



Land at North End Lane, Halewood, Liverpool

Biodiversity Net Gain Summary

18th July 2024

Authored by Richard Roe BSc MSc MCIEEM CEnv

CONTACT DETAILS

KINGDOM ECOLOGY LTD
7 Speke Road
Woolton
Liverpool
L25 8QA

Email: enquiries@kingdomecology.com

CONTENTS

1	Introduction.....	2
1.1	Background.....	2
1.2	Purpose of Report	2
2	Field Survey Methods.....	3
2.1	Survey Aims and Objectives	3
2.2	Survey Methods.....	3
2.2.1	Ecological Walkover Survey	3
3	Survey Results.....	4
3.1	Site Description and History	4
3.2	Baseline Habitats	4
3.3	Development Proposals and Habitat Creation	5
3.3.1	Proposals	5
4	Biodiversity Metric Calculation	7
4.1.1	Biodiversity Metric Calculation Results	7
5	Appendix	8

1 Introduction

1.1 Background

Kingdom Ecology have undertaken a Ecological Walkover Survey and a Biodiversity Net Gain Assessment of a grassland field located at North Lane end, Halewood, Liverpool, L26 5QB (National Grid Reference SJ 44400 87103).

Development proposals are to use the land as a dog exercise area, with the installation of new fencing around the site perimeter, additional small areas of hardstanding and some new areas of landscaping.

The assessment has been carried out to record existing habitats at the site; to provide an assessment of likely impacts; to make recommendations for biodiversity enhancement; and ultimately to consider whether the development will deliver a biodiversity net gain.

Field surveys were undertaken 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. Richard holds a Level 4 FISC.

1.2 Purpose of Report

This report provides the findings of field surveys undertaken at the site. The field surveys comprised of an ecological walkover and habitat survey of the site.

Following a description of the survey findings and an evaluation of habitats, the report goes on to make recommendations for mitigation and ecological enhancement measures where relevant.

A Biodiversity Metric Assessment for the site pre- and post-development has been carried out to determine whether the proposals will achieve a biodiversity net gain.

2 Field Survey Methods

2.1 Survey Aims and Objectives

The survey aim was to assess the site as to its ecological importance by assessing the value of habitats. The purpose of this was to determine the ecological baseline value of the site and highlight any ecological constraints associated with future development proposals.

Survey comprised of an ecological walkover survey of the site with an evaluation of habitats.

2.2 Survey Methods

2.2.1 Ecological Walkover Survey

An Ecological Walkover of the site was initially undertaken on the on the 1st May 2024. The site was also revisited 18th July 2024.

The aims of the walkover survey were to:

- identify areas or habitats that are of particular ecological interest for nature conservation and which require more detailed investigation;
- provide botanical description of habitats present (in relation to the UKHab classification system);
- establish the condition of habitats on site in line with the statutory biodiversity net gain metric;
- provide additional information regarding incidental observations of protected species or non-native, invasive species;
- to assess the site as to its ecological importance by assessing the value of habitats and their suitability to support any protected or notable species (including badgers, bats and breeding birds).

A map of the study site is shown in Figure 1. Typical habitats recorded at the site are also shown in photographs in the Appendix.

3 Survey Results

3.1 Site Description and History

The study site comprises of a former horse-grazed pasture field located off North End Lane, Halewood.

The site is located in a semi-rural setting between Halewood and Netherley village. Development proposals are to use the areas of grassland as a dog exercise park. There is an existing dog exercise area located immediately to the south of the study site. Land to the north of the site comprises of horse-grazed pasture. Land to the east of the site comprises of agricultural grassland. Land to the west of the study site comprises of an existing car park area which is accessed from North Lane End.

There is a shallow pond located immediately to the west of the study area. The pond is of relatively recent origin having developed within an area of former marshy grassland. Given the very recent origin of the pond it is considered very unlikely to support great crested newt.

The site comprises principally of modified grassland, with scattered trees present throughout and a small copse of trees located at the north-east corner of the site.

Development proposals will largely retain all existing habitats site with a small area (approximately 140 m²) lost to provide disabled access. No trees would be affected by development proposals.

3.2 Baseline Habitats

As previously described, the site currently comprises of areas of former horse-grazed pasture, scattered trees and a small copse of trees.

The main field comprises of a 'modified grassland' habitat with abundant Yorkshire Fog, frequent perennial rye-grass, sweet vernal grass, meadow foxtail and red fescue (Target Note 1 on Figure 1). Herbs present include frequent meadow buttercup, creeping buttercup, dandelion, cat's ear, common ragwort, ribwort plantain, and occasional common knapweed, common mouse ear and broadleaved dock.

Species diversity was measured by undertaking 5 x 1 m² samples of grassland habitat and recording the number of species present. The grassland was found to support approximately six species per square metre.

The grassland had been mown short at the time of survey. Historic aerial imagery shows the grassland to have been grazed short by horses for at least the past 20 years.

With regards to the biodiversity net gain assessment for the site, the grassland is considered to represent 'modified grassland' in a 'moderate' condition

There are scattered small trees throughout the grassland area including field maple, horse chestnut, willow, lime and hawthorn. The trees were all assessed as being in a 'moderate' condition.

There is a small copse of trees located at the north-east corner of the site (Target Note 2). The area comprises of a mix of species including occasional mature oak with semi-mature lime, field maple, horse chestnut and hawthorn. The understory comprises areas of bare ground, with sparse grassland and patches of nettle. The area was assessed as representing 'other broadleaved woodland' in a 'poor' condition.

There is a row of densely planted beech and ash trees running along the northern boundary of the site (Target Note 3). Some of the ash trees are suffering from ash die-back. The line of trees were assessed as being in a 'poor' condition.

All habitat condition sheets are provided in the Appendix. No trees would be affected by development proposals.

3.3 Development Proposals and Habitat Creation

3.3.1 Proposals

Development proposals are to use the areas of grassland as a dog exercise Park.

The field will be subdivided into three separate compartments by lengths of fencing. A short area of gravel path will be provided to permit wheelchair access to one of the fields. Otherwise, areas of grassland and trees will remain unaffected. The change of use from horse grazing to dog exercise is unlikely to have a significant detrimental effect upon the species diversity of the grassland. Dogs would be exercised in individually/in relatively low numbers. All dog excrement would be removed from the site.

Nevertheless, in order to provide a 10% biodiversity net gain, habitat enhancements will be required at the site.

It is proposed that additional tree planting is carried out with 17 x new trees provided at the site. The trees will be provided in areas of land immediately adjacent to the dog exercise area but under the applicant's ownership (Target Notes 4 and 5 on Figure 1).

The following small/medium sized tree species are recommended as they offer suitable foraging opportunities to various native wildlife (including birds and invertebrates): rowan, wild cherry, crab apple, silver birch, holly, and willow.

A new line of willow trees will be planted along the southern boundary of the site. A 40 m line of trees will be provided within the study site, with the line of trees extending for a further 90 m into adjacent habitats at Targets Note 4.

An approximate 1000 m² strip of land located immediately to the south of the site will be managed as a wildlife area (Target Note 4 on Figure 1). This area comprises of existing modified grassland in a 'moderate' condition. Proposals are to manage this land to provide a rough tussocky grassland habitat ('other modified grassland' in a 'moderate' condition). This area will not be accessible to exercising dogs and so will be retained exclusively for its wildlife benefit.

The grasslands will be managed to promote floral diversity, with the grassland allowed to grow long and will remain uncut during spring and summer; with a hay cut taken in late summer. All clippings will be removed to avoid putting nutrients back into the soil. A further cut can be taken again in late Autumn/Winter.

The provision of these habitat enhancements will ensure that the development delivers a biodiversity net gain (see next section for calculations).

The site was revisited on the 18th July 2024, with many of these habitat proposals having already been completed including the planting of willow and fruit trees at Target Note 5, the planting of a line of willows on the southern boundary of the site and the maintenance of tall grassland habitats at Target Note 4.

4 Biodiversity Metric Calculation

4.1.1 Biodiversity Metric Calculation Results

The relative biodiversity units at the site before and after the completion of development and landscaping proposals have been calculated following methodologies and using tools provided within DEFRA's Statutory Biodiversity Metric Calculator Version (DEFRA November 2023).

Summary tables of the 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 4.43 Habitat Units and 0.16 hedgerow units.

The combined on-site and off-site biodiversity habitat creation proposals after the completion of development (including the new neutral grassland, tree planting and willow habitats) will result in a **net gain of 0.45 habitat units representing a 10.06 % net percentage biodiversity gain of habitat units. The new line of willow trees will result in a net gain of 0.22 hedgerow units representing a 135.98 % net percentage biodiversity gain of hedgerow units.**

Therefore, the proposed development would exceed the statutory 10% net gain target.

5 Appendix

Biodiversity Net Gain Summary Results Table

On-site baseline	Habitat units	4.43	
	Hedgerow units	0.16	
	Watercourse units	0.00	
On-site post-intervention (including habitat retention, creation & enhancement)	Habitat units	4.37	
	Hedgerow units	0.23	
	Watercourse units	0.00	
On-site net change (units & percentage)	Habitat units	-0.06	-1.27%
	Hedgerow units	0.07	41.84%
	Watercourse units	0.00	0.00%
Off-site baseline	Habitat units	1.38	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (including habitat retention, creation & enhancement)	Habitat units	1.88	
	Hedgerow units	0.15	
	Watercourse units	0.00	
Off-site net change (units & percentage)	Habitat units	0.50	36.38%
	Hedgerow units	0.15	N/A
	Watercourse units	0.00	0.00%
Combined net unit change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.45	
	Hedgerow units	0.22	
	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	0.45	
	Hedgerow units	0.22	
	Watercourse units	0.00	
Total net % change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	10.06%	
	Hedgerow units	135.98%	
	Watercourse units	0.00%	

Photograph 1- View of Site May 2024



Photograph 2- View of site July 2024



Photograph 3- Grassland habitats at site



Photograph 4- Woodland habitats at Target Note 2



Photograph 5- Tree line at Target Note 3



Photograph 6- Habitats at Targets Note 4 (July 2024)



**Figure 1- Ecology Survey
Results/ Habitat Plan**



KEY

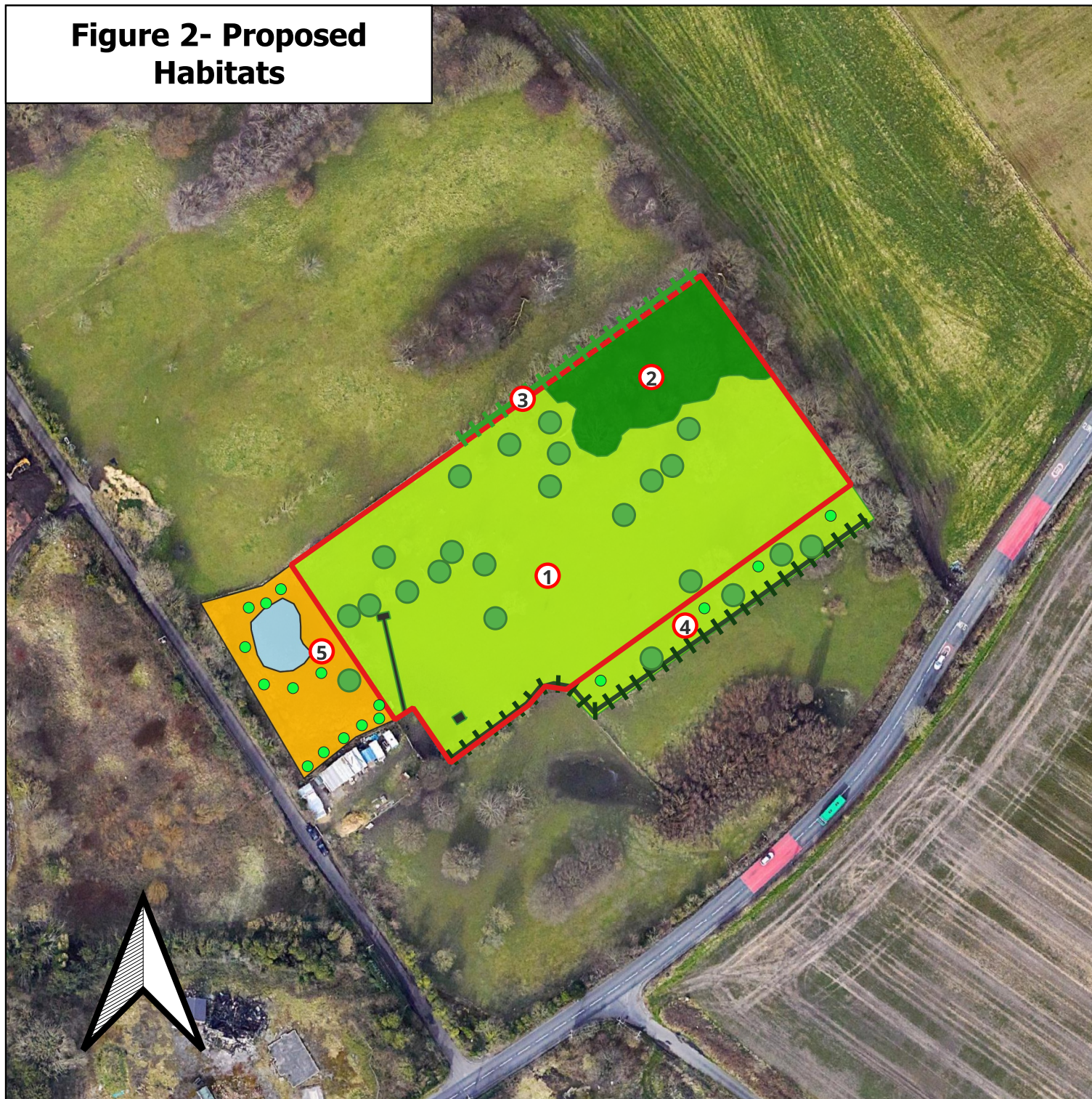
-  Study Site
-  Target Note
-  Existing tree line
-  Trees
-  Modified Grassland
-  Other Woodland; mixed
-  Other Neutral Grassland
-  Bioswale

0 20 40 60 80 100 m



Map data ©2024 Google

Figure 2- Proposed Habitats



KEY

-  Study Site
-  Target Note
-  Proposed trees
-  Existing tree line
-  Retained Trees
-  Proposed tree line
-  Developed/Sealed Surface
-  Modified Grassland
-  Other Woodland; mixed
-  Other Neutral Grassland
-  Pond

0 20 40 60 80 100 m



Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)			
UK Habitat Classification (UKHab) Habitat Type			
Grassland - Modified grassland			
On-site or off-site, site name and location	North Lane End	Survey date and Surveyor name	1st May 2024 Richard Roe
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference		Habitat parcel reference	
Habitat Description			
Grassland - Modified grassland			
ukhab – UK Habitat Classification			
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	There are 6-8 vascular plant species per m ² present, including at least 2 forbs (these may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m ² (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	y	
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	n	
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	y	
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	y	
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	n	
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	y	

G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	y	
Essential criterion achieved (Yes or No)			y
Number of criteria passed			y
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x/√	
Passes 6 or 7 criteria including passing essential criterion A	Good (3)		
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	X	
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)		
Suggested enhancement interventions to improve condition score			
Footnotes			
Footnote 1 – Creeping thistle <i>Cirsium arvense</i> , spear thistle <i>Cirsium vulgare</i> , curled dock <i>Rumex crispus</i> , broad-leaved dock <i>Rumex obtusifolius</i> , common nettle <i>Urtica dioica</i> , creeping buttercup <i>Ranunculus repens</i> , greater plantain <i>Plantago major</i> , white clover <i>Trifolium repens</i> and cow parsley <i>Anthriscus sylvestris</i> . Footnote 2 – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover. Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement. Footnote 4 – Wildlife and Countryside Act 1981 (as amended).			

Condition Sheet: LINE OF TREES Habitat Type			
Habitat Types			
Line of trees			
Line of trees – associated with bank or ditch			
Ecologically valuable line of trees			
Ecologically valuable line of trees – associated with bank or ditch			
Habitat Description			
Line of trees			
See the Statutory Biodiversity Metric User Guide.			
This assessment is based on the Hedgerow Survey Handbook ¹ . For further clarifications please refer to the Handbook.			
Where ancient and veteran trees are present within the line of trees, see Footnote 2 for standing advice.			
On-site or off-site, site name and location	North Lane End	Survey date and Surveyor name	Richard Roe 1st May 2024
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference		Habitat parcel reference	
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	At least 70% of trees are native species.	y	
B	Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.	y	
C	One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates, such as presence of standing and attached deadwood, cavities, ivy or loose bark.	n	
D	There is an undisturbed naturally-vegetated strip of at least 6 m on both sides to protect the line of trees from farming and other human activities (excluding grazing). Where veteran trees are present, root protection areas should follow standing advice ² .	n	
E	At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	n	
		Number of criteria passed	2
Condition Assessment Result (out of 5 criteria)	Condition Assessment Score	Score Achieved x/√	
Passes 5 criteria	Good (3)		
Passes 3 or 4 criteria	Moderate (2)		
Passes 2 or fewer criteria	Poor (1)	X	
Suggested enhancement interventions to improve condition score			

Condition Sheet: INDIVIDUAL TREES Habitat Type			
Habitat Types			
Individual trees – Urban trees Individual trees – Rural trees Complete a condition sheet for each tree or block of trees.			
Please see separate Line of trees condition sheet for a line of Rural trees.			
Habitat Description			
Individual trees (description applied to the urban or rural environment): Young trees over 7.5 cm in diameter at breast height whose canopies are not touching.			
Urban Perimeter / Linear Blocks and Groups (description applied to the urban environment only): Groups or stands of trees (size requirement as defined above) within and around the perimeter of urban land. This includes those along urban streets, highways, railways and canals, and also former field boundary trees incorporated into developments. Canopies must overlap continuously. Groups of urban trees that don't match the descriptions for woodland may be assessed within this category.			
On-site or off-site, site name and location	North Lane End	Survey date and Surveyor name	1st May 2024 Richard Roe
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference		Habitat parcel reference	
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The tree is a native species (or at least 70% within the block are native species).	y	
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	y	
C	The tree is mature (or more than 50% within the block are mature) ¹ .	n	
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	y	
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	n	
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	y	
Number of criteria passed		4	
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved x/√	
Passes 5 or 6 criteria	Good (3)		
Passes 3 or 4 criteria	Moderate (2)	X	
Passes 2 or fewer criteria	Poor (1)		
Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.			
Suggested enhancement interventions to improve condition score ²			



Condition Sheet: WOODLAND Habitat Type						
UK Habitat Classification (UKHab) Habitat Types						
Woodland and forest - Lowland beech and yew woodland Woodland and forest - Lowland mixed deciduous woodland Woodland and forest - Native pine woodlands Woodland and forest - Other coniferous woodland Woodland and forest - Other Scot's pine woodland Woodland and forest - Other woodland; broadleaved Woodland and forest - Other woodland; mixed Woodland and forest - Upland birchwoods Woodland and forest - Upland mixed ashwoods Woodland and forest - Upland oakwood Woodland and forest - Wet woodland						
Habitat Description						
Woodland habitat						
ukhab – UK Habitat Classification						
This condition sheet is based on the England Woodland Biodiversity Group (EWBG) Woodland Condition Survey Method, available here:						
Woodland Wildlife Toolkit (sylva.org.uk)						
IMPORTANT: This biodiversity metric woodland condition assessment must be used to assess woodland being input into the biodiversity metric. The outputs of this condition assessment are not equivalent to, nor are they comparable with the scores from the EWBG condition assessment, because the EWBG assessment has been adapted for the biodiversity metric, including the removal of EWBG Indicator 7 (Proportion of favourable land cover around woodland) and Indicator 14 (Size of woodland), and minor changes to other indicators.						
On-site or off-site, site name and location		North Lane End		Survey date and Surveyor name		1st May 2024 Richard Roe
Limitations (if applicable)				Survey reference (if relating to a wider survey)		
Grid reference				Habitat parcel reference		
Condition Assessment Criteria						
Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator	Notes (such as justification)
A	Age distribution of trees	Three age-classes ¹ present.	Two age-classes ¹ present.	One age-class ¹ present.	1	
B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland ² .	Evidence of significant browsing pressure is present in less than 40% of whole woodland ² .	Evidence of significant browsing pressure is present in 40% or more of whole woodland ² .	3	
C	Invasive plant species	No invasive species ³ present in woodland.	Rhododendron <i>Rhododendron ponticum</i> or cherry laurel <i>Prunus laurocerasus</i> not present, and other invasive species ³ <10% cover.	Rhododendron or cherry laurel present, or other invasive species ³ ≥10% cover.	3	
D	Number of native tree species	Five or more native tree or shrub species ⁴ found across woodland parcel.	Three to four native tree or shrub species ⁴ found across woodland parcel.	Two or less native tree or shrub species ⁴ across woodland parcel.	2	

