

BRITISH STANDARD 5837

TREE SURVEYS ARBORICULTURAL IMPLICATION STUDIES

TPO/PLANNING ADVICE/ PROJECT MANAGEMENT

TREE INVENTORIES AND RISK ASSESSMENTS

WOODLAND MANAGEMENT PLANS

TREE PLANTING SCHEMES

TPO RE-SURVEY



Land at Borrowdale Road, Middleton

Biodiversity Net Gain Assessment

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1 Introduction

1.1 Background

Kingdom Ecology have undertaken a Biodiversity Net Gain Assessment approximately 2ha of amenity land/urban park located adjacent to Borrowdale Road, Middleton, Rochdale, M24 5QG (National Grid Reference SD 8608 0680).

Development proposals are to redevelop the site with new housing with associated landscaping, parking and road infrastructure (see Figures 1 and 2 in the Appendix for existing habitats and development proposals). The works will result in the loss of modified grassland and plantation woodland.

The proposed development area extends to approximately 0.6 ha, with the remainder of the site retained. Retained grassland habitats will be enhanced in order to achieve a biodiversity net gain.

It is proposed that extensive areas of the retained grassland are enhanced to create a more species-diverse, neutral grassland habitat and these are managed as a hay-meadow type habitat. Habitats around the proposed development area will also be enhanced through additional tree planting.

A Biodiversity Metric Assessment for the site pre- and post-development has been carried out to determine the level of change with regards to biodiversity units.

The areas of land have been surveyed in the past with a survey of the full site completed on the 20th August 2018 and a survey of part of the site completed on the 2nd May 2021. The latest field survey was undertaken on 17th January 2023.

The findings of the site surveys have been used to assess habitats and to calculate the biodiversity units of pre-construction habitats.

The original survey and the net gain assessment have been completed by Richard Roe (BSc, MSc, MIEEM, CEnv). Richard has extensive experience of undertaking habitat and protected species surveys as a professional ecological consultant with over twenty years' experience.

2 Habitats

2.1 Existing Habitats

The study area comprises of an approximately 2ha area of amenity parkland and woodland plantation located between Borrowdale Road and Haweswater Drive, Middleton.

The site comprises of a roughly T-shaped area of mown, amenity grassland with fringes of young plantation woodland, ornamental shrubbery and hedgerow. The site is located in a shallow depression with the surrounding housing and school located at a slightly raised elevation. The site slopes gently down from its northern boundary on Borrowdale Road towards the southern end of the site on Grisedale Drive.

There are some areas of slightly wetter ground at the site which include plant species indicative of marshy grassland habitats. These areas are broadly located near the centre of the site and towards the southern end of the site.

There are a series of hardstanding paths which criss-cross through the site. The site is used regularly by dog walkers and for other recreational activities.

The areas of dry grassland comprises of abundant Yorkshire fog, with frequent sweet vernal grass, perennial rye-grass and occasional red fescue, meadow foxtail, crested dog's-tail, cock's foot, timothy and soft rush. Herbs present comprise of frequent creeping buttercup and dandelion with occasional broadleaved dock, common ragwort, meadow buttercup and bird's foot-trefoil, with rare silverweed, ribwort plantain, common sorrel and common mouse ear.

The grassland is not considered to be of any significant botanical value and supports plant species typical of similar managed urban grassland habitats.

The area of marshy grassland habitats supports similar grassland species as recorded within the drier habitats with further plant species indicative of wetter habitats including frequent soft rush, articulated rush, creeping buttercup and silverweed with occasional greater bird's-foot trefoil.

None of the habitats present are considered to be of any significant biodiversity value as they comprise of habitats and plant species that are of relatively low botanical interest and are commonly occurring throughout the UK.

2.2 The back of our Proposals

The proposed development would be located at the northern end of the site. Development proposals will potentially result in the loss of plantation woodland, scrub, hedgerow and grassland habitats

The development proposals will include new housing, apartments, associated areas of vegetated garden, road, parking, paths and public open space.

In order to maximise the biodiversity value of the development, 52 new native trees will be planted, along with areas of wildflower grassland, and new lengths of native hedge.

The locations of proposed tree planting and hedgerows are shown on the associated landscaping plans.

In addition, the development will seek to enhance the biodiversity value of retained areas of grassland present at the site (approximately 0.8ha of grassland habitat).

These currently comprise of relatively species-poor, modified grassland habitats. It is proposed that these are instead managed as a hay-meadow type habitat and species diversity within the grassland sward is enhanced through the creation of establishment beds scattered throughout the grassland. These should comprise of patches of bare ground which would be over sown with appropriate wildflower seed mix (e.g. Emorsgate EM1 General Purpose Meadow Mix for the dry areas of grassland and for the wetter areas EM8- Wetland Mix). The grassland should remain un-cut until late July. Following the hay cut, the grassland should be taken away from site.

It is considered that the enhancement of the grassland and management as hay meadow, will allow the grassland to develop into more species-diverse, neutral grassland habitats.

An appropriate habitat creation and management plan would be produced and the grasslands will be managed over a minimum 30 year period.

3 Biodiversity Metric Calculation

3.1.1 Biodiversity Metric Calculation Results

Based upon the on-site and off-site development proposals, the relative biodiversity units at the site before and after the development proposals have been calculated following methodologies and using tools provided within the Natural England Biodiversity Metric Calculator Version 4.0.

Summary tables of these calculations are provided in the Appendix. The full Biodiversity Metric Calculation Tool Spreadsheet for the site has also been submitted to the Council.

The baseline biodiversity units (i.e. the site's pre-development condition) has been calculated at 8.09 Habitat Units and 0.62 Hedgerow Units.

The on-site biodiversity units after the completion of development has been calculated at 8.93 habitat units and 0.76 Hedgerow Units.

The development will therefore result in a net gain of 0.84 habitat units representing a net percentage biodiversity increase of 10.34% in habitat units and a net gain of 0.14 hedgerow units representing a net percentage biodiversity increase of 23.44% .

In addition, it is recommended that further biodiversity enhancements are provided at the site including the incorporation of bat and bird boxes into the proposed new buildings for the site.

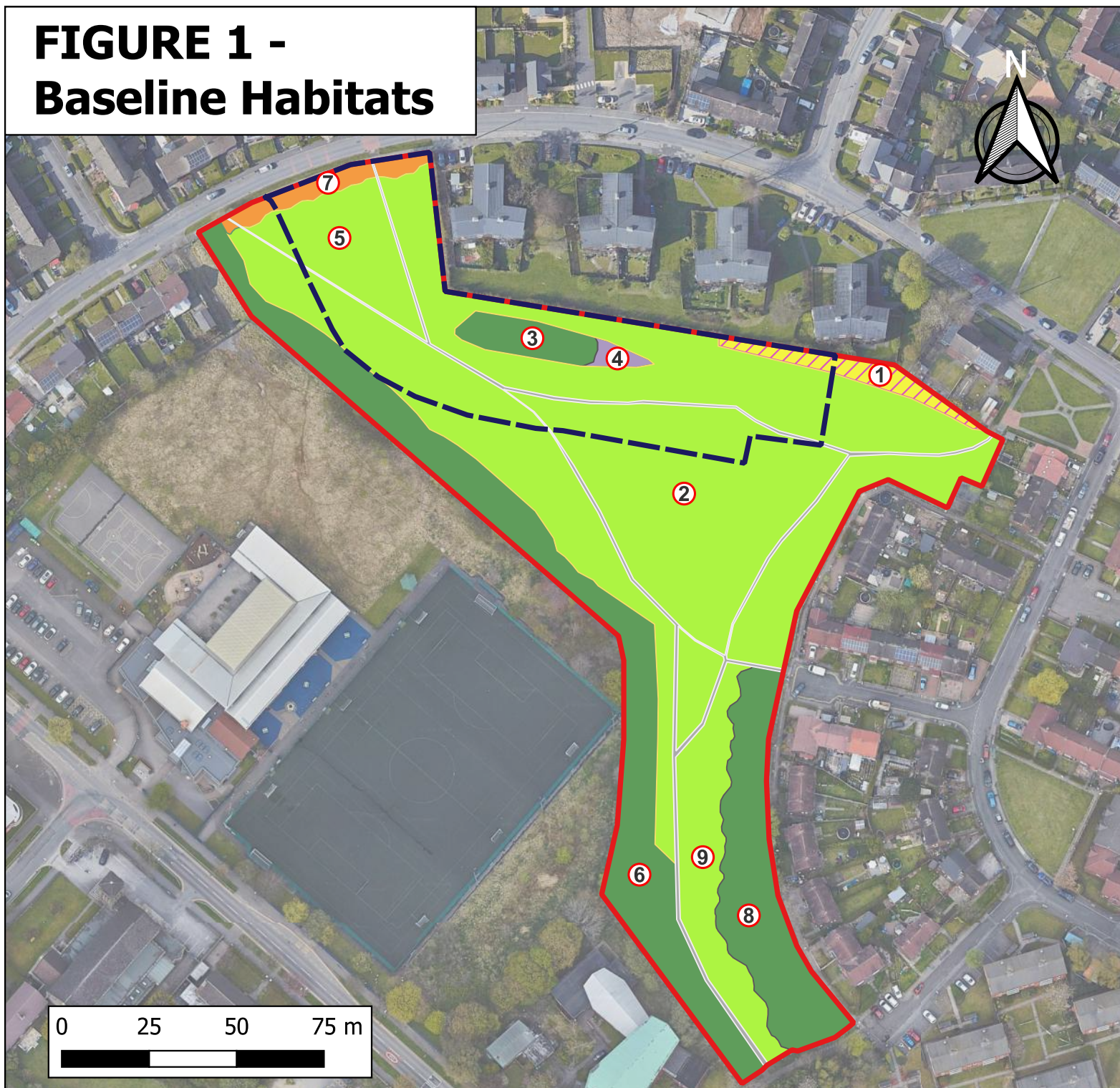
4 Appendix

Borrowdale Road
Biodiversity Net Gain Assessment

Biodiversity Net Gain Summary Results Table

On-site baseline	Habitat units	8.09	
	Hedgerow units	0.62	
	Watercourse units	0.00	
On-site post-intervention (including habitat retention, creation & enhancement)	Habitat units	8.93	
	Hedgerow units	0.76	
	Watercourse units	0.00	
On-site net change (units & percentage)	Habitat units	0.84	10.34%
	Hedgerow units	0.14	23.44%
	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	0.84	
	Hedgerow units	0.14	
	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	0.84	
	Hedgerow units	0.14	
	Watercourse units	0.00	
Total net % change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	10.34%	
	Hedgerow units	23.44%	
	Watercourse units	0.00%	

FIGURE 1 - Baseline Habitats



KEY



Study Site



Development

BNG BASELINE



Built sealed Surface



Other Woodland; mixed



Modified Grassland



Introduced Shrub



Bramble



Ephemeral/ruderal vegetation

0 25 50 75 m

FIGURE 2 - Proposal Habitats

