

JAMES BLAKE

A S S O C I A T E S

Our Ref: JBA 24/555 Gray's Lane, Hitchin, Hill Residential ECO04 Rev A

2nd July 2025

On behalf of Hill Residential

Biodiversity Net Gain Calculation for land at Gray's Lane, Hitchin.

James Blake Associates Ltd. (JBA) was commissioned by Hill Residential to provide a biodiversity net gain calculation for the proposed development on land at Gray's Lane, Hitchin.

The baseline habitat calculations have been taken from the Updated Ecological Appraisal by Aspect Ecology Ltd, However, as the boundary line overlaps with the adjacent application for Gray's Lane, some quantities have been adjusted so as not to double-count habitats.

Background

A biodiversity net gain calculation has been carried out using Defra Biodiversity Statutory Metric (updated February 2025 version 4.0). For more information on the metric, please see [here](#).

Defra's Biodiversity Statutory Metric provides a way of measuring and accounting for biodiversity losses and gains resulting from development or land management change. The metric encompasses both area (e.g. grasslands) and linear habitats (such as hedgerows, rivers and streams). Note that 'material' enhancements for species, such as bat/bird boxes, reptile hibernacula, hedgehog 'highways' etc. cannot currently be factored into the calculation.

The habitats and linear features currently present within the site boundary are used to calculate the baseline biodiversity units; the percentage gain that the proposed development can potentially deliver is estimated using the detailed soft landscape proposals for the development and assumptions made by the assessor.

At present, national policy states '*To protect and enhance biodiversity and geodiversity, plans should:*

- a) *Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national, and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*
- b) *promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity'* (NPPF, 2024).

The figure of 10% net gain as the minimum has now been highlighted as mandatory with the emerging Environment Bill, from February 2024 for major development and from April 2024 for small developments.

Methodology and Evaluation

The baseline figures for the metric calculation were based on the biodiversity net gain (BNG) condition assessment undertaken by JBA on 30th May 2025.

The area measurement for each of the baseline habitat types was made using measuring tools in AutoCAD based on the architect's layout, the topographical survey and Arboricultural Impact Assessment supplied by the client.

The baseline habitats consist of those detailed in Table 1 and Table 2, the impact of each habitat has also been provided. See also appendix A for Phase 1 Habitat Survey map by Aspect Ecology Ltd.

Table 1: Habitat baseline and impact

Habitat	Area (ha)	Impact
Modified Grassland	1.9422	Partially Retained and Enhanced
Modified Grassland	0.1428	Removed (area covered by nettles)
Urban trees	0.1751	Partially Retained

Table 2: Habitat baseline and impact

Habitat	Length (km)	Condition
Native Hedgerow	0.354	Partially Retained

The strategic significance of the location was checked against the North Herts Local Plan 2011-2031. The location is mentioned in the Strategy under 'Housing Site' HT5.

The areas for habitat to be created were taken from the detailed soft landscape proposals JBA 24/555 02-13. Proposed habitats are provided in Table 3, with proposed hedgerows shown in Table 4.

Table 3: Proposed habitat creation

Habitat	Area (ha)	Condition
Urban Tree	0.1588	Moderate
Mixed Scrub	0.0361	Moderate
Modified Grassland	0.0855	Moderate
Other Neutral Grassland	0.3203	Moderate
Vegetated Garden	0.4559	N/A
Introduced Shrub	0.0078	N/A
Developed Land; Sealed Surface	0.93531	N/A

Table 4: Proposed hedgerow/linear features

Habitat	Length (km)	Condition
Species-rich Native Hedgerow with trees	0.075	Moderate
Species-rich Native Hedgerow	0.134	Moderate

Results

The overall score is a **gain of 16.55%** or **0.92** Habitat units and a **gain of 29.94%** or **0.97** Hedgerow units. However, to achieve this BNG percentage, the conditions noted in Tables 3 and 4 will need to be achieved within 30 years. Landscape and ecological management plans are required to secure the potential benefits for biodiversity in perpetuity. Please see Appendix B for Headline Results from the BNG Metric.

Table 5 below gives some general guidance for the proposed habitat creation and management and how to achieve the targeted conditions.

Table 5: General guidance for targeted conditions

Habitat
Urban tree
Planting/management measures
The trees should be managed to achieve the following characteristics; • The tree is a native species (or at least 70% within the block are native species). • 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). • More than 20% of the tree canopy area is oversailing vegetation beneath. • 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.
Habitat
Mixed scrub
Planting/management measures
The scrub should be managed to achieve the following characteristics; • There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA5) and species indicative of suboptimal condition make up less than 5% of ground cover. • At least 80% of scrub is native • There are at least three native woody species, • No single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i>, common juniper <i>Juniperus communis</i>, sea buckthorn <i>Hippophae rhamnoides</i> (only in its restricted native range), or box <i>Buxus sempervirens</i>, which can be up to 100% cover.
Habitat
Modified grassland
Planting/management measures
The grassland should be managed to achieve the following characteristics; • "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. • 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 • Cover of bracken is less than 20% and cover of scrub (including bramble) is less than 5%. • Absence of invasive non-native species.

Habitat
Other Neutral Grassland
Planting/management measures
- 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. - Sward height is varied (at least 20% of the sward is less than 7cm and at least 20% is more than 7cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed. - Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens. - Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of shrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%. - Combined cover of species indicative of suboptimal condition 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 species are present, this criterion is automatically failed.
Habitat
Species-Rich Native hedgerow
Planting/management measures
Planting and management of new hedgerow to meet the following criteria over time; >1.5 m average height along length >1.5 m average width along length - Gap between ground and base of canopy <0.5 m for >90% of length - Gaps make up <10% of total length; and no canopy gaps >5 m >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length >90% of the hedgerow or undisturbed ground is free of damage caused by human activities >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA3) and recently introduced species.
Habitat
Species-Rich Native hedgerow with Trees
Planting/management measures
Planting and management of new hedgerow to meet the following criteria over time; >1.5 m average height along length >1.5 m average width along length - Gap between ground and base of canopy <0.5 m for >90% of length - Gaps make up <10% of total length; and no canopy gaps >5 m >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length >90% of the hedgerow or undisturbed ground is free of damage caused by human activities >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA3) and recently introduced species. - There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient8), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow. - At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.

Conclusions

Using the proposed detailed soft landscape proposals (JBA 24/555 02 - 13) and assessor assumptions, it is concluded that the development can deliver an overall **gain of 0.92** for habitat units and **gain of 0.97** hedgerow units providing the above management can be followed.

Yours faithfully,

Jessica Bond
Landscape Architect
James Blake Associates Ltd.

References

Updated Ecological Appraisal by Aspect Ecology, June 2025
Tree Constraints Plan and Tree Survey, Aspect Arboriculture, November 2022
Further BNG Consideration of Habitat Condition, May 2023, by Aspect Ecology
Detailed Soft Landscape Proposals JBA 24/555 02 - 13, James Blake Associates, July 2025

Appendix A. Habitats and Ecological Features



Gray's Lane, Hitchin

Headline Results

Scroll down for final results ⚠

Return to

On-site baseline	Habitat units	5.55	
	Hedgerow units	3.23	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	6.47	
	Hedgerow units	4.20	
	Watercourse units	0.00	
On-site net change (units & percentage)	Habitat units	0.92	16.55%
	Hedgerow units	0.97	29.94%
	Watercourse units	0.00	0.00%

Off-site baseline	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	Habitat units	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%

Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.92	
	Hedgerow units	0.97	
	Watercourse units	0.00	
Spatial risk multiplier (SRM) deductions	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	

FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.92	
	Hedgerow units	0.97	
	Watercourse units	0.00	

Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	16.55%
	Hedgerow units	29.94%
	Watercourse units	0.00%

Trading rules satisfied?	Yes ✓
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Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	5.55	6.11	0.00
Hedgerow units	10.00%	3.23	3.56	0.00
Watercourse units	10.00%	0.00	0.00	0.00

No additional area habitat units required to meet target ✓
No additional hedgerow units required to meet target ✓
No additional watercourse units required to meet target ✓