JAMES BLAKE
ASSOCIATES

Our Ref: JBA 24/482 ECO03 JB

24th July 2025

On behalf of Allison Homes

Baseline Biodiversity Net Gain Calculation for Land off Normanton Road, Crowland, Lincolnshire

James Blake Associates Ltd. (JBA) was commissioned by Allison Homes to provide a biodiversity net gain calculation for the proposed development on Land off Normanton Road, Crowland, Lincolnshire (South Holland District Council).

Background

A biodiversity net gain calculation has been carried out using Defra Biodiversity Statutory Metric (updated November 2023). 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 a site plan for the development and assumptions made by the assessor. As no finalised development plan is available, this statement sets out the biodiversity value of the existing habitats in terms of biodiversity units.

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 Preliminary Ecological Appraisal (PEA) and biodiversity net gain (BNG) condition assessment undertaken by JBA in July 2025.

The area measurement for each of the baseline habitat types was made using measuring tools on QGIS Prizren 3.34.15.

The baseline habitats and linear features consist of those detailed in Table 1, 2 and 3 respectively, the baseline habitat units has also been provided.

Table 1: Habitat baseline and impact

Habitat	Area (ha)	Condition	Baseline habitat units
Non-Cereal Crops	3.14	N/A	6.28
Bramble Scrub	0.034	N/A	0.14
Modified Grassland	0.029	Poor	0.08
Ruderal/Ephemeral	0.261	Moderate	1.04
Bare Ground	0.022	Poor	0.04
Urban trees	0.0652	Good	0.78
Urban trees	0.0692	Moderate	0.55
Urban trees	0.0041	Poor	0.06
		Total baseline habitat units	**8.92**

Table 2: Linear baseline and impact

Linear Feature	Length (km)	Condition	Baseline habitat units
Native Hedgerow	0.015	Poor	0.03
Native Hedgerow with trees	0.048	Moderate	0.42
Non-Native Hedgerow	0.034	Poor	0.034
Native Hedgerow associated with bank or ditch	0.155	Moderate	1.36
Line of trees	0.067	Moderate	0.067
		Total baseline Linear units	**2.15**

Table 3: Watercourse baseline and impact

Linear Feature	Length (km)	Condition	Baseline habitat units
Ditch	0.095	Poor	0.32
		Total baseline Linear units	**0.32**

The strategic significance of the location was checked against the ‘Local Plan' of South Holland District Council. The location did not appear to be in or near to a locality mentioned in the Strategy.

Results

The majority of the site comprises non-cereal cropland. Other habitats present on site are bramble scrub, mixed scrub, ruderal/ephemeral ground cover, modified grassland, hedgerows and bare ground. A line of trees was present along the southern boundary in the western half of the site. Two dry ditches were also present, Ditch 1 was located along the eastern site boundary and Ditch 2 (associated with hedge) bisected the site extending westwards from the eastern boundary.

The existing baseline habitats hold an overall value of **8.92** habitat units, **2.15** units for linear features and **0.32** unit for watercourses. To achieve the BNG percentage, the development will need to provide a total of **9.81** habitat units, **2.37** for linear units and **0.35** watercourse units.

The areas for habitat to be created were taken from the detailed soft landscape proposals JBA 24/482 01-04. Proposed habitats are provided in Table 3, with proposed hedgerows shown in Table 4.

Table 4: Proposed habitat creation

Habitat	Area (ha)	Condition
Urban Tree	0.5171	Moderate
Mixed Scrub	0.0961	Moderate
Modified Grassland	0.2426	Moderate
Other Neutral Grassland	0.6519	Good
Vegetated Garden	0.8637	N/A
Bare Ground	0.0171	N/A
Developed Land; Sealed Surface	1.372	N/A

Table 5: Proposed hedgerow/linear features

Habitat	Length (km)	Condition
Species-rich Native Hedgerow associated with ditch	0.035	Good
Species-rich Native Hedgerow	0.334	Good

Table 6: Proposed watercourse enhancement

Linear Feature	Length (km)	Condition
Ditch	0.095	Moderate

Results

The overall score is a **gain of 37.01%** for Habitat net % change, a **gain of 132.80%** for Hedgerow net % change and a **gain of 69.74%** for Watercourse enhancement net % change. However, to achieve this BNG percentage, the conditions noted in Table 7 will need to be achieved within 30 years. Landscape and ecological management plans are required to secure the potential benefits for biodiversity in perpetuity.

Table 7 below gives some general guidance for the proposed habitat creation and management and how to achieve the targeted conditions.

Table 7: 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 *Corylus avellana*, common juniper *Juniperus communis*, sea buckthorn *Hippophae rhamnoides* [only in its restricted native range], or box *Buxus sempervirens*, 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 *Pteridium aquilinum* is less than 20% and cover of shrub (including bramble *Rubus fruticosus* 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 associated with ditch
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
Ditch
Planting/management measures
Planting and management of new hedgerow to meet the following criteria over time; • A range of emergent, submerged and floating-leaved plants are present. As a guide >10 species of emergent, floating or submerged plants present in a 20 m ditch length. • There is less than 10% cover of filamentous algae and or duckweed Lemna spp. (these are signs of eutrophication). • A fringe of aquatic marginal vegetation is present along more than 75% of the ditch. • Physical damage is evident along less than 5% of the ditch, with examples of damage including: excessive poaching, damage from machinery use or storage, or any other damaging management activities. • Less than 10% of the ditch is heavily shaded. • There is an absence of non-native plant and animal species.

Conclusions

Using the proposed detailed soft landscape proposals (JBA 24/482 01-04) and assessor assumptions, the overall score is a **gain of 37.01%** for Habitat net % change, a **gain of 132.80%** for Hedgerow net % change and a **gain of 69.74%** for Watercourse enhancement net % change, providing the above management can be followed.

Yours faithfully,

Jessica Bond
Landscape Architect
James Blake Associates Ltd.

References

Preliminary Ecological Appraisal, Rev B, James Blake Associates, July 2025
Arboricultural Impact Assessment, Rev A James Blake Associates, July 2025
Arboricultural Method Statement, James Blake Associates, July 2025
Tree Schedule, James Blake Associates, July 2025
Detailed Soft Landscape Proposals JBA 24/482 01-04, James Blake Associates, July 2025

Appendix A. Baseline Habitat Map



Key

- Red Line Boundary
- g - Ruderal
- g4 - modified grassland
- c1d - non-cereal crops
- s - sparsely vegetated land - bare ground
- h3d- brambe scrub
- J2.6 - Dry ditch
- h2a- native hedgerow
- h2b- Non-native and ornamental hedgerow
- w1g 33- Line of trees
- Target Note
- Broadleaved tree

OSM Standard

Created by: JW	Date: 18.07.2025
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JAMES BLAKE ASSOCIATES

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Base Map and data from Open Street Map and OpenStreetMap Foundation (CC-BY-SA). (C)