

Land at Sugar Hill Farm, Cow Ark

HABITAT MANAGEMENT AND MONITORING PLAN

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1 INTRODUCTION

1.1 Instruction and Background

Knight Sky Ecology Ltd was commissioned to provide a Habitat Management & Monitoring Plan (HMMP) for the permitted development on land at Sugar Hill Farm, Whitewell Road, Cow Ark, BB7 3DG. The development is to include the formation of new agricultural field access.

The production of a HMMP is required to discharge condition 8 of the planning permission notice (ref. 3/2025/0651).

1.2 Existing Documents

This HMMP seeks to address condition 8 and has been informed by the following documents which were submitted to the application to set out the Biodiversity Net Gain (BNG) commitments made for the site post-development:

- Small Sites Statutory Biodiversity Metric Calculation Tool
- UK Habitat Classification Map (Pre-development) (Figure 1)
- UK Habitat Classification Map (Post-development) (Figure 2)

A Biodiversity Gain Plan is to be submitted separately with regards to discharging the mandatory BNG condition.

2 ECOLOGICAL FEATURES

2.1 Habitats

Table 2.1 provides a list of all the habitats that are to be lost or retained along with the selected habitats which are to be created. There are no habitats subject to enhancement. The created habitats that are of primary consideration for maintenance / management are highlighted in green and extend to trees only.

Figure 1 provides an overview of the baseline habitats and Figure 2 provides an overview of the locations of each habitat parcel post-development including the tree planting area.

Table 2.1. Habitats within the site to be retained, created and managed

Broad Habitat	Habitat Type (condition in brackets)	Area (m2)	Area retained	Biodiversity Commitments
BASELINE				
Grassland	Modified grassland (Moderate)	660.2	599.3	No management commitments required provided that the habitat is retained in perpetuity and remains in the same condition as stated in the baseline.
Individual trees	Rural trees (moderate: X1 medium size and x 1 small size).	203	0	N/A – Trees not retained.
CREATED HABITATS				
Urban	Developed land; sealed surface (N/A)	60.9	NA	N/A - No management commitments required.
Individual trees	Rural tree (Moderate)	854.58	N/A	Minimum 21 native trees to be planted.

2.2 Hedgerows

Table 2.2 provides the details of the existing hedgerow within the site along with the hedgerow which is to be created. The new hedgerow is included in this HMMP. Figure 2 provides an overview of the new hedgerow location.

Table 2.2. Hedgerows within the site to be retained, enhanced and managed

Hedgerow type (condition in brackets)	Length (m)	Length retained (m)	Biodiversity commitments
BASELINE			
Native hedgerow (moderate)	6.5	0	N/A – Hedgerow not retained.
CREATION			
Native hedgerow (moderate)	21.2	NA	21.2m of native hedgerow to be planted and managed.

3 AIMS

The primary aim of this HMMP is to provide a framework for the delivery of the habitat establishment and management measures within the site to achieve the outcomes within the small sites' statutory biodiversity metric calculation tool. This includes the retention / creation of **0.5 habitat units on-site and the creation of 0.0710 hedgerow units.**

This HMMP is specifically focused on trees and hedgerows. It details planting, establishment, and management measures. Trees are to be retained and managed for at least 30 years, though active management is not expected beyond the 5-year establishment period unless trees are dead or diseased.

There are no other habitat enhancement, creation or management actions required for any other feature on the site provided that the development is constructed to the specifications as approved.

4 MANAGEMENT

4.1 Ecological Trends and Constraints

There are no ecological trends or constraints within the site that may influence management. The trees would not be actively managed following establishment and there are no expected ecological constraints to the management of the trees.

4.2 Management Prescriptions

4.2.1 General

The appointed landscaping contractor or site owner is to adhere to general good practice guidelines for any landscaping operations including:

- *BS 4428:1989 code of practice for general landscape operations*
- *BS 8545:2014 Trees: from nursery to independence in the landscape. Recommendations*

Any imported topsoil and site soils shall also comply with *BS 3882:2015 British Standard Topsoil*.

4.2.2 Trees

New Tree Planting (Minimum of 21 trees)

Trees to be planted will comprise:

- 5 x rowan (*Sorbus aucuparia*).
- 3 x wild cherry (*Prunus avium*).
- 5 x silver birch (*Betula pendula*).
- 4 x hazel (*Corylus avellana*)
- 4 x crab apple (*Malus sylvestris*)

Other species to be considered include silver birch (*Betula pendula*), alder (*Alnus glutinosa*), and oak (*Quercus robur*). At least 4 more trees will be planted (approx. 20% of total) to account for failures. Non-native varieties will be avoided as the trees may not meet the required condition.

- The trees will be sourced from a reputable stockist using British seed stock.
- Whips or feathered trees will be purchased.
- Tree planting ideally to be undertaken November to March (dormant season).
- Trees shall be root balled or container grown and planted into pits of an appropriate size to accommodate the root system without restriction, backfilled with a 3:1 topsoil: compost mix and shall be secured to a machine rounded stake using 1 no. tree tie with rubber spacer. Finished height of stake shall not exceed 1/3 height of staked tree above ground. A thick mulch is to be used to retain moisture and suppress weeds.
- Trees to be spaced a minimum of 4m apart.
- The trees must be protected from grazing animals (via tree guards or fencing) if required.

Management

Ongoing management will include:

- The trees will be checked on a yearly basis and any dead / dying trees will be replaced.
- Prune and repair wounds (Oct-Feb as required).
- Maintain 1m diameter circle of plant-free soil round the base of the tree (monthly through growing season).
- Check and adjust stakes (Feb/Aug and after weather disturbance as required).
- Apply slow-release fertiliser annually (Apr/May).
- Water as necessary dependent on weather/soil conditions (May through Aug).
- Apply and maintain mulch to a depth of 75mm around the base of the trees annually (Apr).

4.2.3 Hedgerows – Creation

The native hedgerow will contain hawthorn (*Crataegus monogyna*). Other species such as blackthorn (*Prunus spinosa*), dog rose (*Rosa canina*) and holly (*Ilex aquifolium*) can also be used.

The hedgerow is to be planted in a previously prepared trench, 500mm wide and 450mm deep backfilled with a 3:1 mix of multipurpose topsoil to BS3882:2007 and planting compost. Bareroot transplants to be dipped in a suitable mycorrhizal dip before planting. Plants to be planted in a double staggered row, 300-350mm wide, at 5no. plants per linear metre. The hedge lines shall be mulched after planting with forest mulch to a uniform depth of 50mm.

4.2.4 Hedgerows – Management

- Hedgerows must not be cut or trimmed during the nesting bird season from 1 March to 31 August.
- Trim the hedgerows until late winter. Hedgerow berries provide vital food for birds throughout the winter.
- Allow the hedgerows to grow out (in height and width).
- Change the cutting regime – cut the hedgerows once every 2-3 years or cut just one side per year.
- Encourage more species richness at the hedgerow base by retaining an unmanaged strip of grassland 1-2m from the base. This grassland can be cut once a year in the early autumn.

4.3 Habitat Condition Requirements & Targets

4.3.1 Individual Trees

As per Table 4.1, in order to meet the stated moderate target condition, the trees would need to **pass 3-4 of the 5 specified criteria.**

Table 4.1. Criteria for target conditions (trees)

Condition Required	Condition Assessment Criteria	
Individual Trees		
Moderate	A	The tree is a native species (or at least 70% within the block are native species).
	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).
	C	The tree is mature (or more than 50% within the block are mature)
	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.
	E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.
	F	More than 20% of the tree canopy area is oversailing vegetation beneath.

4.4 Hedgerow Condition Targets and Requirements

4.4.1 Native Hedgerow

As per Table 4.2, in order to meet the stated moderate target condition, the hedgerows would need to have no more than 4 failures in total; and should not fail both attributes in more than one functional group.

Table 4.2. Criteria for target conditions (hedgerows)

Attributes and Functional Group		Criteria description	Condition Assessment Criteria
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).
C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: · Measured from outer edge of hedgerow; and · Is present on one side of the hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.

Attributes and Functional Group		Criteria description	Condition Assessment Criteria
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA3) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).

4.5 Work Programme

Table 4.3 provides a timetable for the habitat enhancement, creation and management actions for the site during Years 1 to 5.

Table 4.3. Timetable for annual management requirements

Habitat	Enhancement or creation	Management Action	Year	Timings	Management Requirements	Time to Target Condition
Individual trees & new hedgerow	All planted trees	Tree / Hedgerow planting	1	November – March	See Section 3.2	27 yrs (trees)
		Replacement planting and ongoing management	2-5	November – March as required	See Section 3.2	5 years (hedgerow)
		None	5-30	N/A	None. Trees retained in perpetuity. Hedgerows to be trimmed as part of the routine management of hedgerow field boundaries on the farm.	N/A

5 ROLES & RESPONSIBILITIES

5.1 Funding Mechanism & Responsibilities

Mr Ian Hopkinson (the land owner) is responsible for the delivery of all habitat establishment and management requirements detailed within this document and for complying with the biodiversity related planning condition detailed within the consent notice. **The trees and hedgerows will be secured and maintained for at least 30 years in line with legislation.**

The site owner will follow the stated habitat establishment and management measures within this document. This will include the implementation of remedial actions should the habitats not meet the required conditions.

5.2 Remedial Actions

Any trees which, within a period of 5 years from the completion of the development, die or are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of a similar size or species as approved.

6 MONITORING & REPORTING

6.1 Biodiversity Monitoring

With respect to the very limited habitat creation and management measures required for trees and hedgerows, it is not considered proportionate for the development to contract an Ecological Clerk of Works for the required monitoring commitments. The most important commitment is the implementation and establishment of the trees. The recommended approach is for the site owner (and person responsible for the delivery and management of the habitats) to submit a very concise report using the example table template below. The table should include photos of the planting and any evidence to show implementation of the correct specifications (e.g., tree labels, or a purchase receipt).

The monitoring reports are suggested to be sent in **Year 1 (following completion) and Year 5 (full establishment)**. Thereafter, the land including the created habitats is to be secured for at least 30 years in line with the legislation. There should be no risk to the biodiversity measures in the long term.

Example Table A. HMMP – YEAR 1

Habitat Type	Monitoring Interval and Timing	Example Description
Trees	Year 1 June 2026	21 trees planted in line with the specification of the HMMP. Undertaken February 2026. Tree species comprised: <ul style="list-style-type: none"> • 5 x rowan (<i>Sorbus aucuparia</i>). • 3 x wild cherry (<i>Prunus avium</i>). • 5 x silver birch (<i>Betula pendula</i>). • 4 x hazel (<i>Corylus avellana</i>) • 4 x crab apple (<i>Malus sylvestris</i>)
Native hedgerow	Year 1 June 2026	Hawthorn (<i>Crataegus monogyna</i>) hedgerows planted on either side of new entrance in February 2026.
Photos – Year 1		
Insert photos of tree labels here		
Insert photos of trees in-situ here		
Notes of Target Condition		
<ul style="list-style-type: none"> • Trees - Habitat condition on course to pass 3-4 of the 5 specified criteria by Year 27. • Hedgerow – On course to meet specified conditions by Year 5. 		
Remedial Actions		
One dead tree identified. To be replaced on a like for like basis within the next planting season.		

APPENDIX A. FIGURES

Figure 1. UK Habitat Classification Map (Baseline)

Figure 2. UK Habitat Classification Map (Post-development)

367350

367400

367450

445200

445200

445150

445150


367350

367400


367450





Survey Information

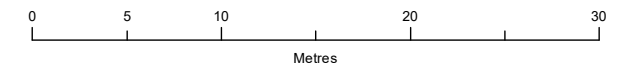
	Site boundary (660.2m ²)
---	--------------------------------------

UKHab Habitat Survey

	g4 - Modified grassland (660.2m ²)
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	h2a - Native hedgerow (6.5m)
---	------------------------------

	32 - Scattered tree (2)
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PROJECT TITLE
SUGAR HILL FARM, COW ARK

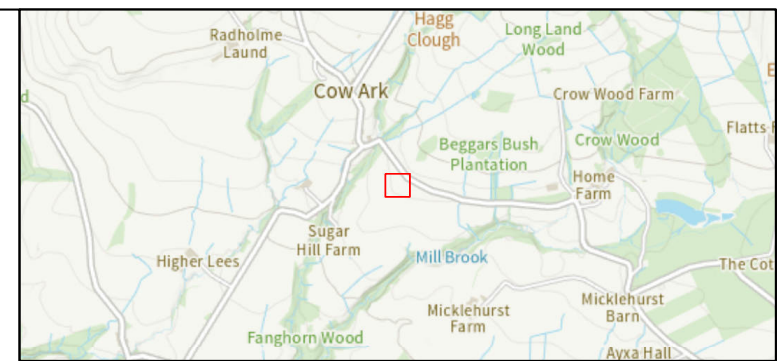
DRAWING TITLE
Figure 1: UK Habitat Classification Map (Pre-Development)

VER	DATE	REMARKS	Drawn	Checked
2.0	08/08/25	Pre-Development	MP	RK

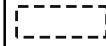




DRAWING NUMBER:
StantonAndrewsArchitects/SugarHillFarm/Pre-Development

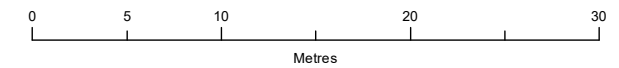
SCALE	1:400	PLOT SIZE	A3	DATUM	OSGB	PROJECTION	BNG
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Survey Information

	Site boundary (660.2m ²)
UKHab Habitat Survey	
	g4 - Modified grassland (599.3m ²)
	u1b6 - Other developed land (60.9m ²)
	h2a - Native hedgerow, newly planted (21.2m)
	32 - Scattered tree, newly planted



PROJECT TITLE
SUGAR HILL FARM, COW ARK

DRAWING TITLE
Figure 2: UK Habitat Classification Map (Post-Development)

VER	DATE	REMARKS	Drawn	Checked
2.0	08/08/25	Post-Development	MP	RK

DRAWING NUMBER:
StantonAndrewsArchitects/SugarHillFarm/Post-Development

SCALE	1:400	PLOT SIZE	A3	DATUM	OSGB	PROJECTION	BNG
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