



Biodiversity Net Gain Assessment

9 Erleigh Road, Reading, Berkshire, RG1 5LR

Ghalib Hussain

Status	Issue	Name	Date
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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 Ghalib Hussain to undertake a Biodiversity Net Gain (BNG) Assessment at 9 Erleigh Road, Reading, Berkshire, RG1 5LR (hereafter referred to as “the site”). The assessment was required to inform a planning application for the construction of a driveway (hereafter referred to as “the proposed development”).

The baseline habitat value of the site is 0.06 units; comprised of 0.05 units vegetated garden and 0.01 units introduced shrub. The post development habitat value has not been calculated at this stage. There is a unit deficit of 0.06 units.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Ghalib Hussain to undertake a Biodiversity Net Gain (BNG) Assessment at 9 Erleigh Road, Reading, Berkshire, RG1 5LR (hereafter referred to as “the site”). The assessment was required to inform a planning application for the construction of a driveway (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:

- Defra Statutory Biodiversity Metric
- PEA/Survey Report for the site.

1.2 Site Location, Geology and Landscape Context

site is centred on National Grid Reference SU 72690 72931 and has an area of approximately 0.044ha comprising a semi-detached residential property, a front garden, a rear garden, and a greenhouse. It is surrounded by residential properties with

Reading university to the south and the river Kennet to the north. The wider landscape comprises the town of Reading.

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 Environment Act (2021) states biodiversity net gain is mandatory for sites over 0.5ha as of February 2024. The requirement for biodiversity net gain is also enshrined within the National Planning Policy Framework (NPPF, 2021). 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 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 a Preliminary Ecological Appraisal (PEA) by Arbtech Consulting Ltd July 2024.

A baseline habitat plan is provided in Appendix 3.

Habitat Classification

The PEA 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 User Guide (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 Reading Borough Council Local Plan

2.2 *Limitations*

None known.

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 – buildings [u1b5]	0.01053 ha	There are two buildings on site, the main dwelling B1, and a small outbuilding B2. B1 is a semi-detached urban dwelling with brick walls and clay tiles, the clay tiles are in excellent condition, the roof of the building is pitched and gabled, with wooden gables and wooden windows, with three chimneys as well. There are two loft areas in the building. Loft 1, on the northern end of the building, is lined with a breathable membrane as well as wooden sarking and has a window at the gable end, and loft 2, at the southern end of the building, is also lined with a breathable membrane. B2 is a small outbuilding with a flat corrugated metal roof and wooden clad concrete walls.	NA	Low – provides negligible ecological value for wildlife species
Developed Land Sealed Surface – other sealed surfaces [u1b6]	0.00734 ha	On the southern end of the site, there is a paved pathway leading from the pavement and road to the front door, and around to the side of the property, before entering the northern end, there is a section of hard standing that is covered by a sheet of artificial grass as	NA	Low – provides negligible ecological value for wildlife species

		well as a continuation of the pathway from the road, this pathway then continues around the back of the property at the edge of the building.		
Developed Vegetated Gardens [u1b]	0.02301 ha	The southern and northern ends of the site are comprised of vegetated garden, subject to intense management through mowing, resulting in a sward length of 2cm, species present are comprised of; perennial ryegrass (D), meadow rye grass (D), clover (O), dandelion (A), selfheal (O), daisy (R), creeping buttercup (O), yarrow (F), broadleaved plantain (O), green alkanet (O), primrose (R), spurge (R), black medic (R), fringed willowherb (R), maretail (R), hawkweed (O), and cranesbill (O)	NA	Low – may provide some ecological value for wildlife species
Introduced Shrub [u1 1160]	0.00379 ha	On the side edges of the front garden are thin strips of introduced shrub, and on the west and northern edges of the back garden are vegetable patches and introduced shrub.	NA	Low – may provide some ecological value and niches for wildlife species

3.2 Change in Biodiversity Value of the Site

Arbtech Consulting Ltd has not been commissioned to calculate the post-development habitat value at this stage. Therefore a net change in biodiversity cannot be provided at this time.

Areas of Habitat

The baseline habitat value of the site is 0.06 units, comprising 0.05 units of vegetated garden, 0.01 units of introduced shrub, developed land sealed surface – no habitat unit value.

4.0 Recommendations to Deliver BNG

4.1 Discussion

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

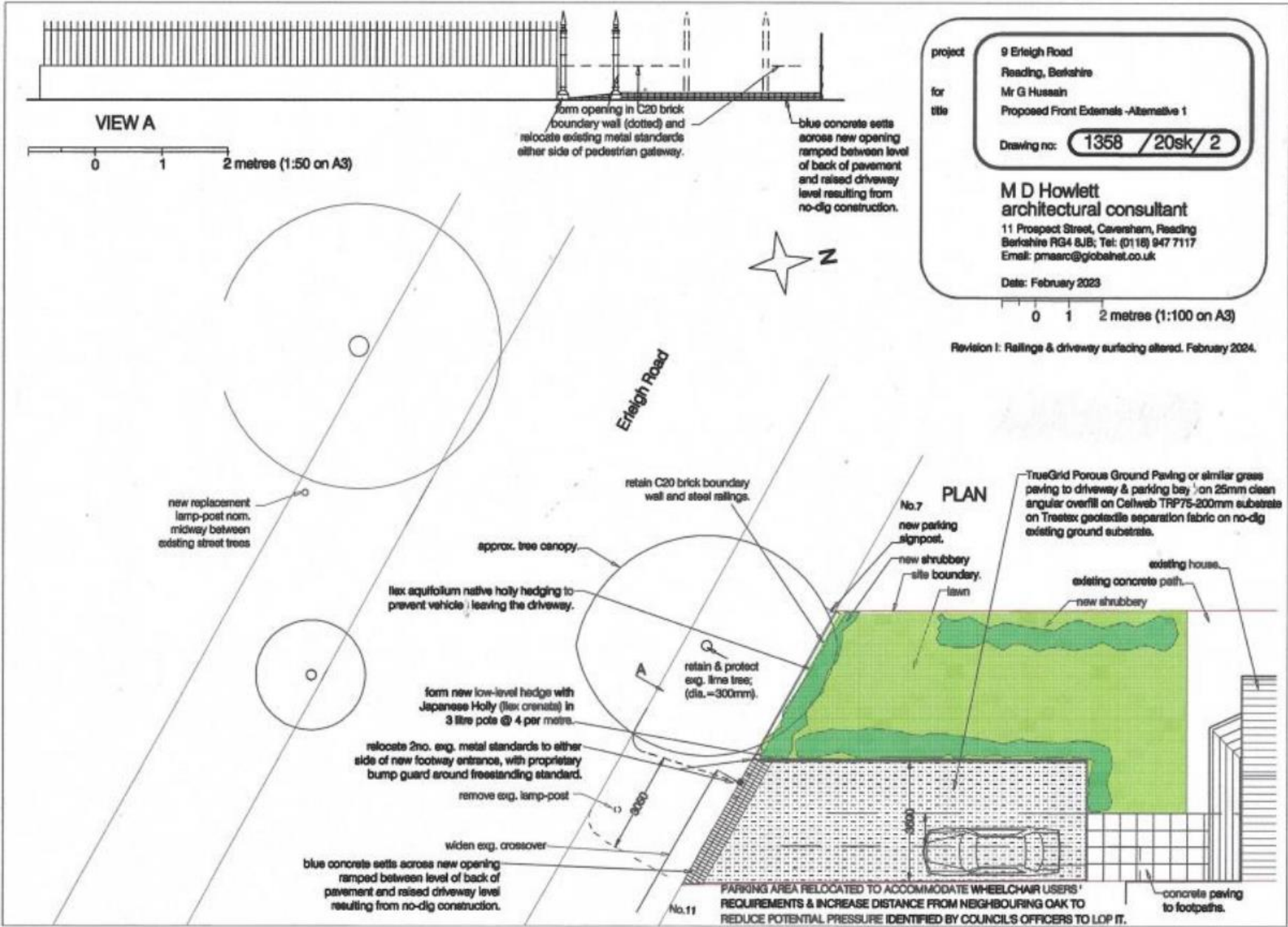
- Retain as much original habitat as possible.

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.

5.0 Bibliography

- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- CIEEM-CIRIA-IEMA (2019) Biodiversity Net Gain – Good Practice Principles for Development.
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit.
http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- Natural England (2023). The Statutory Biodiversity Metric (JP039).
- Natural England (2023). The Statutory Biodiversity Metric User Guide (JP039).
- 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



Appendix 2: Site Location Plan



Appendix 3: Baseline Habitat Plan

