

Report

BIODIVERSITY NET GAIN (BNG) ASSESSMENT





BIODIVERSITY NET GAIN ASSESSMENT REPORT

FOR

**482 Halifax Road, Liversedge,
WF15 8DX**

**in collaboration with
BARNES HOMES**



Contents

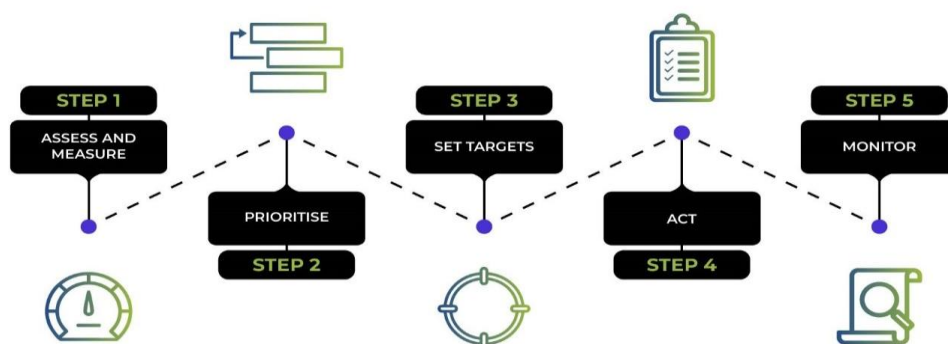
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Nomenclature

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.

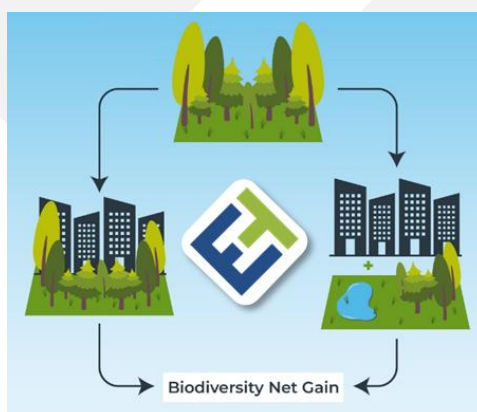
Methodology and Quantification Standards

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 Barnes Homes and their client, the baseline 'area habitat' biodiversity units of the site were calculated to be 0.230 area habitat units which is over an area of 750 m². This is comprised of vegetated garden, developed land; sealed surface and ruderal/ephemeral. There are no hedgerow habitats on site.

Within the proposed development there are plans to create new vegetated garden and developed land; sealed surface. The post-development results indicate that the site will only reach 0.024 area habitat units (Figure 1). This change will not result in compliance with the 10% BNG requirement. Therefore, the developer will purchase offsite credits to ensure the delivery of this compliance (Small site metric: Sheet 8).

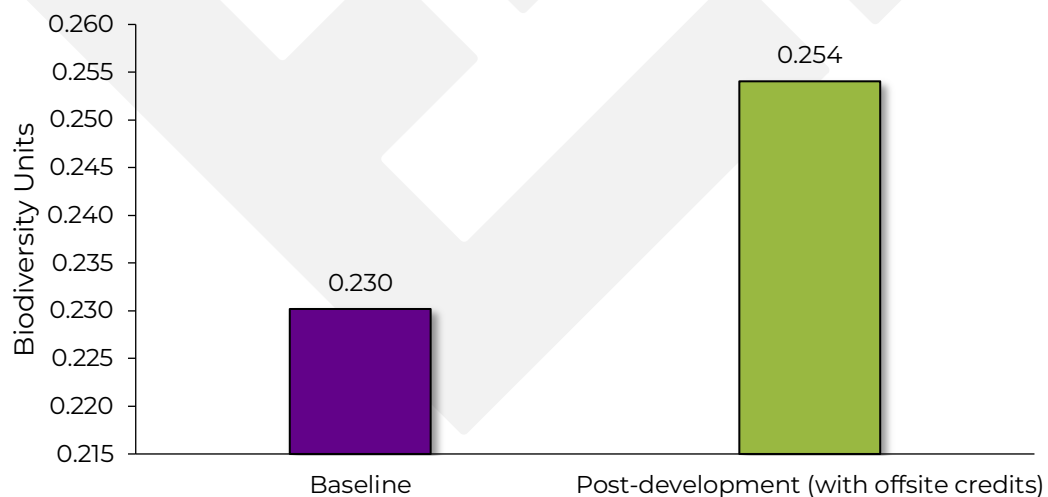


Figure 1. Total biodiversity units of area habitats of the site, before and after development.



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 metric to quantify the biodiversity units present before development.

Below shows the most recent aerial image of the site at Halifax Road (Figure 2).



Figure 2. Aerial image of the site at Halifax Road.

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 Halifax Road 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 sheet 4 (Supporting Information).

A map of the habitats identified from these images is overlaid into the aerial image above in Figure 3.

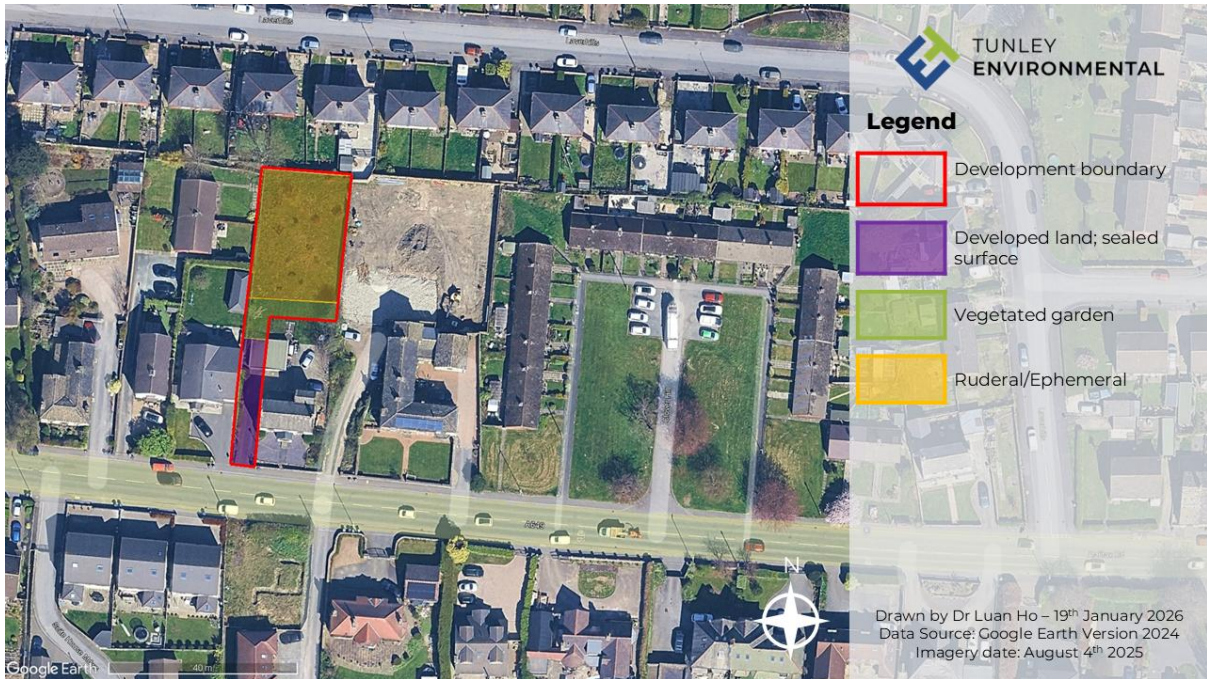


Figure 3. Baseline Habitat of the site at Halifax Road.

For the proposed site for development, 0.230 biodiversity units were identified pre-development (Figure 3 and Small site metric: sheet 5). The [UK habitat classification \(UKHab\)](#) system is utilised to define habitats inputted within the metric.

Biodiversity Net Gain Results

The site at Halifax Road aims to consider biodiversity impact by the creation of new vegetated garden and developed land; sealed surface 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 4).

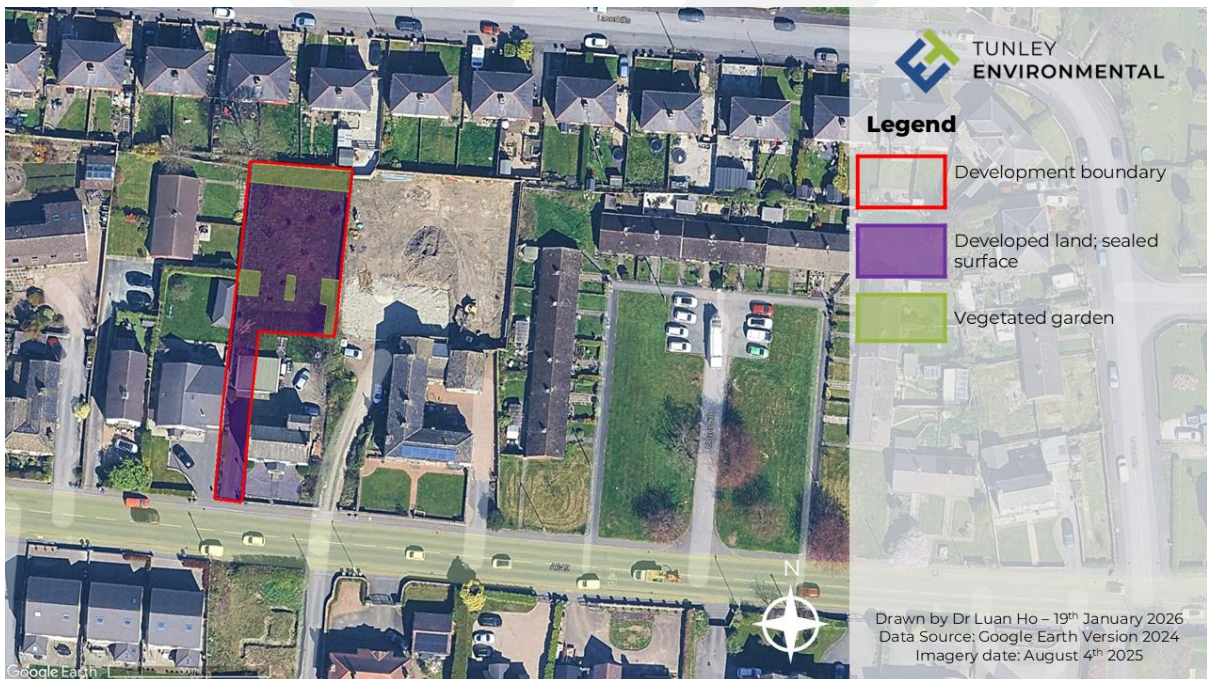


Figure 4. Post-development Habitat Map at Halifax Road.

These habitats 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 (Small site metric: Sheet 8). Therefore, the developer will purchase offsite credits to ensure the delivery of this requirement (Figure 5).

Off-site Biodiversity Unit proposal								
We can supply the off-site Biodiversity Units you require from our Sheffield Habitat Bank which is secured under a conservation covenant with RSK Biocensus and listed on the biodiversity gain sites register under the reference: BGS-050924002. Learn more about the Habitat Bank via our BNG network .								
Biodiversity Unit type impacted	Distinctiveness	Number of Units impacted	Unit type provided	Distinctiveness	Habitat Bank	Proximity	Number of Units provided	Total cost (exc. VAT)
Residual biodiversity habitat	Low	0.21	Lowland meadows	Very high	SHEF01	Local	0.21	£5,565.00
Net gain target habitat (10%)	N/A	0.02	Lowland meadows	Very high	SHEF01	Local	0.02	£530.00
	TOTAL	0.23				TOTAL	0.23	£6,095.00

Figure 5. Evidence of BNG offsite credit quote.

Conclusion

The BNG assessment by Tunley Environmental have confirmed the site at 482 Halifax Road will not reach the national standard of 10% biodiversity net gain. The developer will purchase offsite credit to ensure this requirement is complied with.

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.

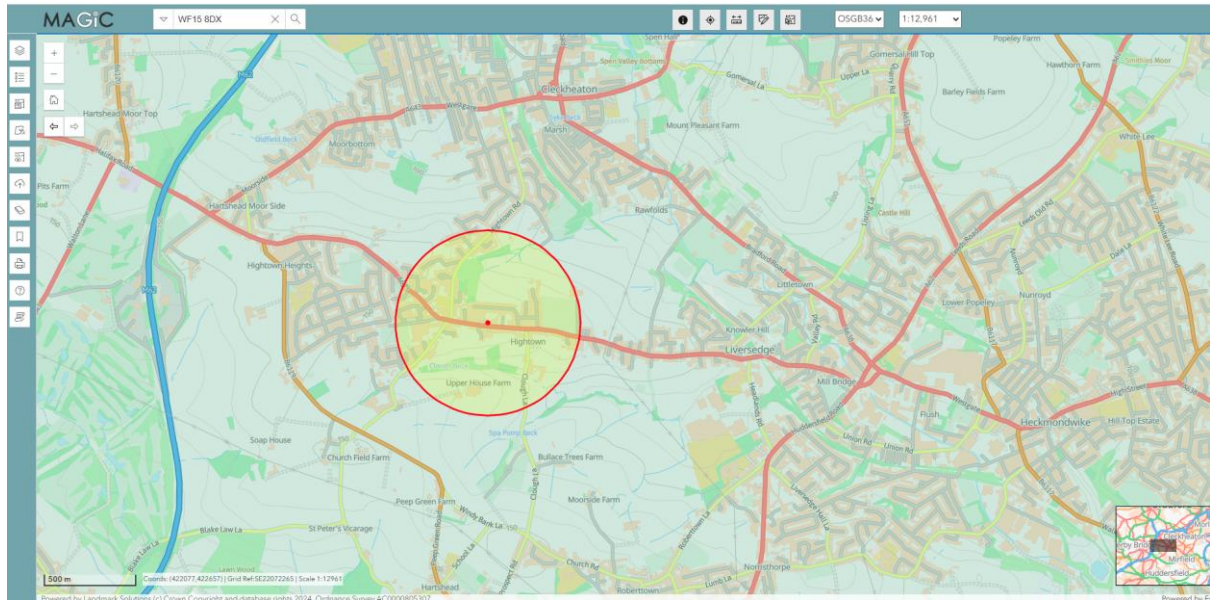
Site Name	482 Halifax Road, Liversedge, WF15 8DX	
Sheet Name	Headline Results	
Headline Results		
Headline	BNG Targets Not Met ▲	
Trading Rules	Trading Rules Not Satisfied ▲	
Next steps	Scheme alterations or offsite units required	
Baseline Units	Area habitat units	0.2302
	Hedgerow units	Zero Units Baseline
	Watercourse units	Zero Units Baseline
Post-development Units	Area habitat units	0.0240
	Hedgerow units	0.0000
	Watercourse units	0.0000
Total net unit change	Area habitat units	-0.2061 ▲
	Hedgerow units	0.0000
	Watercourse units	0.0000
Total net % change	Area habitat units	-89.55% ▲
	Hedgerow units	% target not appropriate
	Watercourse units	% target not appropriate
Area habitat units required to meet target		0.2291
Hedgerow units required to meet target		0.0000
Watercourse units required to meet target		0.0000

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

There are no designated sites and priority habitat on site, but there are two areas of deciduous woodland, one Objective 2 area and a community forest within a 500 m radius (but not onsite). In consequence, the proposed development will not have a negative impact on any priority habitats or designated sites.



Approval

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Approval date:	22 nd January 2026
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Revision History:	Change Description:	Changed by:	Date:	Approved by:	Date:
B					
C					
D					
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F					



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