

Circular Letter No.: 2024.196

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Application: BEAM Plus NB Version 2.0

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# **SS 7 Biodiversity Enhancement**

- 1. The Technical Circular Letter hereby announces an update to the credit content for SS 7 **Biodiversity Enhancement** under BEAM Plus NB v2.0.
- 2. The aim of the update is to clarify the following:
  - Update of the Extent of Application for SS 7a Reduction of Ecological Impact; and
  - Update of the submittal requirements for justification of non-applicability for SS 7b Enhancement of Biodiversity.
- 3. The requirements given in Section 1.3 and Section 3.2 of the BEAM Plus NB v2.0 Manual (2023 Edition) are hereby updated with the enclosures in Annex A and Annex B of this Technical Circular Letter respectively.
  - Page Annex A-1 shall replace all contents in Section 1.3 Summary of Credits specified in Page 17 of the Manual; and
  - Pages Annex B-1 to B-6 shall replace all contents in Section 3.2 on SS 7 specified in Pages 161 to 166 of the Manual.
- 4. <u>Approved PA projects</u>: For projects that have already completed PA and have certain assessment approach approved, the Applicant may opt to adopt the same assessment criteria for FA or voluntarily comply with this Technical Circular Letter. For the avoidance of doubt, the Applicant shall provide PA evidence (e.g., extract of the PA report, documents submitted for assessment in PA, etc.) in subsequent assessments to support the intention of using the same assessment methodology as in PA.

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Ir Colin Chung Chairperson of Standards Sub-committee

# Annex A: Updated Credit Content for Section 1.3 under BEAM Plus NB v2.0

	Section	Credit Requirement	Extent of Application	Credit
SS 7	Biodiversity Enhancement	<ul> <li>(a) Reduction of Ecological Impact <ol> <li>credit for demonstrating that all identified habitat types on Site are of low or negligible indicative ecological values.</li> </ol> </li> <li>Alternatively, <ul> <li>Demonstrate that all identified habitat types on Site of medium to high indicative ecological value are preserved intact and are either unaffected by the planned development.</li> <li>additional BONUS credit for demonstrating that the combined girth of the retained trees, with individual girth of at least 150mm, is at least 20% of the total girth of all existing trees on site.</li> <li>additional BONUS credit for demonstrating that the combined girth of at least 150mm, is at least 20% of the total girth of all existing trees on site.</li> </ul> </li> <li>(b) Enhancement of Biodiversity <ul> <li>Prepare a manual on biodiversity-friendly landscape maintenance, PLUS a biodiversity enhancement</li> </ul> </li> </ul>	SS 7a All sites with existing tree except brownfield sites SS 7b Sites with adjacent areas of medium or high ecological value	1 + 2 additional BONUS + 3 BONUS
		report demonstrating each of the following measures for enhancing the biodiversity of the Site: 1 BONUS credit for physical connectivity between areas with ecological values.		
		1 BONUS credit for increased diversity and complexity of planting. 1 BONUS credit for wildlife-friendly		
		building features (e.g. windows and lighting).		
SS 8	Urban Heat Island Mitigation	<ul> <li>For Site area &lt;1000m<sup>2</sup></li> <li>(a) Urban Design Guidelines Chapter 11 <ol> <li>credit for implementing at least 2 site</li> <li>level strategies under Section 11 of</li> <li>Hong Kong Planning Standards and</li> <li>Guidelines Chapter 11 Urban Design</li> <li>Guidelines.</li> </ol> </li> </ul>	All buildings	For Site area <1000m <sup>2</sup> : 1 For Site area ≥1000m <sup>2</sup> : 4 + 2 additional BONUS + 4 BONUS

Annex B:

Updated Credit Content for Section 3.2 under BEAM Plus NB v2.0

3 Sustainable Site 3.2 Ecologically Responsible Design

- SS 7 Biodiversity Enhancement 🛇
- Extent of ApplicationAll sites with existing tree except brownfield sites for SS 7aSites with adjacent areas of medium or high ecological value for SS 7b
- **Objective** Preserve and/ or enhance the biodiversity of the site.
- **Credits Attainable** 1 + 2 additional BONUS + 3 BONUS

## Credit Requirement (a) Reduction of Ecological Impact

Credit	Requirement	
	All identified habitat types on Site are of low or negligible indicative ecological values <b>OR</b>	
1	All identified habitat types on Site of medium to high indicative ecological value are preserved intact and are unaffected or enhanced by the planned development	
1 additional BONUS	The combined girth of the retained trees, with individual girth of at least 150mm, is at least 20% of the total girth of all existing trees on site.	
1 additional BONUS	The combined girth of the retained trees, with individual girth of at least 150mm, is at least 40% of the total girth of all existing trees on site.	

## (b) Enhancement of Biodiversity

Prepare a manual on biodiversity-friendly landscape maintenance, **PLUS** a biodiversity enhancement report demonstrating each of the following measures for enhancing the biodiversity of the Site:

- 1. 1 BONUS credit for physical connectivity between areas with ecological values
- 2. 1 BONUS credit for increased diversity and complexity of planting
- 3. 1 BONUS credit for wildlife-friendly building features (e.g. windows and lighting)

## Assessment

# (a) Reduction of Ecological Impact

 Provide a habitat mapping report of the Site to identify the locations, dimensions and areas of all existing habitat types within the Site and determine their corresponding indicative ecological value. The mapping of habitat types, their definition and ecological value identification shall make reference to Terrestrial Habitat Mapping and Ranking Based on Conservation Value [1]. Types of habitats and their indicative ecological values are summarised below:

<sup>1</sup> Sustainable Development Unit, Environment Bureau, HKSAR. 2009. Terrestrial Habitat Mapping and Ranking Based on Conservation Value.

Ecological Value	Habitat Types	
High Value	Fung Shui Forest; Montane Forest; Lowland Forest; Mixed Shrubland; Freshwater/ Brackish Wetland; Natural Watercourse; Seagrass Bed; and Intertidal Mudflat.	
Medium Value	Shrubby Grassland (including Baeckea Shrubland); Plantation or Plantation/ Mixed Forest; Fishpond/ Gei Wai; Sandy Shore; Rocky Shore; and Cultivation.	
Low Value	Bare Rock or Soil; Grassland; Modified Watercourse; Artificial Rocky/ Hard Shoreline; Golf Course/ Urban Park; and Quarry	
Negligible Value	Rural industrial storage/ containers; Landfill; and Others.	

- 2. Provide an ecological impact assessment report to demonstrate one of the following is achieved:
  - 2.1. All identified habitat types on Site are of low or negligible indicative ecological value; **OR**
  - 2.2. All identified habitat types on Site of medium to high indicative ecological value are preserved intact and are unaffected or enhanced by the planned development.
- 3. Retention of Trees
  - 3.1. Provide a detailed tree survey of all trees on Site in accordance with the Development Bureau Technical Circular (Works) No. 7/2015 of the HKSAR Government.
  - 3.2. Demonstrate the combined girth of retained trees shall be at least 20% (or 40%) of the total girth of all existing trees on site.
  - 3.3. The individual girth of the retained trees counting towards the 20% (or 40%) shall not be less than 150mm and shall each have no more than 25% of its crown pruned to enable construction and operation of the Project.
  - 3.4. Trees transplanted within the Site are not qualified as retained trees of this BONUS credit.

# (b) Enhancement of Biodiversity

 Provide a habitat mapping report of the adjacent areas to the Site to identify the locations, dimensions and areas of all existing habitat types of areas adjacent to the Site and determine their corresponding indicative ecological value. The mapping of habitat types, their definition and ecological value identification shall make reference to Terrestrial Habitat Mapping and Ranking Based on Conservation Value. Types of habitats and their indicative ecological values are summarised in the table under Part (a)(1) above.

- 2. Prepare a Biodiversity-friendly Landscape Maintenance Manual including the sections below for at least 20 A4 pages:
  - 2.1. Design objectives of biodiversity enhancement;
  - 2.2. Maintenance requirement; and
  - 2.3. Waste minimisation.
- 3. Prepare a Biodiversity enhancement report to indicate the measures to be implemented:
  - 3.1. Physical connectivity between areas with ecological values
    - 3.1.1. Provide planting plans and demonstrate the physical interconnectivity between new planting area and any preserved areas of medium to high ecological value within the Site or any areas of medium to high indicative ecological value adjacent to the Site (supported by a habitat map of adjacent area) [2].
    - 3.1.2. Physical interconnectivity refers to contiguous planting areas less than 2m wide apart, without broken by occasional footpaths, installations or other features wider than 2m.
    - 3.1.3. Demonstrate the total connected area is more than 5% of the total Site area.
  - 3.2. Increased diversity and complexity of planting
    - 3.2.1. Provide planting plans and demonstrate plant species type, characteristics of the species chosen (tree/ shrub/ herb/ climber), nativeness (native/ exotic), quantity and location.
    - 3.2.2. Demonstrate the planting scheme incorporated **ALL** elements below:
      - a) Chosen diverse plant species. Reference to 10-20-30 rule for planting [3].
      - b) Increase complexity of vegetation structure and provide habitats for wildlife by mixing vegetation with varied heights [4].
      - c) Use >50% native or adaptive species.
  - 3.3. Wildlife-friendly building features
    - 3.3.1. Demonstrate features on design drawings that reduce bird collision:
      - a) Design that avoid bird collision on windows (e.g. use pattern on glass/ façade/ shades, translucent glass)
         [5].

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<sup>2</sup> Sustainable Development Unit, Environment Bureau, HKSAR. 2009. Terrestrial Habitat Mapping and Ranking Based on Conservation Value.

<sup>3</sup> Development Bureau, HKSAR, 2018 Street Tree Selection Guide "Chapter 9 – Complementary Vegetation Community Mix".

<sup>4</sup> Development Bureau, HKSAR, 2018 Street Tree Selection Guide "Chapter 9 – Complementary Vegetation Community Mix".

<sup>5</sup> Sheppard, C. 2011. Bird-Friendly Building Design. American Bird Conservancy, The Plains, VA. USA.

- b) Design essential outdoor lighting only and adopt measures to minimise impacts of outdoor lighting to wildlife (e.g. use narrow-spectrum light bulbs to lower the range of species affected by light; use light sources that emit minimal UV light and avoid the white and blue wavelengths; use shields to minimise light spill) [6].
- 4. The biodiversity enhancement report should be endorsed by a qualified landscape architect or ecologist. Alternative measures proposed other than those listed for compliance is acceptable with justification.

# Submittals (a) Reduction of Ecological Impact

<b>Supporting Documents</b> Please provide softcopies with filename prefix as indicated on the leftmost column below.		PA	CA	FA/ RFA
SS_07a_00	BEAM Plus NB submission template for SS 7a	$\checkmark$	$\checkmark$	$\checkmark$
SS_07a_01	Evidence such as site survey photo or aerial photo of the site condition before development	~	$\checkmark$	$\checkmark$
SS_07a_02	Habitat mapping report (Site) with scaled and dimensioned drawings and photographic records of the existing site conditions for habitat types identified in the Site (if SS 7a is applicable)	✓	✓	~
SS_07a_03	Ecological impact assessment report (if SS 7a is applicable)	~	~	~
SS_07a_04	Detailed tree survey of all the trees on Site (for additional BONUS only)	~	~	~
SS_07a_05	Landscape layout plans, sections showing the retained trees (for additional BONUS only)	✓	✓	~
SS_07a_06	Summary and calculations to demonstrate the girth of retained trees shall be at least 20% (or 40%) of the total girth of all existing trees on site (for additional BONUS only)	✓	✓	~

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<sup>6</sup> Gunnell, K. et al. 2013. Designing for Biodiversity: A Technical Guide for New and Existing Buildings. Second Edition. RIBA Publishing, London. UK.

# (b) Enhancement of Biodiversity

<b>Supporting Documents</b> Please provide softcopies with filename prefix as indicated on the leftmost column below.		ΡΑ	CA	FA/ RFA
SS_07b_00	BEAM Plus NB submission template for SS 7b	~	~	~
SS_07b_01	Habitat mapping report (Adjacent Area) with scaled and dimensioned drawings and photographic records of the existing conditions for habitat types identified in the areas adjacent to the Site [or] Site photo / terrestrial habitat map to justify that the adjacent areas of the Site are not of medium or high ecological value (Substantiation for non- applicability only)	~	~	*
SS_07b_02	Biodiversity-friendly landscape maintenance manual (if SS 7b is applicable)	~	~	~
SS_07b_03	Biodiversity enhancement report (if SS 7b is applicable)	~	~	~
SS_07b_04	CV of the professional as per requirements in the assessment (if SS 7b is applicable)	~	~	~

## Remarks

# (a) Additional Information

Development Bureau HKSAR Government, 'A Comprehensive Street Tree Management Plan for Hong Kong', Annex IV: Encouraging Biodiversity in the Urban Landscape through Planting Appropriate Tree Species in Hong Kong.

Development Bureau. Greening, Landscape and Tree Management Office (GLMTS) 2010, Guiding principles on use of native plant species in public works projects.

Beck T, Principles of ecological landscape design. Island Press, Washington, Covelo, London.

MacArthur R.H. and Wilson E.O., The theory of island biogeography, Princeton University Press, New Jersey, USA.

## (b) Related Credit

SS P1 Minimum Landscaping Requirements

The related prerequisite requires minimum site coverage of greenery and minimum provisions for viability of planting, for example, the minimum soil volumes and depths for all plant areas.

SS 1 Pedestrian-oriented and Low Carbon Transport

The related credit encourages the shading of main pedestrian paths by trees. The soil space of trees shall meet the minimum standards stipulated in SA P1.

SS 8 Urban Heat Island Mitigation

The related credit encourages higher overall site coverage of greenery.

## SS 10 Outdoor Thermal Comfort

The related credit considers the positive effect of shading by trees and the surrounding ground surface temperatures of greenery within the site.

#### SS 11 Stormwater Management

The related credit considers softscape provided with the site for infiltration and detention in stormwater management.

#### WU 2 Water Efficient Irrigation

The related credit considers water efficient irrigation for greenery provided within the site.

## HWB 2 Biophilic Design

The related credit encourages human-nature connection for building occupants.