



Biodiversity Net Gain Assessment

The Firs, Bedford Road, Hitchin

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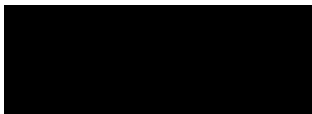
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1. Introduction

1.1 Project Background

Brown & Co was commissioned by Capital Developments Group in June 2025 to undertake a Biodiversity Net Gain Assessment at land at land at Firs Hotel, Bedford Road, Hitchin SG5 2TY (NRG: TL 17925 29803)—hereafter referred to as ‘the Site’.

The Site was dominated by a hotel and hardstanding. A small amenity lawn was present as well as a tree line and hedgerow.

This report sets out the results of a Site survey undertaken 30 June 2025 and a subsequent desk-based assessment. The information, assessment and discussion set out in this report aim to inform the potential for Biodiversity Net Gain on the Site in the context of plans to include development of new dwellings and associated infrastructure.

1.2 Site Description

The Site is a 0.16 ha flat parcel of land on Bedford Road, Hitchin, in the north of Hertfordshire (See Figure 1). The Site was dominated by an existing hotel and hardstanding with a small amenity lawn. A small amenity lawn was present as well as a tree line and hedgerow.

No watercourse were present within the Site.



Figure 1 – Site (redline) and offsite location (blueline), showing the wider local landscape (© 2025 Microsoft Corporation, © 2025 Maxar, ©CNES (2025) Distribution Airbus DS).

Imagery taken from Aerial Imagery May 2025.

The wider landscape around the Site was dominated by the urban area of Hitchin, with a few recreational grounds and playing fields, tree-lined streets and residential gardens.

Multiple public roadways, chiefly associated with the urban area of Hitchin are present within the local vicinity of the Site.

One Statutory Main River, the River Purwell, lies within 2 km of the Site.

2. Methods

2.1 Objectives

The aim of this report is to provide an initial assessment of the habitats present within the Site and those included in proposals for the Site with regard to the potential of achieving Biodiversity Net Gain. Plans showing all onsite habitats will be generated.

This report was produced following current best practice guidance, including that set out in BS 8683:2021 Process for designing and implementing Biodiversity Net Gain (British Standards 2021).

2.2 Legislation and Policy

Appendix A sets out the national and local planning policy, as well as environmental and wildlife legislation relevant to the Site. The project must adhere to these documents at all times. The contents of this report are written in part to avoid an offence being committed in regard to this policy and legislation.

2.3 Biodiversity Net Gain Calculation

A survey of the Site was conducted on 30 June 2025 by Senior Ecologist Ryan Clark BSc (Hons) MSc ACIEEM.

The survey area was subject to a walkover by the attending ecologist, where in the onsite habitats were identified and assessed in accordance with the UK Habitat Classification Version 2.0 (UKHab Ltd 2023). Flora species lists were compiled for each habitat and assigned positions on the DAFOR (Dominant, Abundant, Frequent, Occasional, or Rare) scale as laid out in Walker *et al.* (2010). Additionally, the Site was assessed for its suitability for protected and notable species. Any evidence of such species, e.g. Badger setts and signs, was recorded and geo-referenced onsite.

The Statutory Biodiversity metric (Defra 2023) was employed to input the results of the Site survey and the proposed new onsite habitats, thereby generating the value difference between the pre-project and post-project habitats—relative Biodiversity Net Gain (BNG).

The Statutory Biodiversity Metric requires the following site condition data points to generate the BNG associated with the Site and proposed works:

Habitat Type: both the broad habitat, e.g. woodland, and the specific habitat type, e.g. lowland mixed deciduous woodland, as outlined in UKHab Ltd. (2023).

Area: an aerial measurement of total land cover area (in hectares) for each habitat parcel. Recording of habitat extents, both pre and post-works, was conducted using the onsite survey results, readily available online mapping and aerial imagery, and verified land use records. The minimal mapping unit (MMU) was taken at 0.01 ha.

Condition: a measure within Defra’s BNG guidance and assessment tools that quantified the relative ‘condition’ of a habitat parcel based on various physical, composition, and landscape variables dependant on the habitat type, e.g. number of vascular plant species present per square metre. The Statutory Biodiversity Metric Condition Assessment sheets (Defra 2023) were used to assign condition scores to the habitat parcels identified in the onsite survey.

Strategic Significance: a category ascribed to the geographical location of the Site in regard to its position in the context of Local Planning Authority areas and National Character Area profiles.

2.4 Limitations

The survey of the Site was conducted in June 2025, within the optimal botanical assessment period and habitat survey season (April-September inclusive). Thus, it is considered that an accurate baseline ecological condition of the Site was captured at the time of survey.

Habitats within the Site are relatively small and are estimated to be adjacent or beneath the government-endorsed minimal mappable unit—the smallest habitat area (or length) that can be assigned a primary habitat code. At such scales, small variations in habitat extent in both onsite surveying and desktop mapping are considered unavoidable. However, all reasonable efforts to avoid and minimise such variations have been employed during this assessment.

Habitat mapping is subject to seasonal variations, wherein, ecotones—transitional zones between biological communities—may drift or be relocated at different periods of the year. This can be a natural shift owing to abiotic factors, or a consequence of management, either within the habitat itself or within adjacent communities.

3. Baseline Conditions

3.1 UK Habitat Classification Survey

This section outlines all habitats recorded within the Site on 30 June 2025. A plan depicting the onsite habitats, their extent and location, and relevant target notes are shown in Appendix B; photographs of the Site are shown in Appendix C.

UKHab baseline habitats present within the Site:

- Developed land
- Modified grassland – g4
- Other woodland; mixed; mainly broadleaved – w1h5 (Secondary code: 33 – line of trees)
- Non-native and ornamental hedgerow – h2b

3.1.1 Developed Land

Existing buildings and hardstanding (Photographs 1).

3.1.2 Modified Grassland

Small parcel of amenity grassland in the centre of the Site (Photograph 2). The sward was dominated by perennial ryegrass (*Lolium perenne*). Forbs included dandelion (*Taraxacum* agg.), ribwort plantain (*Plantago lanceolata*), rough hawkbit (*Leontodon hispidus*) and selfheal (*Prunella vulgaris*).

This habitat fails Condition Criteria A; therefore, achieving Poor condition.

3.1.3 Line of Trees

Line of trees (Photograph 3) dominated by Italian cypress (*Cupressus sempervirens*) and Lawson's cypress (*Chamaecyparis lawsoniana*), with English yew (*Taxus baccata*) and Japanese wild cherry (*Prunus serrulate*).

This habitat passed Condition Criteria E; therefore, achieving Poor condition.

3.1.3 *Non-native and Ornamental Hedgerow*

Scarlet firethorn (*Pyracantha coccinea*) dominated hedgerow (Photograph 4).

4. Feasibility of Biodiversity Net Gain

4.1 Irreplaceable Habitat and Other Important Ecological Features Evaluation

No irreplaceable or Priority habitats are present within the Site. Protected species assessments are detailed in a separate Preliminary Ecological Appraisal.

4.2 Proposed Habitats

This section outlines all UKHab habitats proposed to be present on the Site post development; as shown in the indicative Site plan (Appendix B).

UKHab habitats proposed to be present after project delivery on the Site:

- Developed land
- Suburban mosaic of developed and natural surface – u1d (Secondary code: vegetated garden – 828)
- Modified grassland – g4
- Native hedgerow – h2a6

4.2.1 *Developed Land.*

Proposed buildings and hardstanding.

4.2.2 *Suburban Mosaic of Developed and Natural Surface*

Proposed vegetated garden; anticipated to comprise amenity lawn, planting beds and paved areas.

4.2.3 Modified Grassland

Grassland to be created and sown with a commercially available seed mix to establish a modified grassland sward. Proposed grassland anticipated to meet condition criteria C, D, F, and G; therefore, achieving Poor condition score.

5 small trees proposed to be planted. These trees should be native species, sourced from local provenance where possible. While these trees are plotted on the indicative plan, their location can be adapted to fit in with the proposed scheme without any impact on the Biodiversity Net Gain obligation—trees will remain outside of residential curtilage. These trees are anticipated to pass condition criteria A and B; therefore, achieving Poor condition.

4.2.3 Other Native Hedgerow

Proposed hedgerow comprising native British species. Hedgerow anticipated to fail condition criteria A1, C1, C2 and D2; therefore, achieving Moderate condition.

4.3 Summary of Habitat Change

Tables 4.1 and 4.2 details summary changes in UKHab habitats associated with the proposed project prior to and after the proposed development.

Table 4.1 – summary of UKHab habitat change pre-development

Habitat	Total area	Area retained	Area enhanced	Description
Non-linear habitats (ha)				
Developed land (Building – u1b5)	0.15	0.00	0.00	Existing buildings & hardstanding.
Modified grassland – g4	0.01	0.00	0.00	Existing modified grassland
Linear Habitats (km)				
Other woodland; mixed; mainly broadleaved – w1h5	0.052	0.00	0.00	Existing line of trees.

Other native hedgerow – h2b6	0.009	0.00	0.00	Existing native hedgerow.
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Table 4.2 - summary of UKHab habitat change post-development

Habitat	Total area	Description
Non-linear habitat creation (ha)		
Developed land (Other developed land – u1b6 & Building – u1b5)	0.108	Proposed new hardstanding and buildings.
Suburban mosaic of developed and natural surface – u1d (Vegetated garden – 828)	0.04	Proposed vegetated garden.
Modified grassland – g4	0.002	Proposed modified grassland.
Individual trees	0.0204	Proposed individual trees.

Figure 2 presents an extract from the completed Statutory Biodiversity Metric completed for the Site.

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	0.12
	Hedgerow units	0.01
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	591.02%
	Hedgerow units	11.84%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

Figure 2 – extract from a completed Statutory Biodiversity Metric for the Site.

The proposed changes of habitats within the Site result in an increase of habitat units from 0.02 to 0.14—equating in a **biodiversity net gain of 591.02%**.

The proposed changes of habitats within the Site result in an increase of hedgerow units from 0.11 to 0.13—equating in a **biodiversity net gain of 11.84%**.

No Watercourse Units were present within the Site.

5. Conclusion

The proposals for the Site include the establishment of new dwellings and associated infrastructure.

A baseline dominated by existing developed land is proposed to be lost to create new dwellings with vegetated gardens, as well as areas of modified grassland and 5 individual trees.

The onsite habitat change is estimated to result in a habitat unit uplift of 591.02% and a hedgerow uplift of 11.84%. Thus, the project is considered to meet the legal obligation to achieve a minimum of 10% Biodiversity Net Gain in England.

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Methods & Professional Standards

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Species and Habitats Best Practice Guidance

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APPENDIX A: Planning Policy & Legislation

Relevant Planning Policy

National Planning Policy Framework 2024

The NPPF states that:

Para 8

Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives).

Para 33

Local plans and spatial development strategies should be informed throughout their preparation by a sustainability appraisal that meets the relevant legal requirements¹⁷. This should demonstrate how the plan has addressed relevant economic, social and environmental objectives (including opportunities for net gains).

Para 187

Planning policies and decisions should contribute and enhance the natural and local environment by:

- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Para 192

To protect and enhance biodiversity and geodiversity, plans should:

- 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

Para 193

When determining planning applications, local planning authorities should apply the following principle:

- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around

developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Main Environmental and wildlife Legislation (England)

Environment Act 2021

Schedule 14 of The Environment Act 2021 makes it mandatory for all new developments (with some limited exceptions) to achieve a biodiversity net gain (BNG) of at least 10% by the time the development is completed compared to the pre-development biodiversity value of the onsite habitat.

The outputs and statutory instruments of this legislation may be amended in the future by the Secretary of State.

Conservation of Habitats and Species regulations 2017 (as amended).

Section 43 of Part 3 of this legislation makes it an offence to do any of the following with regards to European Protected Species (animals) as listed on Schedule 2:

- Deliberately capture, injure or kill any wild animal of a European protected species.
 - Deliberately disturb wild animals of any such species.
 - Deliberately takes or destroy the eggs of such an animal.
 - Damage or destroy a breeding site or resting place of such an animal. (*Note: no intentionality is necessary to prosecute this activity*).
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Section 43 of Part 3 of this legislation makes it an offence to do any of the following with regards to European Protected Species (plants) as listed on Schedule 5:

- Deliberately pick, collect, cut, uproot or destroy a wild plant of a European Protected Species.
- Be in position of or to transport said plant.

Natural Environment and Rural Communities Act (as amended).

Section 40 of Part 3 of this act compels public bodies (local authorities, police, fire and health authorities, and utility companies) with exercisable functions within England to consider actions to be taken to conserve and enhance biodiversity in England—in particular to have regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992, any relevant local nature recovery strategies, and any relevant species conservation strategy or protected site strategy (prepared by Natural England).

Section 41 of Part 3 of this Act ensures the publishing of a list containing species and habitat types that are of principle importance for the purpose of conserving or enhancing biodiversity in England.

Wild Mammals (Protection) Act 1996.

Under this legislation it is an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with the intent to inflict unnecessary suffering.

Protection of Badgers Act 1992

Under this legislation it is an offence to (or intend to, or to be reckless as to whether your actions would have these consequences):

- Wilfully kill, injure or take a badger (or attempts to do so).
 - Damage or destroy any part of a badger sett. (Note: no intentionality is necessary to prosecute these activities).
 - Obstruct access to a badger sett. (Note: no intentionality is necessary to prosecute these activities).
 - Disturb a badger when it is occupying a sett. (Note: no intentionality is necessary to prosecute these activities).
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Wildlife and Countryside Act 1981 (as amended).

Part 1 of this act makes it an offence to intentionally or recklessly kill, injure or take any wild bird, to take, damage or destroy the nest of any wild bird while that nest is in use or being built, and/or to take or destroy an egg of any wild bird.

Part 1 also makes it an offence to intentionally or recklessly disturb any wild bird included in Schedule 1 of the act, and to take, damage, or destroy the nest of any wild bird included in Schedule ZA1.

Schedule 5 list non-avian species that are afforded various protections under Sections 9.1a, 9.1b, 9.2, 9.4a, 9.4a (Whales), 9.4b, 9.4c, 9.5a and 9.5b.

Schedule 8 lists plant species that are protected from intentionally picking, uprooting or destroying under Section 13.

Schedule 9 lists non-native invasive plants for which it is an offence under Section 14 to plant or otherwise cause to grow in the wild any part of said plants. (Note: no intentionality is necessary to prosecute these activities).

Other Legislation (England)

- **The Environmental Impact Assessment (EIA) Regulations 2017**
- **Anti-social Behaviour Act 2003** (as amended).
- **Countryside and Rights of Way Act 2000**
- **Hedgerows Regulations 1997.**
- **Weeds Act 1959.**

APPENDIX B: Baseline Habitat Plan & Proposed Habitats Plan

See overleaf.

Plans are indicative approximations of the layout of onsite habitats and are not drawn to measurable scale.





APPENDIX C: Photographs



Photograph 1: developed land.



Photograph 2: modified grassland.



Photograph 3: line of trees.



Photograph 4: non-native hedgerow.