



Clayton Ecology

Biodiversity Net Gain Assessment

Castle Farm

Bilstone

September 2024

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SUMMARY

This report has been prepared by Clayton Ecology Ltd on behalf of the owner: J G & C A Bayley The report provides the results of a biodiversity net gain assessment of Castle Farm, Bilstone, Nuneaton CV13 6NQ.

The proposal is for additional cattle sheds on current hard standing, bare ground and tall forbs.

The attached and supporting Biodiversity Net Gain Metric identifies that the changes to the site will result in net loss of biodiversity in the absence of mitigation and compensation.

The habitat that will be lost comprises of temporary grass ley, bare ground and tall forbs.

The habitat units delivered within this Biodiversity Net Gain assessment are:

Habitat Units: Total Net Unit Change of 0.12 (positive; equivalent to a gain of 18.36%).

In order to achieve the biodiversity net gain target of 10% from the project a total of 0 habitat units is required.

Trading Rules

The trading rules within the DEFRA calculation tool have been satisfied with the proposed development plan.

Habitat Unit Loss Offsetting

All of the proposals (specifically the area of Mixed scrub) will require a detailed management plan and adaptive monitoring for a minimum of 30 years from the implementation of those habitats as per guidelines.

1. INTRODUCTION

This report has been prepared by Clayton Ecology Ltd on behalf of the owner: J G & C A Bayley. The report provides the results of a biodiversity net gain assessment of Land at Castle Farm, Bilstone, Nuneaton CV13 6NQ. The survey area is centred at Ordnance Survey grid reference, SK 36383 06141.

The proposal is for additional cattle sheds on current hard standing, bare ground and tall forbs.

The evidence is presented in the form of Statutory Biodiversity Metric calculations for the site based on a condition assessments of the habitats on-site.

The location of the survey site in relation to wider environment is provided in Figure 1 below:



Figure 1: The site highlighted in red, satellite imagery courtesy of Bing Maps 2024.

2. SURVEY METHODOLOGY

2.1 Desktop Study

A desktop study which comprised a search for records of designated wildlife sites, and priority habitats within a 500 metre radius was acquired through the government MAGIC website.

2.2 Habitat Condition Survey to inform BNG Calculations

To inform the Biodiversity Net Gain (BNG) Calculations, the habitat types and the condition assessments of the habitats. The habitats on the site were assessed and categorised in order to provide baseline information and subsequent interpretation of the ecological value of the site. These were undertaken by the previous ecological consultancy and directly inputted into this metric and report. Please note: No Site survey was undertaken by our consultancy.

2.3 BNG Calculations

The latest version of the Small Sites Metric or the Statutory Metric (DEFRA, 2024) has been used to calculate the baseline value of the site (before development) and the post-development value in order to calculate the Total Net Unit Change. The broad habitat type 'Individual trees' has been used where a tree (or a group of trees) over 7 cm in diameter at breast height (DBH) does not meet or contribute towards the definition of another broad habitat type. The tree sizes and areas have been assessed using the guidelines as shown below in Table 1. Please note small trees are not recorded within the baseline assessment of the small sites metric if they are within a residential garden.

Size class	Diameter at breast height (cm)	Metric area equivalent (ha)
Small	greater than 7cm and less than or equal to 30cm	0.0041
Medium	greater than 30cm and less than or equal to 60cm	0.0163
Large	greater than 60cm and less than or equal to 90cm	0.0366
Very Large	greater than 90cm	0.0765

Table 1: Tree size classes and area equivalents taken from Statutory Metric guidelines.

2.4 Minimum Mapping Units

The minimum mappable area used is equal to or above 25 m², the minimum mappable length of a linear feature is equal to or above 5 m.

2.5 Survey constraints

The survey was undertaken inside of the optimal period for habitat surveys (April to October); however, given the nature of the habitats present, it is considered that sufficient botanical information was collected to categorise the habitats and identify potential features of value.

2.6 Personnel

The Site visit was undertaken by Clayton Ecology Ltd on the 24th July 2024 alongside the inputs into the statutory metric were carried out by Nick Clayton BSc (Hons) ACIEEM. Nick has extensive experience in habitat survey and condition assessments for biodiversity net gain and is appropriately qualified for the surveys based on the CIEEM competencies (CIEEM, 2017).

2.7 National Policy

The Environment Act 2021

This legislation and the requirement for mandatory biodiversity net gain of new developments came into force on the 12th of February 2024. As such, all developments (aside from those exempt) are required to demonstrate a 10% biodiversity net gain.

National Planning Policy Framework

The National Planning Policy Framework (NPPF) (2023) guides Local Planning Authorities (LPAs) when developing their planning policies and considering planning applications affecting protected habitats, sites and species.

Planning Policy Statement 15: Conserving and enhancing the natural environment of the NPPF recognises that, planning policies and decisions should contribute to and enhance the natural and local environment. Section D of Paragraph 180 states:

“Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; In respect of the natural environment.”

Section B of Paragraph 185 states:

“Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity”.

Section D of Paragraph 186 also states:

“Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate”.

2.8 Local Policy

Hinckley and Bosworth Borough Council is the local authority, the Climate Change and Biodiversity Strategy 2024 - 2028 was therefore used to understand the local biodiversity targets. A screenshot 1 below shows that in section 5 of the strategy that tree planting is one of the key priorities within the borough. In addition the local plan, that it is under consultation only (not adopted) Hinckley and Bosworth Draft Local Plan 2020 – 2039, section NAT08, screenshot 2 show that development proposals should provide a net gain for biodiversity.

Maximising carbon storage and sequestration, including by:

- i. Increasing tree cover across the borough;***
- j. Incorporating green infrastructure, such as trees and woodland, that helps to sequester carbon from the atmosphere; and***

Screenshot 1: The local policy from Hinckley and Bosworth Borough Council.

Development proposals must demonstrate how they conserve and enhance features of nature conservation and geological value including proposals for their long-term future management.

All development should provide a net gain in biodiversity where possible. As a minimum, there should be no net loss of biodiversity. All proposals should be supported by evidence to demonstrate a biodiversity net gain using the recognised biodiversity accounting metric.

Major developments in particular must include measures to deliver biodiversity gains through opportunities to:

- a) restore and enhance existing features on site***
- b) create additional habitats and ecological networks***
- c) The linking of existing habitats to create links between ecological networks and where possible, with adjoining features.***

Screenshot 2: The draft Hinckley and Bosworth Draft Local Plan 2020 – 2039, section NAT08.

3. SURVEY RESULTS

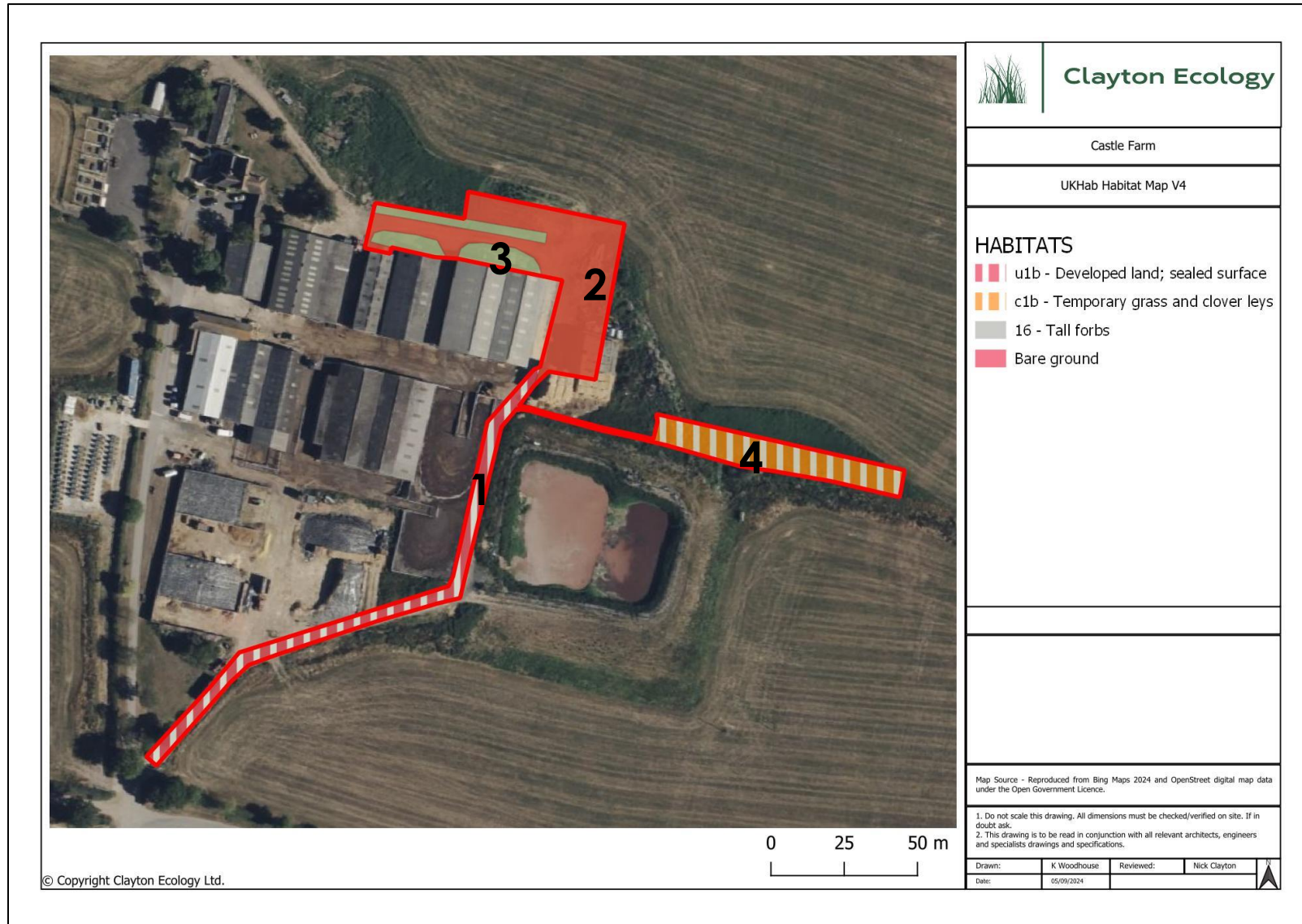


Figure 2: The baseline assessment of the area impacted.

3.1 Desktop Study

There are no Statutory Designated Sites (Site of Special Scientific Interest (SSSI) / Special Area of Conservation SAC / National Nature Reserve (NNR) within the 500 metre search radius.

3.2 On-site Habitats/Hedgerows and Condition Assessment Results

The survey area is a zone within a working dairy farm, the main areas of biodiversity loss is an area of Tall forbs at the north of the cattle sheds. This is between the sheds and the access road. The access road (bare ground) and temporary grass leys are the other habitats lost.

3.2.1 Developed land; sealed surface – u1b (Map indicator 1)

A concrete road runs from the entrance of the Site to the northern section of the Site.
Condition assessment: N/A

3.2.2 Bare ground - 510 (Map indicator 2)

Areas of track and at the site of the turning area for agricultural vehicles (at the north east of the Site) consisted of bare ground with little to no vegetation.

Condition Assessment Criteria		Criterion Passed (Yes or No)
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	Yes
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	No
C	Invasive non-native plant species (listed on Schedule 9 of WCA ¹) and others which are to the detriment of native wildlife (using professional judgement) ² cover less than 5% of the total vegetated area ³ . Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	No
Passes all 3 core criteria; AND Meets the requirements for Good condition within criterion C. Good (3)		
Passes 2 of 3 core criteria; OR		

Passes 3 of 3 core criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)
Passes 0 or 1 of 3 core criteria.	Poor (1)

Table 2. Urban Condition Assessment Sheet taken from Statutory Biodiversity Metric Condition Assessments- Feb24.

3.2.3 Tall forbs – 16 (Map indicator 3)

There are three sections of tall forbs, immediately adjacent to the northern section of the cattle shed and on the opposite side of the bare ground also to the north. These vegetated areas had a similar coverage of forbs and included the following plants: Redshank *Persicaria maculosa* (F), Dock sp. *Rumex* sp. (O), *Epilobium* sp. (R), Mugwort *Artemisia vulgaris* (F), Scentless mayweed *Tripleurospermum inodorum* (O), Groundsel *Senecio vulgaris* (R), Smooth sowthistle *Sonchus oleraceus* (R), Nettle *Urtica dioica* (F), Annual meadow grass *Poa annua* (O), Perennial ryegrass *Lolium perenne* agg. (R), and Cockspur *Echinochloa crus-galli* (R).

Condition Assessment Criteria		Criterion Passed (Yes or No)
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	No
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	No
C	Invasive non-native plant species (listed on Schedule 9 of WCA¹) and others which are to the detriment of native wildlife (using professional judgement)² cover less than 5% of the total vegetated area³. Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	No
Passes all 3 core criteria; AND Meets the requirements for Good condition within criterion C.		Good (3)
Passes 2 of 3 core criteria; OR Passes 3 of 3 core criteria but does not meet the requirements for Good condition within criterion C.		

Moderate (2)
Passes 0 or 1 of 3 core criteria.
Poor (1)

Table 3. Urban Condition Assessment Sheet taken from Statutory_Biodiversity_Metric_Condition_Assessments- Feb24.

3.2.4 Temporary grass and clover leys – c1 (Map indicator 4)

The arable field has recently been planted with a grass ley.

Condition assessment: N/A

3.3 Baseline Total Habitat Units

Map ref	Baseline Habitat	Condition assessment	Area (ha)	Habitat Units (HBU)
On-site				
1.	Developed land; sealed surface	N/A	0.0904	0.00
2.	Bare ground	Poor	0.1785	0.36
3.	Tall forbs	Poor	0.0515	0.10
4.	Temporary grass and clover leys	N/A	0.0902	0.18
Totals			0.4106	0.64

Table 4: A table showing the baseline values of habitats within the site.

4. PROPOSED DESIGN

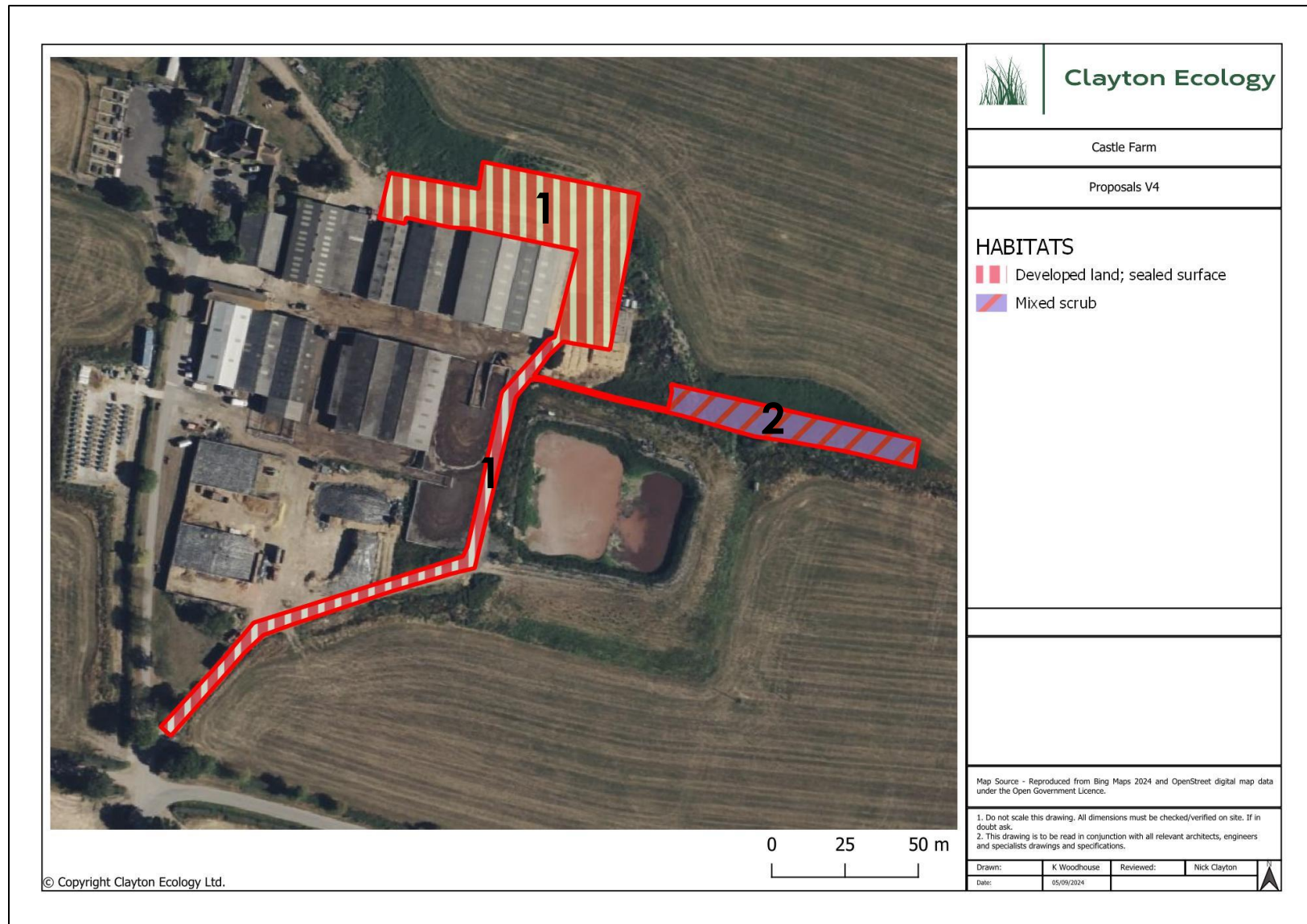


Figure 3: The proposals for the site.

4.1 On-site Habitat Creation/Retention/Enhancement

4.1.1 Developed land, sealed surface - (Map indicator 1)

These areas include the access road, cattle sheds and pathways around the sheds.

Minimum Targeted Condition: N/A

4.1.2 Mixed scrub - (Map indicator 2)

An area at the east of the proposals alongside a native hedgerow will be planted with mixed scrub species to offset the biodiversity losses.

Created (Map indicator 3)

A new native scrub area will be created. The length of the section of additional scrub is approximately 85 metres x 10.58 metres width along its length. Recommended a minimum of 5 woody species to be added into the hedgerow include any combination of the following species:

Blackthorn *Prunus spinosa*, Hawthorn *Crataegus monogyna*, Alder *Alnus glutinosa*, Elm *Ulmus sp.*, Dogwood *Cornus sanguinea*, Hornbeam *Carpinus betulus*, Field maple *Acer campestre*, Guelder rose *Viburnum opulus*, Hazel *Corylus avellana*, Dog rose *Rosa Canina*, Cherry *Prunus spinosa*, Beech *Fagus sylvatica*, Spindle *Euonymus europaeus*, Holly *Ilex aquifolium*, and Honeysuckle *Lonicera periclymenum*.

These woody species will be native and of local provenience from a reputable supplier.

Minimum Targeted Condition: Moderate

4.2 Proposed Total Habitat Units

Map ref	Proposed On-site	Habitat	Area retention category	Proposed Condition assessment	Area (ha)	Habitat Units (HBU)
On-site						
1.	Developed land; sealed surface		Created	N/A	0.3204	0.00
2.	Mixed scrub		Created	Moderate	0.0902	0.76
Totals					0.4106	0.76

Table 4: A table showing the proposed values of the created habitats.

5. BIODIVERSITY NET GAIN RESULTS

5.1 Habitats

Habitat Units: Total Net Unit Change of 0.12 (positive; equivalent to a gain of 18.36%)

5.2 Habitats units required to meet target

In order to achieve the biodiversity net gain target of 10% from the project a total of 0 habitat units is required.

5.3 Trading Rules

The trading rules within the DEFRA calculation tool have been satisfied with the proposed development plan.

Please see the following excel document for full details:

**V4_Castle Farm_The_Statutory_Biodiversity_Metric_Calculation_Tool_-
_Macro_enabled_tool_23.07.2024**

6. REFERENCES

Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification User Manual Version 1.1 at <http://www.ukhab.org/>

DEFRA (2024) The Statutory Biodiversity Metric User Guide - Date: February

DEFRA (2024). The Statutory Biodiversity Metric User Guidance. Available at: https://assets.publishing.service.gov.uk/media/65c60e0514b83c000ca715f3/The_Statutory_Biodiversity_Metric_-_User_Guide_.pdf. Department for Environment Food & Rural Affairs

Department for Levelling Up, Housing & Communities (2023). National Planning Policy Framework. Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

Hinckley and Bosworth Borough Council (2024) Climate Change and Biodiversity Strategy 2024 – 2028. Available at: <https://www.hinckley-bosworth.gov.uk/climatechange#:~:text=Climate%20Change%20and%20Biodiversity%20Strategy%202024%20%2D%202028&text=The%20strategy%20identifies%20the%20need,cleaner%20resources%20such%20as%20renewables.>