



envirotech

**Ecological Consultants
Environmental and Rural Chartered Surveyors**

Biodiversity Net Gain

Smethurst Street



Tel: 015395 61894
Email: info@envtech.co.uk
Web: www.envtech.co.uk
Envirotech NW Ltd

The Stables, Back Lane, Hale, Milnthorpe, Cumbria. LA7 7BL
Directors: A. Gardner BSc (Hons), MSc, MRICS, Dip NDEA
H. Gardner BSc (Hons), MSc, CEnv, MRICS
Registered in England and Wales. Company Registration Number 5028111

ACCURACY OF REPORT

This report has been compiled based on the methodology as detailed and the professional experience of the surveyor. Whilst the report reflects the situation found as accurately as possible, all of the protected species this survey covers are wild and can move freely from site to site. Their presence or absence detailed in this report does not entirely preclude the possibility of a different past, current or future use of the site surveyed.

We would ask all clients acting upon the contents of this report to show due diligence when undertaking work on their site and/or in their interaction with protected species. If protected species are found during a work programme, and continuing the work programme could result in their disturbance, injury or death, either directly or indirectly an offence may be committed.

If in doubt, stop work and seek further professional advice.

Quality and Environmental Assurance

This report has been printed on recycled paper as part of our commitment to achieving both the ISO 9001 Quality Assurance and ISO 14001 Environmental Assurance standards. Envirotech have been awarded the Gold standard by the Cumbria Business Environmental Network for its Environmental management systems.

Author	Andrew Gardner	Date	26/10/2022
Checked by	Andrew Gardner	Date	26/10/2022
Report Version	1		
Field data entered	☐		
Report Reference	7551		

Contents

INTRODUCTION	3
Purpose of this Report	3
Ecological Context	3
Policy context	5
METHODS	5
Introduction	5
Biodiversity Assessment Methods.....	5
Habitat Distinctiveness	5
Habitat Condition.....	6
Strategic Location	6
Difficulty of Creation and Restoration.....	6
Time to Target Condition.....	6
Off-site Risk	6
BIODIVERSITY ASSESSMENT.....	7
Biodiversity Baseline	7
Post-development Habitat Creation and Enhancement	7
Change in Biodiversity Value.....	9
REFERENCES.....	11
APPENDIX A – DEFRA METRIC TABLES – BASELINE	12
APPENDIX B – DEFRA METRIC TABLES – POST-DEVELOPMENT	13
APPENDIX C – BASELINE DETAILED CONDITION ASSESSMENTS	14
APPENDIX D – POST DEVELOPMENT DETAILED CONDITION ASSESSMENTS.....	15

INTRODUCTION

Purpose of this Report

In October 2022, Envirotech were requested, to carry out a biodiversity assessment of land at Smethurst Street. The aim was for an ecologist with botanical expertise to carry out a site visit to map the habitat types present at the site in order to establish the biodiversity baseline.

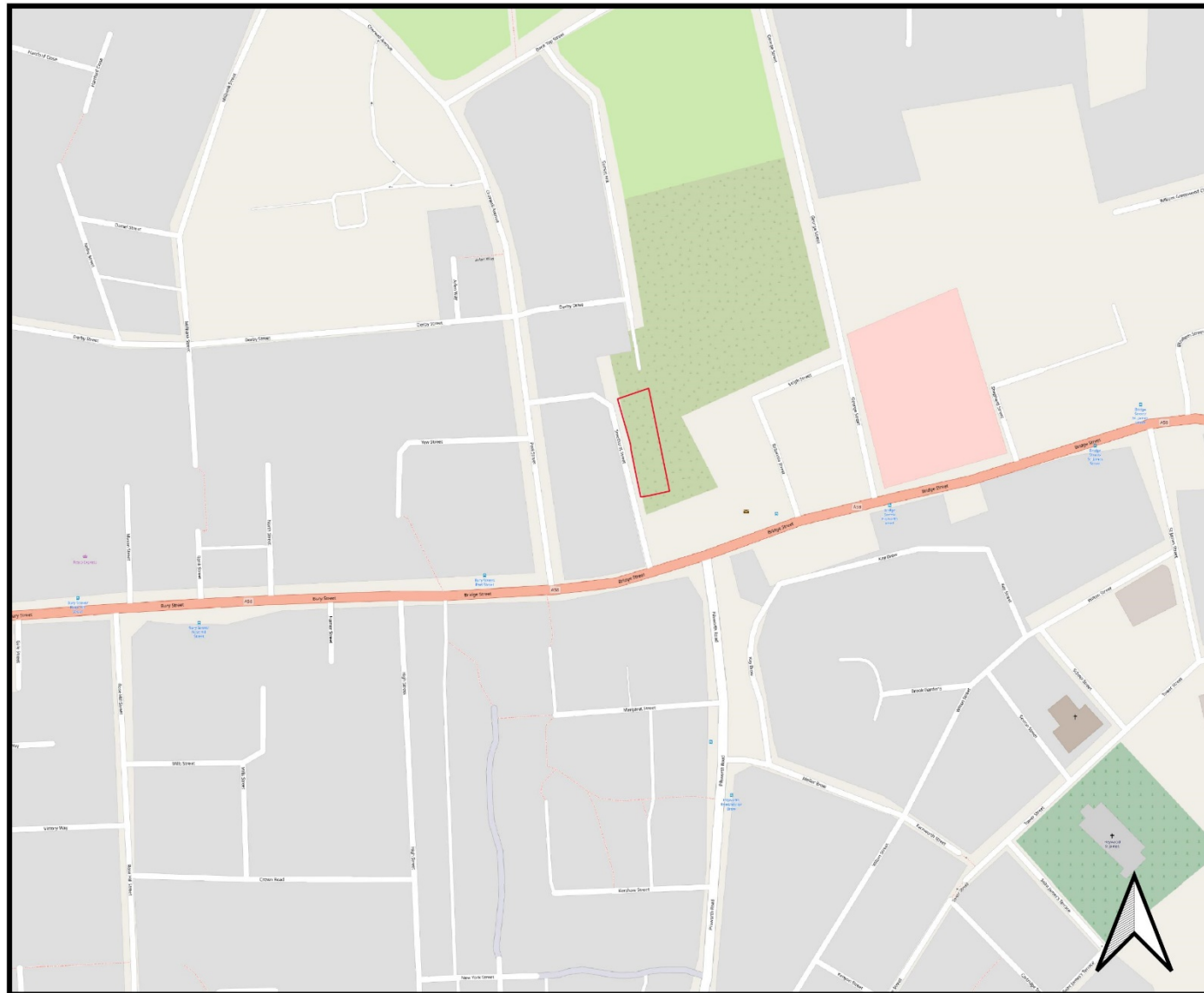
Each habitat type was mapped using the standard habitat mapping convention using Phase 1 habitat survey (JNCC, 2010) which was subsequently converted into the UK Habitat Classification (Butcher et al., 2020) for the purposes of using the Defra metric.

Using the findings of the baseline surveys, pre-construction ecology was measured against proposed habitat changes arising from future ecological enhancements based on an Illustrative Landscape Plan (post-construction) provided by the client.

This report presents the results of this desk-based study to assess net change in biodiversity 'units' in connection with the removal of habitats for the proposed development at the site.

Ecological Context

The site is 0.26ha and *Figure 1* shows the site location.



 Boundary

Figure 1
Site Location



Policy context

The primary aims of Biodiversity Net Gain are to secure a measurable improvement in habitat for biodiversity, to minimise biodiversity losses and to help to restore ecological networks whilst streamlining development processes.

The National Planning Policy Framework (NPPF) makes provisions for the delivery of biodiversity net gain. Additionally, there is a proposed 10% net gain requirement in the Environment Bill. There is currently no statutory requirement to deliver mandatory 10% biodiversity net gain as the secondary legislation to do so has not yet been brought in.

METHODS

Introduction

The biodiversity metric 3.1 is designed to quantify biodiversity to inform and improve planning, design, land management and decision-making (Panks et al., 2022).

This study has been carried out as a desk-based exercise, using the results of field surveys carried out at the site by Envirotech and an Illustrative Landscape Plan provided by the client.

Biodiversity Assessment Methods

To calculate biodiversity units for the site and assess any changes arising from the proposed development this study uses methods set out the latest Biodiversity Metric 3.1 user guide (Panks et al., 2022).

The biodiversity metric uses three core measurements:

- Habitat area
- Length of linear terrestrial habitats
- Length of linear aquatic habitats.

Consequently, a site can have three biodiversity unit values, which are assessed using the same metric, but cannot be summed together.

Habitat area is multiplied by several factors that indicate its quality: distinctiveness, condition, strategic location and connectivity, and this gives its biodiversity unit value. This can be used for existing and future created habitats. In addition, when habitats are to be enhanced or newly-created, the risk of failure is accounted for by applying multipliers for risk factors (difficulty, time to target condition, and off-site risk).

Habitat Distinctiveness

Habitats are classified using the phase 1 habitat survey methodology (JNCC 2010) or the UK habitat classification system (Butcher et al., 2020).

The metric pre-assigns each habitat type to a distinctiveness band according to its distinguishing features, i.e. species richness, rarity (at local, regional, national and international scales), and the degree to which it supports species rarely found in other habitats. On rare occasions, the habitat distinctiveness of a habitat can be altered up or down from the preassigned value. Any alterations must then be fully explained using evidence relevant to the site, e.g. an increase in distinctiveness because of rare flora or fauna or a decrease in distinctiveness because of significant damage to the habitat.

Habitat Condition

Habitat condition measures the varying quality of similar habitats against what is perceived to be their optimal state. The biodiversity metric 3.1 technical supplement (Panks et al., 2022) contains condition sheets for all habitats to which the metric can apply. The condition sheets contain a habitat description, contextual information to aid the assessment, and the assessment criteria. The criteria describe what components need to be present for a habitat to be in good, moderate or poor condition.

Strategic Location

Strategic location - sometimes called 'strategic significance' - works at a landscape scale, allowing additional value to be added to habitats in 'priority' or 'biodiversity target areas'. They include statutory and non-statutory sites and other areas with biodiversity value or potential, and they are mainly identified from local plans and objectives. If a habitat is within such a target area, a multiplier is applied to increase its value.

Difficulty of Creation and Restoration

The risks associated with creating new or enhancing existing habitats, are known as difficulty factors; for example, where habitats fail to establish owing to natural changes in local conditions, incorrect management or for unknown reasons. The biodiversity metric 3.1 contains default values for each habitat based on the average difficulty of creating or enhancing a habitat. Occasionally, under exceptional circumstances, these can be modified, but any deviation from the default value must be fully justified.

Time to Target Condition

There is often a lag between a habitat being removed and the new compensation habitats achieving their target condition. This gives reduced biodiversity value for a time. The biodiversity metric 3.1 preassigns the time to target condition based on good practice and typical conditions, and assigns a multiplier based on the number of years required to achieve it.

Using bespoke techniques under unique conditions, or creating compensation habitats prior to impacts taking place, the time to target condition can be adjusted. Any changes must again be fully justified.

Off-site Risk

Sometimes it is not possible to compensate adequately for loss of biodiversity within the site boundary, so off-site compensation is required. If the off-site compensation is a significant distance from the development site, then there will be a local loss of biodiversity and a multiplier is applied to any off-site compensation.

BIODIVERSITY ASSESSMENT

Biodiversity Baseline

The phase 1 habitat survey map (Figure 2) has been used to identify three habitat areas.

These habitats have been input into the Defra Biodiversity Metric 3.1 calculator and indicate a total of 0.98 area units. The results of the calculations are presented in Appendix A. It should be noted that these represent screenshots from the calculator; the full biodiversity assessment calculation can be found in the Excel document 'BNG Smethurst Street'.

The condition assessments for each of the linear and area habitats are presented in Appendix C. No deviations have been made from the default methods for baseline habitats assessment.

Post-development Habitat Creation and Enhancement

The Illustrative Landscape Plan has been used to identify that there will be one retained habitat, one enhanced habitat and two new habitats.

These figures have been put in to the Biodiversity Metric 3.1 and would comprise a total of 1.13 biodiversity area units.

The enhanced habitat area will consist of 0.11ha of scrub which will be enhanced with the removal of rubbish, selective thinning and replanting.

Developed land/ sealed surface is retained.

Five medium size urban trees in poor condition will be lost. These sit between being classified as scrub, woodland and urban tree. Urban tree is considered the most appropriate classification as they occur in an urban area subject to intensive anthropogenic activities.

Eight new urban trees will be planted, native species as heavy standards will be in moderate condition and medium size.

There are no changes to default values for post development habitats. Details of the assumptions made to achieve the proposed conditions are found in Appendix D.



- Boundary
- Scrub - Dense/continuous
- Hardstanding
- Parkland/scattered Trees - Broad-leaved

Figure 2
Phase 1 Habitat Survey



Change in Biodiversity Value

Under the current proposals set out in the Illustrative Landscape Plan there will be a GAIN of 0.15 biodiversity area units (+15.85%). This is shown in Table 1.

Table 1. *Change in Biodiversity Units Calculation*

On-site baseline	Habitat units	0.98
	Hedgerow units	0.00
	River units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	1.13
	Hedgerow units	0.00
	River units	0.00
On-site net % change (Including habitat retention, creation & enhancement)	Habitat units	15.82%
	Hedgerow units	0.00%
	River units	0.00%
Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.15
	Hedgerow units	0.00
	River units	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	15.82%
	Hedgerow units	0.00%
	River units	0.00%
Trading rules Satisfied?	No - Check Trading Summary ▲	

REFERENCES

Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020), UK Habitat Classification – Habitat Definitions V1.1 at <http://ukhab.org>

Stephen Panks A, Nick White A, Amanda Newsome A, Mungo Nash A, Jack Potter A, Matt Heydon A, Edward Mayhew A, Maria Alvarez A, Trudy Russell A, Clare Cashon A, Finn Goddard A, Sarah J. Scott B, Max Heaver C, Sarah H. Scott C, Jo Treweek D, Bill Butcher E And Dave Stone A 2022. Biodiversity metric 3.1: Auditing and accounting for biodiversity – User Guide. Natural England.

JNCC. (2010), Handbook for Phase 1 Habitat Survey (revised). JNCC, Peterborough.

APPENDIX A – DEFRA METRIC TABLES – BASELINE

	Habitats and areas			Distinctiveness		Condition		Strategic significance			Suggested action to address habitat losses	Ecological baseline	Retention category biodiversity value							
Ref	Broad Habitat	Habitat Type	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic Significance multiplier		Total habitat units	Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area habitat lost	Units lost		
1	Urban	Developed land; sealed surface	0.011	V.Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Compensation Not Required	0.00	0.011		0.00	0.00	0.00	0.00		
2	Heathland and shrub	Mixed scrub	0.061	Medium	4	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required (2)	0.24		0.032	0.00	0.13	0.03	0.12		
3	Urban	Urban Tree	0.1831	Medium	4	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required (2)	0.73			0.00	0.00	0.18	0.73		
4																				
5																				
6																				
7																				
	Total habitat area		0.26									0.98	0.01	0.03	0.00	0.13	0.21	0.85		
													Total area lost (excluding area of Urban trees and Green walls)						0.03	

APPENDIX B – DEFRA METRIC TABLES – POST-DEVELOPMENT

Post development/ post intervention habitats																						
Broad Habitat	Proposed habitat	Area: (hectares)	Distinctiveness		Condition		Strategic significance			Temporal multiplier					Difficulty multipliers				Habitat units delivered	Comments		
			Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier	Standard time to target condition/years	Habitat created in advance/years	Delay in starting habitat creation/years	Standard or adjusted time to target condition	Final time to target condition/years	Final time to target multiplier	Standard difficulty of creation	Applied difficulty multiplier	Final difficulty of creation		Difficulty multiplier applied	Assessor comments	Reviewer comments
Urban	Developed land; sealed surface	0.029	V.Low	0	N/A - Other	0	Area/correspondence not in local strategy/ no local strategy	Low Strategic Significance	1	0	0	0	Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Medium	0.67	0.00		
Urban	Urban Tree	0.293	Medium	4	Moderate	2	Area/correspondence not in local strategy/ no local strategy	Low Strategic Significance	1	27	0	0	Standard time to target condition applied	27	0.382	Low	Standard difficulty applied	Low	1	0.90		
Total habitat area		0.32																				
Site Area (Excluding area of Urban trees and Green walls)		0.03																				
																			Total Units	0.90		

[illegible]

APPENDIX C – BASELINE DETAILED CONDITION ASSESSMENTS

This appendix presents the assessment of the post-development habitats against the condition sheets in the biodiversity metric 3.1 technical supplement published by Panks et al., 2022. Any deviations from the published guidance is explained and justified.

Appendix C - Condition Assessment Tables

UK Hab Equivalent	Condition Sheet	Other Habitat Criteria Score									Total Score	Condition Assessment	Notes
		C1	C2	C3	C4	C5	C6	C7	C8	C9			
Scrub	Scrub	F	F	FF	F						0	Poor	
Developed Land; Sealed Surface	Not assessed												
Urban trees	URBAN TREES	P	P	F	F	F	F				2	Poor	Vegetation below trees is significantly damaged by flytipping. Trees show damage
Key: P – Criteria passed F – Criteria failed													
Appendix Table C1: Condition Assessment for Area Habitats													

APPENDIX D – POST DEVELOPMENT DETAILED CONDITION ASSESSMENTS

This appendix presents the assessment of the post-development habitats against the condition sheets in the biodiversity metric 3.1 technical supplement published by Panks et al., 2022 Any deviations from the published guidance is explained and justified.

Appendix D - Condition Assessment Tables

UK Hab Equivalent	Condition Sheet	Other Habitat Criteria Score									Total Score	Condition Assessment	Notes
		C1	C2	C3	C4	C5	C6	C7	C8	C9			
Scrub	Scrub	P	P	P	F	F					3	Moderate	
Developed Land; Sealed Surface	Not assessed												
Urban trees	URBAN TREES	P	P	F	P	F	F				3	Moderate	
Key: P – Criteria passed F – Criteria failed													
Appendix Table D1: Condition Assessment for Area Habitats													