

# LE 04 Ecological change and enhancement

(All buildings)

## Aim

To enhance ecological value of the area associated with the site in support of local, regional, and national priorities.

## Overview

Assessment type	Available credits	Applicable assessment criteria
Fully fitted	4 + 1 exemplary	All
Shell and core	4 + 1 exemplary	All
Shell only	4 + 1 exemplary	All
Residential: Fully fitted	4 + 1 exemplary	All
Residential: Partially fitted	4 + 1 exemplary	All
EU Taxonomy	-	None

## Minimum standards

Rating level	Criteria
-	None

## Assessment type specific notes

Reference	Assessment type specific note
-	None

## Building type specific notes

Reference	Building type specific note
-	None

## Assessment criteria

This issue is split into four parts:

- Prerequisite – Managing negative impacts on ecology
- Ecological enhancement – one credit
- Quantifying change in ecological value – three credits
- Exemplary credit – Quantifying change in ecological value

### Prerequisite – Managing negative impacts on ecology

- 1 Achieve criteria 2 and 3 in LE 03.

### Ecological enhancement – one credit

- 2 Measures have been implemented that enhance ecological value, which are based on input from the project team and SQE in collaboration with representative stakeholders and data collated as part of 'Determining ecological outcomes' in LE 02 (see M1).

Measures are implemented in the following order:

- 2.a On-site, and where this is not feasible,
- 2.b Outside of the site boundary, within the zone of influence.

### Quantifying change in ecological value – three credits

#### Urban Greening Factor – One credit

- 3 For urban sites, where an ecologist confirms that biodiversity net gain is not appropriate for the project, the Urban Greening Factor may be used as an alternative. A credit can be awarded based on the targets set out in Table 91.
- 4 In addition to meeting the targets, the ecologist must also confirm that the vegetation specified to meet the targets provides ecological benefits. These can be the same measures as outlined in criterion 2 and must be based on input from the project team and SQE in collaboration with representative stakeholders and data collated as part of 'Determining ecological outcomes' in LE 02.
- 5 Where the baseline of the site already meets the target level, or a UGF has been set by a local authority, projects must increase the score by 0.1.

OR

#### Quantifying change in ecological value - Prerequisite

- 6 To achieve any credits for quantifying change in ecological value there must be no residual effects on protected sites or irreplaceable habitats. This should be calculated using one of the following:
  - 6.a CLIMB model for Ecological Enhancement,
  - 6.b Global Biodiversity Metric (Ramboll).

**No net loss - One credit**

- 7 Biodiversity Metric  $\geq 0\%$  and the total area of habitat created or enhanced should cover at least 2,5 % of the site area.

OR

**Net gain – two credits**

- 8 Biodiversity Metric  $\geq 5\%$  and the total area of habitat created or enhanced should cover at least 5 % of the site area.

OR

**Net gain – three credits**

- 9 Biodiversity Metric  $\geq 10\%$  and the total area of habitat created or enhanced should cover at least 5 % of the site area.

**Exemplary credit - Quantifying change in ecological value**

- 10 Biodiversity Metric  $\geq 20\%$  and the total area of habitat created or enhanced should cover at least 10 % of the site area.

## Checklists and tables

Table 91: Urban Greening Factor – Target based on asset type

Asset type	UGF
Residential (Including residential institutions)	0.6
Offices, retail, industrial, hospitality, culture & entertainment, sports & leisure	0.3
Community, education, healthcare, government services, transport hub	0.4
Daycare centre	0.6
If target is set by local authority	Target set + 0.1 OR BREEAM target (Whichever is higher)

## Methodology

### M1: Enhancement measures

For criterion 2, the ecologist's report must clearly justify how the selected measures meaningfully enhance ecological value.

This criterion recognises enhancement measures that have been carried out in line with good practice recommended by an SQE, which build on mitigation measures taken in LE 03. This also supports meeting good practice principles of biodiversity net-gain before quantifying the change in ecological value in criteria 6-10.

#### **M1.1: Collaboration throughout the project**

For criterion 2, feedback from relevant stakeholders in LE 02 informs decisions made in this issue. For example, where appointed, guidance from the landscape architect regarding long term maintenance requirements should be considered as part of decisions made for habitat creation and enhancement.

### M2: Quantifying change in ecological value

Criterion 6 is based on the outputs from completing either the CLIMB model for Ecological Enhancement or Ramboll's Global Biodiversity Metric (GBM) tool.

Within the GBM, "biodiversity units" quantify the biodiversity value of on-site habitats before development to provide a baseline and after development to evaluate the change that has occurred. Once the baseline and post construction information has been entered the tool generates a score, expressed as a percentage, which quantifies any losses or gains, against the baseline and takes into account any compensation or enhancements that directly increases habitat condition.

Biodiversity units are determined by quantifying the following: habitat type, conservation priority, quality (condition), strategic significance and area (hectares) throughout the assessed project's lifecycle. The corresponding biodiversity measure for Climb Is given in CLIMB units.

Detailed guidance and information about the calculation methodology of the CLIMB model for Ecological Enhancement can be found on the Ecogain website (<https://climb.ecogain.se/anvand-climb/>). Detailed information about the Global Biodiversity Metric (GBM) tool as well as the calculator tool are available on the Ramboll website: (<https://www.ramboll.com/measuring-biodiversity>).

SS ISO 17620:2025 "Biodiversity — Process for designing and implementing biodiversity net gain in development projects" can also be useful.

**M2.1: Appropriate habitat not listed in Biodiversity net gain tools**

In cases where an equivalent habitat cannot be found in the metric, the ecologist should choose a similar habitat with the same conservation priority as the actual habitat using their professional judgement.

The ecologist should provide written confirmation and justification for all instances where the actual habitat is not the same as the one listed in the tool.

**M2.2: Assigned conservation priority in Global Biodiversity Metric not reflective of actual habitat**

Where the ecologist disagrees with the conservation priority assigned to the habitat in the metric, they should use a similar habitat that has the appropriate conservation priority using their professional judgement.

The ecologist should provide written confirmation and justification for all instances where the actual habitat is not the same as the one listed in the tool.

**M2.3: Documenting irreplaceable habitat in Global Biodiversity Metric**

Irreplaceable habitats are automatically identified in the metric and cannot be changed when the two following conditions are met:

- 1 The habitat is ranked as 'Very High' for conservation priority
- 2 Has a strategic significance of 'Critical' or 'Very High'.

Habitats that do not meet the above conditions but based on local conditions and expert ecological judgement, align with irreplaceable status, can be manually identified as such in the "Is habitat irreplaceable?" column.

**M3: Off-site ecological enhancement and change in ecological value**

In line with criteria 2 and 3, in certain circumstances, BREEAM may recognise ecological enhancements which are not within the boundary of the site being assessed.

Off-site enhancement may be acceptable where:

- 1 One of the following scenarios:
  - 1.a On-site enhancement is not possible
  - OR
  - 1.b The suitably qualified ecologist (SQE) confirms that the proposed ecological enhancements are appropriate and more effective than can be done solely within the development boundary.
- 2 The enhancement is made within the zone of influence (see Definitions in LE 02). The specific zone of influence for the development should be defined by the SQE.
- 3 There are arrangements in place for the on-going maintenance of the enhanced land. This could be demonstrated by compliance with LE 05, as well as legal and funding arrangements.

Full justification and robust evidence must be submitted when relying on this approach.

No credits are available where the enhancement/creation is made off-site and outside the zone of influence.

The compensation should maintain the ecological function within the zone of influence.

## M4 Urban Greening Factor (UGF) methodology

A local or national UGF tool can be used. The SQE must define the used tool as appropriate.

## Compliance notes

Reference	Terms	Description
CN1	Ecological enhancement implementation timeframes	<p>At the post-construction assessment stage of large or phased developments, for example, some ecological enhancements may not have been completed. This may include features which are to be added later in the appropriate planting season.</p> <p>In such cases, it is acceptable to provide evidence from the client or principal contractor confirming that the enhancements will be completed within an appropriate period, advised by the SQE.</p>
CN2	Swedish best practice	SS ISO 17620:2025 "Biodiversity — Process for designing and implementing biodiversity net gain in development projects"
CN3	Other biodiversity metric	If the project intends to use a biodiversity metric tool under Criterion 6 other than those listed, the project must submit a formal query to <a href="mailto:breeam@sgbc.se">breeam@sgbc.se</a> , explaining why the proposed tool demonstrates equivalent qualities to the listed tools.

## Evidence

Criteria	Interim design stage	Post construction stage
<b>Ecological enhancement</b>		
2	Report or letters detailing the recommendations for measures of ecological enhancement. Drawings and specifications demonstrating that the recommendations have been implemented in the design.	Site visit confirming measures have been carried out in-practice, in line with recommendations.
<b>Urban Greening factor</b>		
3-5	Recommendations from the SQE that the targeted urban greening factor will be met. Report from SQE confirming ecological benefits.	Confirmation of urban greening factor
<b>Quantifying change in ecological value</b>		
6-10	Completed version of the Biodiversity Metric tool. Evidence to support the data input within the tool such as ecological survey report and landscape plans (existing and proposed).	Completed version of the as-built Biodiversity Metric tool. AND Site inspection reports, as-built landscape plans and/or planting schedules to show the changes in the Biodiversity Metric tool have been carried out as planned, in line with SQE's recommendations.

## Definitions

See definitions in LE 02

## Additional information

### Ramboll's Global Biodiversity Metric

Allows quantification of both positive and negative land use impacts regardless of location or habitat type. A tool for assessing biodiversity value based on key indicators of ecological integrity tailored to the IUCN Global Ecosystem Typology. This metric enables effective measurement and informed decision-making for biodiversity management at sites around the world. It is an open-source tool.

For more information, see: [www.ramboll.com/measuring-biodiversity](http://www.ramboll.com/measuring-biodiversity)

### CLIMB model for Ecological Enhancement

CLIMB is a model based on SS 199000:2023 that calculates biodiversity within a geographical area. More information can be found here: <https://climb.ecogain.se/anvand-climb/>.