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**Land South of Leicester Road,
Earl Shilton**



Biodiversity Net Gain Report
February 2026



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0. Executive Summary

This report has been prepared at the request of Ms. M. Spence (landowner). It relates to the proposed re-development works at the Land South of Leicester Road, Earl Shilton, Leicestershire, LE9 7DY (OS Grid Reference: SP 47505 99033). For this report, a biodiversity impact assessment calculation has been made. This document should be read in conjunction with the completed Excel spreadsheet.

Under the current proposals, the site is to be converted from agricultural use to an outdoor dog park, which will include associated access, fencing, and the erection of a field shelter. Overall, this will result in both the permanent and temporary loss and/or alteration of some of the habitats located on the proposed re-development site. Please refer to **Appendix A** for the site plans.

The site walkover revealed multiple habitats on site. The Baseline Habitat Plan, habitat codes and target notes for the site are located within **Appendix C**. The following habitats were recorded on site (in primary habitat code alphabetical order):

- **g4 - Modified Grassland**
- **u1b – Developed Land; Sealed Surface**
- **u1c - Artificial Unvegetated; Unsealed Surface**
- **u1e – Built Linear Features**

Habitat Mitigation Score

Biodiversity Unit Type	Baseline Units		Post-Development Units Without Recommendations			Post-Development Units With Recommendations			
	On-Site	Off-Site	On-Site	Off-Site	% Net Gain	On-site	Off-site	Statutory Biodiversity Credits	% Net Gain
Area Habitats	1.15	N/A	1.03	N/A	-10.21%	1.27	N/A	N/A	+10.20%
Linear Habitats	N/A	N/A	N/A	N/A	0.00%	N/A	N/A	N/A	0.00%
Linear Habitat – Rivers and Streams	N/A	N/A	N/A	N/A	0.00%	N/A	N/A	N/A	0.00%

Habitat Creation and Management

Habitat creation and management details can be found within **Section 6**. Following the management plan will ensure that habitats meet their target conditions. Habitats that will be implemented are as follows:

- Scattered Trees.
- Wildflower Planting.

Timetables for post-monitoring can be found in **Section 7**.

Species Specific Enhancements

A number of species-specific enhancements can be found in **Section 6**.

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1. Introduction

1.1 Report Rationale

This report has been prepared at the request of Ms. M. Spence (landowner). It relates to the proposed re-development works at the Land South of Leicester Road, Earl Shilton, Leicestershire, LE9 7DY (OS Grid Reference: SP 47505 99033). For this report, a biodiversity impact assessment calculation has been made. This document should be read in conjunction with the completed Excel spreadsheet.

1.2 Site Description

The site is located within a rural setting, on the outskirts of the Leicestershire market town of Earl Shilton.

The site measures approximately 0.60ha and contains a number of habitats. These include developed land, built linear features and modified grassland. The habitats on site have the potential to support protected species. The photographs of the site are found within **Appendix E**.

Within the wider landscape, further habitats are present. These come in the form of arable land, amenity grassland, buildings (and their associated gardens/yards), hard standing ground, hedgerows, running water, scattered trees, standing water, and woodland. The habitats that surround the site have the potential to be utilized by a variety of protected species.

Figure 1: An aerial map showing the approximate boundary of the site at the Land South of Leicester Road, Earl Shilton (as shown by the red outline).



Figure 2: An aerial map showing the site at the Land South of Leicester Road, Earl Shilton (as shown by the yellow star) in relation to some of the local landscape.

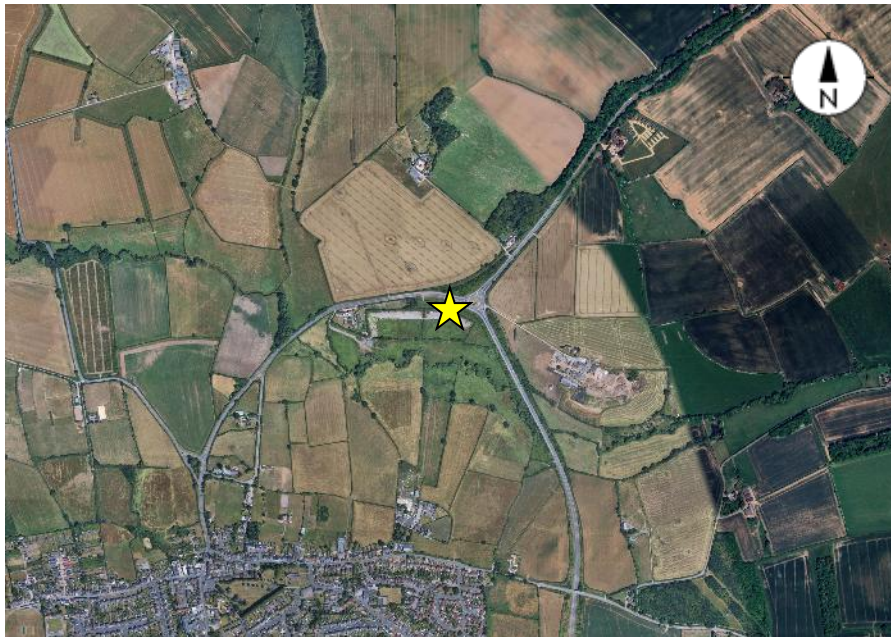


Figure 3: An OS map obtained from Bing showing the site at the Land South of Leicester Road, Earl Shilton (as shown by the yellow star).



1.3 Proposals

Under the current proposals, the site is to be converted from agricultural use to an outdoor dog park, which will include associated access, fencing, and the erection of a field shelter. Overall, this will result in both the permanent and temporary loss and/or alteration of some of the habitats located on the proposed re-development site. Please refer to **Appendix A** for the site plans.

1.4 Scope of Report

This report aims to:

- Establish the total number of baseline and lost habitat, hedgerow, and river units at the site of the proposed scheme.
- Establish the total number habitat, hedgerow, and river units that are to be created, retained and/or enhanced under landscape and ecological mitigation proposals at the proposed works site.
- Determine whether the proposed scheme will result in a net loss, no net loss, or a net gain for biodiversity.
- Make further recommendations to gain the required 10% minimum net gain for biodiversity.

1.5 Biodiversity Net Gain Relevant Policies

The appraisal has been compiled with reference to the following relevant nature conservation legislation, planning policy and the UK Biodiversity Framework from which the protection of sites, habitats and species is derived in England. These are:

- UK Biodiversity Action Plan (UKBAP).
- The Natural Environment and Rural Communities (NERC) Act 2006.
- The UK Post-2010 Biodiversity Framework (2011-2020).
- Biodiversity 2020: A strategy for England's wildlife and ecosystem services.
- The National Planning Policy Framework (NPPF) 2024.
- Environmental Act 2021.
- Local policy.

A full explanation of these policies can be found within **Appendix F**.

2. Methodology

Personnel

Field surveys have been undertaken by licensed ecologist/s, members of the Chartered Institute of Ecology & Environmental Management (CIEEM) and members of Elite Ecology staff. A walkover of the site was undertaken on the 5th of February 2026 by **Mr. Matthew Cotterill**: PG Dip, Senior Ecologist and **Miss. Rachael Nowakowski**: MSc, Assistant Ecologist.

The Biodiversity Net Gain Assessment has been carried out by **Miss. Katherine Ward**: MSc, Assistant Ecologist, in line with CIEEM Guidelines on Good practice principles for development (2016), CIEEM A Practical Guide (2019) and BS 8683:2021 - Process for designing and implementing biodiversity net gain. This net gain report and assessment has been reviewed by **Mr. Lewis Webster**: MSc, Office Ecologist.

Survey of Baseline Habitats and Condition

Habitat typing and condition assessments are undertaken during a Preliminary Ecological Appraisals (PEA) or similar studies. The baseline also considers historic records for the site and local area via a desktop study (satellite imagery, previous ecological reports), as well as additional surveys to assess the presence/absence of species in certain situations. Conditions of habitats and hedgerows are assessed using the scoring systems provided in the Statutory Biodiversity Metric Condition Assessment Sheet.

River assessments are carried out through a MoRPH5 Pro survey and River type survey. At least one MoRPH5 is undertaken per reach on site that will be directly or indirectly impacted with a further MoRPH5 undertaken upstream to record a more “natural setting” if required. This data is then processed via Cartographer to give the condition of the rivers on site.

Calculations of Baseline Habitats

Using Geographic Information Software (GIS), baseline habitats are measured in hectares (ha) using vector layer polygons. These measurements are then input into the DEFRA Statutory Biodiversity Metric Calculation Tool. Habitat condition and connectivity are then input into the calculator. The area of habitat retained is then entered into the calculation to give a final sum of baseline units and lost unit.

Each habitat has a base score of 1, this is then multiplied by the size of the habitat (ha). The habitat is then multiplied by its distinctiveness:

- Very low – 0
- Low – 2
- Medium – 4
- High – 6

The next multiplier is based on the condition of the habitat:

- N/A-other/agricultural – 0
- Poor – 1
- Fairly poor – 1.5
- Moderate – 2
- Fairly good – 2.5
- Good – 3

Calculations of Post-development Habitats

The calculation is informed by planning design, landscape plans, and proposed ecological mitigation. Plans are georeferenced into GIS and are similarly measured in hectares (ha) using vector layer polygons. These measurements are then converted into input into the DEFRA Statutory Biodiversity Metric Calculation Tool. A target condition will be assigned to each new habitat following the same scores as above. The calculator will generate a proposed time to hit this target condition and difficulty score.

3. Baseline Conditions

3.1 Habitats

The site walkover, completed on the 5th of February 2026, revealed multiple habitats on site. The full condition assessment of the habitats found on site can be found within **Appendix C**. The baseline habitat map, habitat codes and target notes for the site are located within **Appendix C**. The following habitats were recorded on site (in habitat code order).

UKHAB	Metric	Condition	Justification
g4 – Modified Grassland	Modified Grassland	Poor	Fails essential conditioning criterion A (see Appendix B).
u1b – Developed Land, Sealed Surface	Developed Land, Sealed Surface	N/A – Other	Automatically calculated by the statutory metric.
u1c – Artificial Unvegetated, Unsealed Surface	Artificial Unvegetated, Unsealed Surface	N/A – Other	Automatically calculated by the statutory metric.
u1e – Built Linear Features	N/A	N/A	Metric limitation.

3.2 Strategic Significance

The following table shows the strategic significance of the site. This is compared against freely available sources such as the Multi Agency Geographic Information for the Countryside (MAGIC) and local policy maps.

Habitats	Strategic Significance	Justification
All Habitats	Area/compensation not in local strategy/no local strategy.	Area not identified in the local plan/strategy for biodiversity, nor is it deemed to be in a particularly ecologically valuable area.

3.3 Species

No Preliminary Ecological Appraisal (PEA) was undertaken, and thus the potential of the site to support rare or protected species was not ascertained.

4. Baseline Calculation and Proposal Impact

4.1 Existing Habitats

The table below outlines the existing site status based on the most recent field survey.

Area Habitats

Habitat Description	Habitat Area (ha)	Distinctiveness	Score	Condition	Score	Baseline Habitat Units	Habitats Retention (ha)			Habitat Units Lost
							Retained	Enhanced	Lost	
Modified Grassland	0.575	Low	2	Poor	1	1.15	0.000	0.000	0.575	1.15
Developed Land; Sealed Surface	0.008	V. Low	0	N/A – Other	0	0.00	0.008	0.000	0.000	0.00
Artificial Unvegetated, Unsealed Surface	0.013	V. Low	0	N/A – Other	0	0.00	0.000	0.000	0.013	0.00
TOTALS:	0.60					1.15	0.01	0.000	0.59	1.15
*Areas excluding individual trees.										

Based on the above information, the on-site habitat biodiversity value is calculated at **1.15** habitat units, with **1.15** units lost during the development. Therefore, **0.00** habitat units will remain.

Linear Habitats

No linear habitats were present in the baseline.

Watercourse Habitats

No watercourses were present in the baseline.

4.2 Proposed Habitats

Area Habitats

Habitat Description	Habitat Area (ha)	Target Distinctiveness	Score	Target Condition	Score	Time To Target Condition		Difficulty of Creation		Habitat Biodiversity Value
						Time (years)	Score	Difficulty	Score	
Developed Land; Sealed Surface	0.019	V. Low	0	N/A - Other	0	0	1.000	Low	1	0.00
Artificial Unvegetated; Unsealed Surface	0.034	V. Low	0	N/A - Other	0	0	1.000	Low	1	0.00
Modified Grassland	0.535	Low	2	Poor	1	1	0.965	Low	1	1.03
TOTALS:	0.59									1.03

The above habitats, valued at **1.03** habitat units, combined with the remaining valued at **0.00** units, a habitat biodiversity value score of **1.03** habitat units is given by the metric calculation.

Linear Habitats

No linear habitats have been proposed as part of this project.

Watercourse Habitats

No watercourse habitats have been proposed as part of this project.

4.3 Total Net Unit Change

The net unit change for the area habitats on site is calculated at **-0.12**, which correlates to a **loss** of **-10.21%** in biodiversity units.

The net unit change for the linear habitats on site is calculated at **0.00**, which correlates to neither a net gain nor loss in biodiversity units.

The net unit change for the water course habitats on site is calculated at **0.00**, which correlates to neither a net gain nor loss in biodiversity units.

4.4 Trading Rules

With the above proposed habitats, the trading rules are **not** satisfied. The table below breaks down the factors for passing or failing the trading rules:

Area Habitats:

Trading Summary			
Distinctiveness Group	Trading Rule	Trading Satisfied	Reason
Very High	Same habitat required – bespoke compensation option	Yes	No habitats of this distinctiveness were identified on site.
High	Same habitat required	Yes	No habitats of this distinctiveness were identified on site.
Medium	Same broad habitat or a higher distinctiveness habitat required ($\geq$)	Yes	No habitats of this distinctiveness were lost under the current proposals.
Low	Same distinctiveness or better habitat required ($\geq$)	No	1.15 units were lost under the current proposals. The proposals only provide 1.03 units of this distinctiveness.

Linear Habitats:

Trading Summary			
Distinctiveness Group	Trading Rule	Trading Satisfied	Reason
Very High	Same habitat required – bespoke compensation option	Yes	No habitats of this distinctiveness were identified on site.
High	Same habitat required	Yes	No habitats of this distinctiveness were identified on site.
Medium	Same broad habitat or a higher distinctiveness habitat required ($\geq$)	Yes	No habitats of this distinctiveness were identified on site.
Low	Same distinctiveness or better habitat required ($\geq$)	Yes	No habitats of this distinctiveness were identified on site.
Very Low	Same distinctiveness or better habitat required ($\geq$)	Yes	No habitats of this distinctiveness were identified on site.

Watercourse Habitats:

Trading Summary			
Distinctiveness Group	Trading Rule	Trading Satisfied	Reason
Very High	Same habitat required – bespoke compensation option	Yes	No habitats of this distinctiveness were identified on site.
High	Same habitat required	Yes	No habitats of this distinctiveness were identified on site.
Medium	Same broad habitat or a higher distinctiveness habitat required ($\geq$)	Yes	No habitats of this distinctiveness were identified on site.
Low	Same distinctiveness or better habitat required ($\geq$)	Yes	No habitats of this distinctiveness were identified on site.
Very Low	Same distinctiveness or better habitat required ($\geq$)	Yes	No habitats of this distinctiveness were identified on site.

5. Recommendations

5.1 Habitats

The initial score, without enhancements, resulted in a **0.12** loss in habitat units (-**10.21%**) and a **-0.00** loss (**-100.00%**) in linear habitat units.

The following includes suggested habitats that must be included to reach a 10% gain (DEFRA recommended minimum). If these are implemented a positive net gain score can be achieved for the proposed development which will ensure a positive impact on biodiversity.

Changes to Baseline Habitat Retention

No changes to the baseline Habitat retention have been proposed.

Changes to the Proposed Habitats

Habitat Description	Habitat Area (ha)	Target Distinctiveness	Score	Target Condition	Score	Time To Target Condition		Difficulty of Creation		Habitat Biodiversity Value
						Time (years)	Score	Difficulty	Score	
Developed Land; Sealed Surface	0.019	V. Low	0	N/A - Other	0	0	1.000	Low	1	0.00
Artificial Unvegetated; Unsealed Surface	0.034	V. Low	0	N/A - Other	0	0	1.000	Low	1	0.00
Modified Grassland	0.496	Low	2	Poor	1	1	0.965	Low	1	0.96
TOTALS:	0.549									0.96

Based on the above information, the on-site habitat biodiversity value was calculated at **1.03** habitat units, with **0.7** units lost with changes to the habitats proposed on site.

The changes to the proposed habitats are such that the proposed modified grassland is reduced from 0.535 hectares to 0.496 hectares to create area for new habitat creation. Therefore, **0.96** habitat units will remain.

Recommended Habitats

Habitat Description	Habitat Area (ha)	Target Distinctiveness	Score	Target Condition	Score	Time To Target Condition		Difficulty of Creation		Habitat Biodiversity Value
						Time (years)	Score	Difficulty	Score	
Developed Land; Sealed Surface	0.019	V. Low	0	N/A - Other	0	0	1.000	Low	1	0.00
Artificial Unvegetated; Unsealed Surface	0.034	V. Low	0	N/A - Other	0	0	1.000	Low	1	0.00
Modified Grassland	0.496	Low	2	Poor	1	1	0.965	Low	1	0.96
Other Neutral Grassland	0.039	Medium	4	Moderate	2	5	0.837	Low	1	0.26
Rural Tree	0.016	Medium	4	Moderate	2	27	0.382	Low	1	0.05
TOTALS:	0.588*									1.27
*Areas excluding urban trees										

The above habitats, valued at **1.27** habitat units, combined with the remaining valued at **0.00** units, mean a habitat biodiversity value score of **1.27** habitat units is given by the metric calculation.

Recommended Linear Habitats

No linear habitats have been recommended.

Recommended Watercourses

No watercourses have been recommended.

5.2 Habitat Mitigation Score

If the above habitats are implemented on site:

The net unit change for the habitats on site is calculated at **+0.12**, which correlates to a **gain** of **10.20%** in habitat biodiversity.

The net unit change for the linear habitats on site is calculated at **+0.00**, which correlates to neither a net gain nor a net loss in linear habitat biodiversity.

The net unit change for the watercourses is calculated at **+0.00**, which correlates to neither a net gain nor a net loss in watercourse biodiversity.

5.3 Trading Rules

The trading rules have been satisfied. The project passes on the requirements to meet the trading rules for both low and medium distinctiveness habitats. The table below breaks down the factors for passing and failing trading rules:

Area Habitats:

Trading Summary			
Distinctiveness Group	Trading Rule	Trading Satisfied	Reason
Very High	Same habitat required – bespoke compensation option	Yes	No habitats of this distinctiveness were identified on site.
High	Same habitat required (=)	Yes	No habitats of this distinctiveness were identified on site.
Medium	Same broad habitat or a higher distinctiveness habitat required ($\geq$)	Yes	0.31 units of medium distinctiveness have been recommended, which is used as surplus.
Low	Same distinctiveness or better habitat required ($\geq$)	Yes	0.19 units of low distinctiveness have been lost under the changes to the baseline retention. After offsetting, this leaves a surplus of 0.12 units.

Linear Habitats:

Trading Summary			
Distinctiveness Group	Trading Rule	Trading Satisfied	Reason
Very High	Same habitat required – bespoke compensation option	Yes	No habitats of this distinctiveness were identified on site.
High	Same habitat required	Yes	No habitats of this distinctiveness were identified on site.
Medium	Same broad habitat or a higher distinctiveness habitat required ($\geq$)	Yes	No habitats of this distinctiveness were identified on site.
Low	Same distinctiveness or better habitat required ($\geq$)	Yes	No habitats of this distinctiveness were identified on site.
Very Low	Same distinctiveness or better habitat required ($\geq$)	Yes	No habitats of this distinctiveness were identified on site.

Watercourse Habitats:

Trading Summary			
Distinctiveness Group	Trading Rule	Trading Satisfied	Reason
Very High	Same habitat required – bespoke compensation option	Yes	No habitats of this distinctiveness were identified on site.
High	Same habitat required	Yes	No habitats of this distinctiveness were identified on site.
Medium	Same broad habitat or a higher distinctiveness habitat required ($\geq$)	Yes	No habitats of this distinctiveness were identified on site.
Low	Same distinctiveness or better habitat required ($\geq$)	Yes	No habitats of this distinctiveness were identified on site.
Very Low	Same distinctiveness or better habitat required ($\geq$)	Yes	No habitats of this distinctiveness were identified on site.

6. Habitat Creation and Management

6.1 Soil Preparation

SOILS: Subgrade/subsoil to be prepared in accordance with BS 8601:2013 and BS 4428:1989 and scarified or ripped to 300mm depth (excluding root protection areas of retained trees refer to Tree Protection Plan) prior to spreading topsoil to alleviate compaction and promote drainage. Imported and as saved topsoil to be in accordance with BS 3882: 2015 'Multipurpose Grade' with minimum soil organic matter contents 1% greater than the minimal value (or as approved). Imported topsoil (and 'as saved' if requested) is to be laboratory tested to BS 3882:2015 and ameliorated as required to meet the required characteristics as detailed within Table 1 of BS 3882:2015 specification.

6.2 Habitats

6.2.1 Scattered Trees

Four trees are to be planted. These are to consist of:

Four small sized trees: hazel (*Corylus avellana*), holly (*Ilex aquifolium*), silver birch (*Betula pendula*), and wild cherry (*Prunus avium*).

These trees are to be planted accordance with BS 3936, BS8545 and The National Plant Specification – 'Rootballed Trees'.

6.2.2 Wildflower Meadow

A wildflower meadow should form part of the site to maximise biodiversity, this habitat is to be incorporated into the western area of the site, around the proposed parking area. It is recommended this area is fenced off to prevent the habitat from being damaged. A variety of wildflower mixes can be found on the [Meadowmania](#) or [Wildflower Turf](#) webpages. It is recommended that [EM2 standard general purpose meadow mixture](#) or similar is used. A list of recommended species will be provided in **Section 7**.

This must be connected to other habitat features to ensure beneficial invertebrates, such as bees and butterflies, can find and utilise this habitat. This is due to some species not crossing open areas, so connectivity with linear habitat features is critical. Further information on creating wildflower meadows can be found [here](#).

These areas should be mown once a year:

- **Autumn cut** - cut between the end of August and late November.

Management of the grassland should avoid mowing of the entire space, to allow patches of taller or rough grassland patches and flowering to take place.

6.2.3 Control of Aggressive Weeds

Any weeds which grow on site and are thought to be aggressive and pose a threat to the success of the planted trees should be eradicated as soon as possible. These will be identified within a plant identification survey undertaken twice yearly; one in March and one in July. It will be necessary to remove all weeds found on site by hand during the first three years of the project, until the new trees are mature enough to survive. Any invasive species that appear on site will require eradication as soon as possible. The identification of any invasive species will take place within a plant identification survey undertaken twice yearly; one in March and one in July.

6.3 Species Specific Enhancements

6.3.1 Bats

It is recommended that the development site should incorporate a minimum of the following:

- [One Pole Mounted Bat Box.](#)

Including these boxes will providing roosting opportunities. These should avoid any artificial lighting, whilst being sighted facing east, south-east, south, south-west, and/or west. Boxes can be purchased by emailing admin@eliteecology.co.uk.

Artificial lighting **must avoid** linear features. If it is necessary to include artificial lighting in areas overlooking both hedgerows and trees, then this must include sensors to be triggered by larger bodies only. An artificial lighting plan should be drawn up to illustrate the spill of light. This is to include the proposed security lighting on the residential dwellings as well as all street lighting. This document should then be approved by a licenced bat ecologist. More information on bats and artificial lighting can be found within **Appendix G**.

6.3.2 Birds

The development site should be enhanced for birds by installing a variety of bird boxes on site. The development should incorporate a minimum of the following:

- One Apex Bird Boxes.

This is to be installed on the proposed shelter located on the eastern side of the site. Boxes can be purchased by emailing admin@eliteecology.co.uk.

The boxes should be positioned two-to-four metres high on a wall. They must be placed between northern and eastern elevations, thus avoiding strong sunlight and the wettest winds. The entrance of the box must be kept clear of obstructions, such as branches and vegetation. All bird enhancements must be situated in a way that prevents access to predators, such as cats.

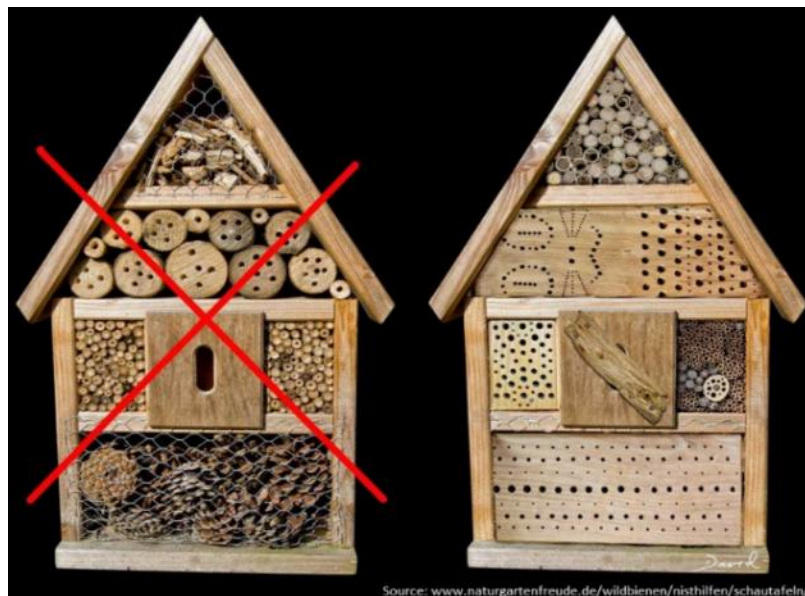
6.3.3 Invertebrates

At present, the site is not considered to be of any importance to local invertebrate populations. In conjunction with the scrub planting, the site could be enhanced for the local invertebrate population by installing at least one [bug hotel](#) (or similar) in a suitable location onsite. These can be purchased by emailing admin@eliteecology.co.uk. This will enhance the site for the local invertebrate populations, which will thus attract species further up in the trophic level.

The bug hotel should be made from a wooden frame with nesting tubes within. Plastic should not be used. The frame should be at least height 15cm x width 15cm x length 15cm (slight variation on dimensions is allowed) and must have a solid back. The nesting tubes should be a minimum of 15cm long and should have an average diameter of 2-10mm. Additional elements can be included such as drilled pieces of timber where the holes are at least 10cm deep. Bug hotels including items such as pinecones, glued snail shells, wood shavings or clear plastic tubes should be strictly avoided (**Figure 5**).

Smaller, more frequent bumblebee boxes/insect hotels are preferred to larger insect boxes as the larger varieties are susceptible to spreading diseases and parasites and can actually cause more harm than good. When situating the box, it should be fixed securely to a sturdy surface at least 1m off of the ground, ideally on an easter-southern elevation so that the box is in full sunlight. No vegetation should be in front the box as it would obscure the entrances to the tunnels. The box would benefit from being placed close to plants rich in a pollen source throughout the year.

Figure 5: Image showing the difference between a good (right) and a bad (left) insect hotel, taken from the Entomologist Lounge website.



7 Timing, Phasing, and Duration of Conservation Measures

7.1 Construction Phase

Creation	Timing	Species
Tree Planting	Plant between October and April.	Individual: Four small-sized trees: hazel (<i>Corylus avellana</i>), holly (<i>Ilex aquifolium</i>), silver birch (<i>Betula pendula</i>), and wild cherry (<i>Prunus avium</i>).
Wildflower Planting	Wildflower Meadow mix May to September	Wildflowers total 20%: Borage (<i>Borago officinalis</i>) 1.4%, corn poppy (<i>Papaver rhoeas</i>) 2.0%, cornflower (<i>Cenaturea Cyanus</i>) 1.6%, lesser knapweed (<i>Centaurea nigra</i>) 0.6%, musk mallow (<i>Malva moschata</i>) 0.4%, ox eye daisy (<i>Leucanthemum Vulgare</i>) 0.6%, red campion (<i>Silene Dioica</i>) 3.0%, wild red clover (<i>Trifolium pratense</i>)1.0%, ribwort plantain (<i>Plantago lanceolata</i>) 2.4%, salad burnet (<i>Sanguisorba Minor</i>) 3.0%, selfheal (<i>Prunella Vulgaris</i>) 1.0%, white campion (<i>Silene Alba</i>) 2.4%, and yarrow, (<i>Achillea millefolium</i>) 0.6%. Grasses (Total 80%): Chewings fescue (<i>Festuca rubra subsp. commutata</i>) 24%, common bent (<i>Agrostis capillaris</i>) 4.4%, crested dogs tail (<i>Cynosurus cristatus</i>) 1.6%, slender creeping red fescue (<i>Festuca rubra subsp. litoralis</i>) 20%, strong creeping red fescue (<i>Festuca rubra</i>) 28%, sweet vernal grass (<i>Anthoxanthum odoratum</i>) 1%, and yellow oat grass (<i>Trisetum flavescens</i>) 1%.

7.2 Operational Phase

Management	Reason for and Frequency of schedule	Yearly Management									
Control of Aggressive Weeds	Any weeds which grow on site and are thought to be aggressive and pose a threat to the success of the planted trees should be eradicated. Plant ID survey undertaken twice yearly	Year 1 plant ID survey: March plant ID survey: July	Year 2 plant ID survey: March plant ID survey: July	Year 3 plant ID survey: March plant ID survey: July	Year 4 plant ID survey: March plant ID survey: July	Year 5 plant ID survey: March plant ID survey: July	Year 6 plant ID survey: March plant ID survey: July	Year 7 plant ID survey: March plant ID survey: July	Year 8 plant ID survey: March plant ID survey: July	Year 9 plant ID survey: March plant ID survey: July	Year 10 plant ID survey: March plant ID survey: July
		Year 11 plant ID survey: March plant ID survey: July	Year 12 plant ID survey: March plant ID survey: July	Year 13 plant ID survey: March plant ID survey: July	Year 14 plant ID survey: March plant ID survey: July	Year 15 plant ID survey: March plant ID survey: July	Year 16 plant ID survey: March plant ID survey: July	Year 17 plant ID survey: March plant ID survey: July	Year 18 plant ID survey: March plant ID survey: July	Year 19 plant ID survey: March plant ID survey: July	Year 20 plant ID survey: March plant ID survey: July
		Year 21 plant ID survey: March plant ID survey: July	Year 22 plant ID survey: March plant ID survey: July	Year 23 plant ID survey: March plant ID survey: July	Year 24 plant ID survey: March plant ID survey: July	Year 25 plant ID survey: March plant ID survey: July	Year 26 plant ID survey: March plant ID survey: July	Year 27 plant ID survey: March plant ID survey: July	Year 28 plant ID survey: March plant ID survey: July	Year 29 plant ID survey: March plant ID survey: July	Year 30 plant ID survey: March plant ID survey: July
Trees	To maximise biodiversity. Beneficial to local fauna.	Year 1- Plant recommended species. Leave to mature.	Year 2- No action.	Year 3- No action.	Year 4- No action.	Year 5- No action.	Year 6- No action.	Year 7- No action.	Year 8- No action.	Year 9- No action.	Year 10- No action.
		Year 11- No action.	Year 12- No action.	Year 13- No action.	Year 14- No action.	Year 15- No action.	Year 16- No action.	Year 17- No action.	Year 18- No action.	Year 19- No action.	Year 20- No action.
		Year 21- No action.	Year 22- No action.	Year 23- No action.	Year 24- No action.	Year 25- No action.	Year 26- No action.	Year 27- No action.	Year 28- Prune to extend life of tree. Prune no more than 25%.	Year 29- Prune to extend life of tree. Prune no more than 25%.	Year 20- Prune to extend life of tree. Prune no more than 25%.
Wildflower Planting	To maximise biodiversity. Beneficial to invertebrates	Year 1 - Sow May to September	Year 2 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 3 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 4 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 5 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 6 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 7 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 8 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 9 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 10 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.
		Year 11 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 12 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 13 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 14 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 15 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 16 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 17 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 18 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 19 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 20 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.
		Year 21 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 22 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 23 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 24 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 25 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 26 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 27 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 28 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 29 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.	Year 30 Autumn cut - Cut back to height of 7.5cm only and cut between the end of August and late November.

7.3 Post-works - Habitat Condition Monitoring Timetable

Post-Monitoring Type	Colour
Progression Check	
Assessing if habitat has met target condition	
Monitoring if Target condition is retained	

Habitat	Year														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
New Scattered Trees															
Wildflower Planting															
Habitat	Year														
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
New Scattered Trees															
Wildflower Planting															

Species-specific Enhancement	Year				
	1	2	3	4	5
Bat Boxes	No action.	Ascertaining whether the enhancement is in use, and whether the condition is still appropriate.	No action.	No action.	Ascertaining whether the enhancement is in use, and whether the condition is still appropriate.
Bird Boxes	No action.	Ascertaining whether the enhancement is in use, and whether the condition is still appropriate.	No action.	No action.	Ascertaining whether the enhancement is in use, and whether the condition is still appropriate.
Bee Bricks	No action.	Ascertaining whether the enhancement is in use, and whether the condition is still appropriate.	No action.	No action.	Ascertaining whether the enhancement is in use, and whether the condition is still appropriate.
Hedgehog Boxes	No action.	Ascertaining whether the enhancement is in use, and whether the condition is still appropriate.	No action.	No action.	Ascertaining whether the enhancement is in use, and whether the condition is still appropriate.

8. Good Practice Principles for Development

The table below outlines the ten principles as outlined by the Chartered Institute of Ecology and Environmental Management (CIEEM) and the Institute of Sustainability and Environmental Professionals (ISEP), whilst outlining whether the project meets each principle, and a justification as to why this has or has not occurred.

Principle	Definition as set out by CIEEM and ISEP	Principle met?	Justification
Principle 1: Apply the Mitigation Hierarchy	Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.	No	No Preliminary Ecological was undertaken, and thus the potential of the site to support rare or protected species was not ascertained. This principle has not been met.
Principle 2: Avoid Losing Biodiversity that Cannot be Offset by Gains Elsewhere	Avoid impacts on irreplaceable biodiversity - these impacts cannot be offset to achieve no net loss or net gain.	Yes	No irreplaceable habitats occur on site. The habitats on site are common and of varying quality. This report has offered recommendations for habitats of a higher standard, while staying in the same broad habitat types.
Principle 3: Be Inclusive and Equitable	Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to net gain. Achieve net gain in partnership with stakeholders where possible and share the benefits fairly among stakeholders.	Yes	Feedback from the stakeholders is welcome and this document is to be updated to fit requirements. This Biodiversity Net Gain Report has included recommendations to benefit the site while allowing it to be used for its intended purpose.
Principle 4: Address Risks	Mitigate difficulty, uncertainty and other risks to achieving net gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.	Yes	Post monitoring and a management scheme has been recommended to ensure habitats meet the target conditions.
Principle 5: Make a Measurable Net Gain Contribution	Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.	Yes	The net unit change for the habitats on site is calculated at +0.12 , which correlates to a gain of 10.20% in habitat biodiversity. The net unit change for the linear habitats on site is calculated at +0.00 , which correlates to neither a net gain nor a net loss in linear habitat biodiversity. The net unit change for watercourses on site is calculated at +0.00 , which correlates to neither a net gain nor a net loss in watercourse biodiversity.
Principle 6: Achieve the Best Outcomes for Biodiversity	Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly-justified choices when: ➤ Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses. ➤ Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation. ➤ Achieving net gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels. ➤ Enhancing existing or creating new habitat. ➤ Enhancing ecological connectivity by creating more bigger, better and joined areas for biodiversity.	Yes	The net unit change for the habitats on site is calculated at +0.12 , which correlates to a gain of 10.20% in habitat biodiversity. The net unit change for the linear habitats on site is calculated at +0.00 , which correlates to neither a net gain nor a net loss in linear habitat biodiversity. The net unit change for the watercourses is calculated at +0.00 , which correlates to neither a net gain nor a net loss in watercourse biodiversity.

Principle 7: Be Additional	Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. do not deliver something that would occur anyway).	Yes	The habitats and species-specific enhancements recommended will improve the site for local fauna.
Principle 8: Create a Net Gain Legacy	Ensure net gain generates long-term benefits by: ➤ Engaging stakeholders and jointly agreeing practical solutions that secure net gain in perpetuity. ➤ Planning for adaptive management and securing dedicated funding for long-term management. ➤ Designing net gain for biodiversity to be resilient to external factors, especially climate change. ➤ Mitigating risks from other land uses. ➤ Avoiding displacing harmful activities from one location to another. ➤ Supporting local-level management of net gain activities.	Yes	Post monitoring and a management scheme has been recommended to ensure habitats meet the target conditions.
Principle 9: Optimise Sustainability	Prioritise biodiversity net gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.	No	No wider environmental benefits or sustainability measures.
Principle 10: Be Transparent	Communicate all net gain activities in a transparent and timely manner, sharing the learning with all stakeholders.	Yes	Feedback from the stakeholders is welcome and this document is to be updated to fit requirements. This Biodiversity Net Gain Report has included recommendations to benefit the site while allowing it to be used for its intended purpose.

9. References

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10. Appendices

Appendix A: Site Plans

Appendix B: Habitat Condition Assessment Sheets

Appendix C: Baseline Habitat Map

Appendix D: New Habitat Maps

Appendix E: Site Photographs

Appendix F: Biodiversity Net Gain Relevant Policies

Appendix G: Bat and Artificial Light

[illegible]

Appendix B: Habitat Condition Assessment Sheets

Habitat: Modified Grassland		
Condition Assessment Criteria		Criterion Passed
A	There are 6-8 vascular plant species per m2 present, including at least 2 forbs (these may include those listed in Footnote 1).. Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m2, please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	No
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	No
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes
D	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.	Yes
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	No
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Yes
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Yes
Condition	Poor	Score
		4/7 and fails criterion A

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*.

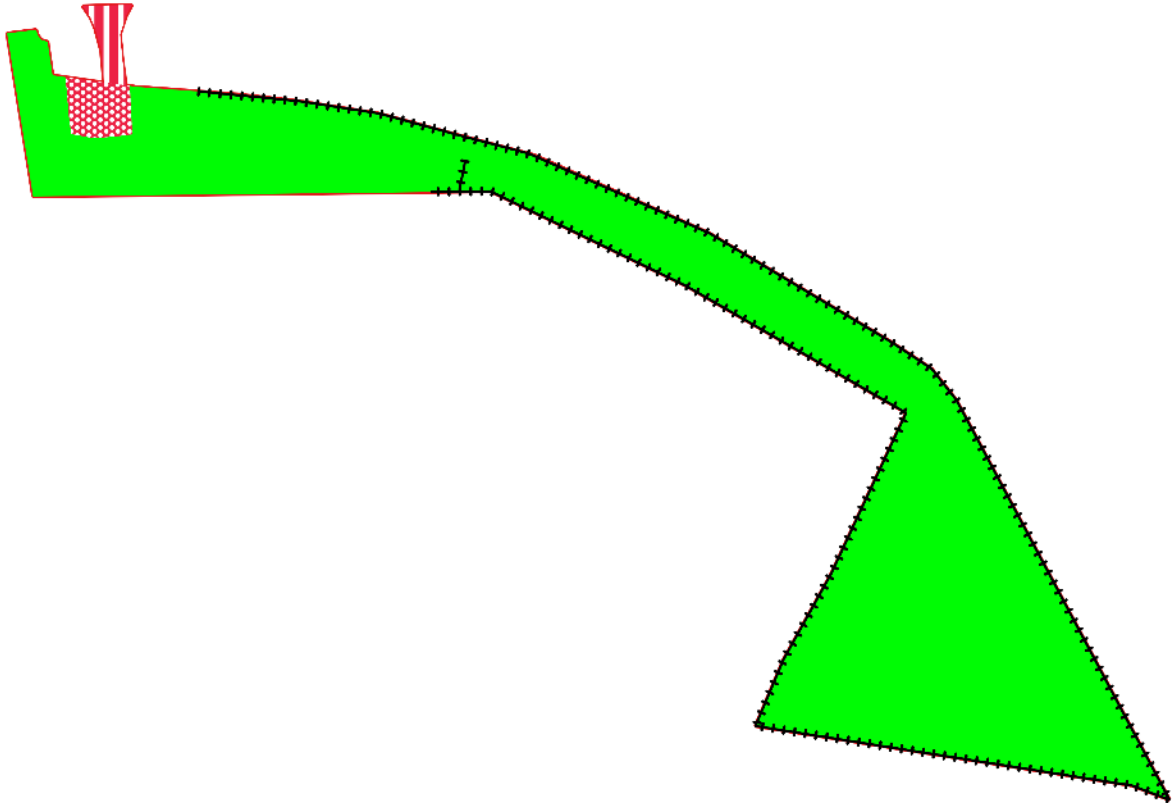
Footnote 2 – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover.

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).

Quadrat Number	Grid Reference	Species Recorded
1	SP 47623 98941	Bulbous buttercup (<i>Ranunculus bulbosus</i>), common bent (<i>Agrostis capillaris</i>), and perennial rye grass (<i>Lolium perenne</i>).
2	SP 47664 98924	Bulbous buttercup (<i>Ranunculus bulbosus</i>), common bent (<i>Agrostis capillaris</i>), and perennial rye grass (<i>Lolium perenne</i>).
3	SP 47685 98910	Bulbous buttercup (<i>Ranunculus bulbosus</i>), common bent (<i>Agrostis capillaris</i>), cow parsley (<i>Anthriscus sylvestris</i>), and perennial rye grass (<i>Lolium perenne</i>).
4	SP 47684 98928	Bulbous buttercup (<i>Ranunculus bulbosus</i>), common bent (<i>Agrostis capillaris</i>), and perennial rye grass (<i>Lolium perenne</i>).
5	SP 47662 98979	Bulbous buttercup (<i>Ranunculus bulbosus</i>), common bent (<i>Agrostis capillaris</i>), common reed (<i>Phragmites australis</i>), creeping thistle (<i>Cirsium arvense</i>), perennial rye grass (<i>Lolium perenne</i>), and white clover (<i>Trifolium repens</i>).
6	SP 47646 98982	Bulbous buttercup (<i>Ranunculus bulbosus</i>), cock's foot (<i>Dactylis glomerata</i>), common bent (<i>Agrostis capillaris</i>), creeping thistle (<i>Cirsium arvense</i>), hard rush (<i>Juncus inflexus</i>), and perennial rye grass (<i>Lolium perenne</i>).
7	SP 47631 98996	Bulbous buttercup (<i>Ranunculus bulbosus</i>), common bent (<i>Agrostis capillaris</i>), creeping thistle (<i>Cirsium arvense</i>), field vetch (<i>Vicia sativa</i>), and perennial rye grass (<i>Lolium perenne</i>).
8	SP 47589 99015	Bulbous buttercup (<i>Ranunculus bulbosus</i>), common bent (<i>Agrostis capillaris</i>), and perennial rye grass (<i>Lolium perenne</i>).
9	SP 47556 99020	Bulbous buttercup (<i>Ranunculus bulbosus</i>), common bent (<i>Agrostis capillaris</i>), and perennial rye grass (<i>Lolium perenne</i>).
10	SP 47533 99030	Bulbous buttercup (<i>Ranunculus bulbosus</i>), cleavers (<i>Galium aparine</i>), common bent (<i>Agrostis capillaris</i>), creeping thistle (<i>Cirsium arvense</i>), perennial rye grass (<i>Lolium perenne</i>), and sorrel (<i>Rumex acetosa</i>).

Appendix C: Baseline Habitat Map





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Job title
Land South of Leicester Road, Earl Shilton

Client
Ms. M. Spence

Map title
UKHAB Habitat Map

Date
13/02/2026

Legend

 g4 - Modified Grassland

 u1b - Developed Land, Sealed Surface

 u1c - Artificial Unvegetated; Unsealed Surface

 u1e - Built Linear Features

 Site Boundary

Scale:
1250@A3

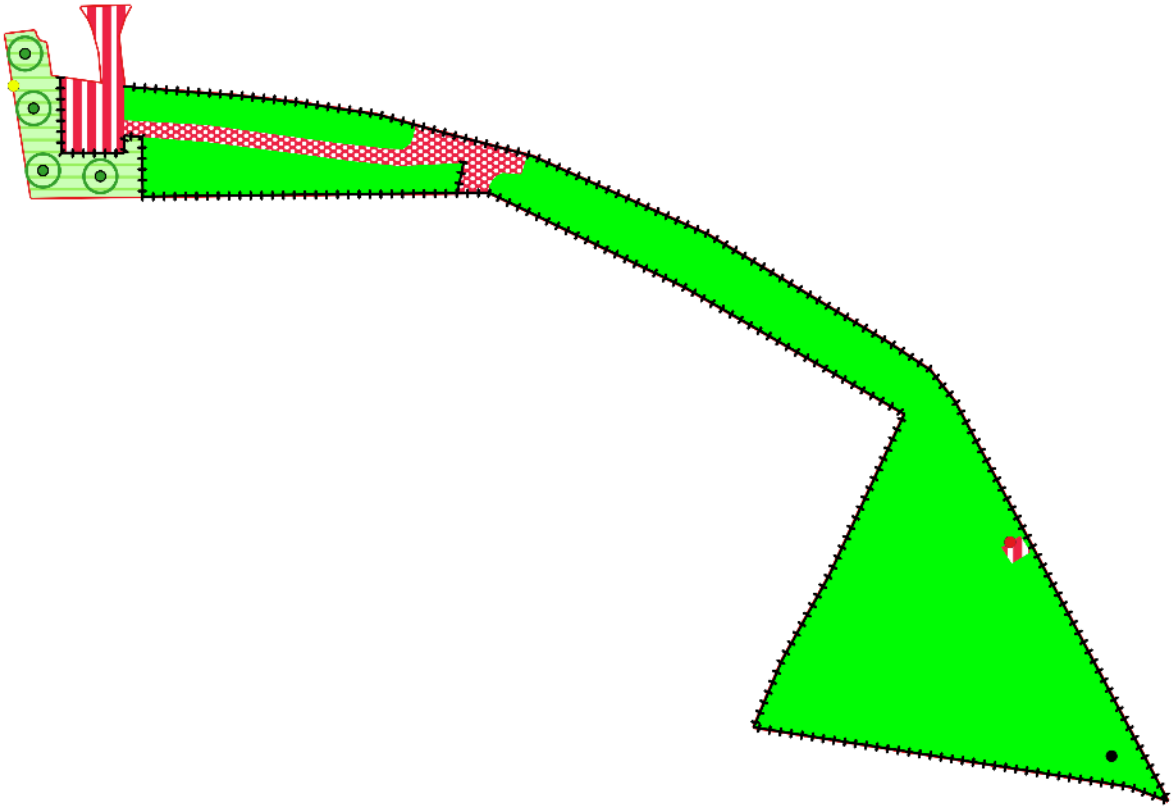
0

20

40 m



Appendix D: New Habitat Map





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Job title

Land South of Leicester Road, Earl Shilton

Client

Ms. M Spence

Map title

New Habitat Map

Date

13/02/2026

Legend

- g3c - Proposed Other Neutral Grassland
- g4 - Modified Grassland
- u1b - Developed Land, Sealed Surface
- u1c - Artificial Unvegetated; Unsealed Surface
- u1e - Built Linear Features
- 32 - Proposed Trees
- Site Boundary
- Bat Box
- Bird Box
- Bee Box

Scale: 1250@A3

0 20 40 m

Based on Location and Block Plan by Architecture Vista Designs Limited

Drawing No. AVD-LRE-PL01

Appendix E: Site Photographs

Plate 1: A photograph of the modified grassland present on the survey site.



Plate 2: A photograph of the sealed surface present on the survey site.



Plate 3: A photograph of the unsealed surface found on the survey site.



Plate 4: A photograph of the fence found on the survey site.



Appendix F: Biodiversity Net Gain Relevant Policies

Environmental Act 2021

Part 6 on nature and biodiversity covers all areas of biodiversity net gain across two core sections. This Act mandates that all planning meets a minimum of a 10% gain in biodiversity calculated using the appropriate Metric and that the newly created habitats are secured for at least 30 years.

National Planning Policy Framework (NPPF)

While currently not a legal obligation, biodiversity and environmental net gains are mentioned in the revised National Planning Policy Framework (NPPF) within the following paragraphs (please refer to the NPPF for the full quotations):

Achieving sustainable development

Paragraph 8 Section C. “an environmental objective – **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.”

Preparing and reviewing plans

Paragraph 33. “Local plans and spatial development strategies should be informed throughout their preparation by a sustainability appraisal that meets the relevant legal requirements. This **should demonstrate how the plan** has addressed relevant economic, social and **environmental objectives** (including **opportunities for net gains**). Significant **adverse impacts on these objectives should be avoided** and, wherever possible, alternative options which reduce or eliminate such impacts should be pursued. Where significant adverse impacts are unavoidable, suitable mitigation measures should be proposed (or, where this is not possible, compensatory measures should be considered).”

Identifying land for homes

Paragraph 77 section A. “consider the opportunities presented by existing or planned investment in infrastructure, the area’s economic potential and the scope for **net environmental gains**”

Promoting sustainable transport:

Paragraph 109 section F. “identifying, assessing and taking into account the environmental impacts of traffic and transport infrastructure – including appropriate opportunities for avoiding and mitigating any adverse effects, and for **net environmental gains**.”

Making effective use of land:

Paragraph 125 section A. “encourage multiple benefits from both urban and rural land, including through mixed use schemes and taking opportunities to achieve **net environmental gains** – such as developments that would enable new habitat creation or improve public access to the countryside.”

Conserving and enhancing the natural environment

Paragraph 187 Section 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 and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs*”

Habitats and biodiversity

Paragraph 192. “*To protect and enhance biodiversity and geodiversity, plans should:*

*a) Identify, map and **safeguard components of local wildlife-rich habitats** and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, **enhancement, restoration or creation**;*

*and b) 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**.*”

Paragraph 1893. “*When determining planning applications, local planning authorities should apply the following principles:*

*a) if **significant harm to biodiversity** resulting from a development **cannot be avoided** (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then **planning permission should be refused**;*

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

*c) development resulting in the **loss or deterioration of irreplaceable habitats** (such as ancient woodland and ancient or veteran trees) **should be refused**, unless there are wholly exceptional reasons and a suitable compensation strategy exists;*

*and d) 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.”*

Local Plan

Hinckley and Bosworth Borough Council Local Plan

DM6 Enhancement of Biodiversity and Geological Interest

- Development proposals must demonstrate how they conserve and enhance features of nature conservation and geological value including proposals for their long-term future management. Major developments in particular must include measures to deliver biodiversity gains through opportunities to restore, enhance and create valuable habitats, ecological networks and ecosystem services.
- Proposals where the primary objective is to conserve or enhance biodiversity or geological interest will be permitted where they comply with other relevant policies in the plan.
- On site features should be retained, buffered and managed favourably to maintain their ecological value, connectivity and functionality in the long-term. The removal or damage of such features shall only be acceptable where it can be demonstrated the proposal will result in no net loss of biodiversity and where the integrity of local ecological networks can be secured.
- If the harm cannot be prevented, adequately mitigated against or appropriate compensation measures provided, planning permission will be refused. In addition to the above, where specific identified sites are to be affected the following will be taken into account:

Internationally and Nationally Designated Sites

International and Nationally Designated Sites will be safeguarded. Development which is likely to have any adverse impact on the notified features of a nationally designated site will not normally be permitted. In exceptional circumstances, a proposal may be found acceptable where it can be demonstrated that: is not available; and

- a) A suitable alternative site with a lesser impact than that proposed is not available; and
- b) The on-site benefits of the proposal clearly outweigh the impacts on the notified features of the site and where applicable, the overall SSSI or habitat network; and
- c) All appropriate mitigation measures have been addressed through the development management process; and
- d) Development likely to result in a significant effect on internationally designated sites will be subject to assessment under the Habitats Regulations and will not be permitted unless adverse effects can be fully avoided, mitigated and/or compensated.

Irreplaceable Habitats

Proposals which are likely to result in the loss or deterioration of an irreplaceable habitat would only be acceptable where:

- e) The need and benefits of the development in that location clearly outweigh the loss; and,
- f) It has been adequately demonstrated that the irreplaceable habitat cannot be retained with the proposed scheme; and,
- g) Appropriate compensation measures are provided on site wherever possible and off site where this is not feasible.

Locally Important Sites

Development proposals affecting locally important sites should always seek to contribute to their favourable management in the long term. Where a proposal is likely to result in harm to locally important sites (including habitats or species of principal importance for biodiversity), developers will be required to accord with the following sequential approach:

- h) Firstly, seek an alternative site with a lesser impact than that proposed;
- i) Secondly, and if the first is not possible, demonstrate mitigation measures can be taken on site.
- j) Thirdly, and as a last resort, seek appropriate compensation measures, on site wherever possible and off site where this is not feasible.

Appendix G: Bats and Artificial Light

Artificial lighting is known to affect bat's roosting and foraging behaviour, with lighting resulting in a range of impacts that includes roost desertion (BCT, 2009), delayed emergence of roosting bats (Downs et al., 2003), increased activity of some bat species and decreased activity by others (Stone et al., 2012).

An experimental approach using LED units, demonstrated that relatively fast-flying bat species, including the common pipistrelle, showed no significant impacts as a result of new artificial lighting, even when lighting was set at relatively high levels close to 50 lux.

In contrast, slow flying bats such as the myotis bats (*Myotis* spp.) showed sharp reductions in presence, even at low light levels of 3.6 lux (Stone et al., 2012).

Current recommendations for all bat species specifies that no bat roost should be directly illuminated.

Due to the impacts of lighting, mitigation and sensitive lighting design schemes are required for projects where bats are present. These should include bat friendly lighting plans that should aim to avoid lighting wherever possible. If this is not possible, then the minimisation of any lighting impacts is required by adopting the following measures:

➤ **To introduce lighting curfews or use of PIR sensors.**

Lighting curfews can be an effective way of avoiding impacts on bats. These curfews may involve either turning off lighting or dimming light units at specific times of the night, dimming units at key times of the year, providing the luminaire allows for this option via a control unit. Lighting to be triggered by PIR sensors can be expected to be illuminated only when required and for a low proportion of time.

➤ **To consider no lighting solutions where possible.**

Options such as white lining, good signage and LED cat's eyes should be considered as preferable. Reflective fittings may help make use of headlights to provide any necessary illumination in some areas.

➤ **To use only high pressure sodium or warm white LED lamps where possible.**

High pressure sodium and warm white LED lamps emit lower proportions of insect attracting UV light than mercury, metal halide lamps and white LED lighting. Generally, lamps should have a lower proportion of white or blue wavelengths, with a colour temperature <4200 kelvin recommended (BCT, 2014).

➤ **To minimise the spread of light.**

The light spread should be kept at or near horizontal to ensure that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Baffles, hoods, louvres and shields should be used where necessary to reduce light spill.

➤ **To consider the height of the lighting column.**

While downward facing bollard lighting is often preferable, it should be noted that a lower mounting height does not automatically reduce impacts to bats as bollard lighting can often be designed to provide up-lighting. Where bollard lighting is considered to be the most appropriate system, bollard spacing or unit density should be kept to a minimum and units should be fitted with the appropriate hoods/deflectors to reduce any up-lighting.

➤ **To avoid reflective surfaces below lights.**

The polarisation of light by shiny surfaces attracts insects increasing bat activity (BCT, 2012). Consequently, surface materials around lighting require consideration.

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