



Biodiversity Enhancement & Mitigation Plan

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Report	Biodiversity Enhancement & Mitigation Plan (BEMP)
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Client	Lonmer Construction
Date of Issue	9 th September 2026
Updates	N/A
Status	Final for submission

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1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd were commissioned by Lonmer Construction to produce a Biodiversity Enhancement & Mitigation Plan (BEMP) for the Site known as Mortimers Farm, Eastleigh to discharge Condition 13 of planning permission F/22/94435. Condition 13 states:

‘13. Prior to first occupation a Biodiversity Environmental Management Plan (BEMP) shall be submitted to and approved in writing by the Local Planning Authority. The BEMP shall include the following:

- a) Details of all biodiversity mitigation, compensation and enhancement measures and proposed specifications.*
- b) Details of maintenance and management regimes.*
- c) Timings for the implementation / carrying out of the biodiversity mitigation, compensation and enhancement measures.*
- d) Details of management responsibilities including the body or organisation responsible for implementation of the BEMP and details of the legal and funding mechanism(s) by which this will be secured.*

The works shall thereafter be carried out and managed in accordance with the approved details.

Reason: In the interests of amenity and to ensure the protection of wildlife and supporting habitat found on the site and to provide.’

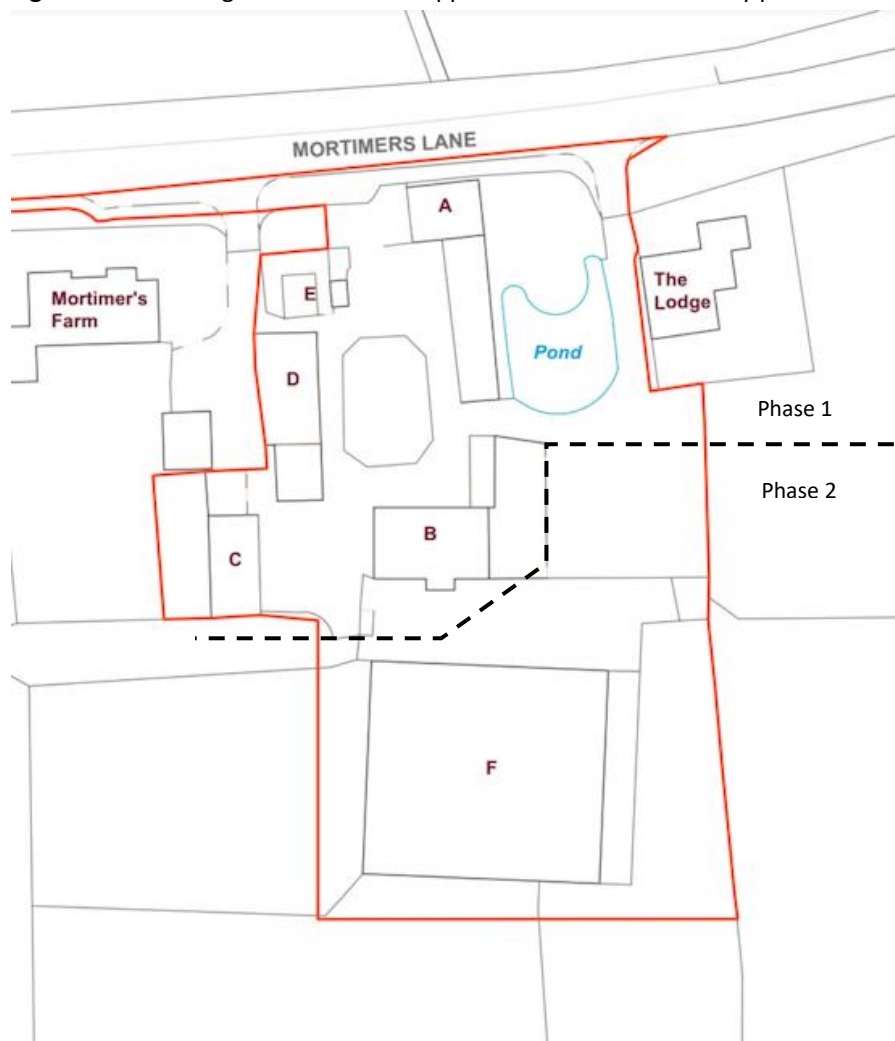
1.2 Aim

The aim of this report is to devise a site-wide Biodiversity Enhancement & Mitigation Plan (BEMP) to contribute towards a net gain for biodiversity post-development. This will ensure all features of ecological value and all legally protected species are protected, that their presence on Site is retained in perpetuity.

1.3 Site Description

The site comprises a number of farm buildings associated with Mortimers Farm, Eastleigh, SO50 7EA (centred on OS grid reference SU 50843 18930). The site is bounded by agricultural fields to the east and south, a residential property to the west and Mortimers Lane to the north (**Figure 1**). The immediate surrounding environment is semi-rural, with the farm being situated within agricultural land close to the suburbs of Eastleigh.

Figure 1. Aerial image of the site with approximate redline boundary provided.



1.4 Proposed Plans

Alterations, extensions and conversions of 4 existing barns including Grade II listed Threshing Barn and Granary to create 4 dwellings, demolition of modern barn and construction of 5 new dwellings with associated gardens parking and car port/bat barn new sewerage treatment and new footpath on the southern side of Mortimers Lane.

2.0 ECOLOGICAL BASELINE SUMMARY

Full details and results of the survey work can be found within the Ecological Appraisal (EA) (Ecosupport 2022).

2.1 Habitats

The vegetation within the site has been described below using the broad Phase I habitat classification terminology as described with JNCC (2010). The below species noted should not be considered an exhaustive list and instead refer to dominant, characteristic and other noteworthy species associated with each community within the survey area. The habitat types on site comprise:

- Modified grassland
- Scattered trees
- Standing water
- Hardstanding
- Bare Ground
- Buildings

2.2 Bats

2.2.1 Pre-existing data

Hampshire Biodiversity Information Centre (HBIC) provided records for up to 66 records of bat within 1 km of the development site comprising an unidentified bat species (*Chiroptera sp.*), 2 unidentified *Myotis spp*, 3 unidentified Pipistrelle species (*Pipistrellus spp.*), 33 Common Pipistrelles (*Pipistrellus pipistrellus*), 3 Soprano Pipistrelle (*Pipistrellus pygmaeus*), a Long-Eared Bat species (*Plecotus sp.*) and 4 Noctule (*Nyctalus noctula*). The closest records are for *Myotis spp*, Pipistrelle, Soprano Pipistrelle and Noctule located 0.44 km west. It is not clear whether any of these are roost records.

2.2.2 Tree PRA

An exhaustive assessment of trees was not completed during the Phase I, however should any trees be directly impacted upon by the proposals, a full ground level tree assessment should be carried out to determine their roost potential (with appropriate survey recommendations made as required).

2.2.3 Building PRA

The findings of the initial bat roost assessment undertaken of the built structures located on site is provided in **Table 2** below.

Table 1. Bat roost assessment of buildings on site and notes on any evidence of occupation observed.

Building No	Fig	Description of Construction	PRFs / Evidence of Occupation	Assessed Roost Potential
Building B	Figure 2. Barn to the south of the amenity grassland. 	Large L shaped barn of wooden overlapping weather boarding construction with a pitched clay tiled roof and wooden frame internally. The roof tiles were largely without any sarking underlining and gaps for direct access into building present in multiple locations (doors are usually left open as well). Building over 150 + years old.	Multiple broken, slipped and lifted tiles, gaps in mortise and tenon joints along with PRFs between wooden boarding used on external walls. Found evidence of bats in the form of <i>Brown Long Eared Droppings</i> , <i>Natterers Droppings</i> and Common Pipistrelle droppings (200+ in total), urine staining and feeding remains (moth wings).	High / Known Roost
Building A	Figure 3. Barn to the north-east of amenity grassland. 	Second large L shaped barn of more modern construction with red brick walls and a pitched clay tiled roof. Part of the building is used for machinery storage and part as a car port.	Multiple broken, slipped and lifted tiles. Found evidence of bats in the form of <i>Plecotus</i> spp droppings Bat droppings and Pipistrelle droppings (30+ in total), and urine staining.	High / Known Roost

Building D	Figure 4. Outbuilding to the far west of the site. 	Former stable block that has been partially converted into accommodation with dormer added on first floor. Building of red brick wall construction (2 brick buttress supports on eastern elevation) with pegged clay tiled roof and clay tile hanging on dormer.	Multiple broken, slipped and lifted tiles on both roof and tile hanging dormer on eastern roof pitch. Evidence of bats found between tile hanging on upper floor with suspected <i>Pipistrellus</i> spp droppings adhered between tiles	High / Known Roost
Building C	Figure 5. Cattle barn to the west of the amenity grassland. 	Open fronted cattle barn (still used for that purpose) of wooden overlapping weather boarding construction with a pegged clay tile roof (no sarking underlining present).	Multiple broken, slipped and lifted tiles, gaps in mortise and tenon joints along with PRFs between wooden boarding used on external walls.	High / Known Roost

Building E	Figure 6. Small storage barn in northwestern corner of site. 	Small wooden storage barn / shed formally used as a grain store (raised on saddle stones). Building of wooden slatted construction with a pegged clay tile roof.	PRFs noted between roof tiles and a low number of suitably sized gaps between external wooden boards. Internally, building was heavily cobwebbed throughout.	High / Known Roost
Building F	Figure 7. Large agricultural barn within the southern portion of the site 	Large metal framed agricultural barn with single skinned corrugated metal and asbestos roof with single skinned wooden walls.	Due to the nature of the construction of the building, it does not provide the thermal stability required by bats. Additionally, there were no noted PRF's within the building and no evidence of bat occupation or feeding was identified.	Negligible

2.2.4 Emergence survey results (May-July 2021)

All surveys were completed in suitable weather conditions. They were undertaken between temperatures of 11 and 23°C on dry days with only one survey having a small amount of light rain. The wind was limited on all surveys with the highest recording at 1 on the Beaufort scale. The summary of the results of the bat emergence and re-entry surveys are below.

2.2.4.1 Survey 1

Activity during this survey was considered moderate to high, with numerous bats emerging from buildings and multiple individuals foraging around the pond; species diversity was high with 6 species recorded. Common Pipistrelles dominated the activity, with 24 individuals emerging from Building D's hanging tiles between 20:38 and 21:18. Fourteen Soprano Pipistrelles were recorded commuting and briefly foraging through the site between 21:06 and 21:37, having first emerged from Building B's wooden cladding at 20:56. Ten Brown Long-eared Bats emerged from Buildings B and C between 21:11 and 21:24, with 5 later observed grouped together at the ridge beam in Building B's western barn portion by the survey's end. Two Serotines were recorded as high-north-south (HNS) passes, one *Myotis* species (likely Daubenton's) foraged briefly over the pond at 21:32, and two Noctules were detected as HNS at 21:39 and 22:04.

2.2.4.2 Survey 2

This survey recorded moderate to high activity with bats emerging from buildings and foraging within building internals, though species diversity was moderate at 4 species. Thirty-four Common Pipistrelles flew from Building D between 21:17 and 21:51, with individuals later foraging around the pond and within buildings until 22:18 and swarming around Building D to roost between 22:25 and 22:48. Only two Soprano Pipistrelles were detected, commuting south at 21:43 and foraging north at 22:05. At least 12 Brown Long-eared Bats were observed within Building B by the survey's end, with 5 foraging inside and 7 grouped at the western ridge beam. A single *Myotis* species (likely Natterer's based on eDNA and call analysis) foraged within Building B's internals from 22:06 to 22:18 and was understood to have returned to roost between the sarking boarding and roof.

2.2.4.3 Survey 3

Moderate to high activity was observed during the dawn survey, with moderate species diversity of 5 species. Forty-five Common Pipistrelles were recorded, with 44 re-entering to roost beneath Building D's hanging tiles between 04:21 and 05:04 after swarming in groups of up to 8 near the mature oak tree south of the building, plus one individual re-entering Building E's ridge tile at 04:43. Brown Long-eared Bats commuted and foraged through the site between 03:36 and 04:11, flying around Buildings B and C but with no re-entries to Buildings A, D, or E observed. A *Myotis* species (likely Daubenton's) foraged over the pond from 03:41 to 04:00 before commuting north. Two Serotines foraged around trees near the pond between 03:54 and 04:17 before departing south, while two Noctules were recorded commuting high over the site at 04:26 and 04:41.

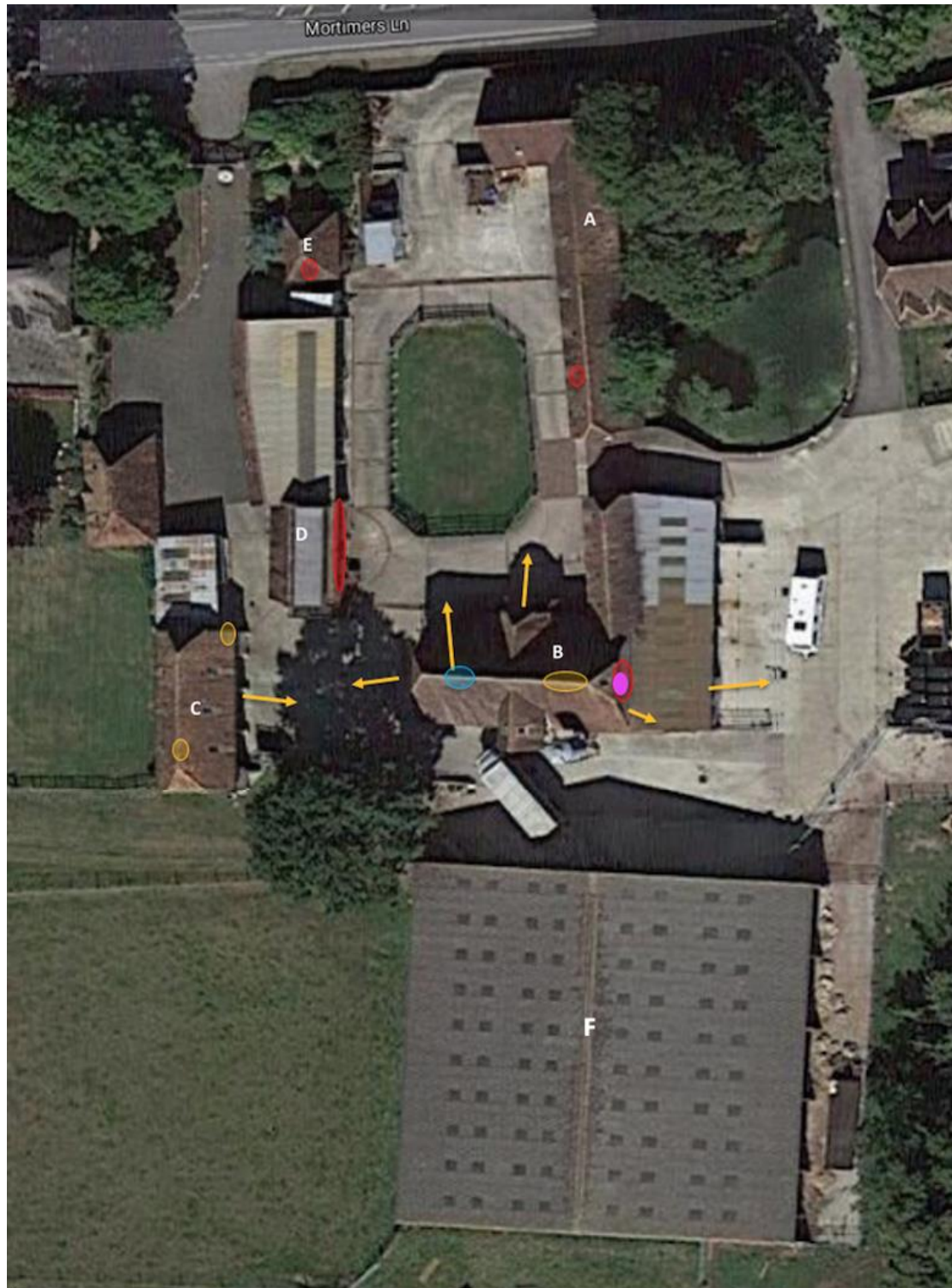
2.2.4.4 Survey 4

This dawn survey recorded moderate to high activity with bats around roost locations, though species diversity was low at only 3 species. Brown Long-eared Bats dominated the activity, with 18 individuals entering Building B through multiple roost entry points between 03:55 and 04:26. They roosted between the sarking boarding and roof near the eastern ridge beam, plus 4 more entered Building C between 04:12 and 04:24 to roost in the southern area. Common Pipistrelles were constantly active around Building D and the nearby oak tree from 04:41. Two individuals re-entered to roost beneath Building B's eastern wooden cladding at 04:41 and 04:45, while others foraged around Building B's externals between 04:14 and 04:37. Two Serotines returned to roost beneath Building B's eastern wooden cladding at 04:35 and 04:41, marking the final species recorded.

2.2.4.5 Survey 5

Moderate to high activity was recorded with bats emerging from buildings and foraging across the site, particularly around the pond, with moderate species diversity of 5 species. Forty-two Common Pipistrelles emerged from Building D's hanging tiles between 21:06 and 21:47, then foraged and commuted through the site until the last recording at 22:31. Five Soprano Pipistrelles commuted and briefly foraged through the northern site between 21:19 and 22:16. Brown Long-eared Bats were recorded at low numbers foraging and commuting from 21:42 until 22:26, first detected commuting north past Building A near the pond. Seven Serotines were recorded between 21:43 and 22:15, with one foraging over the pond, while a single Myotis species (likely Daubenton's) foraged constantly over the pond between 22:01 and 22:30.

Figure 8. Approximate locations of the Common Pipistrelle roost locations (red dots), Likely Plecotus roost locations (Orange dot), Plecotus night roost location (blue dot), Plecotus roost access points (orange arrows), Serotine (Pink Dot) during the 2021 surveys.



2.2.5 Evaluation

2.2.5.1 Foraging and commuting

Overall, the levels of foraging and commuting bats recorded on site during the surveys was moderate – high, largely due to the presence of a number of bat roosts on site. The pond was also used by a variety of bat species including Common Pipistrelle, Soprano Pipistrelle, Serotine and Daubenton's Bat for foraging, with the internals of buildings B and C also used for foraging by both Brown Long Eared Bat, Common Pipistrelle and occasionally Natterers Bat.

2.2.6 Updated Bat Survey Results (2024)

2.3.1.1 Further Survey Work (Buildings) (Including Mitigation and Compensation Strategy)

As outlined within the Framework Bat Mitigation / Compensation Strategy (Ecosupport, 2023), updated surveys of buildings A-E were carried out in June 2024 to inform the EPS applications. This work enabled the refinement of the mitigation and compensation proposals for all the buildings.

The survey was completed in suitable weather conditions with a starting temperature of 15°C and finishing temperature of 16°C on a dry day. The wind was recorded at 1-2 on the Beaufort scale. The summary of the results of the bat emergence survey are below.

2.3.1.2 Key roost locations and timing

Building D (eastern face, hanging tiles): 26 emergences from the tiles between the central and left-hand window, plus two more emerged from the tiles between the central and right-hand window. The first emergence overall was a Common Pipistrelle (*Pipistrellus pipistrellus*) at 21:20.

Building B (roof/ridge tiles and cladding): The first emergence was a Common Pipistrelle (*Pipistrellus pipistrellus*) at 21:28 from western ridge tiles. Three Long-eared bats emerged from the northwestern roof extension at 21:48. Five Common Pipistrelle (*Pipistrellus pipistrellus*) emergences came from the northern roof tiles, above the western and southern cladding, and on the ridge tiles near the roof top. One Serotine (*Cnephaeus serotinus*) also emerged from northwestern corner ridge tiles.

Building C (eastern barn opening): All six emergences were Common Pipistrelles (*Pipistrellus pipistrellus*) from the large eastern barn opening with the first one recorded at 21:29.

2.3.1.3 Overall activity patterns

There was high activity due to the frequent commuting between and over all the buildings. Common Pipistrelles (*Pipistrellus pipistrellus*) were the dominant species for both commuting and foraging with commuting activity high and foraging comparatively low. Long-eared Bats (*Plecotus auritus*) had high activity around building B, but low elsewhere. Serotine (*Cnephaeus serotinus*) activity was low with one individual foraging over the courtyard near building A and one pass near building D, both at 22:06. Soprano Pipistrelle (*Pipistrellus pygmaeus*) activity was low relative to Common Pipistrelle (*Pipistrellus pipistrellus*) with the first pass at 21:32, then repeated commuting passes around 22:08–22:27 near building B. Noctule (*Nyctalus*

noctule) activity was low with just a single bat first recorded at 21:55 commuting east–west around building D.

Figure 9. The emergence locations of building B, and directions of flight after emergences during the survey, taken NW of the building (June 2024).



Figure 10. The emergence locations of building B, and directions of flight after emergences during the survey, taken NW of the building (June 2024).



Figure 11. The emergence locations of building C, and directions of flight after emergences during the survey, taken NE of building C (June 2024).



Figure 12. The emergence locations of building D, and directions of flight after emergences during the survey, taken NE of the building (June, 2024).



2.3.2 Evaluation of emergence survey results from 2021 and 2024

2.3.2.1 Foraging and commuting

Overall, the levels of foraging and commuting bats recorded on site during the surveys was moderate - high, largely due to the presence of several bat roosts on site. Bats frequently commuted over and between all the buildings. Commuting and foraging activity was dominated by Common Pipistrelles (*Pipistrellus pipistrellus*) where commuting activity was high, but foraging was comparatively low. Given the nature of the development, it is

considered there will be no impact to foraging and commuting bats around the site, however there will be a loss of internal foraging opportunities for bats within buildings B, C and F.

2.3.2.2 Roosting

Based on the results of the preliminary roost assessment and follow up emergence and re-entry surveys, Mortimers Farm has been classified as supporting one Common Pipistrelle Maternity roost in building D, one Common Pipistrelle Day Roost in building A, B, C and E, one Brown Long Eared Maternity Roost in Building B, one Brown Long Eared Bat satellite roost in building C (and historically in building D), one Serotine day roost in Building B, one Soprano Pipistrelle roost in Building B (and D historically) and a Natterers day roost in building B. The proposed works will result in the loss / significant alteration of these roosts within each of the buildings on site.

2.3.2.3 Site Status Assessment

In accordance with the *Bat Mitigation Guidelines* (Mitchell – Jones, 2004), the Common Pipistrelle day roost present within building A, B, C and E, the Plecotus satellite roosts within building C (and historically D) and the Soprano Pipistrelle day roost within building B and D (historically) are considered to be of **LOW CONSERVATION SIGNIFICANCE** and therefore of **LOCAL SIGNIFICANCE** using the CIEEM valuation criteria for bat roosts (Wray et al., 2010). The Common Pipistrelle Maternity Roost in building D, the Brown Long Eared Maternity roost within building B, the Serotine summer day roost in building B and the Natterers summer day roost in building B are considered to be of **MODERATE CONSERVATION SIGNIFICANCE** and therefore of **COUNTY SIGNIFICANCE** using the CIEEM valuation criteria for bat roosts (Wray et al., 2010).

2.4 Badgers

During the walkover survey no evidence of Badgers was noted on site, however the habitats on site do provide suitable foraging and commuting opportunities for Badgers. Therefore, the site is considered to be of **Moderate Potential** for foraging and commuting Badgers.

2.5 Reptiles

The habitats on site lack the structure and heterogeneity required by reptiles due to the short sward height, management regime, lack of suitable cover and lack of suitable habitats within the immediate surroundings. Therefore, the habitats on site are considered to be of **Negligible potential** for reptiles.

2.6 Great Crested Newts

HBIC do not hold any records of GCN from within 1 km of the site and only two water bodies were identified, one within the site's boundary and a large pond in a woodland area approximately 95m to the south of the site. The pond is situated on private land and was inaccessible at the time of survey. The pond on site was given a HSI score of 0.6 (ARG, 2016)

and was subject to an eDNA test in taken in April 2021 which returned a negative result for the presence of newts.

2.7 Nesting birds

2.7.1 Pre existing information

HBIC provided 3 records of notable birds within 1 km of the proposed development site that could potentially be impacted by the development, including Barn Owl (*Tyto alba*), Starling (*Sturnus vulgaris*) and House Sparrow (*Passer domesticus*). Starlings and House Sparrows are red listed species, and Barn Owls are protected under the Wildlife and Countryside Act 1981 (amended).

2.7.2 Site assessment

All buildings on site could potentially support a range of breeding and nesting bird species, particularly Starlings and House Sparrows. Although building 2 does provide suitable nesting habitat for Barn Owls, no evidence of Barn owls was identified within any of the buildings (such as pellets or feathers ect.) or within the empty nest box (**Figure 13**). Additionally, no Barn Owls were recorded during any of the bat surveys (in 2018 or the surveys to date carried out in 2021). The site is assessed as offering **High potential** for a range of breeding bird species.

Figure 13. Internal of building 2 including Barn Owl box to the left.



3.0 MITIGATION, COMPENSATION AND ENHANCEMENTS

This chapter deals with mitigation, compensation and enhancement. Mitigation refers to measures that can be undertaken to avoid or reduce ecological impacts. Compensation refers to measures taken in order to offset potential significant impacts and finally enhancements contribute towards a net gain for ecology.

3.1 Bats

3.1.1 Maintaining Connectivity

Key areas of suitable habitats for foraging and commuting bats identified during the surveys are to be retained (scattered trees) along with enhancement of the retained grassland on site to increase invertebrate biomass. This will be achieved through plug planting at a density of 5 per square meter on areas of retained grassland.

3.1.2 Roost Compensation

Given the presence of maternity roosts, satellite roosts and day roosts, ranging from local – county level of significance, the most appropriate compensation would be the long-term retention of the above measure in combination with the provision of new roosting opportunities within the converted buildings on site and the retention of roosting areas where possible. The steps outlined in the Ecological Construction Ecological Management Plan (eCEMP) (Ecosupport, 2024) provide full details of the requirements.

3.1.3 Construction works

All mitigations, compensation and enhancements required during the construction phase are provided in the Ecological Construction Ecological Management Plan (eCEMP) (Ecosupport, 2024).

3.1.4 Sensitive Lighting Guidance

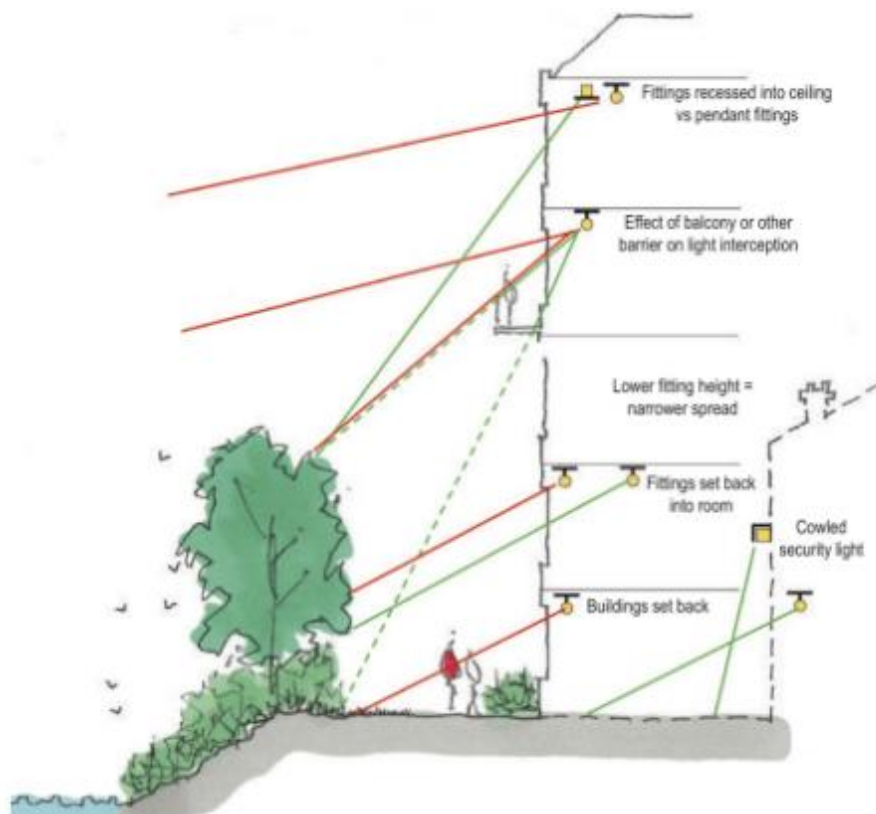
A document (*Guidance Note 08/23 Bats and Artificial Lighting at night*) has been produced via a collaboration between the Institute of Lighting Professionals (ILP) and the Bat Conservation Trust (BCT), which outlines the latest recommendations to minimise the impacts of increased artificial lighting on bats. The key recommendations within this document have been outlined below and will be implemented provided there are no conflicts with any legal limits of illumination (in which case a suitable compromise should be reached).

‘Light sources, lamps, LEDs and their fittings come in a myriad of different specifications which a lighting professional can help to select. However, the following should be considered when choosing luminaires and their potential impact on Key Habitats and features:

- *All luminaires will lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used*
- *LED luminaires will be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability*
- *A warm white light source (2700Kelvin or lower) will be adopted to reduce blue light component*

- *Light sources will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012)*
- *Internal luminaires can be recessed (as opposed to using a pendant fitting – See **Figure 14**) where installed in proximity to windows to reduce glare and light spill*
- *Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges (see Case Study 1)*
- *Column heights will be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards*
- *Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - See ILP GN01*
- *Luminaires will always be mounted horizontally, with no light output above 90° and/or no upward tilt*
- *Where appropriate, external security lighting will be set on motion sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate*
- *Use of a Central Management System (CMS) with additional web-enabled devices to light on demand Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS*
- *The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues. See Case Study 6*

Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely'

Figure 14. Internal lighting mitigation options (ILP 2023).

3.1.5 Natural England European Protected Species License

Any works that impact upon any of the bat roosts identified on site have taken place under an EPSL obtained from Natural England and under the supervision of a Licensed Ecologist. Destruction of the roosts and capture of bats (where required) was carried out under the supervision of a licensed ecologist. A summary of the EPSL Method Statement required as part of the licence application with the main principles of this outlined in the below sections.

Given the presence of a number of separate roosts on site which range from local – county level of significance, the most appropriate compensation would be the long-term retention of the roosts identified in combination with the provision of new roosting opportunities within the converted buildings on site.

To provide temporary roosting locations whilst the works are completed, 2 Schwegler 2F bat boxes (with double front panel), 2 Schwegler 2F and 2 Schwegler 1 FS large colony boxes (or equivalent) have been erected on the mature Oak trees located in the southern areas of the site. The steps outlined below have been incorporated within the new development:

3.1.5.1 Common Pipistrelle

Given the significance of the maternity roost in building D, the upper section of the western gable elevation of building D will have tile hanging and a cavity will be created on the gable end under the tile hanging.

3.1.5.2 BLE

A dedicated loft space will be created within the refurbished building B (same location as before), as this will seek to maintain the functionality of the existing roost.

3.1.5.3 Serotine and Soprano Pipistrelle

The wooden cladding will be retained / replaced like for like on building B where the Serotines and Soprano Pipistrelle were recorded roosting.

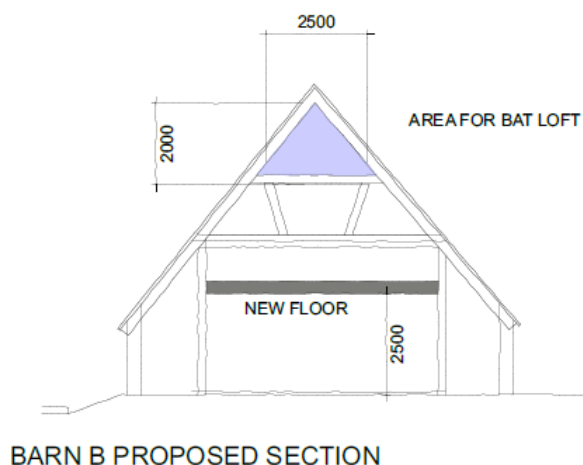
3.1.5.4 Natterers Bat

The creation of the new car port, retention of a loft space dedicated for bats and the addition of the bat boxes on site will provide ample opportunities for Natterers to roost.

3.1.6 Bat loft

The internal space within building B has been reduced into a triangular void at the top of the building at least 10 meters in length by 2.5 meters in width with a minimum height of 2 meters from a boarded off area to the external ridge line.

Figure 15. The proposed design for the bat loft within building B (Hurrell Architecture, 2022).



Four new bat accesses in various positions have been installed to provide direct access into the bat loft. This provides a variety of entrance points and the locations were selected to be as close as possible to the existing entrance locations.

Internally, one Schwegler 1FW bat hibernation boxes has been included within the bat loft of Building B. These are multi-layered and provide insulation for bats during the winter whilst also allow air to permeate, making them also suitable for large colonies within the summer. The internal wooden panel provides crevice spaces for bats to roost within, with sufficient space for bats to freely hang also. This has created further hibernation and maternity roosting opportunities for bats within building B.

3.1.7 Bat Boxes

A Schwegler 1FW bat hibernation box has been included within the internal bat loft of Barn B. In addition, to provide temporary roosting locations whilst the works are completed, 2 Schwegler 2F bat boxes (with double front panel), 2 Schwegler 1FF and 2 Schwegler 1FD large

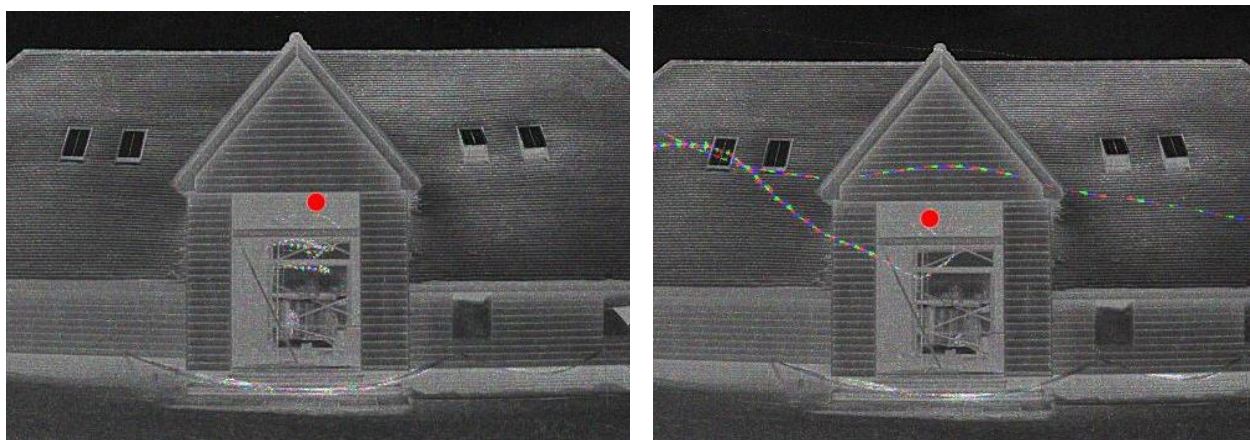
colony boxes (or equivalent) have been erected on the mature Oak trees located in the southern areas of the site.

3.1.8 Monitoring survey 2026

As stated in the EPSL, monitoring surveys are required in 2026 and 2028. The first was carried out on 17th August 2026 under suitable weather conditions. The emergences seen are summarised below:

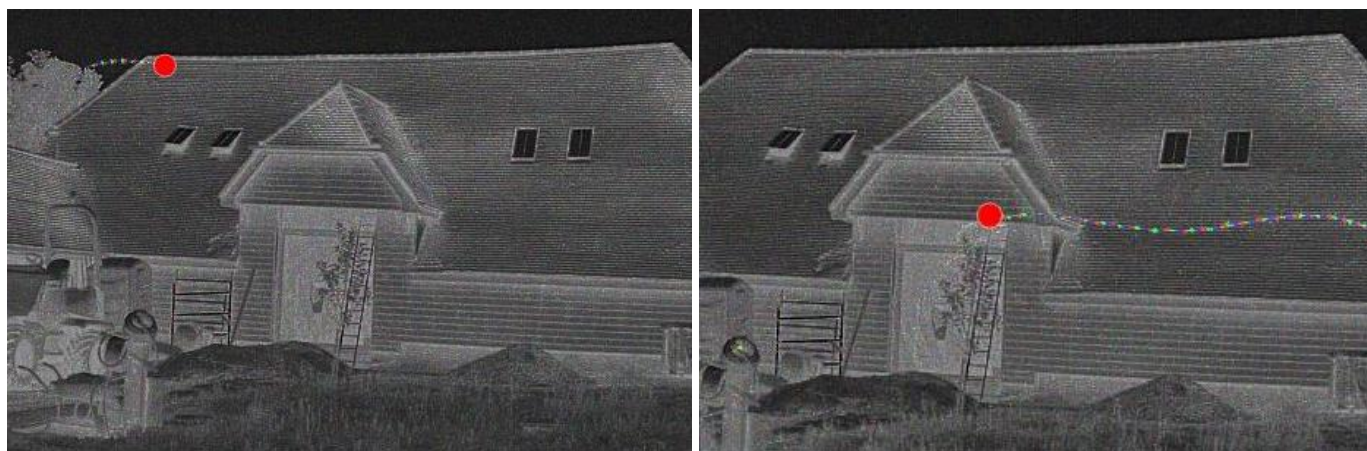
Two emergences were recorded from inside of barn B which were identified to be brown long eared bats. They emerged at 21:02 and 21:08 and commuted through the barn to emerge from the southern open doorway (**Figure 15**).

Figure 15. Location of both brown long eared bat emergences, recorded at 21:02 and 21:08 from Barn B (Ecosupport 2026).



Two emergences were also seen from the northern elevation of barn B including one Serotine at 21:18 and one Common Pipistrelle at 20:57. The Common Pipistrelle emerged from the tiles on the upper left corner of the roof and the Serotine emerged from within the barn and flew out from the main open doorway (**Figure 16**).

Figure 16. Location of the Common Pipistrelle (left) and Serotine (right) emergences, recorded at 20:57 and 21:18 respectively, from Barn B (Ecosupport 2026)



Barn D had two Common Pipistrelle emergences at 20:52 and 21:36 from the bottom of the newly installed hanging tile on the southern elevation of the barn (**Figure 17**).

Figure 17. Location for Common Pipistrelle emergences recorded at 20:52 and 21:36 from Barn D (Ecosupport 2026).



3.2 Badgers and Other Mammals

No Badger setts were identified on site therefore specific mitigation is not required. As a general precaution for all mammals, during the construction phase any open excavations left overnight should either be covered to prevent commuting Badgers falling in or escape ladders should be used to prevent them from becoming trapped. Any open pipework should be checked and then capped nightly.

In case Badgers enter the site, any chemicals will be securely stored, so that Badgers cannot gain access to them.

In the unlikely event a Badger sett becomes established, an ecologist will be consulted immediately.

3.3 Birds

3.3.1 Bird Bricks

To act as biodiversity enhancement, half of the newly built dwellings will incorporate one Swift brick (or suitable alternative approved by an ecologist). The Ibstock 'Eco Home for Swifts' bricks will be installed (**Figure 18**) as they are a discreet and attractive box ideal for new dwellings. The boxes should be installed under the eaves or in high walls in shaded areas out of direct sunlight and away from windows. The installation of such boxes has also been shown to be beneficial for House Sparrows (*Passer domesticus*) which are a nationally declining species.

Figure 18. Ibstock eco home for swifts that will be incorporated into the newly built dwellings.



Alternatively, external wall-mounted swift nest boxes (**Figure 19**) (Wildcare, 2026) can be used on the outside of buildings where integrated bricks are unsuitable.

Figure 19. Wall mounted Swift Nest Box (Wildcare 2026).



3.3.2 Bird Boxes

As well as providing integrated bird bricks, the erection of boxes in trees will provide further enhancements. Using nest boxes of varying designs would maximise the species complement attracted to the site, and where possible these could be tailored to provide opportunities for red listed/BAP species known from the local area. Schwegler 1B, 2H and 2M bird boxes can be used (4 in total) and will be erected on suitable mature trees around the site's boundaries (**Figure 20**).

The 1B is the most popular box for garden birds and appeals to a wide range of species. The 2H is attractive to Robins, Pied Wagtails, Spotted Flycatcher, Wrens and Black Redstarts whilst the 2M is an example of a general-purpose design (**NB if there are issues obtaining these boxes, alternatives can be used if first agreed with the ecologist**).

Figure 20. Schwegler 1B, 2H and 2M bird boxes to be installed (NHBS 2026).



3.4 Hedgehogs

3.3.3 Hedgehog Highways

To ensure permeability for small mammals across the site, gaps will be present within the gravel boards / bases of each fence line which adjoins other gardens or greenspaces. The gaps should be at least 15 cm high by 15 cm wide.

Small signage could be installed at these points to ensure they remain open upon completion of the development. The People's Trust for Endangered Species provide such signage, the purchase of which also supports conservation efforts (**Figure 21**).

Figure 21. Hedgehog Highway Sign (left). Eco Hedgehog Hole Fence Plate (right).



3.5 Invertebrates

3.3.4 Bee Bricks

To increase opportunities for invertebrates within the site, bee bricks will be included within half of the new units on the site (**Figure 22**). The brick can be used in place of a standard brick

and provides cavities for solitary bee species such as Red Mason bees (*Osmia bicornis*) or Leafcutter bees (*Megachile* sp.), both non-aggressive native species. The bricks should be placed in a sunny location at a minimum height of 1m. It is highly recommended the brick is placed in a location where landscaping will include nearby pollinator-friendly plants.

Figure 22. Bee bricks to be installed on site (NHBS 2026).



Alternatively, external wall-mounted Wooden Bee Barn & Insect Hotel (Wildcare, 2026) or Pinta Apex Insect House (NHBS, 2026) can be used on the outside of buildings where integrated bee bricks are unsuitable.

Figure 23. Wooden Bee Barn & Insect Hotel (left) (Wildcare, 2026) and Pinta Apex Insect House (right) (NHBS, 2026)



3.3.5 Tree / Shrub Planting

As a general enhancement, any new landscape planting will aim for a minimum 70:30 ratio in favour of native species over non-natives and ornamentals (in line with the CIEEM guidance outlined within Smith & Day (2012). Species that can be considered within any planting include

Rowan (*Sorbus aucuparia*), Alder (*Alnus glutinosa*), Hazel (*Corylus avellana*), Holly (*Ilex aquifolium*), Silver Birch (*Betula pendula*), Small-leaved Lime (*Tilia cordata*) and Willow (*Salix* spp.). Non-natives and ornamentals should only be given a bias in formal locations where aesthetics is a priority.

Planting a mixture of flowering plants, trees (including fruit trees) and shrubs encourages a diversity of insects to sustain bats. It is beneficial that the flowers vary in colour (although pale flowers are more easily seen in poor light and so attract insects at dusk), fragrance, shape, amount of nectar and time of flowering. (It is important to provide native flowering plants, shrubs and trees throughout spring, summer and autumn). Flowers with 'landing platforms' for insects increase opportunities for insects and in turn foraging bats and these will be included within marginal habitats where appropriate.

4.0 CONCLUSION

This document has been prepared to bring together all the existing ecological information for Mortimers Farm, Eastleigh with the aim of providing a Biodiversity Mitigation and Enhancement Plan. This includes methods for carrying out works without causing harm to protected species and providing opportunities for enhancement that are consistent with the aims of national and local planning policy.

Recommendations are also made within this document to provide compensation and enhancements for badgers, bats and birds.

It is considered that, should all aspects of this document be implemented, adequate mitigation can be achieved to minimise impacts on the existing population of protected and notable species on Site and produce a net gain in the Site's biodiversity value.

5.0 REFERENCES

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