Land Off Windmill Avenue, Grimethorpe, Barnsley, S72 7AN

Biodiversity Net Gain Assessment

Prepared on behalf of

Mr J Nippers

Final Report v1

03 December 2025

Land Off Windmill Avenue, Grimethorpe, Barnsley, S72 7AN
Biodiversity Net Gain Assessment

Document Control

Client:	Mr J Nippers
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Report Prepared for Issue by:	Elizabeth Davies BSc (Hons) MCIEEM

Disclaimer

This report has been prepared, and is only valid for the named client, for the project described. The information which we have prepared and provided is in accordance with CIEEM's Code of Professional Conduct. Liz Ecology confirms that the opinions expressed are our true and professional bona fide opinions. The report is in accordance with the agreement under which our services were performed.

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The content of the report may, in part, be based upon information provided by others and on the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from any third party has not been independently verified by Liz Ecology unless otherwise stated in the report.

Provided no significant changes are made to the proposals or on the site subsequent to the report's issue; this report can be considered valid for 18 months from the date of issue, in line with CIEEM's Advice Note on The Lifespan of Ecological Reports and Surveys (2019).

As part of membership to our professional body (CIEEM) we are required to provide our biological results to applicable biological record centres. As such, it is our intention to supply biological data collected as part of this assessment to the relevant centre unless directly instructed in writing not to do so by the client.

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NON-TECHNICAL SUMMARY

- Liz Ecology was commissioned by Mr J Nippers to conduct a Biodiversity Net Gain Assessment of the land at Land Off Windmill Avenue, Grimethorpe, Barnsley, S72 7AN. The survey was conducted to support a planning application for the development of six new dwellings.
- The purpose of this report is to identify the net percentage change in biodiversity on-site post-development and to aim for a minimum of a 10% Biodiversity Net Gain (BNG)
- The current National Planning Policy Framework (NPPF) sets out that planning should provide biodiversity net gains where possible. Due to the date at which the planning application was granted, mandatory biodiversity net gain set out in the Environment Act was not applicable, as this did not come into force until February 2024 for new planning application. At the time at which planning was granted the BNG requirements were in the emerging local plan for Wakefield which included the requirement for Biodiversity Net Gain in Policy WLP 54.
- The development site is approximately 2100m2 and consists of hardstanding, ruderal, other neutral grassland, modified grassland and scrub. There are a hedge and single tree outside the site boundary.
- The baseline habitat units are 0.40 and hedgerow units are 0.00.
- It is predicted that the proposal will have 0.16 habitat units created, with a net loss of -0.30 units, showing a -66.23% net loss. The client will need to agree off-site compensation via a third party to purchase the required units to achieve the 10% net gain and balance the trading rules. Additional habitat units required to meet the 10% = 0.35 for the proposals. The trading rules are not met, primarily due to the loss of medium distinctiveness habitats. This will need to be considered when seeking off-site BNG habitats so trading down in avoided.

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APPENDICES

1. INTRODUCTION

1.1 Liz Ecology was commissioned by Mr J Nippers to conduct Biodiversity Net Gain assessment of the land at Land Off Windmill Avenue, Grimethorpe, Barnsley, S72 7AN (Grid reference: SE 41169 09821).

1.2 The survey was conducted to support the planning application for the development of six new dwellings.

1.3 The aim of this report is to identify the net percentage change in biodiversity on site post development and where possible to seek a minimum of +10% Biodiversity Net Gain (BNG) in accordance with contractual requirements.

Site description

1.4 The site is approximately 2100m^2 and consists of consists of hardstanding, ruderal, other neutral grassland, short medium grassland, scrub, hedge and a single tree outside the site boundary.

1.5 The site is located within the town of Grimethorpe, east of Barnsley, south of Brierly and southeast of South Kirby. The site is an area of grassland and hardstanding within a built-up residential area between streets with residential dwellings and gardens adjoining either side of the site.

Brief

1.6 To conduct a Biodiversity Net Gain (BNG) assessment using DEFRA metric version 4.0 to demonstrate, where possible, a minimum of 10% net gain.

Relevant Planning Policy and Legislation

1.7 In accordance with the Natural Planning Policy Framework (NPPF, 2021), paragraph 180, development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around the developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

1.8 The planning authority for the site Barnsley Metropolitan Borough Council. The council have an adopted local plan, and an emerging local plan. The vision for the local plan has been amended to include the ability of a project to 'secure biodiversity net gain'. This is further detailed within Policy WLP 54 – design of new development (amended) states that design will be a key consideration when assessing proposals of all scales and types. It states that all development will provide a minimum net gain of 10% of the current ecological value of the site.

1.9 The site will be assessed to provide a minimum of 10% biodiversity net gain, in accordance with contractual requirements.

2. METHODOLOGY

Assessing Strategic Significance

2.1 A desk study was conducted to collate baseline data about ecological sites within the zone of influence of the proposed development site, following guidelines set out by the Charted Institute of Environmental and Ecological Management (CIEEM, 2017). This data-gathering exercise was undertaken to obtain any available information relating to statutory nature conservation sites, ecological networks, local plans and priority habitats to help establish the strategic significance of the site. Sources of information used are shown in Table 1.

Table 1: Summary of information sources used for the desk study

Organisation/source	Information sought
MAGIC	Locations of and citations for all national statutory wildlife sites, including SSSI, and all international sites including SAC, SPA or Ramsar sites within a 5 kilometre radius of the site. Priority Habitats within 300m radius of the site.
Barnsley Metropolitan Borough Council	Adopted Local Plan, Emerging Local Plan 2027, evidence base, and polices map

2.2 This evidence was reviewed and used to assess the strategic significance of the site, and/or individual habitats and whether it lies within an ecological network for the area.

Baseline Assessment

2.3 A baseline botanical assessment was undertaken by Elizabeth Davies, qualified ecologist, on 24th June 2023 before works commenced on site in mostly clear, still and dry weather conditions. The survey employed techniques based on the UK Habitat Classification System. Botanical information was collected, focussing on the dominant and/or key indicator species for each habitat, to enable allocation of habitats to hierarchy levels 3 and/or 4. Where relevant priority habitats were also identified. The conditions of the habitats on the site were assessed in line with the technical sheets supplied alongside DEFRA Metric 4.0.

2.4 The UK habitats map was digitised using QGIS. The mapped habitats were measured using the derived areas, and habitat areas are provided in hectares. Linear features were measured using the derived length and the measurements provided in kilometres.

Biodiversity Net Gain

2.5 Biodiversity Net Gain complements and works with the biodiversity mitigation hierarchy set out in the National Planning Policy Framework paragraph 180a. To achieve a net gain in a way that is consistent with the mitigation hierarchy and reflects the 'spatial-hierarchy' preference for local enhancements, the following steps should be followed:

(1) Aim to avoid or reduce biodiversity impacts through site selection and layout;

(2) Enhance and restore biodiversity on-site;

(3) Create or enhance off-site habitats, either on their own land or by purchasing biodiversity units on the market; and

(4) As a last resort, to prevent undue delays, purchase statutory biodiversity credits from the UK Government where they can demonstrate that they are unable to achieve biodiversity net gain through the available on-site and off-site options.

2.6 On completion of the fieldwork the habitat information was mapped and areas were imported into the DEFRA Biometric version 4.0 calculation tool. The metric calculates the baseline biodiversity units for the site based on the following factors:

- Area
- Habitat distinctiveness
- Habitat condition
- Strategic significance

2.7 Once inputted the metric provides biodiversity units for the proposed habitats based on the following factors:

- Area
- Habitat distinctiveness
- Habitat target condition
- Strategic significance
- Time habitat is created
- Time to target condition
- Difficulty of creation

2.8 The difference between the baseline units and proposed units is then used as a measure of change and is used to assess the number of biodiversity units achieved. Habitats, hedgerows and rivers are inputted as separate factors, with each requiring net gains.

2.9 Limitations

2.10 Whilst every effort has been made to accurately map the habitats on site there may be discrepancies associated with the projected coordinate reference system. The National Grid transformation, however, is considered to be the most accurate with an accuracy level of less than one metre.

3. BASELINE CONDITIONS

3.1 The results of the Baseline Assessment are presented below. A UK Habitat survey map is shown in Appendix I. The map illustrates the location and extent of the sites surveyed, along with additional notable features.

Strategic Significance

3.2 The site is located between two streets within a residential area; the site does have some trees outside the boundary which could provide a link to the wider landscape. The site is within 250m of a designated greenbelt, which has rural fields, hedgerows and tree lines extending into the wider landscape.

3.3 There are a number of designated sites within 5km of the site. There are three Local Nature Reserves (LNR), Fitzwilliam Country Park, LNR, 3km northwest; Carlton Marsh, LNR, 3km east; West Haigh Wood, LNR, 1617m southeast.

3.4 There is one Special Sites of Scientific Interest (SSSI); Dearne Valley Wetlands SSSI 3km northwest.

3.5 These are a minimum of 3km radius from the site, and as such are considered to be within the zone of influence for the site. Further information regarding drainage of the site will be required to ensure no adverse effects on the Dearne Valley Wetlands SSSI.

3.6 The site is not part of any designated site, or listed on any local plan, neighborhood plan or other policy document. It is located in an area where a Local Nature Recovery Strategy is yet to be published As such it is considered to have high strategic significance.

3.7 On-Site Habitats

3.8 The following were recorded on the site, or immediately adjacent. A habitat map is provided in Appendix II, and habitats are described below:

- Developed land, sealed surface,
- Ruderal
- Other neutral grassland,
- Modified grassland,
- Scrub
- Hedge.

Developed land, sealed surface

3.9 There is an area of hard standing on the northeastern side of the site where the site is accessed from the existing housing estate. This has a distinctiveness of very low, and condition assessment is not required.

Ruderal

3.10 There is a small area of ruderal habitat on site in the east. Species recorded include: dock species, apple saplings, rosebay willowherb, hedge bindweed, creeping buttercup and bramble.

3.11 The parcel is not a good example of its habitat type, it is very small, there is an absence of invasive non-native species and there are no edge habitats. There are no invasive non-native species present on site.

3.12 This has a distinctiveness of low, and condition is assessed to be poor.

Other Neutral Grassland

3.13 There is a small area of longer sward other neutral grassland in the west of the site. Species recorded include dandelion, field bindweed, Yorkshire fog, perennial rye grass, dog rose, rough meadow grass, barren brome and cocks foot.

3.14 The grassland is maintained at a moderate sward length across the whole area. There is an absence of invasive non-native plant species. The cover of bare ground is between 1 and 5%. There is no bracken present, and bramble cover is more than 5%. There were approximately 4-5 species per square meter. The area is not a good example of other neutral grassland due to the species composition.

3.15 This has a distinctiveness of medium, and condition is assessed to be poor.

Modified grassland

3.16 The majority of the site is comprised of modified grassland, which is maintained at a short sward height for amenity use. Species recorded include perennial rye grass, ribwort plantain, hawkbit species, white clover, daisy, yarrow, ragwort, Yorkshire fog and creeping buttercup.

3.17 The grassland is maintained at a short sward length across the whole area. There is an absence of invasive non-native plant species. There were approximately 4-5 species per square meter, bare ground is between 10% and 15%, bracken is less than 20%.

3.18 The habitat has a distinctiveness of low, and condition is assessed to be poor.

Scrub

3.19 There is a small area of bramble scrub in the west of the site. Species recorded include dominant bramble, with dog rose, nettle, barren brome, hedge bindweed, creeping thistle, broadleaved dock.

3.20 The habitat has a distinctiveness of medium and condition assessment is not required.

Hedge

3.21 There is a hedge which leads along the access road to the site, but is located outside the red line in the adjacent garden. The species found there include elder, hawthorn and dog rose.

3.22 This hedgerow has a height of more than 1.5m average along the length, and less than 1.5 metres in width. There is a gap at the hedge base of less than 0.5 metres and the gaps in the total length make up less than 10% of the total length of the hedgerow. The ground at the base of the

hedgerow is unmanaged. There are no invasive species and 90% of the hedgerow is undamaged by human activities

Summary

3.23 Below in table 2 is a summary of the baseline habitats, areas, condition assessment and distinctiveness.

Table 2: Summary of baseline habitats

Habitat	Biodiversity Units	Area (ha)	Suggested action
Developed land, sealed surface	0.00	0.085	Compensation Not Required
Other neutral grassland	0.16	0.0175	Same broad habitat or a higher distinctiveness habitat required (≥)
Modified grassland	0.18	0.08	Same distinctiveness or better habitat required ≥
Ruderal	0.01	0.005	Same distinctiveness or better habitat required ≥
Bramble scrub	0.10	0.0225	Same broad habitat or a higher distinctiveness habitat required (≥)

4. BIODIVERSITY NET GAIN METRIC

Biodiversity Metric

4.1 The calculation has been run with the following habitat proposals:

- Creation of 0.07ha vegetated garden.

4.2 The calculation has been based off the current landscaping plans. The biodiversity metric calculated a net change in habitat units of -66.23%. Table 3 below summarises the biodiversity metric results.

Table 3: DEFRA Biodiversity metric results scenario 1

On-site baseline	Habitat units	0.46
	Hedgerow units	0.00
On-site post intervention	Habitat units	0.16
	Hedgerow units	0
Total net change %	Habitat units	-66.23
	Hedgerow units	0
Trading rules satisfied	Yes/No	No

4.3 The client will need to agree off-site compensation via a third party to purchase the required units to achieve the 10% net gain and balance the trading rules.

4.4 Additional habitat units required to meet the 10% = 0.35 for the proposals. The trading rules are not met, primarily due to the loss of medium distinctiveness habitats. This will need to be considered when seeking off-site BNG habitats so trading down in avoided.

5. REFERENCES

CIEEM, CIRIA, IEMA (2016) Biodiversity Net Gain. Good practice principles for development.

CIEEM, CIRIA, IEMA (2019) Biodiversity Net Gain. Good practice principles for development. A practical guide. CIRIA C776a. London, 2019.

CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

Department for Communities and Local Government (2005), *Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System.*

DEFRA (2023) Biodiversity Metric Calculation tool (spreadsheet) (Biodiversity Metric 4.0)

DEFRA (2023) Biodiversity Metric 4.0 User guide

DEFRA (2023) Biodiversity Metric 4.0 and SSM: Technical Annex1 (habitat condition assessments)

Ministry of Housing, Communities and Local Government (2021), *National Planning Policy Framework.*

Multi-Agency Geographical Information for the Countryside (MAGIC) Website

Wakefield District Council (2023). Emerging local plan.

Appendix 1

Proposed site layout

Appendix 2
Existing habitats

Key

- Site boundary
- Artificial sealed surface
- Modified grassland
- Other neutral grassland
- Ruderal
- Scrub
- Ornamental hedgerow

0 10 20 m

Project: Land off Windmill Avenue
Figure 2: On site habitats
Date: 30/06/2025 Version: Final

Author: ED

LIZ ECOLOGY

Appendix 3
Site photographs

Photograph 1: General view of site

Photograph 2: General view of site