carbon Emissions Minimum Expectation: Reducing Upfront Carbon Emissions	● Credit 19: Energy Source Rating Expectation: Zero Carbon Action Plan has been developed by the building owner. Credit 21: Upfront Carbon Emissions
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	● Resilient Credit 16: Climate Change Resilience Minimum Expectation: Climate Change Pre-screening Checklist	◑ Credit 14: Climate Change Resilience Climate Change Risk and Adaptation Assessment
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	◑ Credit 2: Responsible Construction Environmental Management Plan (EMP) Credit 35: Impacts to Nature Protecting Ecological Values – context report: Project team must document the site's current ecological values by type and biomass. This includes terrestrial and aquatic ecological values, geologic features, and soils.	

	(1) Impact on Water Resources.	○ Credit 39: Waterway Protection Local waterways are protected, and the impacts of flooding and drought are reduced. Credit 25: Water Use Min Expectation: the building installs efficient water fixtures, or The building uses 15% less potable water compared to a reference building	◑ Credit 25: Water Use
	(2) Impacts Related to Noise	● NCC outlines regulatory requirements for managing excessive noise during construction. Credit 35: Impacts to Nature Retaining High Biodiversity Values: Project must provide narrative as to how impacts to nature have been mitigated, including light and noise pollution	◑ Credit 34: Impacts to Nature Ecological Impact Assessment, including: – Light, noise, odour and other pollution generated by the building and mitigation measures
	(3) Impact on Air	◑ Credit 2: Responsible Construction Minimum Expectation: The builder or head contractor has an environmental management system in place to manage its environmental impacts	● Credit 6: Clean Air Credit 9: Exposure to Toxins

		on site Credit 10: Clean Air Credit 13: Exposure to Toxins	
	(4) Impact on Soil	◑ Credit 2: Responsible Construction Minimum Expectation: Environmental Management System Credit 35: Impacts to Nature Protecting Ecological Values	◑ Credit 35: Biodiversity Enhancement Biodiversity Enhancement Plan – including soil health
	(5) Impact on Biodiversity	◑ Credit 35: Impacts to Nature Minimum Expectation: Site Ecological Value Credit 2: Responsible Construction – Environmental Management Plan Credit 36: Biodiversity Enhancement Biodiversity Management Plan; Exceptional Performance: landscaping includes critically endangered and/or endangered plant species native to the bioregion	◑ Credit 34: Impacts to Nature Ecological value assessment has been undertaken Credit 35: Biodiversity Enhancement Policy developed on biodiversity enhancement Credit 36: Nature Stewardship Restore biodiversity beyond the building's boundary.

EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ Credit 26: Life Cycle Impacts 30% reduction in life cycle impacts Credit 21: Upfront Carbon Emissions Credit 6: Responsible Structure Credit 7: Responsible Envelope Credit 8: Responsible Systems Credit 9: Responsible Finishes	o Credit 21: Upfront Carbon Emissions Policy and process in place to procure materials, products and services that recognise and report upfront carbon emissions or retain and reuse products and materials

2. China: Green Building Evaluation Standard

Overall Taxonomy Alignment

GB/T 50378-2019 (New Buildings)		Moderate Alignment
GB/T 51141-2015 (Existing Buildings)		Moderate Alignment

About: Green Building Evaluation Standard (Three Star)

The Three-Star Green Building Evaluation Standard (绿色建筑评价标准) is China's national rating system for assessing the sustainability performance of buildings. Administered by the Ministry of Housing and Urban-Rural Development (MOHURD), it aligns with China's goals to promote energy efficiency, resource conservation, and environmental quality in urbanisation.

The Chinese Society for Urban Studies (CSUS), established in 1984, plays a key role in advancing green building practices. As a national high-end think tank, CSUS focuses on urban science, fostering global collaborations, and integrating research, innovation, and demonstration projects. By 2024, CSUS had completed over 3,500 green building label assessments and launched a proprietary online green building evaluation system.

Rating Levels:

Buildings are certified in 4 levels, Basic Level, 1-Star, 2-Star, or 3-Star, with 3-Star representing the highest achievement in sustainable design and operation.

Core Objectives:

- Resource conservation (energy, water, materials)
- Environmental protection (pollution reduction, ecological harmony)
- Human-centric design (healthy, efficient, and adaptable spaces)
- Lifespan sustainability (from construction to operation).

How China's Green Building Evaluation Standard complies with the ASEAN Taxonomy

Environmental Objective	GB/T 50378-2019 (New Buildings)	GB/T 51141-2015 (Existing Buildings)
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	China
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	GB/T 50378–2019
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Two–star
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	Basic
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non–physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	◑ 6 Occupant Convenience IV Property Management 6.2.10 Formulate plans for energy, and water saving (amongst others) (1) Procedures and plans. (2) Energy and water saving performance appraisal incentives mechanisms 7 Resources Saving 7.1.1 to 7.1.6 (prerequisites) require individual systems to minimise energy consumption. Note reference is made to GB 50189 Design Standard for energy efficiency of public buildings, which provides a framework for assessing a buildings energy performance comparing it to a 2005 standard, with a goal for a

			30% reduction relative to this reference. 7.2.8 measures to reduce building energy consumption lower than current national standards
Do No Significant Harm			
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O 9 Promotion and Innovation 9.2.7 Computing and analysing building carbon emission intensity with measures taken to reduce the operational carbon intensity (CO2/m2)
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-
EO3: Protection of Healthy Ecosystems and biodiversity		Environmental Impact Assessment	-
		(1) Impact on Water Resources.	O 5. Health and Comfort 5.1.3 (prerequisite) quality of drinking water with reference to standard GB 5749 *Standards for drinking water quality* 6 Occupant Convenience IV Property Management 6.2.11 Average daily water consumption meets standard GB 50555 *Standard for water saving design in civil buildings* 7. Resources Saving 7.1.7 (Prerequisite) Water resource utilisation plan (metering and pressure reduction (for distribution >0.2MPa)

		III Water Saving and Water Resource Utilisation 7.2.10 Water efficient fittings 7.2.11 Adoption of water saving equipment for landscaping and cooling systems 7.2.12 Rainwater Harvesting 7.2.13 Use of non-traditional water sources for non-potable uses 8 Environmental Liveability I Site ecology and Landscape 8.2.2 Rainwater runoff
	(2) Impacts Related to Noise	◑ 5. Health and Comfort 5.1.4 (prerequisite) indoor noise level and sound insulation, reference to standard *GB 50118 Code for design of sound insulation of civil buildings* III Sound and Daylighting 5.2.6 Optimise indoor acoustic environment base value of GB 50118, (4 points) 5.2.7 (1) Airborne sound insulation and (2) Impact sound insulation base referencing GB 50118 8 Environmental Liveability II Outdoor Physical Environment 8.2.6 Ambient noise in the site with reference to standard GB 3096 *Environmental quality standard for noise.*
	(3) Impact on Air	O 5. Health and Comfort 5.1.1 (Prerequisite) Concentration of Indoor air pollutants to GH/T

		18883 (Indoor air quality standard) 5.1.2 (Prerequisite) avoid air pollutants from pollutive spaces from going into other spaces. I Indoor Air Quality 5.2.1 Indoor Air Quality (includes IAQ improvement from GB/T 18883, PM2.5 and low VOC decoration materials.
	(4) Impact on Soil	O 8 Environmental Liveability 8.1.6 (Prerequisite) Pollution sources with excessive discharge shall not exist in the site. II Site Ecology and Landscape 8.2.1 (2) Recovery and utilisation of topsoil
	(5) Impact on Biodiversity	◑ 8 Environmental Liveability I Site Ecology and Landscape 8.2.1 Fully protect or restore the ecological environment of the site
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O 7 Resources Saving IV Material Saving and Green Materials 7.2.17 Adopt recyclable materials 7.2.18 Use Green Building Materials (not less than 30%)

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	GB/T 50378-2019	GB/T 51141-2015
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Two-star	Two-star
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	● 7 Resources Saving 7.1.5 (Prerequisite) Energy Consumption for Cold and heat sources, distribution system and lighting shall be independently metered item by item	◑ 6 Heating Ventilation and Air Conditioning I Equipment and Systems 6.2.4 Installation of energy metering devices (1) Cooling and heating sources, distribution systems etc
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Basic	Basic
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	◑ 6 Occupant Convenience IV Property Management 6.2.10 Formulate plans for energy, and water saving (amongst others) (1) Procedures and plans. (2) Energy and water saving performance appraisal incentives mechanisms	◑ 10 Operation Management 10.1.1 (Prerequisite) Energy, water, material and greening management system implemented. I Management Systems 10.2.1 (2) Obtain Energy Management System certification

			7 Resources Saving 7.1.1 to 7.1.6 (prerequisites) require individual systems to minimise energy consumption. Note reference is made to GB 50189 Design Standard for energy efficiency of public buildings, which provides a framework for assessing a buildings energy performance comparing it to a 2005 standard, with a goal for a 30% reduction relative to this reference. 7.2.8 measures to reduce building energy consumption lower than current national standards	under GB/T 23331 *Energy Management Systems – Requirements.* III Tracking Evaluation 10.2.12 Regular Energy Audits
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA); OR (2) The climate projections and assessment of impacts are based on best practice and available guidance and science AND (3) The adaptation solutions implemented:	–	–

Do No Significant Harm			
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ 9 Promotion and Innovation 9.2.7 Computing and analysing building carbon emission intensity with measures taken to reduce the operational carbon intensity (CO2/m2)	◑ 3.2.8 prerequisite for One-Star and above. Must clearly state building carbon emission intensity and technical measures to reduce carbon emissions 11 Promotion and Innovation II Innovation 11.2.9 Conducting quantitative analysis and optimisation of greenhouse gas emissions and reduction efforts before and after building retrofitting
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy		-
EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources.	◑ 5. Health and Comfort 5.1.3 (prerequisite) quality of drinking water with reference to standard GB 5749 *Standards for drinking water quality* 6 Occupant Convenience IV Property Management	◑ 7 Water Supply and Drainage II Water-saving fixtures and equipment 7.2.5 Efficient water fittings, 7.2.6 Efficient Irrigation Systems, 7.2.7 water saving technologies for air

		6.2.11 Average daily water consumption meets standard GB 50555 *Standard for water saving design in civil buildings* 7. Resources Saving 7.1.7 (Prerequisite) Water resource utilisation plan (metering and pressure reduction (for distribution >0.2MPa) III Water Saving and Water Resource Utilisation 7.2.10 Water efficient fittings 7.2.11 Adoption of water saving equipment for landscaping and cooling systems 7.2.12 Rainwater Harvesting 7.2.13 Use of non-traditional water sources for non-potable uses 8 Environmental Liveability I Site ecology and Landscape 8.2.2 Rainwater runoff	conditioning systems. III Non-traditional water source utilisation, 7.2.8 non-potable water use for WC flushing, irrigation, and cooling water makeup 7.2.9 Rainwater management, and ecological water treatment including controlling pollution sources from entering landscape water body. IV Retrofitting Effect 7.2.10 Water efficiency increase (RWEI) 9 Construction Management II Resource Conservation 9.2.5 Construction water saving and water usage plans 7.2.11 green rainwater infrastructure to reduce stormwater runoff.
	(2) Impacts Related to Noise	◑ 5. Health and Comfort 5.1.4 (prerequisite) indoor noise level and sound insulation, reference to standard *GB 50118 Code for design of sound insulation of civil buildings*	◑ 4 Planning and Architecture III Building Envelope Structure 4.2.11 Sound insulation performance of exterior walls, partitions, floor slabs, doors and windows is better

		III Sound and Daylighting 5.2.6 Optimise indoor acoustic environment base value of GB 50118, (4 points) 5.2.7 (1) Airborne sound insulation and (2) Impact sound insulation base referencing GB 50118 8 Environmental Liveability II Outdoor Physical Environment 8.2.6 Ambient noise in the site with reference to standard GB 3096 *Environmental quality standard for noise.*	than GB 50118 *Code for design of sound insulation of civil buildings* IV Building Environmental Effects 4.2.12 No environmental noise pollution within the site complies with or better than GB 3096 *Environmental quality standard for noise* 4.2.15 Indoor noise level to meet GB 50118 9 Construction Management I Environmental Protection 9.2.2 Effective vibration and noise reduction measures during construction process through GB 12523 *Emission Standard of Environment Noise for Boundary of Construction Site*
	(3) Impact on Air	◑ 5. Health and Comfort 5.1.1 (Prerequisite) Concentration of Indoor air pollutants to GH/T 18883 (Indoor air quality standard) 5.1.2 (Prerequisite) avoid air pollutants from pollutive spaces from going into other spaces.	◑ 9 Construction Management I Environmental Protection 9.2.1 Effective dust reduction measures during construction 11 Promotion and Innovation I Performance Improvement 11.2.5 VOC and inhalable particulate matter in indoor air is 70% of

		I Indoor Air Quality 5.2.1 Indoor Air Quality (includes IAQ improvement from GB/T 18883, PM2.5 and low VOC decoration materials.	specified values in GB/T 18883 *Indoor Air Quality Standard.*
	(4) Impact on Soil	O 8 Environmental Liveability 8.1.6 (Prerequisite) Pollution sources with excessive discharge shall not exist in the site. II Site Ecology and Landscape 8.2.1 (2) Recovery and utilisation of topsoil	O 9 Construction Management 9.1.2 Environmental protection plans for entire construction process
	(5) Impact on Biodiversity	◑ 8 Environmental Liveability I Site Ecology and Landscape 8.2.1 Fully protect or restore the ecological environment of the site	◑ 4 Planning and Architecture 4.2.2 (1) Protecting the ecological environment around existing buildings

Details: Renovation of Existing Buildings

Environmental Objective	**Tier**	**Technical Screening Criteria**	**GB/T 50378–2019**	**GB/T 51141–2015**
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Two-star	Two-star
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	O 7 Resources Saving 7.1.1 to 7.1.6 (prerequisites) require individual systems to minimise energy consumption. Note reference is made to GB 50189 *Design Standard for energy efficiency of public buildings*, which provides a framework for assessing a buildings energy performance comparing it to a 2005 standard, with a goal for a 30% reduction relative to this reference. 7.2.8 measures to reduce building energy consumption 20% lower than current national standards (10points)	O 6 Heating Ventilation and Air Conditioning IV Retrofitting Effect 6.2.12 Reduction of HVAC energy consumption by 30% (10points)
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Basic	Basic

		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	◑ 7 Resources Saving 7.1.1 to 7.1.6 (prerequisites). 7.2.8 measures to reduce building energy consumption 20% lower than current national standards (10points)	O 6 Heating Ventilation and Air Conditioning IV Retrofitting Effect 6.2.12 Reduction of HVAC energy consumption by 20% (5points)
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA); OR (2) The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science AND (3) The adaptation solutions implemented:	-	-
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that	O 7 Resources Saving IV Material Saving and Green Materials 7.2.17 Adopt recyclable materials	O 4 Planning and Architecture 4.2.2 (2) Reasonable utilisation of existing structures, components and facilities

		demonstrates a minimum of 10% reduction, compared with a baseline building	7.2.18 Use Green Building Materials not less than 70% (12 points) 9 Promotion and Innovation 9.2.3 make full use of a usable old building	5. Structure and Materials 5.1.4 (Prerequisite) utilisation rate of original structural components should not be less than 70%
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	O 7 Resources Saving IV Material Saving and Green Materials 7.2.17 Adopt recyclable materials 7.2.18 Use Green Building Materials not less than 50% (8 points) 9 Promotion and Innovation 9.2.3 make full use of a usable old building	O 4 Planning and Architecture 4.2.2 (2) Reasonable utilisation of existing structures, components and facilities 5. Structure and Materials 5.1.4 (Prerequisite) utilisation rate of original structural components should not be less than 70%
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O 9 Promotion and Innovation 9.2.7 Computing and analysing building carbon emission intensity with measures taken to reduce the operational carbon intensity (CO2/m2)	◑ 3.2.8 prerequisite for One-Star and above. Must clearly state building carbon emission intensity and technical measures to reduce carbon emissions 11 Promotion and Innovation

			II Innovation 11.2.9 Conducting quantitative analysis and optimisation of greenhouse gas emissions and reduction efforts before and after building retrofitting
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-	-
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	-	-
	(1) Impact on Water Resources.	◑ 5. Health and Comfort 5.1.3 (prerequisite) quality of drinking water with reference to standard GB 5749 *Standards for drinking water quality* 6 Occupant Convenience IV Property Management 6.2.11 Average daily water consumption meets standard GB 50555 *Standard for water saving design in civil buildings* 7. Resources Saving 7.1.7 (Prerequisite) Water resource utilisation plan (metering and pressure reduction (for distribution >0.2MPa)	◑ 7 Water Supply and Drainage II Water-saving fixtures and equipment 7.2.5 Efficient water fittings, 7.2.6 Efficient Irrigation Systems, 7.2.7 water saving technologies for air conditioning systems. III Non-traditional water source utilisation, 7.2.8 non-potable water use for WC flushing, irrigation, and cooling water makeup 7.2.9 Rainwater management, and ecological water treatment

		III Water Saving and Water Resource Utilisation 7.2.10 Water efficient fittings 7.2.11 Adoption of water saving equipment for landscaping and cooling systems 7.2.12 Rainwater Harvesting 7.2.13 Use of non-traditional water sources for non-potable uses 8 Environmental Liveability I Site ecology and Landscape 8.2.2 Rainwater runoff	including controlling pollution sources from entering landscape water body. IV Retrofitting Effect 7.2.10 Water efficiency increase (RWEI) 9 Construction Management II Resource Conservation 9.2.5 Construction water saving and water usage plans 7.2.11 green rainwater infrastructure to reduce stormwater runoff.
	(2) Impacts Related to Noise	◑ 5. Health and Comfort 5.1.4 (prerequisite) indoor noise level and sound insulation, reference to standard *GB 50118 Code for design of sound insulation of civil buildings* III Sound and Daylighting 5.2.6 Optimise indoor acoustic environment base value of GB 50118, (4 points) 5.2.7 (1) Airborne sound insulation and (2) Impact sound insulation base referencing GB 50118 8 Environmental Liveability II Outdoor Physical Environment	◑ 4 Planning and Architecture III Building Envelope Structure 4.2.11 Sound insulation performance of exterior walls, partitions, floor slabs, doors and windows is better than GB 50118 *Code for design of sound insulation of civil buildings* IV Building Environmental Effects 4.2.12 No environmental noise pollution within the site complies with or better than GB 3096 *Environmental quality standard for noise*

		8.2.6 Ambient noise in the site with reference to standard GB 3096 *Environmental quality standard for noise.*	4.2.15 Indoor noise level to meet GB 50118 9 Construction Management I Environmental Protection 9.2.2 Effective vibration and noise reduction measures during construction process through GB 12523 *Emission Standard of Environment Noise for Boundary of Construction Site*
	(3) Impact on Air	O 5. Health and Comfort 5.1.1 (Prerequisite) Concentration of Indoor air pollutants to GB/T 18883 (Indoor air quality standard) 5.1.2 (Prerequisite) avoid air pollutants from pollutive spaces from going into other spaces. I Indoor Air Quality 5.2.1 Indoor Air Quality (includes IAQ improvement from GB/T 18883, PM2.5 and low VOC decoration materials.	◑ 9 Construction Management I Environmental Protection 9.2.1 Effective dust reduction measures during construction 11 Promotion and Innovation I Performance Improvement 11.2.5 VOC and inhalable particulate matter in indoor air is 70% of specified values in GB/T 18883 *Indoor Air Quality Standard.*
	(4) Impact on Soil	O 8 Environmental Liveability 8.1.6 (Prerequisite) Pollution sources with excessive discharge shall not exist in the	O

		site. II Site Ecology and Landscape 8.2.1 (2) Recovery and utilisation of topsoil	9 Construction Management 9.1.2 Environmental protection plans for entire construction process
	(5) Impact on Biodiversity	◑ 8 Environmental Liveability I Site Ecology and Landscape 8.2.1 Fully protect or restore the ecological environment of the site	◑ 4 Planning and Architecture 4.2.2 (1) Protecting the ecological environment around existing buildings
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O 7 Resources Saving IV Material Saving and Green Materials 7.2.17 Adopt recyclable materials 7.2.18 Use Green Building Materials (not less than 30%)	O 5. Structure and Materials II Material Selection 5.2.8 Environmentally Friendly structural reinforcement materials 5.2.9 Newly added building materials to use reusable and recycled materials

3. Hong Kong / Greater China: Beam Plus

Overall Taxonomy Alignment

BEAM Plus New Buildings v2.0.2025		Strong Alignment
BEAM Plus Existing Buildings v3.0		Strong Alignment

About BEAM Plus

BEAM Plus is Hong Kong's leading initiative to offer independent assessment of building sustainability performance. The tool was developed in 1996 based on international standards and was among the first batch of rating tools launched in the world.

BEAM stands for "Building Environmental Assessment Method". Its aims are to enhance the health and wellbeing of building occupants, to reduce the environmental impacts of buildings and to make buildings more efficient. Hong Kong is a high-density and high-rise community. Building green in such an environment poses numerous challenges. In this context, BEAM Plus places great emphasis on the health and wellbeing of occupants, the use of smart and modern technologies in construction and facility management, as well as the assurance of a high-quality urban environment.

The BEAM Plus family of tools covers new buildings, existing buildings, neighbourhood and interior fitting-out. The existing building rating tool features a mechanism to allow certification to a selected aspect such as management, energy use and water use. It also allows volume certification to be attained if an applicant is responsible for managing a large portfolio of buildings. Specialised rating tools for schools and data centres have also been developed.

Under BEAM Plus, ratings are granted at four levels, namely Platinum, Gold, Silver and Bronze. Sizeable developers typically adopt Gold rating as their internal target while green finance requirements also specify BEAM Plus Gold as the threshold. Landmark buildings may target at a higher rating, i.e. Platinum. For buildings that aim to differentiate themselves in terms of carbon reduction, the HKGBC offers a Zero-carbon-ready Building (ZCRB) Certification Scheme. Attainment of ZCRB ratings may lead to innovation or credit points under BEAM Plus.

Up to the present, the number of buildings registered for BEAM Plus assessment has exceeded 8,500, demonstrating high popularity among users. Obtaining certification involves a rating applicant providing information to the assessment body, which will arrange independent third-party assessors (experienced industry professionals) to review the information provided.

Today BEAM Plus has extended its reach to Mainland China, Macau Special Administrative Region, and overseas. A global version of the existing building rating tool was launched in 2024 to serve the global market, and for new buildings launched in 2025.

Figure 2 The BEAM Plus rating scale and its meaning

How BEAM Plus complies with the ASEAN Taxonomy

Environmental Objective	**BEAM Plus New Buildings v2.0.2025**	**BEAM Plus Existing Buildings v3.0.Beta0**
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	BEAM Plus New Buildings v2.0.2025
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Bronze
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	O EU 2 Reduction of CO2 Emissions
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	O SS12 Design for Climate Change Adaptation
Do No Significant Harm			
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ EU 2 Reduction of CO2 Emissions

		MW 10 Life Cycle Assessment
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	◑ SS12 Design for Climate Change Adaptation – reviewing the impact of the projected climate change scenarios on the development and consider strategies to improve climate resilience
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	O IDCM P2 Environmental Management Plan
	(1) Impact on Water Resources.	◑ IDCM 7 Measures to Reduce Site Emissions (c) Minimisation of Water Pollution WU P1 Minimum Water Saving Performance SS 11 Stormwater Management
	(2) Impacts Related to Noise	◑ IDCM 7 Measures to Reduce Site Emissions (b) Minimisation of Noise Pollution HWB 6 Acoustics and Noise (a) room acoustics (b) Noise Isolation and (c) background noise
	(3) Impact on Air	◑

		IDCM 7 Measures to Reduce Site Emissions (a) Minimisation of Air Pollution IDCM 9 Construction IAQ Management – ensure that project materials and ventilation system are not contaminated by construction activities. HWB P1 Minimum Ventilation Performance HWB 4 Enhanced ventilation (a) fresh air provision (including onsite measurements) and (b) Exhaust Air
	(4) Impact on Soil	O IDCM P2 Environmental Management Plan
	(5) Impact on Biodiversity	◑ SS 7 Biodiversity Enhancement (a) Reduction of Ecological impact
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ MW 10 Life Cycle Assessment – with data sets compliant with ISO 14044

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	BEAM Plus New Buildings v2.0.2025	BEAM Plus Existing Buildings v3.0
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	Gold
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	◑ EU-4 Metering and Monitoring (a) Fundamental Metering and Monitoring, including the bonus credit for performance auditing monitoring system	◑ EU-01-02 Metering and Monitoring (a) Metering Provisions and (b) Performance Auditing
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Bronze	Bronze
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	O EU 2 Reduction of CO2 Emissions	◑ EU-02-01 Energy Consumption Reduction (a) annual EUI is reduced when compared with that of past 5 years and (b) Continuous Energy Consumption Reduction Trend
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA);	O SS12 Design for Climate Change Adaptation	◑ MAN-02-03 (a) Climate related physical risks and opportunities (c)

		OR (2) The climate projections and assessment of impacts are based on best practice and available guidance and science AND (3) The adaptation solutions implemented:		Evaluation of climate resilience. SS-04-01 - Building-scale climate adaptation measures (at least 3 credits out of 4)
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ EU 2 Reduction of CO2 Emissions MW 10 Life Cycle Assessment	◑ MAN-02-02 Net Zero Transition Plan (b) Roadmap to Net Zero EU-04-02 Carbon Footprint Management
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	◑ SS12 Design for Climate Change Adaptation - reviewing the impact of the projected climate change scenarios on the development and consider strategies to improve climate resilience	◑ MAN-02-03 (a) Climate related physical risks and opportunities (c) Evaluation of climate resilience. SS-04-01 - Building-scale climate adaptation measures (at least 3 credits out of 4)
		(1) Impact on Water Resources.	◑	◑

EO3: Protection of Healthy Ecosystems and biodiversity		IDCM 7 Measures to Reduce Site Emissions (c) Minimisation of Water Pollution WU P1 Minimum Water Saving Performance SS 11 Stormwater Management	WU-04-02 Fresh Water Consumption Monitoring and Reduction (a) Consumption, (c) Self-improvement and (d) Continuous reduction trend
	(2) Impacts Related to Noise	◑ IDCM 7 Measures to Reduce Site Emissions (b) Minimisation of Noise Pollution HWB 6 Acoustics and Noise (a) room acoustics (b) Noise Isolation and (c) background noise	◑ SS-01-01 Noise Control for building equipment. HWB-03-01 Indoor Acoustic Environment
	(3) Impact on Air	◑ IDCM 7 Measures to Reduce Site Emissions (a) Minimisation of Air Pollution IDCM 9 Construction IAQ Management – ensure that project materials and ventilation system are not contaminated by construction activities. HWB P1 Minimum Ventilation Performance	◑ MAN-03-04 Facility Management Plan (includes IAQ management) HWB-01-02 Air Filtration and Purification Treatment HWB-01-03 Continuous IAQ Monitoring

		HWB 4 Enhanced ventilation (a) fresh air provision (including onsite measurements) and (b) Exhaust Air	
	(4) Impact on Soil	O IDCM P2 Environmental Management Plan	O MAN-03-04 Facility Management Plan includes Integrated Pest Management
	(5) Impact on Biodiversity	◑ SS 7 Biodiversity Enhancement (a) Reduction of Ecological impact	O SS-02-01 Native Species – Greenery >5% of site area, demonstrate >20% of native or adaptive plant species are provided

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	BEAM Plus New Buildings v2.0.2025	BEAM Plus Existing Buildings v3.0
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	Gold
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	O EU 2 Reduction of CO2 Emissions % reduction of annual CO2 emissions compared with Building Energy Code (BEC) 2021 (maximum 27%) Under the supplementary Zero carbon ready Building Certification Scheme would require Level 3 improvement (Super Low Energy)	◑ EU-02-02 Energy Use Intensity Benchmarking (a) Benchmarking – percentile under EMSD Benchmarking Tool <20th Percentile (3 points) (b) Zero-Carbon-Ready Building Certification achieving the Energy Performance Certificate Rating of Super-Low (>40% EUI savings) (3 points)
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Bronze	Bronze
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	◑ EU 2 Reduction of CO2 Emissions % reduction of annual CO2 emissions compared with Building Energy Code (BEC) 2021 15% (9 credits)	◑ EU-02-01 Energy Consumption Reduction (a) Self-improvement of Energy Utilisation Index >16% (8points)

EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA); OR (2) The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis AND (3) The adaptation solutions implemented:	O SS12 Design for Climate Change Adaptation	◑ MAN-02-03 (a) Climate related physical risks and opportunities (c) Evaluation of climate resilience. SS-04-01 – Building-scale climate adaptation measures (at least 3 credits out of 4)
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	O MW 1 Building Reuse Method 1 – 3 credits for the reuse of 90% or more (by mass or volume) of existing structures Method 2 – reuse of 90% or more (by surface area) of superstructure elements including at least floor, roof decking and enclosure materials (skin, framing) MW10 Life Cycle Assessment	–

	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	O MW 1 Building Reuse Method 1 – 2 credits for the reuse of 40% or more (by mass or volume) of existing structures Method 2 – reuse of 50% or more (by surface area) of superstructure elements including at least floor, roof decking and enclosure materials (skin, framing) MW10 Life Cycle Assessment	–
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ EU 2 Reduction of CO2 Emissions MW 10 Life Cycle Assessment	◑ MAN-02-02 Net Zero Transition Plan (b) Roadmap to Net Zero EU-04-02 Carbon Footprint Management
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	◑ SS12 Design for Climate Change Adaptation – reviewing the impact of the projected climate change scenarios on the development and consider strategies to improve climate resilience	◑ MAN-02-03 (a) Climate related physical risks and opportunities (c) Evaluation of climate resilience. SS-04-01 – Building-scale climate adaptation measures (at least 3 credits out of 4)

EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	O IDCM P2 Environnemental Management Plan	-
	(1) Impact on Water Resources.	◑ IDCM 7 Measures to Reduce Site Emissions (c) Minimisation of Water Pollution WU P1 Minimum Water Saving Performance SS 11 Stormwater Management	O WU-04-02 Fresh Water Consumption Monitoring and Reduction (a) Consumption, (c) Self-improvement and (d) Continuous reduction trend
	(2) Impacts Related to Noise	◑ IDCM 7 Measures to Reduce Site Emissions (b) Minimisation of Noise Pollution HWB 6 Acoustics and Noise (a) room acoustics (b) Noise Isolation and (c) background noise	◑ SS-01-01 Noise Control for building equipment. HWB-03-01 Indoor Acoustic Environment
	(3) Impact on Air	◑ IDCM 7 Measures to Reduce Site Emissions (a) Minimisation of Air Pollution IDCM 9 Construction IAQ Management – ensure that project materials and ventilation system are not contaminated by construction activities.	◑ MAN-03-04 Facility Management Plan (includes IAQ management) HWB-01-02 Air Filtration and Purification Treatment HWB-01-03 Continuous IAQ Monitoring

		HWB P1 Minimum Ventilation Performance HWB 4 Enhanced ventilation (a) fresh air provision (including onsite measurements) and (b) Exhaust Air	
	(4) Impact on Soil	○ IDCM P2 Environmental Management Plan	○ MAN-03-04 Facility Management Plan includes Integrated Pest Management
	(5) Impact on Biodiversity	◑ SS 7 Biodiversity Enhancement (a) Reduction of Ecological impact	○ SS-02-01 Native Species - Greenery >5% of site area, demonstrate >20% of native or adaptive plant species are provided
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ MW 10 Life Cycle Assessment - with data sets compliant with ISO 14044	○ MW-02-05 Use of Green Products MW-02-06 Life Cycle Costing

4. India: IGBC Rating System

Overall Taxonomy Alignment

IGBC Green New Buildings Rating System v3.0 Sep2016		Moderate Alignment
IGBC Green Existing Buildings Operations and Maintenance (O&M) v2 Nov 2023		Moderate Alignment

About IGBC Rating Systems

The Indian Green Building Council (IGBC), part of the Confederation of Indian Industry (CII), was formed in the year 2001 and has been spearheading India's green building movement since then. With a vision "To enable a sustainable built environment for all", the council has developed 32 green building rating programmes for various building typologies and works towards transforming the existing and new buildings and built environments to green through certification services. Over 15,418 projects equivalent to 13.265 billion Sq. ft. are going green with IGBC Rating Systems.

The IGBC rating systems are developed to be National by Choice, and Global in Performance. They are periodically upgraded to address the new and developing markets and building typologies, advances in technologies and best practices, and new research insights. The IGBC rating programme is a tool enables the building sector to apply green concepts and reduce environmental impacts that are measurable. The rating programme covers methodologies to cover diverse climatic zones and better local bye laws and national codes to create new benchmarks.

The various levels of rating awarded are Certified, Silver, Gold and Platinum. The green concepts and measures defined by the IGBC rating systems are helping to address the national issues like energy efficiency, water efficiency, reduction in fossil fuel use for commuting, handling of consumer waste, and conserving natural resources. Most importantly, these concepts can enhance occupant health, productivity and well-being. Presently, IGBC rated green projects are encouraged by Central and State government incentives in 14 Indian states.

IGBC rating can have tremendous benefits, both tangible and intangible. The most tangible benefits are the reduction in energy and water consumption right from day one of occupancy. The energy savings could range from 20 – 30 % and water savings around 30 – 50%. The intangible benefits of green buildings include enhanced air quality, excellent daylighting, health & well-being of the occupants, and conservation of scarce national resources.

IGBC's latest initiatives include working holistically with robust roadmaps towards achieving Net Zero, with IGBC's Net Zero (Energy, Water, Waste to Landfill and Carbon) rating programs.

Further, IGBC certified buildings make business sense, as they have higher asset value, lower operational costs, and contribute to achieving ESG and decarbonisation goals.

How IGBC Rating Systems complies with the ASEAN Taxonomy

Environmental Objective	IGBC Green New Buildings Rating System v3.0 Sep2016	IGBC Green Existing Buildings Operations and Maintenance (O&M) v2 Nov 2023
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	IGBC Green New Buildings Rating System v3.0 Sep2016
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	o EE Mandatory Requirement 3 Commissioning Plan for Building Equipment and Systems – includes scope for potential performance enhancements and savings EE Mandatory Requirement 2 – Minimum Energy Efficiency EE Credit 2 – Enhanced Energy Efficiency
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	–

Do No Significant Harm		
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O EE Mandatory Requirement 2 – Minimum Energy Efficiency EE Credit 2 – Enhanced Energy Efficiency EE Credit 3 – On-site Renewable Energy EE Credit 4 – Offsite Renewable Energy BMR Credit 1 Sustainable building materials
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	–
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	● SSP Mandatory Requirement 1- Local Building Regulations. Buildings which are 20,000m2 or more shall submit Environmental Impact Assessment approved by Ministry of Environment & Forests or State Environmental Impact Assessment Authority.
	(1) Impact on Water Resources.	O SA Credit 2 Site Preservation – retain 100% of water bodies and Channels existing on the site Water Conservation Section including: WC Mandatory Requirement 1 Rainwater Harvesting,

		Mandatory Requirement 2 Water Efficient Plumbing Fixtures, WC Credit 5 Wastewater Treatment and Reuse ID Credit 3 Water Use Reduction for Construction
	(2) Impacts Related to Noise	-
	(3) Impact on Air	◑ SSP Credit 10 Basic Facilities for Construction Workforce – Dust suppression measures IEQ Mandatory Requirement 1 Minimum Fresh Air Ventilation IEQ Credit 1 CO2 Monitoring IEQ Credit 4 Minimise Indoor and Outdoor Pollutants IEQ Credit 5 Low Emitting Materials IEQ Credit 7 Indoor Air Quality Testing After Construction and Before Occupancy. IEQ Credit 8 Indoor Air Quality Management, During Construction
	(4) Impact on Soil	O SSP Mandatory Requirement 2 Soil Erosion Control
	(5) Impact on Biodiversity	◑

		SA Credit 2 Site Preservation SSP Credit 4 Natural Topography or Vegetation SSP Credit 5 Preservation or Transplantation of Trees
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O BMR Credit 1 Sustainable Building Materials BMR Credit 4 Use of Certified Green Building Materials, Products and Equipment

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	IGBC Green New Buildings Rating System v3.0 Sep2016	IGBC Green Existing Buildings Operations and Maintenance (O&M) v2 Nov 2023
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	Gold
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	◑ EE Credit 6 Energy Metering and Management Case A BTU meter for Chilled Water Consumption AND Case B Airconditioning Management System	◑ SF Credit 8 Building Operations and Maintenance. Option 1 Operation and Maintenance Plan for HVAC systems. SF Credit 9 Building Performance Dashboard – BMS in place to monitor systems including Air conditioning energy usage
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified	Certified
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	O EE Mandatory Requirement 3 Commissioning Plan for Building Equipment and Systems – includes scope for potential performance enhancements	◑ SF Credit 8 Building Operations and Maintenance. Option 2 Assessment for Energy and Water –within 3 years from project registration and demonstrate that the energy

			and savings EE Mandatory Requirement 2 – Minimum Energy Efficiency EE Credit 2 – Enhanced Energy Efficiency	efficiency measures or recommendations indicated are implemented.
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA); OR (2) The climate projections and assessment of impacts are based on best practice and available guidance and science for vulnerability and risk analysis AND (3) The adaptation solutions implemented:	-	-
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O EE Mandatory Requirement 2 – Minimum Energy Efficiency	O EE Mandatory Requirement 2 – Minimum Energy Efficiency

		EE Credit 2 – Enhanced Energy Efficiency EE Credit 3 – On-site Renewable Energy EE Credit 4 – Offsite Renewable Energy BMR Credit 1 Sustainable building materials	EE Credit 2 – Enhanced Energy Efficiency EE Credit 3 – Green Power Option 1 Onsite Renewable Energy and Option 2 Offsite Renewable Energy
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	–	–
EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources.	O SA Credit 2 Site Preservation – retain 100% of water bodies and Channels existing on the site Water Conservation Section including: WC Mandatory Requirement 1 Rainwater Harvesting, Mandatory Requirement 2 Water Efficient Plumbing Fixtures, WC Credit 5 Waste Water Treatment and Reuse ID Credit 3 Water Use Reduction for Construction	◑ SF Credit 8 Building Operations and Maintenance Option 2 Assessment for Water, carried out within 3 years from the date of project registration and demonstrate the water conservation measures or recommendations indicated are implemented SF Credit 9 Building Performance Dashboard – Monitoring Water Consumption WC Mandatory Credit 1 – Rainwater Harvesting

			WC Mandatory Requirement 2 – Water Efficient Plumbing Fixtures WC Credit 3 Wastewater treatment
	(2) Impacts Related to Noise	–	O HC Credit 1 Enhanced Indoor Environment Quality Option 5 Acoustical Parameters – 50% of regularly occupied space meets Noise Criterion (NC) and Reverberation time (RT) as per ISGRAE IEQ Standards 10001:2019
	(3) Impact on Air	◑ SSP Credit 10 Basic Facilities for Construction Workforce – Dust suppression measures IEQ Mandatory Requirement 1 Minimum Fresh Air Ventilation IEQ Credit 1 CO2 Monitoring IEQ Credit 4 Minimise Indoor and Outdoor Pollutants IEQ Credit 5 Low Emitting Materials IEQ Credit 7 Indoor Air Quality Testing After Construction and Before	◑ SF Credit 9 Building Performance Dashboard –Monitoring Indoor Air Quality HC Mandatory Credit 2 Minimum Fresh Air Requirements HC Credit 1 Enhanced Indoor Environment Quality Option 2 Monitor IAQ Parameters and ensure that 80% of measurements are within threshold values. HC Credit 2 Eco Friendly Housekeeping Chemicals

		Occupancy. IEQ Credit 8 Indoor Air Quality Management, During Construction	
	(4) Impact on Soil	 O SSP Mandatory Requirement 2 Soil Erosion Control	O SF Credit 4 Ecofriendly Landscaping Practices – such as use of organic fertilizers to minimise negative impact of chemicals on ecology and promote biodiversity
	(5) Impact on Biodiversity	◑ SA Credit 2 Site Preservation SSP Credit 4 Natural Topography or Vegetation SSP Credit 5 Preservation or Transplantation of Trees	O WC Credit 5 Sustainable Landscape Option 3 Enhanced Biodiversity through Landscape with 60% of the landscape area being drought tolerant/native / adaptive species

Details: Renovation of Existing Buildings

Environmental Objective	**Tier**	**Technical Screening Criteria**	**IGBC Green New Buildings Rating System v3.0 Sep2016**	**IGBC Green Existing Buildings Operations and Maintenance (O&M) v2 Nov 2023**
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	Gold
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	O EE Credit 2 Enhanced Energy Efficiency using Percentage of Energy Cost savings over ASHRAE Standard 90.1-2010 Base case – Major Renovation 30% (14 points)	◑ EE Credit 2 Enhanced Energy Performance Option 1 Prescriptive Approach within EPI (Energy Performance Index) limits, (10 Credit Points)
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified	Certified
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	O EE Credit 2 Enhanced Energy Efficiency using Percentage of Energy Cost savings over ASHRAE Standard 90.1-2010 Base case – Major Renovation 16% (7 points)	◑ EE Credit 2 Enhanced Energy Performance Option 1 Prescriptive Approach within EPI limits (6 points) Option 2 Calibrated Simulation Method compared to ASHRAE 90.1-2016/ ECBC 2017 using Percentage

				Energy Savings over base case >15% (6 points)
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA); OR (2) The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis AND (3) The adaptation solutions implemented:	–	–
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	o BMR Credit 1 – 1.1 Building Reuse + ID Credit 1 which is scored where retention of at least 75% of the structural elements and 50% of the non-structural elements (by area) of the existing building	–
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND	o	–

		(2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	BMR Credit 1 – 1.1 Building Reuse – at least 50% by area of the structure and 25% non-structural (interior) elements are retained	
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O EE Mandatory Requirement 2 – Minimum Energy Efficiency EE Credit 2 – Enhanced Energy Efficiency EE Credit 3 – On-site Renewable Energy EE Credit 4 – Offsite Renewable Energy BMR Credit 1 Sustainable building materials	O EE Mandatory Requirement 2 – Minimum Energy Efficiency EE Credit 2 – Enhanced Energy Efficiency EE Credit 3 – Green Power Option 1 Onsite Renewable Energy and Option 2 Offsite Renewable Energy
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-	-
		Environmental Impact Assessment	●	-

EO3: Protection of Healthy Ecosystems and biodiversity		SSP Mandatory Requirement 1– Local Building Regulations. Buildings which are 20,000m2 or more shall submit Environmental Impact Assessment approved by Ministry of Environment & Forests or State Environmental Impact Assessment Authority.	
	(1) Impact on Water Resources.	O SA Credit 2 Site Preservation – retain 100% of water bodies and Channels existing on the site Water Conservation Section including: WC Mandatory Requirement 1 Rainwater Harvesting, Mandatory Requirement 2 Water Efficient Plumbing Fixtures, WC Credit 5 Waste Water Treatment and Reuse ID Credit 3 Water Use Reduction for Construction	◑ SF Credit 8 Building Operations and Maintenance Option 2 Assessment for Water, carried out within 3 years from the date of project registration and demonstrate the water conservation measures or recommendations indicated are implemented SF Credit 9 Building Performance Dashboard – Monitoring Water Consumption WC Mandatory Credit 1 – Rainwater Harvesting WC Mandatory Requirement 2 – Water Efficient Plumbing Fixtures WC Credit 3 Wastewater treatment

	(2) Impacts Related to Noise	–	O HC Credit 1 Enhanced Indoor Environment Quality Option 5 Acoustical Parameters – 50% of regularly occupied space meets Noise Criterion (NC) and Reverberation time (RT) as per ISGRAE IEQ Standards 10001:2019
	(3) Impact on Air	◑ SSP Credit 10 Basic Facilities for Construction Workforce – Dust suppression measures IEQ Mandatory Requirement 1 Minimum Fresh Air Ventilation IEQ Credit 1 CO2 Monitoring IEQ Credit 4 Minimise Indoor and Outdoor Pollutants IEQ Credit 5 Low Emitting Materials IEQ Credit 7 Indoor Air Quality Testing After Construction and Before Occupancy. IEQ Credit 8 Indoor Air Quality Management, During Construction	O SF Credit 9 Building Performance Dashboard –Monitoring Indoor Air Quality HC Mandatory Credit 2 Minimum Fresh Air Requirements HC Credit 1 Enhanced Indoor Environment Quality Option 2 Monitor IAQ Parameters and ensure that 80% of measurements are within threshold values. HC Credit 2 Eco Friendly Housekeeping Chemicals

	(4) Impact on Soil	O SSP Mandatory Requirement 2 Soil Erosion Control	O SF Credit 4 Ecofriendly Landscaping Practices – such as use of organic fertilizers to minimise negative impact of chemicals on ecology and promote biodiversity
	(5) Impact on Biodiversity	◑ SA Credit 2 Site Preservation SSP Credit 4 Natural Topography or Vegetation SSP Credit 5 Preservation or Transplantation of Trees	O WC Credit 5 Sustainable Landscape Option 3 Enhanced Biodiversity through Landscape with 60% of the landscape area being drought tolerant/native / adaptive species
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O BMR Credit 1 Sustainable Building Materials BMR Credit 4 Use of Certified Green Building Materials, Products and Equipment	O SF Credit 2 – Sustainable Retrofitting Use of Eco-Labelled Products (>10% of the total cost of retrofitting (material and products)

5. Indonesia: GREENSHIP

Overall Taxonomy Alignment

Greenship New Buildings 1.2		Moderate Alignment
Greenship Existing Buildings 1.1		Moderate Alignment

About GREENSHIP

GREENSHIP is an internationally recognized green building rating system developed by Green Building Council Indonesia (GBC Indonesia). It provides a framework for evaluating and certifying buildings based on their environmental performance and sustainability outcomes. The system supports sustainable, healthy, and resilient environments, benefiting both people and the planet.

GREENSHIP applies to various types of developments, guiding sustainability efforts across all project stages and operations. It covers New Buildings by evaluating environmental performance from design to completion, and Existing Buildings by assessing and improving their sustainability during operation. It also addresses Interior Spaces undergoing renovations, promotes energy efficiency in residential Homes, and encourages sustainable community development through its Neighborhood rating tool. The system includes Net Zero certification for buildings and extends to Transit Stations and Data Centers.

A tiered certification system rewards projects based on their sustainability performance. Bronze recognizes good environmental performance, Silver reflects advanced sustainability practices and significant environmental impact reduction, Gold represents excellence in sustainable design and construction, and Platinum stands as the highest recognition for leadership in sustainable practices.

The certification process involves submitting documentation of sustainability efforts for a detailed review by GBC Indonesia's certification partners. For New and Existing Buildings, the evaluation covers six key criteria: Appropriate Site Development, Energy Efficiency and Conservation, Water Conservation, Material Resource and Cycle, Indoor Health and Comfort, and Building and Environment. For Neighborhood developments, it assesses Land Ecological Enhancement, Movement and Connectivity, Water Management and Conservation, Solid Waste and Material, Community Wellbeing Strategy, Building and Energy, and Innovation and Future Development.

GREENSHIP has grown to become Indonesia's widely adopted green building rating system, with certified projects across the country. By aligning with international standards while addressing local environmental challenges, it advances sustainable development in Indonesia and supports both national and global climate action goals.

Management and Conservation, Solid Waste and Material, Community Wellbeing Strategy, Building and Energy, and Innovation and Future Development.

GREENSHIP Rank

Bronze

Achieving more than **30%** of the GREENSHIP credit points, **Bronze** recognizes good environmental performance. It implements commitment to minimize carbon emissions and maximizing efficiency.

Silver

Achieving more than **40%** of the GREENSHIP credit points, **Silver** reflects the strong and advanced sustainability practices. It implements commitment to minimize carbon emissions and maximizing efficiency.

Gold

Achieving more than **50%** of the whole GREENSHIP credit points, **Gold** stands for excellence in sustainability. It implements commitment to minimize carbon emissions and maximizing efficiency.

Platinum

Achieving more than **70%** of the whole GREENSHIP credit points, **Platinum** is the highest achievement, symbolizing leadership in sustainable building. It implements commitment to minimize carbon emissions and maximizing efficiency.

To claim the credit points, all projects need to comply and achieve each of the **Pre-Requisite** criteria.

How Greenship complies with the ASEAN Taxonomy

Environmental Objective	**Greenship New Buildings 1.2**	**Greenship Existing Buildings 1.1**
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	Greenship NB 1.2
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Bronze
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	o EEC 1 Energy Efficiency and Conservation 1A or 1B requires a minimum 5% savings from the baseline building, points awarded for every 2.5% saving (1A) or 2% saving (1B)
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	_

Do No Significant Harm		
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O EEC 4 Climate Change Effect calculations of CO2 reductions from difference in energy consumption from designed building vs baseline building.
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	-
	(1) Impact on Water Resources	◑ ASD 7 Rainwater Runoff Management Water Conservation Section (WAC) which covers metering, consumption and reduction, recycling and alternative water sources, as well as rainwater harvesting and landscape water consumption. BEM 2 - Pollution from Construction Activity (2) Liquid waste - so activities do not pollute city drainage.
	(2) Impacts Related to Noise	O IHC 7 Noise Level - indoor noise levels
	(3) Impact on Air	O ICH P (pre-requisite) Outdoor Air introduction. ICH 1 CO2 Monitoring and regulation of concentration

		<1,000ppm IHC 3 Chemical Pollutants – Low VOC paints and coatings, composite wood and laminating adhesives with low formaldehyde
	(4) Impact on Soil	–
	(5) Impact on Biodiversity	O ASD 5 Landscaping Area 1A Minimum 40% cover of total site area 2 Use locally cultivated plants (provincial scale) in landscape area with minimum of 60% of the area
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O MRC 2 Environmentally Friendly Material 1 Use materials with and environmental management system certificate in the production process for >30% of the total material costs 2 Recycled materials >5% total material costs 3 Rapidly renewable materials (<10 years) >2% total material costs

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	Greenship NB 1.2	Greenship EB 1.1
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	Gold
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	● EEC P1Submeter Installation for each load group and equipment system	◑ EEC 4 Energy Monitoring and Control 1A provision of kWh meters for air-conditioning systems
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Bronze	Bronze
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	o EEC 1 Energy Efficiency and Conservation 1A or 1B requires a minimum 5% savings from the baseline building, points awarded for every 2.5% saving (1A) or 2% saving (1B)	● EEC P1 Policy and Energy Management Plan. Monitoring, savings and timebound action plan EEC P2 Minimum Building Energy Performance. Energy less than reference building OR Reduction of 5% energy savings from historic performance

EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA); OR (2) The climate projections and assessment of impacts are based on best practice and available guidance and science for vulnerability and risk analysis AND (3) The adaptation solutions implemented:	-	-
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	o EEC 4 Climate Change Effect calculations of CO_2 reductions from difference in energy consumption from designed building vs baseline building.	o EEC 7 Less Energy Emission
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-	-

EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources	◑ ASD 7 Rainwater Runoff Management Water Conservation Section (WAC) which covers metering, consumption and reduction, recycling and alternative water sources, as well as rainwater harvesting and landscape water consumption. BEM 2 – Pollution from Construction Activity (2) Liquid waste – so activities do not pollute city drainage.	● WAC P (prerequisite): Water Management Policy – monitoring, savings targets and timebound action plan for building water use
	(2) Impacts Related to Noise	O IHC 7 Noise Level – indoor noise levels	O IHC 7 Acoustic Level – Internal noise and reverberation times in accordance with SNI 03-6386-2000
	(3) Impact on Air	◑ ICH P (pre-requisite) Outdoor Air introduction. ICH 1 CO2 Monitoring and regulation of concentration <1,000ppm IHC 3 Chemical Pollutants – Low VOC paints and coatings, composite wood and laminating adhesives with low formaldehyde	◑ IHC 1 Outdoor Air Introduction IHC 3 CO2 and CO Monitoring IHC 4 Physical, Chemical and Biological Pollutants (IAQ tests and management)
	(4) Impact on Soil	–	–

	(5) Impact on Biodiversity	O ASD 5 Landscaping Area 1A Minimum 40% cover of total site area 2 Use locally cultivated plants (provincial scale) in landscape area with minimum of 60% of the area	◑ ASD 3 Site Landscaping 1. Existence of landscaped area comprising vegetation (softscape) that are free from hardscape structure, covering minimum 30% of total land area. 3a. Use of local plants sourced from nurseries within a maximum distance of 1.000 km

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	Greenship EB 1.1
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	◑ EEC P2 Minimum Building Energy Performance. Energy less than reference building OR Reduction of 5% energy savings from historic performance EEC Optimized Energy Building Energy Performance 1A where IKE (Energy Consumption Intensity) <120% above reference, 1 point for every 5% reduction, 30% (6 points) OR 1B Where IKE < Reference building, 1 point for 3% reduction (10 points) OR 1C if Building IKE >120% reference, 1 point for every 10% improvement (3 points)
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Bronze
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	◑ EEC P2 Minimum Building Energy Performance. Energy less than reference building OR Reduction of 5% energy savings from historic

			performance EEC Optimized Energy Building Energy Performance 1A where (3 points) OR 1B (5points) OR 1C (2 points)
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA); OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	–
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	–
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND	–

		(2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	
Do No Significant Harm			
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O EEC 7 Less Energy Emission
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-
EO3: Protection of Healthy Ecosystems and biodiversity		Environmental Impact Assessment	-
		(1) Impact on Water Resources	◑ ASD 5 Stormwater Management WAC P (prerequisite): Water Management Policy – monitoring, savings targets and timebound action plan for building water use
		(2) Impacts Related to Noise	O IHC 7 Acoustic Level – Internal noise and reverberation times in accordance with SNI 03-6386-2000
		(3) Impact on Air	◑

		IHC 1 Outdoor Air Introduction IHC 3 CO2 and CO Monitoring IHC 4 Physical, Chemical and Biological Pollutants (IAQ tests and management)
	(4) Impact on Soil	-
	(5) Impact on Biodiversity	O ASD 3 Site Landscaping 1. Existence of landscaped area comprising vegetation (softscape) that are free from hardscape structure, covering minimum 30% of total land area. 3a. Use of local plants sourced from nurseries within a maximum distance of 1.000 km
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O MRC P2 Material Purchasing Policy MRC 2 Material Purchasing Practice

6. Malaysia: GBI

Overall Taxonomy Alignment

GBI Non-Residential New Construction		Moderate Alignment
GBI Non-Residential Existing Building		Moderate Alignment

About GBI

Developed in 2009 and administered by the Malaysian Institute of Architects (PAM) and the Association of Consulting Engineers Malaysia (ACEM), the Green Building Index (GBI) is Malaysia's most established green building rating tool. It provides a framework for assessing the environmental sustainability of buildings in Malaysia's tropical climate, aligning with local building practices, by-laws and international best practices, with a strong emphasis on energy efficiency, water conservation, indoor environmental quality and

sustainable site planning. GBI certification applies to a wide range of building types, including residential, non-residential, new

developments and existing buildings. It offers more than 18 specialized rating tools tailored to different project needs, such as GBI Residential New Construction (RNC), GBI Non-Residential New Construction (NRNC), GBI Non-Residential Existing Building (NREB), GBI Township, GBI Industrial New Construction (INC), GBI Interiors, GBI Hospital, GBI Data Centre, GBI Hotel and GBI Retail,

among others. By encouraging collaboration among developers, building owners and professionals, GBI promotes the design, construction and operation of buildings that minimize environmental impact while enhancing occupant comfort and operational efficiency.

GBI Rating Levels

Buildings are awarded one of four certification levels based on their total points out of 100:

- Certified – 50 and above, meeting minimum green building standards
- Silver – 66 to 75, demonstrating enhanced sustainability performance
- Gold – 76 to 85, achieving high environmental performance standards
- Platinum – 86 and above, representing the highest level of sustainability excellence

GBI Certification Criteria

GBI certification is performance-based and evaluates projects across six key sustainability criteria:

- Energy Efficiency (EE) – Minimizing energy consumption through passive and active design strategies
- Indoor Environmental Quality (EQ) – Enhancing air quality, thermal comfort and natural daylighting
- Sustainable Site Planning & Management (SM) – Promoting responsible land use, eco-friendly

- construction practices and biodiversity conservation
- Materials & Resources (MR) – Encouraging the use of sustainable, recycled and low-impact materials
- Water Efficiency (WE) – Supporting conservation, efficient water management and rainwater harvesting
- Innovation (IN) – Recognizing advanced sustainability solutions beyond standard requirements

Certification Process

The GBI certification process consists of two stages:

- Design Assessment (DA): A provisional certification based on the project's design submission.
- Completion and Verification Assessment (CVA): A final certification granted after project completion and occupancy, following verification of sustainability performance in operation.

Projects seeking GBI certification undergo a rigorous assessment process, including documentation review, energy modelling (where applicable) and site verification by qualified, independent experts to ensure compliance with GBI standards. To retain certification, buildings must be reassessed every three years to ensure continued sustainability, proper maintenance and optimal performance GBI has been instrumental in advancing Malaysia's green transition, setting high sustainability benchmarks for the built environment and driving the widespread adoption of green building practices nationwide.

How GBI complies with the ASEAN Taxonomy

Environmental Objective	**GBI Non-Residential New Construction**	**GBI Non-Residential Existing Building**
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	GBI Non Residential New Construction
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	O EE5 Advanced EE performance EE7 Post Occupancy Commissioning
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	-

Do No Significant Harm		
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O EE5 Advanced EE performance EE7 Post Occupancy Commissioning
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	-
	(1) Impact on Water Resources	O SM11 Stormwater Design – Quantity and Quality Control WE Water Efficiency
	(2) Impacts Related to Noise	O EQ13 Internal Noise Levels
	(3) Impact on Air	◑ SM5 Earthworks – Construction Activity Pollution Control – prevent polluting the air with dust and particulate matter EQ 1-5,7,14 Air Quality criteria that covers Minimum IAQ performance, CO2 monitoring and control, Indoor Air Pollutants , Mould Prevention, Air Change Effectiveness, and Verification of IAQ before and during occupancy.

	(4) Impact on Soil	◑ SM5 Earthworks – Construction Activity Pollution Control – includes loss of soil during construction, prevention of sedimentation
	(5) Impact on Biodiversity	◑ SM1 Site Selection avoidance of development on or near land that supports wildlife / habitat zones SM4 Environmental Management conserve and restore natural areas to provide habitat and promote biodiversity and maximise open space by providing a high ratio of open space to development footprint to promote biodiversity
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O MR1: Materials Reuse and Selection (>2% or >5% of projects total material cost) MR2: Recycled Content Materials (use of materials with recycled content for >10 or >30% of total value of materials in the project

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	GBI Non-Residential New Construction	GBI Non-Residential Existing Building
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	Gold
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	◑ EE1 Minimum EE Performance (2) Provision of Energy Management Control System where Airconditioned space >4,000m2 EE3 Electrical Sub-metering & Tenant Sub-metering for all energy uses >100kVA	◑ EE3 Electrical Sub-metering & Tenant Sub-metering for all energy uses >100kVA EE8: EE Monitoring and Improvement – Energy Management System to monitor and trend log building system performance for HVAC system
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified	Certified
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	O EE5 Advanced EE performance EE7 Post Occupancy Commissioning	O EE5 Advanced or Improved EE performance BEI Option 1 Better than baseline BEI (Building Energy Intensity)

				or Option 2 Energy savings over the last 3 years from historical BEI baseline, AND maximum BEI thresholds.
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA); OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	–	–
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O EE5 Advanced EE performance EE7 Post Occupancy Commissioning	O EE8 EE Monitoring and Improvement – Energy Management System, tracking of energy consumption, activation of Maximum Demand Limiting Programme
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	–	–

EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources	◑ SM11 Stormwater Design – Quantity and Quality Control WE Water Efficiency	◑ SM2 Building Exterior Management SM3 Integrated Pest Management, Erosion Control and Landscape Management –environmentally sensitive management to preserve the site's natural components. Minimise harmful chemical use, energy waste, water waste, air pollution, solid waste and/or chemical runoff such as gasoline and oil. WE Water Efficiency
	(2) Impacts Related to Noise	O EQ13 Internal Noise Levels	O EQ13 Internal Noise Levels
	(3) Impact on Air	◑ SM5 Earthworks – Construction Activity Pollution Control – prevent polluting the air with dust and particulate matter EQ 1–5,7,14 Air Quality criteria that covers Minimum IAQ performance, CO2 monitoring and control, Indoor Air Pollutants , Mould Prevention, Air Change	◑ EQ1–5,7,14 Air Quality criteria that covers Minimum IAQ performance, CO2 monitoring and control, Indoor Air Pollutants , Mould Prevention, Air Change Effectiveness, and Verification of IAQ before and during occupancy.

		Effectiveness, and Verification of IAQ before and during occupancy.	
	(4) Impact on Soil	◑ SM5 Earthworks – Construction Activity Pollution Control – includes loss of soil during construction, prevention of sedimentation	◑ SM2 Building Exterior Management SM3 Integrated Pest Management, Erosion Control and Landscape Management –environmentally sensitive management to preserve the site's natural components. Minimise harmful chemical use, energy waste, water waste, air pollution, solid waste and/or chemical runoff such as gasoline and oil.
	(5) Impact on Biodiversity	◑ SM1 Site Selection avoidance of development on or near land that supports wildlife / habitat zones SM4 Environmental Management conserve and restore natural areas to provide habitat and promote biodiversity and maximise open space by providing a high ratio of open space to development footprint to promote biodiversity	–

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	GBI Non-Residential Existing Building
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	◑ EE5 Advanced or Improved EE performance BEI (2) Demonstrate Energy Savings over the last 3 years from Existing Building historical BEI baseline >30% AND BEI<150kWh/m2/yr (example office) (5points)
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	◑ EE5 Advanced or Improved EE performance BEI (2) Demonstrate Energy Savings over the last 3 years from Existing Building historical BEI baseline >20% AND BEI<200kWh/m2/yr (office) (2points)
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR	_

		(2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	o MR1 Material Reuse and Selection Reused products and materials constitutes >20% of projects total retrofit material cost value
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	o MR1 Material Reuse and Selection Reused products and materials constitutes >20% of projects total retrofit material cost value
Do No Significant Harm			
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	o

		EE8 EE Monitoring and Improvement – Energy Management System, tracking of energy consumption, activation of Maximum Demand Limiting Programme
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	-
	(1) Impact on Water Resources	◑ SM2 Building Exterior Management SM3 Integrated Pest Management, Erosion Control and Landscape Management –environmentally sensitive management to preserve the site's natural components. Minimise harmful chemical use, energy waste, water waste, air pollution, solid waste and/or chemical runoff such as gasoline and oil. WE Water Efficiency
	(2) Impacts Related to Noise	O EQ13 Internal Noise Levels
	(3) Impact on Air	◑ EQ1-5,7,14 Air Quality criteria that covers Minimum IAQ performance, CO2 monitoring and control, Indoor Air Pollutants , Mould Prevention, Air Change Effectiveness, and Verification of IAQ before and during occupancy.

	(4) Impact on Soil	◑ SM2 Building Exterior Management SM3 Integrated Pest Management, Erosion Control and Landscape Management –environmentally sensitive management to preserve the site's natural components. Minimise harmful chemical use, energy waste, water waste, air pollution, solid waste and/or chemical runoff such as gasoline and oil.
	(5) Impact on Biodiversity	–
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O MR1: Material Reuse and Selection MR2: Recycled Content Materials – materials with recycled content is such that the sum of post-consumer recycled plus one- half of the pre-consumer content constitutes ≥ 20% (based on cost) of project's total retrofit material cost value

7. Malaysia: GreenRE

Overall Taxonomy Alignment

GreenRE Non-Residential v4		Moderate Alignment
GreenRE Existing Non-Residential Building v3.3		Moderate Alignment

About GreenRE

Established by the Real Estate and Housing Developers' Association Malaysia (REHDA) in 2013, GreenRE is a Malaysian green building certification tool designed to drive sustainable development in the built environment. Developed by an industry association representing real estate developers, GreenRE provides an alternative pathway for green certification, balancing environmental goals with market-driven considerations. It is tailored to Malaysia's tropical climate while promoting energy efficiency, water conservation, carbon emissions reduction and overall environmental sustainability.

GreenRE certifies a wide range of building types, including residential, non-residential, townships, existing buildings and interiors. It also features more than 13 specialized rating tools covering data centers, industrial buildings, retail spaces, infrastructure projects and more. Broadly aligned with national sustainability goals, the system encourages developers and building owners to integrate green design principles that enhance occupant well-being and optimize operational performance.

GreenRE Rating System

GreenRE certification follows a tiered rating structure:

- Certified – Meets basic green building standards
- Silver – Demonstrates moderate environmental performance
- Gold – Recognizes efforts toward sustainability best practices
- Platinum – Represents the highest level of GreenRE certification

The certification assessment evaluates compliance across key sustainability criteria, including:

1. Energy Efficiency – Enhancing building energy performance through passive design and renewable energy integration
2. Water Efficiency – Promoting water conservation through efficient fittings and rainwater harvesting
3. Environmental Protection – Encouraging responsible land use and greenery
4. Indoor Environmental Quality – Improving occupant health and comfort through air quality, daylighting and thermal comfort measures
5. Other Green Features - Encourage the use of green features that are innovative and have positive environment impact
6. Carbon Emission of Development – To calculate the carbon emission resulted from the associated energy used during construction and operational phase of a development.

Certification Process

The GreenRE certification process includes:

- Pre-Assessment – An opportunity for the project team to clarify proposed design strategies prior to formal review submission
- Actual Assessment – A design review conducted in accordance with the guidelines and criteria set by GreenRE
- Site Verification Assessment – Post-construction verification, including performance validation and site inspection

GreenRE continues to evolve, playing an active role in Malaysia's green transition by setting sustainability benchmarks and supporting the nation's goal of reducing carbon intensity in the built environment.

How GreenRE complies with the ASEAN Taxonomy

Environmental Objective	**GreenRE Non-Residential v4**	**GreenRE Existing Non-Residential Building v3.3**
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	GreenRE Non-Residential v4
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Bronze
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	O Prerequisites 6% Energy Saving over the GreenRE reference Model MS1525:2007 (Bronze and Silver) 45% Gold and 50% Platinum or BEI (Gold and Platinum only) NRB1-10 Energy Efficient Practices and Features (a) Calculation of BEI
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	-

Do No Significant Harm		
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ NRB 6-1 Carbon Footprint of the Development (a) Operational Carbon from energy and water consumption (b) Calculation of embodied carbon based on A1 to A3 for concrete, steel, bricks, cement (c) Construction stage embodied carbon A4 to A5
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	-
	(1) Impact on Water Resources	O Part 2 Water Efficiency NRB2-1 to NRB 2-4 NRB3-6 Stormwater Management
	(2) Impacts Related to Noise	◑ NRB3-4 Environmental Management Practice (b) Main Builder has good track record in the adoption of environmentally friendly and considerate practices during construction NRB 4-2 Noise Level - ambient internal noise level

	(3) Impact on Air	◑ NRB3-4 Environmental Management Practice (a) Develop and implement IAQ management plan for construction NRB4-3 Indoor Air Pollutants (low VOC paints, coatings, adhesives and sealants) NRB4-4 Indoor Air Quality Management
	(4) Impact on Soil	O NRB 3-4: Environmental Management Practice (a) To prepare an Environmental Management Plan and conduct a complete Erosion Sedimentation Control Plan
	(5) Impact on Biodiversity	O NRB 3-3: Greenery Provision (a) Green Plot Ratio and (b) Restoration of trees on site (at least 20%)
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O NRB-6-1 Carbon Footprint of Development (d) Reduction of embodied carbon for Ready mix concrete, steel reinforcement, Bricks and steel) - >10% and >30% NRB 3-1 Sustainable Construction and NRB 3-2 Sustainable Products

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	GreenRE Non Residential v4	GreenRE Existing Non-residential Building v3.3
EO1: Climate Change Mitigation	Tier 1 - Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	Gold
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	● Pre-requisite M&V system for centralised AC systems Mandatory Requirement 4. Energy Management system where AC space is greater than 4,000m2	◑ Provision of permanent measuring instruments for monitoring water cooled and air cooled chilled water systems ENRB 1-2 Air-conditioning system Option 1 Fixed Metrics, mandatory requirement for projects rated Gold and Platinum Optional (scored) for ENRB 1-2:Air-conditioning system Option 2 BEI Benchmarking
	Tier 2 - Amber	(1) Building has been certified by relevant Green Building rating tool AND	Bronze	Bronze
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon	O	◑

		implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	Prerequisites 6% Energy Saving over the GreenRE reference Model MS1525:2007 (Bronze and Silver) 45% Gold and 50% Platinum or BEI (Gold and Platinum only) NRB1-10 Energy Efficient Practices and Features (a) Calculation of BEI	ENRB 1-9 Energy Policy and Management (a) Energy policy, Energy targets and regular review. (b) To show intent, measures and implementation of energy efficiency improvement plans to achieve energy target set over next 3 years.
EO2: Climate Change Adaptation	Tier 1 - Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	-	-
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O NRB 6-1 Carbon Footprint of the Development	O NRB 6-1 Carbon Footprint of the Development

		(a) Operational Carbon from energy and water consumption	(a) Operational Carbon from energy and water consumption
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-	-
EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources	◑ Part 2 Water Efficiency NRB2-1 to NRB 2-4 NRB3-6 Stormwater Management	◑ Part 2 - Water Efficiency ENRB 2-1 to 2-6
	(2) Impacts Related to Noise	O NRB 4-2 Noise Level - ambient internal noise level	O ENRB 4-5: Internal Noise Level
	(3) Impact on Air	◑ NRB3-4 Environmental Management Practice (a) Develop and implement IAQ management plan for construction NRB4-3 Indoor Air Pollutants (low VOC paints, coatings, adhesives and sealants) NRB4-4 Indoor Air Quality Management	● ENRB 4-1(a) IAQ Audit is a prerequisite requirement
	(4) Impact on Soil	O	-

		NRB 3-4: Environmental Management Practice (a) To prepare an Environmental Management Plan and conduct a complete Erosion Sedimentation Control Plan	
	(5) Impact on Biodiversity	O NRB 3-3: Greenery Provision (a) Green Plot Ratio and (b) Restoration of trees on site (at least 20%)	O ENRB 3-5: Greenery Provision (a) Green Plot Ratio and (b) Restoration of trees on site (at least 20%)

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	GreenRE Existing Non-residential Building v3.3	MyCREST Design and Construction v2.0.1
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	4 Stars
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	O Energy Efficiency Compliance Option 2 – Building Energy Intensity Benchmarking (kWh/m2/yr) – example Gold 135kWh/m2/yr (office)	◑ EP13: Building Energy Efficiency Performance, 30% savings (18 points) Note in the calculation methodology, the energy is converted to tCO2/yr.
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Bronze	1 Star
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	O Energy Efficiency Compliance Option 2 – Building Energy Intensity Benchmarking (kWh/m2/yr) – Bronze 205kWh/m2/yr (office)	◑ EP13: Building Energy Efficiency Performance, 15% savings (8 points) Note in the calculation methodology, the energy is converted to tCO2/yr.
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA)	–	–

		OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:		
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	–	–
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	–	

Do No Significant Harm			
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O NRB 6-1 Carbon Footprint of the Development (a) Operational Carbon from energy and water consumption	◑ EP req 1 and EP13 Building Energy Efficiency Performance use tCO2/m2 IS10:Emission Reporting - Construction Machinery EC6 Life Cycle Analysis - embodied carbon for up to 5 materials (cradle to gate) and EC7 Materials Life Cycle Analysis Building Works
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-	-
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	-	-
	(1) Impact on Water Resources	◑ Part 2 - Water Efficiency ENRB 2-1 to 2-6	◑ IS3 Environmental Management Plan and Erosion and Sedimentation Control Plan with mitigation of impacts to water air and noise IS4 Factors in Stormwater Management

			WE Water Efficiency Factors
	(2) Impacts Related to Noise	O ENRB 4-5: Internal Noise Level	◑ IS3 Environmental Management Plan and Erosion and Sedimentation Control Plan with mitigation of impacts to water air and noise OH4 Indoor Noise Level (air conditioned Buildings)
	(3) Impact on Air	● ENRB 4-1(a) IAQ Audit is a prerequisite requirement	◑ IS3 Environmental Management Plan and Erosion and Sedimentation Control Plan with mitigation of impacts to water air and noise OH Req 1: Air Quality Performance, OH1 to OH3 and OH5, Smoking, Mould, indoor pollutants and CO2 level control
	(4) Impact on Soil	-	◑ IS8 Environmental Impact from Construction Activity 8.1 Erosion and Sediment Control strategies with respect to monsoon season 8.2 Staging and Spill Prevention Plan

			8.3 Implementation of Erosion and Sedimentation Control Plan to prevent erosion
	(5) Impact on Biodiversity	O ENRB 3-5: Greenery Provision (a) Green Plot Ratio and (b) Restoration of trees on site (at least 20%)	O IS2 Carbon Accounting on Site – to increase carbon sequestration through greenery strategies on site via the conservation of existing trees and flora
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	-	◑ EC6 Life Cycle Analysis – embodied carbon for up to 5 materials (cradle to gate) and EC7 Materials Life Cycle Analysis Building Works

8. Malaysia: MyCREST

Overall Taxonomy Alignment

MyCREST Operation and Maintenance v2.0		Moderate Alignment
MyCREST Design and Construction v2.0.1		Moderate Alignment

About MyCREST

The Malaysian Carbon Reduction and Environmental Sustainability Tool (MyCREST) was introduced in 2016 by the Construction Industry Development Board Malaysia (CIDB) to advance sustainability in the country's construction sector. MyCREST offers a structured framework for reducing carbon emissions, improving resource efficiency and enhancing environmental performance throughout a building's lifecycle. As a government-led initiative, it aligns with national sustainability policies while encouraging industry-wide adoption of green building practices.

MyCREST applies to various building types, including residential, commercial and industrial. It offers a tiered certification system that evaluates projects based on their environmental impact. MyCREST also places strong emphasis on carbon assessment, which distinguished it from other rating tools at the time of its introduction.

MyCREST Rating System

MyCREST employs a star-based rating system, ranging from 1-star to 5-star certifications. The star ranking is based on score percentage:

- 5 stars: 80% – 100%
- 4 stars: 70% – 79%
- 3 stars: 60% – 69%
- 2 stars: 50% – 59%
- 1 star: 40% – 49%

This system evaluates projects based on their environmental impact and social benefits with a strong emphasis on carbon assessment.

Certification Process

The MyCREST certification process involves three main stages:

1. Design Stage: Evaluation of sustainability strategies during the design phase.
2. Construction Stage: Assessment of sustainable practices during construction.
3. Operation & Maintenance Stage: Verification of implemented measures and performance during the building's operational phase.

As a government-led framework, MyCREST reflects Malaysia's broader sustainability agenda, supporting national carbon reduction commitments and industry transformation. While its structured methodology ensures alignment with policy objectives, its uptake within the

construction sector has been gradual, with its long-term impact dependent on broader market adoption and continued policy support.

How MyCREST complies with the ASEAN Taxonomy

Environmental Objective	**MyCREST Operation and Maintenance v2.0**	**MyCREST Design and Construction v2.0.1**
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	MyCREST Design and Construction v2.0.1
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	4 Stars
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	1 Star
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	O EP-Req 1: Demonstrate a 6% energy savings form the baseline derived from MS1525
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	–

Do No Significant Harm		
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ EP req 1 and EP13 Building Energy Efficiency Performance use tCO2/m2 IS10:Emission Reporting – Construction Machinery EC6 Life Cycle Analysis – embodied carbon for up to 5 materials (cradle to gate) and EC7 Materials Life Cycle Analysis Building Works
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	–
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	–
	(1) Impact on Water Resources	◑ IS3 Environmental Management Plan and Erosion and Sedimentation Control Plan with mitigation of impacts to water air and noise IS4 Factors in Stormwater Management WE Water Efficiency Factors
	(2) Impacts Related to Noise	◑ IS3 Environmental Management Plan and Erosion and Sedimentation Control Plan with mitigation of impacts to

		water air and noise OH4 Indoor Noise Level (air conditioned Buildings)
	(3) Impact on Air	◑ IS3 Environmental Management Plan and Erosion and Sedimentation Control Plan with mitigation of impacts to water air and noise OH Req 1: Air Quality Performance, OH1 to OH3 and OH5, Smoking, Mould, indoor pollutants and CO2 level control
	(4) Impact on Soil	◑ IS8 Environmental Impact from Construction Activity 8.1 Erosion and Sediment Control strategies with respect to monsoon season 8.2 Staging and Spill Prevention Plan 8.3 Implementation of Erosion and Sedimentation Control Plan to prevent erosion
	(5) Impact on Biodiversity	O IS2 Carbon Accounting on Site – to increase carbon sequestration through greenery strategies on site via the conservation of existing trees and flora
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ EC6 Life Cycle Analysis – embodied carbon for up to 5 materials (cradle to gate) and EC7 Materials Life Cycle Analysis Building Works

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	MyCREST Operation and Maintenance v2.0
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	4 Stars
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	–
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	1 Star
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	◑ EP17 Energy Commitment EP18 Energy Management System Standard to ISO50001 EP19 Improving Energy Performance
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND	–

		(3) The adaptation solutions implemented:	
Do No Significant Harm			
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ EP22 Emission Reduction Reporting – report, track and record emission reductions based on scope 1,2 and 3
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	–
EO3: Protection of Healthy Ecosystems and biodiversity		(1) Impact on Water Resources	◑ IS14 Stormwater Management Plan WE Water Efficiency Factors WE7 to 10 – Management Policy, Control Plan, Efficiency performance and improvement plan that covers landscaping, cooling towers, metering, rainwater, and wastewater recycling
		(2) Impacts Related to Noise	O OH10 Indoor Noise Level
		(3) Impact on Air	◑ OH8 Indoor Air Quality Performance (Low VOC paints, coatings, adhesives and sealants) OH9 Indoor Air Quality Test

	(4) Impact on Soil	O IS12 Maintenance Management Plan: Erosion Control by Greenery
	(5) Impact on Biodiversity	O IS13 Conserve Natural Ecology and Landscape Elements (1) change of non-native species to native species, maintenance of existing vegetation

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	MyCREST Operation and Maintenance v2.0
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	4 Stars
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	◑ EP19 Improving Energy Performance; 30% savings (18 points). Building performance is through comparing baseline and actual performance and assessing the carbon emission reduction from energy use.
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	1 Star
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	◑ EP19 Improving Energy Performance; 15% savings (8 points). Building performance is through comparing baseline and actual performance and assessing the carbon emission reduction from energy use.
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR	–

		(2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	–
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	–
Do No Significant Harm			
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ EP22 Emission Reduction Reporting – report, track and record emission reductions based on scope 1,2 and 3
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	–
		Environmental Impact Assessment	–

EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources	◑ IS14 Stormwater Management Plan WE Water Efficiency Factors WE7 to 10 – Management Policy, Control Plan, Efficiency performance and improvement plan that covers landscaping, cooling towers, metering, rainwater, and wastewater recycling
	(2) Impacts Related to Noise	O OH10 Indoor Noise Level
	(3) Impact on Air	◑ OH8 Indoor Air Quality Performance (Low VOC paints, coatings, adhesives and sealants) OH9 Indoor Air Quality Test
	(4) Impact on Soil	O IS12 Maintenance Management Plan: Erosion Control by Greenery
	(5) Impact on Biodiversity	O IS13 Conserve Natural Ecology and Landscape Elements (1) change of non-native species to native species, maintenance of existing vegetation
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	-

9. Philippines: BERDE

Overall Taxonomy Alignment

BERDE Buildings v5.0.0		Strong Alignment

About BERDE

The BERDE (Building for Ecologically Responsive Design Excellence) Green Building Rating System was established in 2009 by the Philippine Green Building Council (PHILGBC) as the Philippines' national voluntary green building rating system. Developed as a proactive response to the Philippine building industry's need to address the negative impacts of climate change, BERDE aims to facilitate green building projects in the country, inspire confidence in the industry, and build trust. BERDE is officially recognized by the Philippine government, through the Department of Energy (DOE), as the National Voluntary Green Building Rating System. During the early stages of development, the Department of Energy also provided development and promotional support for BERDE under the Philippine Energy Efficiency Program.

BERDE is a tool used to assess, rate, and certify the performance of green building and district projects. It goes beyond existing national and local building and environmental laws, regulations, and mandatory standards. All property industry stakeholders are encouraged to use BERDE. However, only projects that undergo the formal assessment, rating, and certification process can claim to be BERDE Certified.

BERDE Rating Schemes:
The BERDE Program offers different Green Building Rating Schemes (GBRS) to cater to various project types and development stages. The main schemes are:

BERDE — Buildings:
This scheme applies to building and tenant projects, covering design, construction, and operations. It includes various occupancy types such as office, retail, residential, educational, industrial, and healthcare. New projects must register under the latest version of BERDE — Buildings.

BERDE — Districts:
This scheme applies to community and campus projects, from the planning to the implementation stages. It is suitable for wide-scale projects. New projects must register under the latest version of BERDE — Districts.

BERDE Certification Process:
BERDE Certification involves a formal assessment, rating, and certification process conducted through a third-party assessment to ensure credibility and impartiality. The process varies depending on the rating scheme and project lifecycle.

For BERDE — Buildings, new construction or fit-out projects typically undergo assessment and certification under Stage 1 — Design and Stage 2 — Construction, with Stage 1 preceding Stage 2. Projects must register for certification by submitting a registration form and required documents to the PHILGBC.

The minimum rating for BERDE Certification is 1-Star, signifying "Good practice". Higher ratings (up to 5 Stars) are awarded based on the project's achieved weighting, which is calculated by the awarded score over the maximum applicable score. Projects must also comply with all Minimum System Requirements (MSRs) to be awarded a rating.

BERDE's development process is guided by internationally recognized methodologies and standards, including the *Quality Assurance for Green Building Rating Tools* (WorldGBC, 2013). Rating schemes and tools are drafted by the BERDE Committee with input from the PHILGBC membership and external stakeholders, with final approval by the PHILGBC Board of Trustees. BERDE uses a modified semantic versioning system for efficient updates and improvements.

The BERDE Green Building Rating System serves as a crucial framework for promoting and recognizing sustainable building practices in the Philippines. Its comprehensive approach, government recognition, and continuous development make it a valuable tool for the industry to mitigate environmental impacts and contribute to a greener future.

How BERDE complies with the ASEAN Taxonomy

Environmental Objective	**BERDE Buildings v5.0.0**
Climate Change Mitigation	
Climate Change Adaptation	
Resource Resilience and the Transition to a Circular Economy	
Do No Significant Harm	
Climate Change Mitigation	
Climate Change Adaptation	
Protection of Healthy Ecosystems and Biodiversity	
Resource Resilience and the Transition to a Circular Economy	

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	BERDE Buildings v5.0.0
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	4 Stars
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	1 Star
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	◑ EN-01 Energy Consumption Reduction S1 and S2: real targets (>15% compared to base case) S3 measured performance (>10%)
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	◑ MSR-04 (prerequisite) Initial Site Assessment (includes potential natural disasters and man-made hazards) RE-01 Disaster Prevention and Mitigation

Do No Significant Harm		
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ EM-01 Greenhouse Gas Inventory S1 and S2 Conduct a GHG Inventory for the potential emissions for project and incorporate strategies in the design to reduce the GHG emissions
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	● MSR-04 (prerequisite) Initial Site Assessment (includes potential natural disasters and man-made hazards)
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	O MSR-04 Initial Site Assessment (EIA can be used as evidence for this minimum system requirement criteria
	(1) Impact on Water Resources	◑ MSR-06 Construction Activity Pollution Prevention and Control MSR-04 Initial Site Assessment - Other potential risks such as dust generation, noise pollution (and traffic congestion) Water Section comprising of WT-01 Water Consumption Reduction, WT-02 Greywater Reuse, and WT-03 Rainwater Harvesting

	(2) Impacts Related to Noise	◑ MSR-06 Construction Activity Pollution Prevention and Control MSR-04 Initial Site Assessment – Other potential risks such as dust generation, noise pollution (and traffic congestion) HW-05 Acoustic Comfort (reduce noise to users and manage noise levels from indoor and outdoor noise sources
	(3) Impact on Air	◑ MSR-06 Construction Activity Pollution Prevention and Control MSR-04 Initial Site Assessment – Other potential risks such as dust generation, noise pollution (and traffic congestion) HW-06 Indoor Air Quality HW-08 Low VOC Environment
	(4) Impact on Soil	● MSR-06 Construction Activity Pollution Prevention and Control include erosion and sediment controls, and stormwater pollution prevention plans MSR-04 Initial Site Assessment – Other potential risks such as dust generation, noise pollution (and traffic congestion)

	(5) Impact on Biodiversity	◑ SC-05 Ecological Features Improvement SC-08 Landscape Management
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O MC-01 Green Procurement S1 and S2 - Sustainable materials for more than 30% of all procured materials (based on cost)

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	BERDE Buildings v5.0.0
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	4 Star
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	O EN-01 Energy Consumption Reduction Establish energy metering and monitoring system to manage the energy consumption during operations
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	1 Star
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	◑ EN-01 Energy Consumption Reduction S1 and S2: real targets (>15% compared to base case) S3 measured performance (>10%)
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND	◑ MSR-04 (prerequisite) Initial Site Assessment (includes potential natural disasters and man-made hazards) RE-01 Disaster Prevention and Mitigation

		(3) The adaptation solutions implemented:	
Do No Significant Harm			
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ EM-01 Greenhouse Gas Inventory S1 and S2 Conduct a GHG Inventory for the potential emissions for project and incorporate strategies in the design to reduce the GHG emissions S3 as above based on minimum 12months operational data (inventory) and the documented policy, procedures and implementation records of GHG reduction measures
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	◑ RE-01 Disaster Prevention and Mitigation RE-02 Disaster preparedness RE-03 Disaster Response and Recovery Note MSR-04 (prerequisite) Initial Site Assessment (only for S1 and S2 stages)
EO3: Protection of Healthy Ecosystems and biodiversity		(1) Impact on Water Resources	◑ RE-01 Disaster Prevention and Mitigation (Stormwater)

		Water Section comprising of WT-01 Water Consumption Reduction, WT-02 Greywater Reuse, and WT-03 Rainwater Harvesting
	(2) Impacts Related to Noise	◑ MSR-04 Initial Site Assessment – Other potential risks such as dust generation, noise pollution (and traffic congestion) HW-05 Acoustic Comfort (reduce noise to users and manage noise levels from indoor and outdoor noise sources
	(3) Impact on Air	◑ MSR-06 Construction Activity Pollution Prevention and Control MSR-04 Initial Site Assessment – Other potential risks such as dust generation, noise pollution (and traffic congestion) HW-06 Indoor Air Quality HW-08 Low VOC Environment
	(4) Impact on Soil	● S1 and S2 MSR-06 Construction Activity Pollution Prevention and Control include erosion and sediment controls, and stormwater pollution prevention plans

		MSR-04 Initial Site Assessment – Other potential risks such as dust generation, noise pollution (and traffic congestion) ◑ S3 – SC-05 Ecological Features Improvement (includes non-toxic pesticides)
	(5) Impact on Biodiversity	◑ SC-05 Ecological Features Improvement SC-08 Landscape Management

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	BERDE Buildings v5.0.0
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	4 Stars
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	◑ EN-01 Energy Consumption Reduction S1 and S2: >30% compared to base case (2 points) S3 measured performance actual energy consumption reduction of 40% or more (3 points)
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	1 Star
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	◑ EN-01 Energy Consumption Reduction S1 and S2: >15% compared to base case (1 point) S3 measured performance actual energy consumption reduction of 20% or more (2 points)
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND	◑ MSR-04 (prerequisite) Initial Site Assessment (includes potential natural disasters and man-made hazards) RE-01 Disaster Prevention and Mitigation

		(3) The adaptation solutions implemented:	
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	–
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	–
Do No Significant Harm			
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ EM-01 Greenhouse Gas Inventory S1 and S2 Conduct a GHG Inventory for the potential emissions for project and incorporate strategies in the design to reduce the GHG emissions S3 as above based on minimum 12months operational data (inventory) and the documented policy, procedures and implementation records of GHG reduction measures

EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	● MSR-04 (prerequisite) Initial Site Assessment (includes potential natural disasters and man-made hazards)
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	O MSR-04 Initial Site Assessment (EIA can be used as evidence for this minimum system requirement criteria
	(1) Impact on Water Resources	◑ MSR-06 Construction Activity Pollution Prevention and Control MSR-04 Initial Site Assessment - Other potential risks such as dust generation, noise pollution (and traffic congestion) Water Section comprising of WT-01 Water Consumption Reduction, WT-02 Greywater Reuse, and WT-03 Rainwater Harvesting
	(2) Impacts Related to Noise	◑ MSR-06 Construction Activity Pollution Prevention and Control MSR-04 Initial Site Assessment - Other potential risks such as dust generation, noise pollution (and traffic congestion) HW-05 Acoustic Comfort（reduce noise to users and manage noise levels from indoor and outdoor noise sources

	(3) Impact on Air	◑ MSR-06 Construction Activity Pollution Prevention and Control MSR-04 Initial Site Assessment – Other potential risks such as dust generation, noise pollution (and traffic congestion) HW-06 Indoor Air Quality HW-08 Low VOC Environment
	(4) Impact on Soil	● S1 and S2 MSR-06 Construction Activity Pollution Prevention and Control include erosion and sediment controls, and stormwater pollution prevention plans MSR-04 Initial Site Assessment – Other potential risks such as dust generation, noise pollution (and traffic congestion) ◑ S3 – SC-05 Ecological Features Improvement (includes non-toxic pesticides)
	(5) Impact on Biodiversity	◑ SC-05 Ecological Features Improvement

		SC-08 Landscape Management
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O MC-01 Green Procurement S1 and S2 - Sustainable materials for more than 30% of all procured materials (based on cost) S3 - Procured and used materials that meet the sustainability requirements for more than 10% of the average monthly cost of procured materials

10. Singapore/Asia: Green Mark

Overall Taxonomy Alignment

Green Mark 2021		Strong Alignment
Green Mark 2021 In Operations		Moderate Alignment

About Green Mark

Developed by Singapore's Building and Construction Authority (BCA) in 2005, Green Mark (GM) evolved rapidly as the leading green building rating tool for the urbanised tropics and is a key instrument of Singapore Green Building Masterplan, and other national policies on environmental sustainability. Green Mark has a strong focus on verifiable measured building performance.

The latest version, Green Mark 2021, provides holistic certification for residential and non-residential new buildings and existing buildings undergoing refurbishments. For buildings in operation, Green Mark 2021 In Operations provides assurance through measured performance data that these buildings are operating at the same high performance levels. Data Centres, District, and Interior fit-out projects can be certified under respective dedicated criteria (for Data Centres, District, Healthier Workplaces, Retail, Supermarket, Restaurants and Laboratories). Green Mark for buildings is beginning its refresh cycle, with a revised version likely taking shape in 2026.

Green Mark 2021 (including In-Operation) creates a unified performance standard across the building lifecycle. This approach provides market assurance that a certified building is delivering on its environmental promise at all times. Green Mark is widely used outside of Singapore in the tropics with certified projects in Malaysia, Thailand, Indonesia, Vietnam Myanmar, China as well as Tanzania, and Rwanda.

Green Mark's holistic ratings uses the following rating scale[1]:

[1] BCA Green Mark 2021 also has an SLE (Super Low Energy) certification. This purely certifies the best-in-class energy performance of the project. However, for the intent of the paper we refer to the full, holistic, Green Mark 2021 certification

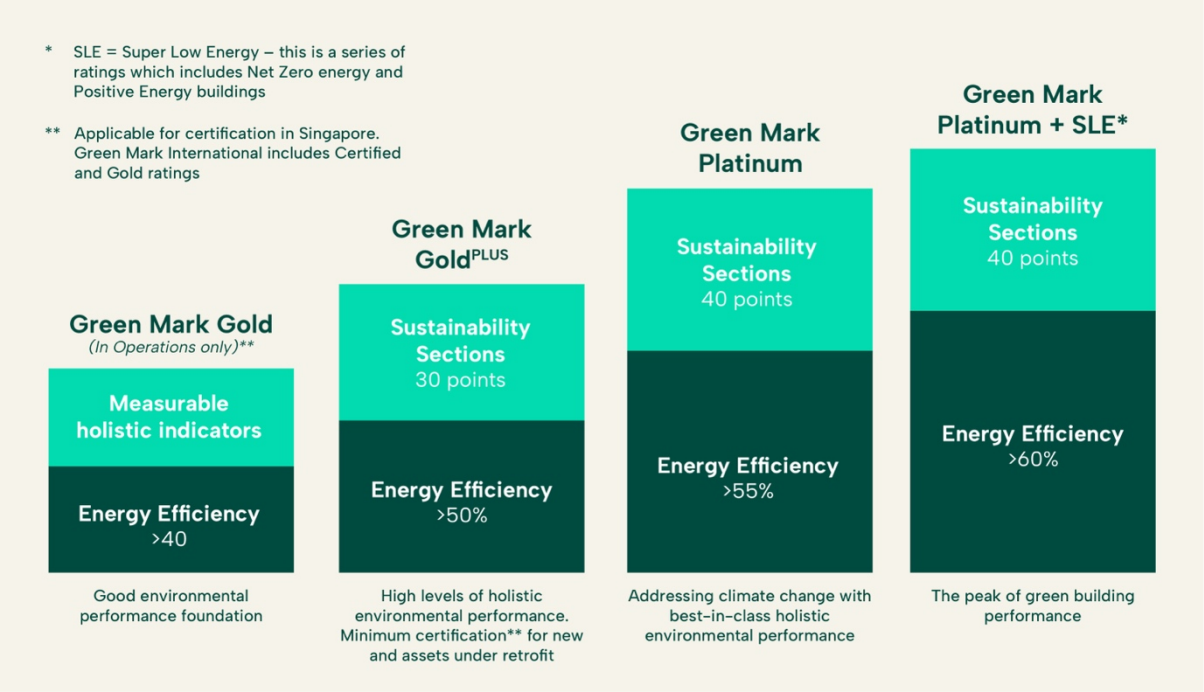


Figure 3 The Green Mark rating scale for new buildings, existing buildings under retrofit and buildings in operation buildings. The rating scale for in operation includes a 'Gold' level, to encourage buildings with legacy ratings to maintain their certification, and work towards higher ratings. The sustainability sections allow exemplary performance to be rewarded through the earning of a 'badge' in that section.

The certification process involves submitting detailed information to BCA, reviewed by internal or appointed independent external assessors to ensure criteria compliance, interactive assessment sessions with project parties and verification with on-site performance measurements. A letter of award is issued upon achieving the Green Mark rating, and the Green Mark of certificate is issued after site verifications, conducted for new buildings and existing buildings under retrofit upon completion.

How Green Mark complies with the ASEAN Taxonomy

Environmental Objective	**Green Mark 2021**	**Green Mark 2021 In Operations**
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	Green Mark 2021
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold Plus
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	–
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	◑ RE1.1b Resources (i) (a) Energy Management Policy and Energy Improvement Plan
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	◑ RE2.3: Resilience Strategy – project specific climate change risk and adaptation assessment that assesses climate related physical and transition risks (and opportunities)

Do No Significant Harm		
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ CN1.1 Whole Life Carbon Assessment and Embodied Carbon Computation. CN1.2: 2030 Transition Plan CN3 Fit Out (including 3.1 Green Lease, 3.3 Tenancy offsets)
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	◑ RE2.3: Resilience Strategy – project specific climate change risk and adaptation assessment that assesses climate related physical and transition risks (and opportunities)
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	◑ RE1.1a Habitat and Ecology – a comprehensive EIA
	(1) Impact on Water Resources	◑ RE1.1a Habitat and Ecology – a comprehensive EIA CN2.3 Conservation, Resource Recovery and Waste Management (iii) Main Builder is Green and Gracious Builder Merit or above rating

		RE1.1b (i) (b) Water Management Policy and Water Improvement Plan and (ii) Water Efficiency
	(2) Impacts Related to Noise	● Regulatory Requirements for noise during construction and building operations. GM scored sections on top of this – CN2.3 Conservation, Resource Recovery and Waste Management (iii) Main Builder is Green and Gracious Builder Merit or above rating HW2.3:Sound – includes (a) Sound zoning approaches (orientation of noise sensitive buildings away from exterior sourced noises, and (b) Interior Acoustic comfort
	(3) Impact on Air	◑ RE1.1a Habitat and Ecology – a comprehensive EIA CN2.3 Conservation, Resource Recovery and Waste Management (iii) Main Builder is Green and Gracious Builder Merit or above rating HW1.2: Material Emissions HW1.3 Air Quality and Comfort
	(4) Impact on Soil	◑

		RE1.1a Habitat and Ecology – a comprehensive EIA
	(5) Impact on Biodiversity	◑ RE1.1a Habitat and Ecology – a comprehensive EIA RE3.1 Buildings in Nature
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ CN1.1 Whole Life Carbon Assessment CN 2.2 Sustainable Products and Finishes CN3.2 Fit Out Products

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	Green Mark 2021	Green Mark in Operations
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	GoldPLUS	GoldPLUS
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	● Energy Minimum Requirements: 1. Permanent Instrumentation for Measurement and Verification (air conditioning systems) 2. Electrical Submetering requirement	● Energy Minimum Requirements: 1. Permanent Instrumentation for Measurement and Verification (air conditioning systems) 2. OSE and Energy Audit Report (including airside efficiency)
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	-	Gold
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	◑ RE1.1b Resources (i) (a) Energy Management Policy and Energy Improvement Plan	● 4. 3 Year Energy Use Intensity Analysis 6. Energy and Water Improvement Plan
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing	◑	-

		a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	RE2.3: Resilience Strategy – project specific climate change risk and adaptation assessment that assesses climate related physical and transition risks (and opportunities)	
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ CN1.1 Whole Life Carbon Assessment and Embodied Carbon Computation. CN1.2: 2030 Transition Plan CN3 Fit Out (including 3.1 Green Lease, 3.3 Tenancy offsets)	O 4. Energy Consumption (whole building) 6. Energy and Water Improvement Plan
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	◑ RE2.3: Resilience Strategy – project specific climate change risk and adaptation assessment that assesses climate related physical and transition risks (and opportunities)	-

EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources	◑ RE1.1a Habitat and Ecology – a comprehensive EIA RE1.1b (i) (b) Water Management Policy and Water Improvement Plan and (ii) Water Efficiency	● 5. Water Consumption 6. Energy and Water Improvement Plan
	(2) Impacts Related to Noise	◑ HW2.3:Sound – includes (a) Sound zoning approaches (orientation of noise sensitive buildings away from exterior sourced noises, and (b) Interior Acoustic comfort	o 8.Indoor Environmental Quality Noise Level complying with SS553
	(3) Impact on Air	◑ RE1.1a Habitat and Ecology – a comprehensive EIA HW1.2: Material Emissions HW1.3 Air Quality and Comfort	● 8. Indoor Environmental Quality – IAQ Audit
	(4) Impact on Soil	◑ RE1.1a Habitat and Ecology – a comprehensive EIA	
	(5) Impact on Biodiversity	◑	–

		RE1.1a Habitat and Ecology – a comprehensive EIA RE3.1 Buildings in Nature	

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	Green Mark 2021
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	GoldPLUS
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	● GoldPLUS achieves an equivalent energy savings as 30% against new building performance (aligned with ASHRAE 90.1)
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Gold (available for projects outside of Singapore only)
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	● Gold achieves an equivalent energy savings as 20% against new building performance (aligned with ASHRAE 90.1)
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND	◑ RE2.3: Resilience Strategy – project specific climate change risk and adaptation assessment that assesses climate related physical and transition risks (and opportunities)

		(3) The adaptation solutions implemented:	
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	◑ CN2.3 Conservation, Resource Recovery and Waste Management (i) Existing structures are conserved and not demolished CN3.2 Fit Out Products >80% of the fit out materials for (i) common areas and (ii) tenanted spaces shall be conserved
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	◑ see above
Do No Significant Harm			
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ CN1.1 Whole Life Carbon Assessment and Embodied Carbon Computation. CN1.2: 2030 Transition Plan CN3 Fit Out (including 3.1 Green Lease, 3.3 Tenancy offsets)

EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	◑ RE2.3: Resilience Strategy – project specific climate change risk and adaptation assessment that assesses climate related physical and transition risks (and opportunities)
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	◑ RE1.1a Habitat and Ecology – a comprehensive EIA
	(1) Impact on Water Resources	◑ RE1.1a Habitat and Ecology – a comprehensive EIA RE1.1b (i) (b) Water Management Policy and Water Improvement Plan and (ii) Water Efficiency
	(2) Impacts Related to Noise	● Regulatory Requirements for noise during construction and building operations. GM scored sections on top of this – CN2.3 Conservation, Resource Recovery and Waste Management (iii) Main Builder is Green and Gracious Builder Merit or above rating HW2.3:Sound – includes (a) Sound zoning approaches (orientation of noise sensitive buildings away from exterior sourced noises, and (b) Interior Acoustic comfort

	(3) Impact on Air	◑ RE1.1a Habitat and Ecology – a comprehensive EIA HW1.2: Material Emissions HW1.3 Air Quality and Comfort
	(4) Impact on Soil	◑ RE1.1a Habitat and Ecology – a comprehensive EIA
	(5) Impact on Biodiversity	◑ RE1.1a Habitat and Ecology – a comprehensive EIA RE3.1 Buildings in Nature
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ CN1.1 Whole Life Carbon Assessment CN 2.2 Sustainable Products and Finishes CN3.2 Fit Out Products

11. Sri Lanka: GreenSL Rating System

Overall Taxonomy Alignment

Green ^{SL} Rating System for New Constructions v2.1		Moderate Alignment
Green ^{SL} Rating System for Existing Buildings v1.0		Moderate Alignment

About GreenSL Rating System

Green^{SL} is Sri Lanka's national green building certification program, developed by the Green Building Council of Sri Lanka (GBCSL). It provides a locally adapted framework to promote sustainable construction practices, addressing the country's unique climatic, economic, and cultural context. The GREEN^{SL} is a voluntary scheme where designers, builders and owners can achieve recognition for their valuable interest to build green.

The criteria covers:

- Management
- Sustainable Sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources (and waste management)
- Indoor Environmental Quality
- Innovation and Design Process
- Social and Cultural Awareness

Ratings are from Certified, Silver, Gold and Platinum (the highest rating).

How Green SL Rating System complies with the ASEAN Taxonomy

Environmental Objective	**Green SL Rating System for New Constructions v2.1**	**Green SL Rating System for Existing Buildings v1.0**
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	Green SL Rating System for New Constructions v2.1
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	O EA Credit 4.1 Optimise Energy Performance Option 1. whole building energy simulation Option 2. Prescriptive path Option 3. System optimisation.
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	-

Do No Significant Harm		
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ EA Credit 4.8 Greenhouse Gas Emissions Management using GHG protocol and ISO14064-Part1 MR Credit 5.1.7 – Upfront Carbon Emissions
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	–
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	◑ MN Credit 1.3 Responsible Construction practices SS Credit 2.2 – Site Assessment and development
	(1) Impact on Water Resources	◑ MN Credit 1.3 Responsible Construction practices SS Credit 2.7 Stormwater Design, Quantity and Quality Control Water Efficiency WE Prerequisite 2 Indoor water use reduction, Credit 3.1 Water Efficient Construction, Credit 3.3 Indoor water use reduction and Credit 3.4 Innovative waste water technologies (including treatment of wastewater, aquifer recharge and rainwater harvesting
	(2) Impacts Related to Noise	◑

		MN Credit 1.3 Responsible Construction practices –1.3.2 Environmental Management Plan EQ Prerequisite 3 – Minimum Acoustic Performance
	(3) Impact on Air	◑ MN Credit 1.3 Responsible Construction practices –1.3.2 Environmental Management Plan EQ Prerequisite 1 Minimum IAQ Performance EQ Credit 6.3 Construction IAQ Management Plan EQ Credit 6.4 Low Emitting Materials
	(4) Impact on Soil	◑ MN Credit 1.3 Responsible Construction practices –1.3.2 Environmental Management Plan SS Prerequisite 1 Erosion and sediment control
	(5) Impact on Biodiversity	◑ MN Credit 1.3 Responsible construction practices – 1.3.1 Involvement of an expert in Ecology SS Credit 2.1 – Site Selection SS Credit 2.2 – Site Assessment and development SS Credit 2.6 – Reduced Site Disturbance
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ MR Credit 5.1.7 – Upfront Carbon Emissions

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	Green SL Rating System for New Constructions v2.1	Green SL Rating System for Existing Buildings v1.0
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	Gold
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	O EA Prerequisite 4 Energy Metering – install new or existing building level energy meters or submeters, utility owned meters that can aggregate building level resource use are acceptable	◑ EA Credit 4.6 Performance Measurement – Sub-Metering
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified	Certified
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	O EA Credit 4.1 Optimise Energy Performance Option 1. whole building energy simulation Option 2. Prescriptive path Option 3. System optimisation.	◑ EA Prerequisite 1 Minimum Energy Performance (using ASHRAE 90.1 – 2004 EA Credit 4.3 Existing Building Commissioning (4.3.1 Investigation and analysis and 4.3.2 Implementation)

EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	–	–
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ EA Credit 4.8 Greenhouse Gas Emissions Management using GHG protocol and ISO14064-Part1 MR Credit 5.1.7 – Upfront Carbon Emissions	–
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	–	–
		(1) Impact on Water Resources	◑	◑

EO3: Protection of Healthy Ecosystems and biodiversity		MN Credit 1.3 Responsible Construction practices SS Credit 2.7 Stormwater Design, Quantity and Quality Control Water Efficiency WE Prerequisite 2 Indoor water use reduction, Credit 3.1 Water Efficient Construction, Credit 3.3 Indoor water use reduction and Credit 3.4 Innovative waste water technologies (including treatment of wastewater, aquifer recharge and rainwater harvesting	SS Credit 2.6 and 2.7 – Storm Water Design (quantity and quality) WE Credit 3.1 Water Performance Measurement, Credit 3.2 Water efficient landscaping, 3.3 Water efficient AC, Credit 3.5 Water Use Education
	(2) Impacts Related to Noise	◑ MN Credit 1.3 Responsible Construction practices –1.3.2 Environmental Management Plan EQ Prerequisite 3 – Minimum Acoustic Performance	–
	(3) Impact on Air	◑ MN Credit 1.3 Responsible Construction practices –1.3.2 Environmental Management Plan EQ Prerequisite 1 Minimum IAQ Performance EQ Credit 6.3 Construction IAQ Management Plan	◑ SS Credit 2.3 – Facility Management – Outdoor Integrated Pest Management, Erosion Control and Landscape Management. – Minimise the usage of harmful chemicals, energy use, water use, air pollution, solid waste and/or chemical runoff

		EQ Credit 6.4 Low Emitting Materials	EQ Prerequisite 1 Minimum IAQ performance EQ Credit 6.1 –Outdoor air EQ Credit 6.3 Low–Emitting Materials EQ Credit 6.6 – Indoor Chemical and Pollutant Source Control
	(4) Impact on Soil	◑ MN Credit 1.3 Responsible Construction practices –1.3.2 Environmental Management Plan SS Prerequisite 1 Erosion and sediment control	◑ SS Credit 2.3 Facility Management – Outdoor Integrated Pest Management, Erosion Control and Landscape Management. Least toxic pesticides, minimum use of chemicals. Sediment and erosion controls and to restore eroded areas. Limited use of chemical fertilizer.
	(5) Impact on Biodiversity	◑ MN Credit 1.3 Responsible construction practices – 1.3.1 Involvement of an expert in Ecology SS Credit 2.1 – Site Selection SS Credit 2.2 – Site Assessment and development SS Credit 2.6 – Reduced Site Disturbance	◑ SS Credit 2.5 Protect or Restore Open Habitat

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	Green SL Rating System for New Constructions v2.1	Green SL Rating System for Existing Buildings v1.0
O1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	Gold
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	o EA Credit 4.1 Optimise Energy Performance Option 1 – Whole Building Energy Simulation, referencing ASHRAE 90.1-2016 appendix G. Based on energy cost savings percentage, >30% (7points)	o EA Credit 4.1 Optimise Energy Performance Option 1 based on % improvement compared to a baseline building defined by ASHRAE 90.1-2004 using performance rating method (Appendix G). Minimum Energy Cost Savings. 30% (6 points)
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified	Certified
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	o EA Credit 4.1 Optimise Energy Performance Option 1 – Whole Building Energy Simulation, referencing ASHRAE 90.1-2016 appendix G. Based on energy cost savings percentage, >15% (3points)	o EA Credit 4.1 Optimise Energy Performance Option 1 based on % improvement compared to a baseline building defined by ASHRAE 90.1-2004 using performance rating method

				(Appendix G). Minimum Energy Cost Savings. 15% (3 points)
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	–	
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	o MR Credit 5.1.1. Building Reuse Ensure at least 75% of structural and/or at least 25% of the non-structural (interior) elements of the exiting building area are retained. MR Credit 5.1.7 – Upfront Carbon Emissions	o MR Credit 5.7– Sustainable Purchasing – Facility Alterations and Additions – Achieve sustainable purchases 40% (by cost) from: – Green Certified Products – Purchases containing at least 70% material salvaged from onsite programmes – Purchases containing at least 70% material salvaged from offsite – Purchases containing 50% rapidly renewable materials / 50% certified wood

				– Purchases containing at least 50% locally sourced materials
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	O MR Credit 5.1.1. Building Reuse Ensure at least 75% of structural and/or at least 25% of the non-structural (interior) elements of the exiting building area are retained. MR Credit 5.1.7 – Upfront Carbon Emissions	O MR Credit 5.7- Sustainable Purchasing – Facility Alterations and Additions – Achieve sustainable purchases 40% (by cost)
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ EA Credit 4.8 Greenhouse Gas Emissions Management using GHG protocol and ISO14064-Part1 MR Credit 5.1.7 – Upfront Carbon Emissions	–
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	–	–
EO3: Protection of Healthy Ecosystems and biodiversity		Environmental Impact Assessment	◑ MN Credit 1.3 Responsible Construction practices	–

		SS Credit 2.2 – Site Assessment and development	
	(1) Impact on Water Resources	◑ MN Credit 1.3 Responsible Construction practices SS Credit 2.7 Stormwater Design, Quantity and Quality Control Water Efficiency WE Prerequisite 2 Indoor water use reduction, Credit 3.1 Water Efficient Construction, Credit 3.3 Indoor water use reduction and Credit 3.4 Innovative waste water technologies (including treatment of wastewater, aquifer recharge and rainwater harvesting	◑ SS Credit 2.6 and 2.7 – Storm Water Design (quantity and quality) WE Credit 3.1 Water Performance Measurement, Credit 3.2 Water efficient landscaping, 3.3 Water efficient AC, Credit 3.5 Water Use Education
	(2) Impacts Related to Noise	◑ MN Credit 1.3 Responsible Construction practices –1.3.2 Environmental Management Plan EQ Prerequisite 3 – Minimum Acoustic Performance	–
	(3) Impact on Air	◑ MN Credit 1.3 Responsible Construction practices –1.3.2 Environmental Management Plan EQ Prerequisite 1 Minimum IAQ	◑ SS Credit 2.3 – Facility Management – Outdoor Integrated Pest Management, Erosion Control and Landscape Management. – Minimise

		Performance EQ Credit 6.3 Construction IAQ Management Plan EQ Credit 6.4 Low Emitting Materials	the usage of harmful chemicals, energy use, water use, air pollution, solid waste and/or chemical runoff EQ Prerequisite 1 Minimum IAQ performance EQ Credit 6.1 –Outdoor air EQ Credit 6.3 Low–Emitting Materials EQ Credit 6.6 – Indoor Chemical and Pollutant Source Control
	(4) Impact on Soil – neither the construction nor operation of the Building will cause significant harm to the environment by impacting soil quality. Minerals and chemicals such as metals, pesticides, polychlorinated biphenyl, and total petroleum hydrocarbons contained in the soil must be within the permissible limits; – management plans such as Soil Erosion and Sediment Control Plans are developed	◑ MN Credit 1.3 Responsible Construction practices –1.3.2 Environmental Management Plan SS Prerequisite 1 Erosion and sediment control	◑ SS Credit 2.3 Facility Management – Outdoor Integrated Pest Management, Erosion Control and Landscape Management. Least toxic pesticides, minimum use of chemicals. Sediment and erosion controls and to restore eroded areas. Limited use of chemical fertilizer.
	(5) Impact on Biodiversity – manage environmental detrimental risks associated with the Construction or Operation of the Building related to biodiversity at the appropriate level.	◑ MN Credit 1.3 Responsible construction practices – 1.3.1 Involvement of an expert in Ecology SS Credit 2.1 – Site Selection	◑ SS Credit 2.5 Protect or Restore Open Habitat

	– Ensure all relevant management plans such as Biodiversity Management Plans are developed	SS Credit 2.2 – Site Assessment and development SS Credit 2.6 – Reduced Site Disturbance	
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process. For new construction (buildings or portions of buildings), a cradle-to-grave life-cycle assessment of the projects structure and enclosure should be conducted. LCA should be conducted using the ISO 14040 and 14044 Series as a guideline.	◑ MR Credit 5.1.7 – Upfront Carbon Emissions	O MR Perquisite 2 – Sustainable Purchasing policy MR Credit 5.7 Sustainable Purchasing – Facility Alterations and Additions

12. Thailand: TREES

Overall Taxonomy Alignment

Thai's Rating of Energy and Environmental Sustainability for New Construction and Major Renovation (TREES – NC/CS Version 2)		Moderate Alignment
Thai's Rating of Energy and Environmental Sustainability for Existing Building: Operation and Maintenance (TREES – EB Version 1.0)		Moderate Alignment

About TREES Rating System

The Thai Green Building Institute (TGBI) developed the TREES rating system (Thai's Rating of Energy and Environmental Sustainability) to promote sustainable building design, operation, and renovation across Thailand. The system provides a structured framework to reduce energy use, minimize environmental impacts, and enhance occupant well-being.

TREES applies to both existing and new/construction projects:

- TREES-EB (Existing Buildings: Operation and Maintenance): Focuses on operational performance and sustainability of buildings already in use. Certification requires passing five prerequisite topics and earning credit points across eight areas, including energy use, water conservation, indoor environment, and innovation. Assessment relies on measured data from actual building operations over defined performance periods. Awards range from Certified to Platinum, based on points achieved.
- TREES-NC/CS (New Construction & Core & Shell): Applies to newly designed or majorly renovated projects. NC covers fully completed, owner-occupied buildings, while CS addresses partially finished or leased buildings where owners control core systems but tenants complete fit-outs. Both require meeting nine prerequisite criteria across eight sustainability categories. Additional credits (out of one hundred) determine award levels from Certified to Platinum. The assessment process is conducted at distinct phases including at registration, design submission, and construction. Each requires strict verification of documentation.

Across both tools, eligibility requires legal compliance, permanence, and clear project boundaries. TREES-EB emphasizes performance in use, while TREES-NC/CS ensures sustainability is embedded from design and construction and retrofits. Together, they provide a comprehensive framework for advancing green building practices in Thailand's built environment.

How TREES Rating System complies with the ASEAN Taxonomy

Environmental Objective	**TREES – NC/CS Version 2**	**TREES – EB Version 1.0**
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		n.a
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		n.a

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	Thai's Rating of Energy and Environmental Sustainability for New Construction and Major Renovation（TREES – NC/CS Version 2）
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	o EA P1 Building Quality Commissioning (mandatory) to ensure energy systems are installed correctly and report commissioning results and recommendations shall be independently reported directly to the project owner. EA1 Energy Performance requires a mandatory 6-10% Energy Cost Savings (ASHRAE 90.1 2007 –Appendix G
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	-

Do No Significant Harm		
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O EA 1 Energy Performance, EA2 Renewable Energy Use, EA 3 Sub-metering of Project Energy EP1 Low Environmental Impact Chemicals in HVAC and Fire Suppression systems MR 6 Low Environmental Impact Materials
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	-
	(1) Impact on Water Resources	◑ Water Conservation (WC) module WC 1 Water conservation and Efficient water use either option 1 water saving fixtures or option 2 reduced water demand vs baseline 15-35% water reduction EP P1 Construction Pollution Reduction (Mandatory) Water pollution prevention EP 5 Wastewater Treatment Energy Monitoring or High Efficiency Development, Option 2 – Install systems capable of treating wastewater to BOD5 and TSS values <10mg/L for at least 50% of project wastewater SL 4 Stormwater Management 4.3 Retention and detention systems to handle 25 year storm events

		4.4 Bioswales and Rain Gardens
	(2) Impacts Related to Noise	-
	(3) Impact on Air	◑ EP P1 Construction Pollution Reduction (Mandatory) Air pollution prevention, EP 2 Heat rejection equipment Location – to locate HVAC heat rejection equipment away from adjacent property to avoid environmental discomfort. IE P1 Indoor air ventilation volume (mandatory) Air exchange rate exceeding standards IE 1 Reducing pollution impacts 1.1 air intake openings away from heat or pollution sources, 1.2 negative pressure for printing rooms, storage, chemical storage and cleaning rooms, 1.3 controlling external pollutant sources entering building interior, 1.4 smoking area locations, 1.5 air filtration efficiency exceeding standards (Option 1 MERV 7 or higher – 1 point, Option 2 MERV 13 or higher – 2 points). IE 2 Use of non-polluting materials
	(4) Impact on Soil	◑ EP P1 Construction Pollution Reduction (Mandatory) Soil erosion control to prevent runoff and sedimentation into waterways GI 1 T1 2 – Organic landscape management completely avoid using chemicals for all project landscape care
	(5) Impact on Biodiversity	◑

		SL P1 Avoiding Unsuitable Construction Sites (mandatory) includes wildlife habitat areas and areas with high ecological value. SL P2 Reducing Impacts on Ecologically Valuable Areas (mandatory) includes restoration of green areas SL 3 Sustainable site planning; 3.1 Ecological Open Space of at least 25% of building base area or 20% of project site 3.2 Trees – 1 tree per 100m2 of open space 3.3 Use appropriate native plant species
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O MR 3 Materials Reuse, MR 4 Recycled content, MR 5 Regional materials. MR 6.1 Use of Environmentally Friendly Materials with Thai Green Label or Carbon Label 20% of total material cost. MR 6.2 Use of materials with published environmental information (ISO 14021 Type II Environmental claims) >30% of total materials (by cost) Exemplary performance credit for >60%

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	Thai's Rating of Energy and Environmental Sustainability for New Construction and Major Renovation (TREES – NC/CS Version 2)	Thai's Rating of Energy and Environmental Sustainability for Existing Building: Operation and Maintenance (TREES – EB Version 1.0)
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	Gold
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	◑ EA 3 Sub-metering of Project Energy install meters that can measure energy and peak demand for energy use types (End use) that account for 10% or more of total energy. Option 1 projects should install meters for following energy end uses: Interior Lighting Conditioned space fans (AHU, FCU) Chillers, condensing units HVAC system pumps Cooling Towers General electrical equipment (receptacles) non HVAC fans Hot water systems Process energy systems	O EA 5 Building Energy Management system EA 5.1 Basic BMS system EA 5.2 End Use energy metering – analysis of end use energy of the building from actual energy use such as cooling, heating, exhaust fans, equipment, machine, lighting, water heating, cooking etc. energy metering for >30% (1 point) or >60% (2 points) of total energy use contributions, and one of the 2 highest end use energy systems shall be measured

			Elevators and Escalators Renewable energy systems Exterior Lighting	
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified	Certified
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	O EA P1 Building Quality Commissioning (mandatory) to ensure energy systems are installed correctly and report commissioning results and recommendations shall be independently reported directly to the project owner. EA1 Energy Performance requires a mandatory 6–10% Energy Cost Savings (ASHRAE 90.1 2007 –Appendix G	◑ EA 1 Building Energy Efficiency – comparison of actual energy use with either TGBI approved database or Energy Star Portfolio Manager. Project shall be minimally 21% better than average Energy Star figure for that year. EA 3 Energy Conservation Measure saving – evaluate energy use in building and analyse and implement energy conservation measures.
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	–	–

Do No Significant Harm			
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O EA 1 Energy Performance, EA2 Renewable Energy Use, EA 3 Sub-metering of Project Energy EP1 Low Environmental Impact Chemicals in HVAC and Fire Suppression systems MR 6 Low Environmental Impact Materials	O EA 1 Building Energy Efficiency, EA 2 Renewable energy, EA 3 Energy Conservation measure application, EA 4 Refrigerant in air conditioning system. MR 1 Policy and participation in building management (extract the sub points for the write up) MR 2 Environmentally friendly purchasing EP 1 Low environmental impact products in fire suppression systems
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-	-
EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources	◑ Water Conservation (WC) module WC 1 Water conservation and Efficient water use either option 1 water saving fixtures or option 2 reduced water demand vs baseline 15-35% water reduction	◑ SL 4 Infiltration of storm water and flooding prevention Alternative 1 – area weighted average runoff coefficient 0.70 to less than 0.50. Alternative 2 project can collect storm water for 5-15% of the

		EP P1 Construction Pollution Reduction (Mandatory) Water pollution prevention EP 5 Wastewater Treatment Energy Monitoring or High Efficiency Development, Option 2 – Install systems capable of treating wastewater to BOD5 and TSS values <10mg/L for at least 50% of project wastewater SL 4 Stormwater Management 4.3 Retention and detention systems to handle 25 year storm events 4.4 Bioswales and Rain Gardens	precipitation falling on the whole project site for an average weather year and 2-year, 24hour design storm. Section 3 Water conservation WC P1 Water saving policy WC 1 Water saving and water use efficiency (10-30% reduction vs baseline) WC2 water end use sub metering
	(2) Impacts Related to Noise - neither the construction nor operation of the Building will cause significant harm to the environment through noise emissions. Noise emitted by the Activity must comply with maximum permissible noise levels for the area; - Noise Management Plans are developed	-	-
	(3) Impact on Air - Air Quality Management Plans are developed Possible sources of air pollution are minimised during construction and operation of the Building	◑ EP P1 Construction Pollution Reduction (Mandatory) Air pollution prevention, EP 2 Heat rejection equipment Location – to locate HVAC heat rejection equipment away from adjacent property to avoid environmental discomfort. IE P1 Indoor air ventilation volume	◑ IE P1 Ventilation rate in the building (mandatory) IE 1 Reduce impact from pollution. IE 1.1 Air intake is not located at the position that has heat or pollution IE 1.2 Negative pressure for printing room, photocopying room,

		(mandatory) Air exchange rate exceeding standards IE 1 Reducing pollution impacts 1.1 air intake openings away from heat or pollution sources, 1.2 negative pressure for printing rooms, storage, chemical storage and cleaning rooms, 1.3 controlling external pollutant sources entering building interior, 1.4 smoking area locations, 1.5 air filtration efficiency exceeding standards (Option 1 MERV 7 or higher – 1 point, Option 2 MERV 13 or higher – 2 points). IE 2 Use of non-polluting materials	chemical storage and cleaner storage, IE 1.3 Prevent pollution from outside to inside of the building IE 1.4 Smoking area locations IE 1.5 The efficiency of the air filter minimally MERV 7
	(4) Impact on Soil – neither the construction nor operation of the Building will cause significant harm to the environment by impacting soil quality. Minerals and chemicals such as metals, pesticides, polychlorinated biphenyl, and total petroleum hydrocarbons contained in the soil must be within the permissible limits; – management plans such as Soil Erosion and Sediment Control Plans are developed	◑ EP P1 Construction Pollution Reduction (Mandatory) Soil erosion control to prevent runoff and sedimentation into waterways GI 1 T1 2 – Organic landscape management completely avoid using chemicals for all project landscape care	◑ SL 6 Landscape and building exterior maintenance (1) Provide environmentally friendly maintenance practice for building exterior by reducing the use of harmful chemical substances, reducing energy use, pollution and toxin leakage. (2) Pest control using low impact chemicals, reduction of soil erosion, not using chemical fertiliser within 8m from water sources or prior to heavy rain

	(5) Impact on Biodiversity – manage environmental detrimental risks associated with the Construction or Operation of the Building related to biodiversity at the appropriate level. – Ensure all relevant management plans such as Biodiversity Management Plans are developed	◑ SL P1 Avoiding Unsuitable Construction Sites (mandatory) includes wildlife habitat areas and areas with high ecological value. SL P2 Reducing Impacts on Ecologically Valuable Areas (mandatory) includes restoration of green areas SL 3 Sustainable site planning; 3.1 Ecological Open Space of at least 25% of building base area or 20% of project site 3.2 Trees – 1 tree per 100m2 of open space 3.3 Use appropriate native plant species	◑ SL 3 Sustainable site planning; 3.1 Appropriate and sufficient Ecological Open Space 10–25% of building footprint or 10–20% of project area 3.2 Trees – 1 tree per 100–200m2 of open space 3.3 Use local or native plants appropriately SL 6 Landscape and building exterior maintenance

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	Thai's Rating of Energy and Environmental Sustainability for New Construction and Major Renovation (TREES – NC/CS Version 2)
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	o EA 1 Energy Performance, Option 1 Whole building simulation according to Ministry of Energy Regulation B.E. 2563 and 2564 – Energy Value (for 9 controlled building types) 31–35% savings (14points). Option 2 from energy simulation according to ASHRAE 90.1–2007 Appendix G (Energy Cost) 31–35% savings (12 points)
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	o EA 1 Energy Performance, Option 1 Whole building simulation according to Ministry of Energy Regulation B.E. 2563 and 2564 – Energy Value (for 9 controlled building types) 16–20% savings (8points). Option 2 from energy simulation according to ASHRAE 90.1–2007 Appendix G (Energy Cost) 16–20% savings (6 points)
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR	–

		(2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building.	O MR 1 Building Reuse Maintain existing building structure, walls, floors, and or roof for 75% of surface area (2 points) MR 3 Materials Reuse – use salvaged materials worth 5-10% of total material cost (1 point) >10% (2 points) MR 4 Recycled content 10-20% by total material cost MR 6.1 Environmentally preferable materials – Green Labels 10 – 20% of total material cost, MR 6.2 Environmental Information Disclosure >30% of total material cost
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	O MR 1 Building Reuse Maintain existing building structure, walls, floors, and or roof for 50-75% of surface area (1 point) MR 3 Materials Reuse – use salvaged materials worth 5-10% of total material cost (1 point) >10% (2 points) MR 4 Recycled content 10-20% by total material cost MR 6.1 Environmentally preferable materials – Green Labels 10 – 20% of total material cost, MR 6.2 Environmental Information Disclosure >30% of total material cost

Do No Significant Harm		
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O EA 1 Energy Performance, EA2 Renewable Energy Use, EA 3 Sub-metering of Project Energy EP1 Low Environmental Impact Chemicals in HVAC and Fire Suppression systems MR 6 Low Environmental Impact Materials
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	-
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	-
	(1) Impact on Water Resources	◑ Water Conservation (WC) module WC 1 Water conservation and Efficient water use either option 1 water saving fixtures or option 2 reduced water demand vs baseline 15-35% water reduction EP P1 Construction Pollution Reduction (Mandatory) Water pollution prevention EP 5 Wastewater Treatment Energy Monitoring or High Efficiency Development, Option 2 - Install systems capable of treating wastewater to BOD5 and TSS values <10mg/L for at least 50% of project wastewater SL 4 Stormwater Management 4.3 Retention and detention systems to handle 25 year storm events 4.4 Bioswales and Rain Gardens

	(2) Impacts Related to Noise	–
	(3) Impact on Air	◑ EP P1 Construction Pollution Reduction (Mandatory) Air pollution prevention, EP 2 Heat rejection equipment Location – to locate HVAC heat rejection equipment away from adjacent property to avoid environmental discomfort. IE P1 Indoor air ventilation volume (mandatory) Air exchange rate exceeding standards IE 1 Reducing pollution impacts 1.1 air intake openings away from heat or pollution sources, 1.2 negative pressure for printing rooms, storage, chemical storage and cleaning rooms, 1.3 controlling external pollutant sources entering building interior, 1.4 smoking area locations, 1.5 air filtration efficiency exceeding standards (Option 1 MERV 7 or higher – 1 point, Option 2 MERV 13 or higher – 2 points). IE 2 Use of non-polluting materials
	(4) Impact on Soil	◑ EP P1 Construction Pollution Reduction (Mandatory) Soil erosion control to prevent runoff and sedimentation into waterways GI 1 T1 2 – Organic landscape management completely avoid using chemicals for all project landscape care
	(5) Impact on Biodiversity	◑ SL P1 Avoiding Unsuitable Construction Sites (mandatory) includes wildlife habitat areas and areas with high ecological value. SL P2 Reducing Impacts on Ecologically Valuable Areas (mandatory)

		includes restoration of green areas SL 3 Sustainable site planning; 3.1 Ecological Open Space of at least 25% of building base area or 20% of project site 3.2 Trees – 1 tree per 100m2 of open space 3.3 Use appropriate native plant species
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O MR 3 Materials Reuse, MR 4 Recycled content, MR 5 Regional materials. MR 6.1 Use of Environmentally Friendly Materials with Thai Green Label or Carbon Label 20% of total material cost. MR 6.2 Use of materials with published environmental information (ISO 14021 Type II Environmental claims) >30% of total materials (by cost) Exemplary performance credit for >60%

13. Vietnam: LOTUS

Overall Taxonomy Alignment

LOTUS New Construction v4 draft 29.04.2025		Strong Alignment
LOTUS Buildings In Operation v1 2019		Moderate Alignment

About Green LOTUS

The globally aligned LOTUS green building rating system was first developed and launched by the Vietnam Green Building Council (VGBC) in 2010. LOTUS is the only system that is both adapted to the conditions, climate, and regulations of the Vietnam construction sector and simultaneously satisfies global green building best practice.

LOTUS' achieves international alignment by incorporating the World Green Building Council's (WorldGBC) seven key impact areas – 1) Carbon 2) Resilience 3) Circularity 4) Water 5) Biodiversity 6) Health, and 7) Equity & Access. Locally, LOTUS meets or exceeds the Vietnam government's definition of green building in Decree 15/2021/ND-CP, Article 3 and stands alone in adopting Vietnam's construction code for baseline reference points, thus uniquely minimizing compliance risk.

LOTUS is for all building typologies and sizes – small and large residential developments, factories, offices, retail, schools, government buildings, healthcare, cultural buildings, data centers, and others. Coverage is achieved under a family of green building systems including LOTUS New Construction (NC), LOTUS Buildings in Operation (BIO), LOTUS Homes, LOTUS Small Buildings (SB), LOTUS Interiors, LOTUS Small Interior (SI), and LOTUS Homes Core & Shell. LOTUS is an objective rating system that can be used for decision-making purposes by all stakeholders in the construction industry – owners, developers, designers, contractors, investors, and lenders alike. Internationally recognized as a tool for verifying bankability of green projects, its holistic and integrated approach ensures comprehensive assessment in a demanding market.

Founded in 2007, the VGBC serves as the sole representative Vietnamese organization to the WorldGBC. The VGBC elevates the voice of the Asia-Pacific construction industry internationally and simultaneously brings global green building standards to Vietnam. Since its inception, the VGBC has worked to develop Vietnam's property sector to be climate change adapted, resource efficient, and healthy for both people and the environment for generations to come. This is achieved through standards creation, certification, education, and collaboration with public and private organizations.

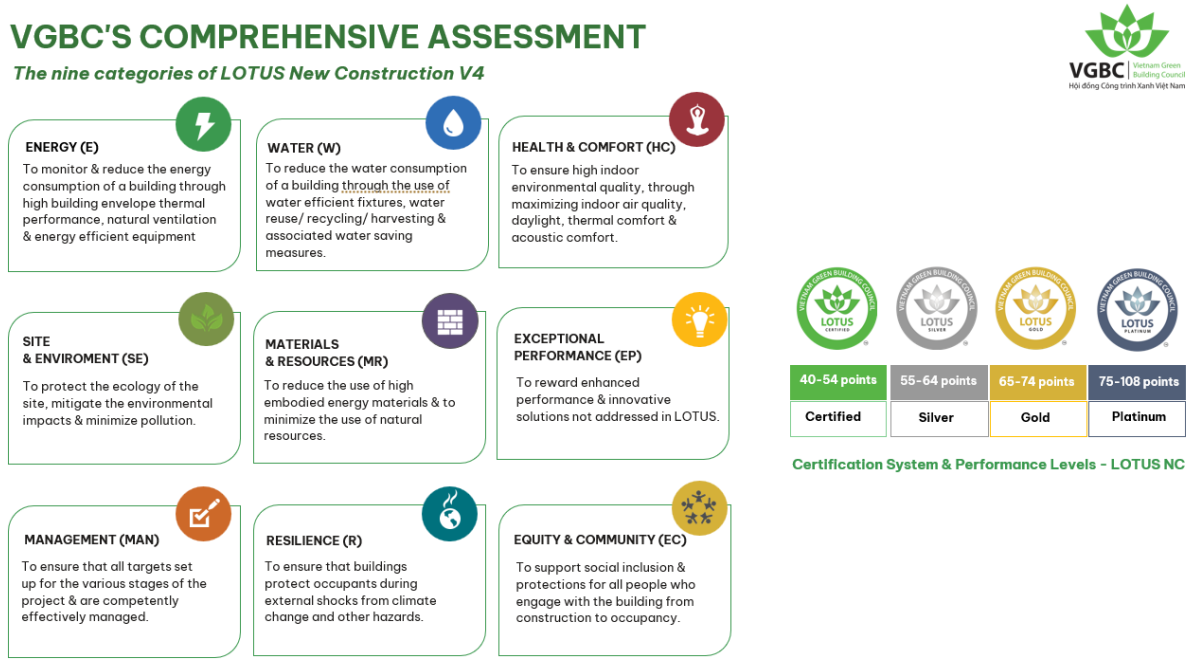
Constant Improvement – LOTUS NCv4 (draft 2) – August 2025

Development of the LOTUS green building rating system involves a range of contributors from internal technical staff to the whole VGBC community of experts including corporate members, advisory committees, and key organizational and institutional partners. This helps

ensure LOTUS is robust and addresses all critical issues facing the full cross-section of construction industry stakeholders.

LOTUS New Construction V4, the most recent system, features key updates including bringing back two essential categories, 1) Resilience and 2) Equity & Community. While present in LOTUS from 2010-2018, these areas were not actively pursued by many projects at that time. Since then, ever increasing threats from climate change and the inclusion of the social dimension in ESG investing and lending have highlighted their importance anew. LOTUS once again supports projects to pursue these critical impact areas. Circularity of materials also takes a more clearly defined role through life cycle analysis (LCA), and environmental concerns specific to Vietnam have also been introduced, such as the need to conserve river sand resources to protect river and coastal ecosystems and properties.

The draft version 4 has been further refined taking into account the findings of the mapping released in the insights report issued earlier in June, further aligning LOTUS to both national imperatives and sustainable finance standards.



How LOTUS complies with the ASEAN Taxonomy

Environmental Objective	LOTUS New Construction v4 draft 29.04.2025	LOTUS Buildings In Operation v1 2019
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	LOTUS v4 draft 2 (August 2025)
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	● E-PR-2 (Prerequisite) Zero Carbon Operations Plan – Project completes a Zero Carbon Operations Plan that calculated projected carbon emissions and plans for mitigation measures to bring emissions to zero during the life of the building
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	◑ R-2 Design for resilience Design strategies to address flooding get 1 point Design strategies to address one additional major risk identified get 1 point Platinum level certifications must cover all potential physical risks from climate change. R-3 – Risk Management Plan – Identifying risks and implementing strategies to enhance the capacity of the building, its users to anticipate, prepare for and respond

			effectively to disasters (covers heat stress, flooding, high winds, utility (power and water) failure). Prerequisite for Platinum
Do No Significant Harm			
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ E-PR-3 (Prerequisite) Total Building Energy Use (converted into CO2) MR-PR 1 (prerequisite) Upfront Carbon Assessment
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	● R-PR-1 – Risk Assessment – Identifying evaluating natural and man-made risks to ascertain the vulnerability of the site and nature of the risks
EO3: Protection of Healthy Ecosystems and biodiversity		Environmental Impact Assessment	● SR-PR1 (Prerequisite) Environmental Impact Assessment
		(1) Impact on Water Resources	◑ SE-?-Water Quality Conservation – develop water quality and conservation plans, including identify harmful and unmanaged effluent leaving the building. (Platinum pre-requisite) SE-PR-2 (prerequisite) Construction Activity Pollution control (includes sediment, dust, emissions, hydrocarbons, pesticides, effluent and noise)

		R4 Stormwater management Water Section, W-PR-1 Water Efficient Fittings, W-2 - Water efficient Landscaping and W-4 Sustainable Water Solutions
	(2) Impacts Related to Noise	◑ SE-PR-2 (prerequisite) - Construction Activity Pollution control (includes sediment, dust, emissions, hydrocarbons, pesticides, effluent and noise) H-7- Acoustic Comfort
	(3) Impact on Air	◑ SE-PR-2 (prerequisite)Construction Activity Pollution control (includes sediment, dust, emissions, hydrocarbons, pesticides, effluent and noise) H-1- Ventilation for Indoor Air Quality H-PR-2 (Prerequisite) - Low-Emission Products
	(4) Impact on Soil	◑ SE-PR-2 (prerequisite) - Construction Activity Pollution control (includes sediment, dust, emissions, hydrocarbons, pesticides, effluent and noise) Man-4 - Maintenance and Green Operations Plan Strategy B green operations plan that eliminates or controls the potential impact of hazardous materials on soil and water

		resources (Platinum prerequisite)
	(5) Impact on Biodiversity	◑ SE-PR-2 (prerequisite) Construction Activity Pollution control (includes sediment, dust, emissions, hydrocarbons, pesticides, effluent and noise) SE-? - Biodiversity Management and Regeneration - Strategy A Biodiversity Management Plan (Platinum Prerequisite)
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ MR-6- Life Cycle Impact/ Life Cycle Assessment (LCA) (Platinum prerequisite new construction must complete comprehensive LCA including carbon and other impacts)

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	LOTUS NC v4 draft 2 (August 2025)	LOTUS BIO v1 2019
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	Gold
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	● E-PR -2- Minimum Energy Metering is implemented for all major energy uses	◑ E-5 Energy Monitoring and Management
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified	Certified
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	● E-PR-2 (Prerequisite) Zero Carbon Operations Plan - Project completes a Zero Carbon Operations Plan that calculated projected carbon emissions and plans for mitigation measures to bring emissions to zero during the life of the building	◑ E-2 Energy Use intensity Strategy B Self-improvement compared to historical baseline
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA)	◑ R-2 Design for resilience Design strategies to address flooding get 1 point	◑ A-1 Disaster Resilience Strategy A Response Plan

		OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	Design strategies to address one additional major risk identified get 1 point Platinum level certifications must cover all potential physical risks from climate change. R-3 – Risk Management Plan – Identifying risks and implementing strategies to enhance the capacity of the building, its users to anticipate, prepare for and respond effectively to disasters (covers heat stress, flooding, high winds, utility (power and water) failure). Prerequisite for Platinum	Strategy B risk report and that resilience is incorporated within the building and the site
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	● E-PR-2 (Prerequisite) Zero Carbon Operations Plan – Project completes a Zero Carbon Operations Plan that calculated projected carbon emissions and plans for mitigation measures to bring emissions to zero during the life of the building	–
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	◑ R-2 Design for resilience Design strategies to address flooding get 1 point	◑ A-1 Disaster Resilience Strategy A Response Plan

		Design strategies to address one additional major risk identified get 1 point Platinum level certifications must cover all potential physical risks from climate change. R-3 – Risk Management Plan – Identifying risks and implementing strategies to enhance the capacity of the building, its users to anticipate, prepare for and respond effectively to disasters (covers heat stress, flooding, high winds, utility (power and water) failure). Prerequisite for Platinum	Strategy B risk report and that resilience is incorporated within the building and the site
EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources	● E-PR-2 (Prerequisite) Zero Carbon Operations Plan – Project completes a Zero Carbon Operations Plan that calculated projected carbon emissions and plans for mitigation measures to bring emissions to zero during the life of the building	◑ WP-1 Wastewater treatment A-2 Stormwater runoff W-2 Water Efficient Fixtures W-4 Sustainable Water Use Solutions
	(2) Impacts Related to Noise	◑ R-2 Design for resilience Design strategies to address flooding get 1 point Design strategies to address one additional major risk identified get 1 point	–

		Platinum level certifications must cover all potential physical risks from climate change. R-3 – Risk Management Plan – Identifying risks and implementing strategies to enhance the capacity of the building, its users to anticipate, prepare for and respond effectively to disasters (covers heat stress, flooding, high winds, utility (power and water) failure). Prerequisite for Platinum	
	(3) Impact on Air	● E-PR-2 (Prerequisite) Zero Carbon Operations Plan – Project completes a Zero Carbon Operations Plan that calculated projected carbon emissions and plans for mitigation measures to bring emissions to zero during the life of the building	◑ H-3 Fresh Air supply H-4 CO2 Monitoring H-5 IAQ testing
	(4) Impact on Soil	◑ SE-PR-2 (prerequisite) – Construction Activity Pollution control (includes sediment, dust, emissions, hydrocarbons, pesticides, effluent and noise) Man-4 – Maintenance and Green Operations Plan Strategy B green operations plan that eliminates or	◑ Eco-2 Sustainable Landscape Management – promote non-toxic landscaping Eco-3 Pest Management – minimising use of chemical pesticides

		controls the potential impact of hazardous materials on soil and water resources (Platinum prerequisite)	
	(5) Impact on Biodiversity	◑ SE-PR-2 (prerequisite) Construction Activity Pollution control (includes sediment, dust, emissions, hydrocarbons, pesticides, effluent and noise) SE-? - Biodiversity Management and Regeneration - Strategy A Biodiversity Management Plan (Platinum Prerequisite)	O Eco-PR-1 (Prerequisite) Conduct a vegetation survey for the building site Eco-1 Vegetation Strategy A, % of total site area that is vegetated (up to 30%). Strategy B, Quality of the vegetation

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	LOTUS v4 draft 2 August 2025
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	◑ E-PR-3 and E-2 Total Building Energy Use based on savings vs reference model 30% improvement (12 points)30% saving is a Gold prerequisite. Platinum requirement for major renovations need to show 30% or greater energy saving from pre-renovation consumption levels Certified 10% Silver 20% Gold 30% Platinum 40%
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	◑ E-PR-3 and E-2 Total Building Energy Use based on savings vs reference model 15% improvement (6 points) Requirement for Silver 20%

EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	◑ R-2 Design for resilience Design strategies to address flooding get 1 point Design strategies to address one additional major risk identified get 1 point Platinum level certifications must cover all potential physical risks from climate change. R-3 – Risk Management Plan – Identifying risks and implementing strategies to enhance the capacity of the building, its users to anticipate, prepare for and respond effectively to disasters (covers heat stress, flooding, high winds, utility (power and water) failure). Prerequisite for Platinum"
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	◑ M-1- Material Reduction M-2-Sustainable Materials – % of the materials (total value) are sustainable materials, 30% (5points) Platinum Prerequisite for major renovations must maintain 75% of the existing building structure AND use existing interior non-structural elements for at least 30% of the entire completed building, including additions) MR-6- Life Cycle Impact/ Life Cycle Assessment (LCA)
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND	◑ M-1- Material Reduction M-2-Sustainable Materials – % of the materials (total value) are

		(3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	sustainable materials, 30% (5points) MR-6- Life Cycle Impact/ Life Cycle Assessment (LCA)
Do No Significant Harm			
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ E-PR-3 (Prerequisite) Total Building Energy Use (converted into CO2) MR-PR 1 (prerequisite) Upfront Carbon Assessment
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	● R-PR-1 - Risk Assessment - Identifying evaluating natural and man-made risks to ascertain the vulnerability of the site and nature of the risks
EO3: Protection of Healthy Ecosystems and biodiversity		Environmental Impact Assessment	● SR-PR1 (Prerequisite) Environmental Impact Assessment
		(1) Impact on Water Resources	◑ SE-?-Water Quality Conservation - develop water quality and conservation plans, including identify harmful and unmanaged effluent leaving the building. (Platinum prerequisite) SE-PR-2 (prerequisite) Construction Activity Pollution control (includes sediment, dust, emissions, hydrocarbons, pesticides, effluent and noise) R4 Stormwater management Water Section, W-PR-1 Water Efficient Fittings, W-2 - Water efficient Landscaping and W-4 Sustainable Water Solutions

	(2) Impacts Related to Noise	◑ SE-PR-2 (prerequisite) - Construction Activity Pollution control (includes sediment, dust, emissions, hydrocarbons, pesticides, effluent and noise) H-7- Acoustic Comfort
	(3) Impact on Air	◑ SE-PR-2 (prerequisite)Construction Activity Pollution control (includes sediment, dust, emissions, hydrocarbons, pesticides, effluent and noise) H-1- Ventilation for Indoor Air Quality H-PR-2 (Prerequisite) - Low-Emission Products
	(4) Impact on Soil	◑ SE-PR-2 (prerequisite) - Construction Activity Pollution control (includes sediment, dust, emissions, hydrocarbons, pesticides, effluent and noise) Man-4 - Maintenance and Green Operations Plan Strategy B green operations plan that eliminates or controls the potential impact of hazardous materials on soil and water resources (Platinum prerequisite)
	(5) Impact on Biodiversity	◑ SE-PR-2 (prerequisite) Construction Activity Pollution control (includes sediment, dust, emissions, hydrocarbons, pesticides, effluent and noise) SE-? - Biodiversity Management and Regeneration - Strategy A Biodiversity Management Plan (Platinum Prerequisite)

EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ MR-6- Life Cycle Impact/ Life Cycle Assessment (LCA) (Platinum prerequisite, 10% reduction compared to baseline building n at least three of six impact categories, one of which must be global warming potential. - global warming potential (greenhouse gases), in kg CO2 e; - depletion of the stratospheric ozone layer, in kg CFC-11e; - acidification of land and water sources, in moles H+ or kg SO2 e; - eutrophication, in kg nitrogen eq or kg phosphate eq; - formation of tropospheric ozone, in kg NOx, kg O3 eq, or kg ethene; and - depletion of non-renewable energy resources, in MJ using CML / depletion of fossil fuels)

14. UK/International: BREEAM

Overall Taxonomy Alignment

BREEAM New Construction International V7		Strong Alignment
BREEAM In Use International V6		Strong Alignment
BREEAM International Non Domestic Refurbishment 2015		Strong Alignment

About BREEAM

BREEAM is used to specify and measure the sustainability performance of buildings, ensuring that projects meet sustainability goals and continue to perform optimally over time.

A BREEAM assessment uses recognised measures of performance, which are set against established benchmarks, to evaluate a building's specification, design, construction and use. The measures used represent a broad range of categories and criteria from energy to ecology. Each category focuses on the most influential factors, including reduced carbon emissions, low impact design, adaptation to climate change, ecological value and biodiversity protection.

Integrating sustainability measures at the earliest possible stage of a project using the BREEAM framework enables reduced life cycle costs and increases in asset value, building user experience and health, corporate image and CSR requirements, and risk mitigation.

BREEAM operates in over 100 countries around the world including many in the ASEAN region.

How BREEAM Schemes align with the ASEAN Taxonomy

Environmental Objective	**BREEAM New Construction International Version 7**	**BREEAM In Use Commercial Version 6**	**BREEAM Refurbishment and Fit out International 2015**
Climate Change Mitigation			
Climate Change Adaptation			
Resource Resilience and the Transition to a Circular Economy	n.a	n.a	
Do No Significant Harm			
Climate Change Mitigation			
Climate Change Adaptation			
Protection of Healthy Ecosystems and Biodiversity			
Resource Resilience and the Transition to a Circular Economy		n.a.	

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	BREEAM New Construction International Version 7
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Excellent
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Pass
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	O Issues Ene 02 Prediction of Operational energy and carbon, 03 Energy monitoring, 04 Low Carbon Design, 05 Energy Efficient Equipment and 06 Energy Efficient systems focus on calculating energy efficiency and how this process should be documented. 'Ene 02– Prediction of operational energy and carbon' focuses on using predictive energy modelling to estimate energy use. The energy use intensity (EUI) is calculated in the BREEAM Platform based on the energy consumption data entered and the floor area of the building. The EUI includes all energy sources used by the building, including renewable energy generated onsite. Criterion 1 states that an energy strategy must be put in place to minimise operational energy usage. The exemplary credit requires documentation of energy consumption In-Use, which allows for the Energy strategy to be adapted based off consumption data.

EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	◑ 'Wst 05-Adapting to climate change'- is to identify climate adaptation solutions and implement these based on a systematic risk assessment that identifies important hazards and vulnerabilities of the asset to those hazards. M1.2 lists the hazards that should be considered.
Do No Significant Harm			
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ Ene 01 – Energy and carbon performance for regulated energy uses and Ene 02- Prediction of operational energy and carbon focus minimising carbon emissions from the building and on using predictive energy modelling to estimate carbon emissions and encourage use of LZC technologies. The output produced by the operational energy calculator energy calculator in Ene 02 is the sum of the predicted scope 1 and scope 2 emissions in the operational phase. Ene 01 Mandatory 4 credits – 'Significant Improvement' for Excellent Rating, 6 credits – 'Best Practice' for Outstanding Rating Mat 01 – Building life cycle assessment and Wst 01 – Construction waste management both aim to minimise the Embodied Carbon of buildings (Scope 3). Finally, Pol 01 – Impact of refrigerants also aims to reduce a building's scope 3 emissions.

EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	◑ Wst 05- Adapting to climate change', the aim of which is to carry out a systematic (structural and fabric resilience specific) risk assessment to identify and evaluate the impact on the building over its projected life cycle from expected extreme weather conditions arising from climate change and, where feasible, mitigate against these impacts. The Steps for the risk assessment are as follows: 1.a.i Hazard identification 1.a.ii Hazard assessment 1.a.iii Risk estimation 1.a.iv Risk evaluation 1.a.v Risk management.
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	◑ Lue 02 Ecological Risks and opportunities, foundation route using BREEAM Ecological Risk Evaluation Checklist, or comprehensive route requiring a suitably qualified ecologist (SQE) Lue 03 Managing impacts on ecology focuses on the avoidance or limiting of negative ecological impacts.
	(1) Impact on Water Resources	◑ Man03 – Responsible Construction' 1 credit for managing utility consumption for energy and water during construction. Man 03 Table 10 risk evaluation must consider minimising the risks of land, air and water pollution – 1 credit mandatory for Excellent. Table 11 includes a plan for protection of water courses on-site as well as an assessment of impact on water quality and a potential plan

		to conserve water quality. Water category aims to minimise water consumption. Wat 01 15% improvement over baseline (1 credit) mandatory for Good rating and above, with 30% (2 credits) required for Outstanding. Wat 02 – Water monitoring aims to provide the ongoing monitoring capabilities, water meter mandatory for Good Rating and above. 'Pol 03– Flood and surface water management', awards one credit for minimising water course pollution from surface run off. Criterion 8 requires for SuDS to be installed, which improves water quality.
	(2) Impacts Related to Noise	◑ Table 10 in 'Man 03 Responsible construction' states that the risk evaluation must minimise the risk of nuisance from air, land and water pollution. Table 11 lists potential measures for reducing noise pollution from a number of different sources such as blasting works. Pol 05– Reduction of noise pollution' requires that noise level measurements be predicted at the design stage using models and calculations. Noise limits are set for day and night (at least 5 dB lower than the background noise throughout the day and night)
	(3) Impact on Air	◑ Table 11 in Man 03– Responsible construction lists the mitigation measures that can be put in place to reduce air

		pollution, including traffic management and other external sources of air pollution. Hea 04– Indoor quality is focused on maintaining an acceptable level of indoor air quality during the operational phase. Its lists a number of sources of air pollution both from construction materials and in the operational phase, with quite a large focus on volatile organic compounds. The issue also sets requirements for ventilation system and an indoor air quality management plan. The criteria for 'Pol 02– Local air quality' are very specific, only focused on NOx emission from combustion plants.
	(4) Impact on Soil	O Man 03 Responsible construction, table 11 air and water pollution
	(5) Impact on Biodiversity	◑ Lue 02 Ecological Risks and opportunities, Lue 03 Managing impacts on ecology Lue 04 Ecological change and enhancement including the quantifying change in ecological value (no net loss, net gain and significant net gain).
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ Mat 01 Building Life Cycle Assessment split into 3 separate

		LCAs= early design, technical design, post construction, covering modules A1-A5, B1-B5 and C1-C4. BREEAM have a benchmarking comparison, results are calculated within the BREEAM platform Mandatory LCA (any stage) and embodied carbon reporting Mandatory for Excellent. Mandatory LCA (All project stages) and embodied carbon reporting (5 credits) for Outstanding Rating

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	BREEAM New Construction International V7	BREEAM In Use International V6	BREEAM International Non Domestic Refurbishment 2015
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Excellent	Excellent	Excellent
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	◑ Ene 03 Energy Monitoring, M2 (method 2) monitoring energy consumption by end use included heating and cooling systems. Mandatory for very good and above – monitor for 90% of energy consumption by end use	O Ene 15 Monitoring energy end uses identifies whether mechanical cooling and air conditioning (space cooling generation) is present in the asset and ascertains what percentage of end uses are sub metered. Significant energy consumption is defined as where the typical energy cost savings achieved through sub-metering is expected to payback within 10 years through energy cost savings	◑ Ene 02 Energy Monitoring Sub Metering – 1 credit submetering of major energy consuming systems, mandatory requirement for Very Good and above

				achieved through improved energy management	
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Pass	Acceptable (1 star)	Pass
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	○ Issues Ene 02 Prediction of Operational energy and carbon, 03 Energy monitoring, 04 Low Carbon Design, 05 Energy Efficient Equipment and 06 Energy Efficient systems focus on calculating energy efficiency and how this process should be documented. 'Ene 02– Prediction of operational energy and carbon' focuses on using predictive energy modelling to estimate energy use. The energy use intensity (EUI) is calculated in the BREEAM Platform based on the energy consumption data entered and the floor area of the building. The EUI includes all energy sources used by the building, including renewable energy generated onsite.	◑ Ene 22 Energy Audit Answer D (3 Credits) or E (4 credits) – Energy audit has been carried out and all measures with a payback of 5 years (D) or 10 years (E) have been implemented.	○ Ene 01 Reduction of energy use and carbon emissions 6 Credits mandatory for Excellent 10 Credits mandatory for Outstanding

			Criterion 1 states that an energy strategy must be put in place to minimise operational energy usage. The exemplary credit requires documentation of energy consumption In- Use, which allows for the Energy strategy to be adapted based off consumption data.		
EO2: Climate Change Adaption	Tier 1 - Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	◑ 'Wst 05-Adapting to climate change'- is to identify climate adaptation solutions and implement these based on a systematic risk assessment that identifies important hazards and vulnerabilities of the asset to those hazards. M1.2 lists the hazards that should be considered.	○ Rsl 06 Emergency plans and climate related physical risks, an emergency plan to protect property and people	◑ Wst 05 - Adaptation to climate change, structural and fabric resilience **and** exemplary credit, responding to adaptation to climate change

Do No Significant Harm				
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ Ene 01 – Energy and carbon performance for regulated energy uses and Ene 02– Prediction of operational energy and carbon focus minimising carbon emissions from the building and on using predictive energy modelling to estimate carbon emissions and encourage use of LZC technologies. The output produced by the operational energy calculator energy calculator in Ene 02 is the sum of the predicted scope 1 and scope 2 emissions in the operational phase. Ene 01 Mandatory 4 credits – 'Significant Improvement' for Excellent Rating, 6 credits – 'Best Practice' for Outstanding Rating Mat 01 – Building life cycle assessment and Wst 01 – Construction waste management both aim to	◑ Ene 19 Energy Consumption, Ene 20 Carbon intensity district heating and cooling, Ene 21 Renewable electricity generated, Pol 04 Global Warming potential of refrigerants,	◑ Ene 01 Reduction of Energy Use and Carbon Emissions, Mat 01 Environmental Impacts of Materials, and Pol 01 Impact of refrigerants

		minimise the Embodied Carbon of buildings (Scope 3). Finally, Pol 01 – Impact of refrigerants also aims to reduce a building's scope 3 emissions.		
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	◑ Wst 05– Adapting to climate change', the aim of which is to carry out a systematic (structural and fabric resilience specific) risk assessment to identify and evaluate the impact on the building over its projected life cycle from expected extreme weather conditions arising from climate change and, where feasible, mitigate against these impacts. The Steps for the risk assessment are as follows: 1.a.i Hazard identification 1.a.ii Hazard assessment 1.a.iii Risk estimation 1.a.iv Risk evaluation 1.a.v Risk management.	◑ Rsl 03 Natural hazard risk assessment Rsl 07 Climate related transition risks and opportunities	O Wst 05 – Adaptation to climate change, structural and fabric resilience.
EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources	◑ Man03 – Responsible Construction' 1 credit for	◑ Pol-01 Minimising water course pollution (light liquid separators	O Wat 01 Water Consumption

		managing utility consumption for energy and water during construction. Man 03 Table 10 risk evaluation must consider minimising the risks of land, air and water pollution – 1 credit mandatory for Excellent. Table 11 includes a plan for protection of water courses on-site as well as an assessment of impact on water quality and a potential plan to conserve water quality. Water category aims to minimise water consumption. Wat 01 15% improvement over baseline (1 credit) mandatory for Good rating and above, with 30% (2 credits) required for Outstanding. Wat 02 – Water monitoring aims to provide the ongoing monitoring capabilities, water meter mandatory for Good Rating and above. 'Pol 03- Flood and surface water management', awards one credit for minimising water course pollution from surface run off. Criterion 8 requires for	within drainage system to vehicular areas and/or grease separators for commercial kitchen facilities. Water Section – Wat 01 Mater monitoring (mandatory Good Rating and above), 02-06 deals with water efficient equipment, Wat 10 reducing utility supplied water consumption, Rsl 02 Surface water runoff mitigation	1 credit mandatory for Good, Very Good and Excellent ratings. 2 credits mandatory for Outstanding Wat 02 Water Monitoring Part 2, Criterion 1 mandatory for Good and above ratings Pol 03 Flood risk management and reducing surface water runoff

		SuDS to be installed, which improves water quality.		
	(2) Impacts Related to Noise	◑ Table 10 in 'Man 03 Responsible construction' states that the risk evaluation must minimise the risk of nuisance from air, land and water pollution. Table 11 lists potential measures for reducing noise pollution from a number of different sources such as blasting works. Pol 05– Reduction of noise pollution' requires that noise level measurements be predicted at the design stage using models and calculations. Noise limits are set for day and night (at least 5 dB lower than the background noise throughout the day and night)	O Hea 17 Acoustic conditions minimally options C, D and E	◑ Hea 05 Acoustic Performance Pol 05 Reduction of Noise Pollution
	(3) Impact on Air	◑ Table 11 in Man 03– Responsible construction lists the mitigation measures that can be put in place to reduce air pollution, including traffic	◑ Hea 08 Ventilation system air intakes and exhausts (minimise entry of external sources of pollution), Hea 09 Carbon Dioxide Sensors,	◑ Hea 02 Indoor Air Quality: (a) IAQ plan (b) Ventilation, (c) Filtration to EN13779:2007 Annex A3, (d) CO2 or air quality sensors, (e) VOC levels

		management and other external sources of air pollution. Hea 04– Indoor quality is focused on maintaining an acceptable level of indoor air quality during the operational phase. Its lists a number of sources of air pollution both from construction materials and in the operational phase, with quite a large focus on volatile organic compounds. The issue also sets requirements for ventilation system and an indoor air quality management plan. The criteria for 'Pol 02– Local air quality' are very specific, only focused on NOx emission from combustion plants.	Hea 16 Indoor air quality management (options F,G,H) Pol 03 Local air quality – low emission heating and hot water systems	for products, (f) VOC levels post construction (TVOC and formaldehyde) Pol 02 Nox emissions – reduction in NOx emissions through the use of low emission heat sources in the building (heating and hot water)
	(4) Impact on Soil	O Man 03 Responsible construction, table 11 air and water pollution	–	–
	(5) Impact on Biodiversity	◑ Lue 02 Ecological Risks and	◑ Lue 03 Ecology report – Suitably	◑ LE 02 Protection of Ecological

		opportunities, Lue 03 Managing impacts on ecology Lue 04 Ecological change and enhancement including the quantifying change in ecological value (no net loss, net gain and significant net gain).	Qualified Ecologist must carry out an ecological assessment. Existing ecological value must be protected and maintained in line with the SQEs recommendations as well as the mitigation hierarchy Lue 04 Biodiversity management plan' require that a biodiversity management plan be developed, that covers management of existing features, enhancement of ecological value, landscaping, integrated pest management. cleaning of façade, landscaping and hardscaping, planting/installation of features to enhance flora and fauna on-site, with clearly defined and allocated roles and responsibilities	features LE 05 Long Term impact on biodiversity

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	BREEAM International Non Domestic Refurbishment 2015
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Excellent
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	O Ene 01 Reduction of energy use and carbon emissions – the criteria uses a BREEAM calculation tool which considers fabric and structure, core services (HVAC & Hot water) and local services (lighting and non-central HVAC and Hot Water systems) 6 Credits mandatory for Excellent 10 Credits mandatory for Outstanding Ene 04 Low Carbon design, passive design to reduce use of active systems, and use of energy generated from Low and Zero Carbon (LZC) technologies, 3 credits = 30% reduction in CO2 emissions
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Pass
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	O Ene 01 Reduction of energy use and carbon emissions – the criteria uses a BREEAM calculation tool 6 Credits mandatory for Excellent

			10 Credits mandatory for Outstanding Ene 04 Low Carbon design, passive design to reduce use of active systems, and use of energy generated from Low and Zero Carbon (LZC) technologies, 2 credits = 20% reduction in CO2 emissions
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	◑ Wst 05 – Adaptation to climate change, structural and fabric resilience **and** exemplary credit, responding to adaptation to climate change
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	O Mat 01 Environmental impact of Materials – Mat 01 Calculator points based on the robustness of the LCA assessment with consideration of % of elements reused in situ. Wst 01 Project waste management, includes pre-refurbishment audit, reuse and direct recycling, resource efficiency and diversion of resources from landfill
	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND	O Mat 01 Environmental impact of Materials – Mat 01 Calculator points based on the robustness of the LCA assessment with consideration of % of elements reused in situ.

		(3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	Wst 01 Project waste management, includes pre-refurbishment audit, reuse and direct recycling, resource efficiency and diversion of resources from landfill
Do No Significant Harm			
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	◑ Ene 01 Reduction of Energy Use and Carbon Emissions, Mat 01 Environmental Impacts of Materials, and Pol 01 Impact of refrigerants
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	O Wst 05 – Adaptation to climate change, structural and fabric resilience.
EO3: Protection of Healthy Ecosystems and biodiversity		Environmental Impact Assessment	◑ LE 02 Protection of Ecological Features, Pol 03 Flood Risk Management and reducing surface water run off
		(1) Impact on Water Resources	O Wat 01 Water Consumption 1 credit mandatory for Good, Very Good and Excellent ratings. 2 credits mandatory for Outstanding Wat 02 Water Monitoring Part 2, Criterion 1 mandatory for Good and above ratings Pol 03 Flood risk management and reducing surface water runoff
		(2) Impacts Related to Noise	◑ Hea 05 Acoustic Performance

		Pol 05 Reduction of Noise Pollution
	(3) Impact on Air	◑ Hea 02 Indoor Air Quality: (a) IAQ plan (b) Ventilation, (c) Filtration to EN13779:2007 Annex A3, (d) CO2 or air quality sensors, (e) VOC levels for products, (f) VOC levels post construction (TVOC and formaldehyde) Pol 02 Nox emissions – reduction in NOx emissions through the use of low emission heat sources in the building (heating and hot water)
	(4) Impact on Soil	-
	(5) Impact on Biodiversity	◑ LE 02 Protection of Ecological features LE 05 Long Term impact on biodiversity
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ Mat 01 Environmental Impact of Materials

15 USA/International: LEED

Overall Taxonomy Alignment

LEED BD+C v5		Strong Alignment
LEED O+M v5		Moderate Alignment

About LEED Rating System

LEED (Leadership in Energy and Environmental Design) provides a framework for creating and operating high performing buildings that advance decarbonisation, quality of life, and ecological stewardship. LEED certification is globally recognised with over 197,000 LEED projects across 186 countries and territories.

Since its founding in 2000, U.S. Green Building Council (USGBC) has evolved LEED to address new markets and building types, advances in technologies and best practices, and new research insights. LEED is applicable to all building types and phases, including new construction, interior fit-outs, operations, maintenance, and core and shell. LEED offers different rating systems for various project types, such as Building Design and Construction (BD+C), Interior Design and Construction (ID+C), Building Operations and Maintenance (O+M), Neighborhood Development (ND), Communities, Cities, and Homes.

The technical basis on which LEED is built seeks a balance between requirement of existing best practice and voluntary incorporation of leadership strategies. LEED sets a challenging yet achievable set of benchmarks that define green building.

LEED-certified buildings aim to reduce global climate change contributions, enhance human health, protect water resources, support biodiversity, and promote sustainable material cycles. LEED buildings are beneficial for businesses, people, and the environment.

LEED v5

Focuses on three primary goals that significantly influence the certification's scoring system: climate action, which accounts for 50% of possible points; quality of life, accounting for 25%; and ecological conservation and restoration, also at 25%. These goals are interwoven across the certification through specific principles aimed at enhancing building performance and sustainability.

Significant changes in LEED v5 include:

- The restructuring of prerequisites and credits to emphasize decarbonization, including separate points for energy efficiency and carbon reduction measures. This includes recognizing strategic decarbonization plans for existing buildings – long-term strategies that dramatically reduce emissions and aggressively improve energy efficiency.
- The inclusion of social equity and carbon literacy as core components, with new prerequisites such as the Social Impact Assessment and Operational Carbon Projection.
- A more pronounced focus on resilience, with requirements for comprehensive assessments of climate resilience and adaptive design strategies.

The new version also features refined categories like Materials & Resources, which now includes credits for low-carbon materials and lifecycle assessment, reflecting a push towards more sustainable construction practices.

How LEED complies with the ASEAN Taxonomy

Environmental Objective	**LEED BD+C v5**	**LEED O+M v5**
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	LEED v5 BDC
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	◑ EA Prerequisite: Operational Carbon Projection and Decarbonisation Plan EA Credit: Decarbonisation and Efficiency Plans
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	◑ IP Prerequisite: Climate Resilience Assessment SS Credit: Enhanced Resilient Site Design. Integrate Requirements for Two High Priority natural and climate Hazards

Do No Significant Harm		
EO1: Climate Change Mitigation	Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	● EA prerequisite: Operational Carbon Projection and Decarbonisation Plan MR prerequisite: Quantify and Assess Embodied Carbon and IP prerequisite: Carbon Assessment
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	● IP Prerequisite: Climate Resilience Assessment
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	-
	(1) Impact on Water Resources	O WE Prerequisite: Minimum Water Efficiency.
	(2) Impacts Related to Noise	O EQ Credit: Occupant Experience Option 4. Sound Environment
	(3) Impact on Air	O EQ Prerequisite: Fundamental Air Quality MR Credit: Low Emitting Materials
	(4) Impact on Soil	◑ SS Credit: Biodiverse Habitat – Soil Restoration

		SS Prerequisite: Minimise Site Disturbance Erosion and Sedimentation Control Plan AND Site Assessment
	(5) Impact on Biodiversity	◑ SS Prerequisite: Minimise Site Disturbance Erosion and Sedimentation Control Plan AND Site Assessment (conservation of special status vegetation, minimise damage to healthy plant communities, control and removal of invasive species SS credit: Biodiverse Habitat Option 1 – Preserve and restore habitat
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ MR credit: Reduce Embodied Carbon

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	LEED v5 BDC	LEED v5 OM
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	Gold
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	● EA Prerequisite: Energy Metering and Reporting, to ASHRAE standard 90.1 (Section 8.4.3 requires electrical energy monitoring, recording, and reporting for total electrical energy, HVAC systems, interior lighting, exterior lighting, receptable circuits, and refrigeration systems)	● EA prerequisite: Energy Monitoring and Reporting, Have permanently installed energy meters or submeters that measure total building energy consumption for each energy source (electricity, on-site renewable electricity, natural gas, chilled water, steam, hot water, fuel oil, propane, etc.)
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified	Certified
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	◑ IP Prerequisite: Climate Resilience Assessment SS Credit: Enhanced Resilient Site	● EA Prerequisite: Operational Carbon Projection and Decarbonization Plan

			Design. Integrate Requirements for Two High Priority natural and climate Hazards	
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	◑ IP Prerequisite: Climate Resilience Assessment SS Credit: Enhanced Resilient Site Design. Integrate Requirements for Two High Priority natural and climate Hazards	● IP Prerequisite: Climate Resilience Assessment – Two priority hazards, at minimum, to address through proposed operations and maintenance strategies Note EQ credit: Resilient Spaces includes operational features that increase the capacity for occupants to adapt to changing climate conditions (focus on indoor environmental quality)
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	● EA prerequisite: Operational Carbon Projection and Decarbonisation Plan MR prerequisite: Quantify and Assess Embodied Carbon and IP prerequisite: Carbon Assessment	◑ EA prerequisite: Carbon Projection from Energy Use EA credit: Decarbonisation and Efficiency Plans
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	● IP Prerequisite: Climate Resilience Assessment	● IP Prerequisite: Climate Resilience Assessment

EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources	● WE Prerequisite: Minimum Water Efficiency.	◑ WE credit: Water Efficiency Performance.
	(2) Impacts Related to Noise	O EQ Credit: Occupant Experience Option 4. Sound Environment	-
	(3) Impact on Air	● EQ Prerequisite: Fundamental Air Quality MR Credit: Low Emitting Materials	◑ EQ Prerequisite: Verification of Ventilation and Filtration EQ Credit: Indoor Air Quality Performance
	(4) Impact on Soil	◑ SS Credit: Biodiverse Habitat – Soil Restoration SS Prerequisite: Minimise Site Disturbance Erosion and Sedimentation Control Plan AND Site Assessment	O EQ Credit: Integrated Pest Management – Pest management programme which includes identification of least risk pesticides and non-chemical preventative measures.
	(5) Impact on Biodiversity	◑ SS Prerequisite: Minimise Site Disturbance Erosion and Sedimentation Control Plan AND Site Assessment (conservation of special status	-

		vegetation, minimise damage to healthy plant communities, control and removal of invasive species SS credit: Biodiverse Habitat Option 1 – Preserve and restore habitat	

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	LEED v5 BDC	LEED v5 OM
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	Gold	Gold
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	◑ EA Credit: Enhanced Energy Efficiency, Option 2 Energy Simulation demonstrating improvement against ASHRAE 90.1 normative Appendix G (source energy). Path 1 (percentage reduction excluding onsite renewable contribution). 30% improvement = 10 points	◑ EA Credit: Optimised Energy Performance. Option 1 Energy Star Score >69. Option 2 Energy Use Intensity Targets (% improvement in EUI beyond median EUI Energy Star) Category 1 = 8points (32% improvement) Category 2 = 10points (30% improvement) Option 3 Points for % improvement over historical baseline. 7 points (30%) or for high process load buildings 12 points (30%)
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	Certified	Certified
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	◑ EA Credit: Enhanced Energy Efficiency,	◑ EA Credit: Optimised Energy

			Option 2 Energy Simulation demonstrating improvement against ASHRAE 90.1 normative Appendix G (source energy). Path 1 (percentage reduction excluding onsite renewable contribution). 15% improvement = 5 points	Performance. Option 1 Energy Star Score >69. Option 2 Energy Use Intensity Targets (% improvement in EUI beyond median EUI Energy Star) Category 1 = 4 points (16% improvement) Category 2 = 5points (15% improvement) Option 3 Points for % improvement over historical baseline. 2 points (15%) or for high process load buildings 6 points (16%)
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	◑ IP Prerequisite: Climate Resilience Assessment SS Credit: Enhanced Resilient Site Design. Integrate Requirements for Two High Priority natural and climate Hazards	● IP Prerequisite: Climate Resilience Assessment – Two priority hazards, at minimum, to address through proposed operations and maintenance strategies Note EQ credit: Resilient Spaces includes operational features that increase the capacity for occupants to adapt to changing climate conditions (focus on indoor environmental quality)
EO4: Resource Resilience and the	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND	O MR Credit: Building and Materials Reuse, Option 1 the % reuse extends to 50% for	–

Transition to a Circular Economy		(2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	Existing Building Structure and Enclosure elements (core&shell projects) and Option 2 which includes up to 30% reuse for 1 targeted building type, or 15% of 2 targeted material types or 15% of 4 other material types. MR Credit: Reduce embodied Carbon, Option 1 whole building lifecycle assessment, 3 points needed for 10% reduction in GWP. Note a prerequisite for platinum requires 20% reduction (4 points),	
	Tier 2 - Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	O see above	-
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	● EA prerequisite: Operational Carbon Projection and Decarbonisation Plan MR prerequisite: Quantify and Assess	◑ EA prerequisite: Carbon Projection from Energy Use

		Embodied Carbon and IP prerequisite: Carbon Assessment	EA credit: Decarbonisation and Efficiency Plans
EO2: Climate Change Adaption	Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	● IP Prerequisite: Climate Resilience Assessment	● IP Prerequisite: Climate Resilience Assessment
EO3: Protection of Healthy Ecosystems and biodiversity	Environmental Impact Assessment	-	-
	(1) Impact on Water Resources	O WE Prerequisite: Minimum Water Efficiency.	O WE credit: Water Efficiency Performance.
	(2) Impacts Related to Noise	O EQ Credit: Occupant Experience Option 4. Sound Environment	-
	(3) Impact on Air	● EQ Prerequisite: Fundamental Air Quality MR Credit: Low Emitting Materials	◑ EQ Prerequisite: Verification of Ventilation and Filtration EQ Credit: Indoor Air Quality Performance
	(4) Impact on Soil	◑ SS Credit: Biodiverse Habitat – Soil Restoration SS Prerequisite: Minimise Site	O EQ Credit: Integrated Pest Management – Pest management programme which includes identification of least risk pesticides

		Disturbance Erosion and Sedimentation Control Plan AND Site Assessment	and non-chemical preventative measures.
	(5) Impact on Biodiversity	◑ SS Prerequisite: Minimise Site Disturbance Erosion and Sedimentation Control Plan AND Site Assessment (conservation of special status vegetation, minimise damage to healthy plant communities, control and removal of invasive species SS credit: Biodiverse Habitat Option 1 - Preserve and restore habitat	-
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	◑ MR credit: Reduce Embodied Carbon	-

16. International: EDGE

Overall Taxonomy Alignment

EDGE v3 01.12.2024		Moderate Alignment
EDGE v4 (Draft)		Moderate Alignment

About EDGE

EDGE certification is a green building certification system that is designed to promote resource-efficient and sustainable building practices. EDGE certification focuses on three key areas: energy, water, and embodied energy in materials. It provides a framework for evaluating and quantifying the environmental impact of a building, considering factors such as energy efficiency, water conservation, and the use of sustainable materials.

Rating Levels & Requirements:

EDGE Certification

EDGE certification is awarded if the required minimum efficiencies of 20% are achieved in the three EDGE categories — Energy, Water, and Materials. A simple pass/fail system indicates whether the building project has demonstrated the minimum 20% savings in operational energy, water and embodied energy in materials compared to the base case model. EDGE certification is a one-time award that does not need to be renewed.

EDGE Advanced Certification

EDGE Advanced status indicates that an EDGE project has achieved 40% or greater savings in Energy, beyond the minimum EDGE certification requirements. To meet the requirements for water savings and savings in embodied carbon of materials, a minimum of 20% savings over the base case is still necessary.

EDGE Zero Carbon Certification

An EDGE Zero Carbon building is defined as one that is committed to resource-efficient operations, maximises on-site renewable energy generation, and responsibly procures offsite energy and carbon offsets, achieving zero net GHG emissions. The certification requires organizations to commit to a plan for achieving and maintaining net zero carbon operations for their certified buildings. Certification is renewed every 2 to 4 years.

Climate Adaptation Gap:

EDGE rating tool does not focus on climate change adaptation, however, IFC has introduced the Building Resilience Index (BRI) web-based tool, to assess and enhance the climate resilience of buildings. This can be used (though independent from EDGE) to bridge the DNSH requirements from the ASEAN Taxonomy.

EDGE Version 4 (Expected June 2027)

Will be a significant overhaul of the current EDGE v3 app. The key changes expected are as follows:

- Updated base case system selection and efficiencies in line with ASHRAE 90.1-2022.
- Emissions breakdown into scope 1, 2 and 3 (Tenants) in line with the Science Based Targets initiative (SBTi) buildings sector science-based target-setting criteria (2024).
- Alignment with the RICS Whole life carbon assessment for the built environment (2nd Ed.) and The increase of the life cycle assessment from A1-A3 to A1-A5, through the inclusion of global study for typical building products and construction practices.
- Inclusion of building circularity index (BCI) calculation for the base and improved case in line with DGNB circularity index. The BCI will be disclosed in the certificate for all projects.
- Inclusion of the IFC – Building Resilience Index (BRI) tool and standard requiring minimally a self-assessment.

How Edge complies with the ASEAN Taxonomy

Environmental Objective	**EDGE v3 01.12.2024**	**EDGE v4 (draft)**
Climate Change Mitigation		
Climate Change Adaptation		
Resource Resilience and the Transition to a Circular Economy		
Do No Significant Harm		
Climate Change Mitigation		
Climate Change Adaptation		
Protection of Healthy Ecosystems and Biodiversity		
Resource Resilience and the Transition to a Circular Economy		

Details: Construction of Buildings

Environmental Objective	Tier	Technical Screening Criteria	EDGE v3 01.12.2024	EDGE v4 (Draft)
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	EDGE Advanced	EDGE Advanced
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	EDGE Certification	EDGE Certification
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	O EDGE Certification requires a 20% saving vs EDGE base case model, EDGE Advanced 40%. EDGE Zero Carbon has a GHG emissions mitigation plan requirement.	O EDGE Certification requires a 20% saving vs EDGE base case model updated to reference ASHRAE 90.1-2022, EDGE Advanced 40%. EDGE Zero Carbon has a GHG emissions mitigation plan requirement.
EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND	-	O EDGE v4 will require the IFC Building Resilience Index (BRI) tool to be used to assess the climate risk resilience and have this verified.

		(3) The adaptation solutions implemented:		
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O EDGE Zero Carbon Certification requirement - GHG emissions mitigation plan with short, medium, and long-term absolute emissions reduction targets compliant with ISO Net Zero Guidelines – ISO IWA 42:2022 (Chapter 9)	● EDGE v4 will include emissions breakdown into scope 1,2,3 (tenants) in line with Science Based Targets Initiative (SBTi) buildings sector criteria. In addition to the enhancements to the materials LCA
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	- IFC however offer a separate (non-EDGE) Building Resilience Index tool which would broadly cover the key issues. EDGE suggest a B grade would align with the EU taxonomy Climate Adaptation DNSH criteria	● EDGE v4 will require the IFC Building Resilience Index (BRI) tool to be used to assess the climate risk resilience and have this verified.
EO3: Protection of Healthy Ecosystems and biodiversity		Environmental Impact Assessment	-	
		(1) Impact on Water Resources	O EDGE Water measures must achieve a 20% efficiency saving compared to the EDGE baseline.	O EDGE Water measures must achieve a 20% efficiency saving compared to the EDGE baseline.
		(2) Impacts Related to Noise	-	
		(3) Impact on Air	O	O

		EEM21 – Demand control ventilation using CO2 sensors	EEM21 – Demand control ventilation using CO2 sensors
	(4) Impact on Soil	–	
	(5) Impact on Biodiversity	–	
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O EDGE Material Measures – embodied carbon based on material Global Warming Potential (GWP) as kgCO2e in line with EN 15804+A2:2019. LCA based on A1 to A3 (Cradle to Gate). Minimum 20% savings in embodied carbon	● EDGE v4 will align with the RICS Whole life carbon assessment for the built environment, increasing the lifecycle assessment from A1–A3 to A1 – A5. Inclusion of building circularity index (BCI) adapted from DGNB's circularity index. This will be disclosed for all projects

Details: Acquisition or Ownership of Buildings

Environmental Objective	Tier	Technical Screening Criteria	EDGE v3 01.12.2024	EDGE v4 (Draft)
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	EDGE Advanced	EDGE Advanced
		(2) For commercial assets with ACMV systems over 290kW has energy performance monitoring and assessment	◑ EEM30 – Submeters for Heating and/or Cooling Systems EEM31 – Smart Meters for Energy	◑ EEM30 – Submeters for Heating and/or Cooling Systems EEM31 – Smart Meters for Energy
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	EDGE Certification	EDGE Certification
		(2) An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	O EDGE Certification requires a 20% saving vs EDGE base case model, EDGE Advanced 40%. EDGE Zero Carbon has a GHG emissions mitigation plan requirement.	O EDGE Certification requires a 20% saving vs EDGE base case model, EDGE Advanced 40%. EDGE Zero Carbon has a GHG emissions mitigation plan requirement.

EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	-	O EDGE v4 will require the IFC Building Resilience Index (BRI) tool to be used to assess the climate risk resilience and have this verified.
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O EDGE Zero Carbon Certification requirement - GHG emissions mitigation plan with short, medium, and long-term absolute emissions reduction targets compliant with ISO Net Zero Guidelines - ISO IWA 42:2022 (Chapter 9)	● EDGE v4 will include emissions breakdown into scope 1,2,3 (tenants) in line with Science Based Targets Initiative (SBTi) buildings sector criteria. In addition to the enhancements to the materials LCA
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	- IFC however offer a separate (non-EDGE) Building Resilience Index tool which would broadly cover the key issues.	● EDGE v4 will require the IFC Building Resilience Index (BRI) tool to be used to

		EDGE suggest a B grade would align with the EU taxonomy Climate Adaptation DNSH criteria	assess the climate risk resilience and have this verified.
EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources	● EDGE Water measures must achieve a 20% efficiency saving compared to the EDGE baseline.	● EDGE Water measures must achieve a 20% efficiency saving compared to the EDGE baseline.
	(2) Impacts Related to Noise	-	
	(3) Impact on Air	o EEM21 – Demand control ventilation using CO2 sensors	o EEM21 – Demand control ventilation using CO2 sensors
	(4) Impact on Soil	-	
	(5) Impact on Biodiversity	-	

Details: Renovation of Existing Buildings

Environmental Objective	Tier	Technical Screening Criteria	EDGE v3 01.12.2024	EDGE v4 (draft)
EO1: Climate Change Mitigation	Tier 1 – Green	(1) Certified under a national/international Green Building Certification (GBC) programme that is applicable to climate change mitigation and achieves an advanced level of certification	EDGE Advanced	EDGE Advanced
		((2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%	◑ EDGE Advanced 40% savings vs an EDGE base case model.	◑ EDGE Advanced Certification requires a 40% saving vs EDGE base case model referencing ASHRAE 90.1-2022
	Tier 2 – Amber	(1) Building has been certified by relevant Green Building rating tool AND	EDGE Certification	EDGE Certification
		(2) It leads to a reduction of Energy Usage Intensity (EUI) of at least 15%,	◑ EDGE Certification requires a 20% saving vs EDGE base case model.	● EDGE Certification requires a 20% saving vs EDGE base case model referencing ASHRAE 90.1-2022

EO2: Climate Change Adaptation	Tier 1 – Green	(1) Implemented physical and non-physical solutions ('adaptation solutions') by performing a robust climate risk and vulnerability assessment (CRVA) OR (2) The climate projections and assessment of impacts AND (3) The adaptation solutions implemented:	–	o EDGE v4 will require the IFC Building Resilience Index (BRI) tool to be used to assess the climate risk resilience and have this verified.
EO4: Resource Resilience and the Transition to a Circular Economy	Tier 1 – Green	(1) Maintain 75% of the existing building structure AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building	–	

	Tier 2 – Amber	(1) Maintain 45% of the existing building structure; AND (2) Use existing interior non-structural elements for at least 30% of the entire completed building, including additions; AND (3) Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building	–	
Do No Significant Harm				
EO1: Climate Change Mitigation		Plans for the management and minimisation of Scope 1, Scope 2 as well as relevant Scope 3 emissions related to the Activity.	O EDGE Zero Carbon Certification requirement - GHG emissions mitigation plan with short, medium, and long-term absolute emissions reduction targets compliant with ISO Net Zero Guidelines - ISO IWA 42:2022 (Chapter 9)	● EDGE v4 will include emissions breakdown into scope 1,2,3 (tenants) in line with Science Based Targets Initiative (SBTi) buildings sector criteria. In addition to the enhancements to the materials LCA
EO2: Climate Change Adaption		Conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance shown in Annex 3 of ASEAN Taxonomy	– IFC however offer a separate (non-EDGE) Building Resilience Index tool which would broadly cover the key issues. EDGE suggest a B grade would align with the EU taxonomy Climate Adaptation DNSH criteria	● EDGE v4 will require the IFC Building Resilience Index (BRI) tool to be used to assess the climate risk resilience and have this verified.
		Environmental Impact Assessment	–	

EO3: Protection of Healthy Ecosystems and biodiversity	(1) Impact on Water Resources	O EDGE Water measures must achieve a 20% efficiency saving compared to the EDGE baseline.	O EDGE Water measures must achieve a 20% efficiency saving compared to the EDGE baseline.
	(2) Impacts Related to Noise	–	
	(3) Impact on Air	O EEM21 – Demand control ventilation using CO2 sensors	O EEM21 – Demand control ventilation using CO2 sensors
	(4) Impact on Soil	–	
	(5) Impact on Biodiversity	–	
EO4: Resource Resilience and the Transition to a Circular Economy	A Lifecycle Assessment (LCA) on the products, materials, and process.	O EDGE Material Measures – embodied carbon based on material Global Warming Potential (GWP) as kgCO2e in line with EN 15804+A2:2019. LCA based on A1 to A3 (Cradle to Gate). Minimum 20% savings in embodied carbon	● EDGE v4 will align with the RICS Whole life carbon assessment for the built environment, increasing the lifecycle assessment from A1–A3 to A1 – A5. Inclusion of building circularity index (BCI) adapted from DGNB's circularity index. This will be disclosed for all projects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