Biodiversity Net Gain Feasibility Report

Site: Land at Higher Road, Longridge, Preston, Lancashire, PR3 2YX

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Guidelines

This assessment has been designed to meet:

- British Standard 42020 (2013) 'Biodiversity – Code of Practice for Planning and Development'.
- National Planning Policy Framework 2023 (*NPPF, 180(d), 2023*)

Summary

Further to the Preliminary Ecological Assessment (PEA) at land Higher Road, Longridge, Preston, Lancashire, PR3 2YX in June 2021, this report has been commissioned to meet the NPPF requirements for developments to show a minimum of 10% Biodiversity Net Gain.
The BNG Metric calculation shows a 19.73% Biodiversity Net Gain on the site with the current landscape plan 12870-LUC-XX-00-DR-L-0101, and an additional 135.4% increase in species rich hedgerow.
The Preliminary Ecological Appraisal (*Ark, July 2021*) shows the site is of moderate conservation and wildlife value due to the habitats present on site and the location in the landscape. Historic Biological Record Data show the presence of multiple IUCN Red List & Lancashire BAP bird species; WCA S41 protected reptiles and mammals in the desk study area. The Site is within The Forest of Bowland National Landscape, therefore consultation with the National Landscape will be required. A RAMS method of site clearance must be carried out to protect wildlife prior to any site works commencing.
Biodiversity enhancement as recommended at 4.3 and mitigation recommendations from the PEA need to be incorporated into any landscaping and building design to achieve the required enhancements and Biodiversity Net Gain as shown in the calculation.

Contents

1.0 Introduction and Context

1.1 Background

Further to the Ecological survey (Preliminary Ecological Appraisal PEA Ark, 2024) an assessment was required to determine the Biodiversity Net Gain of the site at Land at Higher Road, Longridge, Preston, Lancashire, PR3 2YX to support a proposed planning application. Full project description, and survey outcomes are described in the above documents, and baseline plan at appendix 2.

1.2 Scope of the report

The assessment takes into consideration the local and national planning policy and strategy relevant to the site, the baseline ecological condition of the site, and the proposed development plans and the enhancement plan, and to meet the requirements of The National Planning Policy Framework (2023) and standards set in the CIEEM/CIRIA *Biodiversity Net Gain. Good Practice Principles for development a practical guide*.

Under current guidelines (CIEEM, April 2019) this report will be valid until December 30th, 2025. Beyond this date further site visits may be deemed necessary to update the condition of ecological features on site.

2.0 Methodology

2.1 Desk & Field Study methodology

Habitats are described using the UK Habitat Classification System methods and codes (converted from JNCC Phase 1 codes where necessary), and condition assessed according to the Statutory Biodiversity Metric Auditing and Accounting for Biodiversity Condition Assessment Sheets.

Surveys and assessment were carried out by C Edmondson MSc MRSB, consultant ecologist with 12yrs field survey experience and Natural England Class 2 bat licence holder. Methods used are described in detail in the PEA report for this site.

2.2 Approach to BNG

BNG principles: BNG is achieved through 10 principles, the first of which is the Mitigation Hierarchy. This Hierarchy will be followed at each stage of the development.

The DEFRA Statutory Biodiversity Net Gain Metric (Issued 27/07/2024) was used to:

- Assess the baseline biodiversity unit value of the site.
- Demonstrate potential biodiversity net gains.
- Measure and account for direct impacts on biodiversity.

The metric assesses existing habitats and planned new habitats created by a development or land change.

2.3 Limitations

There were no limitations to this report.

3.0 Baseline Site Conditions

3.1 Priority Habitats & designated areas

The PEA (Ark, 2024) concluded that no priority habitats were present on site but is within the Forest of Bowland National Landscape. Other broadleaved woodland (w1g) is adjacent to and is spreading into the boundary to the west; a small area is included in the habitats below.

3.2 Site description

The site is predominantly moderate condition neutral grassland. There were no priority habitat indicator species present at the time of the survey, but the frequent finer meadow grasses present, and soil sample results suggest that the land has not been heavily fertilised or over-seeded in recent history. Other broadleaved woodland (w1g) lies adjacent to the west, and overhangs the grassland in some areas, and therefore has been classified as woodland for the purposes of this calculation.

3.3 Baseline metric calculations

Using the DEFRA Statutory Metric BNG Calculation tool, the development shows a total baseline habitat of 17.92 habitat units on site. The breakdown of habitats is shown below at Table 1, Headline results at Appendix 1, and full metric included with the application as a separate document.

The north boundary to Longridge Road is a mature hedgerow. This has been split into 2 categories for the calculation:H1 -contains mature trees, H2 – has no standard trees, therefore requiring the separate classification.

The total area of the site is 2.24ha.

Table 1: Baseline habitats

Site Features:	Code (UKHab)	Area ha/length/no.	Condition assessment	BNG Units	Map Ref
Other Neutral Grassland	g3c	2.0985	moderate	16.79	G1
Other Deciduous Woodland	w1g	0.1415	moderate	1.13	W1
Species Rich hedgerow with trees.	h2a5	107m	moderate	0.13	H1
Species Rich Hedgerow	h2a	51m	moderate	0.04	H2

4.0 BNG Good Practice Principles for Development

BNG is achieved through 10 principles, the first of which is the Mitigation Hierarchy. This Hierarchy will be followed at each stage of the development.

Principle 1: Mitigation Hierarchy

1: Avoid Biodiversity Loss e.g. Finding alternative sites, changing development plans etc

2: Minimise any loss

3: Mitigate for any loss

4: Compensate

The measures proposed for this development are shown below at Table 2.

Table 2: Hierarchy Measures:

1: Avoidance The CSBI defines avoidance as 'Measures taken to anticipate and prevent adverse impacts on biodiversity before actions or decisions are taken that could lead to such impacts'.	The results of the Ecological Appraisal at Table 2 show that there are no priority habitats present within the site boundaries, nor is the site within or close enough to cause damage to any local designated sites. **However, consultation with Forest of Bowland National Landscape** will be required to determine if the site proposals will be of a detrimental nature to the landscape. Measures to avoid pollution will be implemented according to current EA Pollution Prevention Guidance.
2. Minimise	Implementing tree protection zones around the adjacent hedges & tree lined boundaries to protect from any impacts of the development during construction. Mitigation measures as described in the Reasonable Avoidance Method Strategy included at Appendix 4 in the PEA report (Ark, 2021).
3. Mitigation	Planting native berry producing shrub species, and late flowering shrubs in the hedgerows in the landscaping and gardens. Introducing areas of native and locally relevant wildflower species in the landscaping to enhance the area for invertebrates. Providing early flowering scrub to fill the gap in food resources for pollinators in early spring, and increase potential breeding habitats, evolving into woodland over time, continuing the food & breeding resource provision, and shelter for small mammals. Enhancement measures as described at 4.2 in the PEA report (Ark, 2024) and details shown in the landscape plan in the development proposals
4. Compensation	Areas of native scrub and species rich grassland, with species targeted at locally important moth and butterfly species to be included in the landscape design, to improve the site for wildlife. Native hedging included in the new property boundary increasing the amount of hedging in the area. Specimen trees added into the landscape and boundary. Further details in the full landscape plan.

Principle 2: Avoid losing biodiversity that cannot be offset by gains elsewhere:

Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset to achieve No Net Loss or Net Gain.

- No Priority Habitats or Irreplaceable habitats are present on site.

Principle 3: Be Inclusive and Equitable

Engage stakeholders early (e.g RSPB, NL & Natural England), and involve them in designing, implementing, monitoring and evaluating the approach to Biodiversity Net Gain. Achieve net gain in partnership with stakeholders where possible and share the benefits fairly among stakeholders.

Principle 4: Address Risk

This is addressed within the metric and methodology set out within this document.

Principle 5: Make a measurable Net Gain Achievement

This will be achieved through the landscape plan and Biodiversity enhancement plan

Principle 6: Achieve the best outcomes for biodiversity

Net gain calculations from Landscape plan to show 10% net gain. If this cannot be achieved on-site, biodiversity credits for species rich grassland to be purchased.

Principle 7: Be additional

Aim to achieve a greater BNG than the required 10% and include all enhancement recommendations made through the PEA and Enhancement Strategy

Principle 8: Create a net gain legacy

To be achieved through the "Next steps" following planning decision:

- Project Implementation Construction Plan incorporating the Biodiversity Enhancement Plan.
- Biodiversity Net Gain Habitat Management and Monitoring Plan.

Principle 9: Optimise sustainability & prioritise biodiversity

By implementing the BNG management plan and proposed SUDS in the landscaping plan this development will improve the sustainability of the site.

Principle 10: Be transparent

Communicate all Biodiversity Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.

5.0 Proposed Design

The Site proposals includes the following features in the landscape plan: (full proposal drawings at Appendix.3.) Area measurements provided by landscape design architect LUC from plan no. 12870-LUC-XX-00-DR-L-0101.

Site features created:	Code (UKHABS)	Area ha/length/no.	Units delivered
Buildings & Hardstanding tarmac	u1b5 & u1b6	0.11144	
Vegetated garden	u1	0..0727	0.14
Native mixed scrub	h3h	0.172	1.15
Green roof		0.03452	0.07
43 x Specimen trees within the landscape		0.1751	0.49
Site features enhanced:			
Other Neutral Grassland moderate - Good	g3c	1.7105	18.48
Hedgerows: H2 trees added		51m	0.04
New Hedgerows			
Mixed native species rich hedgerow	h2a	337m	0.23

In addition to the above the development will follow the biodiversity enhancement guidelines of the PEA and will include:

- Bird boxes
- Bat boxes
- Invertebrate habitat
- Hedgehog refugia
- Amphibian & reptile refugia

5.1 *Biodiversity Net Gain Calculation*

The summary of results for the current proposed design shows a net habitat gain of 19.73%, and 135.4% hedgerow gain, which includes the specimen trees in the full landscape plan.

Assumptions made for the purpose of the calculation:

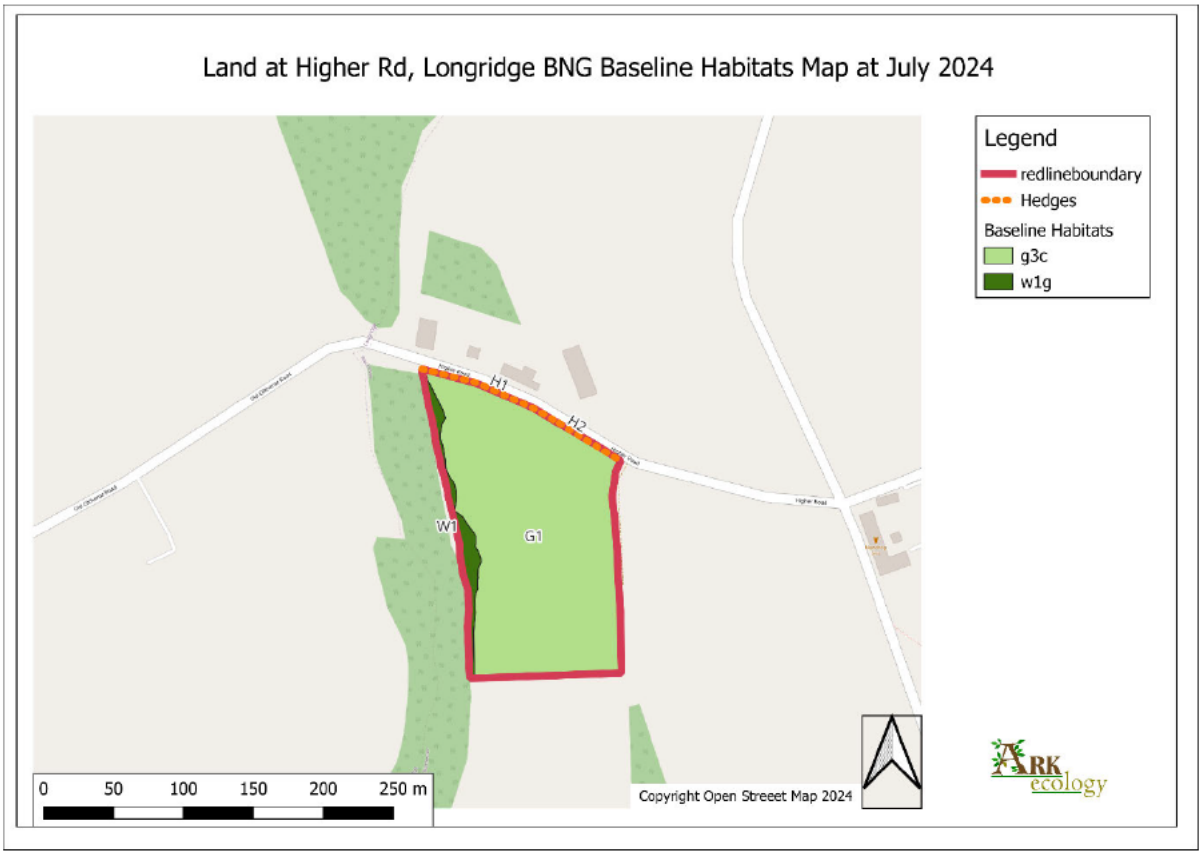
- All specimen trees are classed as small at planting irrespective of their eventual size and will be maintained to reach "poor" criteria of the Habitat Condition Assessment within 10 years.
- Enhanced grassland will be managed according to the Habitat management plan to retain the species and attain the "good" criteria of the Habitat Condition Assessment for neutral grassland within 5 years.
- The native scrub is of mixed species.

Any changes to the above assumptions will require a re-calculation of the metric.

6.0 References

- BS 42020, Biodiversity – Code of practice for planning and development (2013) http://www.bsigroup.com/LocalFiles/en-GB/biodiversity/BS-42020-Smart-Guide.pdf
- Cheffings, C. and Farrell, L. (eds.) (2005) The Vascular Plant Red Data List for Great Britain. Joint Nature Conservation Committee, Peterborough.
- CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester. http://www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf
- CIEEM (2021). Biodiversity Net Gain Report and Audit Templates Chartered Institute of Ecology and Environmental Management, Winchester, UK.
- CIEEM (2013) Guidelines for Preliminary Ecological Appraisal Institute of Ecology and Environmental Management
- CIEEM, CIRIA, IEMA (2019) Biodiversity net gain. Good practice principles for development. A practical guide. CIRIA C776a. London, 2019.
- Google Earth (2024)
- National Planning Policy Framework, 2023 https://www.gov.uk/government/publications/national-planning-policy-framework--2
- Natural England (2007). Badgers and Development a Guide to Best Practice and Licensing. Natural England. Bristol. http://www.wildlifeco.co.uk/wp-content/uploads/2014/03/badgers-and-development.pdf

Appendix 1: BNG Survey Plan



Appendix 2: Proposed Site Plan

Appendix 3: BNG Headline results

The Growing House, Higher Rd

Headline Results

Return to results menu

Scroll down for final results ⚠

On-site baseline	*Habitat units*	17.92	
	Hedgerow units	0.17	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	21.46	
	Hedgerow units	0.40	
	Watercourse units	0.00	
On-site net change (units & percentage)	*Habitat units*	3.54	19.73%
	Hedgerow units	0.23	135.40%
	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*	3.54	
	Hedgerow units	0.23	
	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*	3.54
	Hedgerow units	0.23
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	19.73%
	Hedgerow units	135.40%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	17.92	19.71	0.00	No additional area habitat units required to meet target ✓
Hedgerow units	10.00%	0.17	0.19	0.00	No additional hedgerow units required to meet target ✓
Watercourse units	10.00%	0.00	0.00	0.00	No additional watercourse units required to meet target ✓

Appendix 4: Reasonable Avoidance Measures (RAMS)

Method Statement for Reasonable Avoidance Measures

Reasonable Avoidance Measures (RAMS) - Method Statement in relation to:

- Reptiles
- Great Crested Newt (Triturus cristatus) (GCN) and common amphibians
- Terrestrial Mammals e.g hedgehog, badger, hare

Objectives of the Method Statement

Some development related activities on the site, such as excavation creation and removal of materials from site in areas local to otherwise suitable terrestrial habitat, has the potential to affect common amphibian and reptiles, and some terrestrial mammals, whilst protected mammals are known in the extending area. Therefore, safeguards must be implemented to protect these species and the Method Statement below outlines measures to be implemented in order to ensure this objective is achieved. Following these methods reduces the likelihood of negative impacts.

Timings – preferred timing of scrub clearance to minimise impact

- ***GCN :*** When the GCN are found in their aquatic habitat and not in terrestrial habitat (core breeding season: March-May inclusive).
- ***Nesting Birds:*** Outside the key breeding season which is 1st March – 31st August inclusive
- ***Mammals :*** All year

Before Any Works

- Before any work commence at the site all contractors will be attend a 'tool box' talk by a suitably licenced ecologist of the potential for protected species to occur on site, what to look out for and what to do in the event that protected animals are found.
- Photograph(s) of relevant protected species will be displayed at the site office and/or kept by the contractor's personal being for visual reference purposes.
- Contractors to ask any questions as required following toolbox talk, before signing the Toolbox Talk Audit Form.
- Clearance works within the site should only commence after a careful visual inspection (Hand Search) has been carried out by a suitably qualified and experienced ecologist has determined that no animals are present on site/targeted areas and is satisfied no animals are at risk.
- Habitat manipulation - vegetation that can support reptiles/GCN is to be reduced to a height of 150-200 mm, followed by a visual hand search. After the hand search the vegetation is then to be cut to ground level and raked bare.

During Works

- Habitat manipulation will encourage animals to temporarily move away/abandon the area.
- For the full duration of the work, vegetation will be kept at ground level.

- No works are to extend off site in the areas adjacent to the red line boundary.
- The impact of works on adjacent habitats will be avoided by the clear demarcation of the works area.
- All work must strictly be in accordance with all of the relevant Pollution Prevention Guidelines published by the Environment Agency which may include, but is not limited to, PPG1 (general), PPG5 (works in, near, or liable to affect watercourses) and PPG6 (work at construction & demolition sites). Contingency/emergency plan should be drawn up to address chemical spillage, drainage, collision, etc.
- Machinery and materials are to remain on bare ground and reasonable efforts must be made to avoid the compiling of accumulated piles. Materials that do require piling will be stored within areas of bare ground above ground level using pallets in order to prevent animals from seeking shelter beneath.
- Any excavated material stored overnight should be searched prior to being used as infill.
- Where open vertical-sided trenches are excavated it should be ensured that they are not left open overnight to avoid amphibians or small mammals falling into them and becoming trapped. If trenches cannot be back filled after the working day planks of 150-200 mm wide should be placed in them at a 45 degree diagonal angle to serve as an escape mechanism.
- Excavations should also be checked in the morning on a daily basis for the presence of any animals that may have fallen in during the night. In the event that a protected species is located in trenches then it/they should be left in situ and the ecologist promptly contacted to identify and provide further advice.

If in the event a reptile or protected amphibian is found work must cease; the ecologist will be made aware of the finding and can then appraise the situation providing further advice.

Site staff must be made aware that if a reptile or protected amphibian are found there is a correct procedure in place to follow, and failure to halt works may result in committing an offence.

At no point should any person handle a a reptile or protected amphibian. Unlicensed handling is illegal and untrained handling may cause the animal unnecessary stress and injury.

A Natural England Protected Species Mitigation Licence may be required following the discovery of any protected species on site.