

New House Farm Drigg Cumbria

Biodiversity Net Gain Assessment Report

VERSION 2 Final 25 July 2024



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1.Introduction

1.1. Background

BiOME Consulting Ltd was commissioned by Avison Young, in May 2024, to undertake a Biodiversity Net Gain (BNG) assessment to inform an outline planning application regarding the proposed demolition and replacement of farm buildings at New House Farm, Drigg, Cumbria ('the site') (**Figure 1**).

1.2. Current Site Description

The site, located within Drigg in western Cumbria (Figure 1), is a tenanted farm and includes several barns/sheds, a house, yard area and pasture, with roads to the north (B5344) and west (Station Road). Sparse residential housing and pasture was present in the wider area.

1.3. Project Overview

Proposals for the site comprise the demolition of all existing buildings within the site, followed by replacement with the following (as provided by Avison Young):

"2 No traditionally built single storey modern Steel Portal Frame Barns; Each barn being, Length approximately 27.43m; Width 18.29m to a maximum height of 5m covering an area of 501.68m2; the structure clad to the metal portal frame will comprise of metal/timber structural members taking the roof and wall loadings with the portal frame support on pad foundations. the floor bases will be reinforced concrete; the walls would be Yorkshire boarding/metal cladding with a skirt of blockwork or concrete between 1m and 2m in height. The roof covering would be insulated metal roofing panels incorporating clear roof lights. There would be a maximum of 2 full sized double gates/doors either end of the barns to accommodate farm machinery/tractors with their loads.

House; The house would be of a similar construct and a similar size to the existing but to modern building regulation standards of the existing property being two storeys and would comprise of a concrete foundations to suite ground conditions, concrete ground floor with timber first floor, the walls would be cavity construction blockwork/rendered and painted walls; the doors and windows would be PVCu double glazed. The roof would be traditional purlin/rafter arrangements or timber truss with a roof covering of slate or tiles. The rainwater goods would be



PVCu connecting to a new modern septic tank/water treatment unit, which would replace the existing out of date system."

Baseline and proposed habitat plans are provided in Figures 2 and 3.



2. Methods

The purpose of this BNG assessment is to quantify the ecological value of the site prior to development, and the predicted ecological value post-development. This is measured in biodiversity units calculated according to the habitats present based on their size, distinctiveness and condition. This enables the quantitative calculation of the predicted change in biodiversity value as a result of the proposed development, with the objective of achieving a net gain in biodiversity.

A survey was conducted in good weather conditions on 4th, 5th and 6th June 2024 by BiOME Consulting Ltd (Martyn Owen MCIEEM) to define the baseline habitats within the survey area and their condition. The survey was completed using the UK Habitat Classification (UKHab) system¹, and condition assessment was undertaken for each habitat parcel following Defra Statutory Biodiversity Metric guidance².

For the purposes of BNG assessment all areas within the site (Figure 1) were considered to be 'on-site'. No 'off-site' areas were considered as part of this assessment.

Proposed habitats (see **Sections 4** and **6**) have been based on information provided by Avison Young³.

2.1. Limitations

No limitations were encountered.

¹ UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at: <u>http://www.ukhab.org/</u>)

² Department for Environment, Food and Rural Affairs (Defra) (2024) The Statutory Biodiversity Metric – User Guide. DEFRA

³ Avison Young (03/05/2024). New House Farm, Drigg; Site Plan Proposed. Drawing number P03



3.Baseline Habitats

The following baseline habitats were identified based on the survey (UKHab classifications⁴, with secondary codes shown in parentheses, and Defra Metric definitions below).

Baseline habitats are shown on **Figure 2**. Features are numbered using Habitat Parcel References and referenced below where relevant. **Table 1** details the baseline area habitats and **Table 2** details linear habitats present.

 Table 1. Baseline area habitats

Habitat	Area (Ha)	Notes
UKHab: g3c5 - Arrhenatherum neutral grassland Defra Metric Definition: Other neutral grassland Parcel/s & Condition: 1 - Poor	0.0032	A small strip of this habitat type was present to the south of a barn, adjacent to the farmyard. Species present included False Oat-grass Arrhenatherum elatius, Yorkshire Fog Holcus lanatus, Cock's Foot Dactylis glomerata, Creeping Buttercup Ranunculus repens, Common Nettle Urtica dioica, Field Bindweed Convolvulus arvensis, White Clover Trifolium repens, Soft Rush Juncus effusus, Common Sorrel Rumex acetosa and Broad-leaved Dock Rumex obtusifolius.
UKHab: 32 – scattered trees Defra Metric Definition: Individual trees – Rural tree Parcel/s & Condition: 24 - Moderate 22, 23 - Poor	0.0244	Three scattered trees were present: A Sycamore Platanus occidentalis (habitat parcel 24) within the garden of the house. Two Ash Fraxinus excelsior trees (habitat parcels 22 and 23) in the south of the site.

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⁴ UKHab Ltd (2023) UK Habitat Classification Version 2.0. Available at http://ukhab.org.



Habitat	Area (Ha)	Notes
UKHab: g4 (16) – Modified grassland (tall forbs) Defra Metric Definition: Modified grassland Parcel/s & Condition: 2 – Poor	0.4999	The majority of the site comprised sheep-grazed pasture (habitat parcel 2), dominated by Perennial Ryegrass Lolium perenne with very infrequent Creeping Buttercup Ranunculus repens and scattered Common Nettle Urtica dioica and Soft Rush Juncus effusus. Within this grassland, Common Nettle/Creeping Thistle Cirsium arvense patches (g4 (16)) were present in the south of the site.
UKHab: g4 (827) – Modified grassland (garden) Defra Metric Definition: Modified grassland Parcel/s & Condition: 3, 4 – Poor	0.0184	Lawned, regularly cut garden was present to the north of the farmhouse.
UKHab: u1b5 – Buildings Defra Metric Definition: Developed land; sealed surface Parcel/s & Condition: 5, 6, 7, 8 – N/A	0.0508	A farmhouse (unoccupied at the time of the site survey) was present in the north of the site along with various stone barns.
UKHab: u1b6 - Other developed land Defra Metric Definition: Developed land; sealed surface Parcel/s & Condition: 9, 10, 11, 12, 13 - N/A	0.1914	A farmyard and various paths were present, and two modern agricultural, steel-framed sheds (parcels 9 and 10).
Total Area	0.7881	

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Table 2	2. Base	line lined	ar habitats
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Habitat	Length (km)	Notes
UKHab:		
h2a6 – Other native		Various parcels of native hedgerow were present
hedgerow		around the site boundary. Parcels 18, 19 and 20
		were present near the tarmyard and were intact,
Detra Metric Definition:	0.072	dominated by Hawthorn Crataegus monogyna with
Native hedgerow		occasional Elder Sambucus nigra and rare
		Sycamore. Parcel 21 was defunct and comprised a
Parcel/s & Condition:		few Hawthorn.
18, 19, 20, 21 - Poor		
Total Length	0.072	

In addition, walls (u1e (853) – Built linear features (mortared wall)) were present around the northern periphery of the site. These were too small to be included as area habitats within the metric, but are shown on the figures for illustrative purposes (habitat parcels 14, 15, 16, 17).



4. Post-construction Habitats

4.1. Summary

This section details the proposed habitats to be created and management measures to achieve the proposed condition. All planting will use solely native species. Habitat creation and subsequent management will be overseen by the site owner.

BNG will be achieved through the enhancement of areas of retained grassland, hedgerow enhancement and hedgerow creation.

Post-construction habitats are shown on **Figure 3** and detailed within **Tables 3** and **4**.

Table 3. Area habitats post development

Area Habitat	Retained (ha)	Enhanced (ha)	Created (ha)
Modified grassland	0.3792	-	0.0653
Other neutral grassland⁵	-	0.0540	-
Vegetated garden	N/A	N/A	0.0309
Developed land; sealed surface	0.0809	-	0.1533
Rural tree	0.0244	-	-

Table 4. Linear habitats post development

Linear Habitat	Retained (km)	Enhanced (km)	Created (km)
Native Hedgerow	0.035	0.037	-
Hedgerows and Lines of trees – Species-rich native hedgerow	-	-	0.033

4.2. Area Habitat Enhancements

4.2.1. Other neutral grassland; moderate condition

Retained modified grassland in the south of the site will be enhanced to other neutral grassland. This area will be enclosed with a new fence line, biodiversity enhanced through the management of the cattle grazing regime. Grazing (or

⁵ Enhanced from modified grassland to other neutral grassland.



cutting) will be limited to the period late summer and autumn to allow wildflowers to flower and set seed in the spring and summer. It is envisaged that this habitat will achieve at least moderate condition.

4.3. Linear Habitat Enhancements

4.3.1. Species-rich native hedgerow; poor condition

The defunct hedgerow in the south of the site will be enhanced through gap infilling and increased diversity through planting a variety of native, locally sourced species. It is unlikely that this hedgerow will be of greater than poor condition.

4.4. Area Habitat Creation

4.4.1. Modified grassland; poor condition

New grazing grassland will be created in some areas of currently developed land. These areas of modified grassland are unlikely to achieve greater than poor condition.

4.4.2. Buildings/hardstanding

The site will include the new agricultural buildings, farmhouse and associated hardstanding.

4.4.3. Vegetated garden

A garden will be present associated with the new farmhouse in the north of the site.

4.5. Linear Habitat Creation

4.5.1. Species-rich native hedgerow; poor condition

0.033km of species-rich hedgerow will be planted and protected from cattle grazing using fencing. It is unlikely that this hedgerow will be of greater than poor condition.



5. Monitoring

Monitoring is recommended at two years post-construction, allowing sufficient time for the effectiveness of grassland and hedgerow establishment to be assessed, and at five years post-construction. The requirement for further monitoring will be assessed after year 5.



6. Summary

The BNG assessment indicates that greater than 10% net gain is likely to be readily achieved on-site for all relevant modules (Table 5).

Table 5. BNG Summary⁶

		Baseline	Post Development	% change
On-site	Area Habitat units	1.21	1.44	+18.94
	Hedgerow units	0.14	0.33	+131.46
	Watercourse units	0.00	0.00	0.00

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⁶ These data have been taken from the Metric spreadsheet. Apparent minor discrepancies in values calculated are due to rounding, since the Metric values are calculated from the raw data.



Figures

- Figure 1 Site Location Plan
- Figure 2 Baseline Habitats
- Figure 3 Proposed Habitats





Produced by InTouch Geospatial Services Ltd.







