

SITE: DRAINAGE SCHEME, MOOR ROW

DATE: NOVEMBER 2024

DOCUMENT: BIODIVERSITY IMPACT ASSESSMENT

DOCUMENT REF: JN00551/D03

Associated Figures and Appendices:

JN00551/DW04 – Drainage Scheme BNG Baseline Plan

JN00551/DW05 – Drainage Scheme BNG Proposed Plan

Appendix 1 – Condition Assessment Sheet

Defra Metric spreadsheet (supplied electronically alongside the BIA):

JN00551/BNG – Moor Row Drainage Scheme

Executive Summary

- 1.1 SK Environmental Solutions Limited (SKE) was commissioned by Alpha Design, on behalf of Mr Nigel Kay, to undertake a Biodiversity Impact Assessment (BIA) to support a planning application for a proposed urban drainage scheme at Moor Row, Cumbria.
- 1.2 The scheme is associated with a proposed residential development to the south, for which outline permission was granted by Cumberland Council (ref: 4/23/2076/001) in July 2024.
- 1.3 This application is for the creation of sustainable urban drainage infrastructure, to support the proposed residential development.
- 1.4 The drainage scheme is located entirely within agricultural pasture.
- 1.5 The BIA has been carried out for the development using the Statutory Defra Metric. The Metric *provides a way to measure biodiversity loss and gain in a consistent and robust way*. It calculates a biodiversity value (measured in biodiversity units) for a site both before development commences and after development is completed, allowing the difference (positive or negative) to be measured.
- 1.6 The BIA indicates that, as a result of careful and considerate landscape planning, sympathetic to ecological receptors, a **Biodiversity Net Gain (BNG) of 0.39 habitat units (37.77%)** can be achieved.

Background

- 1.7 This BIA has been prepared in support of a planning application for the proposed drainage scheme at Moor Row, Cumbria, associated with a residential development (ref: 4/23/2076/001).
- 1.8 The application boundary for the scheme extends to approximately 0.51ha and is located entirely within a single pasture field. This comprises the proposed drainage basin itself, a surrounding bund, associated working area and the routes of two underground inflows and one underground outflow which are also to be installed.
- 1.9 Grazing will be excluded from the drainage basin and bund by a post-and-wire fence, while the remainder of the site will be returned to agricultural grazing.

Planning Policy

- 1.10 Under the Environment Act 2021, all planning permissions granted in England (with a few exemptions) have to deliver at least 10% biodiversity net gain, becoming mandatory on the 12th February 2024. The net gain must be demonstrated using the Statutory Defra Metric.
- 1.11 Chapter 2 of the National Planning Policy Framework (NPPF, 2023) describes the Government's objectives on achieving sustainable development. The environmental objective is "– to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."
- 1.12 Chapter 15 of the National Planning Policy Framework (NPPF) sets out the Government's objectives for planning in regard to the protection of habitats and biodiversity. The planning objectives in relation to biodiversity and the natural environment are laid out in paragraph 180 as follows:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; ...

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."

- 1.13 The National Planning Practice Guidance (PPG) provides further guidance to local authorities in relation to biodiversity planning. The PPG explains that planning applications should be informed by appropriate ecological survey work and that developments should be encouraged to protect and enhance biodiversity by following the 'mitigation hierarchy' to avoid, mitigate, or compensate for significant adverse effects to biodiversity.
- 1.14 The PPG also sets out and explains that plans should encourage a 'net gain' in biodiversity, whereby development leaves the natural environment in a measurably better state than it was beforehand.

Methodology

Statutory Defra Metric

- 1.15 There are a number of equations undertaken as part of the metric, but simply put, the metric calculates the change in biodiversity resulting from a development by subtracting the number of pre-intervention or 'baseline' biodiversity units (those generated by existing habitats) from the number of post-intervention units (those anticipated to be provided after the development).
- 1.16 The calculation includes three separate categories: 'Habitat', 'Hedgerows and Lines of Trees' and 'Rivers and Streams'. Each category is considered separately and generates individual loss/gain results.
- 1.17 In order to populate the metric baseline, each land parcel (defined as contiguous habitats of the same type) and linear feature is measured and then assigned the following:
 - Habitat Type which carries with it a pre-assigned 'distinctiveness' classification, from 'very low' to 'very high'. This is a measure of habitat rarity and/or importance;
 - Condition this is a measure of habitat quality as an example of the given habitat type (as per criteria set out in Statutory Biodiversity Metric User Guide) and can be 'poor', 'moderate', or 'good'. In exceptional circumstances, when justified, certain habitats can be assigned the intermediate condition classifications of 'fairly poor' and 'fairly good';
 - Strategic Significance this is determined by whether the location of an existing/proposed habitat parcel is considered to be significant for nature. Such areas are typically identified in relevant published local strategies and objectives, such as an allocation for nature conservation purposes within a Local Plan or designated as a statutory site under the relevant legislation etc.
- 1.18 The metric then multiplies the area or linear length of a land parcel by the assigned distinctiveness, condition and strategic significance 'multipliers' to provide a baseline score in habitat or hedgerow units.
- 1.19 The same process is followed for post development land parcels which will have either been retained (no change), enhanced (either through an increase in condition or to habitat type which is of a higher distinctiveness) or lost and replaced with a different habitat type. There are also a number of additional factors involved in calculating the post-intervention scores such as:
 - How long it would take for newly created habitats to reach the target condition;
 - Whether there will be a delay in habitat creation, or indeed whether habitats have been created/enhanced in advance of impacts; and
 - How difficult it is to create a particular habitat type. Generally, the higher the distinctiveness
 the more difficult it is to create. For this reason, the metric also includes a number of 'trading
 rules' which must be satisfied when habitats are lost. For example, habitats of 'very high'
 distinctiveness, such as ancient woodland, are classed as 'irreplaceable' and therefore
 cannot be compensated for within the metric and habitats that are of 'high' distinctiveness
 must be replaced by the same habitat as that which was lost.

1.20 The Statutory Biodiversity Metric is a tool designed to aid the enhancement of the ecological value of sites. The biodiversity units calculated by the metric, used to give the net gain score, are designed as a best fit proxy for biodiversity and should be treated as relative values, as per the User Guide. Consequently, the metric should be used in conjunction with, rather than instead of, other relevant evidence, professional expertise and guidance.

Net Gain Assessment

- 1.21 The site currently comprises approximately 0.51ha of modified grassland in poor condition. This condition results from low species diversity. This gives a total baseline score for the site of 1.03 habitat units. The baseline habitats are shown on JN00551_DW04 Drainage Scheme BNG Baseline Plan and were classified following a survey undertaken by SKE on 24th October 2024. The condition assessment sheet, completed following this visit, is included as Appendix 1.
- 1.22 The proposed scheme will result in the loss of approximately 925m² of existing modified grassland, to be replaced by a sustainable drainage feature. This sustainable drainage is feature is considered likely to achieve moderate condition and generates approximately 0.22 units.
- 1.23 The newly created bund surrounding the drainage basin will be seeded with a suitable grass mix upon completion and separated from the adjacent field by a post-and-wire fence. This will exclude livestock grazing from the bund and is considered likely to enable sufficient species diversity to establish that this area achieves good condition modified grassland. This area delivers approximately 0.61 units post development.
- 1.24 Impacts on the remaining area of the site are only considered to be temporary, with this ground reverting to its original state of modified grassland in poor condition within two years. As a result, in line with BNG guidelines, these areas are all classified as retained within the metric calculation. These contribute approximately 0.58 units post-development.
- 1.25 Post-development habitats are shown on JN00551_DW05 Drainage Scheme BNG Proposals Plan.
- 1.26 A total of approximately 1.42 units are therefore delivered post-development, giving an overall net gain of **approximately 0.39 habitat units, an uplift of 37.77%**.

FINAL RESULTS									
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units Hedgerow units Watercourse units	0.39 0.00 0.00							
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	37.77%							
	Hedgerow units Watercourse units	0.00%							
Trading rules satisfied?	Yes √								

Plate 1 – Headline Biodiversity Net Gain Assessment Results from the Statutory Defra Metric

DRAWINGS





APPENDIX 1

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)													
UK Habitat Classification (UKHab) Habitat Type													
H	abitat Description												
T٢	e full area of the site is a single parc	el of modified grassland.											
uk	hab – UK Habitat Classification												
C.I.	On Site, Moor Row Drainage Scheme			Bridie Hamilton, 24/10/24									
			Survey da Surveyor	ate and name									
On-site or off-site, site name and location		Survey reference (if relating to a wider survey)											
			white Sur	(c))									
			Habitat pa	arcel refer	ence	1				•			
Li	mitations (if applicable)												
			Grid refer	ence	1								
											[
C	ondition Assessment Criteria												Notes (such
			Criterion	passed (Y	es or No)								as
F			N										justification)
	There are 6-8 vascular plant specie include those listed in Footnote 1). or Good condition.	s per m ² present, including at least 2 forbs (these may Note - this criterion is essential for achieving Moderate											
	Where the vascular plant species p	resent are characteristic of medium, high or very high											
А	distinctiveness grassland, or there	are 9 or more of these characteristic species per m ²											
	(excluding those listed in Footnote whether the grassland should instead	 please review the full UKHab description to assess ad be classified as a higher distinctiveness grassland. 											
	Where a grassland is classed as m	edium, high, or very high distinctiveness, please use the											
	relevant condition sheet.												
			N										A rougher patch is
	Sward height is varied (at least 20%	6 of the sward is less than 7 cm and at least 20% is more											present to the
в	than 7 cm) creating microclimates v to live and breed.	which provide opportunities for vertebrates and invertebrates											east but it does not
													cover >20% of
╞													(contd from
	Any scrub present accounts for less	s than 20% of the total grassland area. (Some scattered											above) Species
с	scrub such as bramble Rubus frutio	cosus agg. may be present).											composition
	Note - patches of scrub with continuous (more than 90%) cover should be classified as the												does not change.
	relevant scrub habitat type.												
	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										Some
													poaching within rougher
D													are but <5%
													area
L													
l	Cover of bare around is between 19												
E	concentration of rabbit warrens) ² .												
l													
┝			Y										
l													
F	F Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.												
l													
L													
Γ			Y										
6	G There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).												
G													
	Essential criterion achieved (Yes or No)												
	Number of criteria passed												
6													
of	of 7 criteria) Condition Assessment Score		Score Ac	nieved ×/v	/								
Pa	Passes 6 or 7 criteria including												
pa	passing essential criterion A												
Passes 4 or 5 criteria including Moderate (2)													
pa	ssing essential criterion A	1								1	1		

Passes 3 or fewer criteria; OR	Deve (4)	x									
Passes 4 - 6 criteria (excluding criterion A)	Poor (1)										
Suggested enhancement interventions to improve condition score											
Footnotes											
Footnote 1 – Creeping thistle Cirsium arvense, spear thistle Cirsium vulgare, curled dock Rumex crispus, broad-leaved dock Rumex obtusifolius, common nettle Urtica dioica, creeping buttercup Ranunculus repens, greater plantain Plantago major, white clover Trifolium repens and cow parsley Anthriscus sylvestris.											
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).