



envirotech

**Ecological Consultants
Environmental and Rural Chartered Surveyors**

Biodiversity Net Gain

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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.

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INTRODUCTION

Purpose of this Report

Envirotech were requested to carry out a biodiversity assessment of land at Griffin Close, Frizington. 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.

It is proposed the site is developed for housing.

Each habitat type was mapped using the standard habitat mapping convention using UK Habitat Classification V2 (Butcher et al., 2023) for the purposes of using the Defra metric.

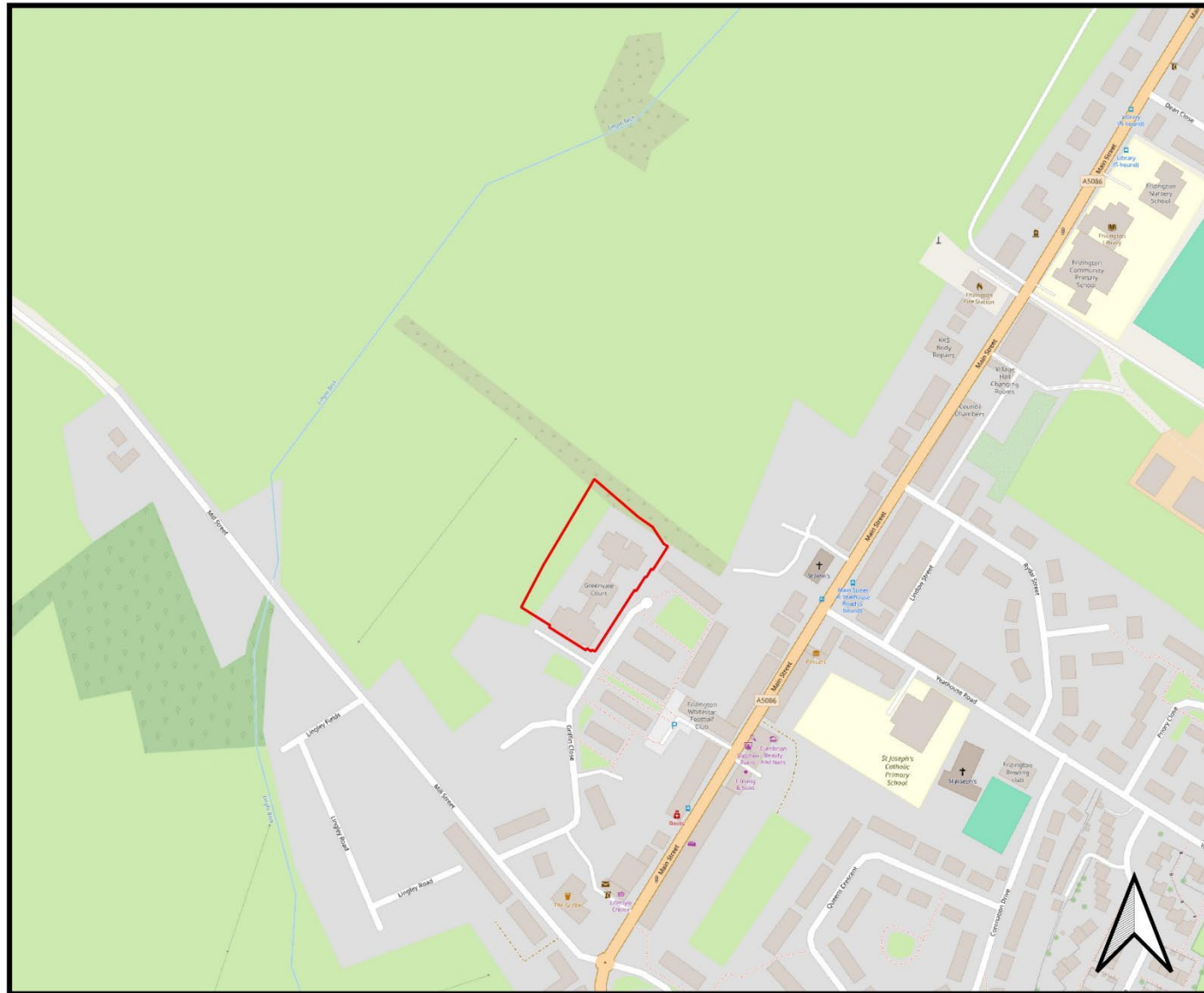
Using the findings of the baseline surveys, pre-construction ecology was measured against proposed habitat changes arising from future ecological enhancements based on an Illustrative Landscape Plan (post-construction).

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 approximately 0.5ha, comprising an open plot of rough and unmanaged '*other neutral grassland*' bordered by hardstanding, ornamental shrubbery and a belt of mixed woodland.

Figure 1 shows the site location, national grid reference NY 03359 17377.



 Red Line 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 10% net gain requirement in the Environment Bill.

METHODS

Introduction

The statutory biodiversity metric is designed to quantify biodiversity to inform and improve planning, design, land management and decision-making (Natural England, 2024).

This study has been carried out as a desk-based exercise, using the results of field surveys carried out at the site by Envirotech.

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 Statutory Biodiversity Metric user guide (Natural England, 2024).

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 UK habitat classification V2 system (Butcher et al., 2023).

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 statutory biodiversity metric technical supplement (Natural England, 2023) 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 statutory biodiversity metric 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 statutory biodiversity metric 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

Baseline:

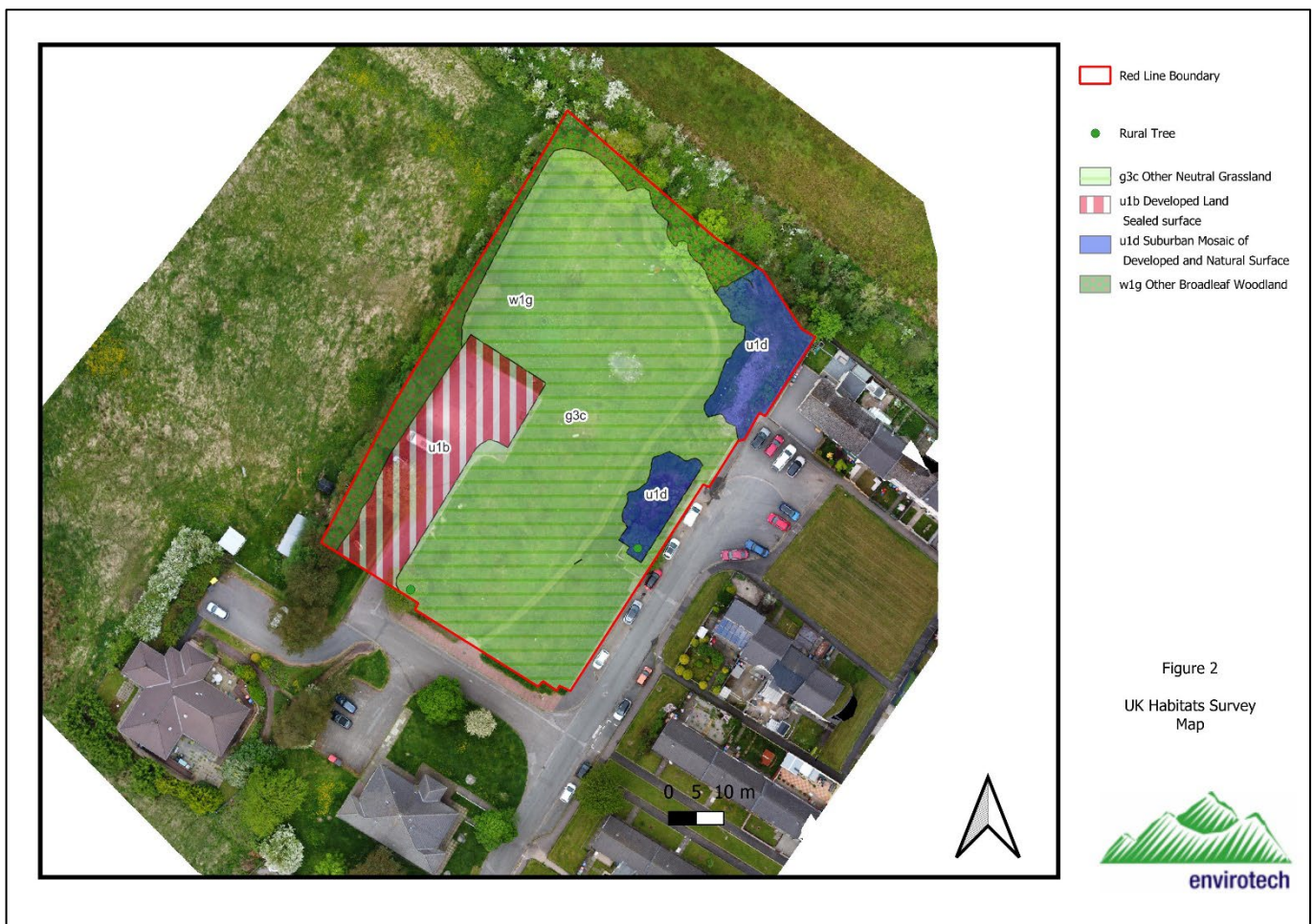
The sites baseline BNG value was calculated using the Statutory BNG metric and UKHabs v2 methodology. This was shown on Figure 2.

The baseline value for the site is as at 17th May 2024. This is the date our assessment was undertaken. We consider there will have been no substantive changes to habitat condition at the time of the planning application being made.

We are not aware of any habitat features which have been purposefully degraded after 30th January 2020.

We consider planning permission, if granted, would be subject to the biodiversity gain condition

The type, area and distinctiveness values are shown on Table 1.



Habitat	Area (ha)	Distinctiveness
Other neutral grassland	0.331	Medium
Other woodland; mixed	0.046	Medium
Developed land; sealed surface	0.063	V.Low
Introduced shrub	0.045	Low
Urban tree	0.0081	Medium

Table 1a- Habitat, Area and Distinctiveness Values (on site)

The UK Habs V2 habitat survey has been used to identify relevant habitat areas, linear habitat areas and watercourse units.

These habitats have been input into the statutory biodiversity metric calculator and indicate a total of 2.99 habitat units. The results of the calculations are presented in the full biodiversity assessment calculation in the Excel document 'Statutory Biodiversity Metric Baseline- Griffin Close, Frizington R2'.

The condition assessments for each of the area, linear and water course habitats are presented in Appendix A. 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 four retained habitats, no enhanced habitats and five new habitats.

These figures have been put in to the Statutory Biodiversity Metric and would comprise a total of 0.79 habitat units.

All woodland to the boundary is retained.

One Urban tree is retained by the site entrance.

Some of the introduced shrubs and other neutral grassland to the site boundary, to the woodland edge, is retained. This will be protected during work with fencing required for protection of the boundary trees.

Additional other neutral grassland is created to the site boundary. This will be sown with a “flowering lawn” type seed mix and lightly mown.

Modified grassland is created to the roadsides adjacent car parking in POS which will be short mown and species poor.

Additional introduced shrubs are planted in POS to the South-west in default condition.

Vegetated gardens (Lawns) have been measured and are in default condition. The balance of the site comprises roads and buildings in default condition.

Details of the assumptions made to achieve the proposed conditions are found in Appendix B



- Rural Tree
- g3c Other Neutral Grassland
- g4 Modified Grassland
- u1 Built Up Areas and Gardens
- u1d Suburban Mosaic of Developed and Natural Surface
- w1g Other Broadleaf Woodland

Figure 3
UK Habitats Survey
Map Post Development



Change in Biodiversity Value

The baseline value of the site is 2.99 habitat units. The post development value of the site is 0.79 units. This is a loss of 2.19 Units or -73.41%.

Purchase of units from an offsite provider will be required to achieve a +10% gain.

This is shown in Table 2.

On-site baseline	Habitat units	2.99		
	Hedgerow units	0.00		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.79		
	Hedgerow units	0.00		
	Watercourse units	0.00		
On-site net change (units & percentage)	Habitat units	-2.19	-73.41%	On-site net gain is less than target set ▲
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	0.00%	
Off-site baseline	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site net change (units & percentage)	Habitat units	0.00	0.00%	
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	0.00%	
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-2.19		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Spatial risk multiplier (SRM) deductions	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-2.19		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-73.41%	Total net gain achieved is less than target set ▲	
	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%	2.99	3.29	2.49
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 ✓

Table 2. Change in Biodiversity Units Calculation

REFERENCES

Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2023), UK Habitat Classification - Habitat Definitions V2.01 at <http://ukhab.org>

Natural England 2023. Natural England The Statutory Biodiversity Metric User Guide (draft)

APPENDIX 1 – BASELINE DETAILED CONDITION ASSESSMENTS

This appendix presents the assessment of the post-development habitats against the condition sheets in the statutory biodiversity metric technical supplement published by Natural England, 2023. Any deviations from the published guidance is explained and justified.

UK Hab Equivalent	Condition Sheet	Other Habitat Criteria Score									Total Score	Condition Assessment	Notes
		C1	C2	C3	C4	C5	C6	C7	C8	C9			
Other neutral grassland	GRASSLAND: Medium-Very High distinctiveness	P	P	P	P	P	F				5	Moderate	This habitat parcel is a good example of this habitat type, comprising an assemblage of rough and unmanaged neutral grassland. Sward height is varied, ranging from 2-3to 40cm. Bare ground, bracken, injurious weeds and invasive non-native species are all either absent or beneath the threshold amounts. Discounting the common/ruderal vegetation in Footnote 3, the grassland (on average) possesses <10 vascular plant species per m2. Owing to failing Criteria 6 this grassland can only be regarded moderate quality.
Introduced Shrub	Not assessed										N/A	N/A	Ornamental shrub to eastern edge of the site (remnant of managed garden area).
Developed Land; Sealed Surface	Not assessed										N/A	N/A	All hardstanding (road and pavement).
Urban trees	URBAN TREES	P	P	F	P	F	P				4	Moderate	Two small (DBH >7.5cm and ≤30cm) urban trees- Wild Cherry (<i>Prunus avium</i>) and Willow (<i>Salix sp.</i>)- located to the southern and eastern areas of the site. All trees are native, automatically pass the canopy criterion, oversail vegetation and appear healthy. Trees are not of a mature size/status and offer minimal ecological niches for vertebrates and invertebrates.
Key: P – Criteria passed F – Criteria failed													
Appendix Table A1: Condition Assessment for Area Habitats													

UK Hab Equivalent	Condition Sheet	Other Habitat Criteria Score													Total Score	Condition Assessment	Notes
		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13			
Other woodland; mixed	WOODLAND AND FOREST	2	2	2	3	3	3	1	2	2	1	1	1	1	24	Poor	Bounding the north and west boundaries of the site is a belt of other mixed woodland. This woodland possesses two age classes; a canopy of Oak, Ash, Beech and Pine accompanied with a poorly developed understory of Hawthorn, Holly and Rowan. There is evidence of access and browsing pressure by domestic animals throughout the northern area of wood, including from dog walkers. Monbretia was identified in the north-east of the site during the 2022 site walkover, although this covered <10% of the woodland area. There are >5 species of native trees, with >80% of the understory native (only Sycamore was identified as non-native). Owing to being a small coppice of woodland, open space is <20%. Woodland regeneration is poor, with the absence of seedlings, saplings and advanced coppice regrowth. Ash shows signs of dieback, representing >10% of the woodland block. There was evidence of ancient woodland groundflora, although this was not prominent. The wood possesses <2 storeys across all survey plots; part of the western area of habitat a narrow belt of uniformly-sized trees. No veteran trees are present and deadwood in minimal. More than 20% of the woodland ground is accessed and damaged- a trampled path created by dog walkers and others.
Key to woodland condition assessment: 3 (points) = Good 2 (points) = Moderate 1 (point) = Poor Total score >32 – Good Total score 26 – 32 – Moderate Total score <26 – Poor																	
Appendix Table A2: Woodland Condition Assessment																	

APPENDIX 2 – POST DEVELOPMENT DETAILED CONDITION ASSESSMENTS

UK Hab Equivalent	Condition Sheet	Other Habitat Criteria Score									Total Score	Condition Assessment	Notes
		C1	C2	C3	C4	C5	C6	C7	C8	C9			
Other neutral grassland	GRASSLAND: Medium-Very High distinctiveness	P	P	P	P	P	F				5	Moderate	Flowering lawn seed mix to be sown and supplement existing seed bed
Modified Grassland	GRASSLAND: Low Distinctiveness	F	F	P	P	P	P	P			5	Poor	Fails C1
Introduced Scrub	Not Assessed										-	Default	
Vegetated Garden	Not Assessed										-	Default	
Developed Land	Not Assessed										-	Default	
Key: P – Criteria passed F – Criteria failed													
Appendix Table B1: Condition Assessment for Area Habitats													