



Biodiversity Net Gain Assessment

22-25 London Road, Northfleet, Gravesend DA11 9JH

Luxor Homes Ltd

Status	Issue	Name	Date
Draft	0.1	Leah Cook, Consultant Ecologist	06/08/2024
Final	1	Leah Cook, Consultant Ecologist	07/08/2024

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Industry Guidelines and Standards

This report has been written with due consideration to:

- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management, Construction Industry Research and Information Association & Institute of Environmental Management and Assessment (2019). Biodiversity Net Gain – Good Practice Principles for Development.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by Luxor Homes Ltd to undertake a Biodiversity Net Gain (BNG) Assessment at 22-25 London Road, Northfleet, Gravesend DA11 9JH (hereafter referred to as “the site”). The survey was required to inform a planning application for the erection of a four-storey building attached to 25 London Road to provide two 2-bedroom and seven 1-bedroom flats; and erection of a two-storey detached block to provide two 2-bedroom and two 1-bedroom flats with associated parking and amenity space and waste storage. (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

The current proposed plan results in a **48.91% net loss** in habitat units. This is less than the 10% target of biodiversity net gain.

In order to achieve the required minimum 10% net gain in biodiversity as a result of the proposed development, the provision of additional or alternative landscaping should be explored and the proposed plans amended accordingly to either achieve a 10% net gain on site or to reduce off-site compensation requirements that may be required to achieve a 10% net gain.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Luxor Homes Ltd to undertake a Biodiversity Net Gain (BNG) Assessment at 22-25 London Road, Northfleet, Gravesend DA11 9JH (hereafter referred to as “the site”). The survey was required to inform a planning application for the erection of a four-storey building attached to 25 London Road to provide two 2-bedroom and seven 1-bedroom flats; and erection of a two-storey detached block to provide two 2-bedroom and two 1-bedroom flats with associated parking and amenity space and waste storage. (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

This report should be read in conjunction with the following documents:

- The_Statutory_Biodiversity_Metric_Calculation_Tool_-_London Road.
- BHCA - 22-25 London Road, DA11 9JH (Arbtech 2024).

1.2 Site Location, Geology and Landscape Context

The survey site is centred on National Grid Reference TQ 63241 74060 and has an area of approximately 415m². The site is located to the on a major B-road within Northfleet and comprises of bare ground with ruderal growth. The southern boundary borders a residential property. The western boundary adjoins a tree line that connects to priority deciduous habitat. The site is located on freely draining slightly acid but base-rich soils [landis.org]. A site location plan is provided in Appendix 2.

1.3 BNG Informative

BNG is a specific, measurable outcome of project activities that deliver demonstrable and quantifiable benefits to biodiversity compared to the baseline situation. In order to achieve BNG, a project must be able to demonstrate that it has followed all 10 of the Principles of Biodiversity Net Gain (as outlined in the *British Standard 8683:2021 Process for Designing and Implementing Biodiversity Net Gain*).

The legalised Environment Act (2021) requires developments in England to demonstrate a measurable net gain in biodiversity and sets a target of a minimum of 10% BNG for all developments. It also stipulates that a management plan with a minimum 30-year term, should be adopted to ensure biodiversity net gain can be delivered. The requirement for biodiversity net gain is also enshrined within the National Planning Policy Framework (NPPF, 2023). Furthermore, BNG is a requirement of the Gravesham Borough Council Local Plan

The DEFRA Statutory Biodiversity Metric is the widely accepted tool used to calculate BNG. It enables the calculation of habitat value pre- and post-development in order to determine the overall change in biodiversity value as a result of the proposed development. The Statutory Biodiversity Metric has separate BNG assessments for areas of habitat, hedgerows and watercourses. The biodiversity value of a site should be maximised. However, it may not always be possible to achieve a 10% biodiversity net gain within a site and therefore the Statutory Biodiversity Metric can also account for offsite habitat creation, where land is available. Alternatively, developers can seek to provide an agreed financial contribution to an appropriate third party (such as the Local Authority, the UK Government or another landowner) to deliver the required biodiversity net gain elsewhere on their behalf.

2.0 Methodology

2.1 Baseline Biodiversity Value

The baseline BNG Calculation was informed by the Baseline Habitat Condition Assessment (BHCA)(Arbtech 2024). A baseline habitat plan is provided in Appendix 3.

Habitat Classification

The BHCA (Arbtech 2024) classified the habitats on site according to The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023).

Habitat Area/Length

The area or length of each habitat was calculated using qGIS software. In calculating the area or length of each habitat, habitats which occur as two or more isolated parcels across the site were combined, where they were deemed to be of a similar composition and condition. Distinctions were made between habitats to be retained (i.e. left as found in baseline), enhanced (i.e. improved condition) or lost (i.e. destroyed by proposed development).

Areas of scattered trees were calculated using the Tree Helper tool within the Statutory Biodiversity Metric. Class sizes for urban trees are set out in Table 8-1 of the Statutory Biodiversity Metric User Guide (Natural England, 2023).

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Statutory Biodiversity Metric (Natural England, 2023).

Strategic Significance

Strategic significance was assigned for each habitat based upon a review of the following:

- Ecological value
- Function within the landscape
- Any site or habitat allocations under the Gravesham Borough Council Local Plan

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by the Site Layout Plan (Gill Sterling, Feb 2024) which is included in Appendix 1. A post development habitat plan is provided in Appendix 4.

Habitat Classification

Proposed habitats were translated to their equivalents in the UK Habitat Classification using The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023) and the information provided within the Site Layout Plan (Gill Sterling, Feb 2024).

Habitat Area/Length

The area or length of each proposed habitat was calculated using qGIS software. In calculating the area or length of each habitat, habitats which occur as two or more isolated parcels across the site were combined, where they were deemed to be of similar composition and condition. Distinctions were made between habitats to be retained (i.e. left as found in baseline), enhanced (i.e. improved condition) or newly created.

Areas of scattered trees were calculated using the Tree Helper tool within the Statutory Biodiversity Metric. Class sizes for urban trees are set out in Table 8-1 of the Statutory Biodiversity Metric User Guide (Natural England, 2023).

Habitat Condition

Target habitat condition for each proposed habitat was determined assessed using the Temporal Multipliers Tool and the Enhancement Temporal Multipliers Tool included in the Statutory Biodiversity Metric spreadsheet as well as the relevant condition assessment sheets found in the Statutory Biodiversity Metric User Guide (Natural England, 2023). This is based on the assumption that a 30-year management plan will be adopted for the site.

Strategic Significance

Strategic significance was assigned for each proposed habitat based upon a review of the following:

- Likely ecological value
- Function within the landscape
- Any site or habitat allocations under the Gravesham Borough Council Local Plan

2.3 Limitations

It was not considered that there were any significant limitations to the completion of this assessment.

3.0 Results

3.1 Baseline Habitats

Table 1 details the baseline habitats present within the site along with their area/length, condition and strategic significance.

Table 1: Baseline Biodiversity Value

Habitat	Area / Length	Description	Condition Assessment	Strategic Significance
Developed land; sealed surface	0.031 ha	A row of four terraced houses are the main land use on site, from number 22 and the western end to 25 at the eastern end. Also found is a small timber shed with a tin roof in the garden of 24, and a brick shed in the garden of 25. The front driveway and rear gardens mainly comprise concrete and block/slab paving.	N/A - Other	Area/compensation not in local strategy/ no local strategy
Artificial unvegetated, unsealed surface	0.0005 ha	Small areas of gravel are found in the northern driveway of number 24.	N/A - Other	Area/compensation not in local strategy/ no local strategy
Vegetated garden	0.003 ha	A small area of introduced shrub is found in the northern driveway of 24. A small patchy grass lawn area is found in the rear garden of 25.	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy
Ruderal/Ephemeral	0.003 ha	A small area of the site comprises sparsely vegetated urban land which is overgrown with ruderals.	Good	Area/compensation not in local strategy/ no local strategy

3.2 Post Development Habitats

Table 2 details the post development habitats present within the site along with their area/length, condition and strategic significance.

Table 2: Post Development Biodiversity Value

Habitat	Area / Length	Description	Target Condition	Strategic Significance
Developed land; sealed surface	0.029 ha	The new dwellings in addition to associated hard standing areas and parking to the south of the site.	N/A - Other	Area/compensation not in local strategy/ no local strategy
Vegetated garden	0.006 ha	Comprises the gardens associated with the new dwellings.	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy

3.3 Change in Biodiversity Value of the Site

Full details are provided in the Statutory Biodiversity Metric calculation tool. The headline results are presented in Appendix 5.

Areas of Habitat (rounded to 2 decimal places)

The baseline habitat value of the site is 0.02 units, comprising 0.01 units of vegetated garden, and 0.02 units of ruderal/ephemeral.

The post development habitat value of the site is 0.01 units, comprising vegetated garden.

This results in a net change in biodiversity of 48.91% (i.e. a net loss).

4.0 Recommendations to Deliver BNG

4.1 Discussion

The current proposed plan results in a 48.91% net loss in habitat units. This is less than the 10% target of biodiversity net gain.

In order to achieve the required minimum 10% net gain in biodiversity as a result of the proposed development, the provision of additional or alternative landscaping should be explored and the proposed plans amended accordingly to either achieve a 10% net gain on site or to reduce off-site compensation requirements that may be required to achieve a 10% net gain.

4.2 Landscaping

To maximise the biodiversity value of the site itself, the following alterations to the current landscaping proposals could be considered:

- The addition of green roofing would result in an increase of biodiversity habitat units onsite.
- The addition of 2 trees (not within gardens) would exceed a 10% gain.

Should these alterations be incorporated this BNG Assessment will need to be updated to accurately reflect the change in biodiversity value of the site pre- and post-development.

4.3 Biodiversity Offsetting

If the landscaping plans are not altered or if the above alterations still do not deliver a 10% net gain, the deficit will need to be delivered in a suitable offsite location i.e. biodiversity offsetting.

According to the Defra Statutory Biodiversity Metric there is a unit deficit of 0.01 habitat units and this will need to be provided to offset the loss in biodiversity and achieve a 10% biodiversity net gain.

The mechanism for securing this off-setting will need to be proposed to, and confirmed by the LPA e.g., purchasing conservation credits through a registered provider, habitat creation directly through the client owned or LPA offered land or a financial contribution towards another provider such as a local nature reserve or park. As well as the creation of new habitats, this should also secure the management of the proposed habitats to help achieve the desired condition for at least 30 years. This would be linked to the application through a planning obligation Section 106 (S106) agreement. The proposed habitat compensation should be of an appropriate distinctiveness to meet the trading rules of BNG. An ecology survey of the baseline habitat of any off-site land will be required to inform the baseline conditions of any land subject to off-site compensation measures.

An estimate for what this could cost using the government website is as follows:

42,000 (credit price) x 0.01 (unit deficit) = £420

4.4 Post Development

A Biodiversity Net Gain (BNG) Management Plan must be produced for the site. This should include recommendations for the implementation, management and monitoring of the site for at least 30 years.

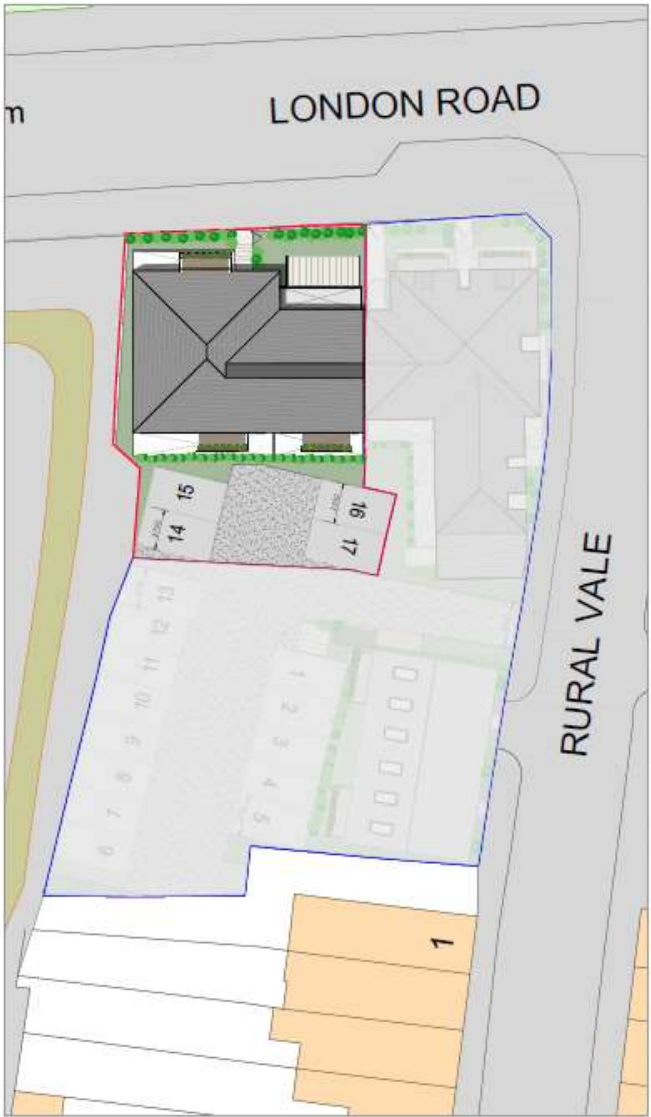
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- Natural England (2023). The Statutory Biodiversity Metric Technical Annex 1 - Condition Assessment Sheets and Methodology (JP039).
- Natural England (2023). The Statutory Biodiversity Metric Technical Annex 2 – Technical Information (JP039).
- The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023)

Appendix 1: Proposed Development Plan



Existing Block Plan
1:200



Proposed Block Plan
1:200

Notes:

- Do not scale from the drawing
- All dimensions to be verified on site prior to construction
- All dimensions shall be checked to ensure that they are compatible with the construction of the building, in the event of approved drawings or construction the engineer will be notified of any discrepancy
- The contractor is responsible for ensuring that all the site work is carried out in accordance with the programme of works
- The contractor shall have full liability to the local authority during progress and completion of works

Site Location 1:1250

This is a small map showing the site location relative to the surrounding area. It includes 'LONDON ROAD' and 'RURAL VALE'. The site is highlighted in orange. A north arrow is located to the right of the map.

Scale:

1:1250
1:200

PLANNING

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Site Layout

Scale 1:1250 & 1:200
Project No. 230401
Date 08.02.2024
Sheet No. 001
Sheet A

Appendix 2: Site Location Plan



Appendix 3: Baseline Habitat Plan



Appendix 4: Post Development Habitat Plan



Appendix 5: Headline BNG Results

The Defra Statutory Biodiversity Metric is provided as a separate excel spreadsheet.

FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-0.01	Total net gain achieved is less than target set ▲	
	Hedgerow units	0.00		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-48.91%		
	Hedgerow units	0.00%		
	Watercourse units	0.00%		
Trading rules satisfied?	No - Check Trading Summaries ▲			
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	0.02	0.03	0.01
Hedgerow units	10.00%	0.00	0.00	0.00
Watercourse units	10.00%	0.00	0.00	0.00
				No additional hedgerow units required to meet target ✓
				No additional watercourse units required to meet target ✓