



Biodiversity Net Gain Assessment Report

Site Name Ballfield Lane	Location Ballfield Lane, Kexbrough, Barnsley, S755LH
Job Ref 844	Document Ref R3-844-03-EC-02
Site Code None	Grid Reference SE300098
Prepared Esme Sudall	Date of Survey 9 th October 2025

FINAL

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Document History

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I. Introduction

I.1 SCOPE AND PURPOSE

Root3 Associates was commissioned by Mr Sargent to prepare a Biodiversity Net Gain (BNG) Assessment for the proposed works at land near the Ballfield Lane, Barnsley. This report has been prepared to inform a planning application at the site. The author of this report is Esme Sudall BSc (hons) MSc, an ecologist at Root3¹.

I.2 LOCATION

I.2.1 Please refer to Figure I for the site location. This site is located in Kexbrough, Barnsley (Grid reference: SE300098).



Figure I: Site Location.

¹ Esme BSc (hons) MSc, post graduate qualified in ecology, with experience conducting PEAs, species surveys, habitat assessment and BNG metric calculations.

1.3 OBJECTIVES

1.3.1 The report has been produced to document the methods, results and conclusions of a BNG Assessment undertaken based on the proposed development for the site to fulfil the following:

- Ensure the mitigation hierarchy has been applied;
- Identify the baseline habitats present and provide condition assessments;
- Identify the post development habitats on site, assess the possible target condition and provide an indication of the likely importance of those habitats;
- Calculate the overall change in biodiversity score from pre-post development;
- Provide design recommendations to maximise potential net gain achievable;
- Provide an indication of the likely outcomes and indicative cost as required.

1.4 PLANNING CONTEXT

1.4.1 The Government 25-year Environment Plan states that the government will “embed environmental net gain principle for development”.

1.4.2 National policy already sets out that planning should provide Biodiversity Net Gain (BNG) where possible. National Planning Policy Framework (NPPF) Paragraphs 174(d), 179(b) and 180(d) refer to this policy requirement and the Natural Environment Planning Practice Guidance (PPG) provides further explanation on how this should be done.

1.4.3 Under the Environment Act 2021, all planning permissions granted in England (with a few exemptions) except for small sites will have to deliver at least 10% biodiversity net gain from February 2024. BNG will be required for small sites from April 2024. BNG will be measured using Defra’s biodiversity metric and habitats will need to be secured for at least 30 years. Key points regarding BNG are listed below:

- Minimum 10% gain required calculated using Biodiversity Metric and approval of net gain plan.
- Habitat secured for at least 30 years via obligations/ conservation covenant.
- Habitat can be delivered on site, off site or via statutory biodiversity units.
- There will be a national register for net gain delivery sites.
- The mitigation hierarchy still applies of avoidance, mitigation, and compensation for biodiversity loss.
- Will also apply to Nationally Significant Infrastructure Projects (NSIPs).
- Does not apply to marine development.

- Does not change existing legal environmental and wildlife protections.

1.4.4 Developers will be required to undertake an assessment (using the nationally set BNG metric tool) of the current biodiversity value of the site both prior to and post the development proposal. In the event that the value of the site post-development is less than 10% better than it was prior to development then the developer will have an obligation to provide additional off-site BNG units to achieve the mandatory 10% net gain.

Biodiversity Mitigation Hierarchy (CIEEM, 2021)

Action in order of priority		
1	Avoid	Retain and protect existing habitats.
2	Minimise	Redesign to reduce habitat loss.
3	Restore	Improvement of on-site habitats.
4	Offset / Compensate	Creation of habitats of similar type where it was not previously present or enhance existing habitats elsewhere.
5	Additional Actions	Use to achieve the targeted level of gain.

2 Methodology

2.1 EXISTING HABITAT (BASELINE)

2.1.1 A walkover survey of the site was undertaken by Root3 in October 2025. The methods were based on the standard methodology as detailed by the UK HAB Methodology. A UK HAB Plan has been provided in the appendix of this report.

2.2 PLANNING LAYOUT

2.2.1 The site layout plan created (Doc ref: BALLFIELD LANE, KEXBROUGH - DETAILED SITE LAYOUT) has provided a red line boundary as well as the habitats to be incorporated within the site.

2.3 STATUTORY BIODIVERSITY METRIC

2.3.1 The BNG calculation was undertaken utilising The Statutory Biodiversity Metric from DEFRA, the site's UK Habitat maps and the Site Plan. The calculation was performed by a technically competent and suitably experienced ecologist as detailed in the British Standard BS8683.

2.3.2 The Statutory Biodiversity Metric uses habitat features as a proxy measure for capturing the importance and value of nature. The metric considers the size, ecological condition, location and proximity to nearby connecting features. The metric enables assessments to be made of the present and forecast future biodiversity value of the site.

2.4 HABITAT SCORING

2.4.1 The Small Sites Statutory Biodiversity Metric supplies reference documents and user guides in which to accurately evaluate and assess the different habitats on site. The methodology for the baseline and post development calculations are demonstrated in the following sections.

Baseline Units

2.4.2 To assess the quality of a habitat and therefore calculate the units scored the Statutory Biodiversity Metric utilises three scoring factors as detailed below.

Condition

2.4.3 The condition of a habitat is assessed utilising the Condition Sheets provided for each habitat type. These list positive indicators of each habitat and indicate how

many of these indicators need to be present to meet certain thresholds of condition. These condition sheets can be found in The Statutory Biodiversity Metric habitat condition assessment sheet with instructions tool Technical (Natural England Joint Publication, 2023).

Distinctiveness

- 2.4.4 The distinctiveness of each habitat (area and linear) is automatically assigned by the tool, based upon national records of the occurrence and rarity of each habitat (The Statutory Biodiversity Metric).

Strategic Significance

- 2.4.5 The idea of strategic significance works at a landscape scale. It gives additional unit value to habitats that are in preferred locations for biodiversity and other environmental objectives. Strategic significance utilises published local plans and objectives to identify local priorities for targeting biodiversity and nature improvement, such as Nature Recovery Areas and Local Biodiversity Plans.

Post Development Units

- 2.4.6 Additional factors are implemented when assessing post development habitats.
- Difficulty of creation/enhancement
 - Temporal Risk “Time to target condition”
 - Spatial Risk (when off-site mitigation is necessary)

2.5 LIMITATION OF ASSESSMENT

- 2.5.1 Whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment. The conclusions and recommendations detailed in this report are based upon the site redline boundary and the development proposals as outlined by the client at the time of writing. Should there be any changes to the site redline boundary or development proposals at a later stage, this assessment should be reviewed to determine whether any amendments or additional survey work is required.
- 2.5.2 Habitat areas, both pre-and-post development have been using online mapping and therefore will not be completely accurate.

3 Baseline Conditions – Habitats

3.1 STRATEGIC SIGNIFICANCE

3.1.1 The site lies within the area covered by the emerging South Yorkshire Mayoral Combined Authority (SYMCA) Local Nature Recovery Strategy (LNRS). At the time of writing, the full draft strategy has not yet been published. Based on the current available documentation, none of the habitats present on site at baseline, or post-development are specifically identified. The Barnsley Biodiversity Trust Biodiversity Action Plan was consulted, however none of the habitats present at baseline or post-development align with the local priority habitats.

3.2 HABITATS PRE-DEVELOPMENT

3.2.1 Table 1 summarises the baseline habitats and area size. Please refer to Appendix D for the Condition Assessment Sheets for each habitat if applicable.

Table 1: Habitat Type and Condition Assessment (pre-development)

Existing area habitats			Distinctiveness		Condition	
Broad Habitat	Habitat Type	Area (hectares)	Distinctiveness	Score	Condition	Score
Urban	Vegetated garden	0.0091	Low	2	Condition Assessment N/A	1
Sparsely vegetated land	Ruderal/Ephemeral	0.0246	Low	2	Moderate	2
Grassland	Modified grassland	0.0076	Low	2	Poor	1

3.3 LOST HABITATS

3.3.1 All habitats within the red line boundary are to be lost to development.

3.4 PRE-DEVELOPMENT HABITAT BASELINE

3.4.1 Please refer to Table 2 summarising the Habitat Baseline for the calculation, demonstrating habitats to be retained, enhanced and/or lost.

Table 2: Habitat Baseline

	On-site Baseline	Retained	Enhanced	Lost
Habitats (Area) Units	0.13	0.00	0.00	0.13

3.5 HEDGEROWS PRE-DEVELOPMENT

3.5.1 There are no hedgerows present at baseline.

4 Habitat Creation

4.1 AREA HABITATS

4.1.1 The site is to be converted to one residential dwelling with associated hardstanding, and private garden.

Table 5: Habitat Creation (Area)

Proposed Habitat	Area (hectares)	Distinctiveness		Condition		Habitat units delivered
		Distinctiveness	Score	Condition	Score	
Developed land; sealed surface	0.0122	V.Low	0	N/A - Other	0	0.00
Vegetated garden	0.0291	Low	2	Condition Assessment N/A	1	0.0562

4.2 LINEAR HABITATS

4.2.1 One hedgerow is to be created within the proposed development. As this is within the curtilage of private garden, it cannot contribute towards biodiversity net gain for this proposed development.

5 SUMMARY

5.1 This report and the DEFRA Statutory Biodiversity Metric submitted have demonstrated that the proposed development results in a net loss of -57.39% habitat units. Trading rules have not been satisfied. Please see Figure 2 below:

FINAL RESULTS		
Total net unit change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Area habitat units	-0.08
	Hedgerow units	0.00
	Watercourse units	0.00
Total net % change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Area habitat units	-57.39%
	Hedgerow units	0.00%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

Figure 2: Headline results from the BNG Metric (Metric reference: R3-844-03-EC-02_BNG_The_Statutory_Metric_Macro_Enabled_1.0.4-22).

5.2 Considering the scale and nature of this small development, delivering the 10% biodiversity net gain requirement on-site is unfeasible. The development footprint will comprise one new dwelling, associated hardstanding and private domestic gardens. As such, leaving minimal space for habitat creation of sufficient scale, and distinctiveness to deliver measurable BNG gains.

5.3 Within the newly created gardens, one hedgerow is to be created, and it is anticipated that soft landscaping, ornamental planting and lawns will occur, contributing some limited biodiversity value at a local scale. However, these areas are not eligible for inclusion in the metric, because long term management cannot be secured or monitored.

5.4 Accordingly, the biodiversity losses will be offset through the purchase of off-site biodiversity units, secured from a suitable habitat bank or third-party provider (such as Environment Bank), ensuring compliance with the Biodiversity Net Gain policy framework and the mitigation hierarchy.

6 BIBLIOGRAPHY

1. CIEEM, 2021. Biodiversity Net Gain. Good Practice Principles for Development. A Practical Guide.
2. CIEEM (2021) Biodiversity Net Gain Report and Audit Templates.
3. DEFRA (2023) The Statutory Biodiversity Metric: Auditing and Accounting for Biodiversity.
4. DEFRA (2023) The Statutory Biodiversity Metric: Auditing and Accounting for Biodiversity. Condition Assessment Sheets (Excel Format).
5. Landscape Plan: BALLFIELD LANE, KEXBROUGH - DETAILED SITE LAYOUT
6. South Yorkshire Mayoral Combined Authority (SYMCA) Local Nature Recovery Strategy (LNRS). Document referenced:
 - a. <https://www.southyorkshire-ca.gov.uk/explore/local-nature-recovery-strategy>
 - b. <https://governance.southyorkshire-ca.gov.uk/documents/s16005/13.i.%20LNRS%20-%20OS%20committee%2014-03-24.pdf>
 - c. <http://www.barnsleybiodiversity.org.uk/built-upareas.html>

7. Appendices

7.1 Appendix A: Proposed Site Plan (doc ref: BALLFIELD LANE, KEXBROUGH - DETAILED SITE LAYOUT)

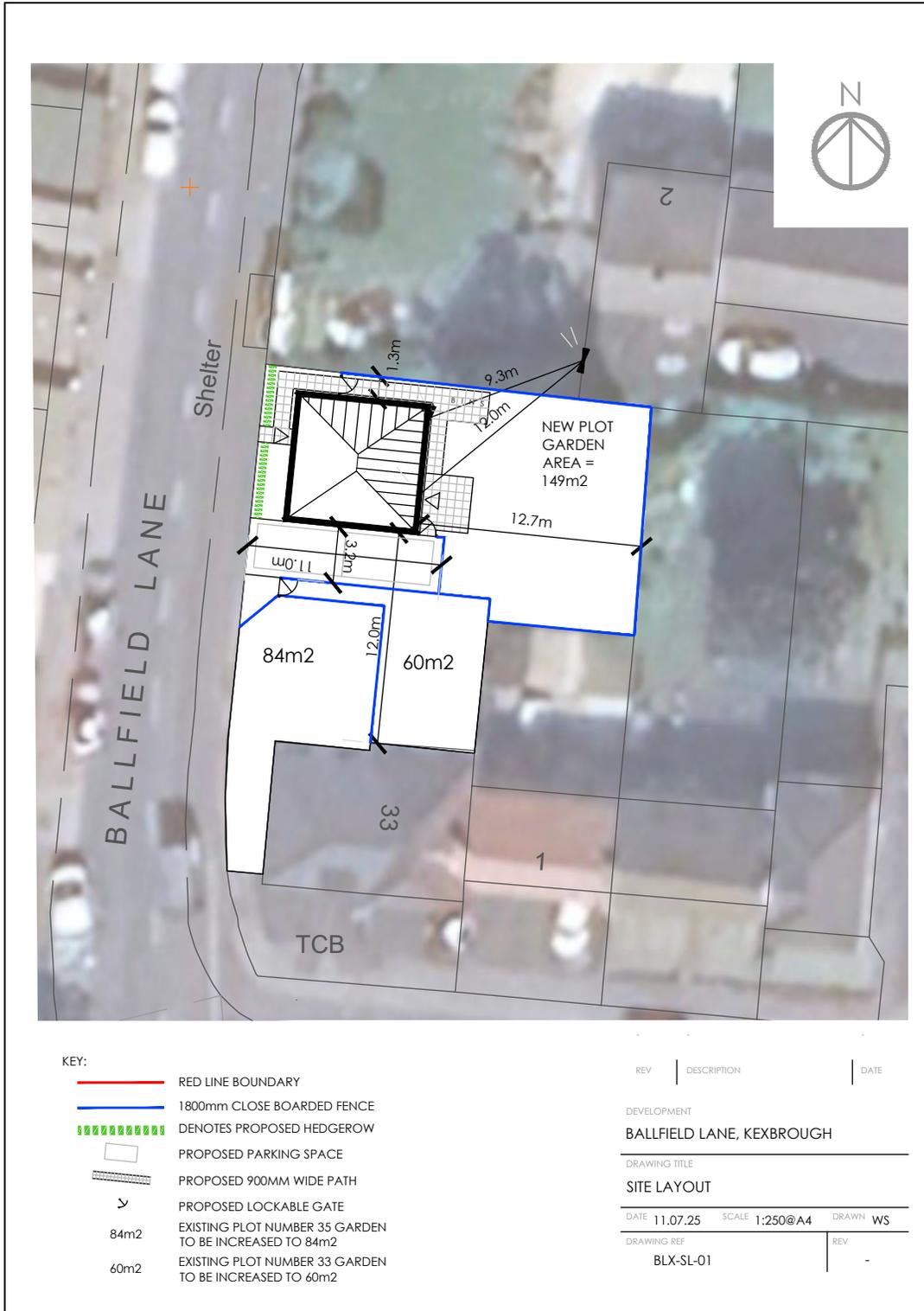
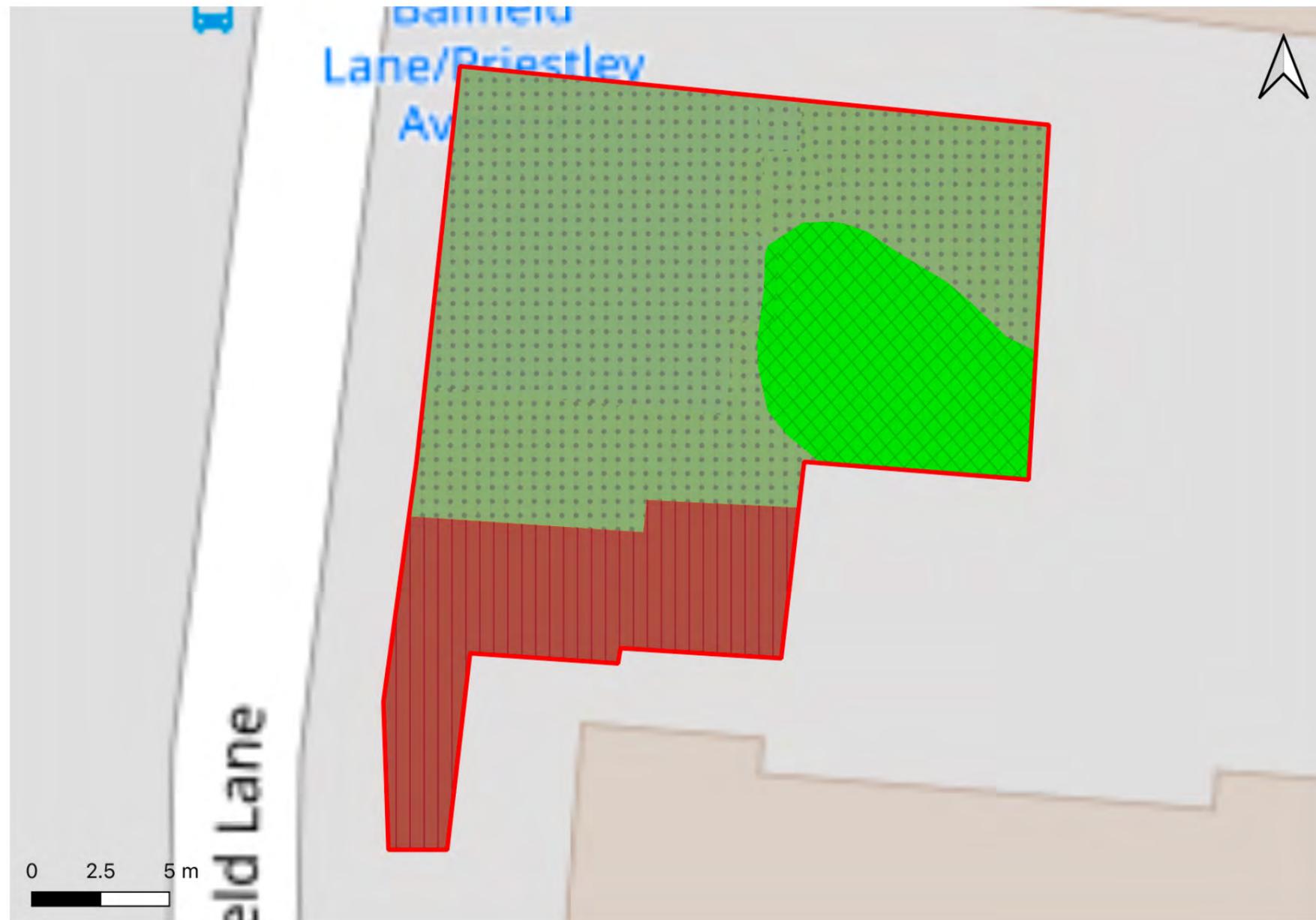


Figure 3: UkHabs Baseline Habitat Plan



Key

Red Line Boundary

HABITATS

Habitats Baseline

Modified grassland

Ruderal/Ephemeral

Vegetated garden

Habitat Graphics

Baseline Habitat Condition

Moderate

Poor

Condition Assessment N/A

Baseline Habitat Distinctiveness

Low

OSM Standard

Originated: E Sudall

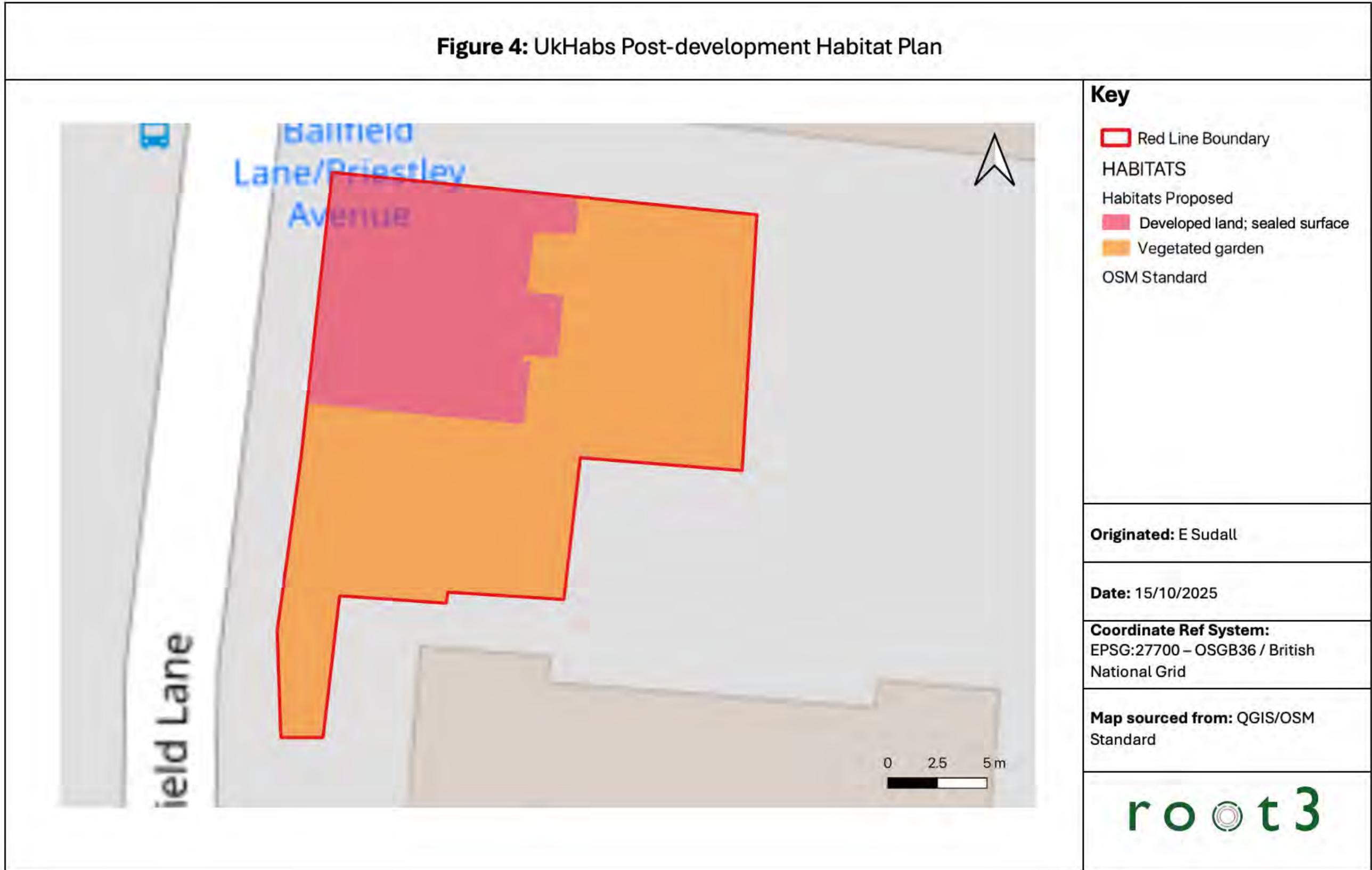
Date: 15/10/2025

Coordinate Ref System:
EPSG:27700 – OSGB36 / British National Grid

Map sourced from: QGIS/OSM Standard



Figure 4: UkHabs Post-development Habitat Plan



7.4 Appendix D: Condition Assessments.

Condition Sheet: URBAN Habitat Type			
Habitat Types			
Sparsely vegetated land - Ruderal/Ephemeral Sparsely vegetated land - Tall forbs Urban - Allotments Urban - Biodiverse green roof Urban - Bioswale Urban - Cemeteries and churchyards Urban - Facade-bound green wall Urban - Ground based green wall Urban - Intensive green roof Urban - Open mosaic habitats on previously developed land Urban - Rain garden Urban - Sustainable drainage system (SuDS) Urban - Vacant or derelict land Urban - Bare ground			
Habitat Description			
The majority of the site comprises ruderal vegetation.			
See the Statutory Biodiversity Metric User Guide for green roofs and UK Habitat Classification (UKHab) for other habitats:			UKHab – UK Habitat Classification
On-site or off-site, site name and location	On-Site. Ballfield Lane, Kexbrough, Barnsley, S755LH	Survey date and Surveyor name	09/09/2025 Esme Sudall
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference	SE300098	Habitat parcel reference	
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - must be assessed for all urban habitat types :			

A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	No.	The sward is dominated by tall vegetation, covering approximately 85-90%. Limited areas of short sward or bare ground.
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	Yes.	Species present included creeping thistle <i>Cirsium arvense</i> , curled dock <i>Rumex crispus</i> , common ragwort <i>Jacobaea vulgaris</i> , fat hen <i>Chenopodium album</i> , false oat grass <i>Arrhenatherum elatius</i> , common poppy <i>Papaver rhoeas</i> , broadleaved dock <i>Rumex obtusifolius</i> .
C	Invasive non-native plant species (listed on Schedule 9 of WCA ¹) and others which are to the detriment of native wildlife (using professional judgement) ² cover less than 5% of the total vegetated area ³ . Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	Yes.	None recorded.
Essential criteria relevant for habitat type achieved (Yes or No)			
Number of criteria passed			
Condition Assessment Result	Condition Assessment Score	Score Achieved x/√	
Results for habitats requiring assessment of 3 core criteria only (all listed urban habitats except Open mosaic habitat on previously developed land, Bioswale, SuDS and Green roofs):			
• Passes all 3 core criteria; AND • Meets the requirements for Good condition within criterion C.	Good (3)		
• Passes 2 of 3 core criteria; OR • Passes 3 of 3 core criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)	Yes.	
• Passes 0 or 1 of 3 core criteria.	Poor (1)		
Suggested enhancement interventions to improve condition score			
Footnotes			

Footnote 1 – Wildlife and Countryside Act 1981 (as amended).

Footnote 2 – Sources of information about detrimental non-native species can be found on the GB Non-native Species Secretariat (GBNNS) website:

[Home » NNS \(nonnativespecies.org\)](#)

and Natural England Access to Evidence page should also be checked for up-to-date information:

[Horizon-scanning for invasive non-native plants in Great Britain - NECR053 \(naturalengland.org.uk\)](#)

For criterion C – For green roof habitat types only – buddleia *Buddleja davidii* should be assessed alongside Schedule 9 species. This species impairs the health of the local ecosystem and reduces the biodiversity potential of the roof. It is also a sign that a roof has not been planted and seeded correctly in subsequent years.

Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.

Footnote 4 – Use professional judgement. Sources of information about non-native species that are not detrimental to native wildlife can be found on the GBNNS website:

[Alternative plants » NNS \(nonnativespecies.org\)](#)

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)

UK Habitat Classification (UKHab) Habitat Type

Grassland - Modified grassland

On-site or off-site, site name and location	On-Site. Ballfield Lane, Kexbrough, Barnsley, S755LH	Survey date and Surveyor name	09/09/2025 Esme Sudall
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference	SE300098	Habitat parcel reference	

Habitat Description

Small area of grassland in the eastern portion of the site.



[ukhab – UK Habitat Classification](#) - -

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	<p>There are 6-8 vascular plant species per m² present, including at least 2 forbs (these may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition.</p> <p>Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m² (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.</p>	No.	Fewer than 6 species recorded per quadrat used, Species present included perennial ryegrass <i>Lolium perenne</i> , cocks foot <i>Dactylis glomerata</i> , dandelion <i>taraxacum officinale</i> , ribwort plantain <i>Plantago lanceolata</i> , creeping thistle <i>Cirsium arvense</i> , nettle <i>Urtica dioica</i> .
B	<p>Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.</p>	Yes.	Estimated 25% of sward above 7cm, with remainder approx. 4-7cm.

C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes.	Little to no bramble recorded.
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Yes.	Little damage recorded.
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Yes.	Approximately 10%.
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Yes.	No bracken recorded.
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Yes.	No INNS recorded.

Essential criterion achieved (Yes or No)			No.
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Number of criteria passed			6
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Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved ×/√
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	Poor – did not pass criterion A.

Suggested enhancement interventions to improve condition score

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Footnotes

Footnote 1 – Creeping thistle *Cirsium arvense*, spear thistle *Cirsium vulgare*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, greater plantain *Plantago major*, white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris*.

Footnote 2 – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover.

Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.

Footnote 4 – Wildlife and Countryside Act 1981 (as amended).