



TUNLEY
ENVIRONMENTAL

BIODIVERSITY NET GAIN ASSESSMENT REPORT

TRUSTED SUSTAINABILITY SCIENTISTS

BIODIVERSITY NET GAIN ASSESSMENT REPORT

FOR

**6 Highfields, Brighton Road,
Waringlid, RH17 5SY**

in collaboration with

LPS Architecture



Contents

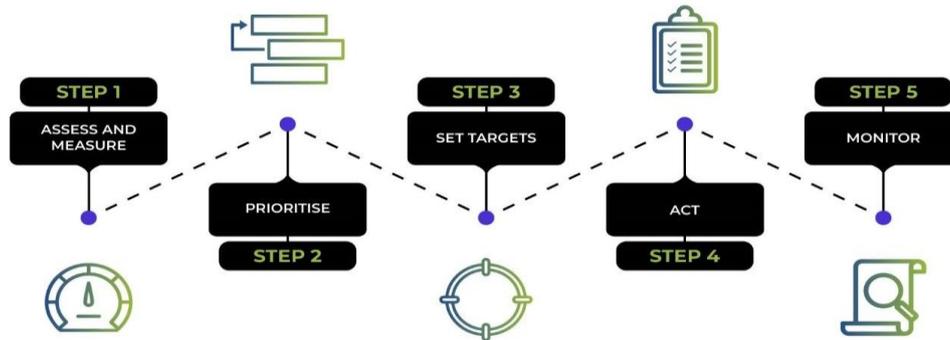
Nomenclature	3
Methodology and Quantification Standards	4
Executive Summary	5
Introduction.....	6
Baseline Results.....	7
Biodiversity Net Gain Results	8
Off-Site Biodiversity Credits.....	9
Conclusion	9
Appendix.....	10
Data Sources	10
Habitat Classification and Justification.....	10
Magic Map Results	10
Approval.....	11
IMPORTANT NOTICE:	12

Nomenclature

Nomenclature	Description
Baseline Assessment	Before a development project begins, a baseline assessment is conducted to determine the existing biodiversity of the project site. This assessment establishes the current state of habitats, species, and ecosystem functions.
Biodiversity	The variety of life within a defined area for example, globally or in a specific habitat which can be described by a variety of metrics including species abundance or the living plant index and which we are dependent on to provide us with food, clean water and many more essentials.
Biodiversity Net Gain	A concept that aims to ensure that development projects have a positive impact on biodiversity by enhancing or creating habitats.
Biodiversity Net Gain (BNG) Assessment	The quantification of the overall positive impact on biodiversity resulting from a specific activity or project. While biodiversity gain refers to the increase in the numbers, genetic variability, and species variety in a given area, BNG goes a step further by assessing whether the difference between biodiversity losses and gains leads to a net positive impact.
Biodiversity Units	A measure to describe the level of biodiversity present on a given site.
DEFRA Statutory (Official) Biodiversity Metric	Is a tool developed by the UK Government that provides a standardised approach to quantifying changes in biodiversity resulting from development activities. It assigns values to different habitats and species based on their ecological importance, and it allows for the calculation of a numerical score that reflects the overall biodiversity impact of a development.
Habitat	The specific environment or type of ecosystem in which a particular species of organism lives. Habitats can range from forests and wetlands to grasslands and urban areas.
Habitat Condition	The state or quality of a habitat, taking into consideration factors such as biodiversity, ecological processes, and overall health. Habitat condition assessment is essential in determining the effectiveness of conservation or restoration efforts.
Habitat Distinctiveness	The unique characteristics and features that differentiate one habitat from another. Distinctiveness is often assessed based on the diversity of species, ecological functions, and physical attributes of a habitat.
Habitat Strategic Significance	The local importance of a habitat determined by assessing both its geographic location and the specific type of habitat it represents. This evaluation helps in understanding the unique value and contribution of the habitat in its surrounding ecosystem.
Local Planning Authority (LPA)	The local government body that is empowered by law to exercise urban planning functions for a particular area/council. They are the government body whom approve and validate planning permissions and Biodiversity Net Gain compliance
On-Site	Refers to activities, impacts, or features that occur within the boundaries of a specific development or project site.
Off-Site	Relates to actions or effects that occur outside the boundaries of the development or project site. Off-site measures in Biodiversity Net Gain may involve compensatory actions, such as creating or enhancing habitats in a different location to offset any biodiversity loss caused by the development.
Small Site	A small residential site is a development which is less than 1 hectare with less than 9 dwellings, or where the number of dwellings is unknown an area of less than 0.5 hectares. A small commercial site is a development which has created floor space of less than 1,000 m ² or with a total site area of less than 1 hectare.
Major Development	A major development is any development, either residential or non-residential, which falls out of the requirements of a small site. This means more than 9 dwellings or greater than 0.5 hectares for residential developments or greater than 1,000 m ² floor space, or over a hectare for non-residential developments.

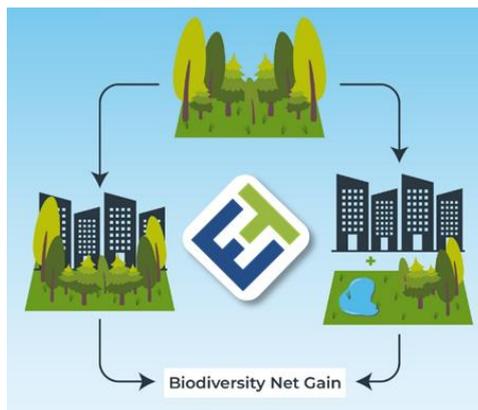
Methodology and Quantification Standards

This Biodiversity Net Gain (BNG) report has been completed using methodology consistent with the Science Based Targets for Nature (SBTN), Nature Positive Initiatives, and DEFRA Regulations.



Science-Based Targets for Nature Steps which Tunley Environmental's Biodiversity Net Gain (BNG) services aligns with to achieve reduced impact on Nature.

Biodiversity was quantified using the DEFRA (Department for Environment, Food & Rural Affairs) statutory (official) biodiversity metric as a tool to assess and measure biodiversity in the context of development projects. This metric is specifically designed to assist in quantification of the impact that development activities have on biodiversity and determine whether Biodiversity Net Gain (BNG) is achieved. Where BNG refers to the idea that the biodiversity value of a site should be enhanced due to development, ensuring a "net gain" in ecological terms. Tunley have completed all calculations within small site metric along with any required documents such as habitat condition. These additional documents will be submitted alongside this form in the excel format for LPA approval.



Tunley Environmental's conceptualisation of Biodiversity Net Gain.

Where applicable, the equivalent small site biodiversity metric was utilised for developments under the requirements for the statutory (official) biodiversity metric. The BNG assessment was further completed using methodology consistent with the international standard BS 8683:2021 (Process for designing and implementing BNG). Information on data sources and assumptions made to support this analysis are provided in Appendix A.

Executive Summary

Biodiversity is the foundation of the global economy. The World Economic Forum (WEF) estimates that over 50% of the world's GDP—equivalent to £33 trillion—depends significantly on nature and the services it provides. Yet biodiversity is amid a severe global crisis.

In response to this crisis, the UK government enacted the *Environment Act 2021*, which introduces a legally mandated approach to Biodiversity Net Gain (BNG) in England. BNG requires that most new developments leave biodiversity in a measurably better state than before. It aims to ensure that development projects not only minimise harm but actively deliver positive outcomes for nature. Through on-site or off-site habitat creation, enhancement, or restoration, BNG seeks to reverse biodiversity loss and embed ecological recovery as a standard component of land use planning and development.

Tunley Environmental have conducted an independent assessment to quantify the biodiversity value of the site before and after development to assess biodiversity of the site by implementing the Small Site metric. Using data provided by LPS Architecture the baseline 'area habitat' biodiversity units of the site were calculated to be 1.20 area habitat units which is over an area of 2,995 m². This is comprised of vacant derelict land and modified grassland. The baseline 'hedgerow habitat' biodiversity units of the site were calculated to be 0.03 hedgerow and line of tree units. This is comprised of non-native and ornamental hedgerow.

Within the proposed development there are plans to do construct 4 new dwellings. Area habitats created will include the implementation of developed land; sealed surface, vegetated garden, ground level planters, more non-native and ornamental hedgerows and individual trees (trees are not included in the metric as they will be planted within private garden and purely based on the proposed plans only). The post-development results indicate that the site will reach 0.30 area habitat units and 0.16 hedgerow and line of tree habitat units (Figure 1). These changes result in non-compliance with BNG national standards as the site is at -75% area habitat net loss (Metric: Sheet 8). However, the developer is committed to purchase third-party off-site BNG credits to ensure the delivery of the 10% BNG required. Moreover, the changes in hedgerow and line of tree units meet the BNG national standards with a total of 503.66% hedgerow net gain (Metric: Sheet 8).

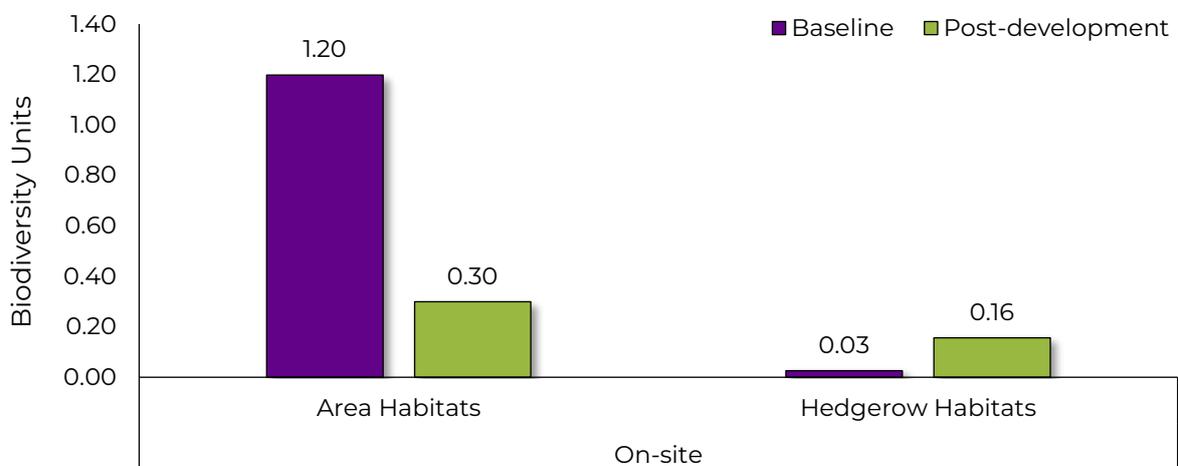


Figure 1. Total biodiversity units of the site, before and after development by LPS Architecture.

Introduction

Tunley Environmental has conducted an independent Biodiversity Net Gain (BNG) assessment to identify and quantify the biodiversity of the site before and after the development. This BNG assessment calculates the biodiversity value of the land by evaluating the number of habitats present, the habitat types, size, condition, and location. These data inputs are utilised within the small site statutory metric (SSM) to quantify the biodiversity units present before development.

Below shows the most recent aerial image of the site at 6 Highfields, Brighton Road, Waringlid, RH17 5SY (Figure 2).



Figure 2. Aerial image of the site at 6 Highfields, Brighton Road, Waringlid, RH17 5SY.

Baseline Results

This baseline assessment is conducted to determine the existing biodiversity on the project site. This assessment establishes the current state of habitats, species, and ecosystem functions.

The baseline assessment for the site at Highfields was conducted by analysing site photos to distinguish habitat types as well as implementing Google Earth to accurately analyse site plans alongside dimensions to yield overall meters of the project site by habitat type. Some example images are shown in (SSM: Sheet 4). A map of the habitats identified from these images is overlaid into the aerial image below in Figure 3.



Figure 3. Baseline Habitat of the site at 6 Highfields, Brighton Road, Waringlid, RH17 5SY.

For the proposed site for development, area habitats biodiversity units were identified pre-development (Figure and SSM: Sheet 5). The [UK habitat classification \(UKHab\)](#) system is utilised to define habitats inputted within the metric (SSM: Sheet 5).

Biodiversity Net Gain Results

The site at 6 Highfields, Brighton Road, Waringlid, RH17 5SY aims to consider biodiversity impact by implementing the creation of developed land; sealed surface, vegetated garden, ground level planters, additional non-native and ornamental hedgerows and the purchasing of BNG credits to account for any biodiversity net loss due to construction, as well as to improve the site for the users of this site whilst still contributing to BNG goals (Figure 5).

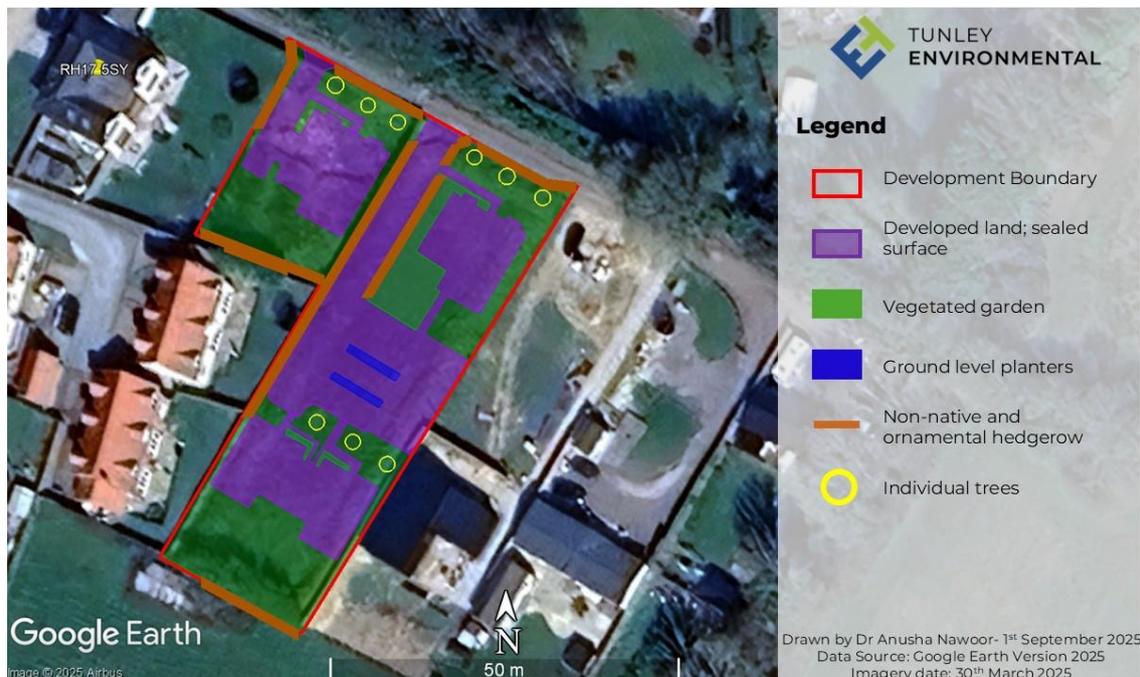


Figure 5. Post-development Habitat Map at 6 Highfields, Brighton Road, Waringlid, RH17 5SY.

Of the area 'habitats' that will be lost during development, the BNG plan creates a variety of habitats like developed land; sealed surface, vegetated garden, ground level planters, more non-native and ornamental hedgerows, individual trees (trees are not counted in the metric and purely based on the proposed plans only) (SSM: Sheet 5-6). These habitats therefore do not ensure that the 10% minimum net gain target for biodiversity will be met as evidenced in headline results section of the small site metric for area habitats (Metric: Sheet 8). However, LPS Architecture is committed to buying BNG credits from a verified third-party provider as shown in the next section. The 10% minimum net gain target for biodiversity will be met for hedgerows as shown in the metrics. (SSM: Sheet 6).

Off-Site Biodiversity Credits

LPS Architecture is committed to complying with BNG regulations for the site at 6 Highfields, Brighton Road, Waringlid, RH17 5SY. Whilst they are not able to reach on-site BNG for area habitats with a unit deficit of 1.02 'habitat units', they will purchase off-site biodiversity units to meet BNG compliance. Below we provide an estimation for the cost of BNG credits from Gov.uk (Figure 6).

**Estimated cost of
statutory biodiversity
credits**
£42,420 (excluding VAT)

Tier	Credits	Estimated cost
A1	1.01	£42,420
A2	0.00	£0
A3	0.00	£0
A4	0.00	£0
A5	0.00	£0
H	0.00	£0
W	0.00	£0
Total estimated cost		£42,420

Figure 6. Estimated Statutory biodiversity credits cost.

Conclusion

The BNG assessment by Tunley Environmental have confirmed the site at 6 Highfields, Brighton Road, Waringlid, RH17 5SY will not reach the national standard of 10% biodiversity net loss achieved was at **-75%** for 'area habitats' (SSM: Sheet 8). Due to constraints onsite, the area habitat units required to comply with national standard of **10% net gain will be achieved offsite** by the purchase of units through an accredited seller. However, the site will reach the national standard of 10% biodiversity net gain by achieving a **503.66% net gain** for 'hedgerow and line of trees' (SSM: Sheet 8).

BNG approaches offer a pathway to not only safeguard the intricate web of life on Earth but also to preserve the essential ecosystem services that underpin the global economy and human prosperity. As the urgency of addressing biodiversity loss intensifies, a comprehensive strategy that integrates conservation, sustainable development, and restoration efforts is essential to ensure a resilient and biodiverse future for the planet.

Appendix

Data Sources

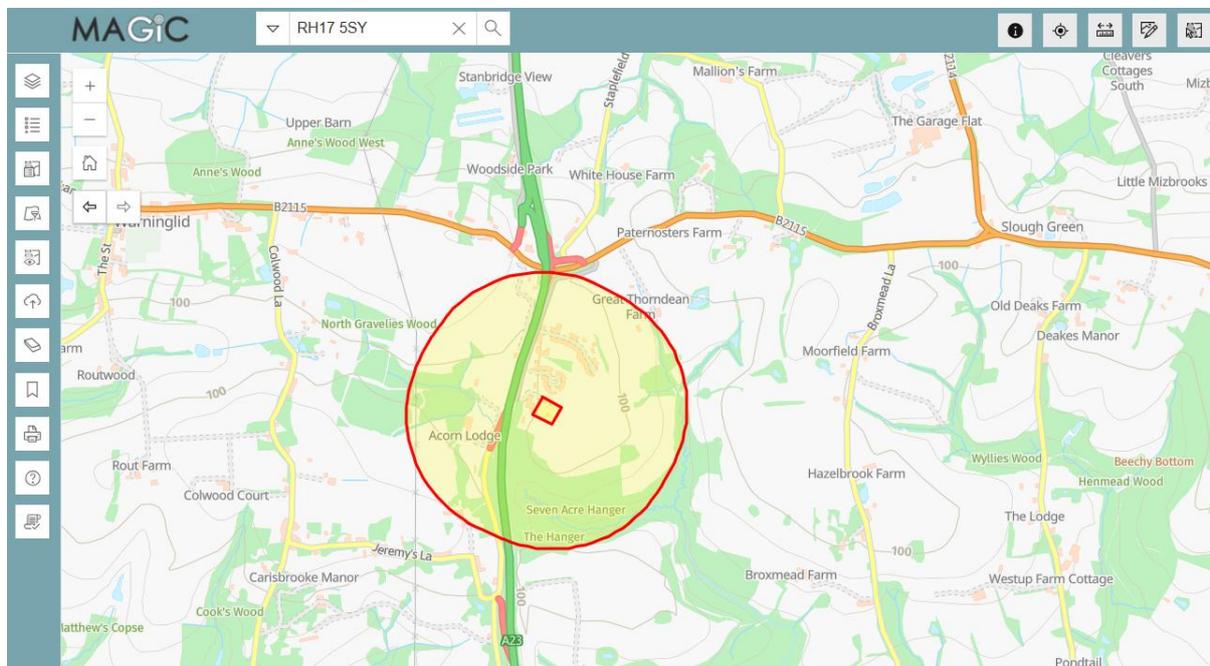
All data results were analysed through the small site metric from DEFRA. The excel version of the metric will also be submitted alongside this report for further evidence and LPA approval and for compliance with BNG regulations.

Habitat Classification and Justification

We conducted a thorough assessment of all habitat types utilising the guidelines outlined in "The UK Habitat Classification Version 2" (UKHab). UKHab serves as a comprehensive, hierarchical system that integrates seamlessly with existing classifications in the UK and Europe. It's architecture, inclusive of primary habitats and secondary codes, enhances the accuracy and consistency of habitat assessments by allowing for the direct attachment of additional features such as habitat mosaics and management strategies. This approach not only facilitates the integration of legacy datasets but also enables efficient sharing of habitat data at regional, national, and international levels. BNG Compliance adheres to these classifications, ensuring consistency and compliance with ecological standards. It's essential that a trained and certified ecologist completes the assessment. For more information, please visit: [UKHab](https://www.ukhab.org/).

Magic Map Results

The Magic Map results below shows that there's no priority habitats or designated sites on site or within the 500-meter boundary highlighted in yellow too. Therefore, it is unlikely that the development will impact any priority habitat or designated site.



Approval

Author:	Dr Anusha Nawoor, PhD.
Position:	Environmental Scientist
Written Date:	1 st September 2025
Peer-reviewed by:	Dr Alejandra Zazueta Lopez
Position:	Biodiversity Scientist
Reviewed Date:	1 st September 2025
QA approved by:	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Revision: Dr Luan Ho, MIEEnvSc, BEng
Position:	Quality Assurance Manager
Approval date:	1 st September 2025
Reference:	Highfields -BNG_25-2
Revision:	A

Revision History:	Change Description:	Changed by:	Date:	Approved by:	Date:
B					
C					
D					
E					
F					

IMPORTANT NOTICE:

Tunley Environmental Ltd has prepared this report and any attachments, based on an agreed scope of work, and acts as an advisor to the named Client and exercises all reasonable skill and care in the provision of its professional services, in a manner consistent with the level of care and expertise exercised by consultants in a similar environment.

Reports are commissioned by and prepared for the exclusive use of the named Client. They are subject to and issued in accordance with the agreed terms between the Client and Tunley Environmental Ltd. Tunley Environmental Ltd is not responsible and will not be liable to any other person or organisation for, or in relation to any matter dealt within this Report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in this report (including without limitation), matters arising from any negligent act or omission of Tunley Environmental Ltd, or for any loss or damage suffered by any other party relying upon the matters dealt with or conclusions expressed in this Report.

This report is not intended to be a comprehensive review of the practices of the named recipient nor the viability of its products or services. It is the responsibility of the named recipient to ensure that all its products or services adhere to and are compliant with all applicable laws, regulations and other generally accepted standards of quality and performance. Tunley Environmental Ltd accepts no liability for any failure of the products or services to meet any such standards or for any loss or other damages, (including death or personal injury) caused as a result of any such failure.

When taking any action, Recipients should not rely solely upon the report or the accuracy or completeness of any conclusions and should make their own inquiries and if they are unsure, should obtain independent advice in relation to such matters.

Except where expressly stated, Tunley Environmental Ltd has not verified the validity, accuracy or comprehensiveness of any information supplied to it, used as the background information for the writing of this report. It is assumed that the information provided to Tunley Environmental Ltd was both complete and accurate.

Information contained in the Report is current as at the date of the Report and may not reflect any event or circumstances which occur after the date of the Report. Tunley Environmental Ltd makes no representation or guarantee that their services or this report will result in any enhancement of the Client.

COPYRIGHT STATEMENT: The concepts and information contained in this document (except the client's own copy information) are the property of Tunley Environmental Ltd. Use, copying or distribution to any third party is expressly prohibited. We do not accept any liability if this report is used for an alternative purpose from which it is intended, nor to any third party in respect of this report or of this document in whole or in part, by anyone other than the addressed recipients. Any such third-party disclosures without the written permission of Tunley Environmental Ltd constitutes an infringement of copyright.