

A large, faint background graphic featuring a circular arrow that loops around a central stylized leaf. The leaf is split vertically, with the left half in light blue and the right half in light green. The arrow is composed of two segments: a light blue one at the top and a light green one at the bottom, both pointing in a clockwise direction.

BIODIVERSITY NET GAIN ASSESSMENT

Land at Nethertown Road
St Bees
Cumbria

March 2025
2025-019
Rev A

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APPENDICES

A	Proposed Site Plan
B	Pre-Development Tree Survey
C	Pre-Development Habitats
D	Post Development Habitats

1.0 INTRODUCTION

1.1 PURPOSE OF THIS REPORT

Waterway Drainage Engineering Ltd were requested to undertake a Biodiversity Net Gain (BNG) assessment for the siting of 5 holiday pods at Nethertown Road, St Bees.

The report sets out the policy background for Biodiversity Net Gain, the baseline conditions of the 'Site', the proposed site layout and the results of the net gain calculations.

Each habitat type was mapped using the standard habitat mapping convention using Phase 1 habitat survey (JNCC, 2010) which was subsequently converted into the UK Habitat Classification (Butcher *et al.*, 2020) for the purposes of using the DEFRA metric.

Using the findings of the baseline surveys, pre-construction ecology was measured against the proposed habitat changes arising from future ecological enhancements based on the proposed site plan produced by Westwood Landscape.

This report presents the results of this desk-based study to assess net change in biodiversity 'units' in connection with the removal of habitat for the proposed development at Nethertown Road, St Bees.

1.2 ECOLOGICAL CONTEXT

The proposed development is for 5 new camping pods on 0.63 ha of agricultural land accessed from the cul-de-sac for five new houses which have recently been approved (Planning Application refs 4/21/2368/001 and 4/23/2100/0R1). This cul-de-sac when constructed will have a single access onto Nethertown Road and there are no proposals to revise the access or cul-de-sac.

The location plan for the proposed development site is located within *Figure 1*.



Figure 1: Site Location Plan

1.3 BIODIVERSITY NET GAIN POLICY CONTEXT

1.3.1 Guidance

This guidance has been produced in line with the template for a 'BNG Feasibility Report' in the CIEEM Biodiversity Net Gain Report and Audit Templates (CIEEM, 2021). It utilises the BNG Good Practice Principles for Development (CIRIA, 2019) (including the checklist for Biodiversity Net Gain design) and BS8683, the British Standard for Biodiversity Net Gain (British Standards Institute, 2021), to inform outputs and recommendations.

1.3.2 Legislation

The Environment Act 2021 was granted Royal Assent on the 9 November 2021 and contains provisions which will mandate achieving a 10% BNG for most developments (including Nationally Significant Infrastructure Projects). These provisions came into effect in November 2023 for developments requiring planning permission and in 2025 for Nationally Significant Infrastructure Projects. They will legally require developers to ensure sites are improved for biodiversity, with a 10% increase in habitat value for wildlife compared with the pre-development baseline. All biodiversity enhancements will be required to be maintained for a minimum of 30 years (UK Parliament, 2021).

1.3.3 Planning Policy

The legal requirement for BNG is embedded in national planning policy. The National Planning Policy Framework (Ministry of Housing, Communities & Local Government, 2021a) states in paragraph 170 that:

“Planning policies and decisions should contribute to and enhance the natural and local environment by:...

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;... ”

Paragraph 174 states:

“To protect and enhance biodiversity and geodiversity, plans should:...

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”

2.0 METHODOLOGY

2.1 METHODOLOGY

The pre-development (baseline) and post development (proposed) value of the habitat at the proposed development site at Nethertown Road, St Bees have been calculated using DEFRA / Natural England's Biodiversity Metric 4.0 calculator. The methodology for determining habitat distinctiveness and condition value follows the guidelines set out by the User Guide and Technical Supplement for Biodiversity Metric 4.0.

The small-scale metric was not utilised due to the close as the proposed development is greater than 0.5 ha and the distance from the site to the St Bees Head Site of Special Scientific Interest (SSSI) being 300m to the south west.

2.2 MITIGATION HIERARCHY

The ecological mitigation hierarchy is central to the BNG process and is the first of the BNG Good Practice Principles. The ecological mitigation hierarchy, as set out in the National Planning Policy Framework (NPPF, 2021), and the National Planning Policy Practice Guidance (NPPG) sets out the order in which the following measures should be implemented, in which avoidance of impacts should always be the priority.

Avoidance – development should be designed to avoid significant harm to valuable wildlife habitats and species.

Mitigation – where significant harm cannot wholly or partially avoided, it should be minimised through the use of effective mitigation measures.

Compensation – where, despite whatever mitigation would be effective, there would still be significant residual harm, as a last resort, compensation should be used to provide an equivalent value of biodiversity.

2.3 DATA SOURCES

The following data sources have been used to define the boundary for the BNG calculation and determine the relevant attributes for BNG (e.g. size, habitat type and condition) for the pre and post development habitats.

2.3.1 Boundary

The boundary used for the BNG assessment is the red line application boundary for the project shown within *Appendix A* of this document.

2.3.2 Baseline Habitats

In order to generate the Site baseline habitat data (e.g. habitat type, condition) the following data was used:

A habitat survey was undertaken of the land within the Site using UK Habs guidance on 10 March 2025. A fine scale MNU of 25m² was selected as the project is small enough for the most detailed mapping to be feasible. The survey followed the UK Habitat Classification Use Manual Version 1.1 (2020) guidance, with the Site systematically walked over, and the dominant habitat type in each area recorded. Dominant plant species were noted, as were any that are legally protected (Schedule 8 of the Wildlife and Countryside Act (WCA) 1981), notable (GB / England Red Listed, Section 41), or invasive species listed in Schedule 9 of the WCA 1981.

The survey was undertaken by Peter Allan who is a Chartered Water and Environmental Manager with CIWEM and a Chartered Environmentalist with the Society for the Environment.

In addition, and to inform the survey, a landscape analysis was conducted by Westwood Landscape Ltd to determine the condition of the Site. The landscape analysis is included in *Appendix B* for reference.

2.4 ASSESSMENT STEPS

The following steps were taken to estimate the BNG value:

2.4.1 Calculation of Baseline Habitat Species

The UK Hab types used within the Biodiversity Metric 4.0 were used, with reference to guidance in the User Guide and Technical Supplement and the G-1 All Habitat Tab in the 4.0 metric which details which metric habitat types corresponds to each UK Hab habitat. In the case of the habitats on the Site, these were simple one to one conversions.

The metric includes three broad categories of habitats and biodiversity units for which scores are calculated differently. These are:

- Area habitats (such as grasslands, woodlands and ponds).
- Linear hedgerows and lines of trees.
- Linear rivers and ditches.

Given the very limited nature / footprint of the Site, no linear rivers or watercourses were present. Therefore, these features are not included on either the baseline or the post development proposals.

Distinctiveness and condition scores were assigned to habitats based on the results of the UK Habs habitat classification survey and guidance in the Biodiversity Metric 4.0 User Guide and Technical Supplement (including the Condition Assessment Sheets for each habitat type).

2.4.2 Calculation of the Post Development Units

Quantification of post development biodiversity units were undertaken using habitat data derived from surveys in these areas. Precautionary habitat scores were assigned based on the management feasibility. Once the calculation had been completed the outputs were reviewed to understand the losses and gains for each type of habitat and understand whether the development complies with the Biodiversity Metric 4.0 trading rules (no trading of habitat value).

Rule 3 of the Biodiversity Metric 4.0 relates to the trading down and states that this must be avoided. Replacement of lost habitat should be on a 'like for like' or 'like for better' basis, in terms of distinctiveness, condition and total units. New, or restored, habitats should aim to achieve a higher distinctiveness and / or condition than those lost. This rule intends to prevent the development of BNG plans that compensate for the loss of biodiverse habitats with larger areas of less biodiverse habitats. Rule 4 states that 'losses and deterioration of irreplaceable habitat cannot be accounted for through the metric'. Separate, bespoke consideration is required if there is a loss or deterioration of any irreplaceable habitat. The presence of irreplaceable habitat was determined from the desk study and field survey results.

2.5 LIMITATIONS AND ASSUMPTIONS

Post development condition scores are indicative and are dependent on the appropriate management and maintenance of the post development habitats. In general, the management of created, enhanced and restored habitats is important within the BNG metric because the metric accounts for some of the risks associated with the difficulty in doing this as well as the time it takes the habitat type to establish and reach a target condition. In committing to the BNG process, the landowners are committed to the management and maintenance requirements that will be necessary to ensure the enhanced / created habitats achieve their target condition and beyond, to a minimum of 30 years post-construction.

The identified option for achieving BNG assumes that the habitats enhanced / created / retained will be maintained for a minimum of 30 years post development as required to satisfy the conditions for biodiversity net gain in the best practice guidelines (CIEEM, IEMA & CIRCA, 2019). A BNG Management and Monitoring Plan (MMP) would need to be implemented by the appointed contractor and then adopted by the Site operator to ensure that all BNG is delivered to the required condition. This MMP would need to include the following details:

- Aftercare maintenance and long-term habitat management and monitoring of created and enhanced features.
- How management will be implemented for a minimum period of 30 years.
- What monitoring will be implemented during and after construction.

3.0 BASELINE CONDITIONS

3.1 VALUE OF BASELINE HABITATS

The baseline habitat has been calculated using the Biodiversity Metric 4.0, as having a baseline habitat value of 2.52. A map of the pre-development habitats is shown within *Appendix C*. The information is summarised in *Table 1*.

The Site currently consists of mowed grassland which periodically is grazed by sheep.

Broad Habitat	Habitat Type	Area (ha)	Distinctiveness	Condition	Habitat Units	Strategic Significance
Grassland	Modified Grassland	0.630	Low	Moderate	2.52	Low strategic significance

Table 1: Summary of the pre-development baseline habitat units

The baseline hedgerow has been calculated using the Biodiversity Metric 4.0, as having a baseline habitat value of 0.62.

Hedge Number	Habitat Type	Length (km)	Distinctiveness	Condition	Habitat Units	Strategic Significance
G1	Native Hedgerow – associated with bank or ditch	0.0515	Medium	Good	0.62	Low strategic significance

Table 2: Summary of the pre-development baseline hedgerow units

4.0 POST DEVELOPMENT HABITAT

4.1 ON-SITE HABITAT PROPOSALS

The proposed development habitat has been identified within the *Appendix D*. This plan determines that there will be the following land uses on Site:

- Five new camping pods (0.03 ha)
- Gravel car park (0.025 ha)
- Access road and hardstanding (0.061 ha)
- Other Neutral Grassland (0.514 ha)
- Species Rich Native Hedgerows with Trees (0.08 km)

These figures have been inputted into the Biodiversity Metric 4.0 and would comprise an area of 0.630 ha.

4.1.1 Other Neutral Grassland

The other neutral grassland proposed for 0.514 ha of the Site is to meet at least three of the following criteria:

1. >20% cover of broadleaved herbs and sedges;
2. >8 species per m² (including forbs, grasses, sedges and rushes, and excluding bryophytes);
3. ≥1 grass species that is not generally sown for intensive agricultural production (ie. Ryegrasses (*Lolium spp.*), Timothy (*Phleum pratense*), Cock's-foot (*Dactylis glomerata*), Meadow Fescue (*Festuca pratensis*) is at least abundant;
4. Cover of Rye-grasses (*Lolium spp.*) and White Clover (*Trifolium repens*), where present, is <30%.

The key species associated with the other neutral grassland are:

- Yarrow (*Achillea millefolium*)
- Ribwort Plantain (*Plantago lanceolata*)
- Creeping Thistle (*Cirsium arvense*)
- White Clover (*Trifolium pratense*)
- Meadow Buttercup (*Ranunculus acris*)
- Creeping buttercup (*Ranunculus repens*)
- Common nettle (*Urtica dioica*)
- Daisy (*Bellis perennis*).

4.1.2 Species Rich Native Hedgerows with Trees

The UK Habitat Action Plan for species-rich hedgerows defines them as hedges “which contain five or more native woody species in a 30 metre length”. Hedges that contain less than 5 woody species (trees and shrubs) in each 30m, but have a rich variety of herbaceous plants at their base, are also included.

The Species Rich native hedgerow is selected from the following plants:

- 50% Quickthorn (Hawthorn, May) – *Crataegus Monogyna*
- 25% Blackthorn (Sloe) – *Prunus Spinosa*

The remaining 25% is selected from the following species:

- Common Alder – *Alnus Glutinosa*,
- Common Dogwood – *Cornus Sanguinea*,
- Hornbeam – *Carpinus betulus*,
- Field maple – *Acer Campestre*,
- Guelder Rose – *Viburnum Opulus*,
- Hazel – *Corylus Avellana*,

- Dog Rose – Rosa Canina,
- Bird Cherry Prunus padus,
- Green Beech – Fagus sylvatica,
- Spindle – Euonymus Europaeus,
- Wild Crabapple – Malus Sylvestris

When planting a new species rich native hedge, it is recommended to use 3 plants per metre for a single row hedge planting them each 33 cm apart.

4.2 CHANGE IN BIODIVERSITY VALUE

Under the current proposals set out within the Site Plan, located within *Appendix C*, there will be a gain of Habitat Area Units of 1.80 (71.40%) and a gain in hedgerow units of 0.09 (14.27%). This is shown within *Table 3*.

On-site baseline	Habitat units	2.52	
	Hedgerow units	0.62	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	4.32	
	Hedgerow units	0.71	
	Watercourse units	0.00	
On-site net change (units & percentage)	Habitat units	1.80	71.40%
	Hedgerow units	0.09	14.27%
	Watercourse units	0.00	0.00%
Off-site baseline	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	Habitat units	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	1.80	
	Hedgerow units	0.09	
	Watercourse units	0.00	
Spatial risk multiplier (SRM) deductions	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
FINAL RESULTS			
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	1.80	
	Hedgerow units	0.09	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	71.40%	
	Hedgerow units	14.27%	
	Watercourse units	0.00%	
Trading rules satisfied?	Yes ✓		

Table 3: Summary of the post-development units

5.0 RECOMMENDATIONS AND CONCLUSIONS

5.1 SUMMARY

The post development plan within this report is sufficient to achieve an area based Biodiversity Net Gain, comprising a net area gain of 71.40 % of habitat units and 14.27 % of hedgerow units when compared to the baseline; assuming the habitat creation starts in the year construction commences.

Given the nature of the development it was not possible to avoid all habitat impacts by re-siting the development; however, none of the habitats lost are high distinctiveness, very high distinctiveness or irreplaceable and they will be compensated for in order to provide a gain in the metric.

5.2 CONTINUED OBSERVATIONS

To ensure compliance with the BNG conditions outlined within this report, an ecologist should attend the site periodically throughout 2025 and 2026, both before and during construction works, to collect evidence that BNG conditions are being adhered to and the management strategy is being followed.

During these visits, National Vegetation Classification (NVC) surveys should be carried out by the Ecologists to appropriately update the species list on site, so to best provide the most up to date information and recommendations for the ongoing BNG management.

6.0 REFERENCES

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