# Land of Wells Street, Cudworth, Barnsley, S72 8DW

## Biodiversity Net Gain Assessment

Prepared on behalf of

Mr D Winter

Final Report

05 December 2025

# Land of Wells Street, Cudworth, Barnsley, S72 8DW
Biodiversity Net Gain Assessment

## Document Control

| | |
|---|---|
| **Client:** | Mr D Winter |
| **Date:** | 5 December 2025 |
| **Status:** | Final report |
| **Report Prepared for Issue by:** | Elizabeth Davies BSc (Hons) MCIEEM |

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*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.*

# Land of Wells Street, Cudworth, Barnsley, S72 8DW
## Biodiversity Net Gain Assessment

### NON-TECHNICAL SUMMARY

- Liz Ecology was commissioned by Mr D Winter to conduct a Biodiversity Net Gain Assessment of the land at Land of Wells Street, Cudworth, Barnsley, S72 8DW. The survey was conducted to support a planning application for the development of 5 residential 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)
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- Mandatory biodiversity net gain set out in the Environment Act 2021 came into force on 2nd April for small sites. This requires a minimum of 10% Biodiversity Net Gain using the Statutory Biodiversity Metric.
- The site is approximately 2000m2 and consists of hardstanding, buildings, scattered trees, ephemeral, modified grassland and tall forbs.
- The baseline habitat units are 1.79 and hedgerow units are 0.00.
- It is predicted that the proposal will have 1.31 habitat units created, with a net loss of 0.48 units, showing a 26.84% 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.

# Land of Wells Street, Cudworth, Barnsley, S72 8DW
## Biodiversity Net Gain Assessment

## Contents



**APPENDICES**

# 1. INTRODUCTION

1.1 Liz Ecology was commissioned by Mr D Winter to conduct Biodiversity Net Gain assessment of the land at Land of Wells Street, Cudworth, Barnsley, S72 8DW (Grid reference: SE 38650 08663).

1.2 The survey was conducted to support the planning application for the development of 6 residential dwellings with associated parking and gardens.

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 the statutory requirements and National Planning Policy. Where 10% is not achievable by the proposals we will seek to make recommendations for amendments to the proposals or third party compensation to meet the 10% target.

## Site description

1.4 The site is approximately 2000m$^2$ and consists of hardstanding, buildings, scattered trees, ephemeral, modified grassland and tall forbs.

1.5 The site is located within a residential area of the village of Cudworth which ls south of Shafton, southeast of Carlton and Royston, east of Grimethorpe and northeast of Barnsley.

## 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

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1.7 In England, Biodiversity Net Gain (BNG) is mandatory under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). All planning permissions granted in England will have to deliver at least 10% Biodiversity Net Gain (BNG) to be maintained for a period of at least 30 years. The concept seeks measurable improvements for biodiversity by creating or enhancing habitats in association with development.

1.8 Mandatory BNG came into force on 12th February 2024 for all developments except exemptions and small sites, and small sites came into force 2nd April 2024 (residential 1-9 units on a site less than one hectare, or number of dwellings is unknown and the site is less than 0.5 hectare; or for non-residential for floor space less than 1000m$^2$ or site less than one hectare). Exceptions include developments of less than 25m$^2$ habitat or 5m for linear habitats (hedgerows and watercourses), householder applications and small scale self-build.

1.9 The planning authority for the site is Barnsley Metropolitan Borough Council.

# 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 2019, 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 9th August 2025 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 moderately well connected to the wider landscape; there is a small bank of woodland with hedges leading to further tree lines which extends towards the tree lines cemetery and further into the countryside beyond that.

3.3 The site is moderately well connected to the wider landscape; there is a small bank of woodland with hedges leading to further tree lines which extends towards the tree lines cemetery and further into the countryside beyond that.

3.4 There are a number of designated sites within 5km of the site.

*Internationally important sites*

3.5 There are two Sites of Special Scientific Interest including:

- Carlton Main Brickworks, SSSI, 2390m east
- Stairfoot Brickworks, SSSI, 3.8km south
- Dearne Valley Wetlands, SSSI, 784m northwest

*Nationally important sites*

3.6 There are two Local Nature Reserves within 5km of the site including:

- Dearne Valley Park, LNR, 2821m southwest
- Carlton Marsh (mapped boundary not verified), LNR, 564m east.
- West Haigh Wood, LNR, 3.7m east

3.7 These are a minimum of 0.5km radius from the site, and as such are considered to be within the zone of influence for the site.

3.8 The site is not part of any designated site, or listed on any local plan, neighborhood plan or other policy document. It is located within an urban area. It is considered to have low strategic significance.

### 3.9 On-Site Habitats

3.10 The following were recorded on site, and are described below:

- Developed land: sealed surface
- Modified grassland

- Ephemeral
- Scattered trees with tall forbs understorey

*Developed land: sealed surface*

3.11 The area of hard standing on the site consists of a brash pile, rubble pile and grass cuttings. This area was previously buildings which have been demolished. There is also an existing single storey wooden clad stable building.

3.12 This area has a distinctiveness of very low and condition assessment is not required.

*Ephemeral*

3.13 The edges of the site show ephemeral vegetation which includes nettle, willowherb, ribwort plantain, dandelion, cocks foot, common bent, daisy, hawkbit species, vetch species, ragwort.

3.14 The vegetation structure is very similar, with more than 80% of the habitat area being uniform in structure. The habitat parcel contains a limited range of plant species, and there are no invasive non-native species.

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

*Modified grassland*

3.16 There is an area of the site which is assessed to be modified grassland due to the density of the species present. Species recorded include ribwort plantain, dandelion, cocks foot, common bent, daisy, hawkbit species, vetch species, ragwort.

3.17 The habitat is short sward, uniform in length with minimal diversity in the habitat structure. There are 3-4 species per square meter and bareground is approximately 5%. There is some physical damage, and no bracken. There are no invasive non-native species present.

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

*Scattered trees*

3.19 There are scattered trees on the dry-stone wall embankment surrounding the site. Species recorded include silver birch, sycamore and ash. The understorey in this area is considered to be tall forbs, including snowberry, ash, dogrose, bramble and ivy. This area has been subject to some recent clearance.

3.20 The trees area mixture of native and non-native species, with less than 70% native, the tree canopy is continuous, the trees are a mixture of mature and semi-mature, there is a regular pruning regime, there are minimal ecological niches. The scattered trees have a distinctiveness of medium and condition is assessed to be moderate.

3.21 The tall forbs vegetation structure is relatively uniform, across over 80% of the site area. The habitat parcel contains similar plant species which offer similar habitat niches for wildlife. There are no invasive non-native species. The tall forbs have a distinctiveness of low and condition is assessed to be poor.

*Summary*

3.22 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) | Condition | Distinctiveness | Suggested action |
|---|---|---|---|---|---|
| Developed land, sealed surface | 0.00 | 0.0195 | N/A – Other | V. Low | Compensation Not Required |
| Ephemeral vegetation | 0.09 | 0.043 | Poor | Low | Same distinctiveness or better habitat required ≥ |
| Modified grassland | 0.12 | 0.0585 | Poor | Low | Same distinctiveness or better habitat required ≥ |
| Scattered trees | 1.43 | 0.1791 | Moderate | Medium | Same broad habitat or a higher distinctiveness habitat required (≥) |
| Tall forbs | 0.16 | 0.079 | Poor | Low | Same distinctiveness or better habitat required ≥ |

# 4. BIODIVERSITY NET GAIN METRIC

*Biodiversity Metric*

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

- Creation of 0.0375ha 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 -26.84%. Table 3 below summarises the biodiversity metric results.

**Table 3: DEFRA Biodiversity metric results scenario 1**

| | | |
|---|---|---|
| On-site baseline | Habitat units | 1.79 |
| | Hedgerow units | 0.00 |
| On-site post intervention | Habitat units | 1.31 |
| | Hedgerow units | 0 |
| Total net change % | Habitat units | -26.84% |
| | Hedgerow units | 0 |
| Trading rules satisfied | Yes/No | Yes |

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% = 0.66 for the proposals. The trading rules are not met primarily due to the loss of medium distinctiveness urban trees. This will need to be considered when seeking off-site BNG habitats so that trading down is 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

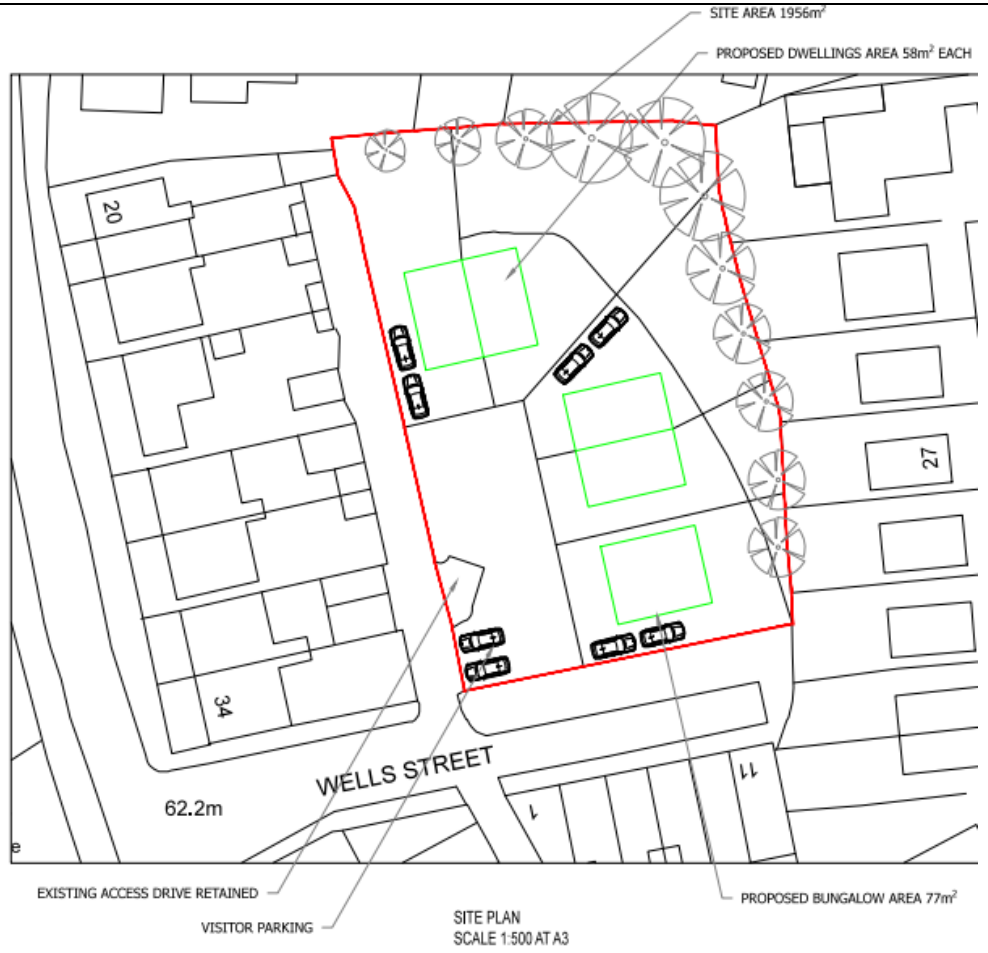
DEFRA (2023) Biodiversity Metric 4.0 and SSM: Technical Annex1 (habitat condition assessments)

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

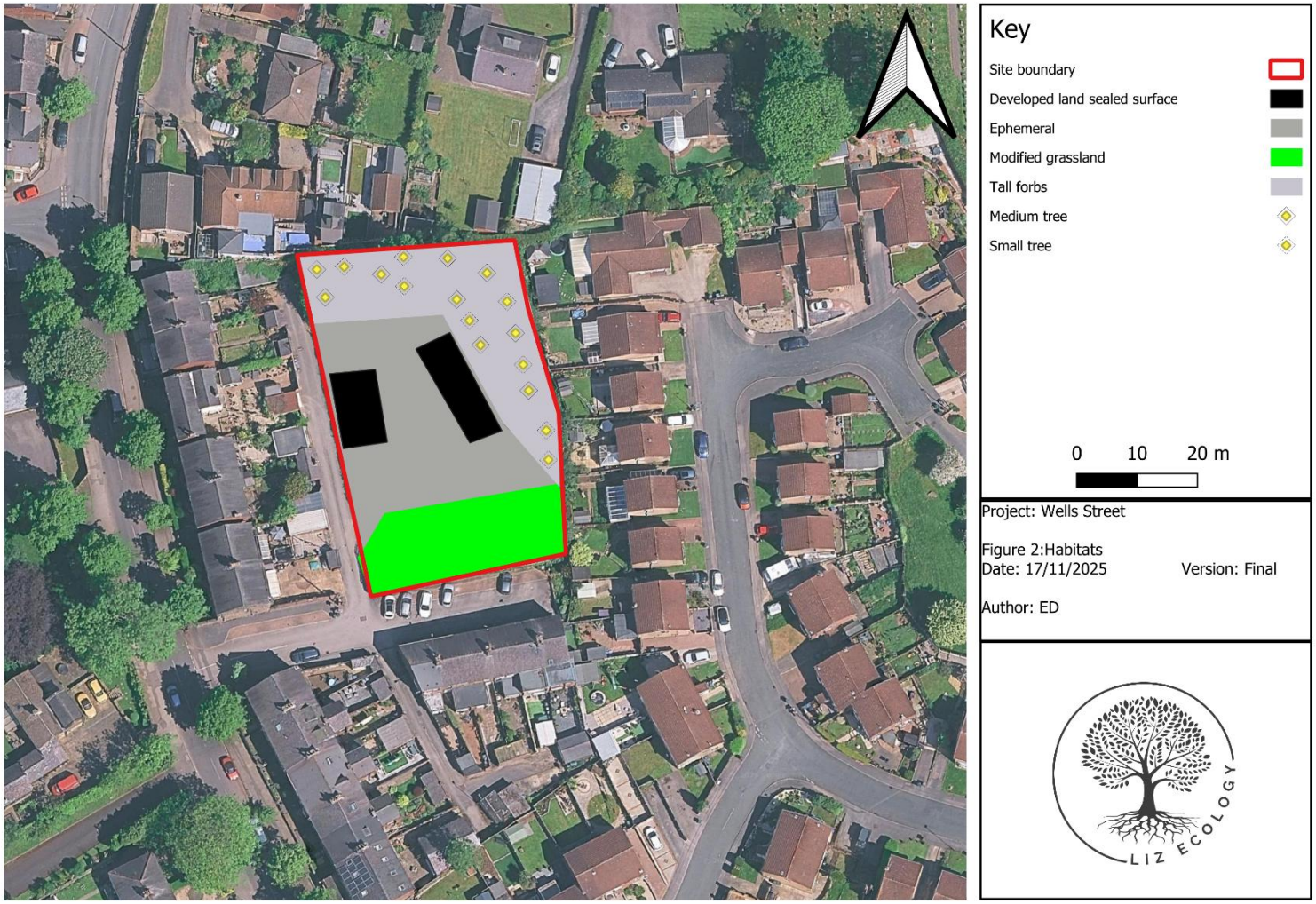
Multi-Agency Geographical Information for the Countryside (MAGIC) Website

Wakefield District Council (2023). Emerging local plan.

# Appendix 1
## Proposed site layout



# Appendix 2
## Proposed habitats



# Appendix 3
## Site photographs

Photograph 1: General view of site

Photograph 2: General view of site

Photograph 3: General view of site