Biodiversity Net Gain Assessment

The Seam, Barnsley

February 2026

One Environments

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1. Introduction

1.1 OS Ecology Ltd were commissioned by One Environments to provide a Biodiversity Net Gain Assessment for a proposed development at The Seam, Barnsley.

Site Location

1.2 The site is located in the centre of Barnsley at an approximate central grid reference of SE346067. The site location is illustrated within figure 1 in the appendices.

Site Description

1.3 The site is approximately 17,724m^2 in size[1] and comprises an existing area of car parking with associated greenspace including fragmented grassland areas.

Objectives of the Study

1.4 The objectives of this report are:

- To assess and map the habitats present within the proposed development area using the UK Habitat Classification[2] criteria.
- To calculate the baseline 'Biodiversity Units' using Natural England's Statutory Biodiversity Metric.[3]
- To use the above metric to assess the anticipated change in biodiversity as a result of the proposed development.

Development Proposals

1.5 The development will comprise alterations to existing car parking and provision of new public open space and landscaping.

[1] Area measurement from One-Environments.
[2] UKHab Ltd (2023) UK Habitat Classification Version 2.0 (at http://www.ukhab.org)
[3] Department for Environment Food and Rural Affairs, The Statutory Biodiversity Metric User Guide, February 2024

2. Methodology

Scope of Study

2.1 This study aims to utilise the Natural England's Statutory Biodiversity Metric[4] to provide a measure of the existing biodiversity value of the proposed development site and of the anticipated change in biodiversity units as a result of the development proposals.

Assessment of Baseline Conditions

Habitat Mapping

2.2 The proposed development site was mapped as different habitat types using the habitat classifications detailed within the UK Habitat Classification User Manual.[5]

2.3 Habitat maps were digitised and area calculations for each UK Habitat Classification habitat type present within the site were undertaken using QGIS.

2.4 Area measurements are provided in hectares with linear features measured in kilometres.

Condition Assessment

2.5 Each area of habitat was assigned a condition score based on the relevant statutory biodiversity metric condition assessment as per the Statutory Biodiversity Metric User Guide.[6]

2.6 Habitat parcels are assigned one of three categories: Good, Moderate or Poor. If condition varies across an area of the same habitat type, the habitat will be split into separate parcels, each assigned a different condition category.

2.7 Certain habitat categories are allocated a fixed condition score and do not need the condition assessed as per the User Guide.[6]

2.8 Where appropriate, completed habitat condition sheets for each parcel of habitat are provided within the appendices.

Use of the Calculation Tool

2.9 The Statutory Biodiversity Metric Calculation Tool is used to calculate biodiversity units for the existing baseline conditions within the proposed development area.

2.10 Habitat type, area (ha) and condition score as calculated above are entered into the metric for each parcel of habitat present within the proposed development site.

2.11 The metric assigns a 'Distinctiveness' category and score to each habitat parcel.

[4] Department for Environment Food and Rural Affairs, The Statutory Biodiversity Metric User Guide, February 2024
[5] UKHab Ltd (2023) UK Habitat Classification Version 2.0 (at http://www.ukhab.org)
[6] Department for Environment Food and Rural Affairs, The Statutory Biodiversity Metric User Guide, February 2024

2.12 A 'Strategic Significance' score is then assigned to each habitat parcel. The assessment of strategic significance is based on local planning policy in the first instance. For example, if the site is located within a Nature Recovery Area then it would be of 'High Strategic Significance'.

2.13 Areas of 'Moderate Strategic Significance' would be classified as areas not formally designated, but which are ecologically desirable. 'Areas of Low Strategic Significance' are those which do not meet the above criteria.

2.14 Based on the above information, the metric then calculates Biodiversity Units for each habitat parcel and a total number of Biodiversity Units for the proposed development area.

Post Development Conditions

2.15 The areas of habitat to be retained within the proposed development are specified within the metric. Data is then entered into the metric with respect to enhanced habitats and new areas of habitat to be created as part of the development, in the same way as for the baseline conditions.

2.16 The same criteria detailed above are input for each habitat parcel, as well as an additional criterion for any off-site creation/enhancement proposed. A spatial risk category is associated with any off-site works. This spatial risk category specifies whether the proposed off-site mitigation is within the same local authority as the proposed development site, within an adjacent local authority or beyond the neighbouring authority.

2.17 The metric tool automatically applies an appropriate difficulty level associated with each type of habitat creation proposed and a temporal category based on the likely time taken to reach the assigned target condition.

2.18 For habitat enhancement the metric identifies the change in distinctiveness and condition of the habitat. Full details are provided within the Statutory Biodiversity Metric User Guide.[7]

Biodiversity Metric Calculation

2.19 Once both the pre-development and post-development habitat calculations have been assessed, the metric provides the results in a range of tables and graphs. These highlight whether biodiversity losses or gains have been achieved based on pre and post development Biodiversity Units. The metric presents a total net unit change and a total net percentage change.

[7] Department for Environment Food and Rural Affairs, The Statutory Biodiversity Metric User Guide, February 2024

3. Results

Baseline Habitat Types and Condition Assessment

3.1 The following table details the results of the habitat survey and assigns the relevant UK Habitat Classification to each parcel of habitat, the metric category to which this relates and the condition of the habitat. The survey area covered the land within the applicant's control. Full survey information is provided within the Preliminary Ecological Appraisal report for this site.[8] Figures illustrating the habitat within the site are provided within the appendices with relevant condition assessment forms.

Table 3.1: Baseline Habitat Types

Habitat Description	Photographs	UK Habs. Category	Metric Category	Condition
Grassland The areas of grassland are species poor with some areas managed for amenity purposes and others left unmanaged around the periphery of the parking area.		*Primary code* g3c – Other neutral grassland *Secondary code* N/A	Other neutral grassland	Poor
Trees There are a number of urban trees to the north of the site within the parking areas, which are Italian alder (*Alnus cordata*).		*Primary code* N/A *Secondary code* 200 - Tree	Individual Trees	Moderate

[8] Ecological Impact Assessment, The Seam, Barnsley, March 2025, OS Ecology Ltd

Table 3.1: Baseline Habitat Types				
Habitat Description	**Photographs**	**UK Habs. Category**	**Metric Category**	**Condition**
Sealed surfaces and built development The majority of the site comprises sealed surface and there buildings within the western half of the site which will be retained as part of the development.		*Primary code* U1b – Developed land, sealed surface *Secondary code*	Developed land; sealed surface	N/A - Other

3.2 The following sections of this report focus on those habitats within the planning application boundary to calculate the baseline Biodiversity Units.

Baseline Biodiversity Units

3.3 Based on the results of field survey, the following table details the baseline Biodiversity Units associated with the proposed development area.

Table 3.2: Baseline Biodiversity Units

Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Biodiversity Units
Habitat Element					
Other neutral grassland	0.1175	Medium	Poor	Low	0.47
Other neutral grassland	0.0115	Medium	Poor	Low	0.05
Other neutral grassland	0.0088	Medium	Poor	Low	0.04
Other neutral grassland	0.0088	Medium	Poor	Low	0.04
Other neutral grassland	0.0082	Medium	Poor	Low	0.03
Other neutral grassland	0.006	Medium	Poor	Low	0.02
Other neutral grassland	0.0045	Medium	Poor	Low	0.02
Other neutral grassland	0.0043	Medium	Poor	Low	0.02
Other neutral grassland	0.0038	Medium	Poor	Low	0.02
Other neutral grassland	0.0025	Medium	Poor	Low	0.01
Other neutral grassland	0.002	Medium	Poor	Low	0.01
Other neutral grassland	0.0016	Medium	Poor	Low	0.01
Other neutral grassland	0.0016	Medium	Poor	Low	0.01
Other neutral grassland	0.0014	Medium	Poor	Low	0.01
Other neutral grassland	0.0013	Medium	Poor	Low	0.01
Other neutral grassland	0.0011	Medium	Poor	Low	0.00
Other neutral grassland	0.0007	Medium	Poor	Low	0.00
Developed land; sealed surface	1.5869	V.Low	N/A - Other	Low	0.00
Urban tree (18No)	0.2687	Medium	Moderate	Low	2.15
				Baseline Habitat Units:	**2.89**

Post Development – Baseline Habitat Retention Category

3.4 The following table details for each of the baseline habitat types present on site the relevant retention category (retained, enhanced or lost) as a result of the proposed development.

3.5 For each category the area of each habitat type that falls into each category is provided. Where habitat is to be lost the number of Biodiversity Units to be lost is provided. In this case, all existing habitats are anticipated to be lost through development of the site.

3.6 A small area of other neutral grassland near the western entrance is being retained.

3.7 Two small and two medium sized moderate condition trees are being lost, the remaining trees are being retained.

Table 3.3: Baseline Habitat Retention

Habitat Type	Area Retained (ha)	Area Enhanced (ha)	Area Lost (ha)	Biodiversity Units Lost
Habitat Element				

Table 3.3: Baseline Habitat Retention				
Other neutral grassland	0	0	0.12	0.47
Other neutral grassland	0	0	0.01	0.05
Other neutral grassland	0	0	0.01	0.04
Other neutral grassland	0	0	0.01	0.04
Other neutral grassland	0	0	0.01	0.03
Other neutral grassland	0	0	0.00	0.02
Other neutral grassland	0	0	0.00	0.02
Other neutral grassland	0	0	0.00	0.02
Other neutral grassland	0.0038	0	0.00	0.00
Other neutral grassland	0	0	0.00	0.01
Other neutral grassland	0	0	0.00	0.01
Other neutral grassland	0	0	0.00	0.01
Other neutral grassland	0	0	0.00	0.01
Other neutral grassland	0	0	0.00	0.01
Other neutral grassland	0	0	0.00	0.01
Other neutral grassland	0	0	0.00	0.00
Other neutral grassland	0	0	0.00	0.00
Developed land; sealed surface	0	0	1.59	0.00
Urban tree	0.2280	0	0.04	0.33
			Habitat Units Lost:	**1.05**

Post Development – Habitat Enhancement

3.8 Due to the nature of the site, there is no on-site enhancement proposed.

Post Development – Habitat Creation

3.9 The following table details the post development habitats proposed within the site and the metric category considered to match the proposed habitat types most closely.

Table 3.4: Post Development Habitats		
Habitat Type	**Metric Category**	**Area/ Length/No.[1]**
Evergreen shrub planting	Introduced Shrubs	0.063ha
Peripheral grassland	Other Neutral Grassland	0.068ha
Hardstanding	Developed Land; Sealed Surface	1.394ha
Shrubs mix group	Vegetated Garden (Public Open Space)	0.195ha
Grasses and perennials mix groups 1 and 2		
Proposed tree planting (73No.)	Urban Trees	0.2972ha
Amenity grassland	Modified Grassland	0.048 ha
Hedgerows	Non-Native and Ornamental Hedgerows	0.261km
1. Area and length measurements from plans provided by One-Environments		

3.10 For the purposes of the metric, it is assumed that a detailed management plan will be produced and adhered to, to ensure delivery of the target habitats and conditions.

3.11 A figure illustrating the location of habitat creation proposals is provided within the appendices. The following table details each element of the habitat creation proposed, including the target condition, other criteria assigned by the metric and the associated biodiversity units delivered by each element.

3.12 For the areas of tree planting (individual trees are small in size), other neutral grassland and modified grassland areas, it is anticipated that a target condition of 'poor' can be achieved given the nature of the habitats and urban location. For all remaining habitat types, the metric assigns a condition of 'Poor', or a proposed condition is not applicable due to the urban habitat type selected.

3.13 The proposed plans include ornamental hedgerow creation along the southern sections. The proposed hedgerows are a combined 261m long.

Table 3.5: Post Development Habitats - Biodiversity Units Delivered (Habitat Creation)

Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Time to target condition/years	Difficulty of Creation	Biodiversity Units Delivered
Habitat Creation							
Introduced shrub	0.0.63	Low	Condition Assessment N/A	Low	1	Low	0.12
Other neutral grassland	0.068	Medium	Poor	Low	1	Low	0.25
Developed land; sealed surface	1.394	V. Low	N/A - Other	Low	0	Low	0.00
Vegetated garden	0.195	Low	Condition Assessment N/A	Low	1	Low	0.38
Urban tree	0.2972	Medium	Poor	Low	10	Low	0.83
Modified grassland	0.048	Low	Poor	Low	1	Low	0.09
						Habitat Units:	**1.68**
Habitat Type	**Length (km)**	**Distinctiveness**	**Condition**	**Strategic Significance**	**Time to target condition/years**	**Difficulty of Creation**	**Biodiversity Units Delivered**
Hedgerow Creation							
Non-native and ornamental hedgerow	0.261	V.Low	Poor	Low	1	Low	0.25
						Hedgerow Units:	**0.25**

4. Net Gain Assessment

4.1 The following extract details the anticipated change in Biodiversity Units as a result of the proposed development, including the associated habitat creation proposals. The full results broken down per habitat type, are detailed within the Statutory Biodiversity Metric Calculation Tool for this site which can be provided on request.

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.62
	Hedgerow units	0.25
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	21.56%
	Hedgerow units	N/A
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

4.2 The current proposals will result in a net gain in habitat biodiversity units with a **net gain of 0.62 units (21.56%)**.

4.3 The current proposals also result in the creation of 0.25 hedgerow units, where no baseline hedgerow units were previously present.

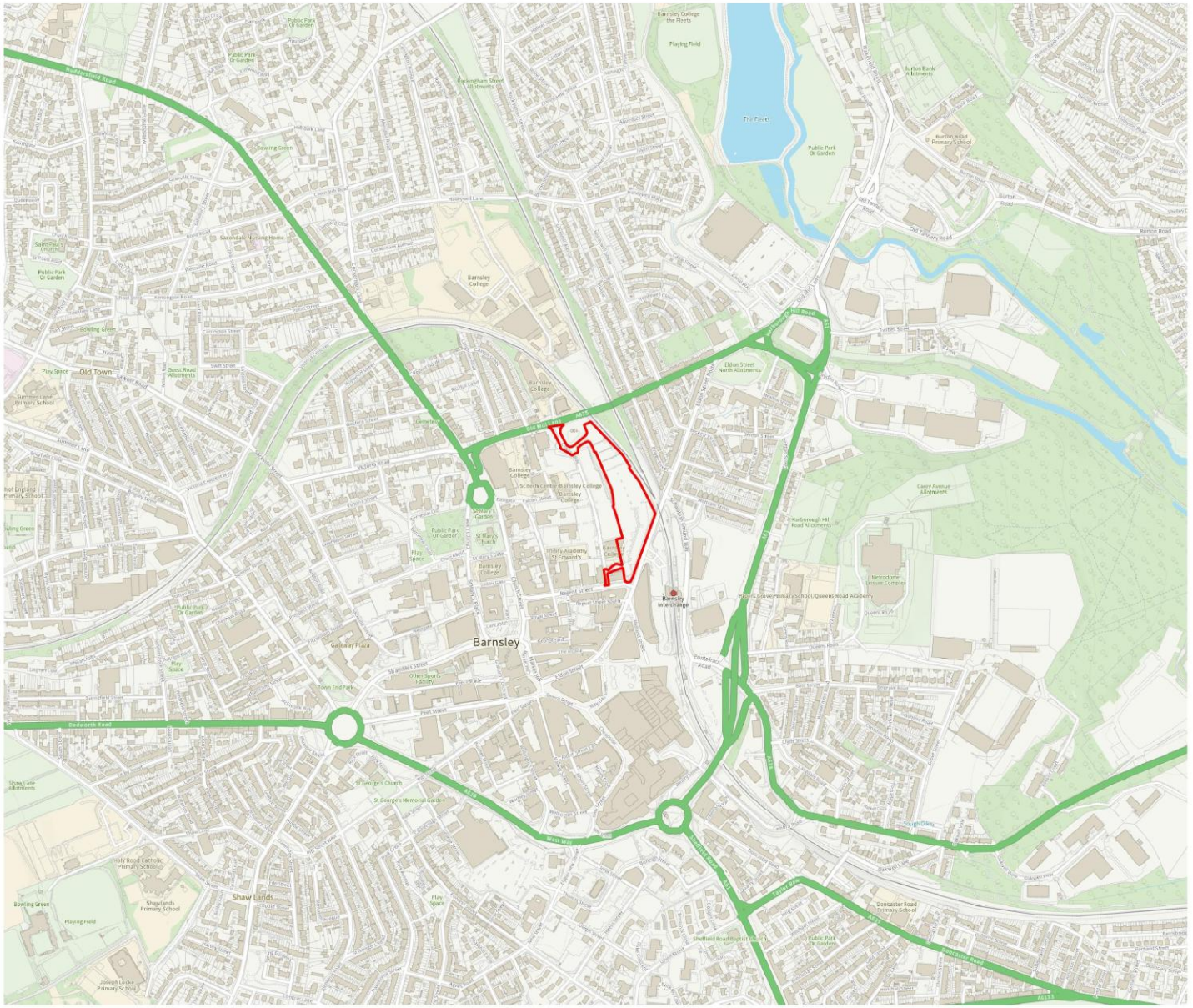
4.4 **The project is exempt from the trading rules of the metric.**

Appendix 1: Condition Assessment

Condition Assessment Criteria – Trees		Criterion passed (Yes or No)
A	The tree is a native species (or at least 70% within the block are native species).	No
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Yes
C	The tree is mature (or more than 50% within the block are mature)[1].	Yes
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	No
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	No
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes
Overall Condition		Moderate

Condition Assessment Criteria – Other Neutral Grassland		**Criterion passed (Yes or No) (all parcels)**
A The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description).[1] **Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**		No
B 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 insects, birds and small mammals to live and breed.		No
C Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens[2].		Yes
D Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus* agg.) is less than 5%.		Yes
E Combined cover of species indicative of suboptimal condition[3] and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species[4] (as listed on Schedule 9 of WCA[5]) are present, this criterion is automatically failed.		No
Additional Criterion - must be assessed for all non-acid grassland types		
F There are 10 or more vascular plant species per m^2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count). **Note - this criterion is essential for achieving Good condition for non-acid grassland types only.**		NO
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)		No
Number of criteria passed		
Condition Assessment Result	**Condition Assessment Score**	**Score Achieved ×/✓**
Non-acid grassland types (Result out of 6 criteria)		
Passes 5 or 6 criteria, including essential criterion A and additional criterion F.	Good (3)	
Passes 3 - 5 criteria, including essential criterion A.	Moderate (2)	
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.	Poor (1)	Yes

Appendix 2: Figures



Key

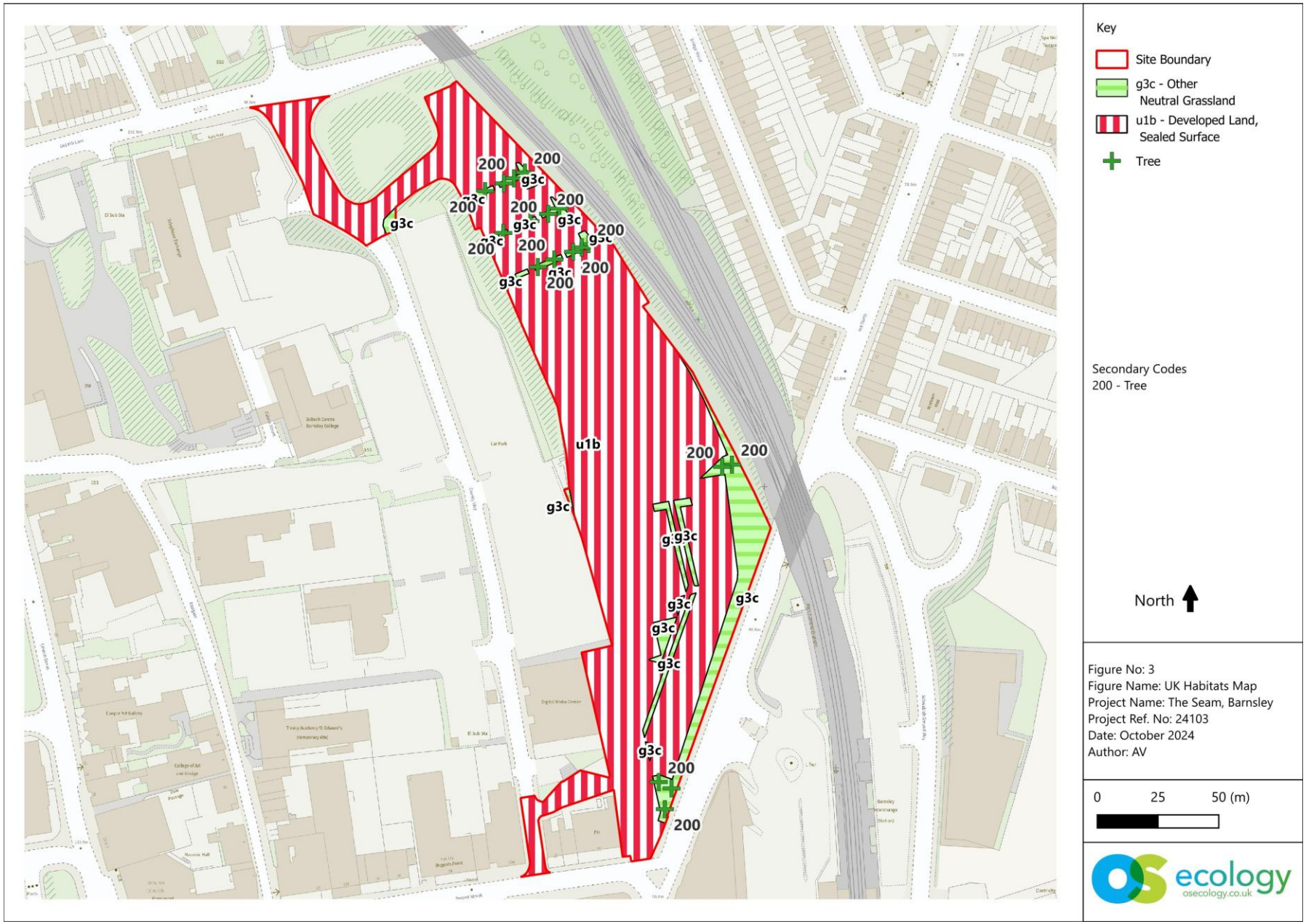
Site Boundary

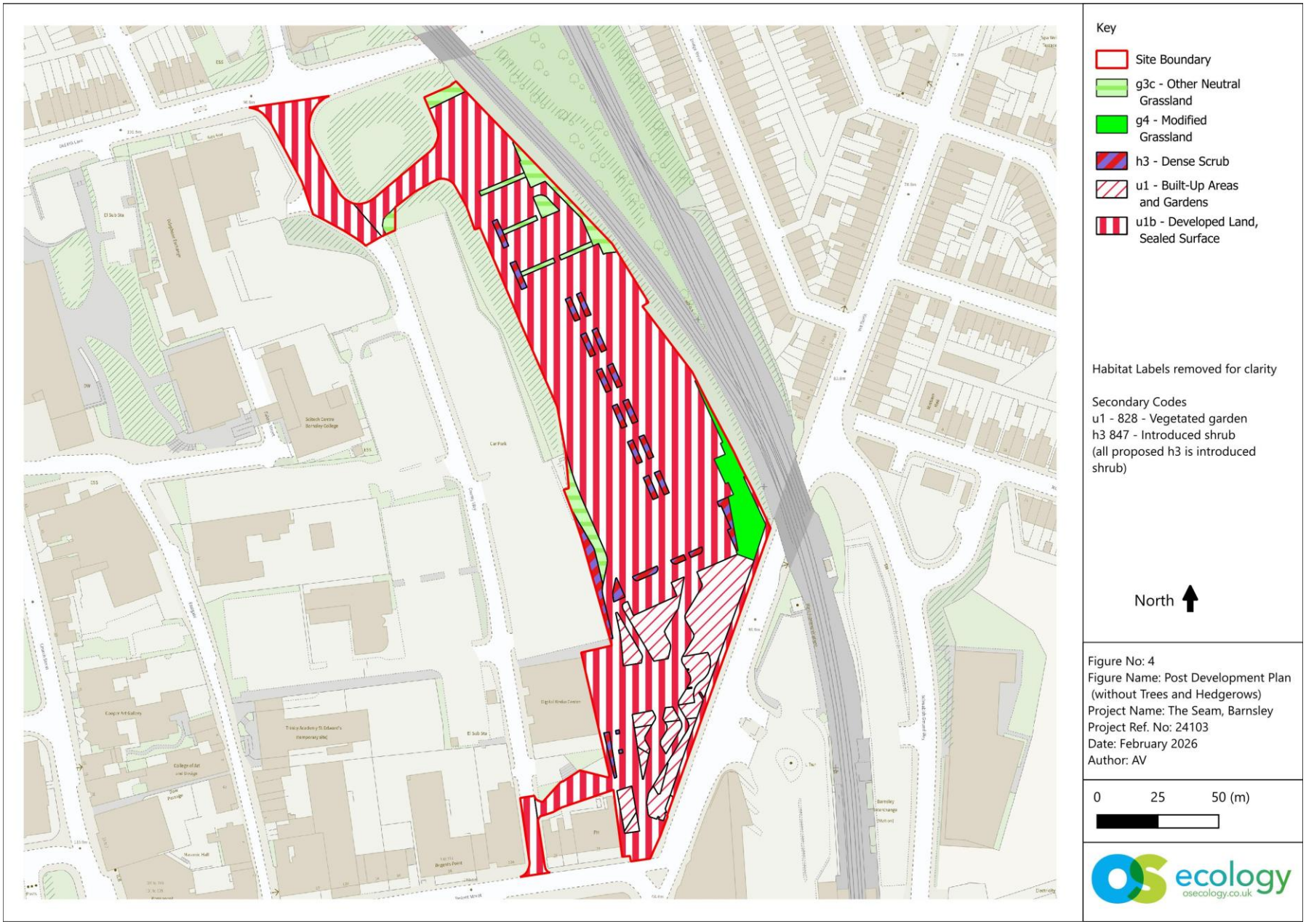
North

Figure No: 1
Figure Name: Site Location
Project Name: The Seam, Barnsley
Project Ref. No: 24103
Date: January 2026
Author: AV

0 150 300 (m)


Key
Site Boundary
North
Figure No: 2
Figure Name: Site Boundary
Project Name: The Seam, Barnsley
Project Ref. No: 24103
Date: January 2026
Author: AV
0
25
50 (m)


Key
Site Boundary
g3c - Other Neutral Grassland
u1b - Developed Land, Sealed Surface
Tree
Secondary Codes
200 - Tree
North
Figure No: 3
Figure Name: UK Habitats Map
Project Name: The Seam, Barnsley
Project Ref. No: 24103
Date: October 2024
Author: AV
0
25
50 (m)
u1b
g3c
200


Key
Site Boundary
g3c - Other Neutral Grassland
g4 - Modified Grassland
h3 - Dense Scrub
u1 - Built-Up Areas and Gardens
u1b - Developed Land, Sealed Surface
Habitat Labels removed for clarity
Secondary Codes
u1 - 828 - Vegetated garden
h3 847 - Introduced shrub
(all proposed h3 is introduced shrub)
North
Figure No: 4
Figure Name: Post Development Plan (without Trees and Hedgerows)
Project Name: The Seam, Barnsley
Project Ref. No: 24103
Date: February 2026
Author: AV
0
25
50 (m)

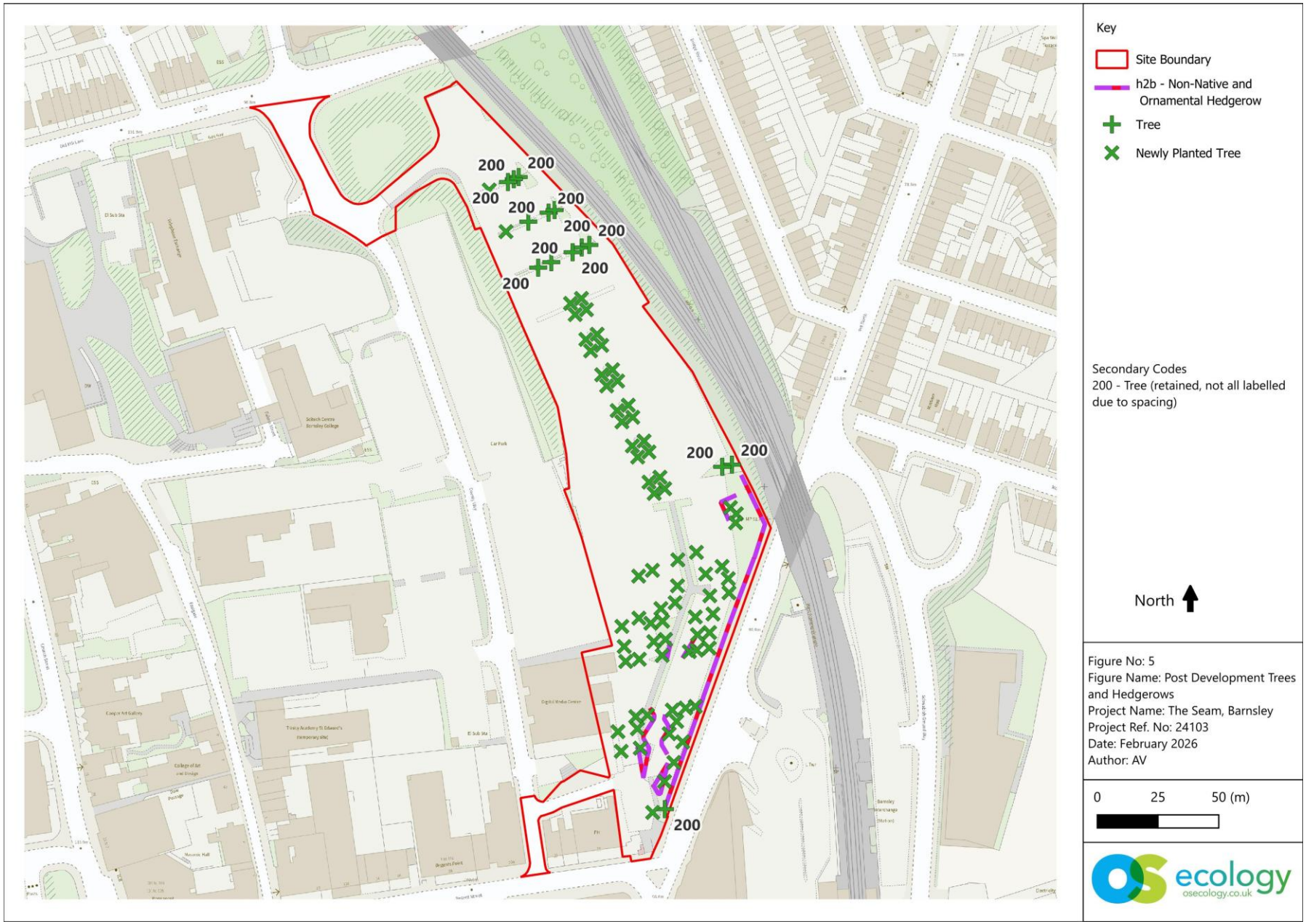

200
200
200
200
200
200
200
200
200
200
200
200
200
200
200
Key
Site Boundary
h2b - Non-Native and Ornamental Hedgerow
Tree
Newly Planted Tree
Secondary Codes
200 - Tree (retained, not all labelled due to spacing)
North
Figure No: 5
Figure Name: Post Development Trees and Hedgerows
Project Name: The Seam, Barnsley
Project Ref. No: 24103
Date: February 2026
Author: AV
0
25
50 (m)

Figure 6: Post Development Plan (One-Environments)