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Ecological Consultants
Environmental and Rural Chartered Surveyors

Biodiversity Net Gain

Land at Melmerby Green, Penrith, CA10 1HE

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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

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Planning Portal Questions

Please provide the date the onsite pre-development biodiversity value was calculated (this should be either the date of the application, or an earlier proposed date)	**24/11/2025**	
If an earlier date, to the date of the planning application, has been used, please provide details why this date has been used.	**Site conditions have not changed between date of assessment and planning submission**	
When was the version of the biodiversity metric published?	**3 July 2025**	
Please provide the pre-development biodiversity value of onsite habitats on the date of calculation	**0.92**	**Habitat Units**
	0	**Hedgerow Units**
	0	**Watercourse Units**
Please provide the reference or supporting document/plan names for the: i. Biodiversity metric calculation	**Biodiversity Net Gain-Melmerby Green, Penrith**	
ii. Onsite irreplaceable habitats (if applicable)	**N/A**	
iii. Onsite habitats existing on the date of the application for planning permission (if applicable)	**Biodiversity Net Gain-Melmerby Green, Penrith**	
Do you believe that, if the development is granted permission, the general Biodiversity Gain Condition (as set out in Paragraph 13 of Schedule 7A of the Town and Country Planning Act 1990 (as amended)) would apply?	**Yes**	
Has there been any loss (or degradation) of any onsite habitat(s), resulting from activities carried out before the date of the onsite pre-development biodiversity value was calculated. Either: - On or after 30 January 2020 which were not in accordance with a planning permission; or - On or after 25 August 2023 which were in accordance with a planning permission?	**No**	
Does the development site have irreplaceable habitats (corresponding to the descriptions in column 1 of [Schedule to the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2023)) which are: i. On land to which the application relates; and	**No**	

ii.	Exist on the date of the application for planning permission (or an earlier agreed date)	

INTRODUCTION

Purpose of this Report

Envirotech were requested to carry out a biodiversity assessment of Land at Melmerby Green, Penrith. 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 a new play park is installed on part of a village green.

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 Site 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 0.12ha, comprising an area of modified grassland, a bank of other neutral grassland and occasional scattered rural trees.

Figure 1a shows an orthomosaic map of the site, grid reference NY 61518 37249.

Figure 1b shows an aerial image of the core development area.

Red Line Boundary

Figure 1a

Site Location

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Figure 1b- *Aerial view over the core development area (looking north-east)*

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 and an Illustrative Site 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 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 give~~s~~ 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 is shown in Figure 2 below.

The baseline value for the site is as at 24/11/2025. This is the date that 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.

Figure 2

UK Habs V2 Map
Pre- Development

Habitat Reference	Habitat	Irreplaceable Habitat	Area (ha)	Distinctiveness	Notes
1	Other neutral grassland	No	0.1031	Medium	Bank of tall flowering grassland between an existing swing and footpath. Grassland contains Cocksfoot *(Dactylis glomerata) (A)*, Yorkshire Fog *(Holcus lanatus) (O)*, False oat grass *(Arrhenatherum elatius) (F)*, Meadow fescue *(Lolium pratense) (A)*, Ribwort Plantain *(Plantago lanceolata) (F)*, Common Sorrel *(Rumex acetosa) (A)*, Broadleaved Dock *(Rumex obtusifolius) (O)* and Knapweed *(Centaurea nigra) (F).*
2	Modified grassland	No	0.0128	Low	Short mown/maintained grassland surrounding the existing swing and connecting to the wider playing field. Grasses include Perennial Ryegrass (*Lolium perenne) (A)* and Red Fescue *(Festuca rubra) (A)*, with Creeping Bent *(Agrostis stolonifera) (A)* and Annual Meadow Grass *(Poa annua) (F)* frequenting pockets of poached ground. Herbaceous flowering vegetation includes Creeping Buttercup (*Ranunculus repens*) *(F)*, White Clover (*Trifolium repens*) *(F)*, Chickweed *(Stellaria media) (O)*, Ribwort plantain *(F)*, Dandelion *(Taraxacum officinale) (F)* and Plantain *(Plantago major) (R).*
3	Urban tree	No	0.0081	Medium	2 x small rural trees comprising Beech *(Fagus sylvatica)* and Oak (Quercus sp.). Both trees >7.5cm and ≤30cm DBH.

Table 1- *Habitat, Area and Distinctiveness Values*

Avoidance: the first step of the mitigation hierarchy comprises measures taken to avoid creating impacts from the outset, such as careful spatial placement of infrastructure, or timing construction sensitively to avoid or disturbance. Examples include the placement of roads outside of rare habitats or key species' breeding grounds, or timing of seismic operations when aggregations of whales are not present. Avoidance is often the easiest, cheapest and most effective way of reducing potential negative impacts, but it requires biodiversity to be considered in the early stages of a project.

There are no irreplaceable habitats on the site

There are no Very High distinctiveness habitats on the site

There are no High distinctiveness habitats on the site

There are two Medium distinctiveness habitats on the site, these being 'other neutral grassland' and individual 'rural trees'

Development is largely to Low distinctiveness habitat- this being 'modified grassland'.

Minimisation: these are measures taken to reduce the duration, intensity and/or extent of impacts that cannot be completely avoided. Effective minimisation can eliminate some negative impacts, such as measures to reduce noise and pollution, designing powerlines to reduce the likelihood of bird electrocutions, or building wildlife crossings on roads.

Most of the bank will not be subject to development and is to be enhanced as part of works. Play equipment is to be undersailed with Grasslok, minimising the loss of modified grassland. Trees are to be retained. Build out of the scheme will be quickly as possible with landscaping prioritised in order that new habitats are created within two years of loss of baseline habitats.

Rehabilitation/restoration: The aim of this step is to improve degraded or removed ecosystems following exposure to impacts that cannot be completely avoided or minimised. Restoration tries to return an area to the original ecosystem that was present before impacts, whereas rehabilitation only aims to restore basic ecological functions and/or ecosystem services – such as through planting trees to stabilise bare soil. Rehabilitation and restoration are frequently needed towards the end of a project's life cycle but may be possible in some areas during operation.

Other neutral grassland comprising the bank is to be enhanced from moderate to good condition.

<u>Collectively, avoidance, minimisation and rehabilitation/restoration serve to reduce, as far as possible, the residual impacts that a project has on biodiversity. Typically, however, even after their effective application, additional steps will be required to achieve no overall negative impact or a net gain for biodiversity.</u>

Offset: offsetting aims to compensate for any residual, adverse impacts after full implementation of the previous three steps of the mitigation hierarchy. Biodiversity offsets are of two main types: 'restoration offsets' which aim to rehabilitate or restore degraded habitat, and 'averted loss offsets' which aim to reduce or stop biodiversity loss in areas where this is predicted. Offsets are often complex and expensive, so attention to earlier steps in the mitigation hierarchy is usually preferable.

Following avoidance, minimisation and rehabilitation/restoration, onsite BNG can be achieved. Purchase of offsite habitat units is not considered necessary at this time.

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

These habitats have been input into the statutory biodiversity metric calculator and indicate a total of 0.92 habitat units. There are no hedgerow units onsite or watercourses within 10m of the redline boundary. The results of the calculations are presented in the full biodiversity assessment calculation in the Excel document 'Biodiversity Net Gain- Melmerby Green, Penrith'.

The condition assessments for each of the habitat types 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 Site Plan has been used to identify that all rural trees are to be retained.

The proposed play equipment is to be mounted over areas of Grasslok totaling 125m^2. Grasslok has been assessed within the BNG metric as 50% modified grassland (in poor condition) and 50% developed land; sealed surface.

Approximately 25% of the other neutral grassland to the banking is to be lost to facilitate development. The remaining 75% is to be enhanced from moderate to good condition via sympathetic management. This is to include overseeding with a wildflower mix/local green hay and establishment of a cut and collect regime. All other neutral grassland is to be cut no more than two or three times a year; with grassland being left to flower between the months of May to late August/September.

The site is within the CLNRS for and as such grassland created and enhanced is set to "Formally identified in local strategy "Manage publicly accessible green spaces to contain more wildlife-rich habitat alongside their main functional needs […]"

These figures have been put in to the Statutory Biodiversity Metric and would comprise a total of 1.18 habitat units.

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 B.

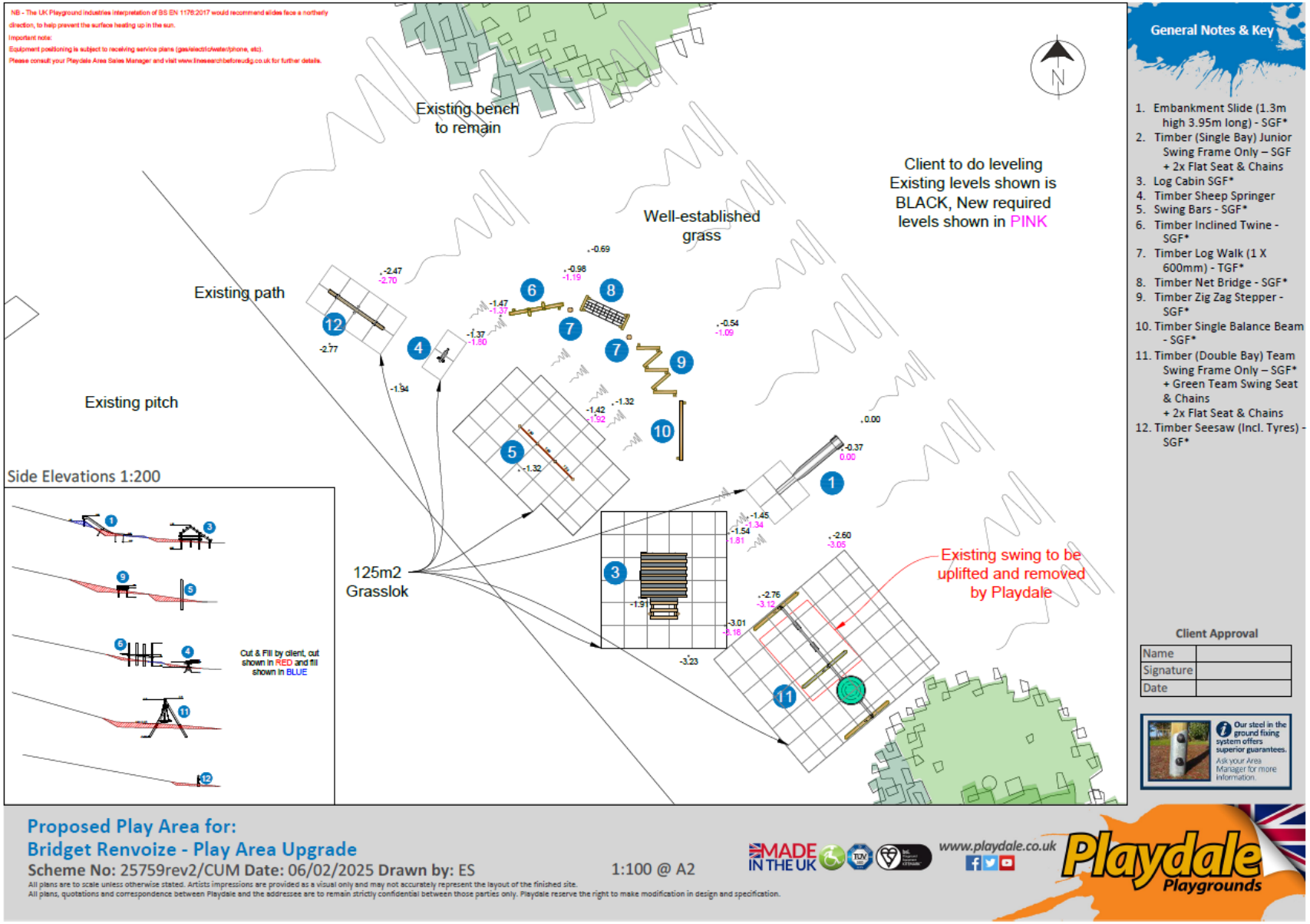

Figure 3- *Illustrative site plan*

Red Line Boundary
Tree
g3c Other Neutral Grassland
g4 Modified Grassland
u1b6 Other Developed Land

Figure 4

UK Habs V2 Map
Post- Development

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Change in Biodiversity Value

Under the current proposals set out in the Illustrative Site Plan there will be a GAIN of 0.18 habitat units (+19.28%). This is shown in Table 2.

Table 2. *Change in Biodiversity Units Calculation*

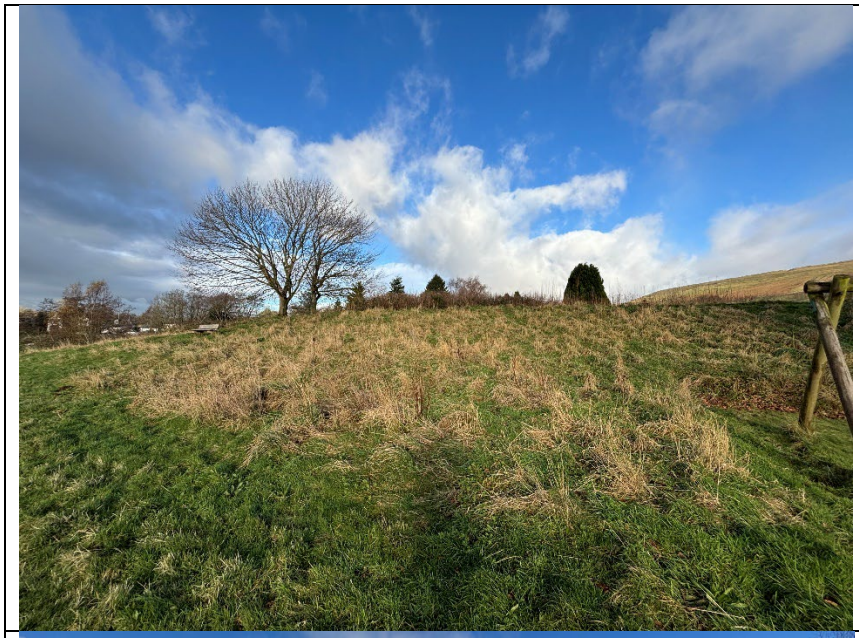
On-site baseline	*Area habitat units*	0.92	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	*Area habitat units*	1.09	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site net change (units & percentage)	*Area habitat units*	0.18	19.28%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Off-site baseline	*Area habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Area habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	*Area 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)	*Area habitat units*	0.18	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Spatial risk multiplier (SRM) deductions	*Area 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)	*Area habitat units*	0.18	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Area habitat units*	19.28%	
	Hedgerow units	0.00%	
	Watercourse units	0.00%	
Trading rules satisfied?	Yes ✓		

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 2025. Natural England The Statutory Biodiversity Metric User Guide.

IMAGES

	It is proposed new playground equipment is installed within a bank of grassland adjacent Melmerby Green A small set of swings is already located onsite

	It is proposed the bank of other neutral grassland between the play equipment and unmarked path above is to be enhanced from moderate to good condition via overseeding and establishment of a cut and collect regime. Grassland is to be managed by Melmerby Parish Council

APPENDIX A – 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	Condition Sheet	Other Habitat Criteria Score									Total Score	Condition Assessment	Notes
		C1	C2	C3	C4	C5	C6	C7	C8	C9			
Modified Grassland	GRASSLAND: Low distinctiveness	F	F	P	F	P	P	P			4	Poor	Grassland fails C1 and can therefore only be considered poor quality.
Other neutral grassland	GRASSLAND: Medium-Very High distinctiveness	P	P	P	P	F	F				4	Moderate	Tall flowering grassland comprising the banking.
Individual trees	RURAL TREES	P	P	F	F	P	P				4	Moderate	2 x small Beech and Oak trees (DBH >7.5cm and ≤30cm).

Key:
P – Criteria passed
F – Criteria failed

Appendix Table A1: Condition Assessment for Area Habitats

APPENDIX B – POST DEVELOPMENT 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	Condition Sheet	Other Habitat Criteria Score									Total Score	Condition Assessment	Notes
		C1	C2	C3	C4	C5	C6	C7	C8	C9			
Modified Grassland	GRASSLAND: Low distinctiveness	F	F	P	F	P	P	P			4	Poor	Grassland fails C1 and can therefore only be considered poor-quality. Modified grassland is to comprise the areas around the play equipment as well as 50% of the Grasslok area.
Developed Land; Sealed Surface	Not assessed										-	-	50% of Grasslok area.
Other neutral grassland	GRASSLAND: Medium-Very High distinctiveness	P	P	P	P	F	P				5	Good	Other neutral grassland to be enhanced to good condition via overseeding/scattering of green hay and establishment of a cut and collect regime.

Key:
P – Criteria passed
F – Criteria failed

Appendix Table B1: Condition Assessment for Area Habitats