

Site Wide Landscape and Ecology Management Plan Thatchers Cider



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Report Produced for Thatchers Cider

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EXECUTIVE SUMMARY

- This Landscape and Ecological Management Plan (LEMP) has been produced by Ethos Environmental Planning (Ethos) for Thatchers Cider, Myrtle Farm, Station Road, Sandford, Somerset (Central Grid Reference ST 42091 59651).
- The LEMP includes detailed prescriptions and timings regarding the creation of grassland, hedgerows, management of the attenuation pond, planted bunds and ecological provisions.
- The LEMP includes a schedule of works and timings which will be reviewed after the first five years.
- Specific timing of monitoring and any remedial actions required have been detailed within this report.
- Ecological constraints to the management plan include bats, birds, badger and reptiles.
- Ecological provisions for bats, reptiles, birds, and invertebrates have been provided.
- The LEMP provides a sustainable and achievable plan to achieve and manage the post construction habitats onsite.

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1. INTRODUCTION

1.1 Introduction

Ethos Environmental Planning (Ethos) have produced this consolidated Landscape and Ecology Management Plan (LEMP) for ecological stewardship of habitat at Thatchers Cider Company Ltd at Myrtle Farm, Station Road, Sandford, Somerset.

Over recent years development has included construction of new warehouses and processing facilities and creation of new habitats, including a large attenuation pond in the northwest and planted bunds in the west, south and central areas of the site.

This LEMP has been produced to detail the habitat creation, management objectives and actions required to deliver the recommendations outlined by the Ecological Assessments and Addendums relating to individual planning applications which are now consolidated into one site-wide plan. These include:

- 16/P/2171/FUL – Myrtle Farm Station Road (New Warehouse and attenuation pond)
- 18/P/4009/FUL Land to North of Myrtle Farm (Primary Processing facilities)
- 19/P/1089/FUL New Building (Roy Hunt), Myrtle Farm
- 20/P/0700/DEA Warehouse Demolition (phase 1)
- 20/P/2619/FUL Warehouse Extension (phase 2) and new building (Thatched Barn).

1.2 Site Location

The Thatchers Estate, approximately 16.6 hectares, is located at the northern end of the village of Sandford, Somerset (central grid reference ST 42091 59651) as shown in Figure 1. The site is comprised of orchard plantations, grassland, hedgerows, production warehouses, office facilities. Created habitats include an attenuation pond and planted bunds.

Figure 1 Site location



1.3 Scope

The LEMP sets out measures to maintain, protect and enhance the ecological value of retained and created habitats associated with development on the Thatchers Estate. After the first five years of management, the plan will be subject to review, which will inform the on-going management of retained and created habitats.

The LEMP also includes the methodology for monitoring of use of the site by bats at intervals of 1, 3 and 5 years, as specified in Habitats Regulations Assessment for the 20/P/2619/FUL Warehouse Extension (phase 2) and new building (Thatched Barn) application.

1.4 Background information

Various habitat surveys, protected species surveys and monitoring surveys have been carried out by Ethos on the Thatchers Estate since 2016 to present.

Surveys have included: phase 1 habitat surveys, UK habitat surveys and condition assessments, hedgerow surveys, updated walkover surveys; badger surveys, eDNA surveys, ground level tree assessments, structures inspections, bat emergence surveys, bat activity transect surveys and passive detector surveys. An overview summary of the results is set out below.

Outline Summary of habitat and protected species (past and present) on site:

- Two breeding badger setts on site – i) a long-established sett located in the embankment to the south of the lorry park. The sett extends under the concrete pad of the long warehouse. ii) an artificial sett located south of the attenuation pond, constructed in 2019. Confirmed in use in 2019, with evidence of breeding in 2020. Both setts confirmed to still be in use during 2022 surveys.
- Historic presence of common pipistrelle day roost and a soprano pipistrelle day roost (hanging tiles of warehouse) – lawfully destroyed in 2020 under a low impact licence and replacement roost provision (large multi-chambered bat box) installed on the gable of the reception building.
- Presence of Lesser horseshoe day roost (up to 2 bats from surveys to date) in the double pitch buildings in the SW of the site.
- Presence of a Whiskered bat maternity roost (confirmed by DNA analysis of droppings) in the attic of the retained cottage adjacent to the reception.
- A total of 13 species of bats have been confirmed using habitats on the estate, using hedgerows and grassland edge habitat between the orchard and hedgerows, for foraging and commuting. Species: common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Nathusius's pipistrelle (*Pipistrellus nathusii*), noctule bat (*Nyctalus noctula*), Leisler's bat (*Nyctalus leisleri*), serotine (*Eptesicus serotinus*), whiskered bat (*Myotis mystacinus*), Natterer's bat (*Myotis nattereri*), Daubenton's bat (*Myotis daubentonii*), brown long-eared bat (*Plecotus auritus*) lesser horseshoe bat (*Rhinolophus hipposideros*) and greater horseshoe bat (*Rhinolophus ferrumequinum*).
- Nesting and foraging habitat for a wide variety of birds across the site. Habitats also provide food resources for overwintering birds, including wintering thrushes.
- Suitable habitat for reptiles and amphibians in the boundary hedgerows and pond area.
- Presence of brown hare (section 41 species), and likely presence of polecat and hedgehog (section 41 species).

The full baseline conditions, survey results and the ecological assessment of the development works is detailed within the various ecological assessment reports that were submitted to support the planning applications as referenced Section 1.1 and listed in Table 1.

The planning applications and supporting ecological assessment reports from which the ecological measures are collated from are referenced below:

Table 1 Site Wide Planning Applications

Myrtle Farm, Station Road, Sandford	
16/P/2171/F	Erection of new warehouse building with ancillary facilities including a new access road, warehouse yard and car parking, lighting scheme, landscaping and surface water attenuation pond.

	<p><i>Ecological Assessment, Land at Thatchers Cider, Sandford, v2 Ethos November 2016.</i></p> <p>HRA (NSC)</p> <p><i>Ecological Addendum, Sept 2018 (external lighting)</i></p>
18/P/4009/FUL	<p>Land to the North of Myrtle Farm, Station Road, Sandford</p> <p>Erection of replacement primary processing facilities (Myrtle Mill), including access roads, landscaping, drainage, lighting, product pipe bridge and pedestrian footbridge.</p>
	<p><i>Ecological Assessment Primary Process Site, Thatchers Cider, v1, Ethos July 2018;</i></p> <p><i>Ecological Assessment Primary Process Bat Addendum (HRA screening), Ethos December 2018.</i></p> <p><i>HEP worksheet, v2, Feb 2019, HRA (Ecology Addendum and NSC)</i></p>
19/P/1089/FUL	<p>New Building (Roy Hunt), Myrtle Farm, Station Road, Sandford</p> <p>Demolition of Existing Structures and the erection of a new building to accommodate engineering, staff welfare and energy centre facilities, together with external landscaping.</p>
	<p><i>Ecological Assessment Roy Hunt Building, Thatchers Cider, Sandford, v3, Ethos February 2019;</i></p> <p><i>Ecological Assessment Roy Hunt Addendum, Ethos 2nd July 2019 (including HRA screening)</i></p> <p><i>HEP worksheet July 2019, HRA (Ecology addendum and NSC)</i></p>
20/P/0700/DEA	<p>Warehouse Extension and Meeting Rooms</p> <p>Extension of the existing warehousing building with meeting facilities above; the demolition of existing structures and the creation of the 'The Farmhouse' and 'The Thatched Barn' meeting facilities.</p>
	<p><i>Demolition Application:</i></p> <p><i>Thatchers Warehouse Demolition v2, April 2020</i></p> <p><i>Phase 2 Application:</i></p> <p><i>Bat Survey Thatchers Warehouse Extension and Meeting Rooms, v3 (Ethos, October 2020);</i></p> <p><i>Ecological Addendum v1 (Ethos, March 2021).</i></p> <p><i>Thatchers Warehouse Extension and Meeting Rooms shadow HRA, v2 (Ethos May 21 and NSC)</i></p> <p><i>HEP worksheet_ Warehouse extension phase 2, v2 May 21</i></p> <p><i>Biodiversity Net Gain metric (excluding HEP), May 21</i></p>
20/P/2619/FUL	

2. MANAGEMENT

3.1 Aims and Objectives of Management

Considering the intended functions of a LEMP, the following objectives for its creation and management have been set:

1. Enhance and maintain the attenuation pond to manage rainwater run-off and provide a water resource for biodiversity;
2. Strengthen the boundaries of the site as wildlife corridors through the enhancement existing hedgerows;
3. Maintain the artificial and natural provisions on site to ensure their continued use for protected species;
4. Provide new habitats through the relaxation of current management practices, focusing on the hedgerows and grassland present;
5. Replace and provide new trees (to include fruiting species) across the site to retain foraging opportunities for a range of species; and
6. Keep the natural areas free from litter and construction or site debris.

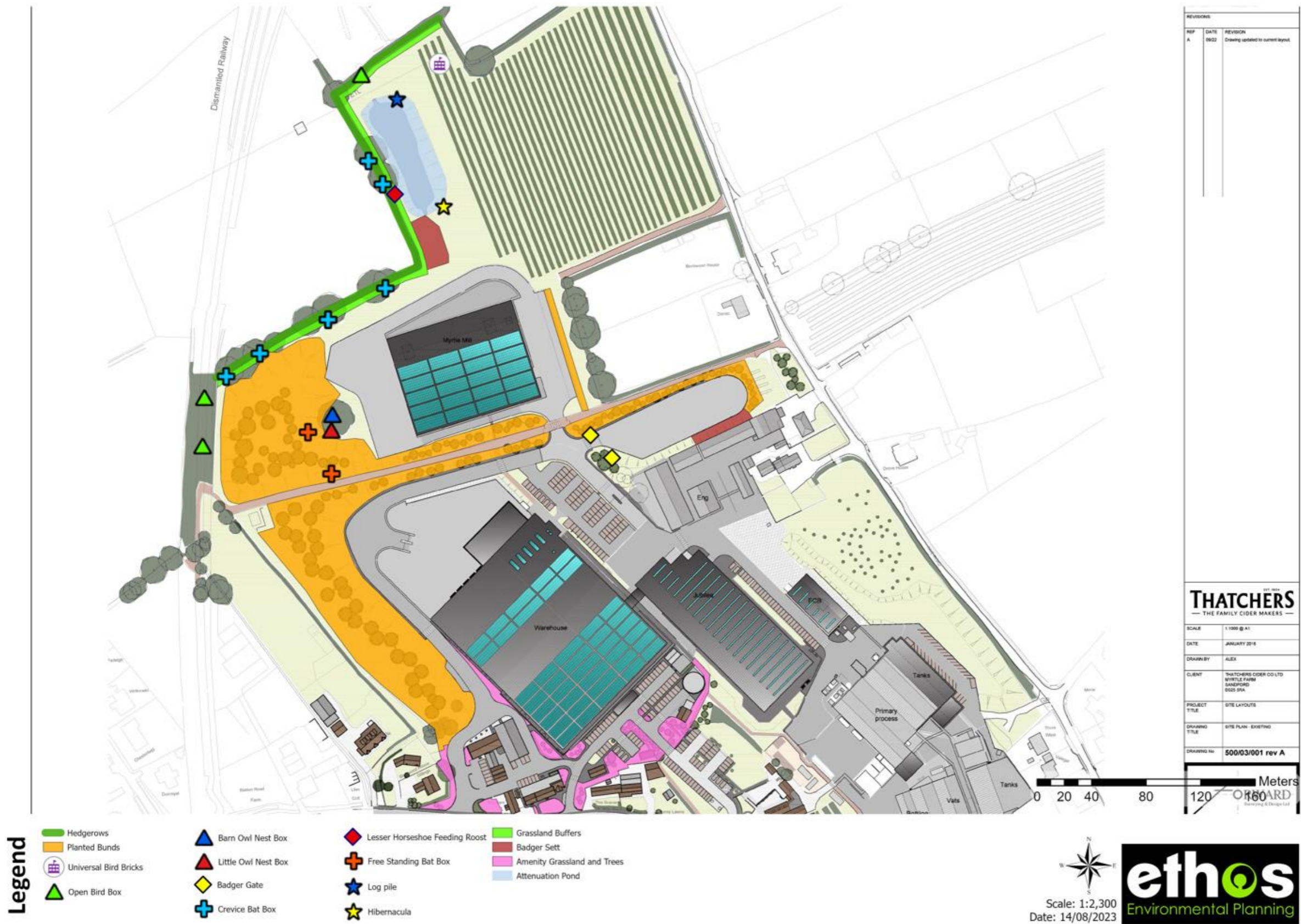
2.2 Management Constraints

Management cannot be undertaken that would result in offences under protective legislation. As such, management would ensure conformity with the Wildlife and Countryside Act (WCA) 1981 (as amended), the Conservation of Habitats and Species Regulations 2017 as Amended and the Natural Environment and Rural Communities (NERC) Act 2006. The following provides a list of the key faunal groups that have been identified at the site through ecological surveys undertaken to date, along with consideration for how management prescriptions for the habitats at the site should take account of the presence of these species:

1. Bats – Maintain suitable foraging and roosting habitat for bats, namely the tree-lined hedgerows, pond, and where possible enhance retained habitat features;
2. Birds – Maintain habitats of value to breeding birds at the site, namely short meadow grassland, hedgerows and trees. Enhance the site for birds through increased provision of these habitats. Management hedgerows should be timed to avoid the bird nesting season (March-August inclusive). Grassland cuts should be undertaken in a manner which seeks to avoid killing/injury of nesting birds;
3. Badger – Maintain and enhance commuting and foraging habitats for badger to ensure the species can continue to utilise the site post-construction. Protection of badger setts and gated safe tunnels;
4. Reptiles and amphibians – Maintain and enhance foraging and sheltering habitats with value to reptiles and amphibians, including creation of refugia piles and sensitive management of grassland areas around hedgerows and the pond; and
5. NERC species – Enhance hedgerow and grassland for foraging and sheltering opportunities for brown hare and hedgehog.

3. HABITATS AND MANAGEMENT SPECIFICATION

Figure 2 Landscape drawing illustrating habitat management



3.1 Grassland buffers

The grassland adjacent to the existing northwest boundary hedgerow, as indicated on the landscape map, will be enhanced for biodiversity. This area will be seeded with a species-rich grass and wildflower mix and subjected to a relaxed management regime for wildflowers and long grasses to develop. The seed-mix recommended is *Emorsgate Hedgerow Mixture EH1* or similar (approved by appointed ecologist). The margins should be cut infrequently outside of the growing season. The grassland may require more management in the early years of establishment to prevent nutrient rich plants dominating. See Section 7 for monitoring details and timeframe.

3.1.1 Creation

- In autumn or early spring cut the grass to ground level in the identified 'buffer' area alongside the northern boundary hedgerows; and scarify to expose the soil;
- Surface sow the seeds, which can be by machine or applied by hand. Use *Emorsgate Hedgerow Mixture EH1* or similar;
- Firm in with a roll or by treading to give the soil contact with the seed.

3.1.2 Management

- A longer sward grassland buffer should be maintained in the zoned 'buffer' area;
- Dominant weeds, outgrowths of scrub and litter will be removed;
- Additional cuts may be required during the first two years of establishment;
- Annual cuts should be undertaken between September and November to minimise the effects on wildlife;
- Arisings should be removed or composted within a designated area on site to be used for reptile sheltering and breeding sites.

3.2 Amenity grassland and trees

The grassland verges around the car parks and vehicle access roads will be enhanced for pollinators and native trees planted to improve the overall ecological value of the site. The grassland will be seeded with *Emorsgate Flowering Lawn Mixture EL1* or similar and cut once a month during the growing season to a *minimum* of 5cm. This will encourage a high-nectar yield, whilst maintaining a suitable tread height. See Section 7 for monitoring details and timeframe.

3.2.1 Creation

Grass verges

- In autumn or early spring, cut the grass to ground level and scarify.
- Use *Emorsgate Flowering Lawn Mixture EL1* or similar (approved by appointed ecologist). Surface sow the seeds, which can be by machine or by hand.
- Firm in with a roll or by treading to give the soil contact with the seed.

Trees

- Native tree species will be planted interspersed in the grassland verges, such as rowan (*Sorbus aucuparia*), field maple (*Acer campestre*), spindle (*Euonymus europaeus*), holly (*Ilex aquifolium*) and silver birch (*Betula pendula*);
- During periods of drought, newly planted and young trees should be watered by saturating the ground to ensure the water soaks to the roots.
- Young saplings should be protected using non-plastic tree guards and kept erect using canes, poles or stumps.
- Suppress weeds in the first 2-3 years through mulching i.e., bark chips.

3.2.2 Management

Grass verges

- The wildflower and grass species in this mix will be slow to germinate and grow and will not usually flower in their first growing season;
- There will often be a flush of annual weeds from the soil in the first growing season. This annual weed growth is easily controlled by repeated mowing;
- Mow once a month at minimum 5cm in height to permit flowering. Mowing can be relaxed from late June. Cut again when the sward gets untidy (after 4-8 weeks);
- Heavy quantities of cuttings should be collected and removed or composted on site.

Trees

- Trees with guards and support structures should be checked regularly for damage i.e., fallen trees, pests etc;
- Biodegradable tree guards may be removed from trees when they start to split, usually after 5-10 years;
- The trees will be pruned to horticultural standards.

3.3 Attenuation pond

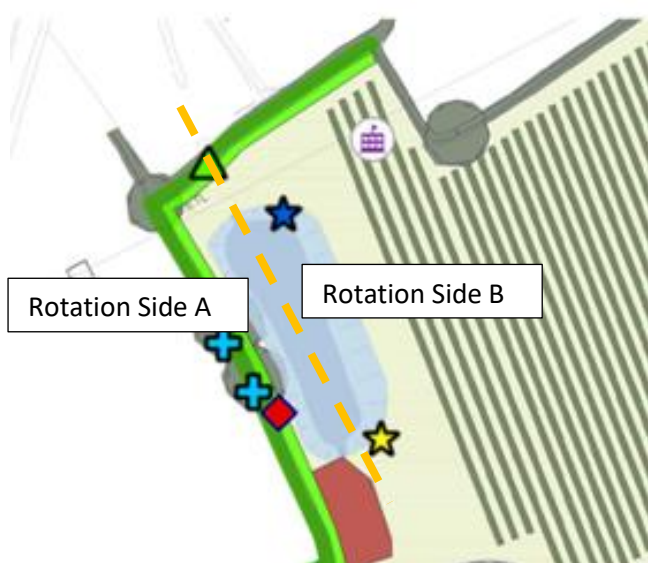
The attenuation pond in the north of the site will be managed to provide a valuable water source for wildlife and assist towards sustainable water management. The pond will be sensitively managed for wildlife by ensuring an appropriate balance between open water, aquatic vegetation, and terrestrial plant-growth in the pond margins. The habitat immediately adjacent the pond will be maintained, including the reptile hibernaculum and log piles. See Section 7 for monitoring details and timeframe.

3.3.1 Management

- The pond will be allowed to colonise with plants naturally;

- Where there is excess detritus (i.e., dead leaves build-up), these should be removed to prevent nutrification;
- Pond surface will be monitored to ensure there is always some clear surface water present;
- Edge habitats should be maintained and will include a once annual cut of the grassland and removal of the arising on rotation on Side A and B to ensure there is always some long grassland present;
- The log piles and hibernaculum will be replenished with fresh material collected from grass arisings and sticks.

Figure 3 Rotational cut of the long grassland by the attenuation pond from Side A to Side B



3.4 Hedgerows

Any gaps in the hedgerows on the northern and eastern boundary will be bolster planted as and when necessary to retain and enhance the ecological connectivity of wildlife corridors across the landscape. If gap planting is identified, suitable native species include hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), guelder rose (*rosa spp.*), holly (*Ilex aquifolium*), spindle (*Euonymus europaeus*), field maple (*Acer campestre*) and dogwood (*Cornus sanguinea*).

Management of the hedgerows will be relaxed to promote dense growth, and to a height of 3m. See Section 7 for monitoring details and timeframe.

3.4.1 Gap planting

- Any gaps appearing within hedgerows will be planted with whips of native species at an appropriate density.
- The whips will be planted when trees are dormant between November and March;
- Non-plastic and biodegradable tree guards are to be used where necessary.

3.4.2 Management

- The new whips should be frequently trimmed within the first five years to ensure dense structure;
- The mature hedgerows should be cut on rotation once every three years on alternate sides (left/top/right) to ensure high fruit production;
- The hedgerows will be maintained with high basal density, which will be achieved by allowing bramble and other scrub species to grow at the base of the hedgerows. This will provide foraging and nesting habitat for birds, hedgehogs, and invertebrates;
- The hedgerow will be cut between January and February to avoid impacts on wildlife (e.g., nesting birds) and to ensure high fruit production.

3.5 Planted bunds

The planting of native tree and shrub species on grassland bunds around the edges of the site will ensure that protected and notable species can continue to utilise the area as a commuting corridor. They consist of a mix of species, which will add to the biodiversity of the site and in turn, provide a diversity of pollen and nectar resources for invertebrates; and food sources for other wildlife.

The planted bunds are located to the north-east of the site around the edges of the lorry park and to the north-west along the site entrance and adjacent the Public Right of Way. The north-western area will comprise coppiced woodland and managed to promote a variety of structure between the topography of the grasses and woody species present. See Section 7 for monitoring details and timeframe.

- During periods of drought, newly planted and young trees should be watered by saturating the ground to ensure the water soaks to the roots;
- Suppress weeds in the first 2-3 years through mulching i.e. bark chips;
- Young saplings should be protected using non-plastic tree guards and kept erect using canes, poles or stumps;
- Trees with guards and support structures should be checked regularly for damage i.e. fallen trees, pests etc;
- Tree guards should be removed from trees when they start to split and before starting to disintegrate, usually after 5-10 years;
- The woodland compartments will be thinned once every five years by coppicing on rotation.

3.6 Ecological Provisions

The site will be enhanced for wildlife through the inclusion of ecological provisions for target species, including birds, bats and reptiles. The ecological provisions will be designed/recommended and located under the guidance provided the consultant ecologists. See Section 7 for monitoring details and timeframe.

3.6.1 Management

- Clean the owl boxes located on site once every 3 years in November – December only during the evening.
- Repair and replace bird and bat boxes of similar make and model where needed;
- Ensure the Lesser Horseshoe bat roost and bat boxes on poles are free from obstruction and in good repair; replace where necessary.
- Replenish reptile hibernaculum and log piles with fresh materials as needed, being careful not to disturb materials at the bottom;
- Ensure the invertebrates posts are erect in good repair, replace where necessary.

4. WORK SCHEDULE

This section sets out the work schedule for executing the recommendations outlined in the LEMP for the first five years, see Table 2. After which, this management should be reviewed and updated where necessary.

Table 2 Work schedule for establishing and managing the LEMP

Feature	Rationale for Feature Creation/Management	Management Tasks <i>'Years' are referred to in line with the monitoring periods conditioned</i>	Timing
1 Grassland buffers	To create areas of long grass to support a variety of species foraging, nesting and sheltering i.e., reptiles, birds and invertebrates	<p>Year 1: Prepare ground in March by removing ruderal vegetation to ground level, scarify and seed. Control the growth of vigorous weeds. Cut the grass in autumn and remove the arisings.</p> <p>Annual management: Cut in autumn and remove arisings. Cut early in the year before spring if a mild winter and dominant weeds/docks emerging early.</p>	March, September - November
2 Amenity grassland and trees	To increase botanical diversity of grassland whilst maintaining manageable tread height. This will benefit pollinating invertebrates.	<p>Year 1: Plant native trees, mulched with bark chippings and supported with tree guards and posts/canes.</p> <p>Year 2: Prepare the grassland verges in March <u>or</u> September by mowing low to the ground, scarify and seed. Control the growth of weeds through repeated mowing at <i>minimum</i> 5cm. The wild flower and grass species in this mix are perennial; they will be slow to germinate and grow and will not usually flower in their first growing season.</p> <p>Annual management: Trees should be watered in periods of drought and checked regularly, replacing guards/canes, and mulching when necessary.</p> <p>Annual management: Cut the grass monthly during the growing season at a <i>minimum</i> 5cm height until late summer when mowing can be relaxed to 4-8 week intervals. This will allow low growing herbs to flower. Arisings will be removed from site or composted on site.</p>	March - September

Feature	Rationale for Feature Creation/Management	Management Tasks <i>'Years' are referred to in line with the monitoring periods conditioned</i>	Timing
3 Attenuation Pond	To provide a pond suitable to support a variety of species including invertebrates, amphibians, reptiles, foraging bats and birds.	The pond has been created on site and established for a few years. Annual management: The pond will be maintained annually to keep the pond in good health; this will include keeping habitats balanced (i.e., open water, marginal/surface vegetation). The grassland will be cut once annually on rotation for Side A then B to ensure an area of long grassland is always present.	September - March
4 Species-rich hedgerows	To improve ecological connectivity around the boundaries of the site and across the site, which will benefit a variety of species including bats, birds, badger and invertebrates.	<i>Bolster gap planting/width enhancing:</i> Year 1: If gap planting needed: Plant whips with stakes, shrub guards and bark mulch to suppress weed growth. Check monthly throughout the first year and water if necessary. Years 2-5: Trim the newly planted whips frequently to ensure low growing density. Annual Management: rotational cutting (once every 3 years) of mature hedgerows on alternate sides and or/sections.	November - March whip planting January - February management
5 Planted bunds	To improve ecological connectivity around the boundaries of the site and across the site, which will benefit a variety of species including bats, birds, badger and invertebrates.	<i>Woodland Copse / linear hedges on Katy Way bunds:</i> Year 1: Plant Saplings / Plant whips with stakes, shrub guards and bark mulch to suppress weed growth. Check monthly throughout the first year and water if necessary. Years 2-5: Trim the newly planted whips frequently to ensure low growing density. Annual management (woodland areas): Remove grass and weeds from ground level to avoid outcompeting whips and mulch semi-mature trees in the winter.	October - February

Feature	Rationale for Feature Creation/Management	Management Tasks <i>'Years' are referred to in line with the monitoring periods conditioned</i>	Timing
		<p>Annual Management (hedgerows): rotational cutting (once every 3 years) of mature hedgerows on alternate sides and or/sections.</p> <p>Year 5: The woodland compartments will be coppiced once every five years on rotation</p>	
6 Ecological Provisions	To upkeep and maintain the bird and bat features and reptile hibernaculum from falling into disrepair	<p>Purchased and installed as to the style and location recommended.</p> <p>Annual management: Replaced/ refurbished as and when necessary</p>	October – December (bird and bat boxes)

5. ANNUAL MANAGEMENT

The recommended time periods during the year for carrying out the habitat management and provisions maintenance is set out in table 3.

Action	Months											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Remove vigorous weeds from the grassland												
Once annual cut for long grassland, including buffers and margins of pond												
Once monthly cut for amenity grassland												
Water trees in periods of drought												
Establishing hedgerows - trim whips												
Mature hedgerows – rotational cutting management												
Mulch trees with bark chippings												
Replace/repair bird and bat boxes												

Table 3 Recommended timings for habitat and species provisions management

6. RESPONSIBILITIES, MONITORING AND REMEDIAL ACTIONS

This section includes details on monitoring and remedial actions, a timeframe for reviewing the plans and details on how this LEMP will be communicated to the Thatchers Cider Grounds Team.

6.1 Remedial Measures

- Trees will be restocked or removed if diseased or damaged;
- The hedgerows, grassland, pond and trees will be monitored by Thatchers and the appointed ecological consultants, subsequent changes to the management will be provided after the first 5 years;
- The grassland sections will be monitored after sowing to check whether seeds have taken. Further actions will be recommended regarding re-sowing;
- A monitoring report will be produced annually and an update of the LEMP will be issued if significant changes are required.

6.2 Monitoring Actions

Table 4 Summary of ecological features and monitoring

Feature	Responsible Persons	Description of Monitoring	Timing
Badger gates	Thatchers	Check the badger gates marked on the map swing freely to allow commuting under the lorry park.	Biannually
Lesser Horseshoe roost	Licensed bat ecologist	The bat roost will be monitored in line with the HRA (and bat licence if required)	Years 1, 3 and 5
Grassland	Thatchers	Check establishment of seeds, monitor for undesirable species (e.g. docks, thistles, ragwort, nettles) and remove as necessary.	Biannually May - August
Bird provisions	Thatchers	The provisions should be checked for evidence of breeding birds and cleaned if required. Any damaged/missing boxes should be replaced. Owl boxes should be cleaned out every 3 years in November – December only.	Cleaning if required November – February
Hedgerows and trees	Thatchers	If gap planting is undertaken, dead or dying plants will be removed and restocked.	As required.

Feature	Responsible Persons	Description of Monitoring	Timing
<p>Attenuation Pond</p>	<p>Thatchers / Ecologist</p>	<p>The overall health of the pond will be regularly monitored and reviewed. At appropriate intervals, an ecologist will survey for any presence for invasive species, assess the spread of bulrush (<i>Typha latifolia</i>) and provide any recommendations to retain the quality of the pond.</p>	<p>May - August</p>

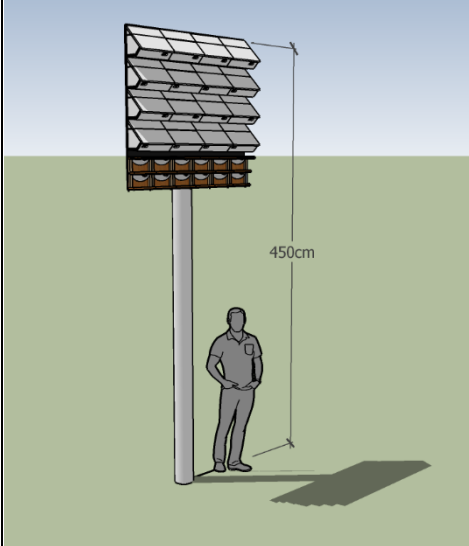

6.3 Responsibilities for Implementation of the LEMP and Future Monitoring and Maintenance

Thatchers Cider Company will be responsible for the implementation of the LEMP from point of approval, review updates and any specified monitoring periods (such as years 1, 3 and 5 for the lesser horseshoe roost), under guidance from their appointed ecological consultants.

7. ECOLOGICAL PROVISIONS



7.1 Bird Tower and Horseshoe Roost


Planning applications 16/P/2171/F recommended 10 bird boxes to be installed on retained trees across the site; 19/P1089/FUL recommended a further 6 bird boxes, and future applications may recommend nesting provisions as enhancement measures on the Thatchers Estate. It is therefore proposed and recommended to consolidate the bird provisions into a 'bird tower', which can also target species of conservation concern, including swift, house sparrow and house martin.

Provision	Description	Installation
 <p data-bbox="193 1247 683 1317">Example 'Bird Tower' as sketched by Green Earth Habitats</p>	<p data-bbox="687 824 914 1003">Species: Target species, Swift, House Sparrow, and House Martin</p> <p data-bbox="687 1037 914 1182">A bird tower designed to consolidate bird provisions.</p>	<p data-bbox="919 880 1350 1126">To be installed in most northern corner of the site or where most appropriate. It will face North or East to avoid the heat of the sun and be positioned out of the prevailing wind, which typically runs west to south.</p>
 <p data-bbox="193 1912 683 1933">St Vincent Lesser Horseshoe Bat Roost</p>	<p data-bbox="687 1451 914 1597">Species: Lesser Horseshoe Feeding/Night Roost</p> <p data-bbox="687 1630 914 1776">Comprising a pitched roof of plywood and bitumen felt.</p>	<p data-bbox="919 1529 1350 1731">To be installed adjacent the attenuation pond. Management required to keep the roost in the correct location, away from the brambles and free from obstruction.</p>

7.2 Bird and Bat Boxes

Provision	No.	Description	Installation
 <p>CJ Wildlife open-front box</p>	4	<p>Species: Wren, Robin, Flycatcher, Wagtail (pied & grey), Song Thrush and Blackbird</p> <ul style="list-style-type: none"> • 19 x 24 x 17.5 cm <p>Woodstone box with removable front panel & 10-year guarantee. Open-fronted box essential for these species</p>	<p>Install within hedgerows as indicated on Figure 2, on posts in hedgerows if necessary, approx. 2m high minimum of 10m intervals</p>
 <p>RSPB recycled plastic Barn Owl Box</p>	1	<p>Species: Barn owl</p> <ul style="list-style-type: none"> • Width 57 cm Depth 49 cm Height 67 cm Weight 11.2 kg <p>This nest box features a cleaning hatch, a large landing shelf and a fledgling exercise area. It has a flat roof to provide further room for the young owls to exercise their wings.</p> <p>With the sides of the nextbox made from waterproof recycled plastic, this FSC® certified wooden box is designed to withstand all weather conditions.</p>	<p>Fix as indicated on Figure 2 to the mature standard oak.</p> <p>Face the entrance East/NE/SE - away from the prevailing wind.</p> <p>In all cases the box should have a clear flight path to the entrance. Height of the top fixing point should ideally be between 3 - 5m (10 -16 ft)</p> <p>Where possible, boxes should be installed where perches such as branches are available for emerging owlets.</p> <p>Fix box at top and bottom fixing points using a suitable strong fixing and if necessary, brace the box using additional fixings. Ensure all fixings are tightened securely but do not over-tighten against the bend, as this may damage to the box.</p>

Provision	No.	Description	Installation
 <p>CJ Wildlife Little Owl Box</p>	1	<p>Species: Little owl</p> <ul style="list-style-type: none"> • Width 32 cm Length 94 cm Height 31 cm Nest box hole size 70mm <p>Made from exterior grade plywood with a bitumen-covered lid for added protection, the box has a separate nesting area at the back, which appeals to the Little Owl's natural preference for nesting in dark cavities.</p>	<p>Fix as indicated on Figure 2 to the mature standard oak.</p> <p>Locate at any height where the box is free from predation or interference and locate it in a quiet area on an accessible branch.</p>
	6	<p>Species: Crevice dwelling bats</p> <ul style="list-style-type: none"> • 11 x 19 x 11 cm inner chamber • Removable wooden grooved board that provides two c. 28 mm wide crevices if required. • Additional wooden crevice of c. 20 mm wide on the front panel. • Two entrance slots, one at the front (approx. 20 x 70 mm) and one on the base (approx. 30 x 85 mm) of the box. • Internal baffle on the front entrance to discourage birds from using the box. 	<p>Installed as indicated on Figure 2 between 3-6m in a sunny and sheltered position. Situated on tree in the eastern and north-eastern hedgerow boundary.</p>

Provision	No.	Description	Installation
 Pole mounted roost box	2	Crevice boxes designed for crevice dwelling bats such as common and soprano pipistrelles and brown long-eared mounted at 4m. N.B. Image shows single box	To be installed as indicated on Figure 2 in a sunny location near vegetation.

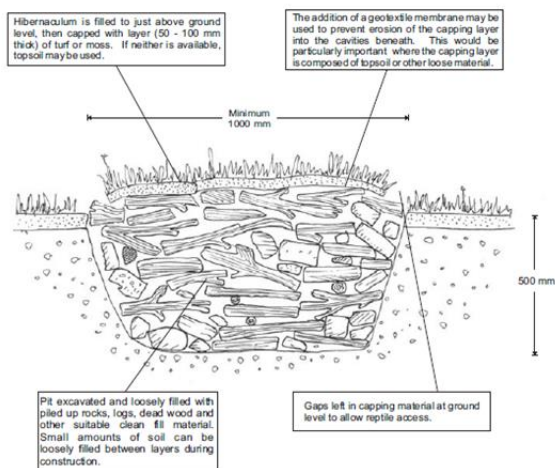
7.3 Reptiles

A below ground reptile hibernacula to be installed next to the attenuation pond as indicated on Figure 2.

ANNEX D HIBERNACULA DESIGN



Hibernaculum on free-draining ground

Where ground conditions allow, the hibernaculum should be incorporated into a shallow pit. This design is more likely to remain frost-free, and will be less obtrusive and thus unlikely to be subject to interference.



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7.4 Invertebrates

Provision	Description	Installation
 <p data-bbox="204 577 312 607">Log piles</p>	<p data-bbox="699 282 900 524">A log pile consisting of different size logs and sticks, held together using 4 wooden posts.</p>	<p data-bbox="927 349 1334 488">Installed in sunny locations in the margins of the attenuation pond and on the planted bunds along the Public Right of Way.</p>
 <p data-bbox="204 954 427 983">Invertebrate posts</p>	<p data-bbox="699 707 900 882">A 2-3m tall invert post with different size holes for various species.</p>	<p data-bbox="927 752 1334 846">Installed along the planted bunds along the Public Right of Way in sunny locations.</p>