



**Biodiversity Net Gain Calculation of land east off Wakely
Farm, Cherry Green, Westmill, Buntingford, Hertfordshire
SG9 9NH**

Commissioned by Unplugged

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1 Executive Summary

1.1 Proposed Development

The proposed development involves three small “off-grid” holiday cabins within fields and paths to access the cabins on foot, as well as a small car.

1.2 Net Gain Calculation Method

A Biodiversity Net Gain Calculation was carried out in September 2023 for the site, the calculation covered the proposed development area. The calculation was made using the Biodiversity Metric 4.0, which was published by Natural England in March 2023.

Information on habitat types and areas on site prior to and post development were input into the metric. This information was obtained from the following sources:

- Preliminary Ecological Appraisal (PEA) Report carried out by Green Shoots Ecology Limited (July 2023)
- Site Design and Access Statement and soft landscaping plan produced by Client's architect (July 2023).

Total areas of each habitat type on site before the proposed development calculated using QGIS and Google Earth.

Calculations of total areas of each habitat type on site post the proposed development were provided by the client's landscape architect and also calculated using QGIS and Google Earth where not provided.

1.3 Result of Net Gain Calculation

Based on the information input into the Metric the proposed development would result in:

An increase of Area Based habitat units on-site from 1.04 to 1.81, a net gain of 73.25%

An increase of Linear Based habitat units on-site from 0.00 to 0.02, a net gain of 100.00%

The Metric table shows the details of areas and habitats/linear features included in the calculation.

1.4 Discussion

There will be a net gain of 0.77 in Area Based Habitat Units.

The net gain has been achieved by the planting of 7 no. native trees and 1 non-native tree, all likely to achieve medium height within 30 years.

There will be a net gain of 0.02 in Linear Based Habitat Units.

The net gain will be achieved by the creation of mixed native hedgerow at the entrance of the site to screen the car park from the fields.

2 Details of completion of the Metric

2.1 Factors to be included in calculation of the Metric

To carry out a Biodiversity Net Gain calculation with the biodiversity Metric there are number of factors which need to be included.

- The area of each habitat needs to be calculated and the length of any linear features such as hedgerows.
- The strategic significance of the habitat needs to be recorded (within area formally identified in local strategy, location ecologically desirable but not in local strategy or area/compensation not in local strategy/ no local strategy).
- The condition of each habitat parcel based on criteria listed in the Metric. Habitats are recorded as poor, fairly poor, moderate, fairly good, or good condition, with a few habitats of no ecological value not given a condition.

2.2 Explanation of calculation of data included in the Metric

2.2.1 Sources of information for the Metric

Areas of habitats prior to development were calculated using:

- QGIS and Google Earth to calculate areas of each habitat parcel on site where not provided by the client's architect.

Areas and lengths of habitats post development was calculated using:

- QGIS and Google Earth to calculate areas of each habitat parcel on site where not provided by the client's architect.

Details of data input into the Metric

The Metric includes specific habitat types which can be chosen. In cases where the habitat to be input does not appear to specifically match any of the habitats in the Metric or appears to match more than one, Habitat Definitions Version 2.0 (2023) is examined for a detailed definition of the habitats given in the Metric and the habitat in question is input as that with the detailed description most closely matching the habitat on site.

Habitat on site prior to proposed development:

- Developed land; sealed surface
- Arable field (cereal crops)
- Ruderal
- Modified grassland

Habitats created on site post proposed development:

- Individual rural trees
- Native hedgerow
- Developed land; sealed surface

Table 1: Development Site - Details of information input for calculation of baseline habitat and hedgerow units prior to development

Habitat type on metric table	Area or length	Details of retention or removal of habitat
Urban – Developed land, sealed surface	Area calculated using QGIS and google earth.	Vehicular access road to be retained.
Grassland – Other neutral grassland	Area calculated using QGIS and google earth.	Tall ruderal habitat area at the entrance to the site, partially cleared to create car park area. N.B. Other neutral grassland was chosen as being the closest habitat match as ruderal is not listed as an option in the metric.
Grassland – Modified grassland	Area calculated using QGIS and google earth.	Modified grassland along foot access tracks and in areas where cabins will be located, mostly retained.
Cropland Cereal crops	Area calculated using QGIS and google earth.	Part of the arable field within the red line boundary, to be retained as is not impacted by the development.
Linear habitat type on metric table		
No linear habitat on site	Length	Details of retention or removal of habitat

Table 2: Development Site - Details of information input for calculation of post-development habitat and hedgerow units

Habitat type on metric table	Area or length	Details of creation and retention of habitats
Urban – Developed land; sealed surface	Area calculated using QGIS and google earth.	Small car park with vehicle access track.
Urban – Rural tree	Canopy area calculated using BNG Metric 4.0 Tree helper.	Tree canopy area being created by the planting of 8 no. medium native trees, 1 no. oak behind the car park and 7 no. planted to screen one of the “off-grid” cabins.
Linear habitat type on metric table		
Hedgerow Native hedgerow	Length	Details of retention or removal of habitat
	Provided by the client.	Native hedgerow planted to screen car park at the entrance of the site from the arable fields.

3 References

Green Shoots Ecology Limited (2023) - PEA Report, Wakely Farm, Cherry Green, Westmill, Buntingford, Hertfordshire SG9 9NH

Natural England Joint Publication JP039 (2023) – The Biodiversity Metric 4.0 - auditing and accounting for biodiversity USER GUIDE

Natural England Joint Publication JP039 (2023) – The Biodiversity Metric 4.0 - auditing and accounting for biodiversity TECHNICAL SUPPLEMENT

The UK Habitat Classification Working Group (July 2023) – Habitat Definitions Version 2.0

4 Annexes

Annex 1 – Habitats Prior to Development

Annex 2 – Habitats Post Development

Annex 1 – Habitats Prior to Development



Map data from Google

Annex 2 – Habitats Post Development



Map data from Google

Based on Plan provided by client's landscape architect.