



Land at Blacksmith's Lane, Reed, Herts

Biodiversity Net Gain Statement

Author: Dr Matthew Denny MCIEEM

February 2026

Declaration of compliance

The information we have provided is true and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinion.

Disclaimer

The surveys within this report can be relied upon for one and a half years, i.e. until February 2027. After this date, further use should be subject to review by a suitably qualified ecologist.

1. SUMMARY	3
2. INTRODUCTION	4
3. SITE SURVEY AND ASSESSMENT METHODOLOGY	5
4. RESULTS AND ASSESSMENT	6
APPENDIX 1. BNG METRIC SUMMARY RESULTS	10
APPENDIX 2. PROPOSED LANDSCAPING PLAN (OVERVIEW)	12

1. Summary

- Development Site Address: Land at Blacksmith's Lane, Reed, Royston, Hertfordshire, SG8 8AX
- Proposed Development Description: Construction of 21 new dwellings and associated access, infrastructure and landscaping, including enhancements for Biodiversity Net Gain (BNG)
- The proposal, if granted, would be subject to the BNG
- Standard Statutory Metric calculation tool used as the site is over a hectare in area, and the proposal is for more than nine units. Publication date 23/07/2024
- No degradation of site recorded since 30 January 2020, and date of BNG baseline same as planning submission
- No irreplaceable habitats present
- Pre-development Biodiversity Value of Area Habitats: 4.41 units (area habitats)
- Post-development Biodiversity Value of Area Habitats: 3.75 units (area habitats)
- Area Habitats Deficit to be met through off-site unit purchase, accounting for trading rules requirement: 1.41 units of medium-distinctiveness grassland or higher distinctiveness habitat
- Pre-development Biodiversity Value of Hedgerow Habitats: 6.84 units (hedge habitats)
- Post-development Biodiversity Value of Hedgerow Habitats: 7.51 units (hedge habitats)
- Hedge Habitats Deficit to be met through off-site unit purchase, accounting for trading rules requirement: 0.77 units of very high-distinctiveness hedge habitat

2. Introduction

The Site landowners, The Turney Trust, are submitting a planning application for 21 residential units with associated vehicle access from Blacksmith's Lane to the south, at a site north of Blacksmith's Lane, Reed. The baseline habitat plan and proposed site layout and landscaping plan are shown in Appendices 1 and 2, respectively. The associated Ecological Impact Assessment (EclA) report should be read in conjunction with this report.

We confirm that this development proposal and planning application is subject to the statutory 10% Biodiversity Net Gain (BNG) to comply with the Environment Act 2021.

This statement presents a summary of the methods and results of the habitat survey, which are presented in full in the accompanying EclA. As the site is over 1ha in size and the proposal is to construct more than nine new units, we have used the statutory BNG Metric tool published on 23 July 2024 by DEFRA, to calculate whether there is a deficit in reaching the required 10% BNG within the red-line application boundary.

The full calculation is available in the accompanying Statutory Biodiversity Metric tool Excel file (filename: Blacksmiths Lane, Reed_SBM_V4-Feb 26).

I am a suitably qualified ecologist, being a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM) for 24 years, a practising ecologist for 35 years, and having a BSc in Zoology and a PhD in Ecology.

3. Site survey and assessment methodology

Habitat survey

Multiple site visits have been made to survey habitats by Dr Matthew Denny MCIEEM, Director, and Rebecca Cattell since 2022. The last visits were made by these two surveyors on 20th May and 20th August 2025, respectively. Initial surveys recorded habitats according to Phase 1 methodology (JNCC 2010). Later surveys have recorded the habitats, using UK Habitat methodology (UKHab 2023¹). Habitats were assigned to UKHab habitat types, mapped and assessed for their condition using DEFRA's standard Condition Assessment (CA) forms.

To assess the condition of the grassland, it is necessary to take quadrat samples. Ten separate 1m by 1m quadrats were sampled randomly across the field to determine the number of vascular plant species per m² in the grassland, and to assess the grassland condition criteria set out in DEFRA's CA forms. Completed forms are presented in the separate excel file (Blacksmiths Lane, Reed - Condition Assessment sheets).

The proposed development work was then superimposed onto the habitat map to elucidate the area of habitats predicted to be impacted.

BNG Metric calculation

We used the Statutory BNG standard metric tool published in July 2024 to calculate the baseline habitat value and predicted BNG as a result of the proposed development. There are no existing watercourses on the Site. Therefore, the target BNG was for a 10% uplift in area and hedgerow habitats only.

Existing habitats were assigned to UKHab Habitat types (UKHab Ltd 2023), as required by the Statutory Metric. Areas of these habitats were measured. We then measured the habitats impacted by the proposed development, and the areas of habitats to be retained, enhanced and created.

¹ UKHab Ltd (2023). UK Habitat Classification Version 2.0 (<https://www.ukhab.org>)

4. Results and assessment

Habitats

Existing area habitats within the Site boundary are other neutral grassland (ONG) (majority of the site), blackthorn scrub (north-west corner) and tall forbs along the Blacksmith's Lane road verge. Existing linear habitats within the Site boundary are species-rich hedgerow with trees associated with a ditch (southern boundary), other native hedgerow (east boundary), and ecologically valuable line of trees (northern boundary). Photos of these habitats are shown within the accompanying EclA report. These habitats are mapped in the UKHab habitat plan in Figure 1, below.

Other Neutral Grassland

The other neutral grassland comprised the majority of the Site. Wild basil *Clinpodium vulgare* and common knapweed *Centaurea nigra* occurred rarely, which are calcareous indicator species, but it was not possible to classify the grassland as distinctly calcareous, due to the overall species composition. There were many more species present which are indicative of more neutral conditions. However, there was not >25% perennial rye-grass *Lolium perenne* cover, which the UKHabs criteria states as usual for neutral grassland. Despite this, the closest UKHabs habitat was Other Neutral Grassland, and all grassland was assigned to this habitat type even though the species composition was not typical of this habitat. As it does not represent a good example of this habitat type, it does not pass Criterion A of the condition assessment, and as such is automatically assigned Poor condition. It is considered likely that its Poor condition is due to its relatively short development time and latent soil fertility since being routinely cropped for intensive arable farming.

There were occasional species indicative of sub-optimal conditions (listed in footnote 3 of the condition assessment sheet), such as stinging nettle *Urtica dioica*, creeping thistle *Cirsium arvense*, spear thistle *Cirsium vulgare* and some scrub encroachment of hawthorn *Crataegus monogyna* and blackthorn *Prunus spinosa*, mainly on the hedge side of the field. Once sub-optimal species were removed from the count, as per footnotes 3 and 5 of the assessment sheet, there were 9.4 vascular plant species present per m² quadrat.

Encroaching scrub within the grassland comprised dog rose *Rosa canina*, bramble *Rubus fruticosus* agg. and willow *Salix* sp. and also ash *Fraxinus excelsior* saplings. Management of the grassland has recently ceased, resulting in a marked increase_ in scrub; percentage cover of scrub had increased from approximately 5% in 2024 to 40-50% in 2025.

Tall Forbs

The northern road verge of Blacksmith's Lane, forming the southern boundary to the Site, was dominated by tall forbs, such as dock sp., cow parsley, and cleavers, and coarse grasses including cock's foot and Yorkshire fog were frequent. The dry ditch along this verge was always dry, despite multiple site visits across all seasons. Much of the ditch was covered and shaded by the hedgerow shrubs. Sections that were not shaded supported the same tall forbs habitat as the adjacent road verge. Therefore, we have included these sections in the same tall forbs habitat type. Only some of the verge and associated dry ditch are located within the red line boundary, as shown in the baseline habitat map. All three CA criteria were passed, and its condition was assessed as being Good.

Blackthorn Scrub

A parcel of dense blackthorn scrub was present in the north-west corner of the Site. It is considered likely to have formed from an outgrown remnant section of hedgerow, following management neglect. Blackthorn *P. spinosa* was dominant (>75%), with mature plum *Prunus* Sp. (not identified to species), field maple *A. campestre*, bramble *R. fruticosus* agg. and ivy *Hedera helix* also present. This scrub passes three of the five CA criteria, and was assessed as being in Moderate condition.

Species-rich Native Hedgerow with Trees associated with a ditch

This forms the mature hedgerow running along most of the southern boundary of the Site, and adjacent to the northern verge of Blacksmith's Lane. It is 180m total length. Hedgerow species composition was field maple *Acer campestre*, bramble *Rubus fruticosus* agg., sycamore *Acer pseudoplatanus*, English elm *Ulmus procera*, hawthorn *C. monogyna*, hazel *Corylus avellana*, blackthorn *P. spinosa*, dog rose *Rosa canina*, ash *Fraxinus excelsior*, elder *Sambucus nigra*, apple *Malus domestica* and traveller's-joy *Clematis vitalba*. Mature trees within the hedge were ash *F. excelsior*, apple *M. domestica*, hazel *C. avellana* and field maple *A. campestre*.

The central 30m section supported 9 woody species. A number of trees of different species and ages were present along the hedgerow length. Therefore, the hedgerow was classified as a Native Species-rich with trees with associated ditch (dry). It is also classified as Important under the 1997 Hedgerow Regulations.

All condition assessment criteria were passed, so the hedgerow was assessed as being in Good condition.

Other Native Hedgerow

The eastern boundary comprises two sections of blackthorn hedgerow, presumably the vestiges of a previously intact hedgerow running the length of this boundary. The sections were both 30m in length, with one at the southern end and the other at the northern end. It was >1.5m high, but <1.5m wide, as it has been cut back until recently on the field side, and is cut on the garden side. Otherwise, all CA criteria are met, and the hedgerow was assessed as being in Good condition.

Ecologically Valuable Line of Trees

The line of trees along the northern boundary comprised mostly mature ash and oak. It was 180m total length. Whilst the recent clearance of the off-site land to the north has resulted in loss of three trees in this line, these were all outside the Site. Before these trees were removed, the line was continuous in terms of canopy overlap, so this condition assessment criterion was marked as passed. Therefore, all five CA criteria are passed, and the line of trees was assessed as being in Good condition.

BNG Metric calculation

When checking Google Earth images, it is apparent that all the habitats recorded during the site survey appear to have been present before 30 January 2020, as far back as 2014 at least. In 2006, it was used for arable cropping. As mentioned above, the valuable line of trees has recently been reduced in length due to felling of three off-site trees by the adjacent landowner, and this is accounted for in our metric calculation, with baseline conditions recorded on visits prior to August 2025 being applied to this tree line.

There will be loss of the following area and linear habitats:

- 0.6692 ha of other neutral grassland will be lost, 0.027 will be retained and 0.3726 will be enhanced
- 0.006 ha of tall forbs will be lost, and 0.0075 retained
- All 0.007 ha of blackthorn scrub will be lost
- 0.002 ha of developed land; sealed surface (pavement) will be retained
- Southern species-rich hedgerow with trees associated with a ditch will be breached in two locations: east breach = 13.5m; west breach = 18.5m; total = 32m lost
- Eastern boundary hedgerow - half will be removed for development; half supplementary planted with native species mix to enhance to species-rich native hedgerow
- Line of trees along northern boundary to be retained as existing

The proposed new habitats are as follows:

- 0.4907 ha of developed land; sealed surface
- 0.1915 ha vegetated garden
- 0.1 ha traditional orchard
- 36 small trees (equivalent to 0.1466 habitat units)
- 187m length of species-rich native hedgerow
- 30m length of native hedgerow on eastern boundary enhanced to species-rich
- Note, that in addition a significant area (0.2726) of existing other neutral grassland will be enhanced from poor to good condition, as detailed above

Calculated BNG change:

A summary of the BNG Metric calculation results is presented in Appendix 1. Area habitat unit values are 4.41 at baseline (pre-development), and 3.75 post-development. Hedgerow habitat unit values are 6.84 at baseline (pre-development), and 7.51 post-development. There will be a 15.07% **decrease** in area habitat value, and a 9.74% **increase** in hedgerow habitat value, as a result of the development.

However, as not enough medium distinctiveness habitat (other neutral grassland) is being replaced within the scheme, the trading rules are not satisfied resulting in a deficit of 1.41 grassland units. These will need to be purchased from an off-site provider.

Also, as sections of the southern hedgerow (very high distinctiveness habitat) will be lost and not replaced with the same value habitat on-site, the trading rules are not satisfied for hedgerow habitats either, resulting in a deficit of 0.77 hedgerow units. These will either need to be created elsewhere within the site, and/or purchased from an off-site provider.

This demonstrates that the proposed scheme will not meet the BNG targets through onsite habitat enhancement and creation for area or hedgerow habitats. With the current layout and landscaping scheme, the deficit of 1.41 area units and 0.77 hedgerow units will need to be purchased through an off-site provider. The most appropriate off-site area habitat to purchase will be medium-distinctiveness grassland, whilst the only hedgerow habitat that can be purchased is species-rich with trees and associated bank or ditch.

Appendix 1. BNG Metric summary results

Land north of Blacksmiths Lane, Reed

Headline Results

Scroll down for final results ☒

Return to results menu

On-site baseline	Habitat units	4.41		
	Hedgerow units	6.84		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	3.75		
	Hedgerow units	7.51		
	Watercourse units	0.00		
On-site net change (units & percentage)	Habitat units	-0.66	-15.07%	On-site net gain is less than target set
	Hedgerow units	0.67	9.74%	On-site net gain is less than target set
	Watercourse units	0.00	0.00%	

FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-0.66		
	Hedgerow units	0.67		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-15.07%	Total net gain achieved is less than target set ▲	
	Hedgerow units	9.74%	Total net gain achieved is less than target set ▲	
	Watercourse units	0.00%		
Trading rules satisfied?	No - Check Trading Summaries ▲			

Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	4.41	4.85	1.11	
Hedgerow units	10.00%	6.84	7.52	0.02	
Watercourse units	10.00%	0.00	0.00	0.00	No additional watercourse units required to meet target ✓

Medium Distinctiveness					
Habitat group	Group	On-site unit change	Off-site unit change	Project wide unit change	Cumulative broad habitat change
Cropland - Arable field margins cultivated annually	Cropland	0.00	0.00	0.00	0.00
Cropland - Arable field margins game bird mix	Cropland	0.00	0.00	0.00	
Cropland - Arable field margins pollen and nectar	Cropland	0.00	0.00	0.00	
Cropland - Arable field margins tussocky	Cropland	0.00	0.00	0.00	
Grassland - Other lowland acid grassland	Grassland	0.00	0.00	0.00	-2.02
Grassland - Other neutral grassland	Grassland	-2.02	0.00	-2.02	
Grassland - Upland acid grassland	Grassland	0.00	0.00	0.00	
Heathland and shrub - Blackthorn scrub	Heathland and shrub	-0.06	0.00	-0.06	-0.06
Heathland and shrub - Bramble scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Gorse scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Hawthorn scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Willow scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Hazel scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Mixed scrub	Heathland and shrub	0.00	0.00	0.00	
Lakes - Ponds (non-priority habitat)	Lakes	0.00	0.00	0.00	0.00
Lakes - Reservoirs	Lakes	0.00	0.00	0.00	
Sparsely vegetated land - Other inland rock and scree	Sparsely vegetated land	0.00	0.00	0.00	0.00
Urban - Cemeteries and churchyards	Urban	0.00	0.00	0.00	0.00
Urban - Biodiverse green roof	Urban	0.00	0.00	0.00	0.00
Individual trees - Urban tree	Individual trees	0.41	0.00	0.41	0.41
Individual trees - Rural tree	Individual trees	0.00	0.00	0.00	0.00
Woodland and forest - Other Scot's pine woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Other woodland; broadleaved	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Other woodland; mixed	Woodland and forest	0.00	0.00	0.00	
Intertidal sediment - Littoral coarse sediment	Intertidal sediment	0.00	0.00	0.00	0.00
Intertidal sediment - Littoral sand	Intertidal sediment	0.00	0.00	0.00	
Intertidal hard structures - Artificial hard structures with integrated greening of grey infrastructure (IGGI)	Intertidal hard structures	0.00	0.00	0.00	
		-1.66	0.00	-1.66	

Medium Distinctiveness Summary		
Medium Distinctiveness Units available to offset Lower Distinctiveness Deficit	0.41	✓
Medium Distinctiveness Broad Habitat losses to be offset by trading up	-2.07	⊠
Higher Distinctiveness Surplus Units minus Medium Distinctiveness Broad Habitat Deficit	-1.41	⊠
Cumulative surplus of units	-1.00	⊠

Trading Summary		
Distinctiveness Group	Trading Rule	Trading Satisfied?
Very High	Same habitat required =	No ▲
High	Like for like or better	Yes ✓
Medium	Same distinctiveness or better habitat required	Yes ✓
Low	Same distinctiveness or better habitat required	Yes ✓
Very Low	Same distinctiveness or better habitat required	Yes ✓

Very High Distinctiveness			
Habitat group	On-site unit change	Off-site unit change	Project-wide unit change
Species-rich native hedgerow with trees - associated with bank or ditch	-0.77	0.00	-0.77 ▲
	-0.77	0.00	-0.77

Very High Distinctiveness Summary	
Very High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
Remaining losses; Like for like not satisfied	-0.77 ▲

Appendix 2. Proposed landscaping plan (overview)

1) Setting Out

- ## 4) Setting Out
- All planting beds and plant positions shall be set out in accordance with the approved soft landscaping plan, using dimensions taken from fixed, permanent reference points.
 - Planting beds shall be a minimum width of 600 mm wherever site conditions allow. Where planting beds are limited or undrained by contours, the contractor shall notify the site manager before proceeding, to agree whether the scheme is to be amended or local modifications made.
 - The soft landscaping works shall be carried out in the first planting season following the completion of the development phase. Any trees, shrubs or plants that die within a period of 5 years from the completion of the development, or which are removed and/or become seriously damaged or diseased in that period, shall be replaced in the first available planting season with others of similar size and species.
- ## 2) Ground Preparation
- Where weeds are present, apply a systemic herbicide in accordance with the manufacturer's instructions. The Control of Pesticides Regulations 1986 (as amended), and COSHH 2002. Application shall only be by trained, certified operators. Multiple applications may be required on heavily weeded sites.
 - Topsoil within planting beds shall be inspected and remediated to comply with BS 3882:2015. Stones, rubble, and debris greater than 50 mm shall be removed.
 - To achieve free-draining, non-compacted conditions:
 - * Beds <5 m wide: cultivate to 300 mm depth by hand or rotavator
 - * Beds >5 m wide: subsoil to 300 mm depth by ripper at 500 mm centres to a depth of 500 mm, except within 10 m of trees or 3 m of edges, or where underground services are present.
 - Where subsoil or topsoil has >20% clay content, ameliorate with suitable organic matter or soil improver to achieve a friable structure. Apply a slow-release fertiliser (e.g. Hortibrite CR 18-8-12) at 100 g/m² in accordance with manufacturer's guidance.
 - Adjacent to grass or paved areas, planting beds shall be graded to 65 mm below finished surface level. Turf shall be flush with or up to 10 mm below adjoining hard surfaces.
 - Where topsoil shall be simply used for topdressing, a 100 mm texture class appropriate to planting requirements, <20% clay, and free of stones >50 mm.

3) Planting

Shrubs and Herbaceous Plants

- Planting shall be carried out in accordance with the approved drawings, plant schedule, and BS 4228:1989.
- Plant at correct depth with the root collar at finished soil level.
- Substitutions shall not be permitted without prior written approval of the project manager and client. All stock shall comply with the HTA National Plant Specification, be healthy, vigorous, free from pests, diseases, deformity, or damage, and true to type.
- Shrubs (except ground cover) shall be 400–600 mm height and spread, unless otherwise specified.
- Immediately after planting, apply water at 20 L/m².

Tree Planting Methodology

1. Excavation: Excavate square pits at least 300 mm wider than the rootball/container/root spread. The pit base shall be slightly domed; break up only if drainage is poor.
2. Backfilling: Place tree so that the root collar is level with finished ground. Backfill with subsoil up to ~400 mm below surface, then topsoil to match site profile. Firm backfill in layers.
3. Tree Stock: Trees may be supplied containerized, rootballed, or bare-root stock, provided they comply with the approved specification and the HTA National Plant Specification. Bare-root trees must be planted during the dormant season (Nov–Mar) and roots kept covered/damp prior to planting.
4. Staking & Ties: In line with BS 8545:2014, provide:
 - Standard and feathered trees: minimum single stake, double if required.
 - Heavy standards and multi-stems: double or angled staking to provide additional support.
 - Stakes: round timber, driven outside rootball, projecting ~600 mm above ground.
 - Ties: biodegradable, Hessian, or rubber, positioned to avoid stem abrasion.
5. Watering Dish (grassed areas only):
 - A shallow, circular depression formed in the soil around the tree base, with raised edges to retain irrigation directly over the rootball.
 - Standard trees (≤3 m height): approx. 1.0 m diameter.
 - Heavy standards (>3 m height or >12–14 cm girth): approx. 1.5 m diameter.
 - Not required in shrub or mulched beds.
6. Initial Watering: Apply a minimum of 25 L clean water per tree immediately after planting.
7. Irrigation Systems: Install a slow-release irrigation system such as a 75 L Treegator or equivalent to each standard and heavy standard tree.
8. Mulching: Apply medium-grade, untreated organic woodchip mulch to a minimum settled depth of 50 mm and:
 - Standard trees: minimum 1.0 m diameter.
 - Heavy standards: minimum 1.5 m diameter.
 - Mulch must be kept 50 mm clear of the stem.
9. Timing: Planting shall be carried out in the first planting season (October–February) following completion of development works.

Hedge Planting

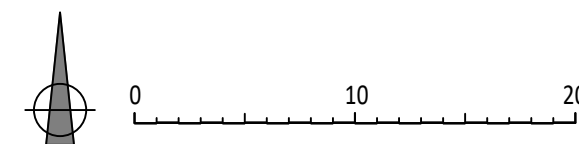
- Trenches shall be minimum 400 mm deep $\times$ 600 mm wide.
- Plants to be set at the same depth as grown in the nursery, spaced as per the approved plan.
- Roots of bare-root plants must not dry out prior to planting. Keep roots covered with damp hessian/straw, or heel into soil until planting.
- After planting, heel in firmly and water during dry weather.
- Mulch hedges with untreated organic woodchip mulch, 50 mm minimum settled depth, medium grade.
- Planting shall be carried out in the first planting season (October–February) following completion of development works.

4) Mulch and Supports

- Climbing plants requiring support shall be trained onto galvanised or stainless steel wire supports fixed with stainless steel eyescrews at 250 mm from ground and 250 mm from the top of the wall/fence, with wires tensioned between. Fix climbers with plastic-coated wire ties.
- Tree staking and mulching as set out above under Tree Planting Methodology.
- Where grassed areas extend to the tree pit edge, install rabbit/deer guards in line with BS 8601:2013.

5) Aftercare

- a) Maintain hedges, trees, and shrubs for 3–5 years following planting to ensure successful establishment. Carry out annual pruning/trimming in accordance with species requirements.
- b. Provide supplementary irrigation for the first 24 months, tailored to prevailing weather. During summer months, water 3–7 times per week to maintain soil moisture and plant health.
- c. Trees shall receive supplementary irrigation for at least 2 years. Water every 3–5 days in summer. Tree hydration bags (e.g. 75 L Treegator) are recommended to reduce frequency and ensure deep water.



Project	Land at Blacksmiths Lane		
Client	The Trustee Trust		
Drawing	Soft-Landscaping Scheme (00)		
Revision	Rev	Date	
P5596-SL500	V3	16/12/2025	
Scale	n/a - A1		
Author	A. Beighton		
Issued on	Proposed Site Plan		